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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 2000330

MCAS
Tustin, CA
April 2021

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

March 02, 2020

Vista Work Order No. 2000330

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 15, 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. 2000330
Case Narrative

Sample Condition on Receipt:

One blank water sample and four groundwater 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. The OPR recoveries were within the method acceptance criteria.

As requested, an MS/MSD was performed on sample "I003MW14S-20200214". The MS/MSD recoveries and/or RPDs were out of the acceptance criteria for PFBS, PFHxA, PFHpA, PFHxS, PFOA and MeFOSAA.

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

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2000330-02	I003MW05S-20200214	PFAS Isotope Dilution Method	13C2-PFOA	H	161
2000330-04	DUP04-20200214	PFAS Isotope Dilution Method	13C2-PFTeDA	H	39.9
2000330-05	I003MW14S-20200214	PFAS Isotope Dilution Method	13C2-PFHxA	H	187
2000330-05	I003MW14S-20200214	PFAS Isotope Dilution Method	13C2-PFOA	H	174

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
2000330-01	EB03-20200214		14-Feb-20 07:00	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-02	I003MW05S-20200214		14-Feb-20 08:10	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-03	I003MW12S-20200214		14-Feb-20 09:10	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-04	DUP04-20200214		14-Feb-20 09:15	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-05	I003MW14S-20200214	MS/MSD	14-Feb-20 10:15	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL

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: B0B0137-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		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHxA	307-24-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHpA	375-85-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHxS	355-46-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFOA	335-67-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFOS	1763-23-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	93.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C3-HFPO-DA	IS	78.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFHxA	IS	88.5	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C4-PFHpA	IS	91.3	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C3-PFHxS	IS	92.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C5-PFNA	IS	86.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFOA	IS	93.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C8-PFOS	IS	96.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFDA	IS	83.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
d3-MeFOSAA	IS	75.2	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFUnA	IS	87.5	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
d5-EtFOSAA	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFDoA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFTeDA	IS	69.6	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	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: B0B0137-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	0.0345	0.0400	86.3	72 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHxA	307-24-4	0.0367	0.0400	91.6	72 - 129		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
HFPO-DA	13252-13-6	0.0329	0.0400	82.1	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHpA	375-85-9	0.0350	0.0400	87.5	72 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
ADONA	919005-14-4	0.0338	0.0400	84.5	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHxS	355-46-4	0.0391	0.0400	97.7	68 - 131		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFOA	335-67-1	0.0354	0.0400	88.5	71 - 133		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFNA	375-95-1	0.0348	0.0400	87.0	69 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFOS	1763-23-1	0.0359	0.0400	89.7	65 - 140		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
9Cl-PF3ONS	756426-58-1	0.0367	0.0400	91.8	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFDA	335-76-2	0.0368	0.0400	91.9	71 - 129		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
MeFOSAA	2355-31-9	0.0375	0.0400	93.8	65 - 136		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
EtFOSAA	2991-50-6	0.0348	0.0400	87.1	61 - 135		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFUnA	2058-94-8	0.0355	0.0400	88.8	69 - 133		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
11Cl-PF3OUdS	763051-92-9	0.0352	0.0400	88.0	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFDoA	307-55-1	0.0295	0.0400	73.7	72 - 134		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFTrDA	72629-94-8	0.0297	0.0400	74.3	65 - 144		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFTeDA	376-06-7	0.0394	0.0400	98.5	71 - 132		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C3-HFPO-DA	IS	98.3	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFHxA	IS	101	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C4-PFHpA	IS	107	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C3-PFHxS	IS	100	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C5-PFNA	IS	112	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFOA	IS	113	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C8-PFOS	IS	107	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFDA	IS	101	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
d3-MeFOSAA	IS	82.1	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFUnA	IS	94.2	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
d5-EtFOSAA	IS	95.4	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFDoA	IS	102	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFTeDA	IS	82.7	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1

Sample ID: EB03-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 14-Feb-20 07:00

Laboratory Data

Lab Sample: 2000330-01
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHxA	307-24-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
HFPO-DA	13252-13-6	ND	0.00240	0.00299	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHpA	375-85-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
ADONA	919005-14-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHxS	355-46-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFOA	335-67-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFNA	375-95-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFOS	1763-23-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFDA	335-76-2	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
MeFOSAA	2355-31-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
EtFOSAA	2991-50-6	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFUnA	2058-94-8	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFDoA	307-55-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFTrDA	72629-94-8	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFTeDA	376-06-7	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C3-HFPO-DA	IS	84.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFHxA	IS	95.7	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C4-PFHpA	IS	95.8	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C3-PFHxS	IS	106	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C5-PFNA	IS	96.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFOA	IS	98.9	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C8-PFOS	IS	96.9	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFDA	IS	87.8	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
d3-MeFOSAA	IS	80.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFUnA	IS	88.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
d5-EtFOSAA	IS	85.2	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFDoA	IS	89.2	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFTeDA	IS	58.7	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	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: I003MW05S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 08:10

Laboratory Data

Lab Sample: 2000330-02
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.198	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHxA	307-24-4	1.77	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
HFPO-DA	13252-13-6	ND	0.00235	0.00293	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHpA	375-85-9	0.943	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
ADONA	919005-14-4	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHxS	355-46-4	1.62	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFOA	335-67-1	2.55	0.00668	0.00977	0.0195	D	B0B0137	21-Feb-20	0.256 L	27-Feb-20 18:29	5
PFNA	375-95-1	0.0364	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFOS	1763-23-1	1.57	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFDA	335-76-2	0.00290	0.00134	0.00195	0.00390	J	B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
MeFOSAA	2355-31-9	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
EtFOSAA	2991-50-6	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFUnA	2058-94-8	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFDoA	307-55-1	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFTrDA	72629-94-8	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFTeDA	376-06-7	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	90.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C3-HFPO-DA	IS	82.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFHxA	IS	79.8	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C4-PFHpA	IS	83.9	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C3-PFHxS	IS	81.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C5-PFNA	IS	93.2	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFOA	IS	161	50 - 150	D, H	B0B0137	21-Feb-20	0.256 L	27-Feb-20 18:29	5
13C8-PFOS	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFDA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
d3-MeFOSAA	IS	73.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFUnA	IS	70.4	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
d5-EtFOSAA	IS	74.1	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFDoA	IS	75.0	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFTeDA	IS	50.0	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	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: I003MW12S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 09:10

Laboratory Data

Lab Sample: 2000330-03
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0346	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHxA	307-24-4	0.164	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHpA	375-85-9	0.0538	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHxS	355-46-4	0.190	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFOA	335-67-1	0.402	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFOS	1763-23-1	0.0519	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	94.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C3-HFPO-DA	IS	81.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFHxA	IS	87.3	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C4-PFHpA	IS	84.0	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C3-PFHxS	IS	78.7	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C5-PFNA	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFOA	IS	83.2	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C8-PFOS	IS	84.1	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFDA	IS	75.7	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
d3-MeFOSAA	IS	84.0	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFUnA	IS	79.3	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
d5-EtFOSAA	IS	80.1	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFDoA	IS	69.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFTeDA	IS	72.8	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	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: DUP04-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 09:15

Laboratory Data

Lab Sample: 2000330-04
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0349	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHxA	307-24-4	0.155	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHpA	375-85-9	0.0547	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHxS	355-46-4	0.166	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFOA	335-67-1	0.403	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFNA	375-95-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFOS	1763-23-1	0.0574	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	91.9	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C3-HFPO-DA	IS	88.1	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFHxA	IS	89.5	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C4-PFHpA	IS	93.6	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C3-PFHxS	IS	91.0	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C5-PFNA	IS	94.1	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFOA	IS	95.7	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C8-PFOS	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFDA	IS	85.2	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
d3-MeFOSAA	IS	75.5	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFUnA	IS	72.2	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
d5-EtFOSAA	IS	77.8	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFDoA	IS	66.3	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFTeDA	IS	39.9	50 - 150	H	B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	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: I003MW14S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 10:15

Laboratory Data

Lab Sample: 2000330-05
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.301	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHxA	307-24-4	3.14	0.00680	0.00992	0.0199	D	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
HFPO-DA	13252-13-6	ND	0.00239	0.00298	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHpA	375-85-9	1.88	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHxS	355-46-4	1.82	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFOA	335-67-1	4.36	0.00680	0.00992	0.0199	D	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
PFNA	375-95-1	0.0268	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFOS	1763-23-1	0.601	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	85.5	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C3-HFPO-DA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFHxA	IS	187	50 - 150	D, H	B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	5
13C4-PFHpA	IS	85.1	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C3-PFHxS	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C5-PFNA	IS	89.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFOA	IS	174	50 - 150	D, H	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
13C8-PFOS	IS	94.3	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFDA	IS	86.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
d3-MeFOSAA	IS	72.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFUnA	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
d5-EtFOSAA	IS	84.5	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFDoA	IS	72.8	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFTeDA	IS	52.7	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	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: I003MW14S-20200214 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0137-MS1/B0B0137-MSD1	Source Lab Sample:	2000330-05
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0137	Date Extracted:	21-Feb-20
Matrix:	Aqueous	Samp Size:	0.248/0.247 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	0.301	0.322	0.0403	53.1	H	0.328	0.0405	68.3	25.0	H	72-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHxA	307-24-4	3.14	3.40	0.202	127	D	3.26	0.202	61.2	69.9	D, H	72-129	30	29-Feb-20 04:24	5	29-Feb-20 04:34	5
HFPO-DA	13252-13-6	ND	0.0438	0.0403	109		0.0373	0.0405	92.0	16.9		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHpA	375-85-9	1.88	1.93	0.0403	138	H	1.75	0.0405	-314	514	H	72-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
ADONA	919005-14-4	ND	0.0420	0.0403	104		0.0408	0.0405	101	2.93		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHxS	355-46-4	1.82	1.84	0.0403	44.2	H	1.67	0.0405	-379	253	H	68-131	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFOA	335-67-1	4.36	4.49	0.202	64.4	D, H	4.42	0.202	26.4	83.7	D, H	71-133	30	29-Feb-20 04:24	5	29-Feb-20 04:34	5
PFNA	375-95-1	0.0268	0.0689	0.0403	105		0.0623	0.0405	87.8	17.8		69-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFOS	1763-23-1	0.601	0.645	0.0403	111		0.649	0.0405	120	7.79		65-140	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
9Cl-PF3ONS	756426-58-1	ND	0.0416	0.0403	103		0.0403	0.0405	99.5	3.46		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFDA	335-76-2	ND	0.0448	0.0403	110		0.0405	0.0405	99.1	10.4		71-129	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
MeFOSAA	2355-31-9	ND	0.0426	0.0403	106		0.0310	0.0405	76.4	32.5	H	65-136	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
EtFOSAA	2991-50-6	ND	0.0384	0.0403	95.2		0.0431	0.0405	106	10.7		61-135	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFUnA	2058-94-8	ND	0.0408	0.0403	101		0.0401	0.0405	99.0	2.00		69-133	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
11Cl-PF3OUdS	763051-92-9	ND	0.0429	0.0403	106		0.0395	0.0405	97.6	8.25		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFDoA	307-55-1	ND	0.0392	0.0403	97.3		0.0340	0.0405	84.1	14.6		72-134	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFTrDA	72629-94-8	ND	0.0396	0.0403	98.3		0.0346	0.0405	85.4	14.0		65-144	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFTeDA	376-06-7	ND	0.0409	0.0403	101		0.0389	0.0405	96.0	5.08		71-132	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	90.7		89.2		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C3-HFPO-DA	IS	77.3		88.6		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFHxA	IS	86.0	D	90.0	D	50-150	29-Feb-20 04:24	5	29-Feb-20 04:34	5
13C4-PFHpA	IS	83.5		88.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C3-PFHxS	IS	87.1		92.5		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C5-PFNA	IS	90.3		93.9		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFOA	IS	86.7	D	90.0	D	50-150	29-Feb-20 04:24	5	29-Feb-20 04:34	5
13C8-PFOS	IS	94.0		95.8		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFDA	IS	79.0		91.5		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
d3-MeFOSAA	IS	80.0		92.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFUnA	IS	77.3		78.2		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
d5-EtFOSAA	IS	86.2		85.0		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFDoA	IS	73.8		81.1		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1

Sample ID: I003MW14S-20200214 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0137-MS1/B0B0137-MSD1	Source Lab Sample:	2000330-05
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0137	Date Extracted:	21-Feb-20
Matrix:	Aqueous	Samp Size:	0.248/0.247 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	67.9		62.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1

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

2000330 2.4°C

Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/14/2020

PAGE: 1 OF 1

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 Ruite	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
	EB03-20200214	2/14/20	7:00	BW	2		X
	I003MW05S-20200214		8:10	GW	2	IV	X
	I003MW12S-20200214		9:10		2	IV	X
	DUP04-20200214		9:15		2	IV	X
	I003MW14S-20200214		10:15		6	IV	X MS/MSD

VK 2-14-20

Relinquished by: (Signature) Uly Ruite	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/14/20	Time: 12:00
Relinquished by: (Signature) FedEx	Received by: (Signature) Hayden Gamal	Date: 02/15/2020	Time: 10:07
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2000330 TAT 14

Samples Arrival:	**Date/Time** 02/15/2020 10:07		**Initials:** HDG		**Location:** WR-2 **Shelf/Rack:** NA		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None
Temp °C: 2.4 (uncorrected) **Temp °C:** 2.4 (corrected)			**Probe used:** Y / N		**Thermometer ID:** IR-4		

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 8101 0952 1851	✓		
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** 02/18/20 0721	**Initials:** KS	**Location:** R-13	WR-2
			Shelf/Rack: A-2	E-3
COC Anomaly/Sample Acceptance Form completed?				✓

Comments:

CoC/Label Reconciliation Report WO# 2000330

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time		Container	BaseMatrix	Sample Comments
2000330-01	A EB03-20200214	☑		14-Feb-20 07:00	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-01	B EB03-20200214	☑		14-Feb-20 07:00	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-02	A I003MW05S-20200214	☑		14-Feb-20 08:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-02	B I003MW05S-20200214	☑		14-Feb-20 08:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-03	A I003MW12S-20200214	☑		14-Feb-20 09:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-03	B I003MW12S-20200214	☑		14-Feb-20 09:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-04	A DUP04-20200214	☑		14-Feb-20 09:15	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-04	B DUP04-20200214	☑		14-Feb-20 09:15	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-05	A I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	B I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	C I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	D I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	E I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	F I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD

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: KS 12/16/20

March 02, 2020

Vista Work Order No. 2000330

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 15, 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. 2000330
Case Narrative

Sample Condition on Receipt:

One blank water sample and four groundwater 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. The OPR recoveries were within the method acceptance criteria.

As requested, an MS/MSD was performed on sample "I003MW14S-20200214". The MS/MSD recoveries and/or RPDs were out of the acceptance criteria for PFBS, PFHxA, PFHpA, PFHxS, PFOA and MeFOSAA.

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

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
2000330-02	I003MW05S-20200214	PFAS Isotope Dilution Method	13C2-PFOA	H	161
2000330-04	DUP04-20200214	PFAS Isotope Dilution Method	13C2-PFTeDA	H	39.9
2000330-05	I003MW14S-20200214	PFAS Isotope Dilution Method	13C2-PFHxA	H	187
2000330-05	I003MW14S-20200214	PFAS Isotope Dilution Method	13C2-PFOA	H	174

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
2000330-01	EB03-20200214		14-Feb-20 07:00	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-02	I003MW05S-20200214		14-Feb-20 08:10	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-03	I003MW12S-20200214		14-Feb-20 09:10	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-04	DUP04-20200214		14-Feb-20 09:15	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
2000330-05	I003MW14S-20200214	MS/MSD	14-Feb-20 10:15	17-Feb-20 10:07	HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL
					HDPE Bottle, 250 mL

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: B0B0137-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		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHxA	307-24-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHpA	375-85-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFHxS	355-46-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFOA	335-67-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFOS	1763-23-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	93.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C3-HFPO-DA	IS	78.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFHxA	IS	88.5	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C4-PFHpA	IS	91.3	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C3-PFHxS	IS	92.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C5-PFNA	IS	86.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFOA	IS	93.9	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C8-PFOS	IS	96.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFDA	IS	83.4	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
d3-MeFOSAA	IS	75.2	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFUnA	IS	87.5	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
d5-EtFOSAA	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFDoA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	1
13C2-PFTeDA	IS	69.6	50 - 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:11	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: B0B0137-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	0.0345	0.0400	86.3	72 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHxA	307-24-4	0.0367	0.0400	91.6	72 - 129		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
HFPO-DA	13252-13-6	0.0329	0.0400	82.1	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHpA	375-85-9	0.0350	0.0400	87.5	72 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
ADONA	919005-14-4	0.0338	0.0400	84.5	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFHxS	355-46-4	0.0391	0.0400	97.7	68 - 131		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFOA	335-67-1	0.0354	0.0400	88.5	71 - 133		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFNA	375-95-1	0.0348	0.0400	87.0	69 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFOS	1763-23-1	0.0359	0.0400	89.7	65 - 140		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
9Cl-PF3ONS	756426-58-1	0.0367	0.0400	91.8	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFDA	335-76-2	0.0368	0.0400	91.9	71 - 129		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
MeFOSAA	2355-31-9	0.0375	0.0400	93.8	65 - 136		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
EtFOSAA	2991-50-6	0.0348	0.0400	87.1	61 - 135		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFUnA	2058-94-8	0.0355	0.0400	88.8	69 - 133		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
11Cl-PF3OUdS	763051-92-9	0.0352	0.0400	88.0	70 - 130		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFDoA	307-55-1	0.0295	0.0400	73.7	72 - 134		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFTrDA	72629-94-8	0.0297	0.0400	74.3	65 - 144		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
PFTeDA	376-06-7	0.0394	0.0400	98.5	71 - 132		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C3-HFPO-DA	IS	98.3	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFHxA	IS	101	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C4-PFHpA	IS	107	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C3-PFHxS	IS	100	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C5-PFNA	IS	112	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFOA	IS	113	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C8-PFOS	IS	107	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFDA	IS	101	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
d3-MeFOSAA	IS	82.1	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFUnA	IS	94.2	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
d5-EtFOSAA	IS	95.4	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFDoA	IS	102	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1
13C2-PFTeDA	IS	82.7	50- 150		B0B0137	21-Feb-20	0.250 L	25-Feb-20 00:21	1

Sample ID: EB03-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Blank Water
Date Collected: 14-Feb-20 07:00

Laboratory Data

Lab Sample: 2000330-01
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHxA	307-24-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
HFPO-DA	13252-13-6	ND	0.00240	0.00299	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHpA	375-85-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
ADONA	919005-14-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFHxS	355-46-4	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFOA	335-67-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFNA	375-95-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFOS	1763-23-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFDA	335-76-2	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
MeFOSAA	2355-31-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
EtFOSAA	2991-50-6	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFUnA	2058-94-8	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFDoA	307-55-1	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFTrDA	72629-94-8	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
PFTeDA	376-06-7	ND	0.00136	0.00199	0.00398		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C3-HFPO-DA	IS	84.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFHxA	IS	95.7	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C4-PFHpA	IS	95.8	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C3-PFHxS	IS	106	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C5-PFNA	IS	96.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFOA	IS	98.9	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C8-PFOS	IS	96.9	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFDA	IS	87.8	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
d3-MeFOSAA	IS	80.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFUnA	IS	88.6	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
d5-EtFOSAA	IS	85.2	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFDoA	IS	89.2	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	1
13C2-PFTeDA	IS	58.7	50 - 150		B0B0137	21-Feb-20	0.251 L	25-Feb-20 00:53	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: I003MW05S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 08:10

Laboratory Data

Lab Sample: 2000330-02
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.198	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHxA	307-24-4	1.77	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
HFPO-DA	13252-13-6	ND	0.00235	0.00293	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHpA	375-85-9	0.943	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
ADONA	919005-14-4	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFHxS	355-46-4	1.62	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFOA	335-67-1	2.55	0.00668	0.00977	0.0195	D	B0B0137	21-Feb-20	0.256 L	27-Feb-20 18:29	5
PFNA	375-95-1	0.0364	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFOS	1763-23-1	1.57	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
9Cl-PF3ONS	756426-58-1	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFDA	335-76-2	0.00290	0.00134	0.00195	0.00390	J	B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
MeFOSAA	2355-31-9	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
EtFOSAA	2991-50-6	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFUnA	2058-94-8	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
11Cl-PF3OUdS	763051-92-9	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFDoA	307-55-1	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFTrDA	72629-94-8	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
PFTeDA	376-06-7	ND	0.00134	0.00195	0.00390		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	90.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C3-HFPO-DA	IS	82.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFHxA	IS	79.8	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C4-PFHpA	IS	83.9	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C3-PFHxS	IS	81.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C5-PFNA	IS	93.2	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFOA	IS	161	50 - 150	D, H	B0B0137	21-Feb-20	0.256 L	27-Feb-20 18:29	5
13C8-PFOS	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFDA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
d3-MeFOSAA	IS	73.6	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFUnA	IS	70.4	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
d5-EtFOSAA	IS	74.1	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFDoA	IS	75.0	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	1
13C2-PFTeDA	IS	50.0	50 - 150		B0B0137	21-Feb-20	0.256 L	25-Feb-20 01:03	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.

Vista Analytical Laboratory

Sample ID: I003MW12S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 09:10

Laboratory Data

Lab Sample: 2000330-03
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0346	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHxA	307-24-4	0.164	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
HFPO-DA	13252-13-6	ND	0.00241	0.00300	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHpA	375-85-9	0.0538	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
ADONA	919005-14-4	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFHxS	355-46-4	0.190	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFOA	335-67-1	0.402	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFNA	375-95-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFOS	1763-23-1	0.0519	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
9Cl-PF3ONS	756426-58-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFDA	335-76-2	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
MeFOSAA	2355-31-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
EtFOSAA	2991-50-6	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFUnA	2058-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
11Cl-PF3OUdS	763051-92-9	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFDoA	307-55-1	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFTrDA	72629-94-8	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
PFTeDA	376-06-7	ND	0.00137	0.00200	0.00400		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	94.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C3-HFPO-DA	IS	81.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFHxA	IS	87.3	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C4-PFHpA	IS	84.0	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C3-PFHxS	IS	78.7	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C5-PFNA	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFOA	IS	83.2	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C8-PFOS	IS	84.1	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFDA	IS	75.7	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
d3-MeFOSAA	IS	84.0	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFUnA	IS	79.3	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
d5-EtFOSAA	IS	80.1	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFDoA	IS	69.5	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	1
13C2-PFTeDA	IS	72.8	50 - 150		B0B0137	21-Feb-20	0.250 L	27-Feb-20 18:19	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: DUP04-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 09:15

Laboratory Data

Lab Sample: 2000330-04
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.0349	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHxA	307-24-4	0.155	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
HFPO-DA	13252-13-6	ND	0.00237	0.00295	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHpA	375-85-9	0.0547	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
ADONA	919005-14-4	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFHxS	355-46-4	0.166	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFOA	335-67-1	0.403	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFNA	375-95-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFOS	1763-23-1	0.0574	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
9Cl-PF3ONS	756426-58-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFDA	335-76-2	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
MeFOSAA	2355-31-9	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
EtFOSAA	2991-50-6	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFUnA	2058-94-8	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
11Cl-PF3OUdS	763051-92-9	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFDoA	307-55-1	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFTrDA	72629-94-8	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
PFTeDA	376-06-7	ND	0.00135	0.00197	0.00393		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	91.9	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C3-HFPO-DA	IS	88.1	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFHxA	IS	89.5	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C4-PFHpA	IS	93.6	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C3-PFHxS	IS	91.0	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C5-PFNA	IS	94.1	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFOA	IS	95.7	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C8-PFOS	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFDA	IS	85.2	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
d3-MeFOSAA	IS	75.5	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFUnA	IS	72.2	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
d5-EtFOSAA	IS	77.8	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFDoA	IS	66.3	50 - 150		B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	1
13C2-PFTeDA	IS	39.9	50 - 150	H	B0B0137	21-Feb-20	0.254 L	25-Feb-20 01:24	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: I003MW14S-20200214

PFAS Isotope Dilution Method

Client Data

Name: KMEA
Project: MCAS El Toro and Tustin, PFAS
Matrix: Groundwater
Date Collected: 14-Feb-20 10:15

Laboratory Data

Lab Sample: 2000330-05
Date Received: 17-Feb-20 10:07
Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.301	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHxA	307-24-4	3.14	0.00680	0.00992	0.0199	D	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
HFPO-DA	13252-13-6	ND	0.00239	0.00298	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHpA	375-85-9	1.88	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
ADONA	919005-14-4	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFHxS	355-46-4	1.82	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFOA	335-67-1	4.36	0.00680	0.00992	0.0199	D	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
PFNA	375-95-1	0.0268	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFOS	1763-23-1	0.601	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
9Cl-PF3ONS	756426-58-1	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFDA	335-76-2	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
MeFOSAA	2355-31-9	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
EtFOSAA	2991-50-6	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFUnA	2058-94-8	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
11Cl-PF3OUdS	763051-92-9	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFDoA	307-55-1	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFTrDA	72629-94-8	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
PFTeDA	376-06-7	ND	0.00136	0.00198	0.00397		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	85.5	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C3-HFPO-DA	IS	84.7	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFHxA	IS	187	50 - 150	D, H	B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	5
13C4-PFHpA	IS	85.1	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C3-PFHxS	IS	87.6	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C5-PFNA	IS	89.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFOA	IS	174	50 - 150	D, H	B0B0137	21-Feb-20	0.252 L	27-Feb-20 18:40	5
13C8-PFOS	IS	94.3	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFDA	IS	86.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
d3-MeFOSAA	IS	72.0	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFUnA	IS	78.6	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
d5-EtFOSAA	IS	84.5	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFDoA	IS	72.8	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	1
13C2-PFTeDA	IS	52.7	50 - 150		B0B0137	21-Feb-20	0.252 L	25-Feb-20 01:35	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: I003MW14S-20200214 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0137-MS1/B0B0137-MSD1	Source Lab Sample:	2000330-05
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0137	Date Extracted:	21-Feb-20
Matrix:	Aqueous	Samp Size:	0.248/0.247 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	0.301	0.322	0.0403	53.1	H	0.328	0.0405	68.3	25.0	H	72-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHxA	307-24-4	3.14	3.40	0.202	127	D	3.26	0.202	61.2	69.9	D, H	72-129	30	29-Feb-20 04:24	5	29-Feb-20 04:34	5
HFPO-DA	13252-13-6	ND	0.0438	0.0403	109		0.0373	0.0405	92.0	16.9		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHpA	375-85-9	1.88	1.93	0.0403	138	H	1.75	0.0405	-314	514	H	72-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
ADONA	919005-14-4	ND	0.0420	0.0403	104		0.0408	0.0405	101	2.93		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFHxS	355-46-4	1.82	1.84	0.0403	44.2	H	1.67	0.0405	-379	253	H	68-131	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFOA	335-67-1	4.36	4.49	0.202	64.4	D, H	4.42	0.202	26.4	83.7	D, H	71-133	30	29-Feb-20 04:24	5	29-Feb-20 04:34	5
PFNA	375-95-1	0.0268	0.0689	0.0403	105		0.0623	0.0405	87.8	17.8		69-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFOS	1763-23-1	0.601	0.645	0.0403	111		0.649	0.0405	120	7.79		65-140	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
9Cl-PF3ONS	756426-58-1	ND	0.0416	0.0403	103		0.0403	0.0405	99.5	3.46		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFDA	335-76-2	ND	0.0448	0.0403	110		0.0405	0.0405	99.1	10.4		71-129	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
MeFOSAA	2355-31-9	ND	0.0426	0.0403	106		0.0310	0.0405	76.4	32.5	H	65-136	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
EtFOSAA	2991-50-6	ND	0.0384	0.0403	95.2		0.0431	0.0405	106	10.7		61-135	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFUnA	2058-94-8	ND	0.0408	0.0403	101		0.0401	0.0405	99.0	2.00		69-133	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
11Cl-PF3OUdS	763051-92-9	ND	0.0429	0.0403	106		0.0395	0.0405	97.6	8.25		70-130	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFDoA	307-55-1	ND	0.0392	0.0403	97.3		0.0340	0.0405	84.1	14.6		72-134	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFTrDA	72629-94-8	ND	0.0396	0.0403	98.3		0.0346	0.0405	85.4	14.0		65-144	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1
PFTeDA	376-06-7	ND	0.0409	0.0403	101		0.0389	0.0405	96.0	5.08		71-132	30	25-Feb-20 00:32	1	25-Feb-20 00:42	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	90.7		89.2		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C3-HFPO-DA	IS	77.3		88.6		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFHxA	IS	86.0	D	90.0	D	50-150	29-Feb-20 04:24	5	29-Feb-20 04:34	5
13C4-PFHpA	IS	83.5		88.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C3-PFHxS	IS	87.1		92.5		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C5-PFNA	IS	90.3		93.9		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFOA	IS	86.7	D	90.0	D	50-150	29-Feb-20 04:24	5	29-Feb-20 04:34	5
13C8-PFOS	IS	94.0		95.8		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFDA	IS	79.0		91.5		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
d3-MeFOSAA	IS	80.0		92.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFUnA	IS	77.3		78.2		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
d5-EtFOSAA	IS	86.2		85.0		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1
13C2-PFDoA	IS	73.8		81.1		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1

Sample ID: I003MW14S-20200214 **PFAS Isotope Dilution Method**

Name:	KMEA	Lab Sample:	B0B0137-MS1/B0B0137-MSD1	Source Lab Sample:	2000330-05
Project:	MCAS El Toro and Tustin, PFAS	QC Batch:	B0B0137	Date Extracted:	21-Feb-20
Matrix:	Aqueous	Samp Size:	0.248/0.247 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	67.9		62.4		50-150	25-Feb-20 00:32	1	25-Feb-20 00:42	1

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

2000330 2.4°C

Vista PM: Jade White-Dobbs

CHAIN OF CUSTODY RECORD

DATE: 2/14/2020

PAGE: 1 OF 1

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 Ruite	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
	EB03-20200214	2/14/20	7:00	BW	2		X
	I003MW05S-20200214		8:10	GW	2	IV	X
	I003MW12S-20200214		9:10		2	IV	X
	DUP04-20200214		9:15		2	IV	X
	I003MW14S-20200214		10:15		6	IV	X

MS/MSD

VK 2-14-20

Relinquished by: (Signature) Uly Ruite	Received by: (Signature) / Carrier Tracking Number FedEx	Date: 2/14/20	Time: 12:00
Relinquished by: (Signature) FedEx	Received by: (Signature) Hayden Gamal	Date: 02/15/2020	Time: 10:07
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2000330 TAT 14

Samples Arrival:	**Date/Time** 02/15/2020 10:07		**Initials:** HDG		**Location:** WR-2 **Shelf/Rack:** NA		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Dry Ice		None
Temp °C: 2.4 (uncorrected) **Temp °C:** 2.4 (corrected)			**Probe used:** Y / N		**Thermometer ID:** IR-4		

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Airbill — Trk # 8101 0952 1851	✓		
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** 02/18/20 0721	**Initials:** KS	**Location:** R-13	WR-2
			Shelf/Rack: A-2	E-3
COC Anomaly/Sample Acceptance Form completed?				✓

Comments:

CoC/Label Reconciliation Report WO# 2000330

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time		Container	BaseMatrix	Sample Comments
2000330-01	A EB03-20200214	☑		14-Feb-20 07:00	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-01	B EB03-20200214	☑		14-Feb-20 07:00	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-02	A I003MW05S-20200214	☑		14-Feb-20 08:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-02	B I003MW05S-20200214	☑		14-Feb-20 08:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-03	A I003MW12S-20200214	☑		14-Feb-20 09:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-03	B I003MW12S-20200214	☑		14-Feb-20 09:10	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-04	A DUP04-20200214	☑		14-Feb-20 09:15	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-04	B DUP04-20200214	☑		14-Feb-20 09:15	☑	HDPE Bottle, 250 mL	Aqueous	
2000330-05	A I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	B I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	C I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	D I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	E I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD
2000330-05	F I003MW14S-20200214	☑		14-Feb-20 10:15	☑	HDPE Bottle, 250 mL	Aqueous	MS/MSD

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: KS 02/16/20

EXTRACTION INFORMATION

PRIORITY

Process Sheet

Workorder: 2000330

Prep Expiration: 2020-02-28
Client: KMEA

Workorder Due: 02-Mar-20 00:00

TAT: 16

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

Prep Batch: BOB0137

Prep Data Entered: N 02/24/20
Date and Initials

Version: 537.1 List of 18
DoD: DoD QSM 5.3

Initial Sequence: SØBØØ55

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
2000330-01	A	☑	☑	EB03-20200214		R-13 A-2	HDPE Bottle, 250 mL
2000330-02	↓	☑	☑	I003MW05S-20200214		R-13 A-2	HDPE Bottle, 250 mL
2000330-03	↓	☑	☑	I003MW12S-20200214		R-13 A-2	HDPE Bottle, 250 mL
2000330-04	↓	☑	☑	DUP04-20200214	↓	R-13 A-2	HDPE Bottle, 250 mL
2000330-05	ABC	☑	☑	I003MW14S-20200214	**MS/MSD**	R-13 A-2	HDPE Bottle, 250 mL

Potentially elevated levels - isolate samples.
Instrument - begin w/ dils. (tw) 02/18/20

Pre-Prep Check Out: CHT 02/18/20
Pre-Prep Check In: CHT 02/18/20

Prep Check Out: LW 02/21/20
Prep Check In: N/A

Prep Reconciled Initals/Date: CHT 02/18/20
Spike Reconciled Initals/Date: LW 02/21/20
VialBoxID: Worth it

Matrix: Aqueous

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

Vista Internal Chain-of-Custody

B0B0137

Vista Analytical Laboratory

	Location		L2	R13	L2	R12	L2	R12	L4		
	Reason		Prep	R9	R4	R9	R6	R6,9	pw		
	Initials		CHT	CHT	LW	LW	ONL	ME	Ohn		
	Date/Time		02/18/20 1137	02/18/20 1153	02/21/20 0704	02/21/20 1436	02/24/20 06:58	02/24/2020 14:44	~~2/25/2020 1757~~		
Initial Storage	LabNumber	Cont									
R-13 A-2	2000330-01	A	O	O	O	E	E	E	E		
R-13 A-2	2000330-02										
R-13 A-2	2000330-03										
R-13 A-2	2000330-04										
R-13 A-2	2000330-05	ABC									

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

* ME 02/24/2020

& Analyzed on 2/24/2020 but time not documented -Ohn 2/28/2020

Matrix: Aqueous

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

PREPARATION BENCH SHEET

B0B0137

Chemist: LW

Prep Date: 02/21/20

Prep Time: 7:49

Hood#: 6

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

Rec Date/Initals: HP 02/24/20

Date/Initals: 02/18/20 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
☐	B0B0137-BLK1	☑	☑	5	0	NA	NA	(0.250)	LW HP 02/21/20	LW 02/21/20	LW 02/21/20	LW LW 02/21/20
☐	B0B0137-BS1	☑	☑	5	0	↓	↓	(0.250)	↓	↓	↓	↓
☐	B0B0137-MS1 2000330-05	☑	☑	6	0	273.68	25.69	0.24799				
☐	B0B0137-MSD1 2000330-05	☑	☑	6	0	272.80	25.62	0.24718				
☐	2000330-01	☑	☑	5	0	276.96	25.77	0.25119				
☐	2000330-02	☑	☑	6	0	282.48	26.11	0.25637				
☐	2000330-03	☑	☑	6	0	276.50	26.19	0.25031				
☐	2000330-04	☑	☑	6	0	280.32	25.97	0.25435				
☐	2000330-05	☑	☑	6	0	277.60	25.89	0.25171				

IS: 20A0801, 10mL V19

IS SUP: N/A

NS: 20A0803, 10mL V10

NS SUP: N/A

RS: 20A0804, 10mL V20

SPE Chem: Strata xAW 33um 200mg/6mL LW 02/21/20

SPE Lot#: 99-005938 9

ENVI-Carb Lot#: 803071

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: B0B0137

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
2000330-01	0.25119	NA	NA	1000	21-Feb-20 07:49	LW			Blank Water	537M PFAS DOD QSM 5.3
2000330-02	0.25637			1000	21-Feb-20 07:49	LW			Groundwater	537M PFAS DOD QSM 5.3
2000330-03	0.25031			1000	21-Feb-20 07:49	LW			Groundwater	537M PFAS DOD QSM 5.3
2000330-04	0.25435			1000	21-Feb-20 07:49	LW			Groundwater	537M PFAS DOD QSM 5.3
2000330-05	0.25171			1000	21-Feb-20 07:49	LW			Groundwater	537M PFAS DOD QSM 5.3
B0B0137-BLK1	0.25			1000	21-Feb-20 07:49	LW				QC
B0B0137-BS1	0.25			1000	21-Feb-20 07:49	LW	20A0803	10		QC
B0B0137-MS1	0.24799			1000	21-Feb-20 07:49	LW	20A0803	10		QC
B0B0137-MSD1	0.24718			1000	21-Feb-20 07:49	LW	20A0803	10		QC

All bolded data on report verified against written benchsheet by (initial/date) M 02/24/20

Printed: 2/24/2020 8:56:22AM
Page 1 of 1

Sample Data – PFAS Isotope Dilution Method

Vista Analytical Laboratory L18

MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

Last Altered: Friday, February 28, 2020 14:31:20 Pacific Standard Time
Printed: Friday, February 28, 2020 14:38:55 Pacific Standard Time

Name: 200224P1-41, Date: 25-Feb-2020, Time: 00:11:13, ID: B0B0137-BLK1 Method Blank 0.25, Description: Method Blank

	#	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		1.42e3	0.250		2.61						
2	7	PFHxA	313.0 > 269.0		1.93e4	0.250		3.12						
3	9	HFPO-DA	285.1 > 168.9		3.22e3	0.250		3.33						
4	11	PFHpA	363.0 > 318.9		1.21e4	0.250		3.71						
5	12	ADONA	376.8 > 250.9		1.21e4	0.250		3.81						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.42e3		0.250	121.548	2.65	2.61	1420	46.7092	93.4		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.93e4		0.250	1744.841	3.11	3.12	19300	44.2644	88.5		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.22e3		0.250	328.216	3.38	3.33	3220	39.2100	78.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.21e4		0.250	1063.335	3.72	3.71	12100	45.6649	91.3		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.21e4		0.250	1063.335	3.72	3.71	12100	45.6649	91.3		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.28e1	2.94e3	0.250		3.85	3.85	0.0970	0.6893		100.410	YES
13	1...	Total PFHxS	398.9 > 79.7	2.28e1	2.94e3	0.250		3.93		0.0970	0.6893			
14	16	L-PFOA	412.8 > 368.9		1.72e4	0.250		4.22						
15	1...	Total PFOA	412.8 > 368.9	0.00e0	1.72e4	0.250		4.60		0.000				
16	21	PFNA	463.0 > 418.8		1.39e4	0.250		4.65						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.94e3		0.250	253.005	3.85	3.85	2940	46.4559	92.9		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.94e3		0.250	253.005	3.85	3.85	2940	46.4559	92.9		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.72e4		0.250	1468.721	4.22	4.22	17200	46.9495	93.9		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.72e4		0.250	1468.721	4.22	4.22	17200	46.9495	93.9		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.39e4		0.250	1278.380	4.65	4.65	13900	43.4465	86.9		
22	-1													
23	23	L-PFOS	498.9 > 79.7		3.45e3	0.250		4.74						
24	1...	Total PFOS	498.9 > 79.7	0.00e0	3.45e3	0.250		5.13		0.000				
25	25	9Cl-PF30NS	530.7 > 350.8		3.45e3	0.250		4.94						
26	26	PFDA	513 > 468.8		1.52e4	0.250		5.03						
27	33	PFUdA	563.0 > 518.9		1.80e4	0.250		5.34						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.45e3		0.250	286.356	4.74	4.74	3450	48.2037	96.4		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.45e3		0.250	286.356	4.74	4.74	3450	48.2037	96.4		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.45e3		0.250	286.356	4.74	4.74	3450	48.2037	96.4		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.52e4		0.250	1461.559	5.03	5.03	15200	41.7170	83.4		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.80e4		0.250	1646.627	5.34	5.34	18000	43.7721	87.5		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.70e3	0.250		5.17						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.70e3	0.250		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.50e3	0.250		5.33						

Vista Analytical Laboratory L18

MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

Last Altered: Friday, February 28, 2020 14:31:20 Pacific Standard Time
Printed: Friday, February 28, 2020 14:38:55 Pacific Standard Time

Name: 200224P1-41, Date: 25-Feb-2020, Time: 00:11:13, ID: B0B0137-BLK1 Method Blank 0.25, Description: Method Blank

	#	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	3.50e3	0.250		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.53e4	0.250		5.55						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.70e3		0.250	287.523	5.17	5.17	2700	37.6161	75.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.70e3		0.250	287.523	5.17	5.17	2700	37.6161	75.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.50e3		0.250	355.877	5.31	5.33	3500	39.2852	78.6		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.50e3		0.250	355.877	5.31	5.33	3500	39.2852	78.6		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.53e4		0.250	1443.711	5.61	5.62	15300	42.3534	84.7		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.53e4	0.250		5.62						
46	39	PFTrDA	662.9 > 618.9		1.53e4	0.250		5.87						
47	41	PFTeDA	713.0 > 669.0		1.45e4	0.250		6.07						
48	1...	TDCA	498.3>106.9			0.250		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.21e4	1.21e4	0.250	1.000	1.40	1.39	12.5	50.0000	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.53e4		0.250	1443.711	5.61	5.62	15300	42.3534	84.7		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.53e4		0.250	1443.711	5.61	5.62	15300	42.3534	84.7		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.45e4		0.250	1671.855	6.04	6.07	14500	34.7971	69.6		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.45e3		0.250	286.356	4.74	4.74	3450	48.2037	96.4		
54	1...	13C5-PFHxA	318.0 > 272.9	2.23e4	2.23e4	0.250	1.000	3.11	3.11	12.5	50.0000	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.31e3	1.31e3	0.250	1.000	3.85	3.85	12.5	50.0000	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.95e4	1.95e4	0.250	1.000	5.02	5.03	12.5	50.0000	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	2.00e4	2.00e4	0.250	1.000	5.34	5.34	12.5	50.0000	100.0		
59	1...	13C4-PFOS	503 > 79.7	4.09e3	4.09e3	0.250	1.000	4.74	4.74	12.5	50.0000	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.76e4	1.76e4	0.250	1.000	4.65	4.65	12.5	50.0000	100.0		

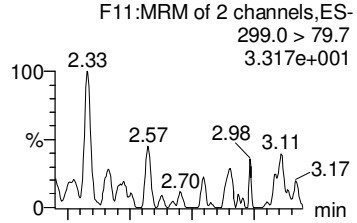
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Last Altered: Friday, February 28, 2020 14:31:20 Pacific Standard Time
Printed: Friday, February 28, 2020 14:38:55 Pacific Standard Time

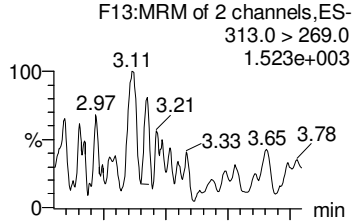
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Name: 200224P1-41, Date: 25-Feb-2020, Time: 00:11:13, ID: B0B0137-BLK1 Method Blank 0.25, Description: Method Blank

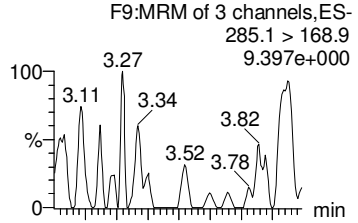
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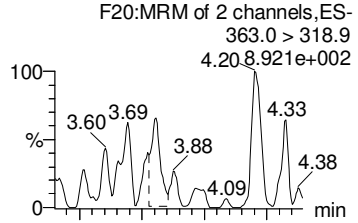
PFHxA



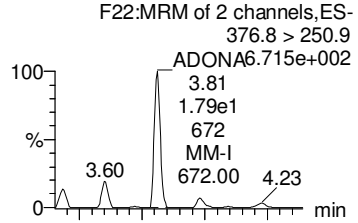
HFPO-DA



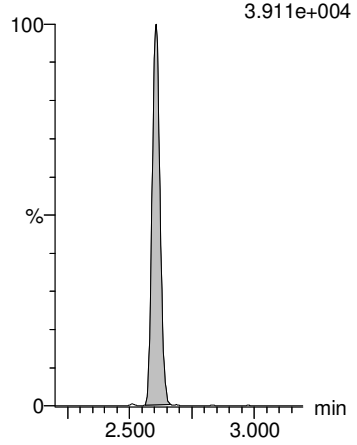
PFHpA



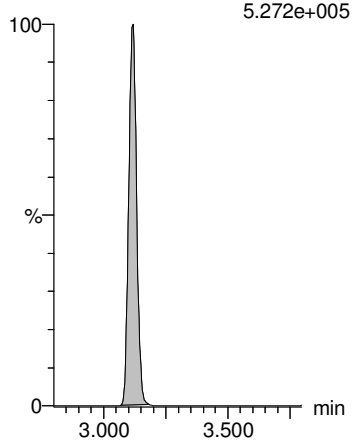
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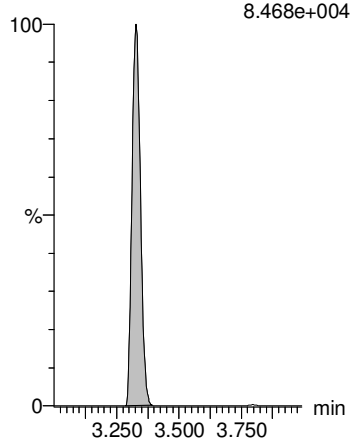
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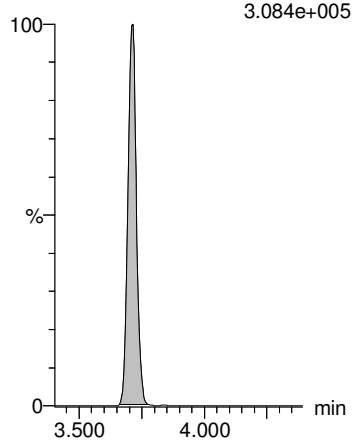
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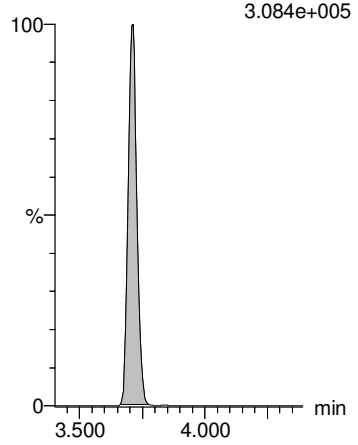
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13C4-PFHpA-EIS



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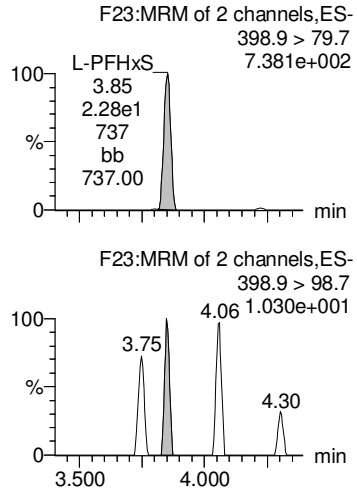


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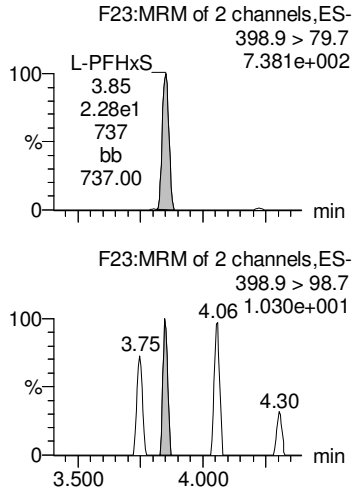
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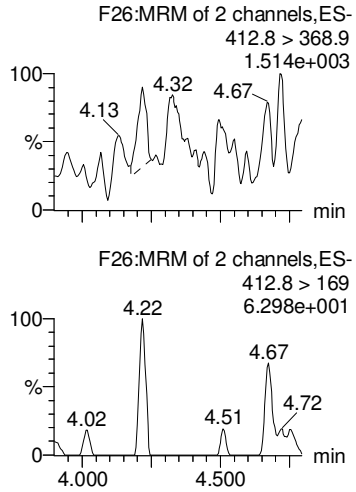
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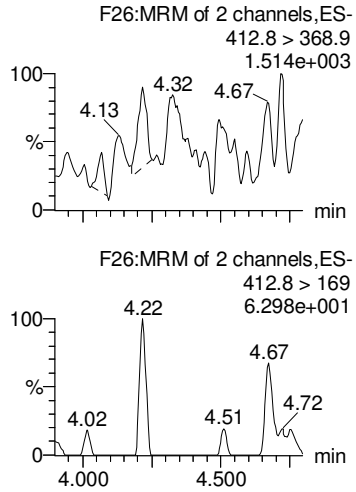
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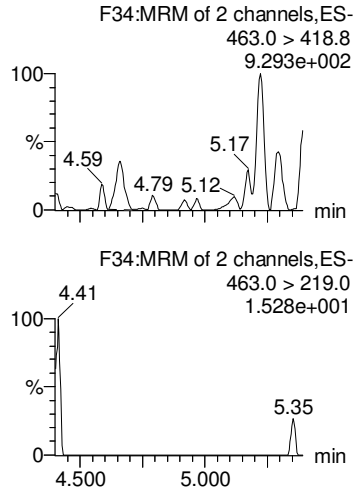
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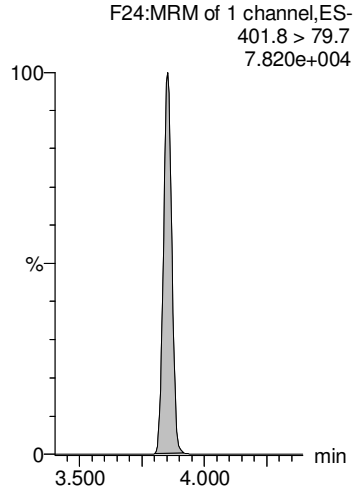
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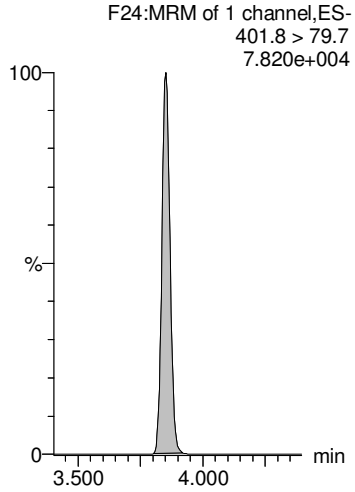
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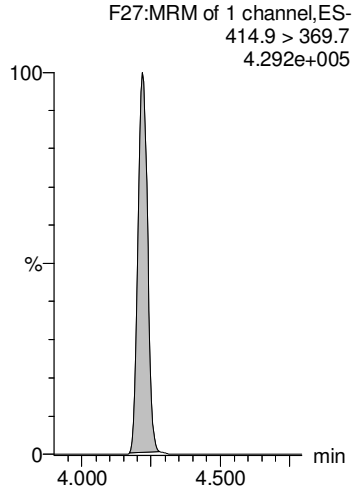
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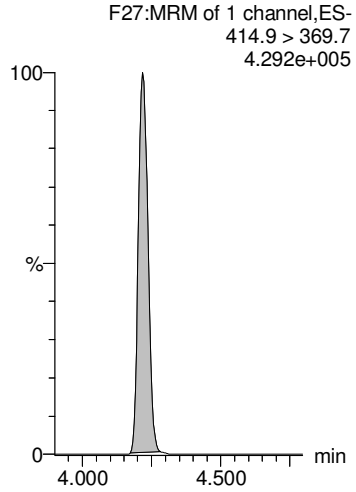
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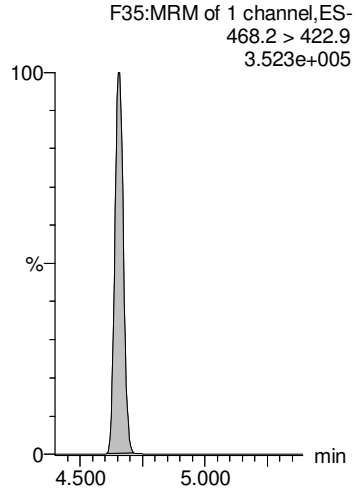
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13C2-PFOA-EIS



13C5-PFNA-EIS

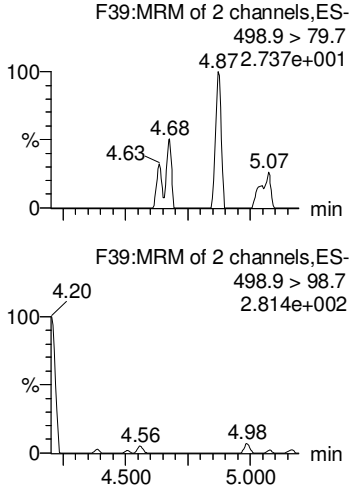


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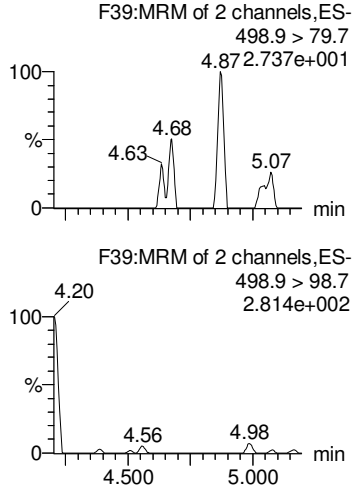
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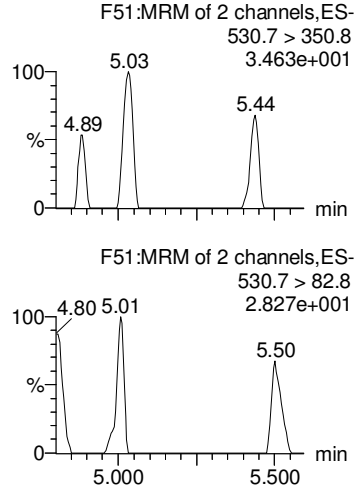
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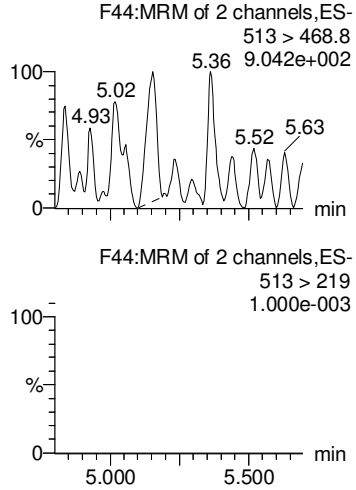
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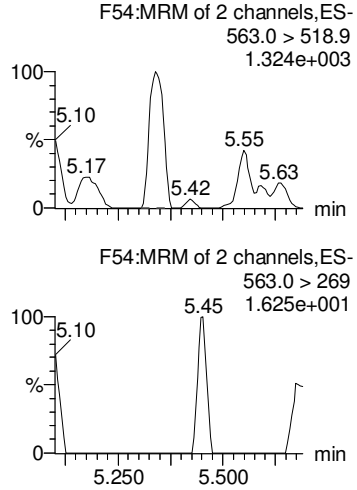
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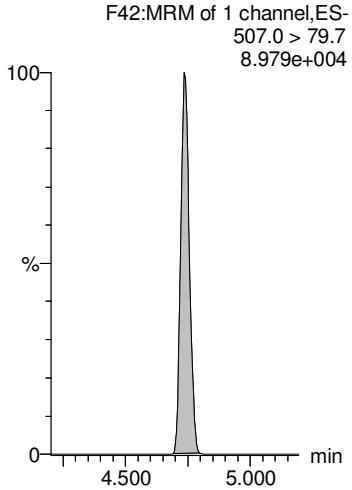
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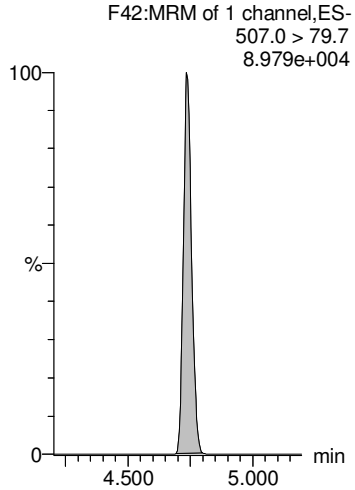
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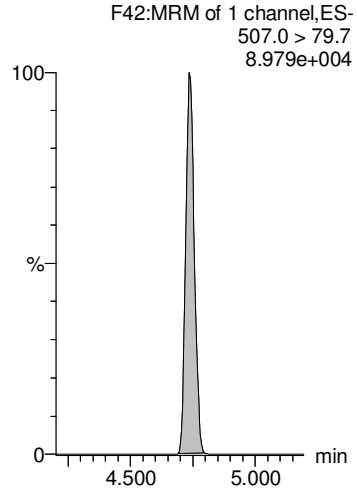
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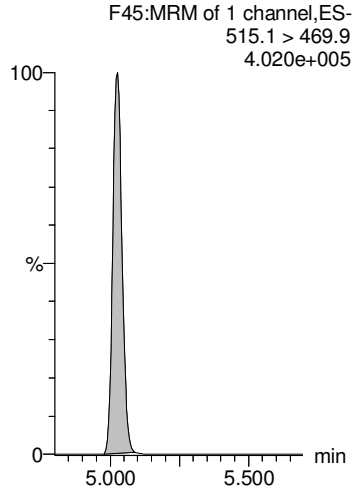
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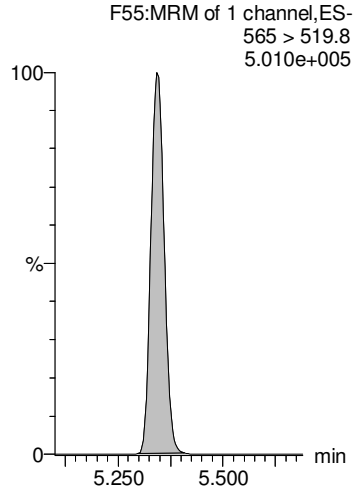
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13C2-PFDA-EIS



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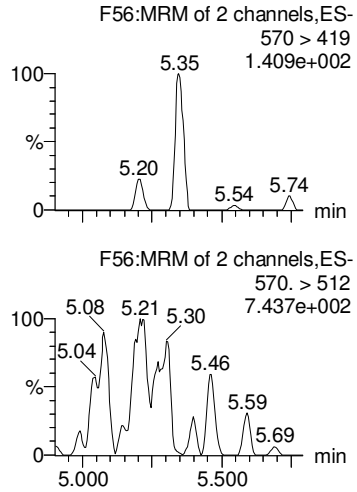


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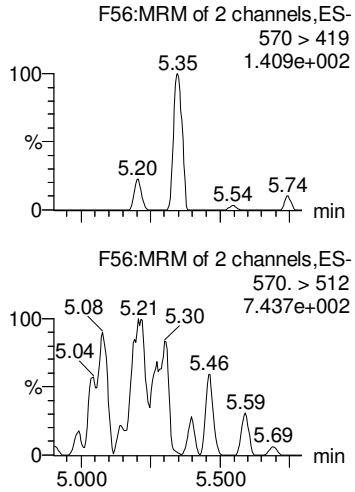
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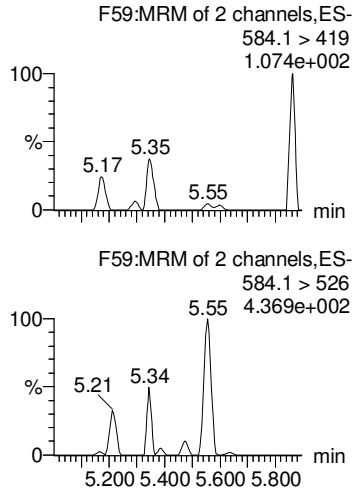
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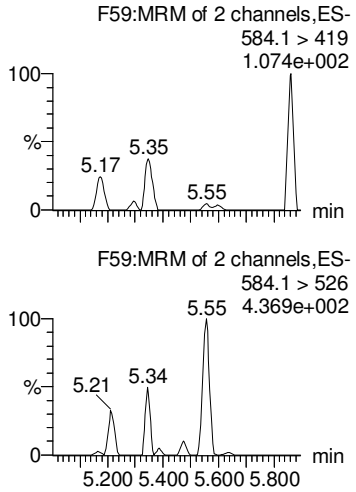
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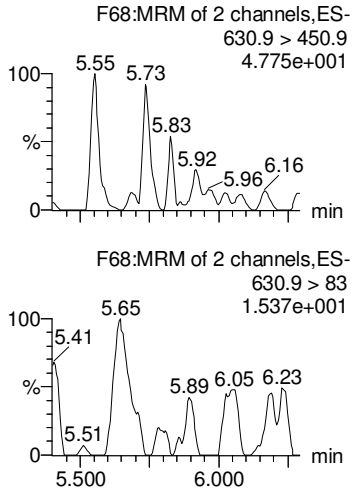
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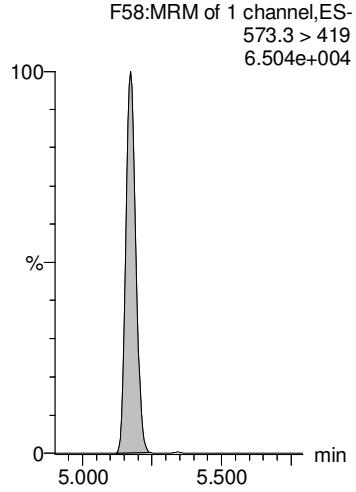
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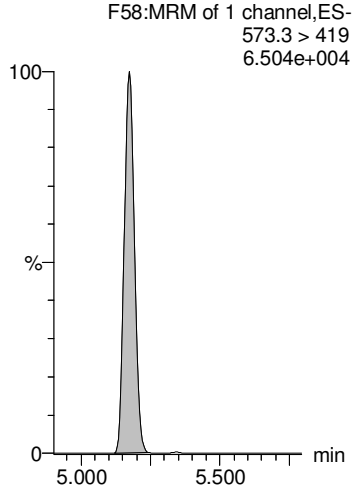
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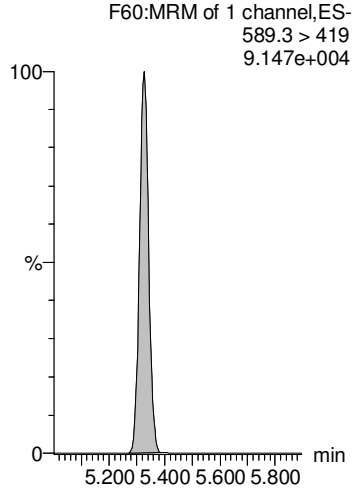
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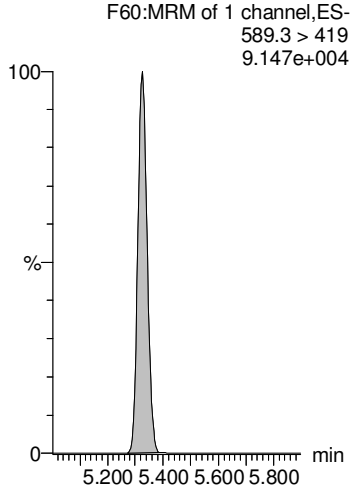
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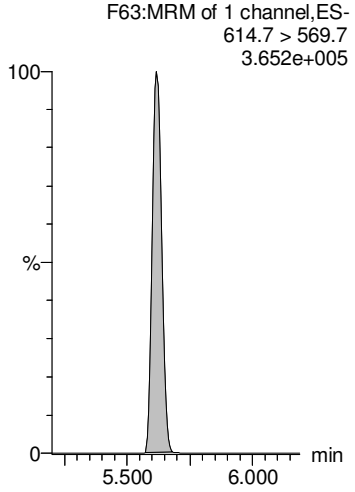
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

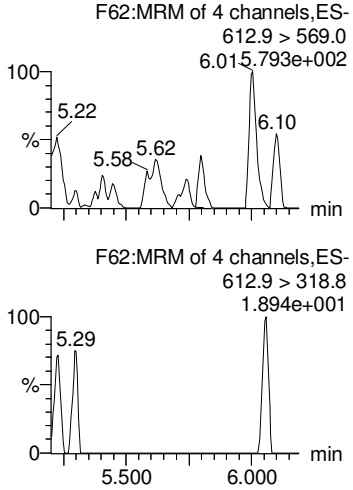


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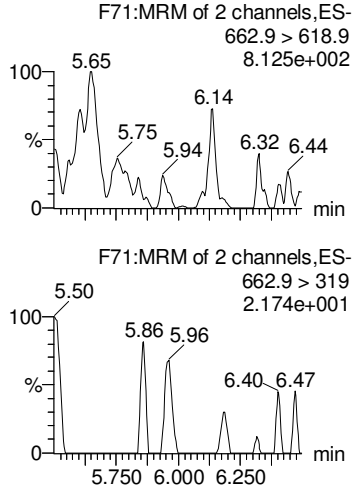
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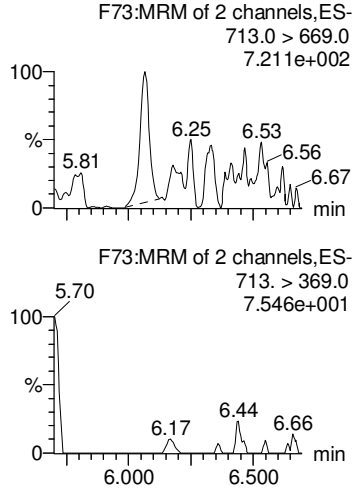
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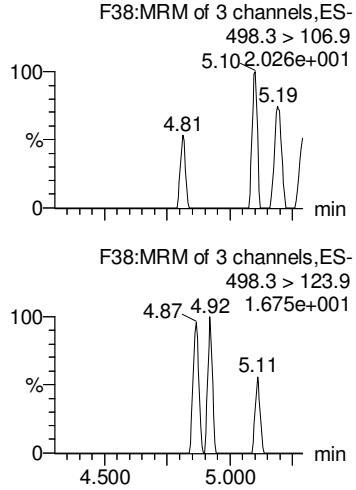
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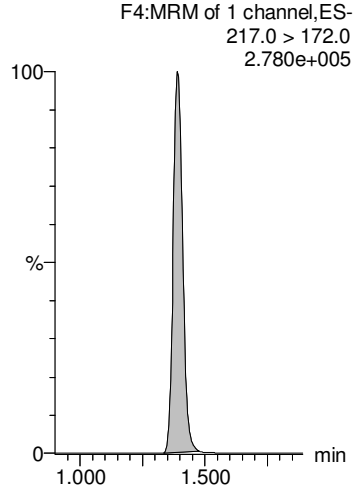
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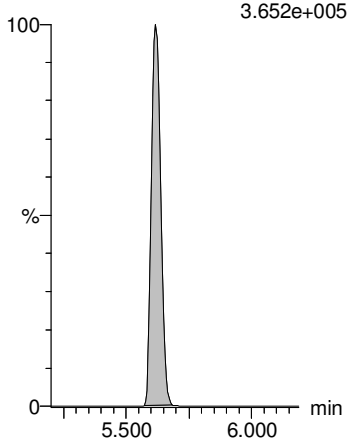
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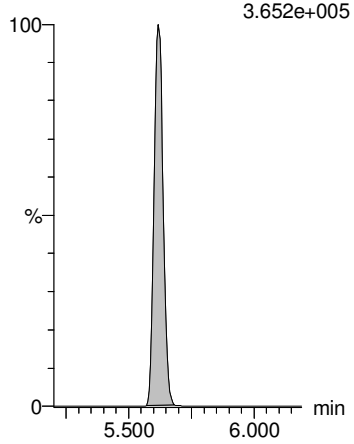
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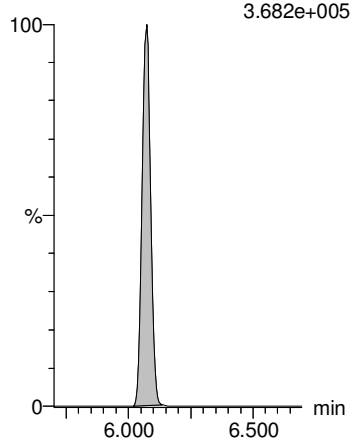
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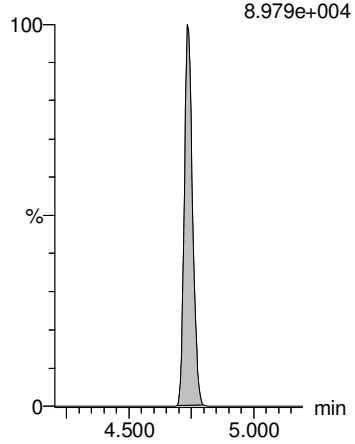
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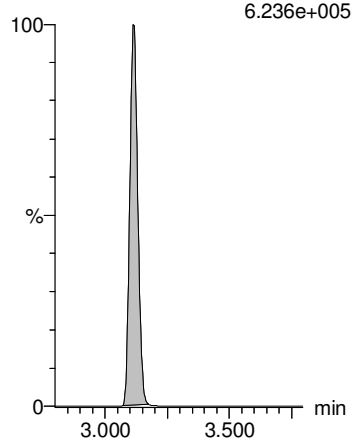
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

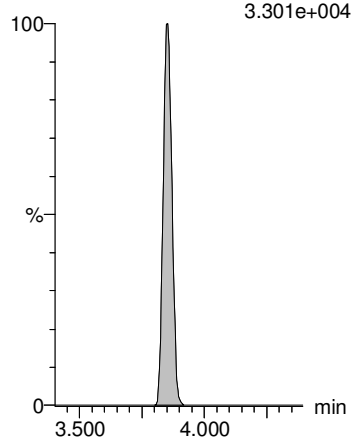


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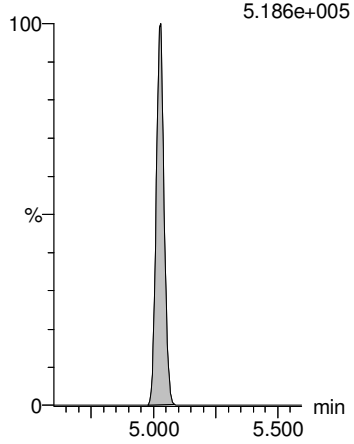
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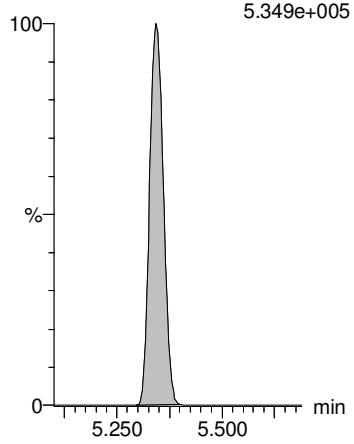
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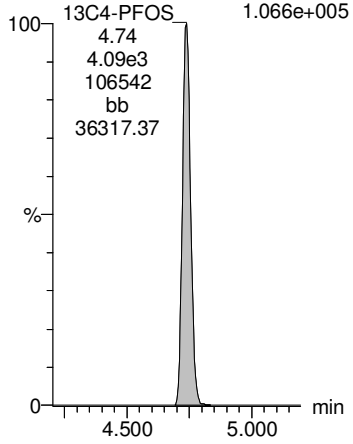
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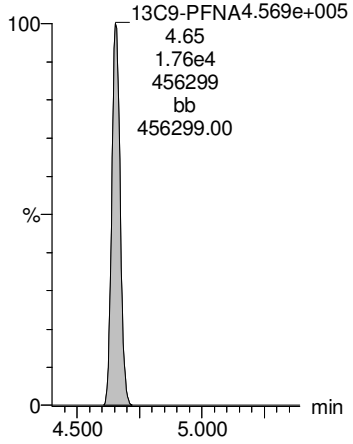
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Name: 200224P1-42, Date: 25-Feb-2020, Time: 00:21:42, ID: B0B0137-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?
1	5	PFBS	299.0 > 79.7	2.59e3	1.57e3	0.250		2.60	2.61	20.6	34.5141	86.3	2.973	NO
2	7	PFHxA	313.0 > 269.0	1.48e4	2.19e4	0.250		3.12	3.12	8.41	36.6505	91.6	16.486	NO
3	9	HFPO-DA	285.1 > 168.9	2.80e3	4.03e3	0.250		3.33	3.33	8.68	32.8540	82.1	2.584	NO
4	11	PFHpA	363.0 > 318.9	1.22e4	1.42e4	0.250		3.71	3.71	10.7	35.0154	87.5	23.107	NO
5	12	ADONA	376.8 > 250.9	2.98e4	1.42e4	0.250		3.81	3.81	26.2	33.7917	84.5	3.888	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.57e3		0.250	121.548	2.64	2.60	1570	51.6823	103.4		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.19e4		0.250	1744.841	3.11	3.12	21900	50.2808	100.6		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4.03e3		0.250	328.216	3.38	3.33	4030	49.1289	98.3		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.42e4		0.250	1063.335	3.72	3.71	14200	53.4761	107.0		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.42e4		0.250	1063.335	3.72	3.71	14200	53.4761	107.0		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	2.69e3	3.18e3	0.250		3.85	3.85	10.6	39.0619	97.7	2.410	NO
13	1...	Total PFHxS	398.9 > 79.7	2.69e3	3.18e3	0.250		3.93		10.6	39.0619			
14	16	L-PFOA	412.8 > 368.9	1.74e4	2.08e4	0.250		4.22	4.22	10.4	35.3841	88.5	3.327	NO
15	1...	Total PFOA	412.8 > 368.9	1.74e4	2.08e4	0.250		4.60		10.4	35.3841			
16	21	PFNA	463.0 > 418.8	1.60e4	1.79e4	0.250		4.65	4.65	11.2	34.8129	87.0	7.630	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.18e3		0.250	253.005	3.85	3.85	3180	50.2078	100.4		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.18e3		0.250	253.005	3.85	3.85	3180	50.2078	100.4		
19	69	13C2-PFOA-EIS	414.9 > 369.7	2.08e4		0.250	1468.721	4.22	4.22	20800	56.6323	113.3		
20	69	13C2-PFOA-EIS	414.9 > 369.7	2.08e4		0.250	1468.721	4.22	4.22	20800	56.6323	113.3		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.79e4		0.250	1278.380	4.65	4.65	17900	56.0624	112.1		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.74e3	3.82e3	0.250		4.74	4.74	8.96	35.8735	89.7	2.345	NO
24	1...	Total PFOS	498.9 > 79.7	2.74e3	3.82e3	0.250		5.13		8.96	35.8735			
25	25	9Cl-PF30NS	530.7 > 350.8	3.13e3	3.82e3	0.250		4.95	4.95	10.2	36.7134	91.8	13.535	NO
26	26	PFDA	513 > 468.8	1.69e4	1.84e4	0.250		5.02	5.02	11.4	36.7726	91.9	11.007	NO
27	33	PFUdA	563.0 > 518.9	1.37e4	1.94e4	0.250		5.34	5.34	8.84	35.5365	88.8	19.079	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.82e3		0.250	286.356	4.74	4.74	3820	53.3904	106.8		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.82e3		0.250	286.356	4.74	4.74	3820	53.3904	106.8		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.82e3		0.250	286.356	4.74	4.74	3820	53.3904	106.8		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.84e4		0.250	1461.559	5.02	5.02	18400	50.4053	100.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.94e4		0.250	1646.627	5.34	5.34	19400	47.1207	94.2		
33	-1													
34	29	L-MeFOSAA	570 > 419	4.48e3	2.95e3	0.250		5.17	5.18	19.0	37.5247	93.8	1.984	NO
35	1...	Total N-MeFOSAA	570. > 419	4.48e3	2.95e3	0.250		5.19		19.0	37.5247			
36	31	L-EtFOSAA	584.1 > 419	3.74e3	4.25e3	0.250		5.32	5.33	11.0	34.8275	87.1	1.132	NO

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Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.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	3.74e3	4.25e3	0.250		5.37		11.0	34.8275			
38	35	11Cl-PF30UdS	630.9 > 450.9	6.84e3	1.85e4	0.250		5.55	5.55	4.62	35.2071	88.0	21.244	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.95e3		0.250	287.523	5.17	5.17	2950	41.0520	82.1		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.95e3		0.250	287.523	5.17	5.17	2950	41.0520	82.1		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.25e3		0.250	355.877	5.31	5.32	4250	47.7157	95.4		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	4.25e3		0.250	355.877	5.31	5.32	4250	47.7157	95.4		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.85e4		0.250	1443.711	5.61	5.62	18500	51.2090	102.4		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.24e4	1.85e4	0.250		5.62	5.62	8.39	29.4813	73.7	10.279	NO
46	39	PFTrDA	662.9 > 618.9	1.31e4	1.85e4	0.250		5.87	5.86	8.84	29.7363	74.3	65.043	NO
47	41	PFTeDA	713.0 > 669.0	1.41e4	1.73e4	0.250		6.07	6.07	10.2	39.3802	98.5	19.628	NO
48	1...	TDCA	498.3>106.9			0.250		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.24e4	1.24e4	0.250	1.000	1.40	1.39	12.5	50.0000	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.85e4		0.250	1443.711	5.61	5.62	18500	51.2090	102.4		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.85e4		0.250	1443.711	5.61	5.62	18500	51.2090	102.4		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.73e4		0.250	1671.855	6.04	6.07	17300	41.3399	82.7		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.82e3		0.250	286.356	4.74	4.74	3820	53.3904	106.8		
54	1...	13C5-PFHxA	318.0 > 272.9	2.19e4	2.19e4	0.250	1.000	3.11	3.11	12.5	50.0000	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.31e3	1.31e3	0.250	1.000	3.85	3.85	12.5	50.0000	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.86e4	1.86e4	0.250	1.000	5.02	5.02	12.5	50.0000	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.97e4	1.97e4	0.250	1.000	5.34	5.34	12.5	50.0000	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.90e3	3.90e3	0.250	1.000	4.74	4.74	12.5	50.0000	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.78e4	1.78e4	0.250	1.000	4.65	4.65	12.5	50.0000	100.0		

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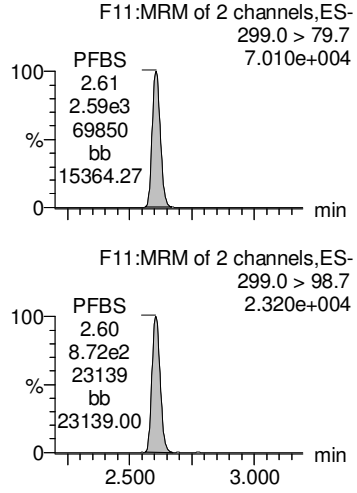
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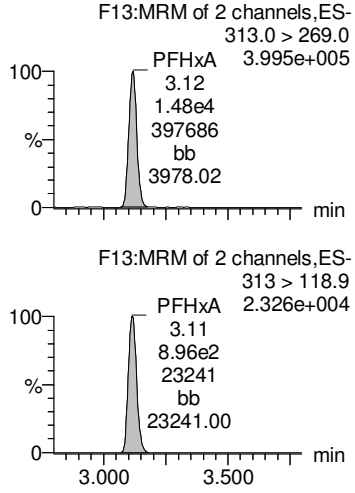
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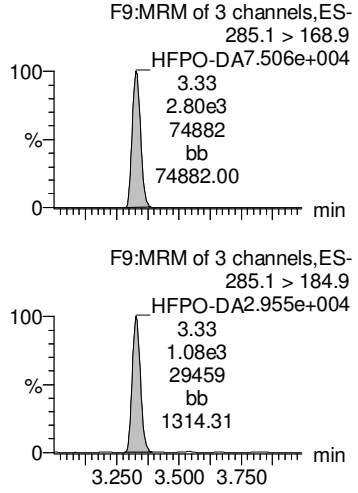
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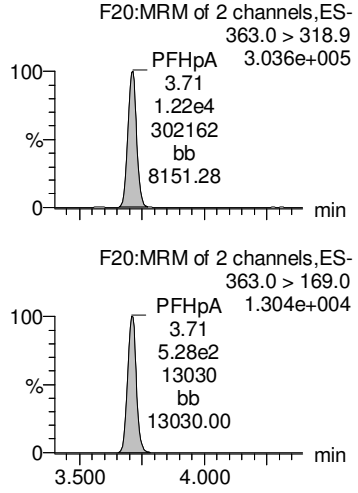
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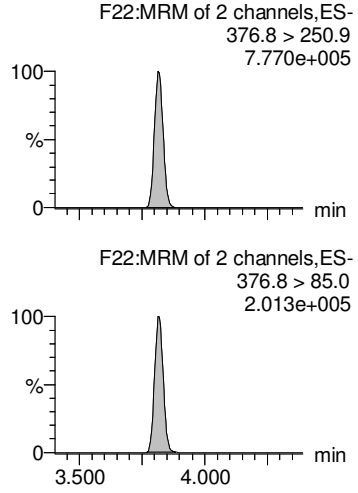
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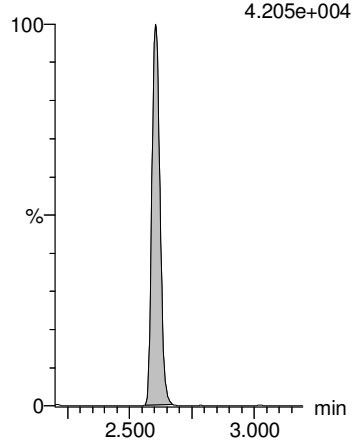
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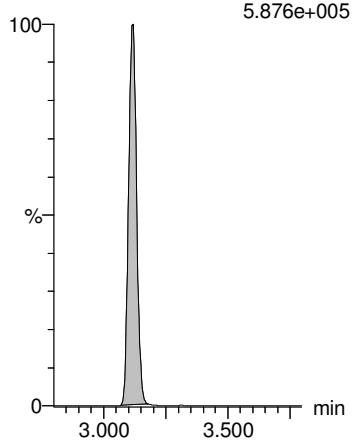
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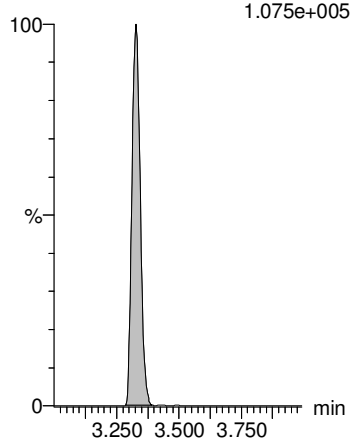
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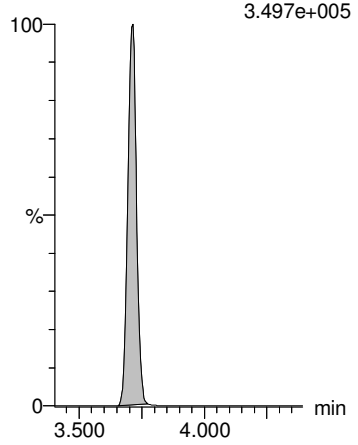
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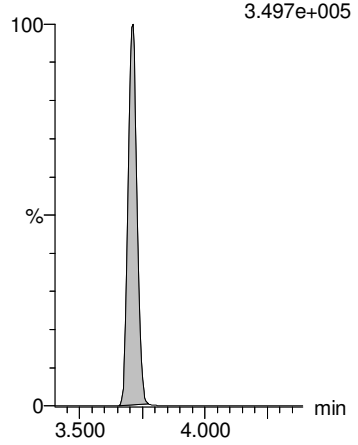
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

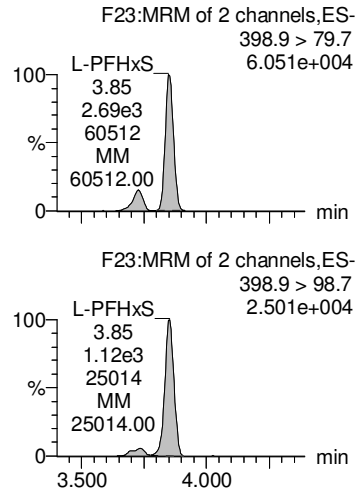


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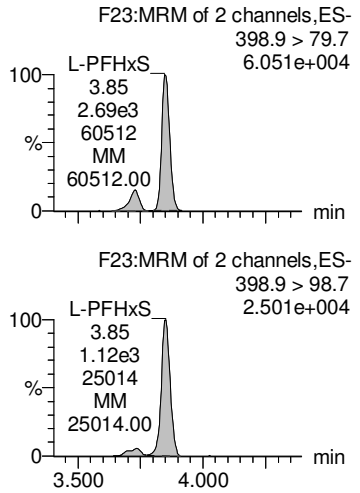
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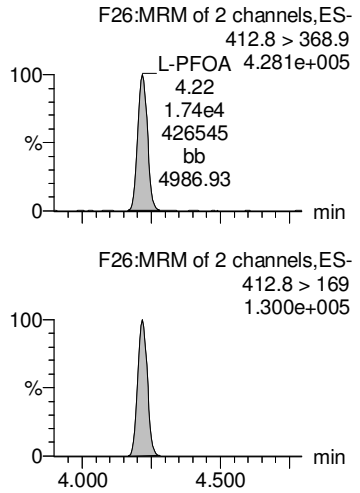
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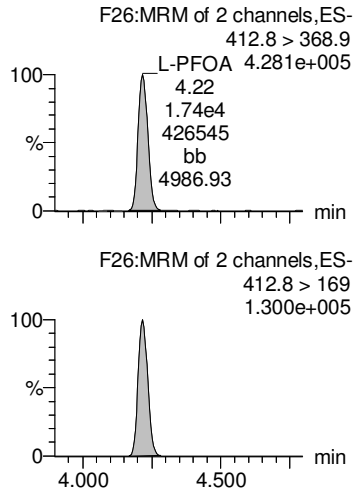
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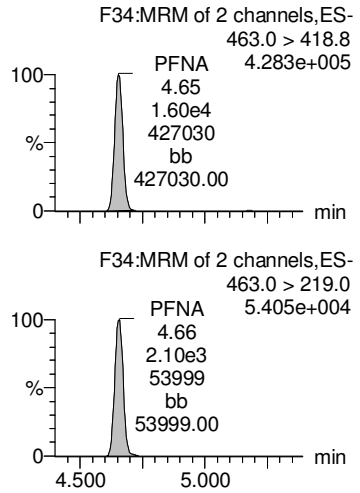
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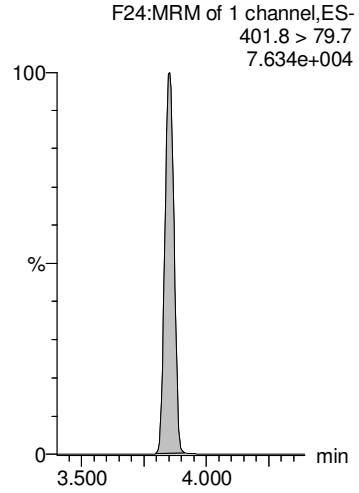
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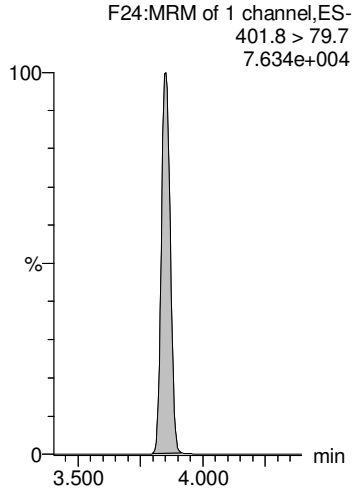
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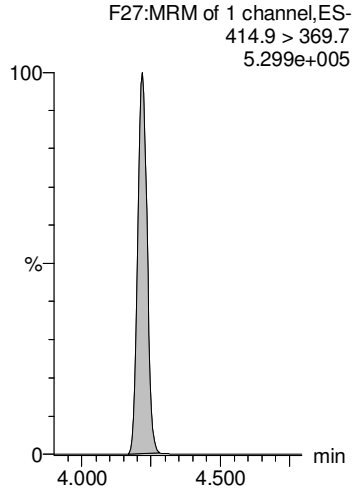
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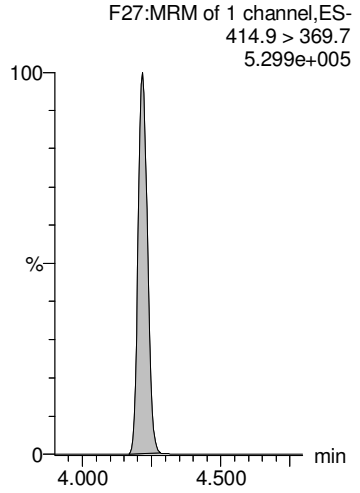
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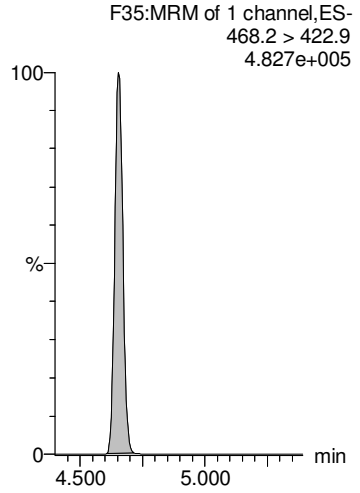
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13C2-PFOA-EIS



13C5-PFNA-EIS

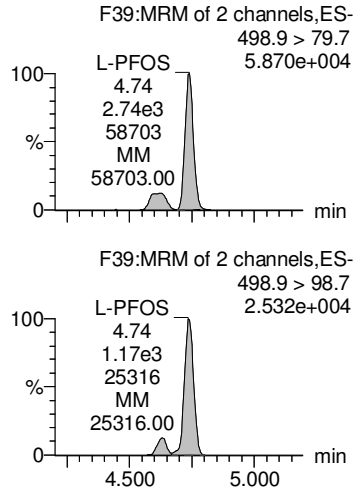


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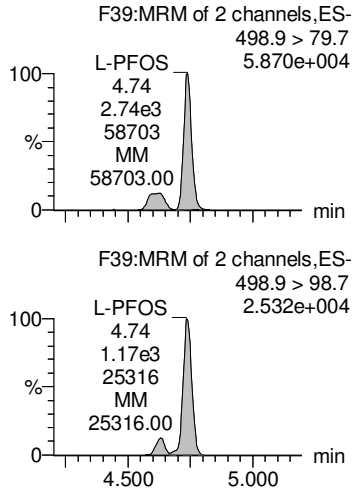
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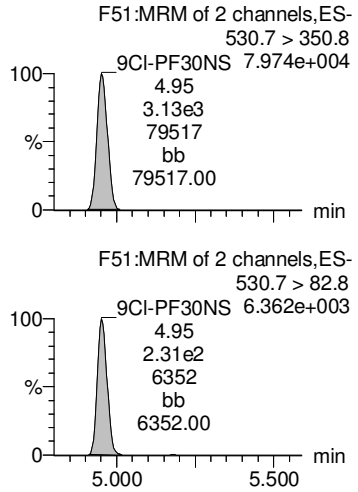
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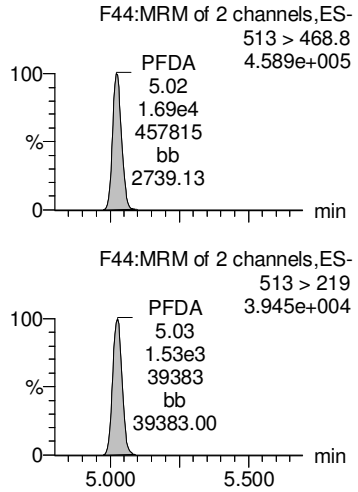
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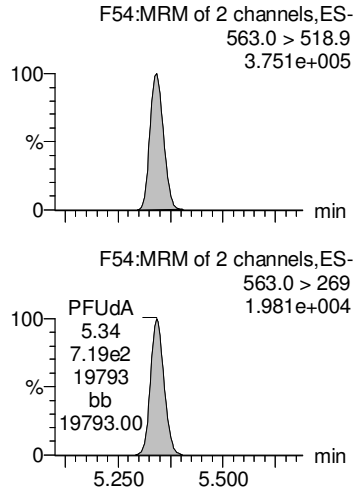
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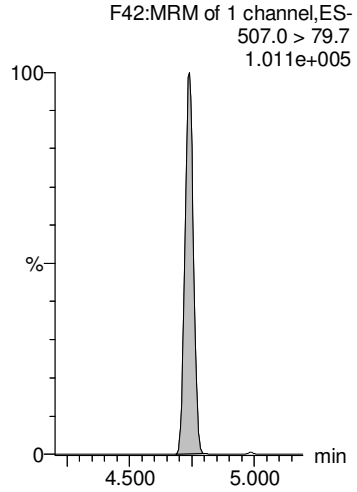
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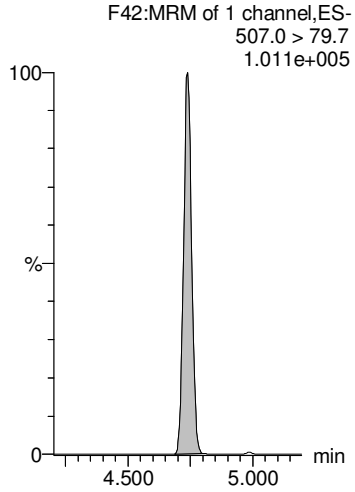
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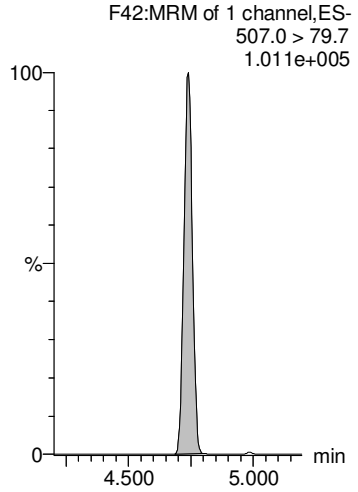
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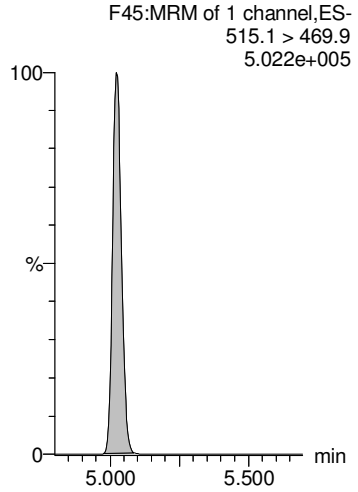
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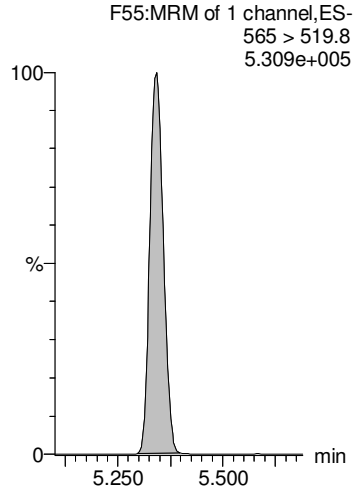
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS

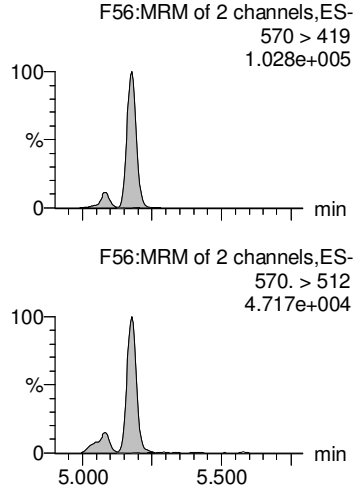


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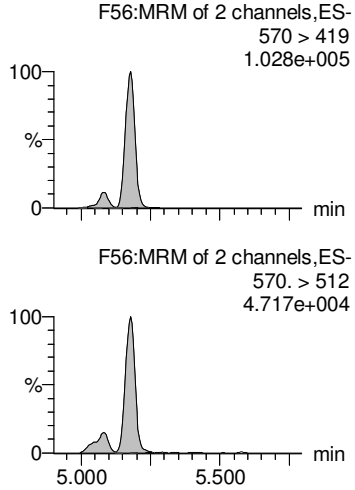
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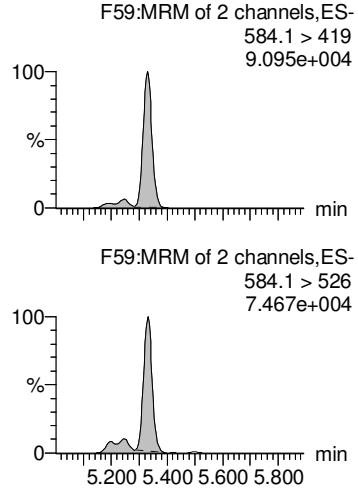
L-MeFOSAA



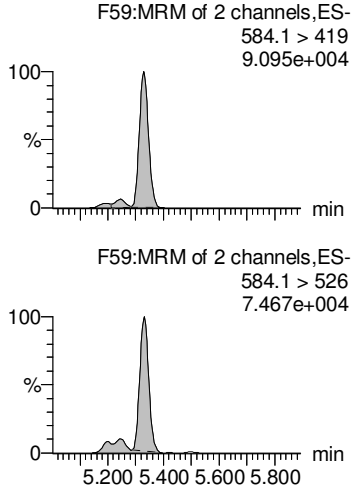
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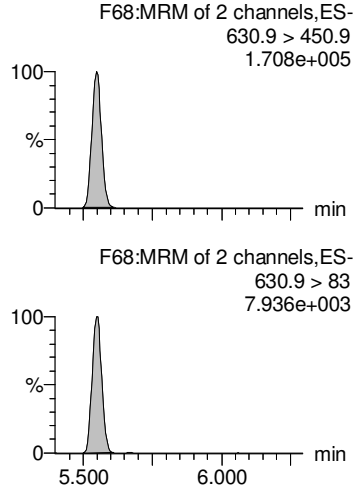
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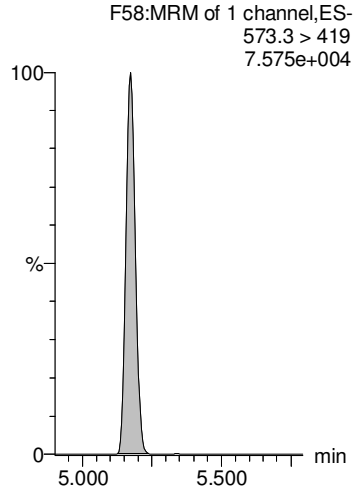
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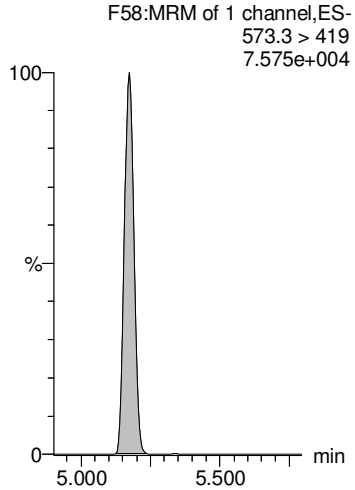
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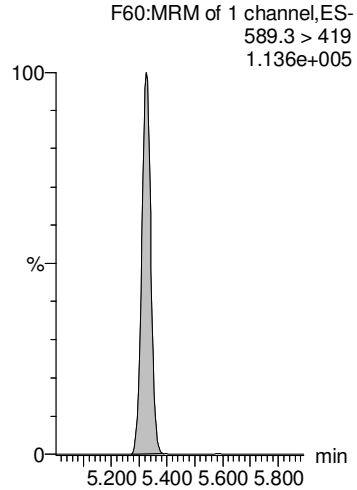
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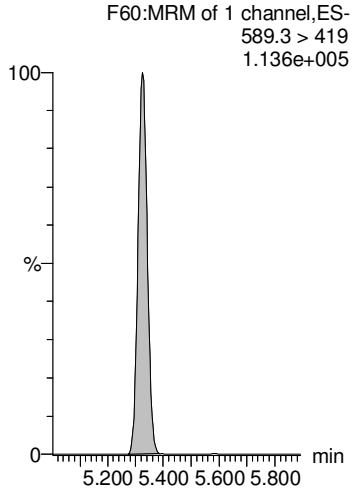
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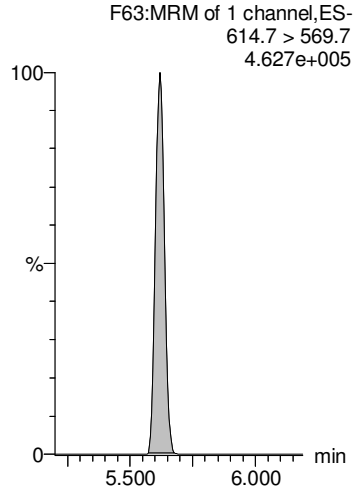
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

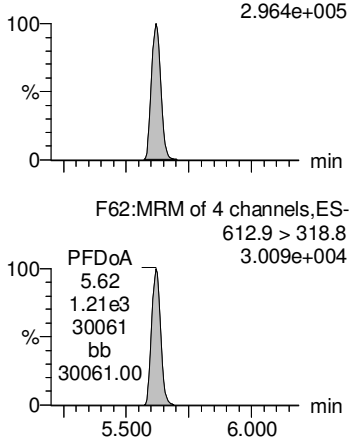


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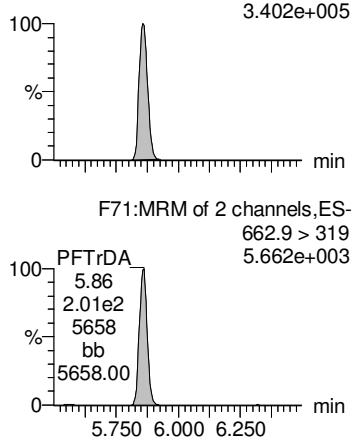
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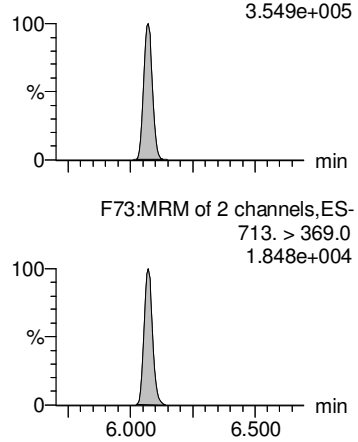
PFDoA



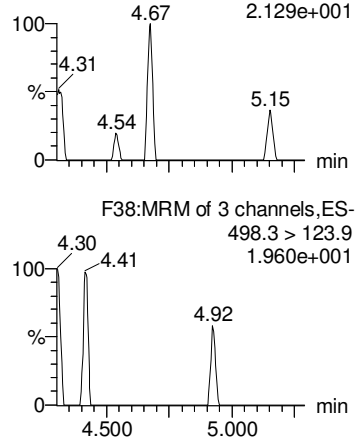
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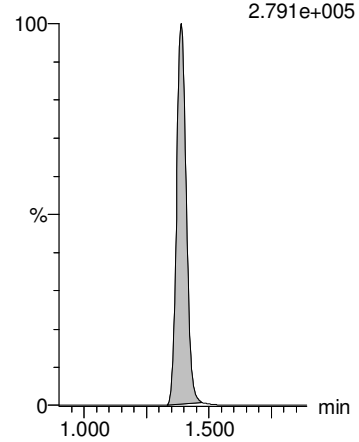
PFTeDA



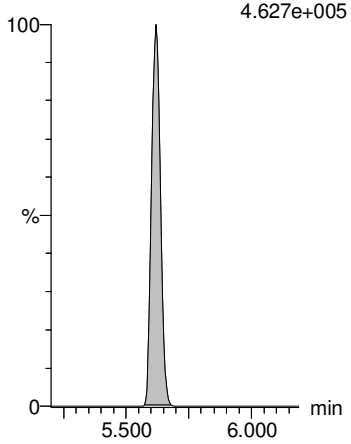
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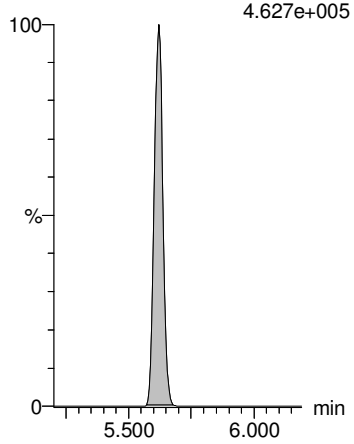
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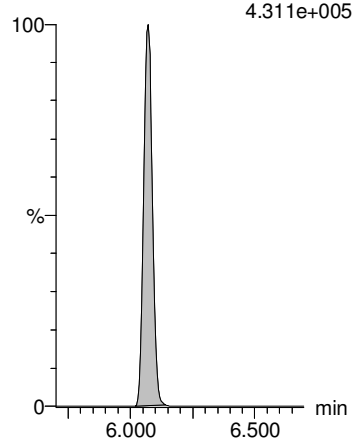
13C2-PFDoA-EIS



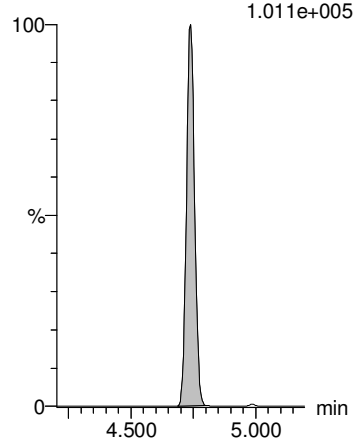
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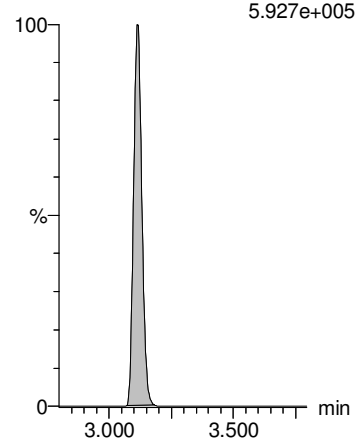
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

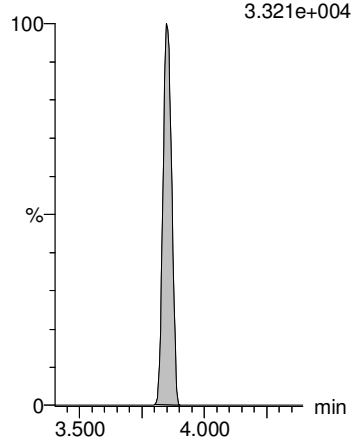


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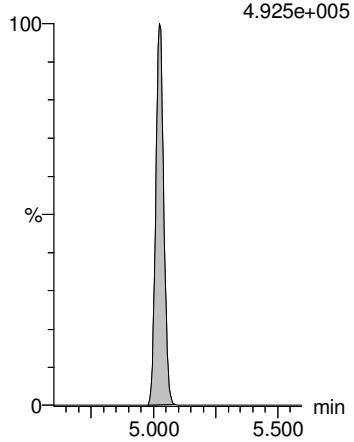
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Name: 200224P1-42, Date: 25-Feb-2020, Time: 00:21:42, ID: B0B0137-BS1 OPR 0.25, Description: OPR

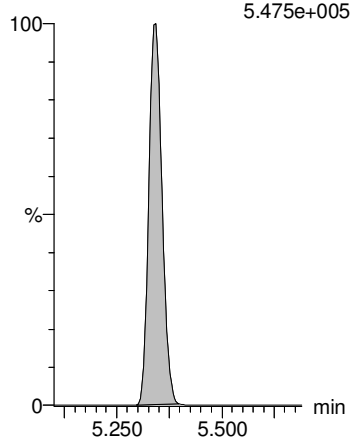
18O2-PFHxS



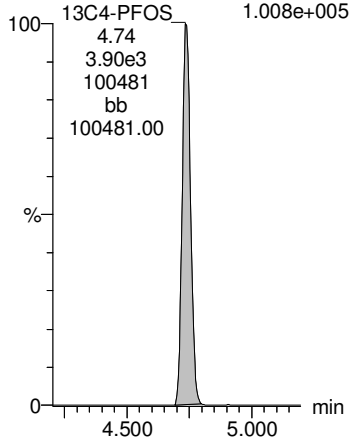
13C6-PFDA



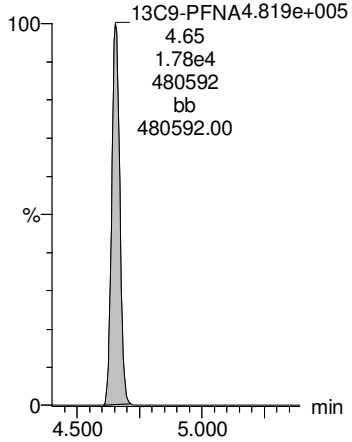
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
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Name: 200224P1-45, Date: 25-Feb-2020, Time: 00:53:12, ID: 2000330-01 EB03-20200214 0.25119, Description: EB03-20200214

	#	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		1.57e3	0.251		2.61						
2	7	PFHxA	313.0 > 269.0		2.09e4	0.251		3.12						
3	9	HFPO-DA	285.1 > 168.9		3.47e3	0.251		3.33						
4	11	PFHpA	363.0 > 318.9		1.27e4	0.251		3.71						
5	12	ADONA	376.8 > 250.9		1.27e4	0.251		3.80						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.57e3		0.251	121.548	2.64	2.61	1570	51.4259	103.3		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	2.09e4		0.251	1744.841	3.12	3.12	20900	47.6169	95.7		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.47e3		0.251	328.216	3.38	3.33	3470	42.1114	84.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.27e4		0.251	1063.335	3.72	3.71	12700	47.6823	95.8		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.27e4		0.251	1063.335	3.72	3.71	12700	47.6823	95.8		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	3.70e1	3.35e3	0.251		3.85	3.86	0.138	0.8347		14.646	YES
13	1...	Total PFHxS	398.9 > 79.7	3.70e1	3.35e3	0.251		3.93		0.138	0.8347			
14	16	L-PFOA	412.8 > 368.9	2.91e2	1.82e4	0.251		4.22	4.21	0.200	0.0444		3.206	NO
15	1...	Total PFOA	412.8 > 368.9	2.91e2	1.82e4	0.251		4.60		0.200	0.0444			
16	21	PFNA	463.0 > 418.8		1.54e4	0.251		4.65						
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.35e3		0.251	253.005	3.85	3.85	3350	52.6941	105.9		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.35e3		0.251	253.005	3.85	3.85	3350	52.6941	105.9		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.82e4		0.251	1468.721	4.22	4.22	18200	49.2161	98.9		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.82e4		0.251	1468.721	4.22	4.22	18200	49.2161	98.9		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.54e4		0.251	1278.380	4.65	4.65	15400	48.0789	96.6		
22	-1													
23	23	L-PFOS	498.9 > 79.7		3.47e3	0.251		4.74						
24	1...	Total PFOS	498.9 > 79.7	0.00e0	3.47e3	0.251		5.13		0.000				
25	25	9Cl-PF30NS	530.7 > 350.8		3.47e3	0.251		4.94						
26	26	PFDA	513 > 468.8		1.60e4	0.251		5.03						
27	33	PFUdA	563.0 > 518.9		1.82e4	0.251		5.34						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.251	286.356	4.74	4.74	3470	48.2343	96.9		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.251	286.356	4.74	4.74	3470	48.2343	96.9		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.251	286.356	4.74	4.74	3470	48.2343	96.9		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.60e4		0.251	1461.559	5.03	5.03	16000	43.7062	87.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.82e4		0.251	1646.627	5.34	5.34	18200	44.1071	88.6		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.90e3	0.251		5.17						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.90e3	0.251		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.79e3	0.251		5.32						

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Name: 200224P1-45, Date: 25-Feb-2020, Time: 00:53:12, ID: 2000330-01 EB03-20200214 0.25119, Description: EB03-20200214

	#	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	3.79e3	0.251		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.61e4	0.251		5.55						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.90e3		0.251	287.523	5.17	5.17	2900	40.1060	80.6		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.90e3		0.251	287.523	5.17	5.17	2900	40.1060	80.6		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.79e3		0.251	355.877	5.31	5.32	3790	42.4019	85.2		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.79e3		0.251	355.877	5.31	5.32	3790	42.4019	85.2		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.61e4		0.251	1443.711	5.61	5.62	16100	44.4034	89.2		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.61e4	0.251		5.62						
46	39	PFTrDA	662.9 > 618.9		1.61e4	0.251		5.87						
47	41	PFTeDA	713.0 > 669.0		1.23e4	0.251		6.07						
48	1...	TDCA	498.3>106.9			0.251		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.34e4	1.34e4	0.251	1.000	1.40	1.40	12.5	49.7631	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.61e4		0.251	1443.711	5.61	5.62	16100	44.4034	89.2		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.61e4		0.251	1443.711	5.61	5.62	16100	44.4034	89.2		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.23e4		0.251	1671.855	6.04	6.07	12300	29.2061	58.7		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.47e3		0.251	286.356	4.74	4.74	3470	48.2343	96.9		
54	1...	13C5-PFHxA	318.0 > 272.9	2.31e4	2.31e4	0.251	1.000	3.11	3.12	12.5	49.7631	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.49e3	1.49e3	0.251	1.000	3.85	3.85	12.5	49.7631	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.03e4	2.03e4	0.251	1.000	5.02	5.03	12.5	49.7631	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.95e4	1.95e4	0.251	1.000	5.34	5.34	12.5	49.7631	100.0		
59	1...	13C4-PFOS	503 > 79.7	4.09e3	4.09e3	0.251	1.000	4.74	4.74	12.5	49.7631	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.90e4	1.90e4	0.251	1.000	4.65	4.65	12.5	49.7631	100.0		

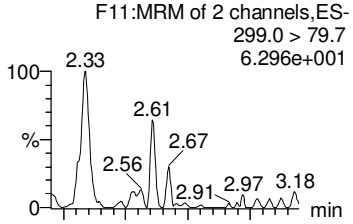
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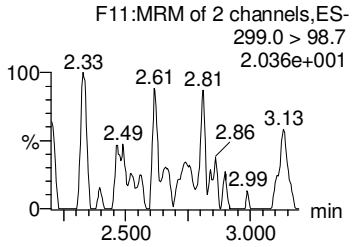
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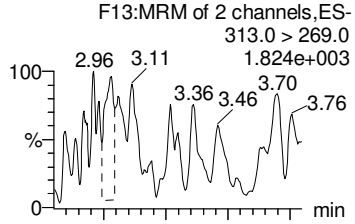
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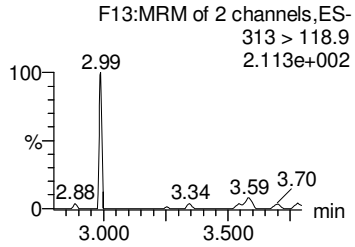
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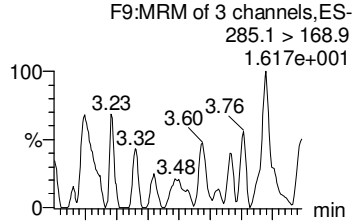


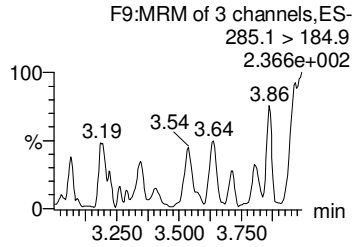
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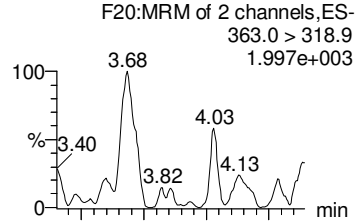


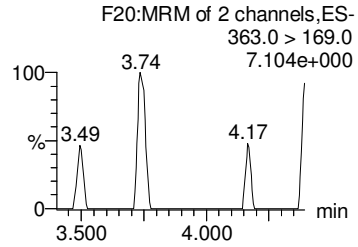
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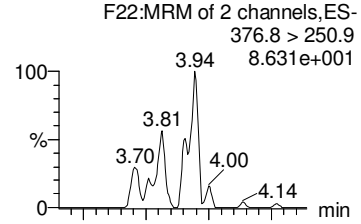


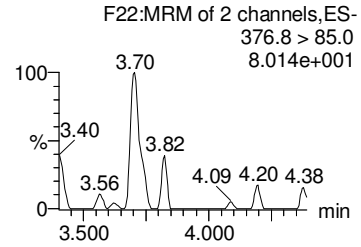
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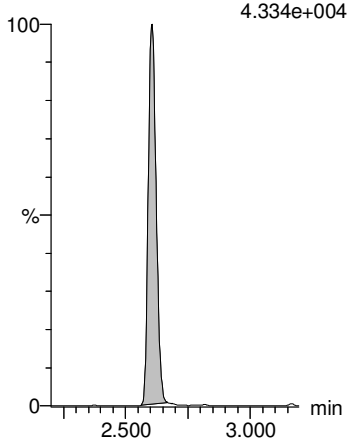


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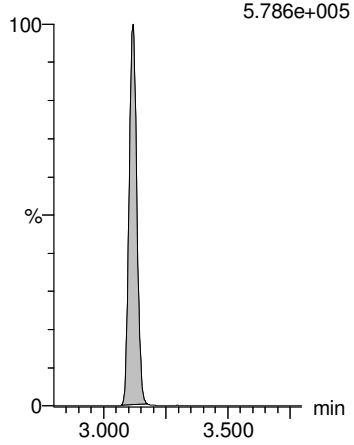




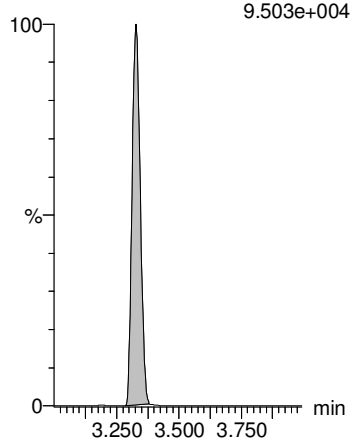
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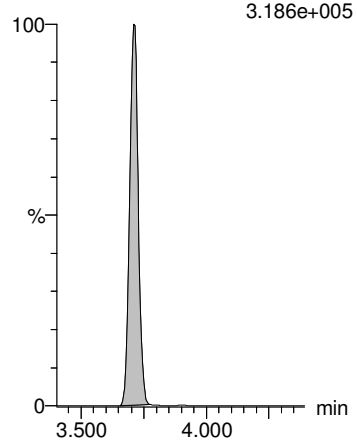
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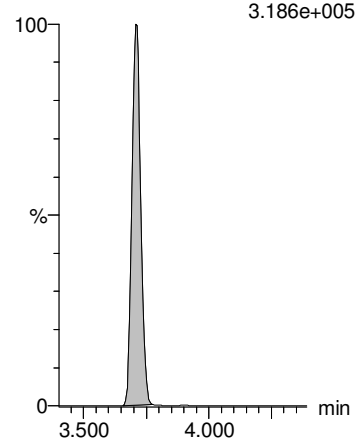
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13C4-PFHpA-EIS

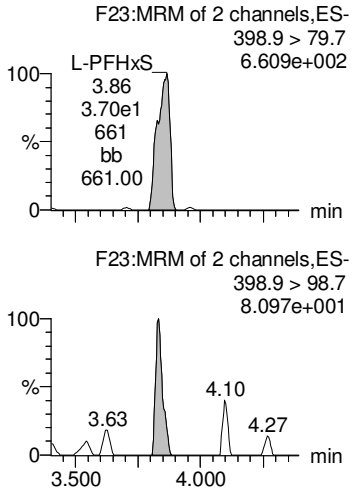


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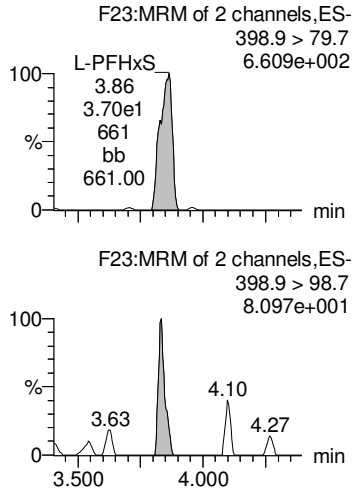
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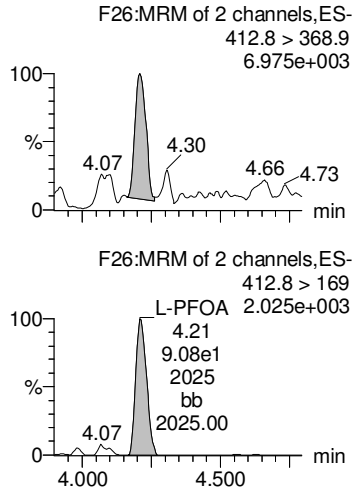
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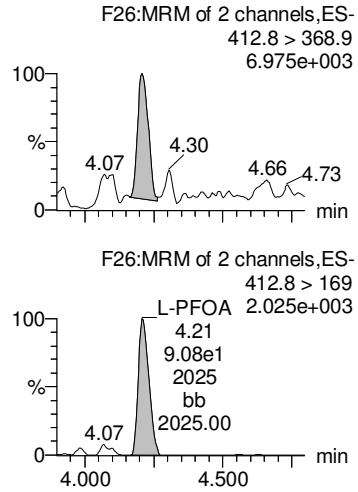
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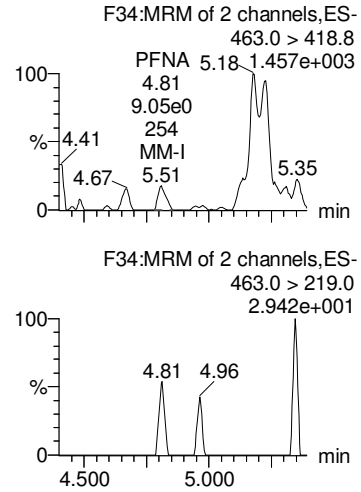
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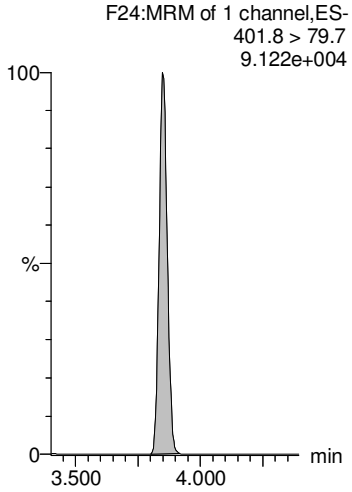
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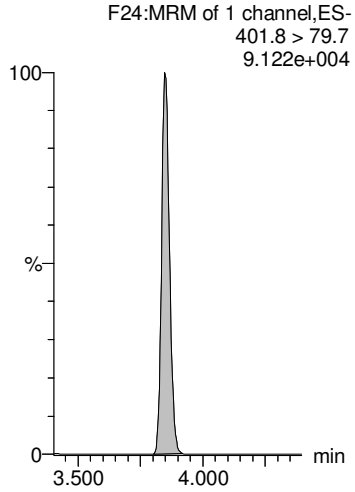
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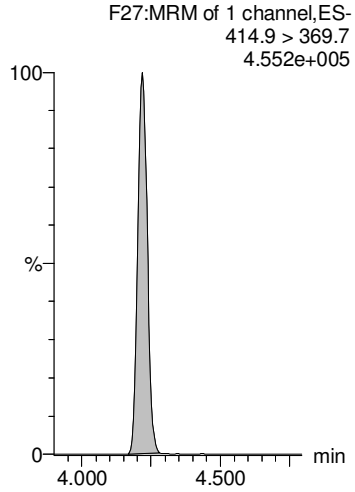
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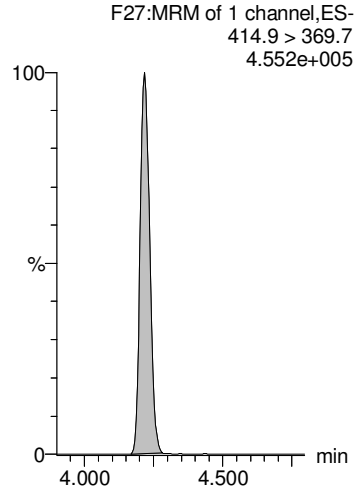
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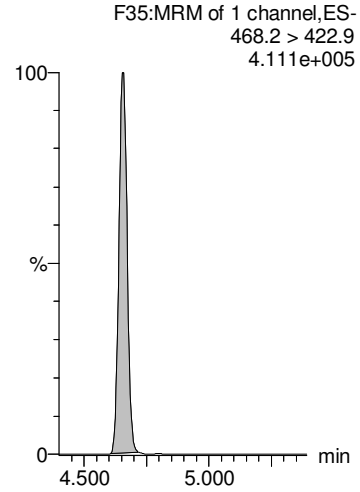
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13C2-PFOA-EIS



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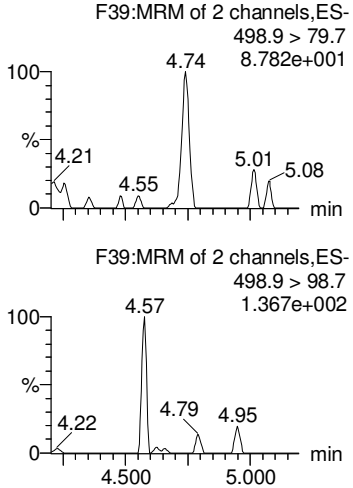


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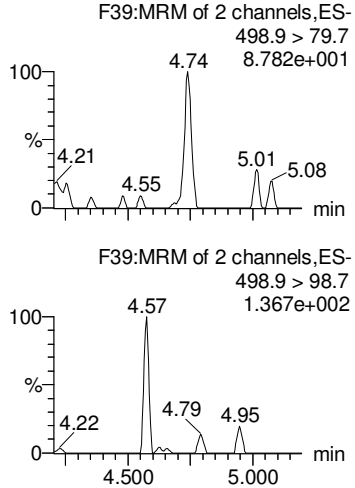
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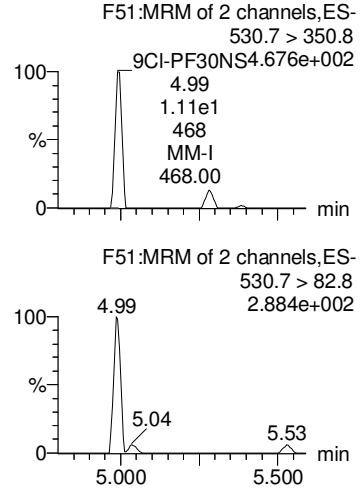
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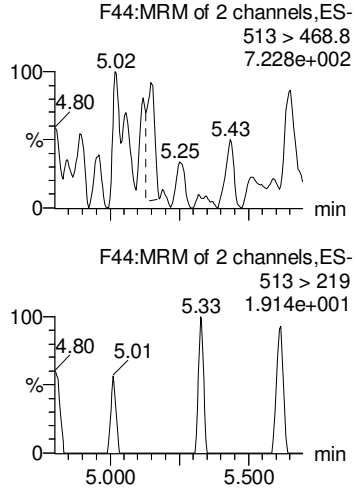
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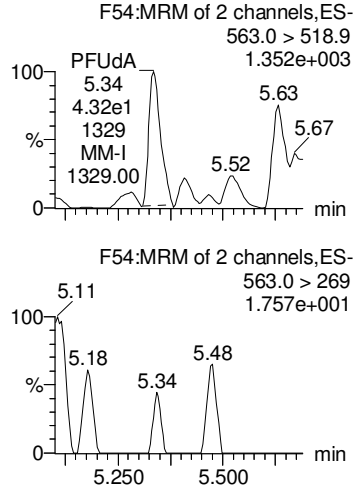
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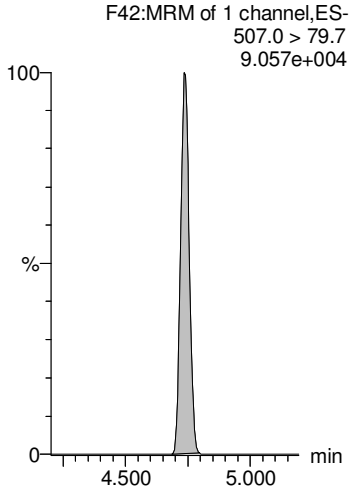
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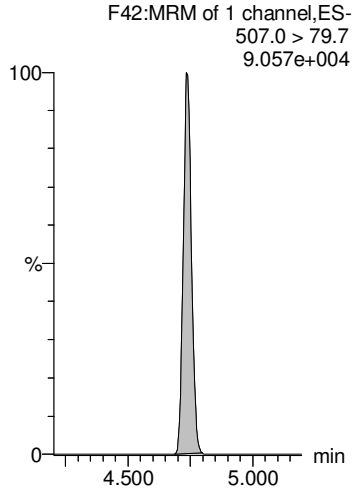
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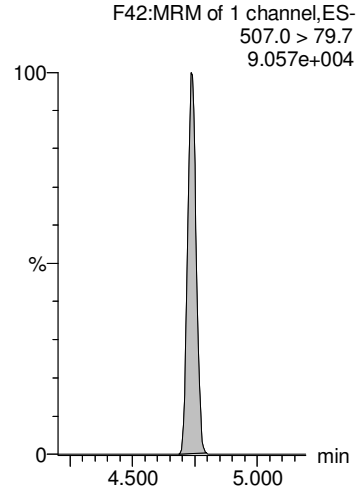
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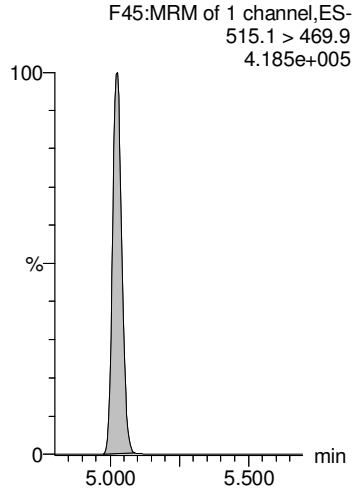
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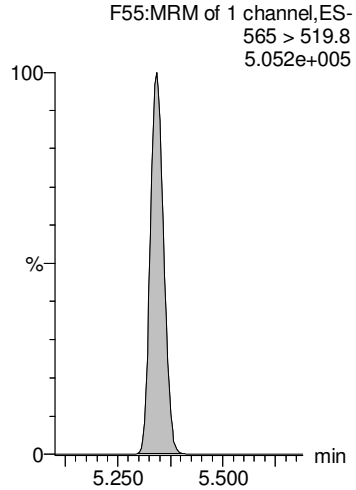
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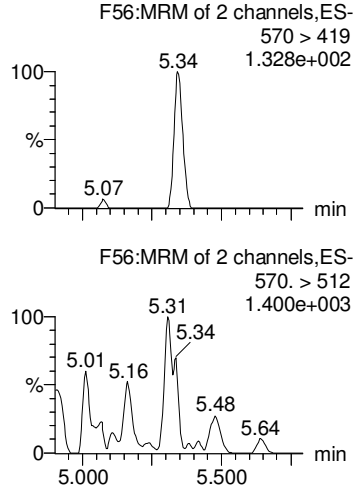


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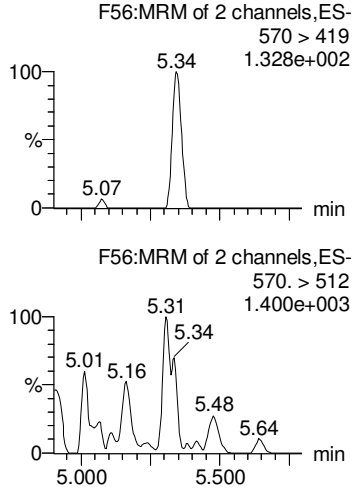
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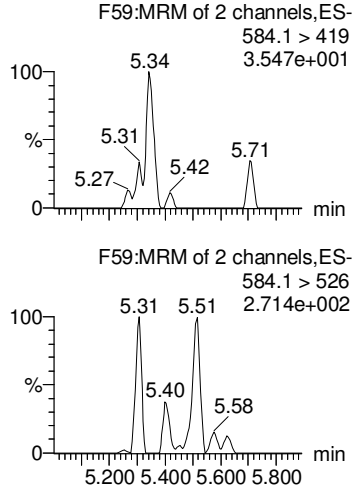
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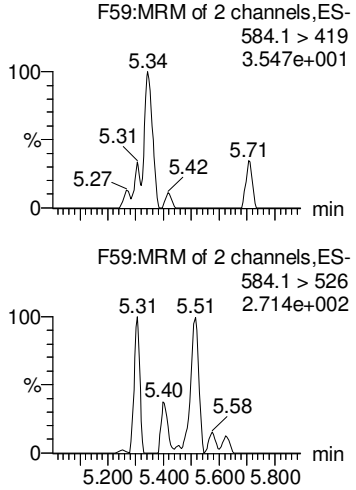
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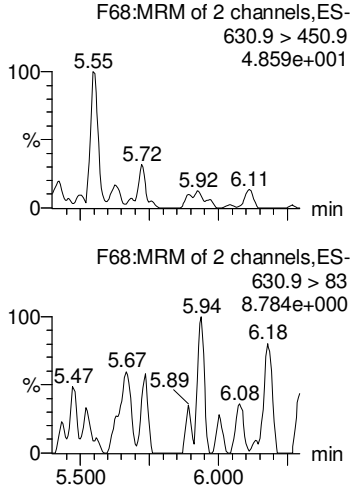
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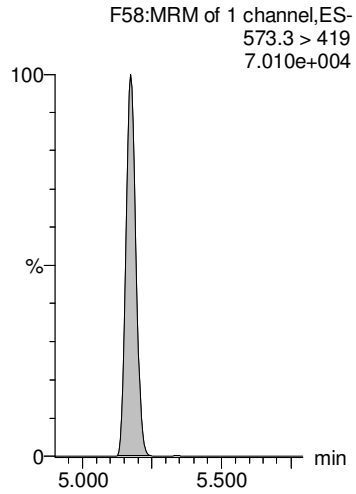
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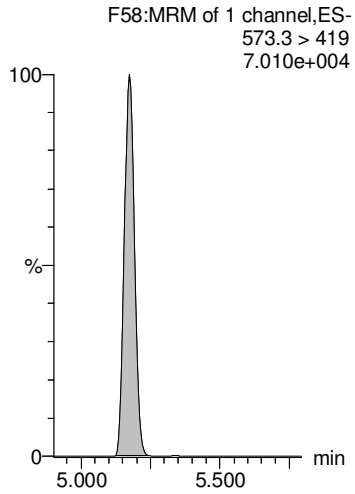
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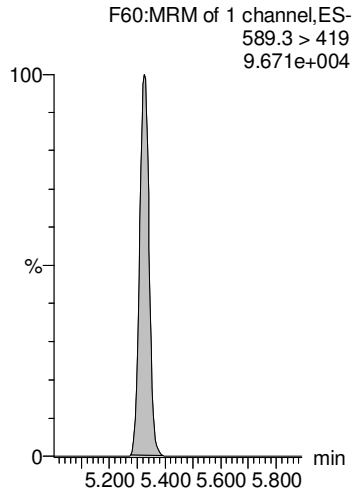
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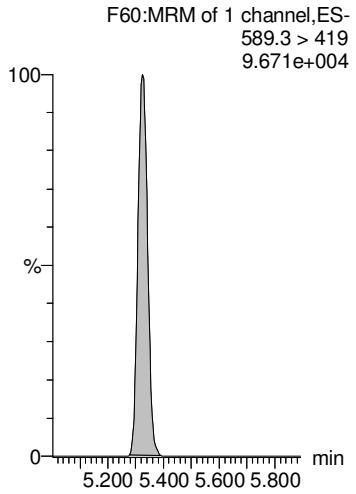
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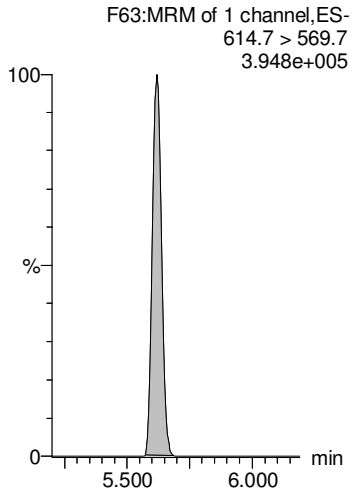
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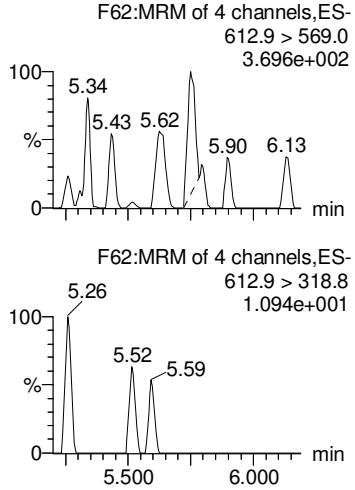


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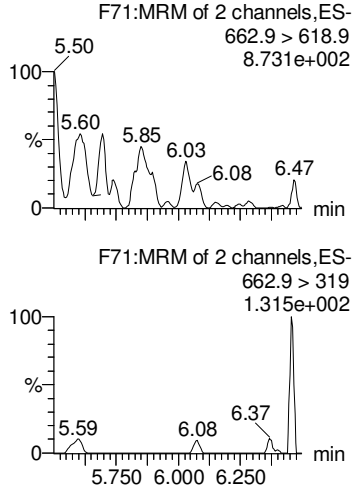
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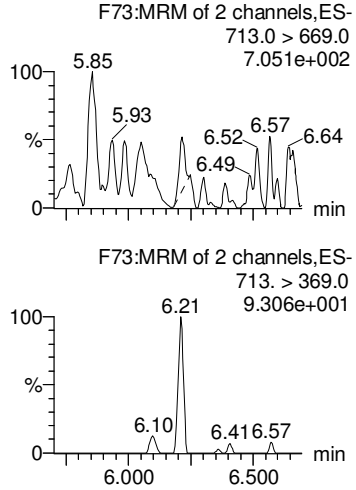
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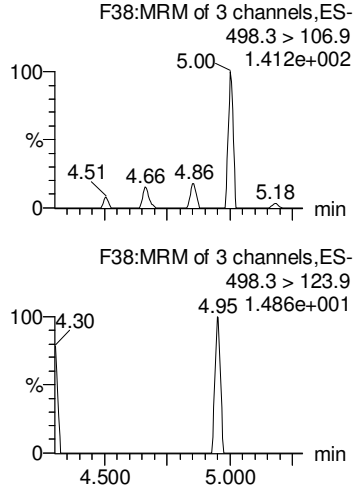
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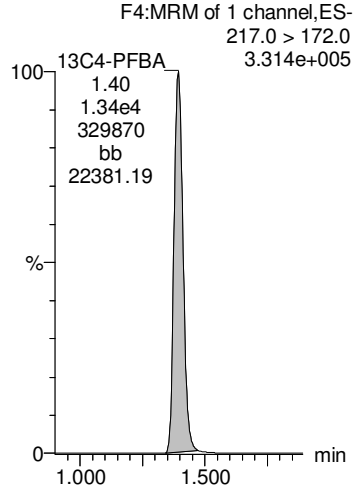
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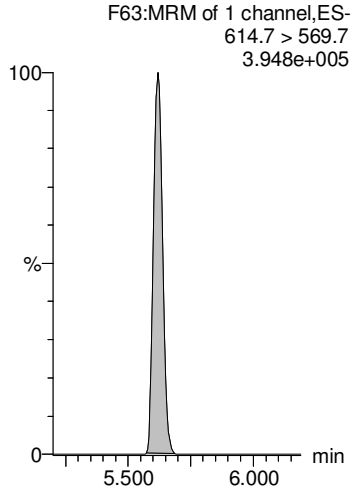
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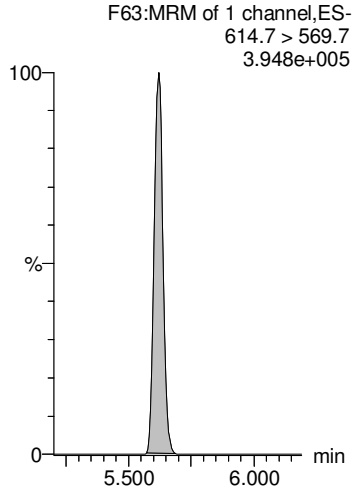
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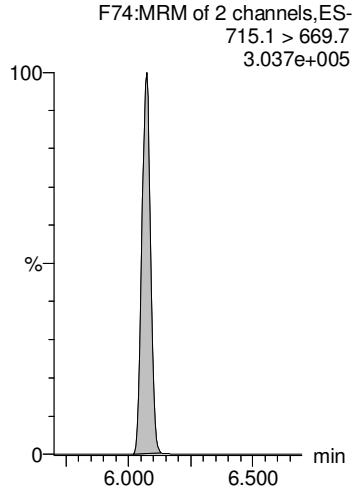
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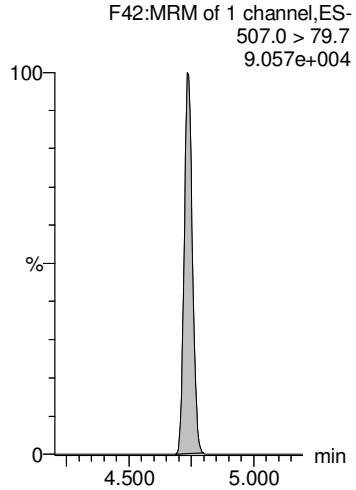
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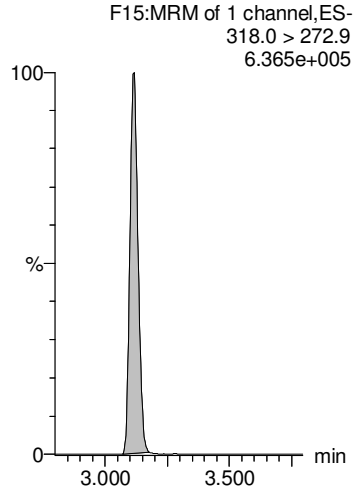
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13C8-PFOS-EIS



13C5-PFHxA

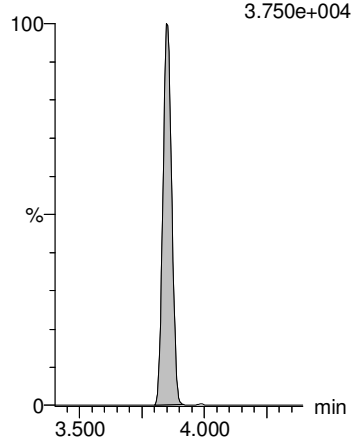


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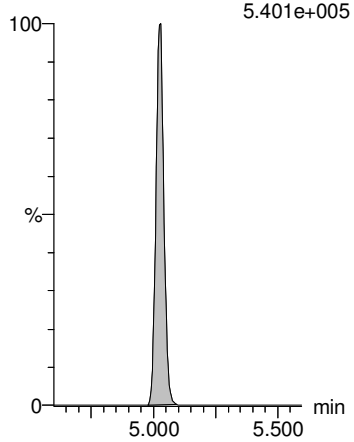
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Printed: Friday, February 28, 2020 14:58:04 Pacific Standard Time

Name: 200224P1-45, Date: 25-Feb-2020, Time: 00:53:12, ID: 2000330-01 EB03-20200214 0.25119, Description: EB03-20200214

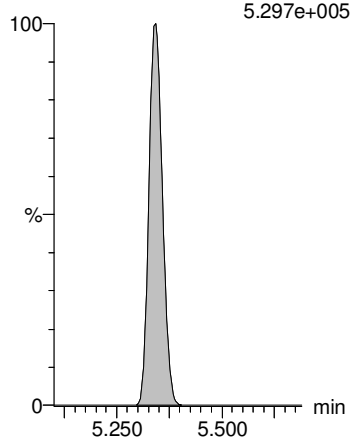
18O2-PFHxS



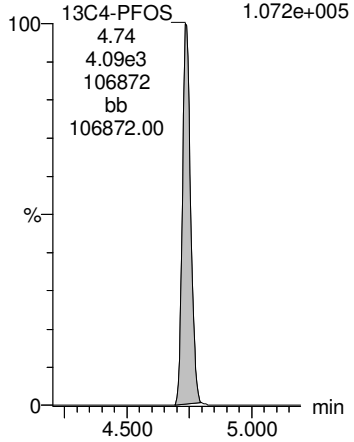
13C6-PFDA



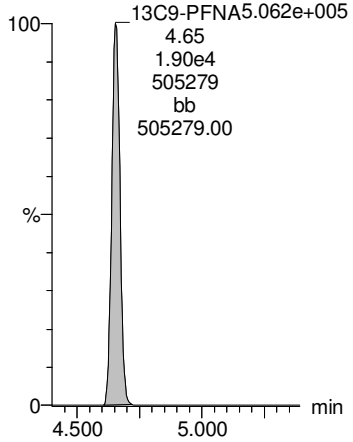
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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***SEE DILUTION**

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Name: 200224P1-46, Date: 25-Feb-2020, Time: 01:03:42, ID: 2000330-02 I003MW05S-20200214 0.25637, Description: I003MW05S-20200214

	#	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	1.34e4	1.38e3	0.256		2.60	2.60	122	198.4095			3.282	NO
2	7	PFHxA	313.0 > 269.0	5.75e5	1.74e4	0.256		3.11	3.11	413	1769.6288			17.074	NO
3	9	HFPO-DA	285.1 > 168.9		3.39e3	0.256		3.33							
4	11	PFHpA	363.0 > 318.9	2.59e5	1.12e4	0.256		3.71	3.71	290	943.4815			23.086	NO
5	12	ADONA	376.8 > 250.9		1.12e4	0.256		3.81							
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.38e3		0.256	121.548	2.65	2.60	1380	44.2117		90.7		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.74e4		0.256	1744.841	3.11	3.11	17400	38.9311		79.8		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.39e3		0.256	328.216	3.38	3.33	3390	40.2962		82.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.12e4		0.256	1063.335	3.72	3.71	11200	40.9104		83.9		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.12e4		0.256	1063.335	3.72	3.71	11200	40.9104		83.9		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	8.66e4	2.58e3	0.256		3.85	3.85	419	1622.5802			2.345	NO
13	1...	Total PFHxS	398.9 > 79.7	8.66e4	2.58e3	0.256		3.93		419	1622.5802				
14	16	L-PFOA	412.8 > 368.9	7.78e5	1.58e4	0.256		4.22	4.22	615	2110.8227	***E**		2.790	NO
15	1...	Total PFOA	412.8 > 368.9	7.78e5	1.58e4	0.256		4.60		615	2110.8227				
16	21	PFNA	463.0 > 418.8	1.43e4	1.49e4	0.256		4.66	4.66	12.0	36.4384			7.281	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.58e3		0.256	253.005	3.85	3.85	2580	39.8474		81.7		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.58e3		0.256	253.005	3.85	3.85	2580	39.8474		81.7		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.58e4		0.256	1468.721	4.22	4.22	15800	42.0207		86.2		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.58e4		0.256	1468.721	4.22	4.22	15800	42.0207		86.2		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.49e4		0.256	1278.380	4.66	4.66	14900	45.4282		93.2		
22	-1														
23	23	L-PFOS	498.9 > 79.7	7.39e4	2.81e3	0.256		4.74	4.74	328	1567.9800			2.344	NO
24	1...	Total PFOS	498.9 > 79.7	7.39e4	2.81e3	0.256		5.13		328	1567.9800				
25	25	9Cl-PF30NS	530.7 > 350.8		2.81e3	0.256		4.95							
26	26	PFDA	513 > 468.8	1.21e3	1.55e4	0.256		5.02	5.02	0.980	2.9022			11.225	NO
27	33	PFUdA	563.0 > 518.9		1.45e4	0.256		5.34							
28	71	13C8-PFOS-EIS	507.0 > 79.7	2.81e3		0.256	286.356	4.74	4.74	2810	38.3436		78.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	2.81e3		0.256	286.356	4.74	4.74	2810	38.3436		78.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	2.81e3		0.256	286.356	4.74	4.74	2810	38.3436		78.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.55e4		0.256	1461.559	5.02	5.02	15500	41.3186		84.7		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.45e4		0.256	1646.627	5.34	5.34	14500	34.3143		70.4		
33	-1														
34	29	L-MeFOSAA	570 > 419		2.64e3	0.256		5.17							
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.64e3	0.256		5.19		0.000					
36	31	L-EtFOSAA	584.1 > 419		3.30e3	0.256		5.32							

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Name: 200224P1-46, Date: 25-Feb-2020, Time: 01:03:42, ID: 2000330-02 I003MW05S-20200214 0.25637, Description: I003MW05S-20200214

	#	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	3.30e3	0.256		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.35e4	0.256		5.55						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.64e3		0.256	287.523	5.17	5.17	2640	35.8708	73.6		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.64e3		0.256	287.523	5.17	5.17	2640	35.8708	73.6		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.30e3		0.256	355.877	5.31	5.32	3300	36.1534	74.1		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.30e3		0.256	355.877	5.31	5.32	3300	36.1534	74.1		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.256	1443.711	5.61	5.62	13500	36.5446	75.0		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.35e4	0.256		5.62						
46	39	PFTrDA	662.9 > 618.9		1.35e4	0.256		5.87						
47	41	PFTeDA	713.0 > 669.0		1.05e4	0.256		6.07						
48	1...	TDCA	498.3>106.9			0.256		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.29e4	1.29e4	0.256	1.000	1.40	1.40	12.5	48.7577	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.256	1443.711	5.61	5.62	13500	36.5446	75.0		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.35e4		0.256	1443.711	5.61	5.62	13500	36.5446	75.0		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.05e4		0.256	1671.855	6.04	6.07	10500	24.3928	50.0		
53	71	13C8-PFOS-EIS	507.0 > 79.7	2.81e3		0.256	286.356	4.74	4.74	2810	38.3436	78.6		
54	1...	13C5-PFHxA	318.0 > 272.9	1.94e4	1.94e4	0.256	1.000	3.11	3.11	12.5	48.7577	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.34e3	1.34e3	0.256	1.000	3.85	3.85	12.5	48.7577	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.92e4	1.92e4	0.256	1.000	5.02	5.02	12.5	48.7577	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.99e4	1.99e4	0.256	1.000	5.34	5.34	12.5	48.7577	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.72e3	3.72e3	0.256	1.000	4.74	4.74	12.5	48.7577	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.83e4	1.83e4	0.256	1.000	4.65	4.66	12.5	48.7577	100.0		

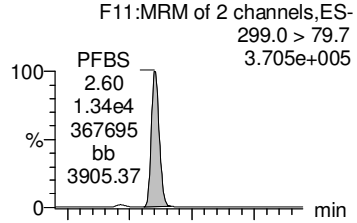
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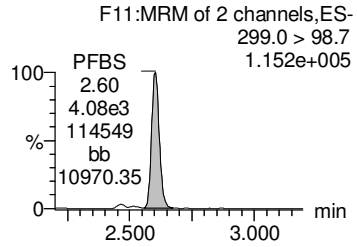
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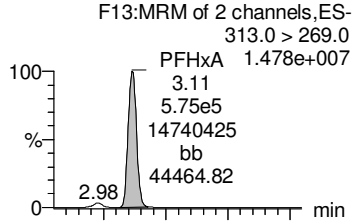
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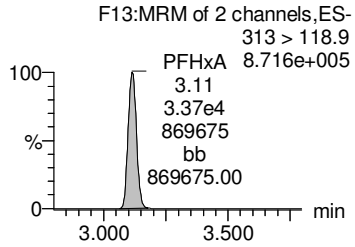
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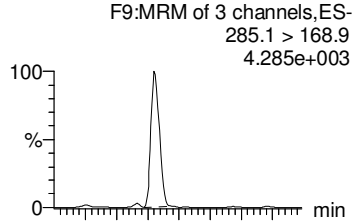


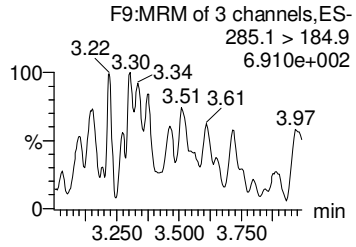
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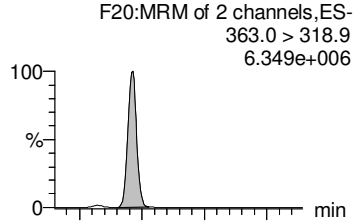


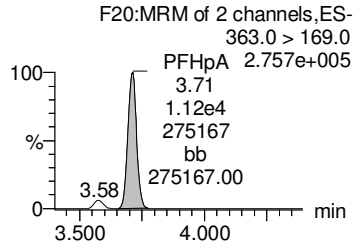
HFPO-DA



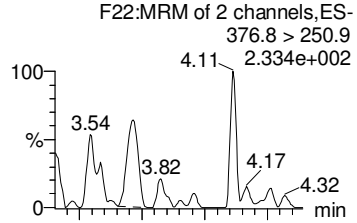


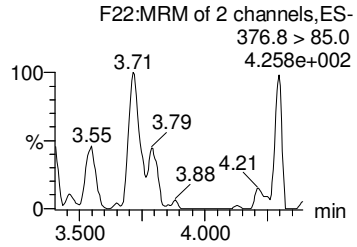
PFHpA



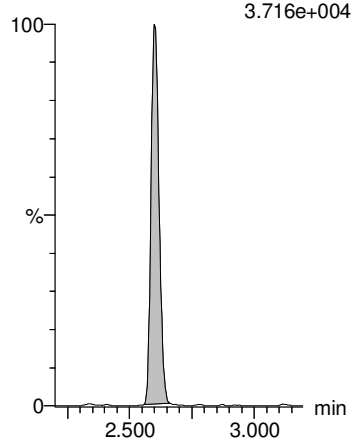


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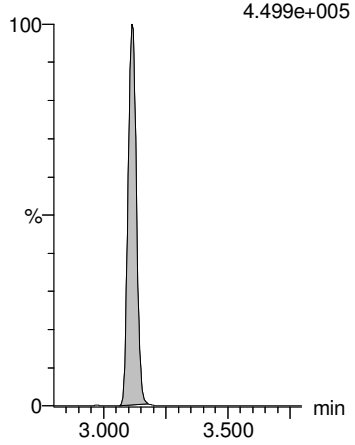




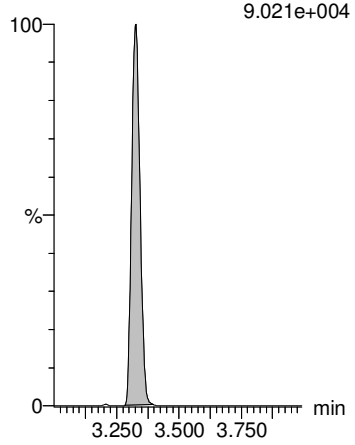
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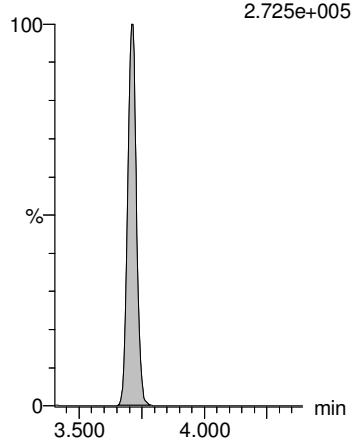
13C2-PFHxA-EIS



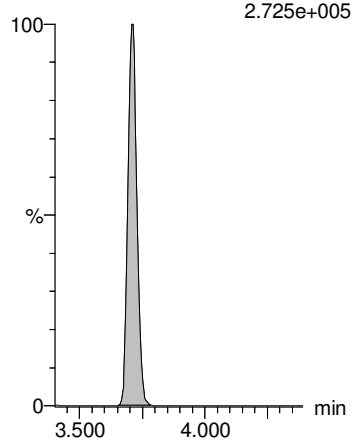
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

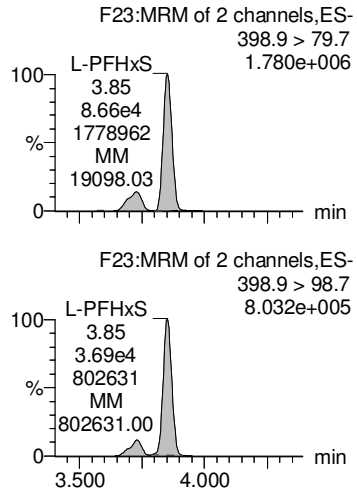


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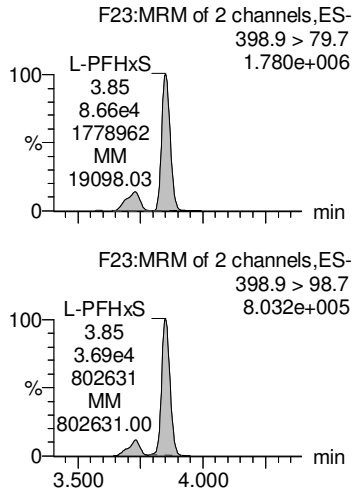
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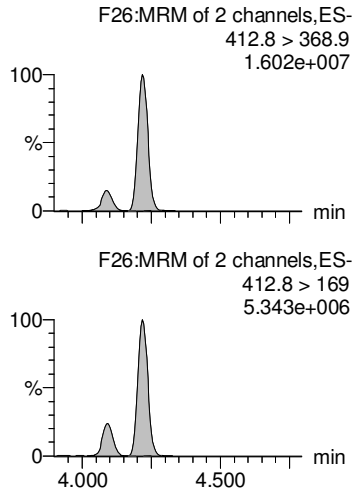
L-PFHxS



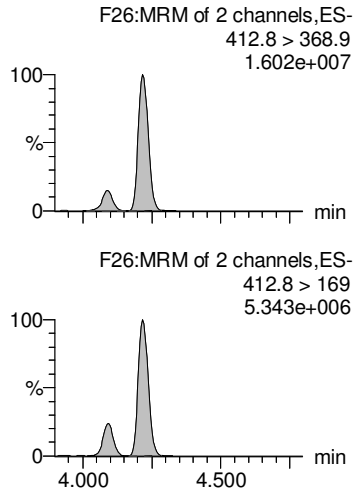
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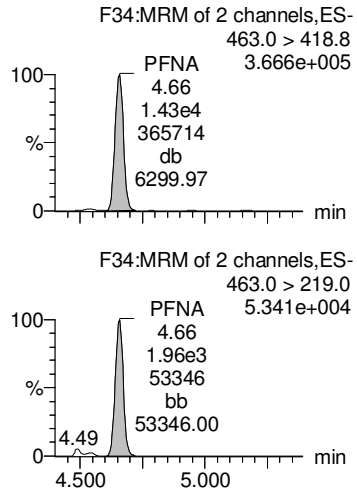
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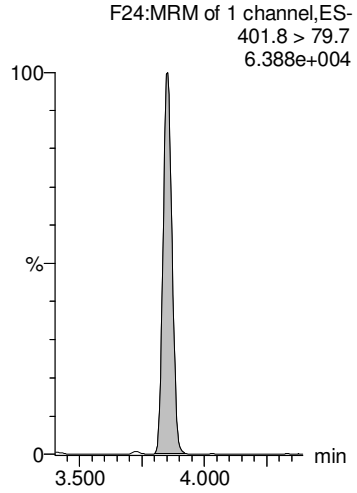
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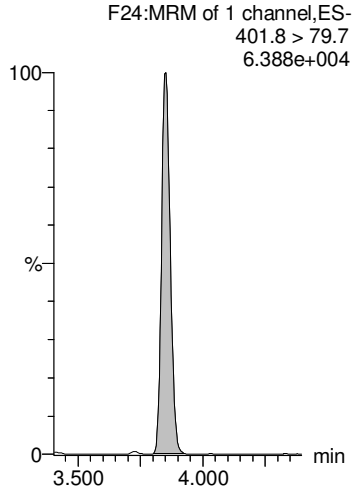
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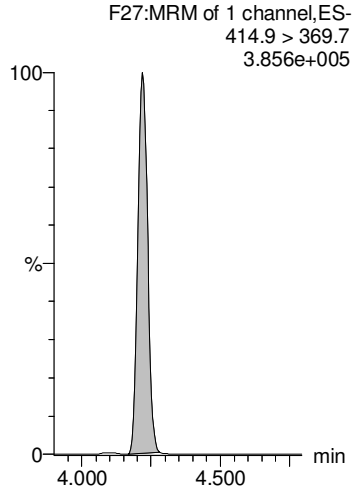
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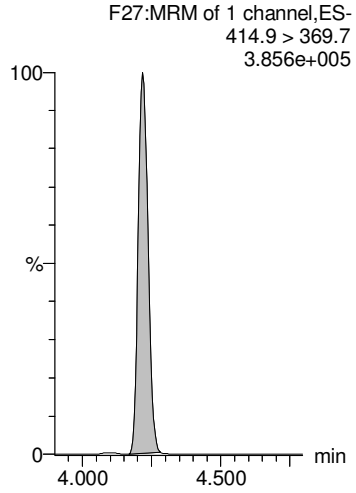
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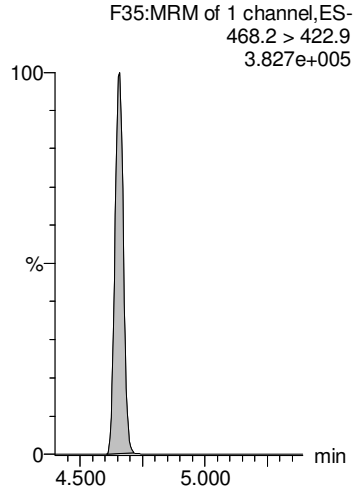
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS

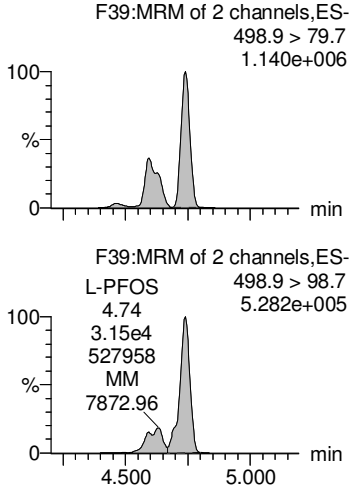


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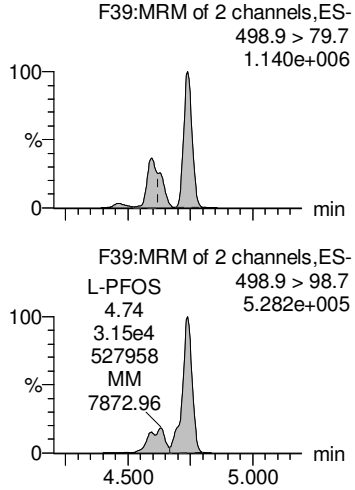
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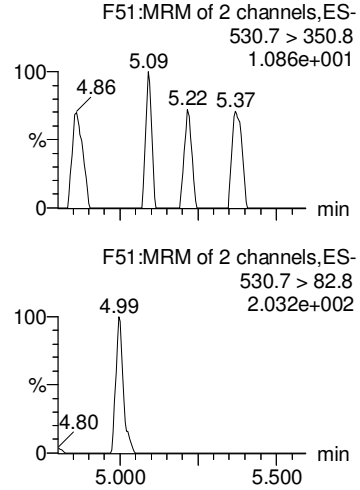
L-PFOS



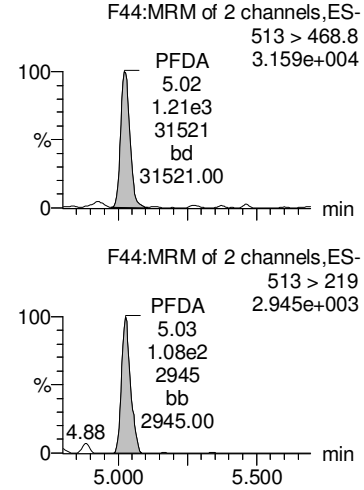
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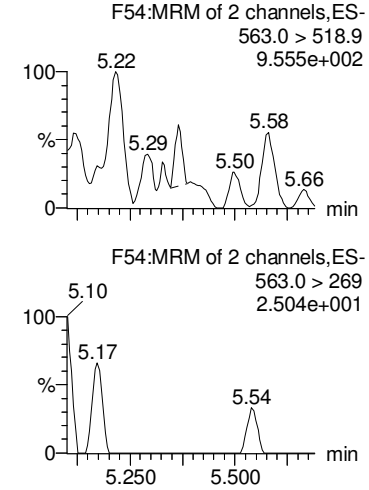
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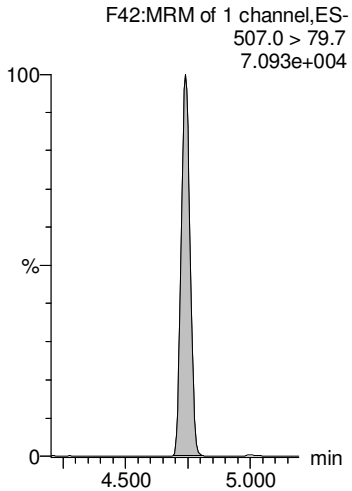
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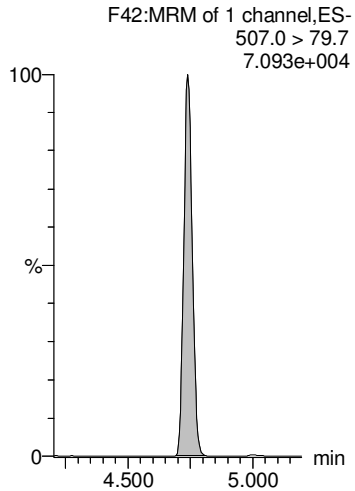
PFUdA



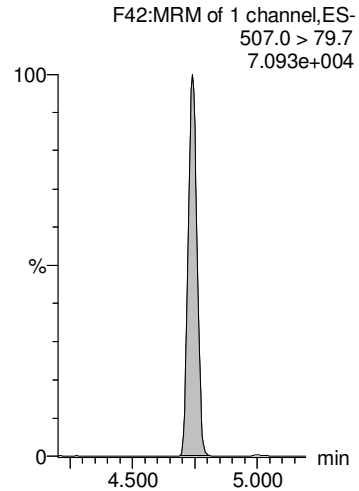
13C8-PFOS-EIS



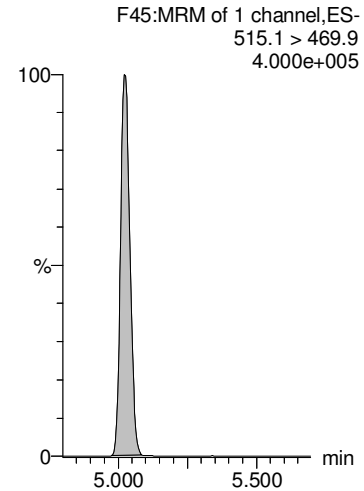
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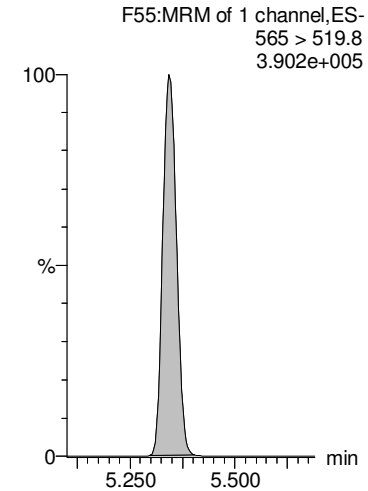
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-PFUdA-EIS

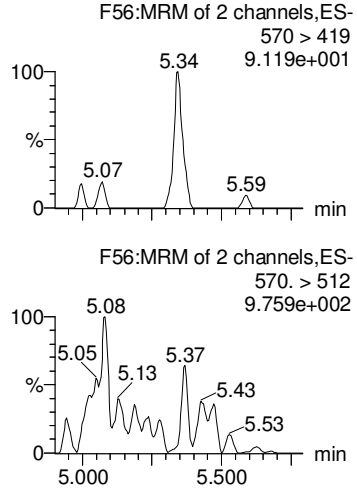


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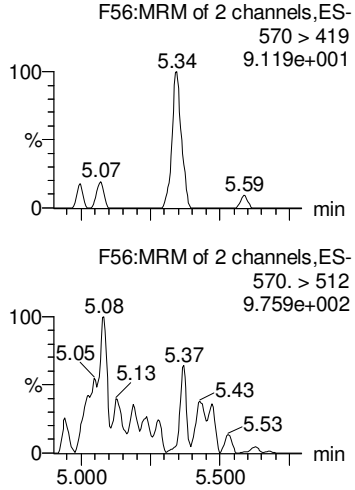
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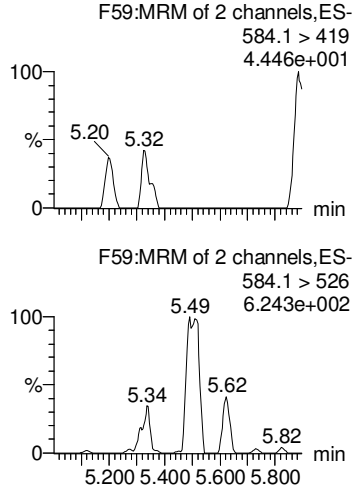
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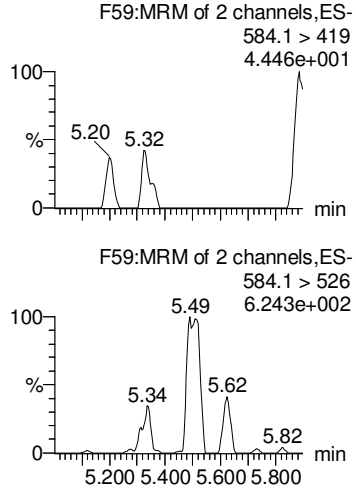
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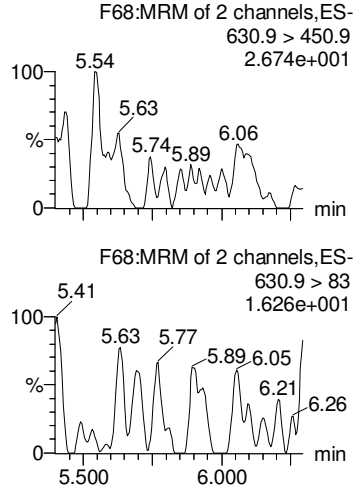
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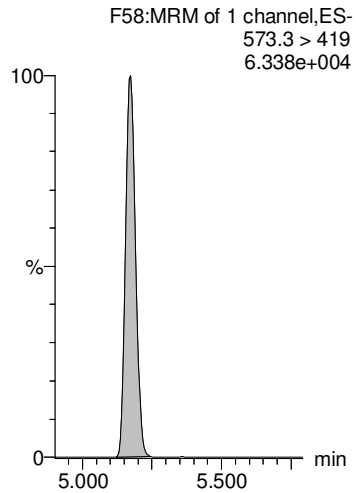
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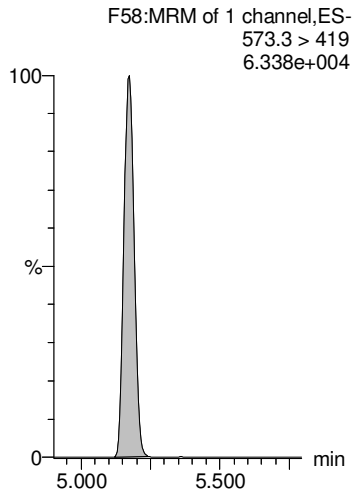
11Cl-PF30UdS



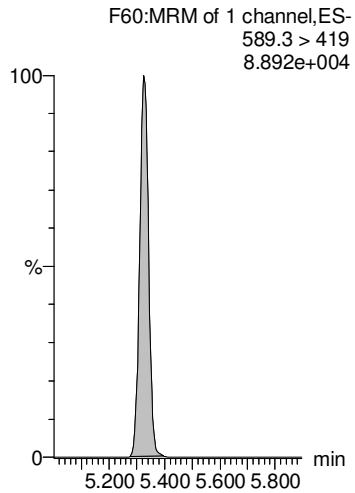
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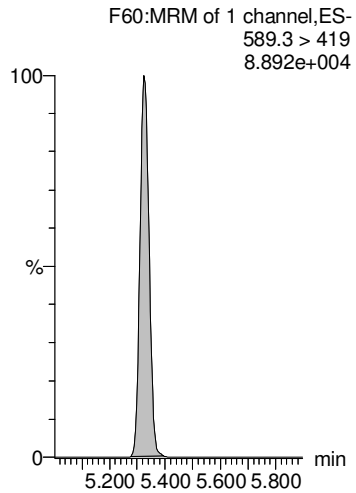
d3-N-MeFOSAA-EIS



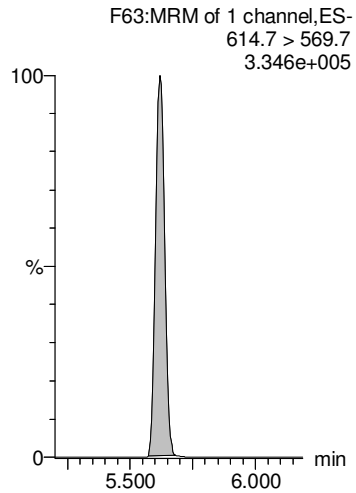
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

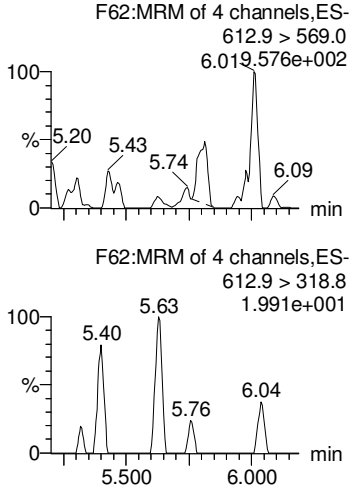


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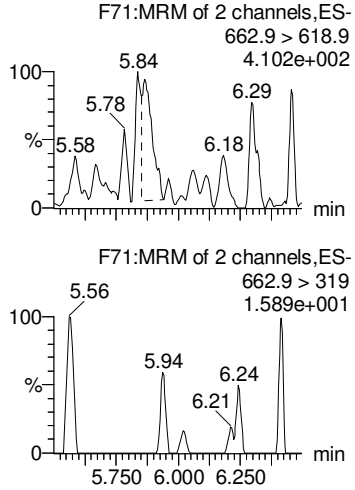
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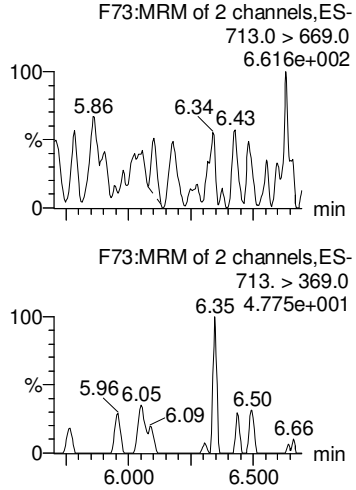
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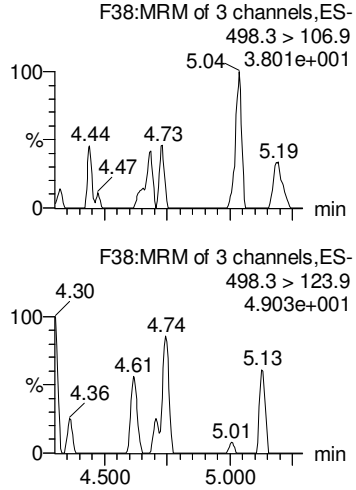
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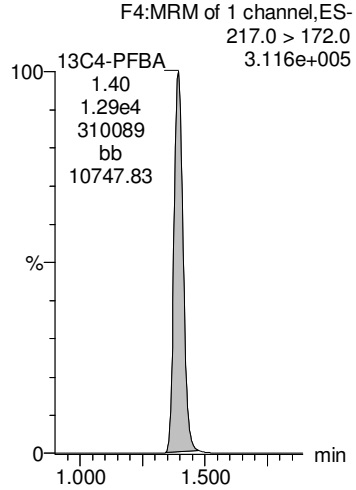
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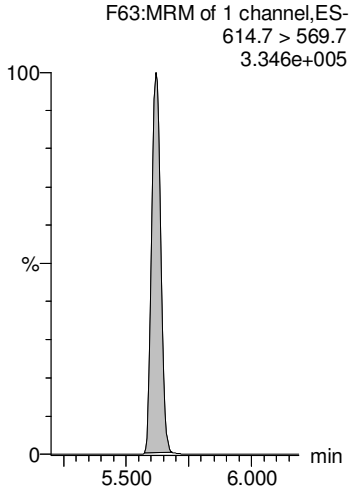
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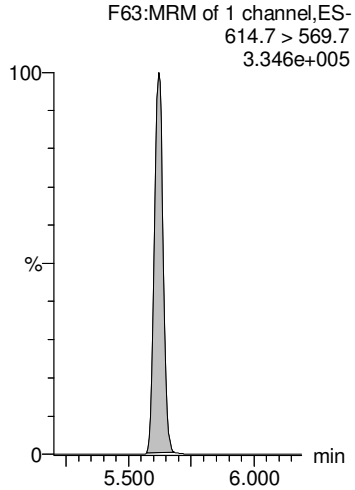
13C4-PFBA



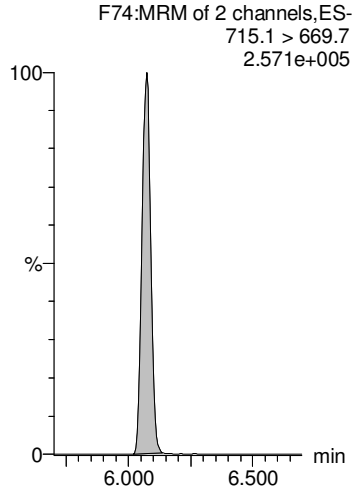
13C2-PFDoA-EIS



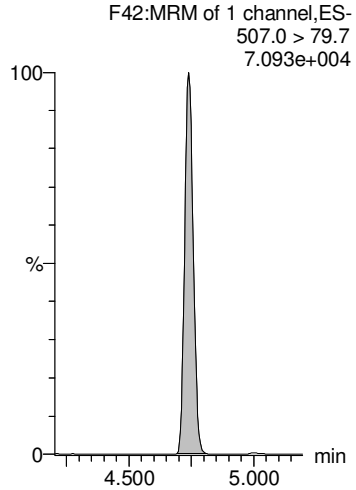
13C2-PFDoA-EIS



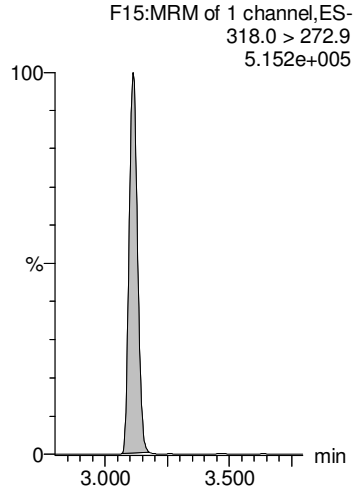
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

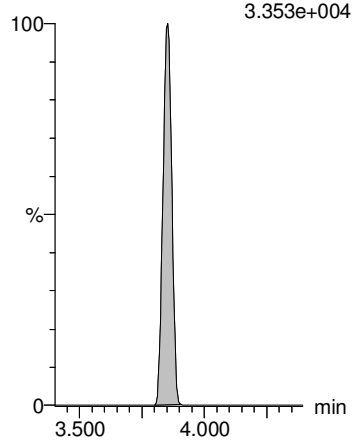


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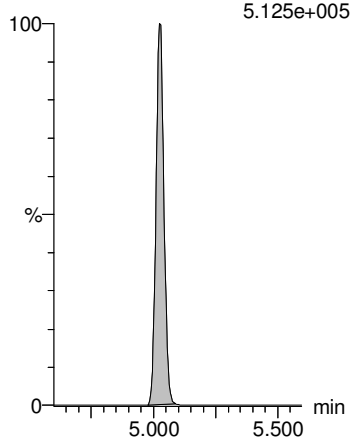
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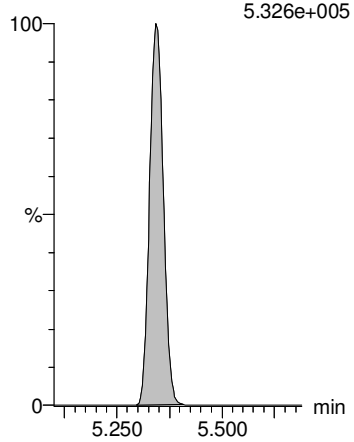
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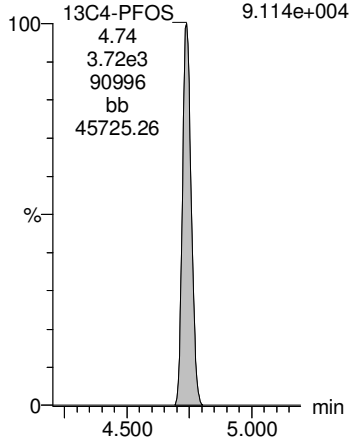
13C6-PFDA



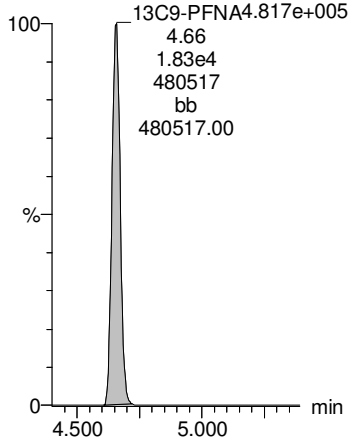
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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	#	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	4.95e3	5.01e2	0.256		2.54	2.54	124	203.3503		3.086	NO
2	7	PFHxA	313.0 > 269.0	2.43e5	7.25e3	0.256		3.06	3.06	418	1844.7580		16.884	NO
3	9	HFPO-DA	285.1 > 168.9	6.11e1	1.37e3	0.256		3.28	3.36	0.558	1.9917		6.503	YES
4	11	PFHpA	363.0 > 318.9	1.12e5	4.47e3	0.256		3.66	3.66	312	1053.0995		28.626	NO
5	12	ADONA	376.8 > 250.9		4.47e3	0.256		3.75						
6	51	13C3-PFBS-EIS	302.0 > 98.8	5.01e2		0.256	122.770	2.61	2.54	501	15.9213	32.7		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	7.25e3		0.256	1761.472	3.06	3.06	7250	16.0562	32.9		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	1.37e3		0.256	328.229	3.34	3.28	1370	16.2616	33.4		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	4.47e3		0.256	1290.921	3.68	3.66	4470	13.5206	27.7		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	4.47e3		0.256	1290.921	3.68	3.66	4470	13.5206	27.7		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	3.70e4	1.03e3	0.256		3.80	3.80	449	1683.4288		2.300	NO
13	1...	Total PFHxS	398.9 > 79.7	3.70e4	1.03e3	0.256		3.93		449	1683.4288			
14	16	L-PFOA	412.8 > 368.9	3.52e5	7.15e3	0.256		4.17	4.17	616	2551.8382		2.920	NO
15	1...	Total PFOA	412.8 > 368.9	3.52e5	7.15e3	0.256		4.60		616	2551.8382			
16	21	PFNA	463.0 > 418.8	6.16e3	6.90e3	0.256		4.62	4.62	11.2	40.1930		8.163	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	1.03e3		0.256	309.268	3.80	3.80	1030	13.0002	26.7		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	1.03e3		0.256	309.268	3.80	3.80	1030	13.0002	26.7		
19	69	13C2-PFOA-EIS	414.9 > 369.7	7.15e3		0.256	1782.464	4.17	4.17	7150	15.6531	32.1		
20	69	13C2-PFOA-EIS	414.9 > 369.7	7.15e3		0.256	1782.464	4.17	4.17	7150	15.6531	32.1		
21	65	13C5-PFNA-EIS	468.2 > 422.9	6.90e3		0.256	1750.823	4.62	4.62	6900	15.3673	31.5		
22	-1													
23	23	L-PFOS	498.9 > 79.7	2.80e4	1.27e3	0.256		4.70	4.70	276	1159.1054		2.309	NO
24	1...	Total PFOS	498.9 > 79.7	2.80e4	1.27e3	0.256		5.13		276	1159.1054			
25	25	9Cl-PF30NS	530.7 > 350.8		1.27e3	0.256		4.91						
26	26	PFDA	513 > 468.8	5.11e2	7.38e3	0.256		4.99	4.99	0.865	2.7243		11.171	NO
27	33	PFUdA	563.0 > 518.9		7.38e3	0.256		5.32						
28	71	13C8-PFOS-EIS	507.0 > 79.7	1.27e3		0.256	346.443	4.70	4.70	1270	14.2959	29.3		
29	71	13C8-PFOS-EIS	507.0 > 79.7	1.27e3		0.256	346.443	4.70	4.70	1270	14.2959	29.3		
30	71	13C8-PFOS-EIS	507.0 > 79.7	1.27e3		0.256	346.443	4.70	4.70	1270	14.2959	29.3		
31	73	13C2-PFDA-EIS	515.1 > 469.9	7.38e3		0.256	1915.540	4.99	4.99	7380	15.0294	30.8		
32	79	13C2-PFUdA-EIS	565 > 519.8	7.38e3		0.256	2194.474	5.32	5.32	7380	13.1097	26.9		
33	-1													
34	29	L-MeFOSAA	570 > 419		1.90e3	0.256		5.14						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	1.90e3	0.256		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		1.85e3	0.256		5.30						

Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-17-19.qld

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Name: 200227P1-18, Date: 27-Feb-2020, Time: 18:29:43, ID: 2000330-02@5X I003MW05S-20200214 0.25637, Description: I003MW05S-20200214

	#	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	1.85e3	0.256		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		6.03e3	0.256		5.53						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	1.90e3		0.256	482.560	5.15	5.14	1900	15.3502	31.5		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	1.90e3		0.256	482.560	5.15	5.14	1900	15.3502	31.5		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	1.85e3		0.256	553.305	5.29	5.30	1850	13.0734	26.8		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	1.85e3		0.256	553.305	5.29	5.30	1850	13.0734	26.8		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	6.03e3		0.256	1946.588	5.58	5.60	6030	12.0765	24.8		
44	-1													
45	37	PFDoA	612.9 > 569.0		6.03e3	0.256		5.60						
46	39	PFTrDA	662.9 > 618.9		6.03e3	0.256		5.85						
47	41	PFTeDA	713.0 > 669.0		4.70e3	0.256		6.06						
48	1...	TDCA	498.3>106.9			0.256		4.59						
49	99	13C4-PFBA	217.0 > 172.0	4.82e3	4.82e3	0.256	1.000	1.32	1.32	12.5	48.7577	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	6.03e3		0.256	1946.588	5.58	5.60	6030	12.0765	24.8		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	6.03e3		0.256	1946.588	5.58	5.60	6030	12.0765	24.8		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	4.70e3		0.256	2085.576	6.01	6.06	4700	8.7968	18.0		
53	71	13C8-PFOS-EIS	507.0 > 79.7	1.27e3		0.256	346.443	4.70	4.70	1270	14.2959	29.3		
54	1...	13C5-PFHxA	318.0 > 272.9	8.06e3	8.06e3	0.256	1.000	3.05	3.06	12.5	48.7577	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	4.39e2	4.39e2	0.256	1.000	3.80	3.80	12.5	48.7577	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	8.57e3	8.57e3	0.256	1.000	4.99	4.99	12.5	48.7577	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	9.48e3	9.48e3	0.256	1.000	5.31	5.32	12.5	48.7577	100.0		
59	1...	13C4-PFOS	503 > 79.7	1.52e3	1.52e3	0.256	1.000	4.70	4.70	12.5	48.7577	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	9.00e3	9.00e3	0.256	1.000	4.61	4.62	12.5	48.7577	100.0		

Vista Analytical Laboratory L18

MM 3/2/2020

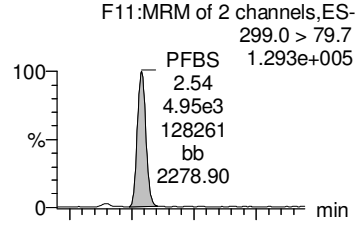
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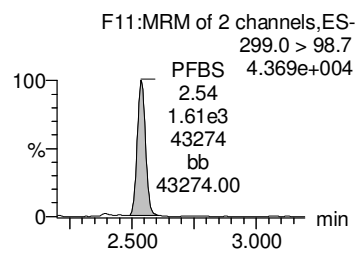
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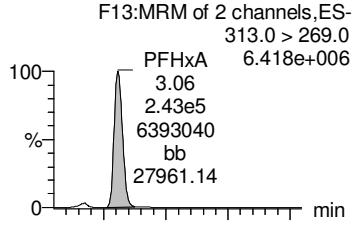
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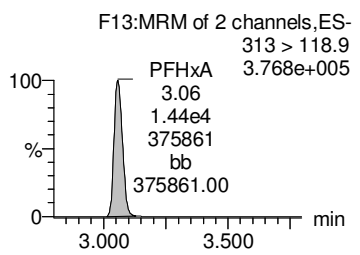
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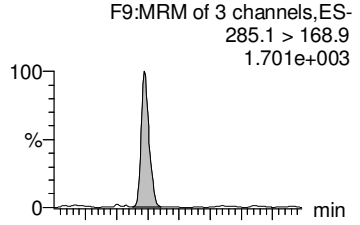


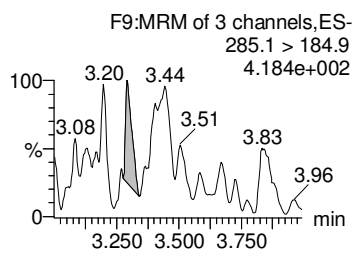
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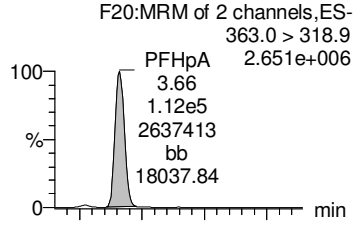


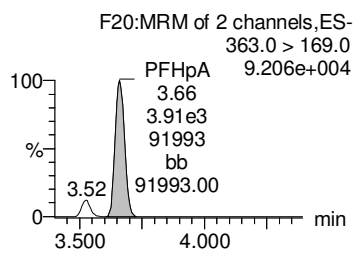
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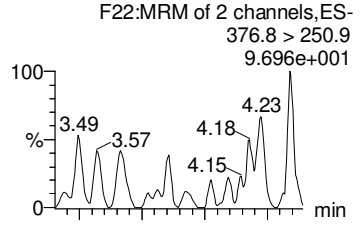


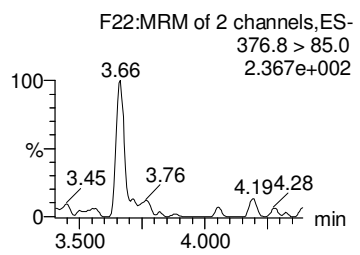
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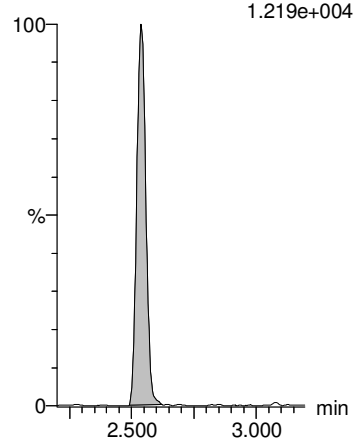


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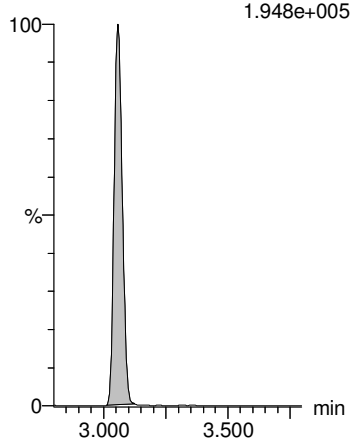




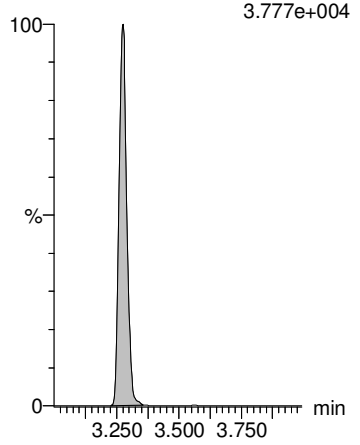
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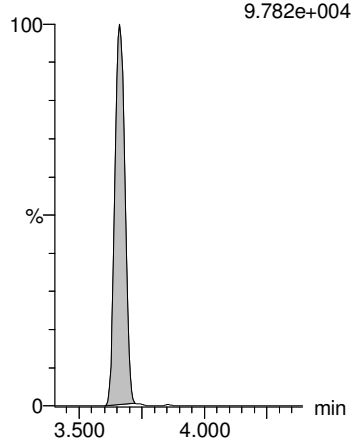
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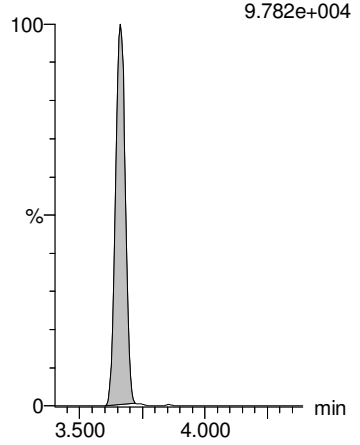
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13C4-PFHpA-EIS



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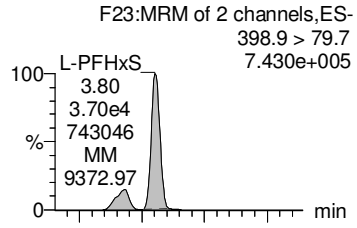


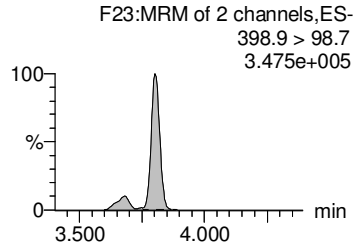
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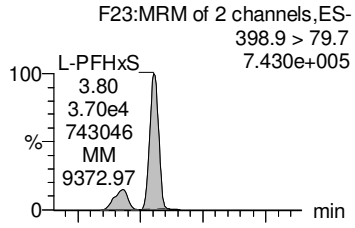
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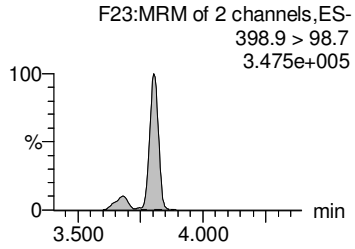
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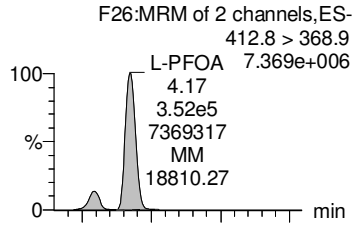


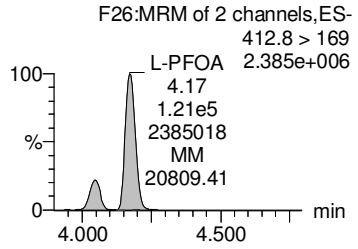
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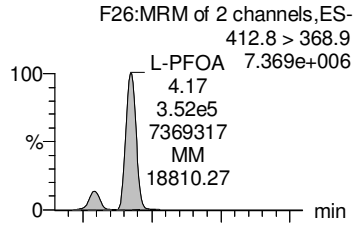


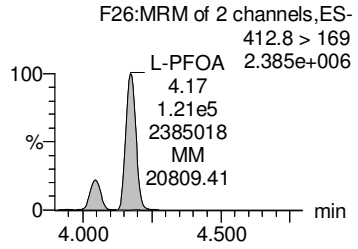
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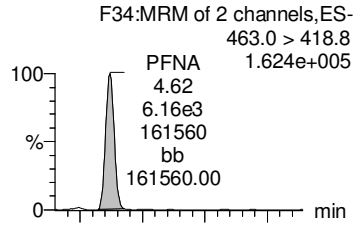


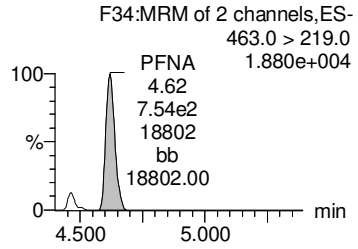
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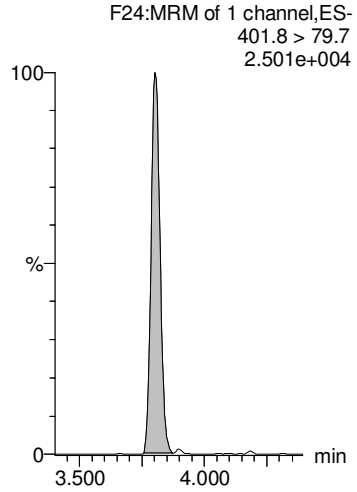


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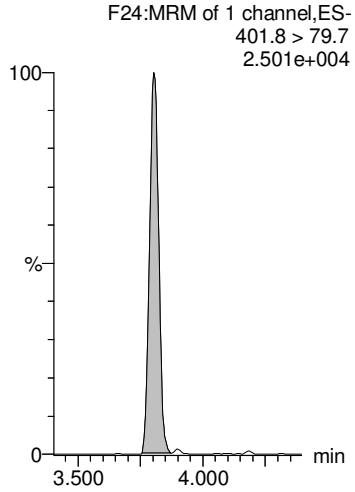




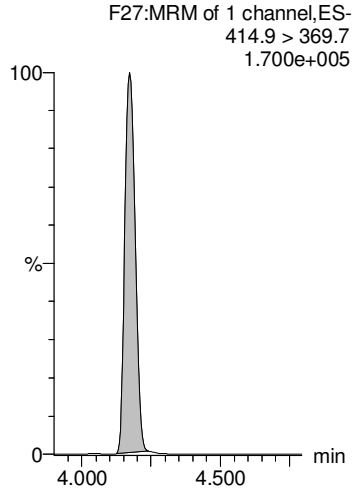
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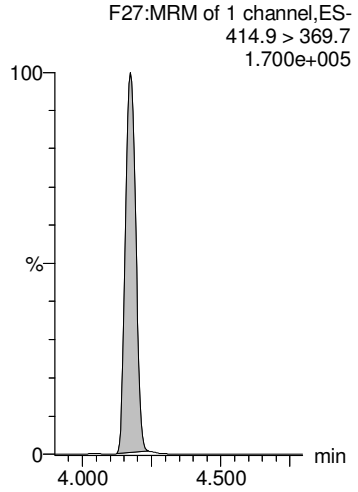
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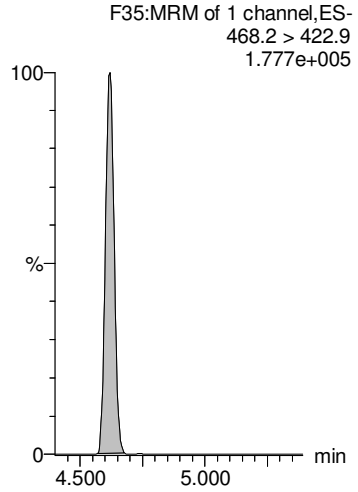
13C2-PFOA-EIS



13C2-PFOA-EIS



13C5-PFNA-EIS

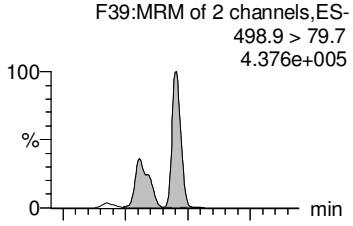


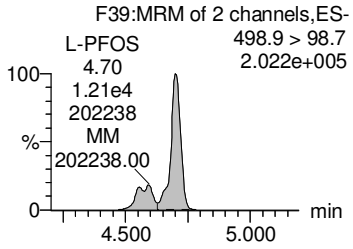
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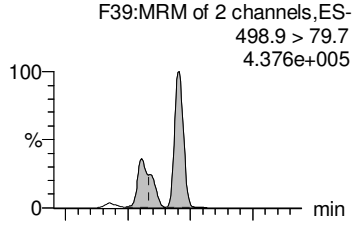
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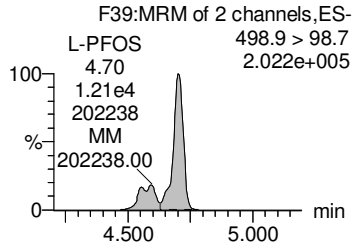
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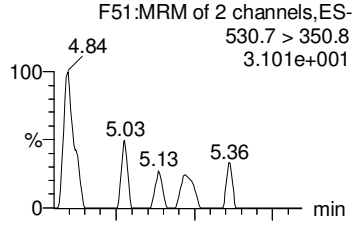


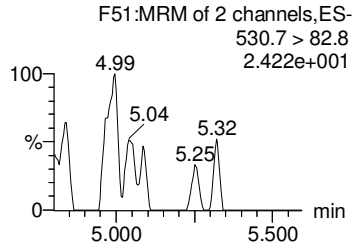
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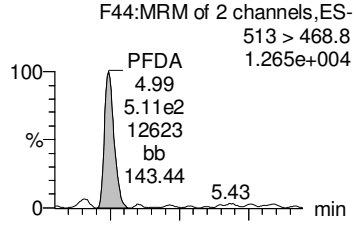


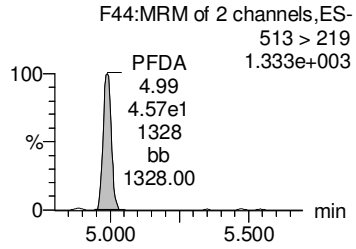
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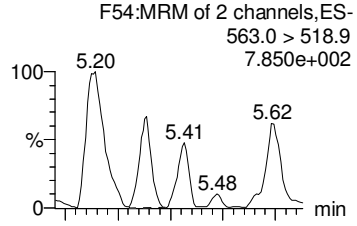


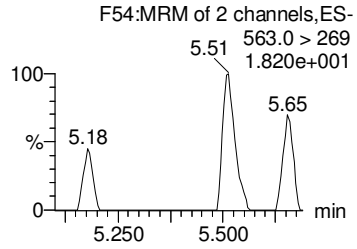
PFDA



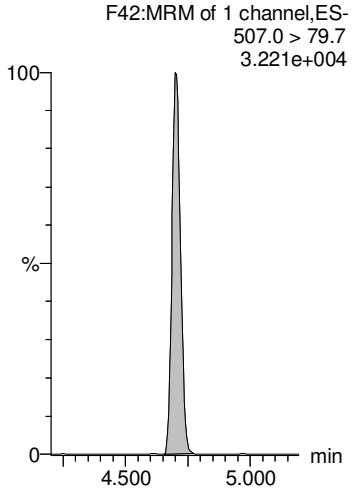


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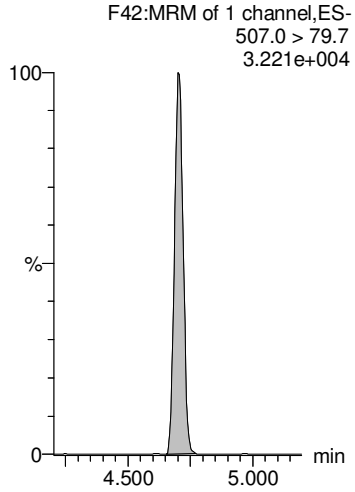




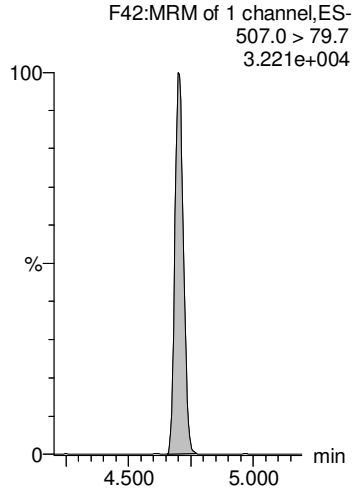
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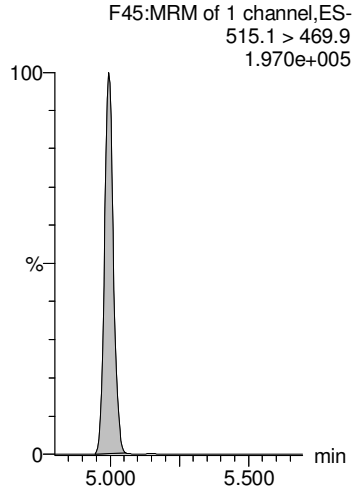
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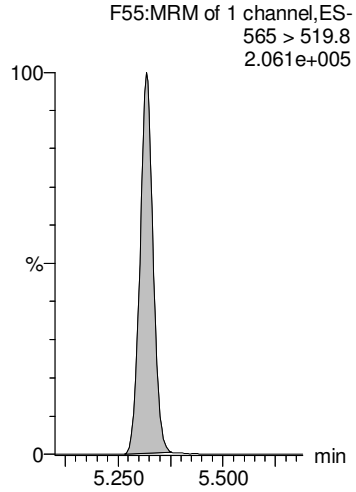
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13C2-PFDA-EIS



13C2-PFUdA-EIS

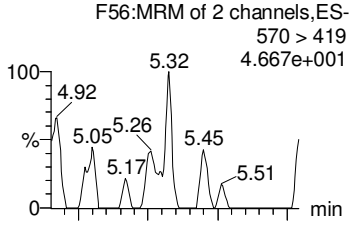


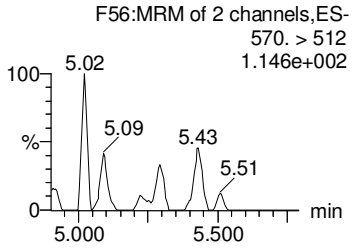
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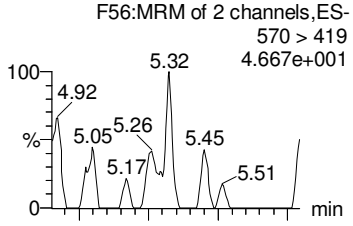
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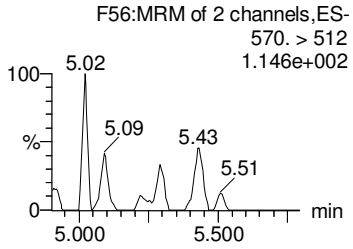
L-MeFOSAA



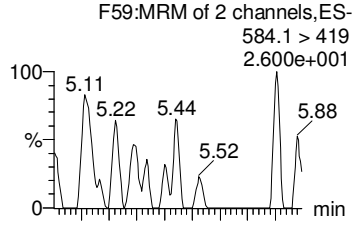


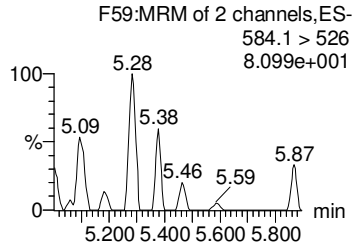
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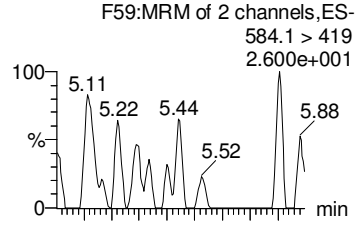


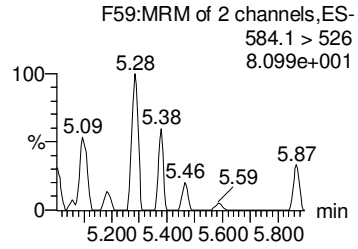
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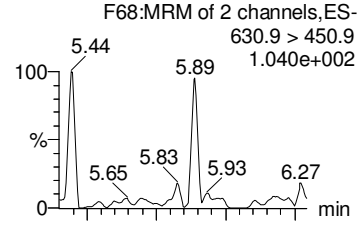


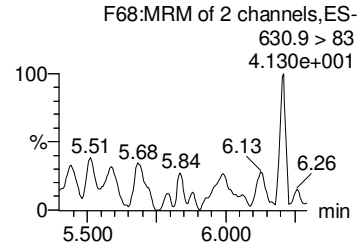
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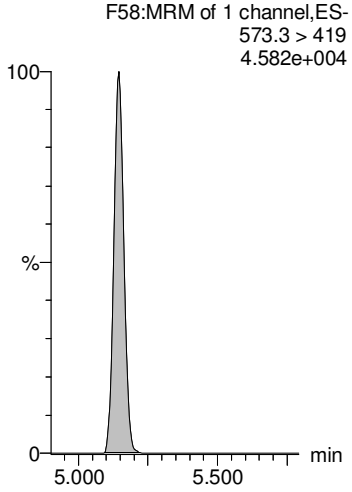


11Cl-PF30UdS

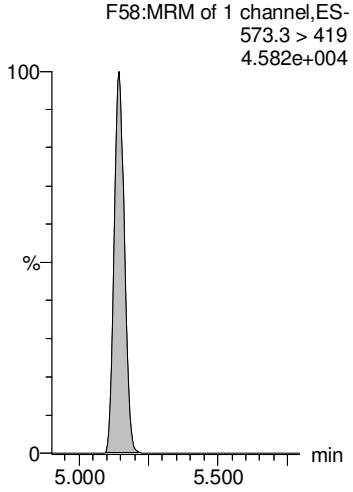




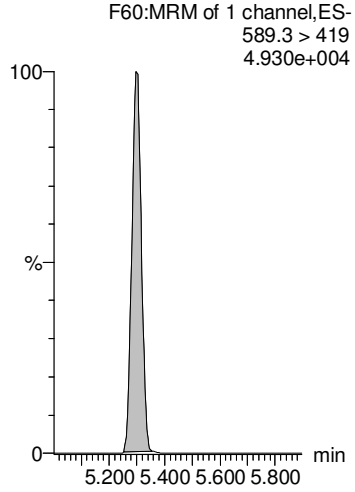
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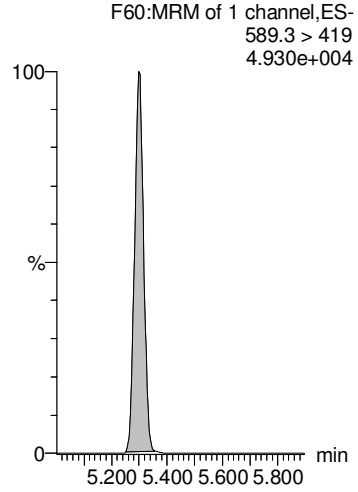
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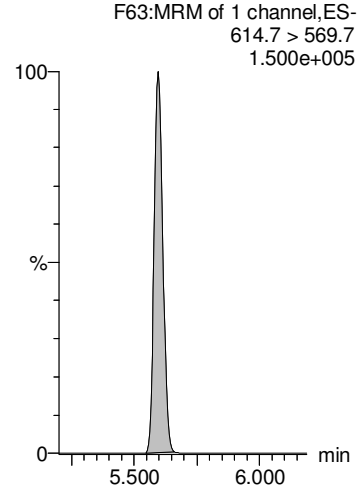
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

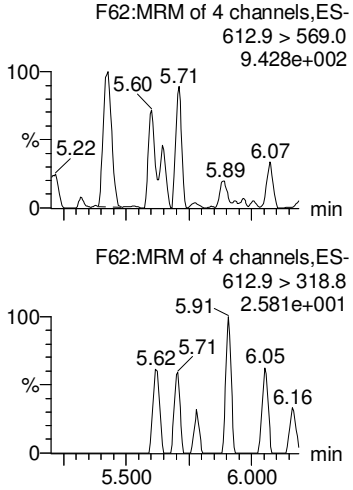


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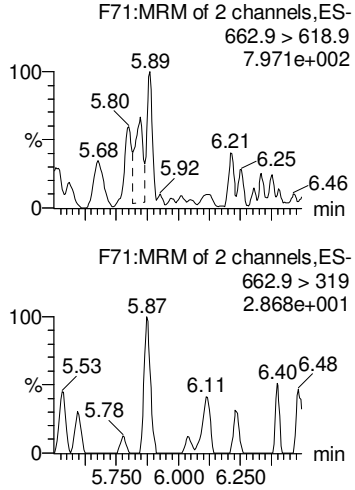
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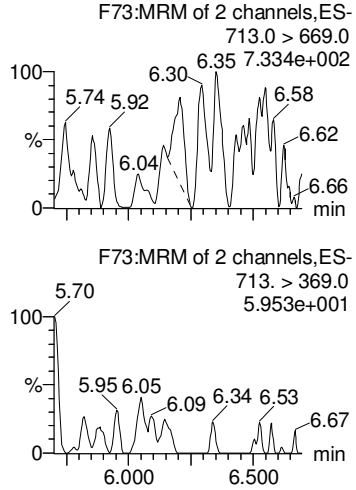
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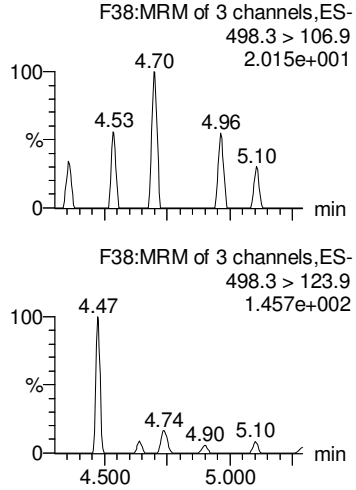
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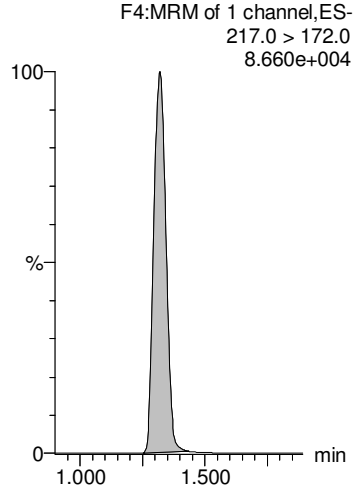
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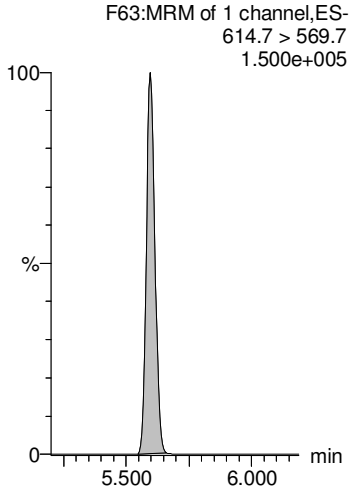
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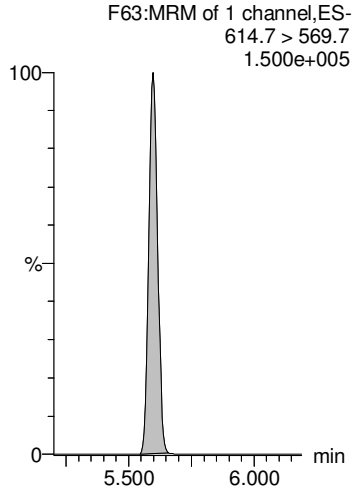
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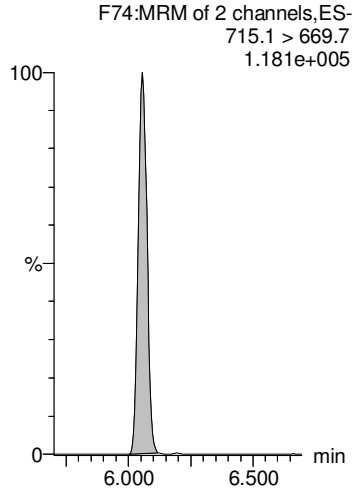
13C2-PFDoA-EIS



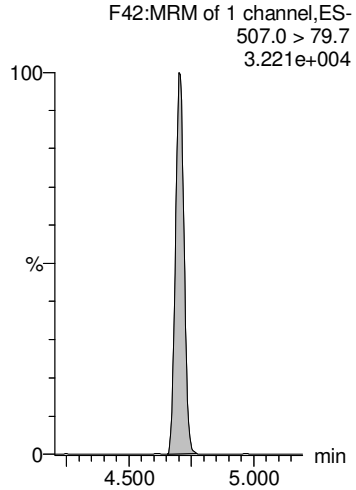
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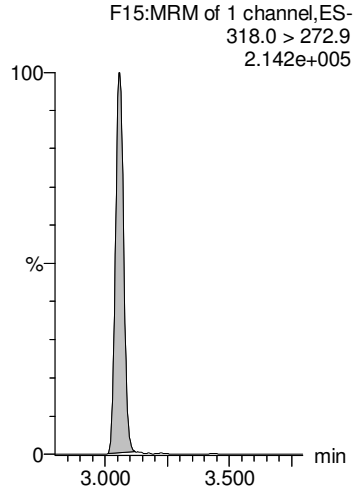
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

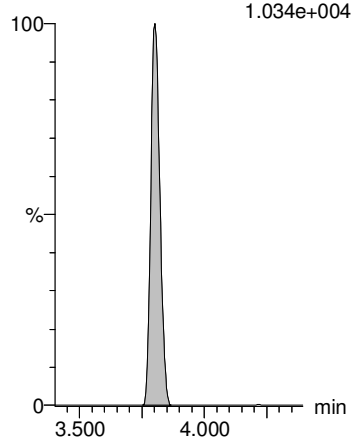


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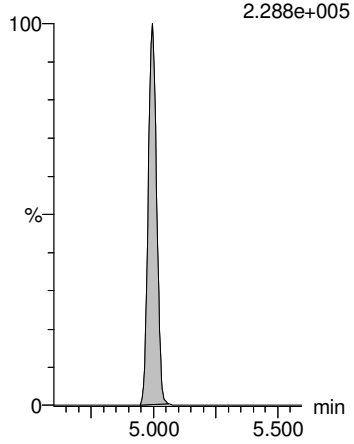
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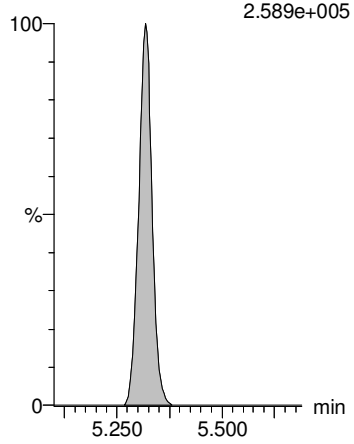
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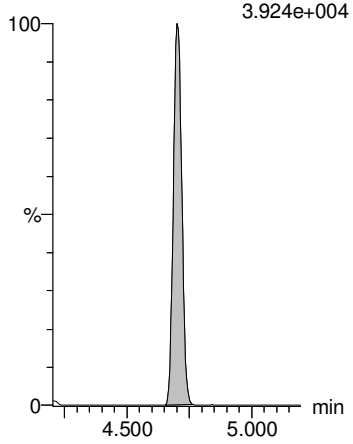
13C6-PFDA



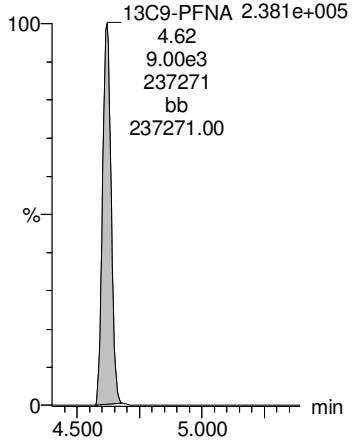
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Name: 200227P1-17, Date: 27-Feb-2020, Time: 18:19:12, ID: 2000330-03 I003MW12S-20200214 0.25031, Description: I003MW12S-20200214

	#	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	2.40e3	1.45e3	0.250		2.54	2.54	20.7	34.6485		3.080	NO
2	7	PFHxA	313.0 > 269.0	5.61e4	1.92e4	0.250		3.06	3.06	36.5	164.3085		17.233	NO
3	9	HFPO-DA	285.1 > 168.9		3.35e3	0.250		3.28						
4	11	PFHpA	363.0 > 318.9	1.70e4	1.36e4	0.250		3.66	3.66	15.7	53.7990		34.657	NO
5	12	ADONA	376.8 > 250.9		1.36e4	0.250		3.75						
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.45e3		0.250	122.770	2.61	2.54	1450	47.1899	94.5		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.92e4		0.250	1761.472	3.06	3.06	19200	43.6196	87.3		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.35e3		0.250	328.229	3.34	3.28	3350	40.7164	81.5		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.36e4		0.250	1290.921	3.68	3.66	13600	41.9640	84.0		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.36e4		0.250	1290.921	3.68	3.66	13600	41.9640	84.0		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.21e4	3.04e3	0.250		3.81	3.81	49.7	190.4960		2.543	NO
13	1...	Total PFHxS	398.9 > 79.7	1.21e4	3.04e3	0.250		3.93		49.7	190.4960			
14	16	L-PFOA	412.8 > 368.9	1.75e5	1.85e4	0.250		4.18	4.18	118	402.0863		2.780	NO
15	1...	Total PFOA	412.8 > 368.9	1.75e5	1.85e4	0.250		4.60		118	402.0863			
16	21	PFNA	463.0 > 418.8	2.58e2	1.92e4	0.250		4.62	4.62	0.168	0.3556		17.080	YES
17	61	13C3-PFHxS-EIS	401.8 > 79.7	3.04e3		0.250	309.268	3.80	3.81	3040	39.2961	78.7		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	3.04e3		0.250	309.268	3.80	3.81	3040	39.2961	78.7		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.85e4		0.250	1782.464	4.17	4.18	18500	41.5685	83.2		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.85e4		0.250	1782.464	4.17	4.18	18500	41.5685	83.2		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.92e4		0.250	1750.823	4.62	4.62	19200	43.7429	87.6		
22	-1													
23	23	L-PFOS	498.9 > 79.7	3.54e3	3.64e3	0.250		4.70	4.55	12.1	51.8776		2.444	NO
24	1...	Total PFOS	498.9 > 79.7	3.54e3	3.64e3	0.250		5.13		12.1	51.8776			
25	25	9Cl-PF30NS	530.7 > 350.8		3.64e3	0.250		4.91						
26	26	PFDA	513 > 468.8		1.81e4	0.250		5.00						
27	33	PFUdA	563.0 > 518.9		2.18e4	0.250		5.32						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.250	346.443	4.70	4.70	3640	41.9897	84.1		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.250	346.443	4.70	4.70	3640	41.9897	84.1		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.250	346.443	4.70	4.70	3640	41.9897	84.1		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.81e4		0.250	1915.540	4.99	5.00	18100	37.8117	75.7		
32	79	13C2-PFUdA-EIS	565 > 519.8	2.18e4		0.250	2194.474	5.32	5.32	21800	39.6144	79.3		
33	-1													
34	29	L-MeFOSAA	570 > 419		5.07e3	0.250		5.14						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	5.07e3	0.250		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		5.54e3	0.250		5.30						

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Name: 200227P1-17, Date: 27-Feb-2020, Time: 18:19:12, ID: 2000330-03 I003MW12S-20200214 0.25031, Description: I003MW12S-20200214

	#	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	5.54e3	0.250		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.69e4	0.250		5.53						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	5.07e3		0.250	482.560	5.15	5.14	5070	41.9334	84.0		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	5.07e3		0.250	482.560	5.15	5.14	5070	41.9334	84.0		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	5.54e3		0.250	553.305	5.29	5.30	5540	39.9883	80.1		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	5.54e3		0.250	553.305	5.29	5.30	5540	39.9883	80.1		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.69e4		0.250	1946.588	5.58	5.60	16900	34.7156	69.5		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.69e4	0.250		5.60						
46	39	PFTrDA	662.9 > 618.9		1.69e4	0.250		5.85						
47	41	PFTeDA	713.0 > 669.0		1.90e4	0.250		6.06						
48	1...	TDCA	498.3>106.9			0.250		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.18e4	1.18e4	0.250	1.000	1.32	1.32	12.5	49.9381	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.69e4		0.250	1946.588	5.58	5.60	16900	34.7156	69.5		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.69e4		0.250	1946.588	5.58	5.60	16900	34.7156	69.5		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.90e4		0.250	2085.576	6.01	6.06	19000	36.3710	72.8		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.64e3		0.250	346.443	4.70	4.70	3640	41.9897	84.1		
54	1...	13C5-PFHxA	318.0 > 272.9	2.15e4	2.15e4	0.250	1.000	3.05	3.06	12.5	49.9381	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.58e3	1.58e3	0.250	1.000	3.80	3.80	12.5	49.9381	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.25e4	2.25e4	0.250	1.000	4.99	4.99	12.5	49.9381	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	2.47e4	2.47e4	0.250	1.000	5.31	5.32	12.5	49.9381	100.0		
59	1...	13C4-PFOS	503 > 79.7	4.18e3	4.18e3	0.250	1.000	4.70	4.70	12.5	49.9381	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	2.28e4	2.28e4	0.250	1.000	4.61	4.62	12.5	49.9381	100.0		

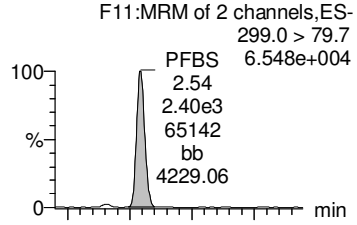
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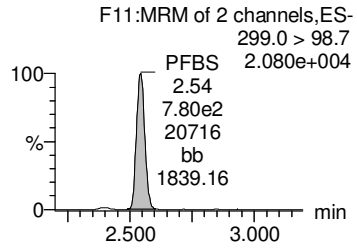
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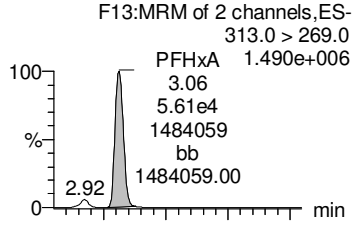
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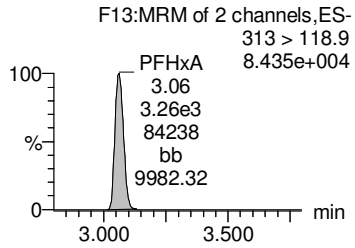
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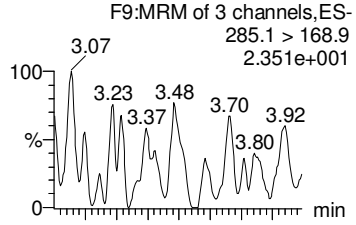


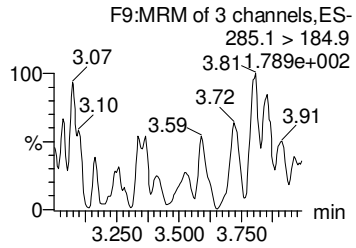
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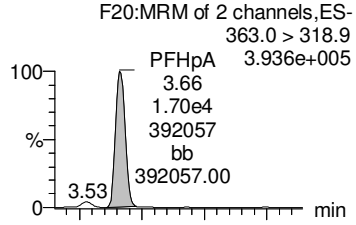


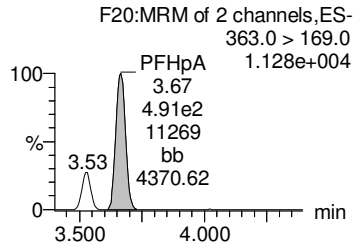
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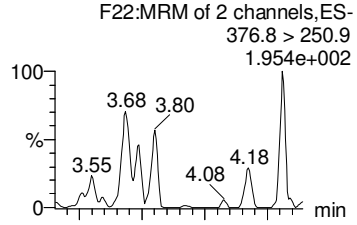


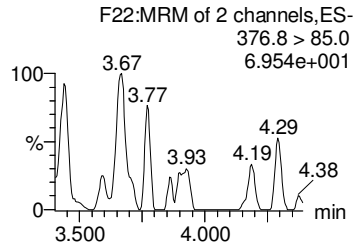
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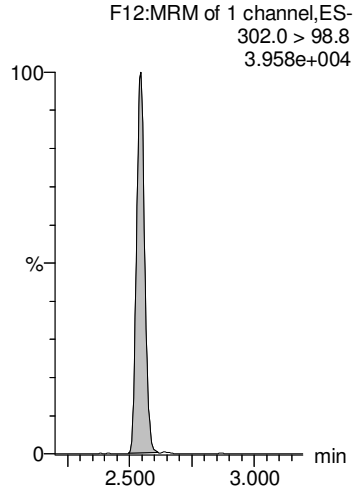


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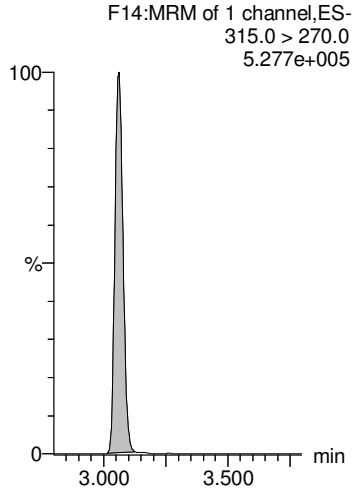




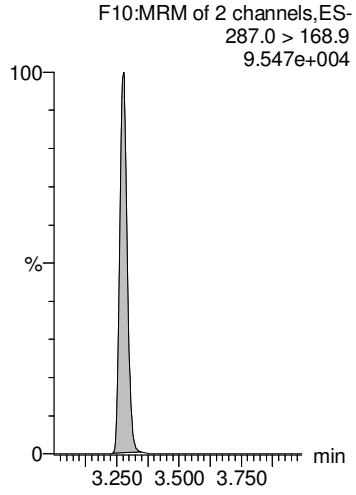
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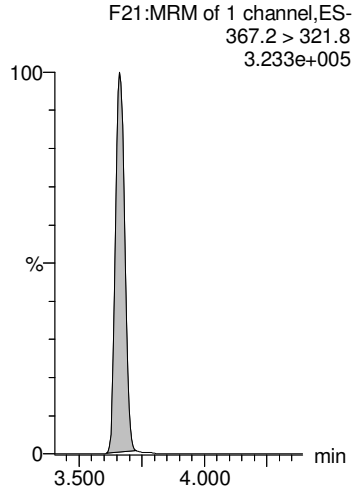
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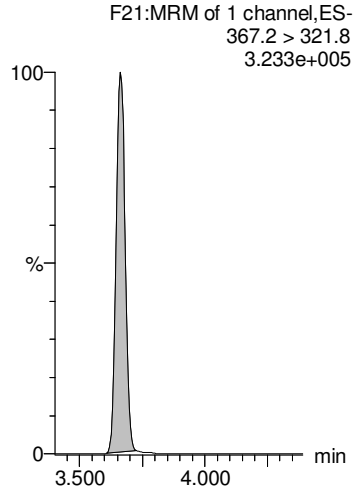
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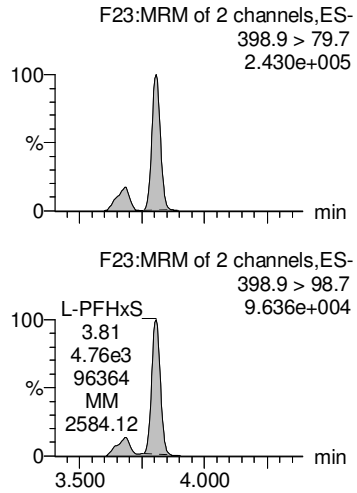


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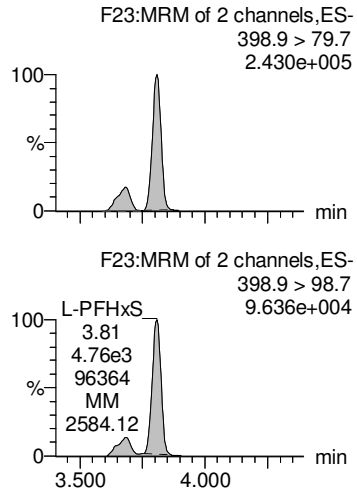
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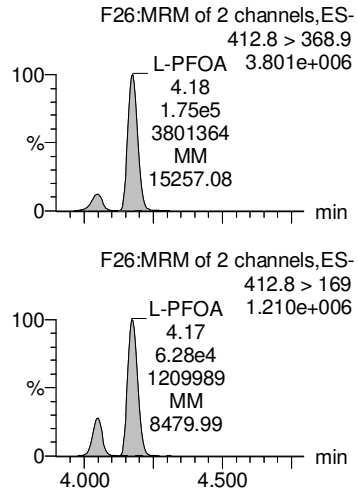
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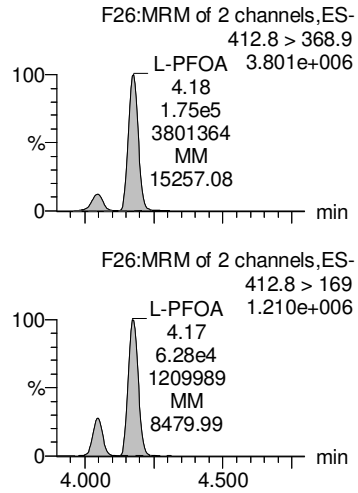
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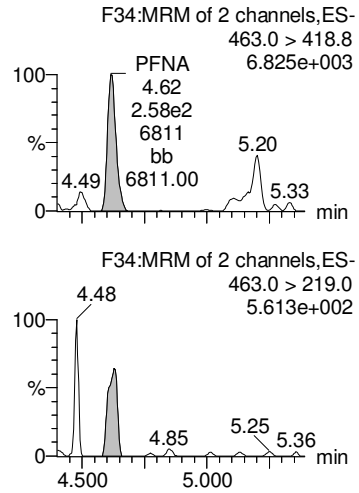
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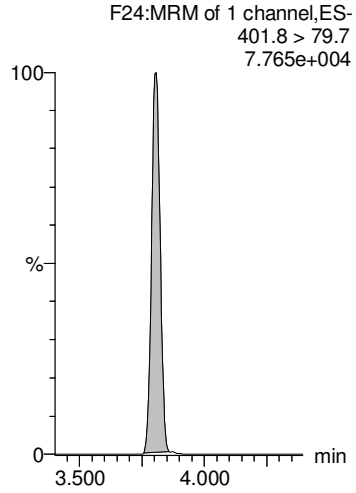
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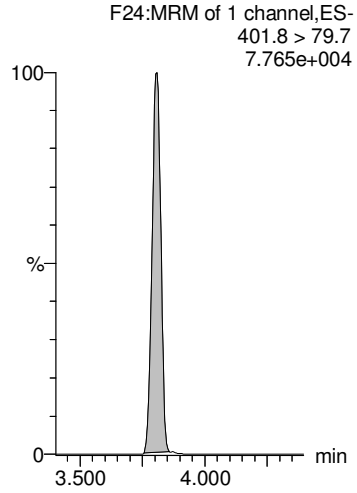
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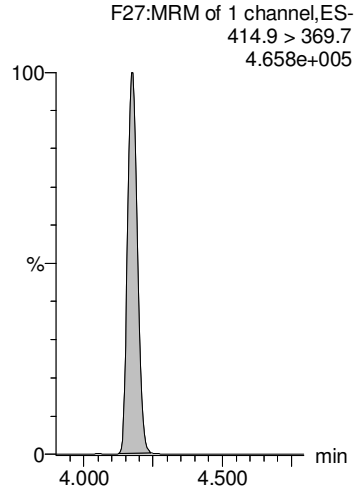
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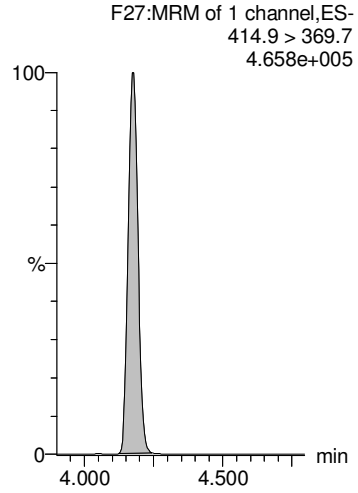
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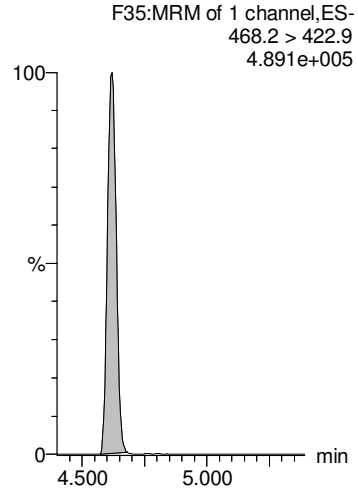
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13C2-PFOA-EIS



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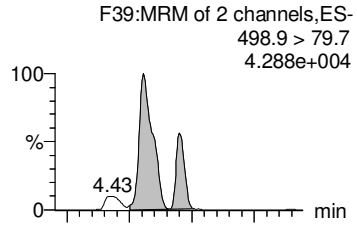


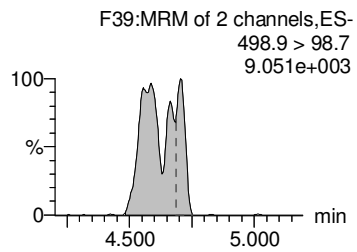
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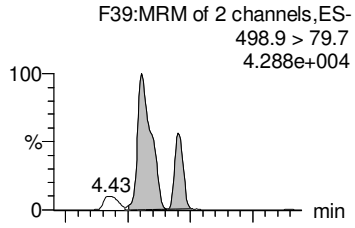
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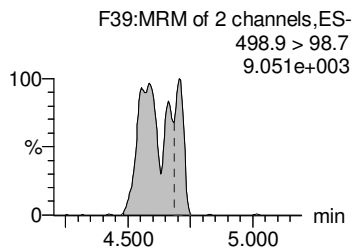
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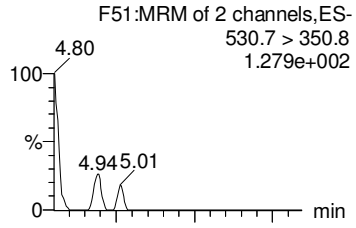


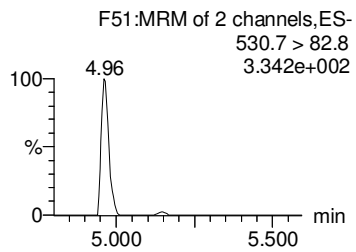
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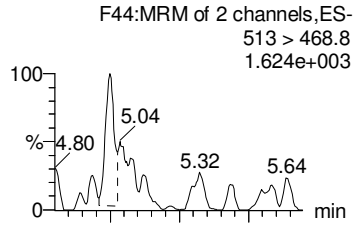


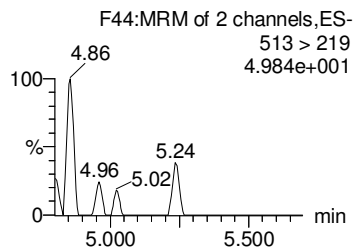
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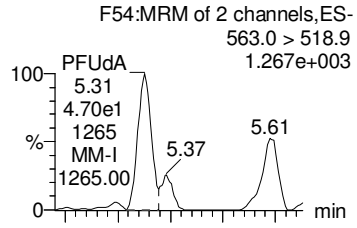


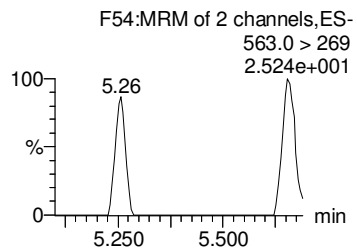
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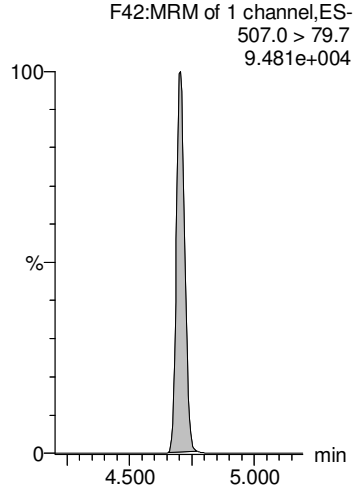


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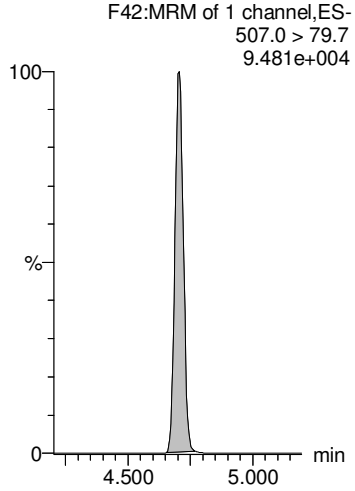




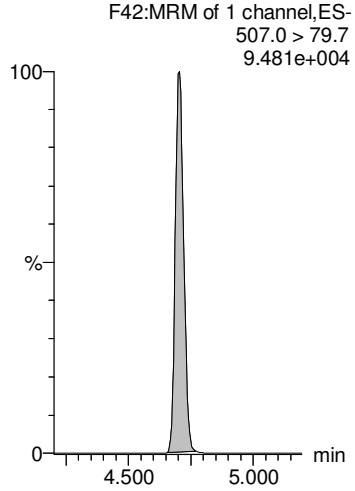
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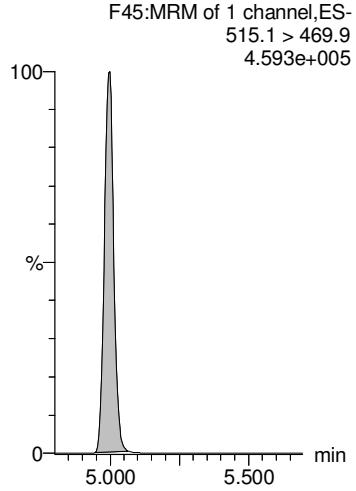
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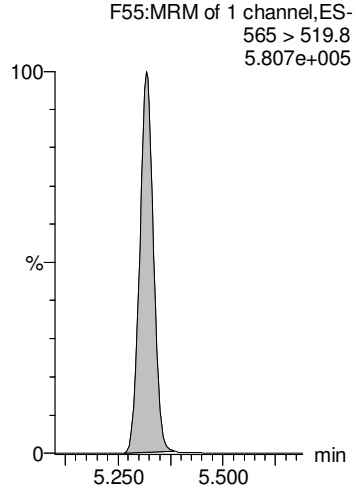
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13C2-PFDA-EIS



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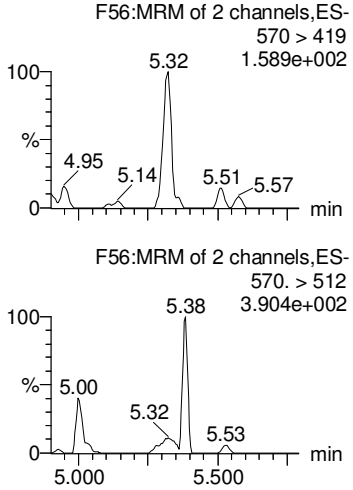


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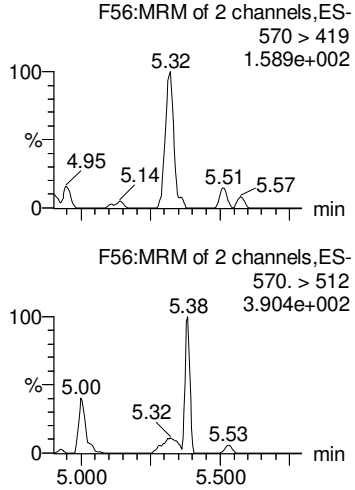
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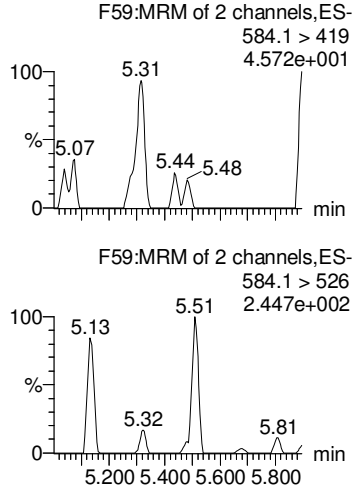
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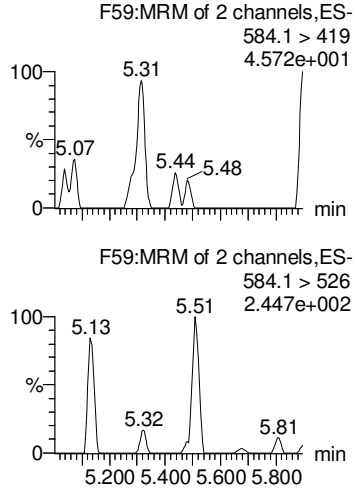
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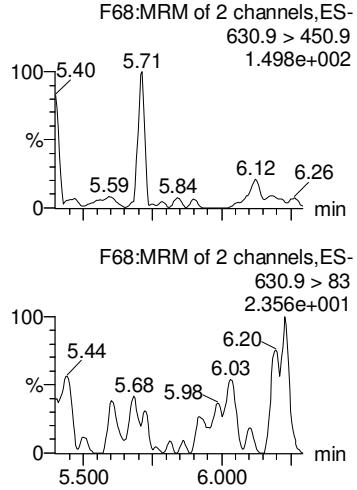
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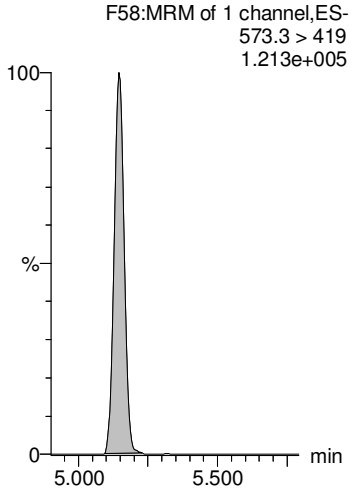
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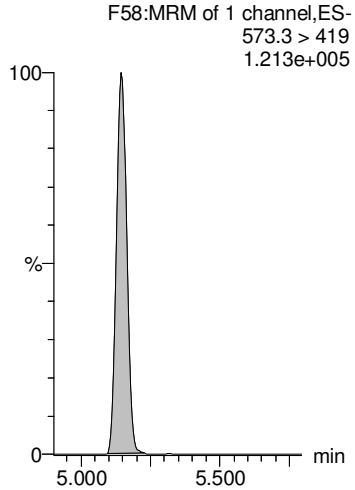
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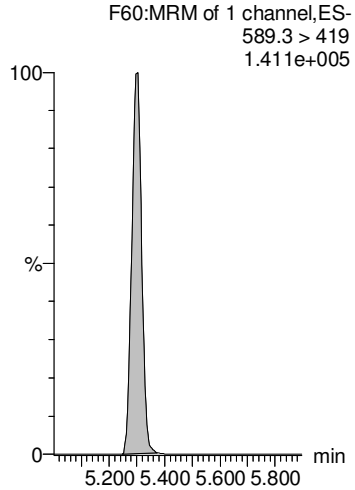
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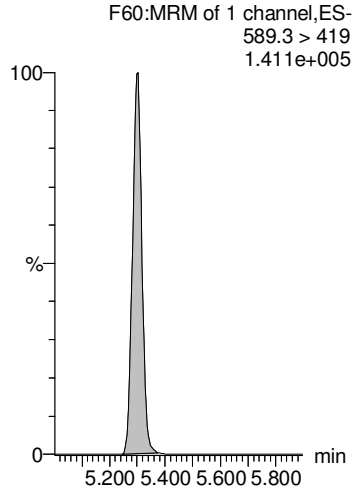
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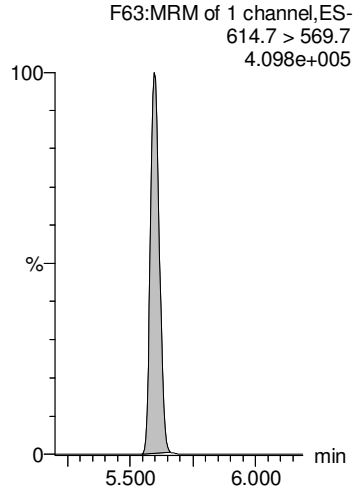
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

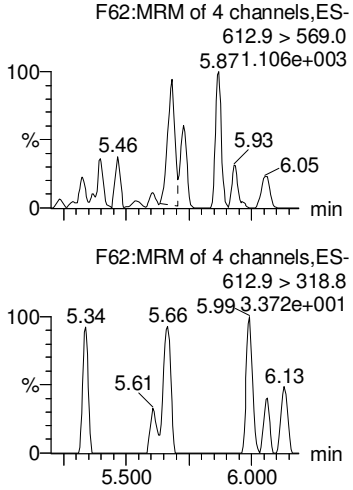


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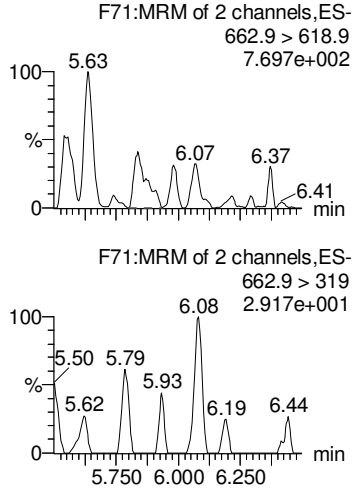
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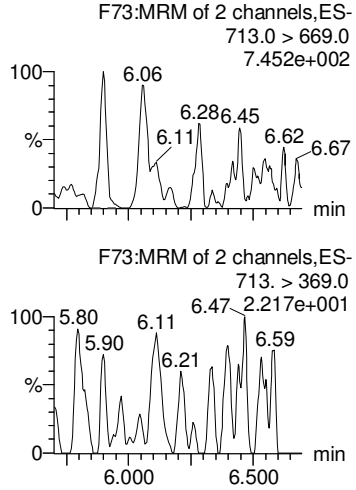
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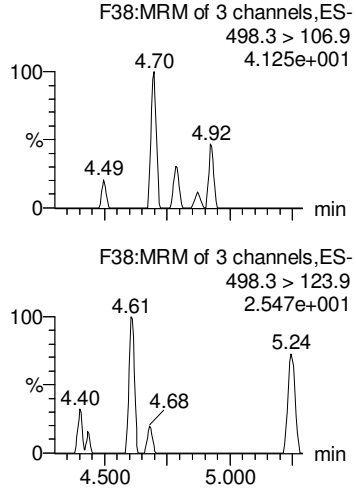
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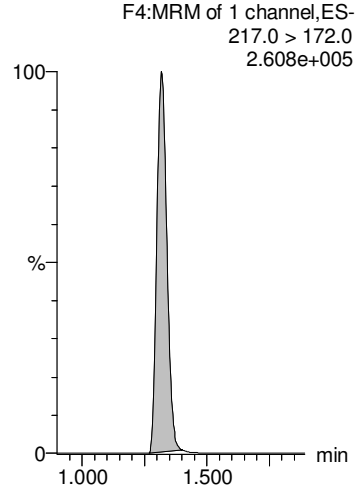
PFTeDA



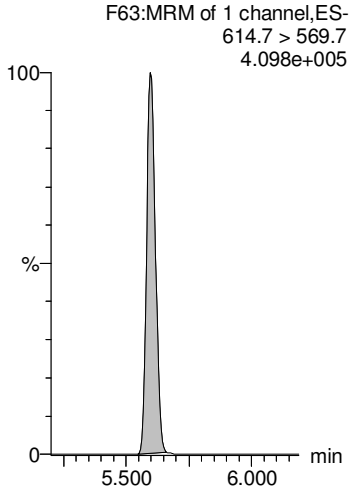
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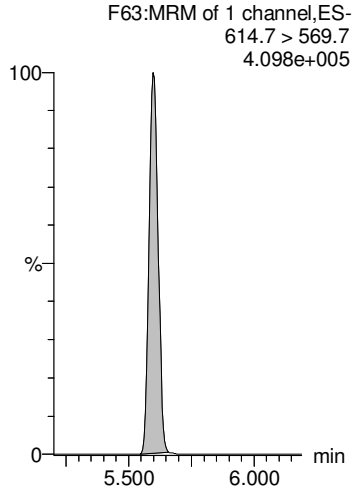
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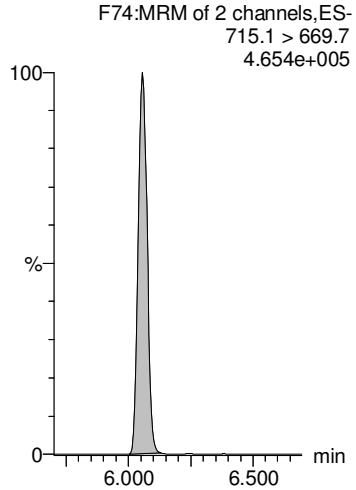
13C2-PFDoA-EIS



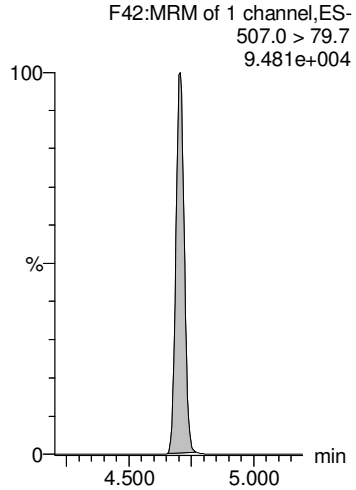
13C2-PFDoA-EIS



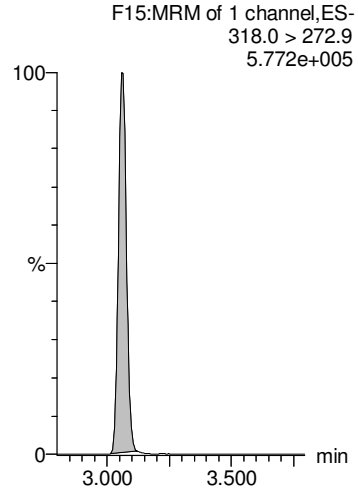
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13C8-PFOS-EIS



13C5-PFHxA

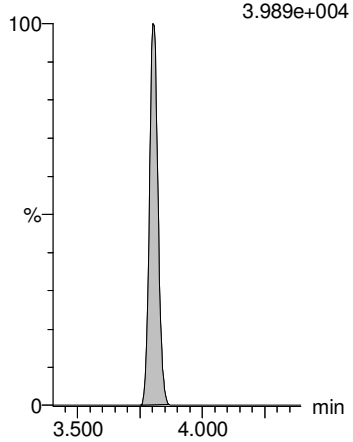


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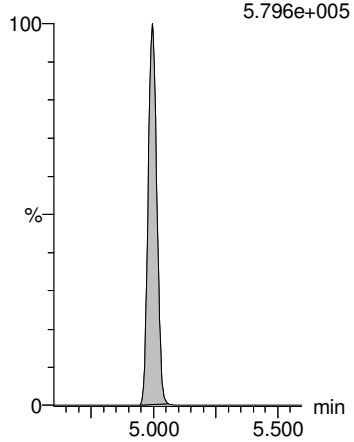
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Name: 200227P1-17, Date: 27-Feb-2020, Time: 18:19:12, ID: 2000330-03 I003MW12S-20200214 0.25031, Description: I003MW12S-20200214

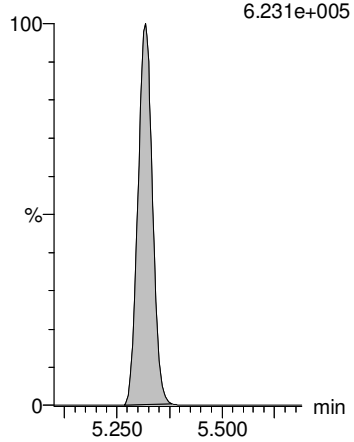
18O2-PFHxS



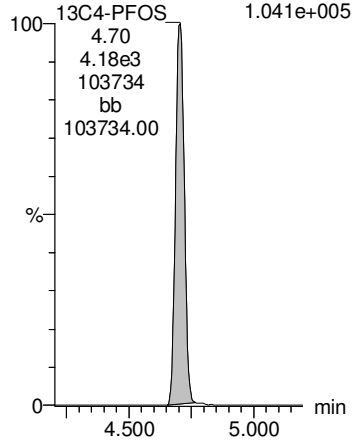
13C6-PFDA



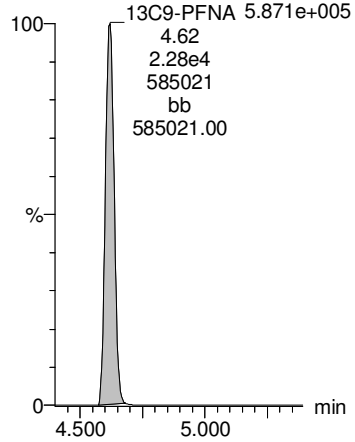
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
Printed: Monday, March 02, 2020 07:57:36 Pacific Standard Time

Name: 200224P1-48, Date: 25-Feb-2020, Time: 01:24:44, ID: 2000330-04 DUP04-20200214 0.25435, Description: DUP04-20200214

	#	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	2.37e3	1.40e3	0.254		2.60	2.60	21.2	34.8834		3.203	NO
2	7	PFHxA	313.0 > 269.0	5.60e4	1.95e4	0.254		3.12	3.12	35.9	154.5990		16.217	NO
3	9	HFPO-DA	285.1 > 168.9		3.61e3	0.254		3.33						NO
4	11	PFHpA	363.0 > 318.9	1.68e4	1.24e4	0.254		3.71	3.71	16.9	54.6975		23.188	NO
5	12	ADONA	376.8 > 250.9		1.24e4	0.254		3.80						NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.40e3		0.254	121.548	2.65	2.60	1400	45.1788	91.9		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.95e4		0.254	1744.841	3.12	3.12	19500	43.9797	89.5		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.61e3		0.254	328.216	3.38	3.33	3610	43.2963	88.1		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.24e4		0.254	1063.335	3.72	3.71	12400	46.0128	93.6		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.24e4		0.254	1063.335	3.72	3.71	12400	46.0128	93.6		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.06e4	2.88e3	0.254		3.85	3.85	45.9	166.1492		2.465	NO
13	1...	Total PFHxS	398.9 > 79.7	1.06e4	2.88e3	0.254		3.93		45.9	166.1492			
14	16	L-PFOA	412.8 > 368.9	1.67e5	1.76e4	0.254		4.22	4.22	119	403.3613		2.807	NO
15	1...	Total PFOA	412.8 > 368.9	1.67e5	1.76e4	0.254		4.60		119	403.3613			
16	21	PFNA	463.0 > 418.8	2.20e2	1.50e4	0.254		4.65	4.65	0.183	0.4386		5.249	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.254	253.005	3.85	3.85	2880	44.7203	91.0		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.88e3		0.254	253.005	3.85	3.85	2880	44.7203	91.0		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.76e4		0.254	1468.721	4.22	4.22	17600	47.0376	95.7		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.76e4		0.254	1468.721	4.22	4.22	17600	47.0376	95.7		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.50e4		0.254	1278.380	4.65	4.65	15000	46.2657	94.1		
22	-1													
23	23	L-PFOS	498.9 > 79.7	3.66e3	3.14e3	0.254		4.74	4.59	14.6	57.4118		2.600	NO
24	1...	Total PFOS	498.9 > 79.7	3.66e3	3.14e3	0.254		5.13		14.6	57.4118			
25	25	9Cl-PF30NS	530.7 > 350.8		3.14e3	0.254		4.94						NO
26	26	PFDA	513 > 468.8		1.56e4	0.254		5.03						NO
27	33	PFUdA	563.0 > 518.9		1.49e4	0.254		5.34						NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.14e3		0.254	286.356	4.74	4.74	3140	43.0721	87.6		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.14e3		0.254	286.356	4.74	4.74	3140	43.0721	87.6		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.14e3		0.254	286.356	4.74	4.74	3140	43.0721	87.6		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.56e4		0.254	1461.559	5.02	5.03	15600	41.8676	85.2		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.49e4		0.254	1646.627	5.34	5.34	14900	35.4594	72.2		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.71e3	0.254		5.17						NO
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.71e3	0.254		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.46e3	0.254		5.32						NO

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Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
Printed: Monday, March 02, 2020 07:57:36 Pacific Standard Time

Name: 200224P1-48, Date: 25-Feb-2020, Time: 01:24:44, ID: 2000330-04 DUP04-20200214 0.25435, Description: DUP04-20200214

	#	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	3.46e3	0.254		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.20e4	0.254		5.55						NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.71e3		0.254	287.523	5.17	5.17	2710	37.1058	75.5		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.71e3		0.254	287.523	5.17	5.17	2710	37.1058	75.5		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.46e3		0.254	355.877	5.31	5.32	3460	38.2237	77.8		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.46e3		0.254	355.877	5.31	5.32	3460	38.2237	77.8		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.20e4		0.254	1443.711	5.61	5.62	12000	32.5884	66.3		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.20e4	0.254		5.62						NO
46	39	PFTrDA	662.9 > 618.9		1.20e4	0.254		5.87						NO
47	41	PFTeDA	713.0 > 669.0		8.33e3	0.254		6.07						NO
48	1...	TDCA	498.3>106.9			0.254		4.59						NO
49	99	13C4-PFBA	217.0 > 172.0	1.28e4	1.28e4	0.254	1.000	1.40	1.39	12.5	49.1449	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.20e4		0.254	1443.711	5.61	5.62	12000	32.5884	66.3		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.20e4		0.254	1443.711	5.61	5.62	12000	32.5884	66.3		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	8.33e3		0.254	1671.855	6.04	6.07	8330	19.5978	39.9		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.14e3		0.254	286.356	4.74	4.74	3140	43.0721	87.6		
54	1...	13C5-PFHxA	318.0 > 272.9	2.11e4	2.11e4	0.254	1.000	3.11	3.12	12.5	49.1449	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.35e3	1.35e3	0.254	1.000	3.85	3.85	12.5	49.1449	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.87e4	1.87e4	0.254	1.000	5.02	5.02	12.5	49.1449	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.60e4	1.60e4	0.254	1.000	5.34	5.34	12.5	49.1449	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.95e3	3.95e3	0.254	1.000	4.74	4.74	12.5	49.1449	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.72e4	1.72e4	0.254	1.000	4.65	4.65	12.5	49.1449	100.0		

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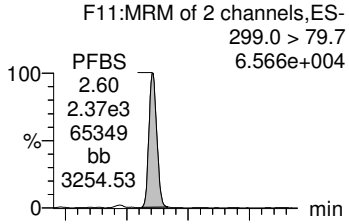
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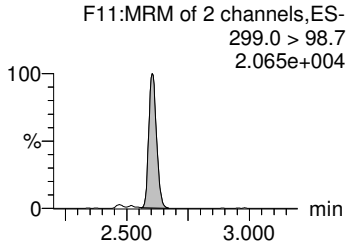
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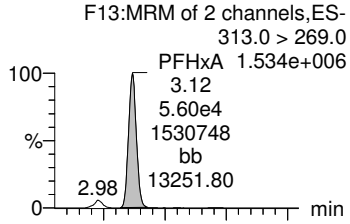
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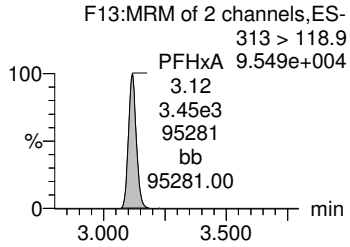
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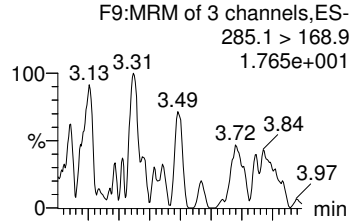


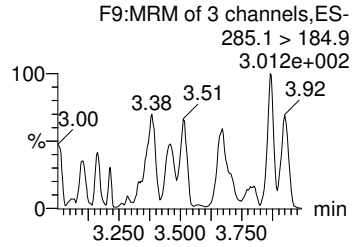
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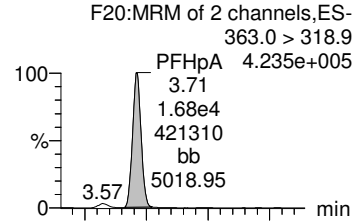


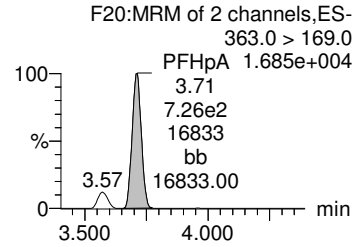
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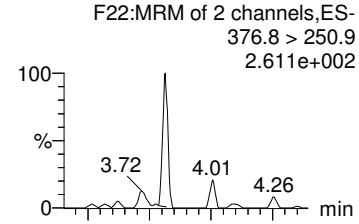


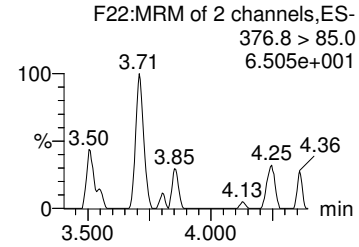
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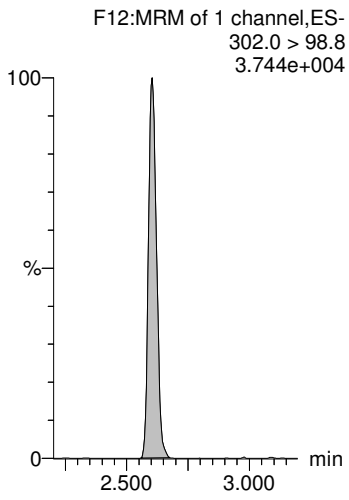


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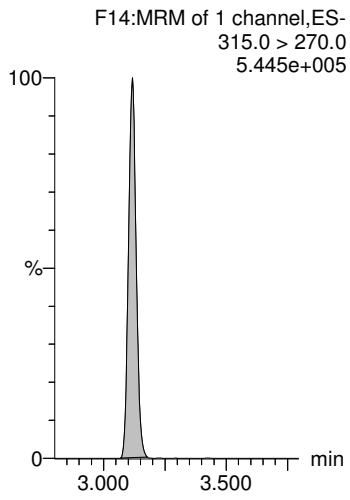




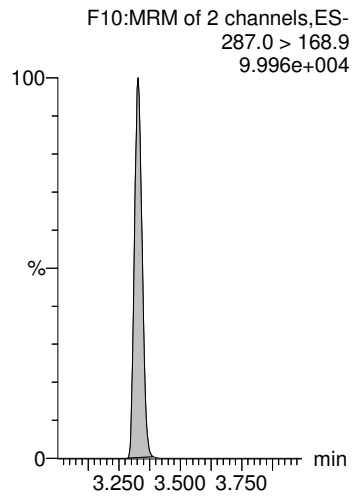
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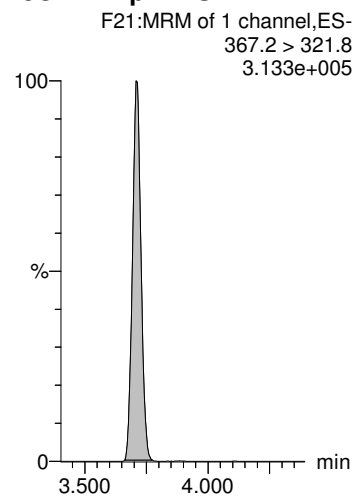
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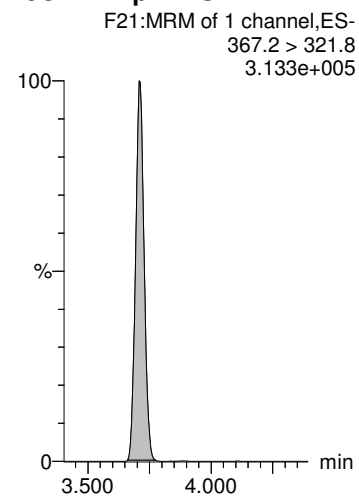
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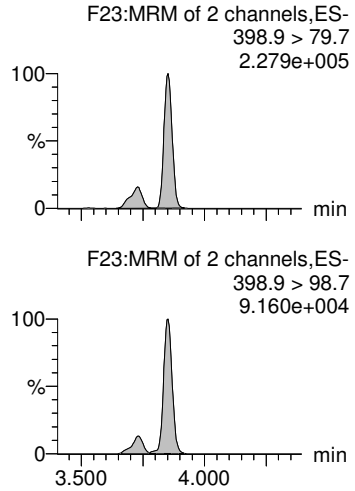
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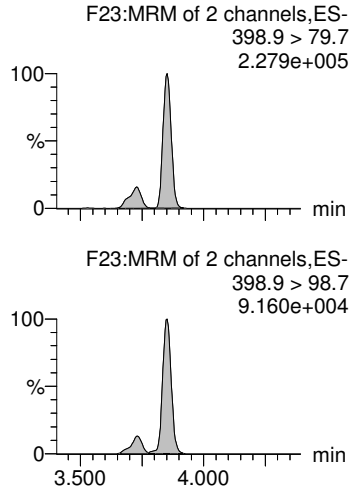
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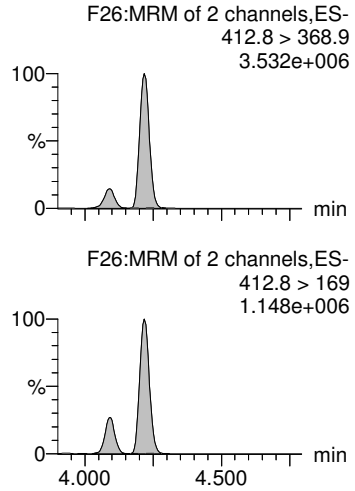
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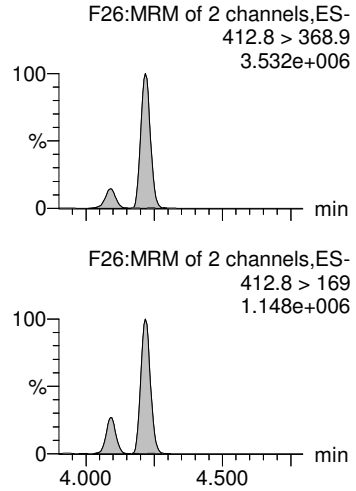
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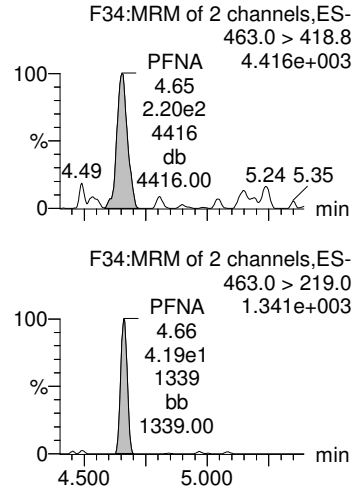
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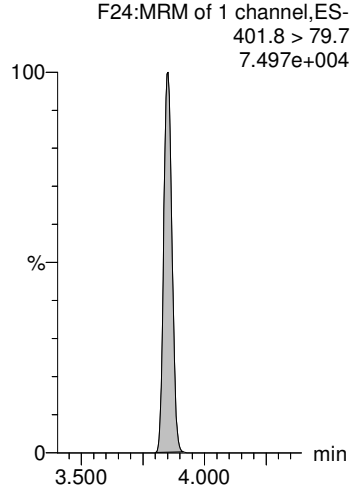
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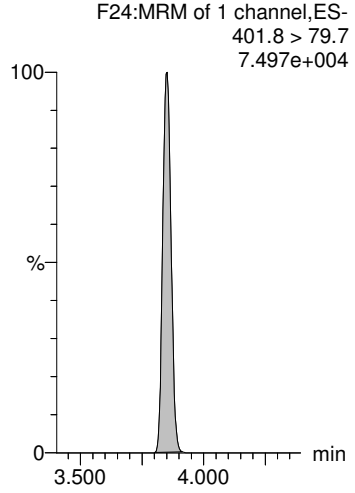
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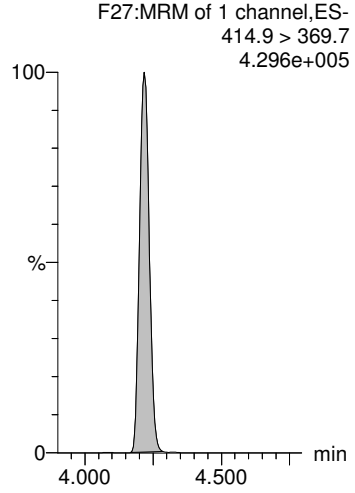
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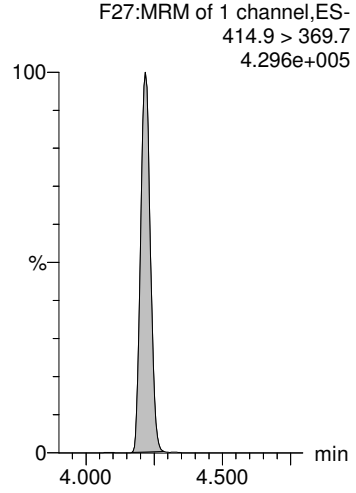
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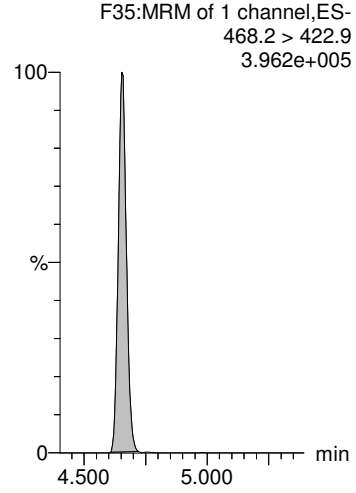
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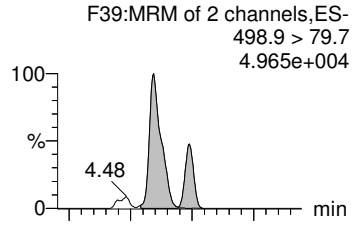


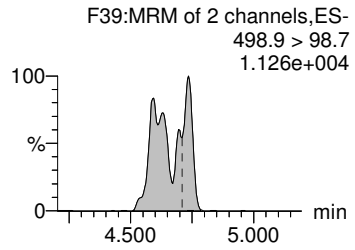
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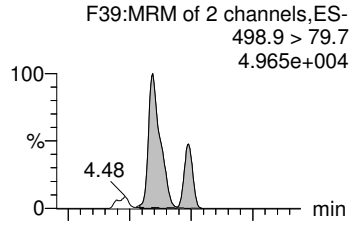
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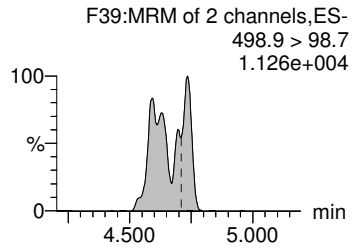
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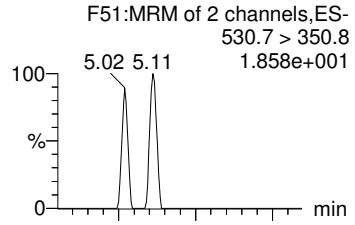


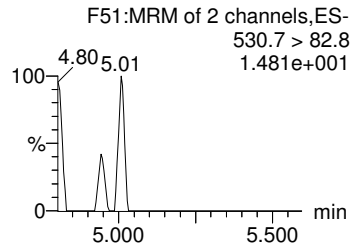
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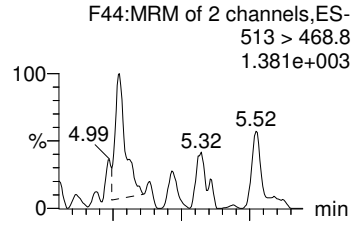


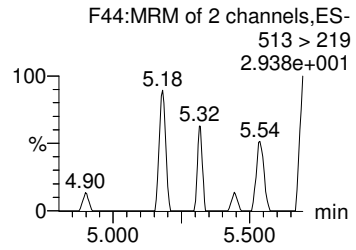
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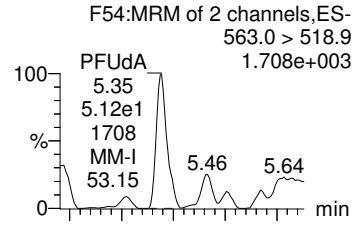


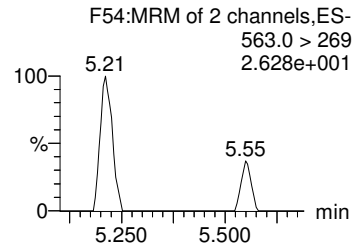
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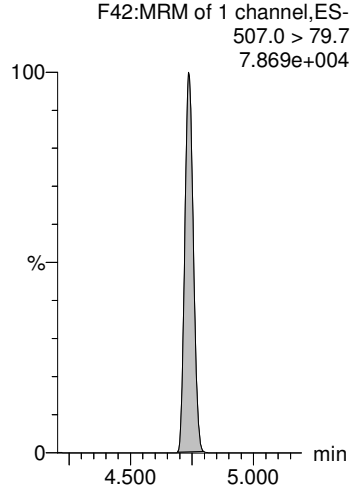


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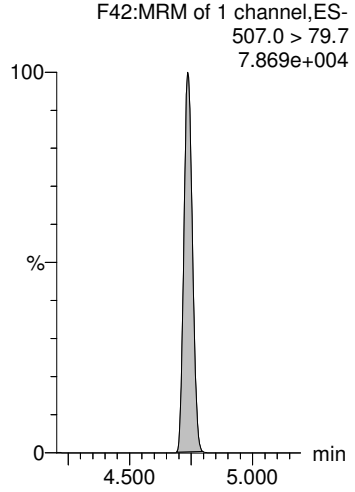




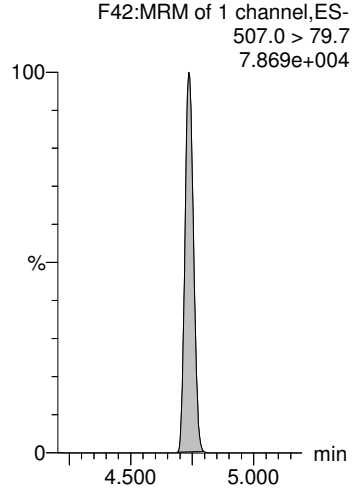
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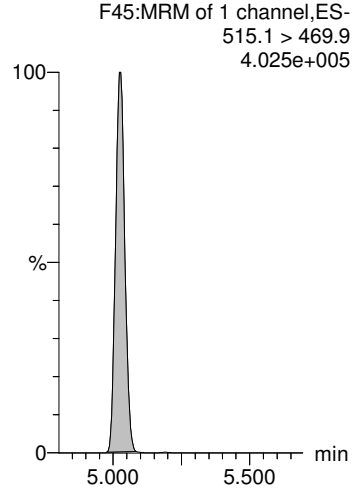
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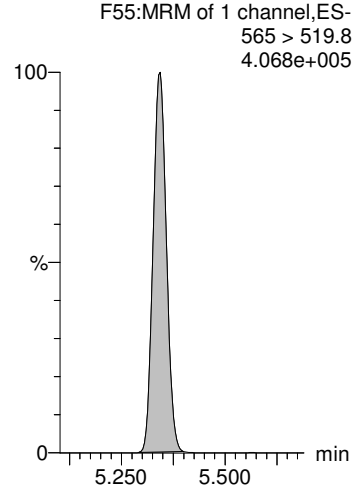
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13C2-PFDA-EIS



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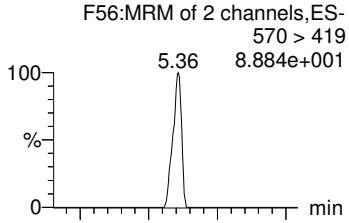


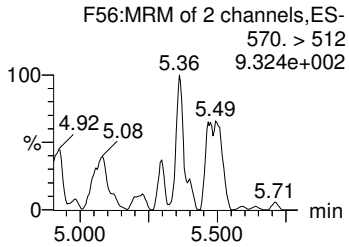
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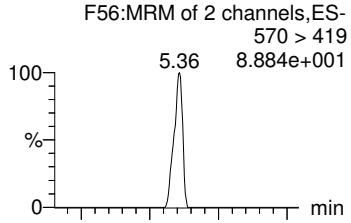
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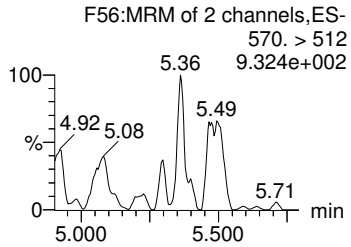
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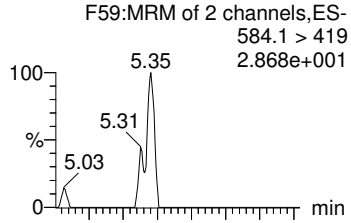


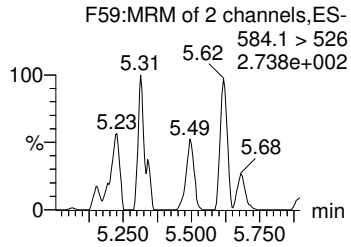
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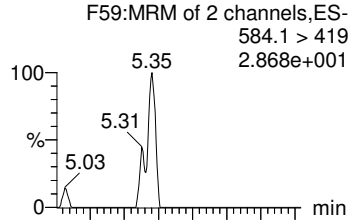


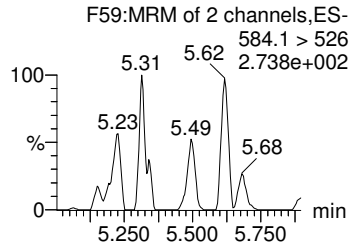
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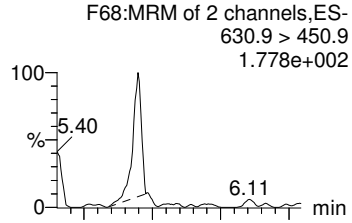


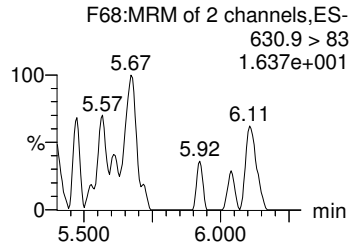
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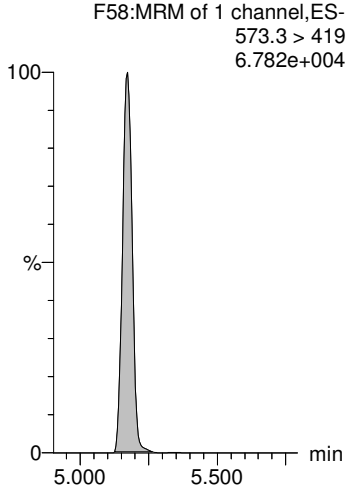


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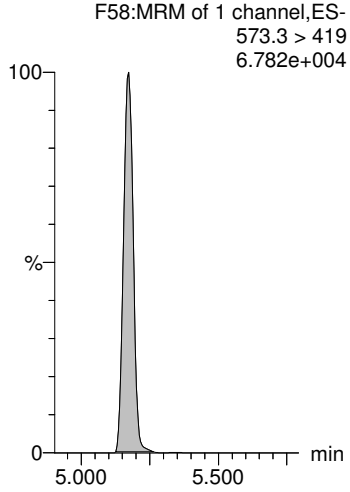




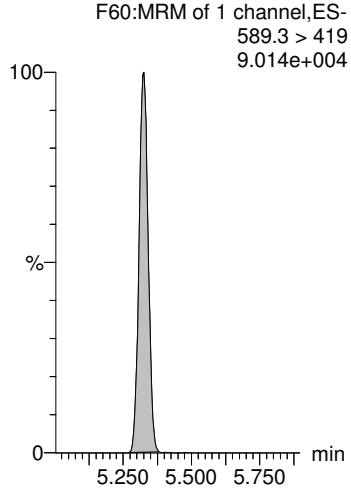
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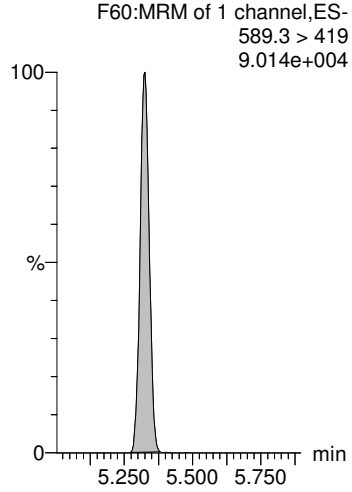
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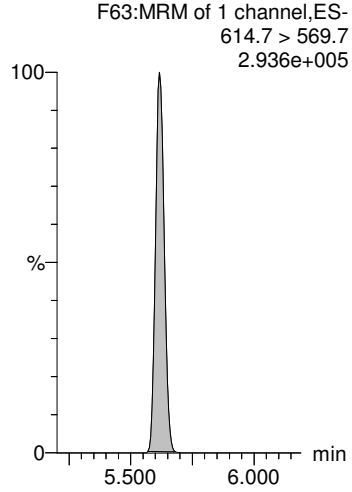
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d5-N-EtFOSAA-EIS



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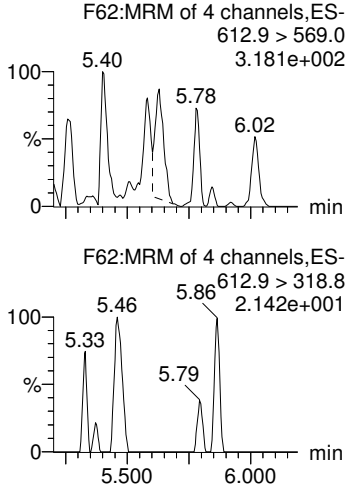


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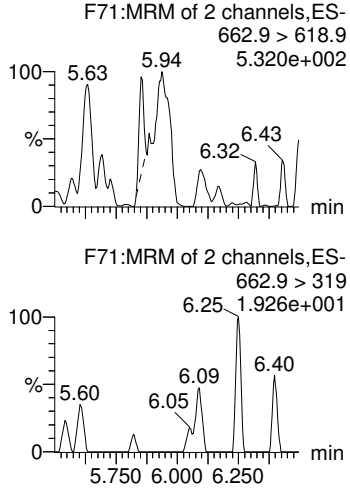
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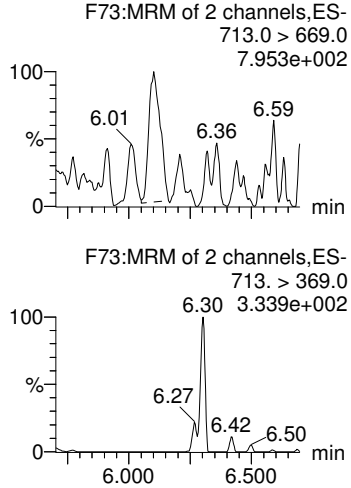
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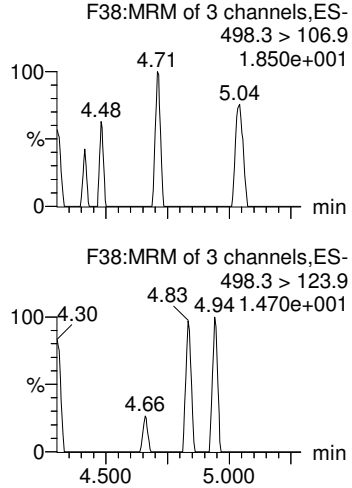
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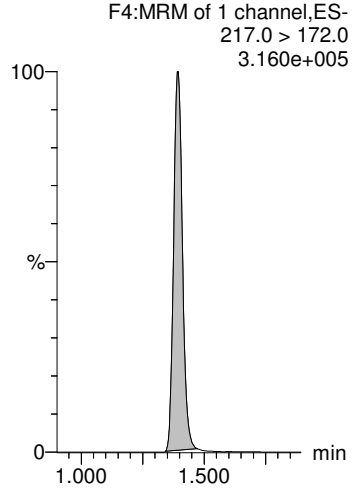
PFTeDA



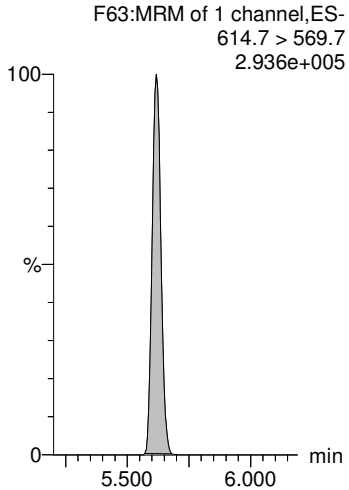
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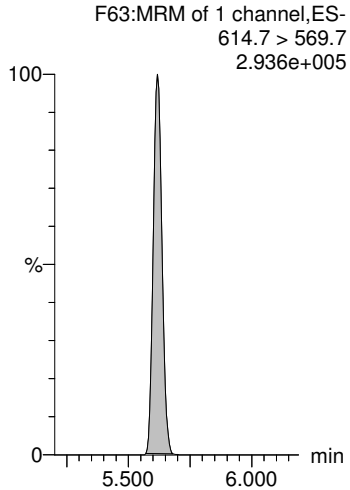
13C4-PFBA



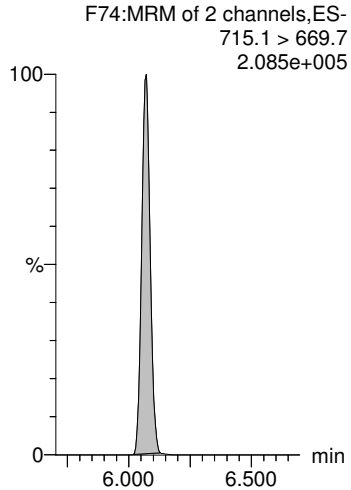
13C2-PFDoA-EIS



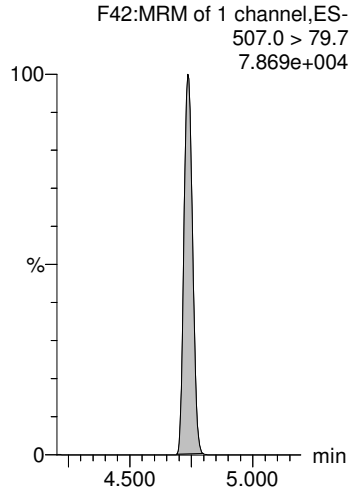
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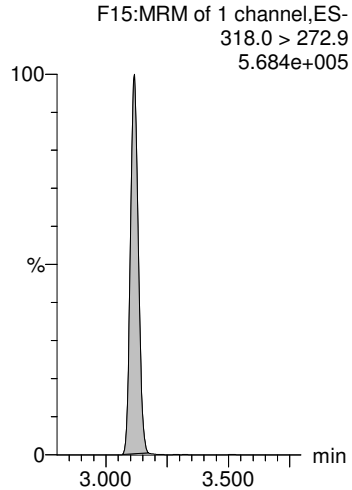
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

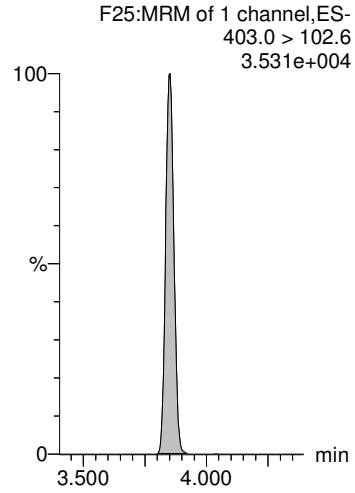


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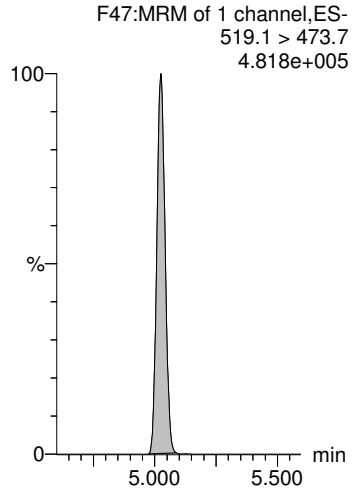
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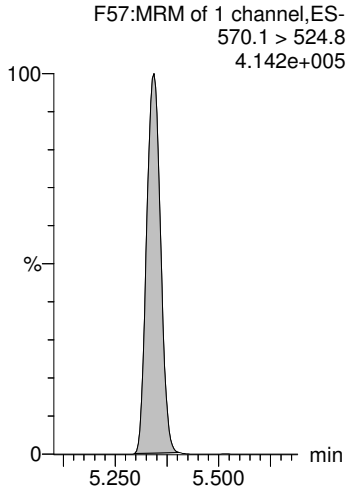
18O2-PFHxS



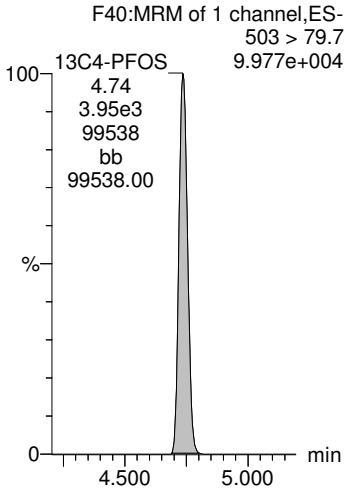
13C6-PFDA



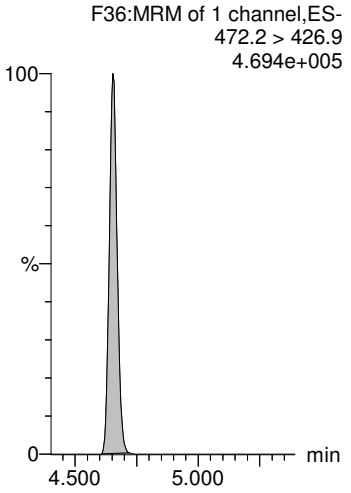
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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***SEE DILUTION**

Name: 200224P1-49, Date: 25-Feb-2020, Time: 01:35:15, ID: 2000330-05 I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

	#	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	1.88e4	1.30e3	0.252		2.60	2.60	181	300.5324		3.130	NO
2	7	PFHxA	313.0 > 269.0	9.87e5	1.77e4	0.252		3.12	3.12	696	3036.7493 *E		16.445	NO
3	9	HFPO-DA	285.1 > 168.9		3.47e3	0.252		3.33						
4	11	PFHpA	363.0 > 318.9	5.12e5	1.13e4	0.252		3.71	3.71	566	1875.1226		24.564	NO
5	12	ADONA	376.8 > 250.9	1.23e1	1.13e4	0.252		3.81	3.71	0.0136			0.415	YES
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.30e3		0.252	121.548	2.65	2.60	1300	42.4588	85.5		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.77e4		0.252	1744.841	3.12	3.12	17700	40.3958	81.3		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.47e3		0.252	328.216	3.38	3.33	3470	42.0454	84.7		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.13e4		0.252	1063.335	3.72	3.71	11300	42.2400	85.1		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.13e4		0.252	1063.335	3.72	3.71	11300	42.2400	85.1		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	1.01e5	2.77e3	0.252		3.85	3.85	457	1821.7829		2.376	NO
13	1...	Total PFHxS	398.9 > 79.7	1.01e5	2.77e3	0.252		3.93		457	1821.7829			
14	16	L-PFOA	412.8 > 368.9	1.77e6	1.61e4	0.252		4.22	4.22	1370	4935.6060 *E		2.911	NO
15	1...	Total PFOA	412.8 > 368.9	1.77e6	1.61e4	0.252		4.60		1370	4935.6060			
16	21	PFNA	463.0 > 418.8	9.85e3	1.42e4	0.252		4.66	4.66	8.66	26.7690		7.346	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.77e3		0.252	253.005	3.85	3.85	2770	43.5109	87.6		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.77e3		0.252	253.005	3.85	3.85	2770	43.5109	87.6		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.61e4		0.252	1468.721	4.22	4.22	16100	43.6262	87.8		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.61e4		0.252	1468.721	4.22	4.22	16100	43.6262	87.8		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.42e4		0.252	1278.380	4.66	4.66	14200	44.1765	89.0		
22	-1													
23	23	L-PFOS	498.9 > 79.7	3.83e4	3.38e3	0.252		4.74	4.74	142	600.5816		2.251	NO
24	1...	Total PFOS	498.9 > 79.7	3.83e4	3.38e3	0.252		5.13		142	600.5816			
25	25	9Cl-PF30NS	530.7 > 350.8		3.38e3	0.252		4.95						
26	26	PFDA	513 > 468.8	2.05e2	1.57e4	0.252		5.03	5.03	0.163	0.3412		12.075	NO
27	33	PFUdA	563.0 > 518.9		1.62e4	0.252		5.34						
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.38e3		0.252	286.356	4.74	4.74	3380	46.8502	94.3		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.38e3		0.252	286.356	4.74	4.74	3380	46.8502	94.3		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.38e3		0.252	286.356	4.74	4.74	3380	46.8502	94.3		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.57e4		0.252	1461.559	5.03	5.03	15700	42.7279	86.0		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.62e4		0.252	1646.627	5.34	5.34	16200	39.0180	78.6		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.59e3	0.252		5.17						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.59e3	0.252		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		3.76e3	0.252		5.33						

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Name: 200224P1-49, Date: 25-Feb-2020, Time: 01:35:15, ID: 2000330-05 I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

	#	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	3.76e3	0.252		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		1.31e4	0.252		5.56						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.59e3		0.252	287.523	5.17	5.17	2590	35.7610	72.0		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.59e3		0.252	287.523	5.17	5.17	2590	35.7610	72.0		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.76e3		0.252	355.877	5.31	5.33	3760	41.9867	84.5		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.76e3		0.252	355.877	5.31	5.33	3760	41.9867	84.5		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.31e4		0.252	1443.711	5.61	5.62	13100	36.1712	72.8		
44	-1													
45	37	PFDoA	612.9 > 569.0		1.31e4	0.252		5.62						
46	39	PFTrDA	662.9 > 618.9		1.31e4	0.252		5.88						
47	41	PFTeDA	713.0 > 669.0		1.10e4	0.252		6.07						
48	1...	TDCA	498.3>106.9			0.252		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.31e4	1.31e4	0.252	1.000	1.40	1.40	12.5	49.6603	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.31e4		0.252	1443.711	5.61	5.62	13100	36.1712	72.8		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.31e4		0.252	1443.711	5.61	5.62	13100	36.1712	72.8		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.10e4		0.252	1671.855	6.04	6.07	11000	26.1529	52.7		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.38e3		0.252	286.356	4.74	4.74	3380	46.8502	94.3		
54	1...	13C5-PFHxA	318.0 > 272.9	1.97e4	1.97e4	0.252	1.000	3.11	3.12	12.5	49.6603	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.33e3	1.33e3	0.252	1.000	3.85	3.85	12.5	49.6603	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	2.00e4	2.00e4	0.252	1.000	5.02	5.03	12.5	49.6603	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	2.07e4	2.07e4	0.252	1.000	5.34	5.34	12.5	49.6603	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.80e3	3.80e3	0.252	1.000	4.74	4.74	12.5	49.6603	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.84e4	1.84e4	0.252	1.000	4.65	4.66	12.5	49.6603	100.0		

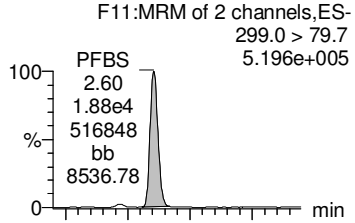
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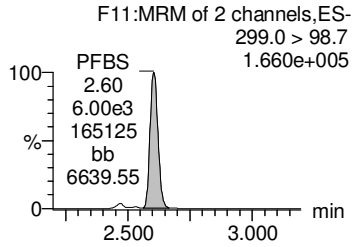
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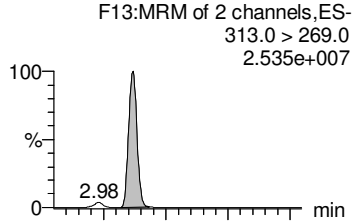
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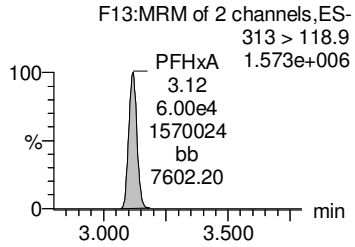
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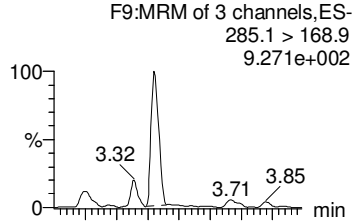


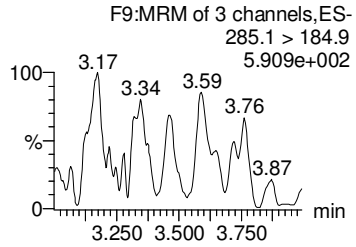
PFHxA



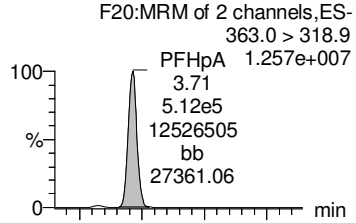


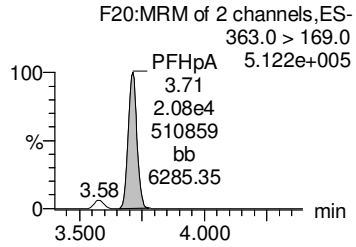
HFPO-DA



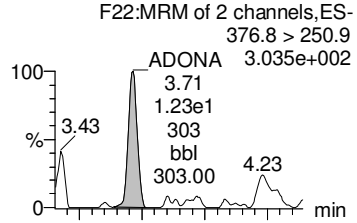


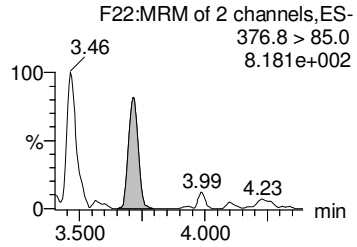
PFHpA



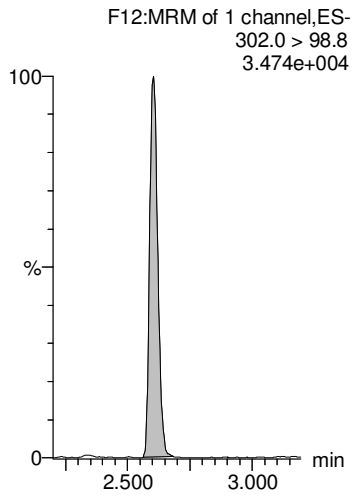


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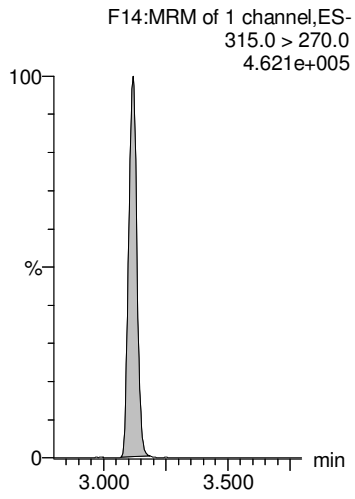




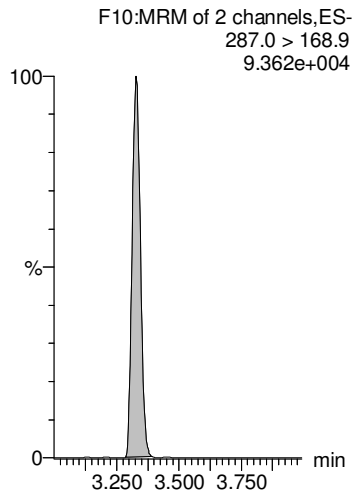
13C3-PFBS-EIS



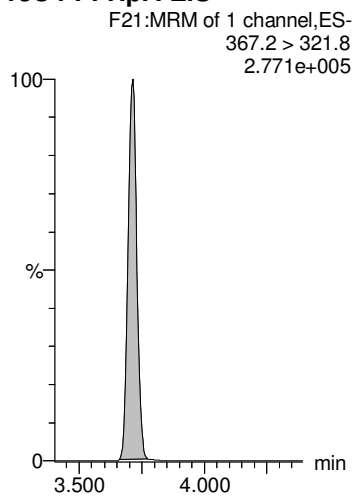
13C2-PFHxA-EIS



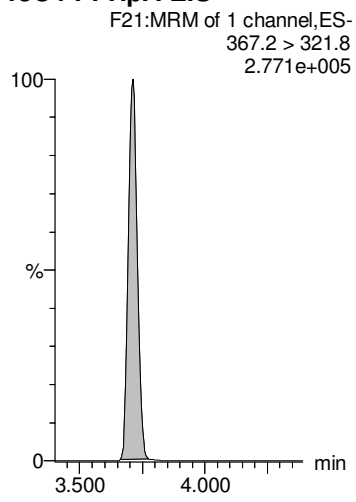
13C3-HFPO-DA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

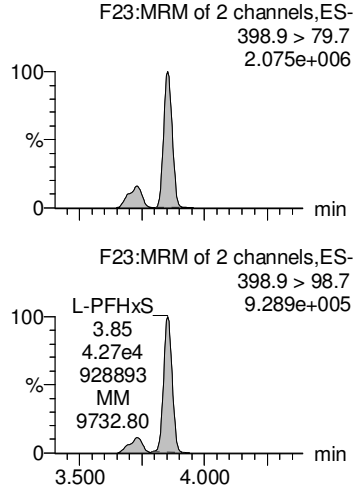


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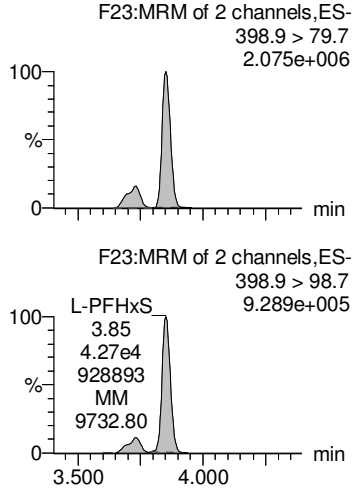
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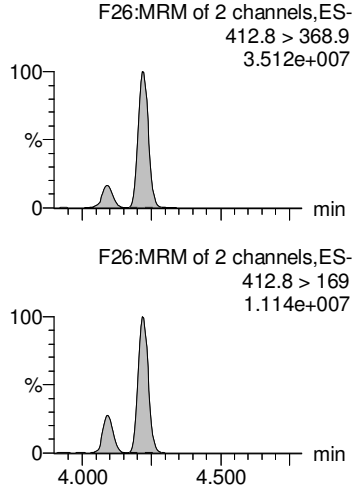
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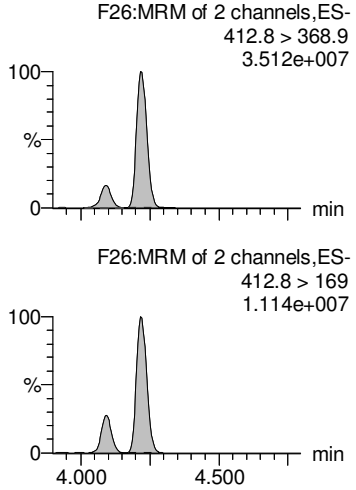
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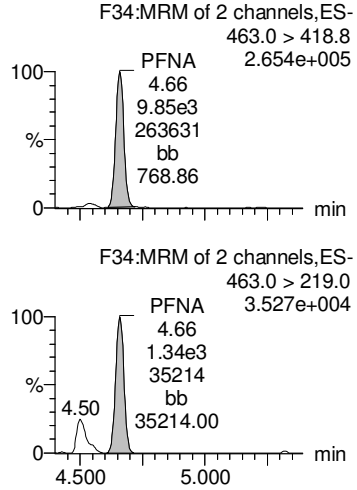
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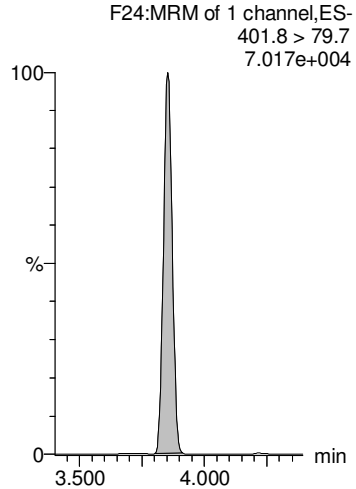
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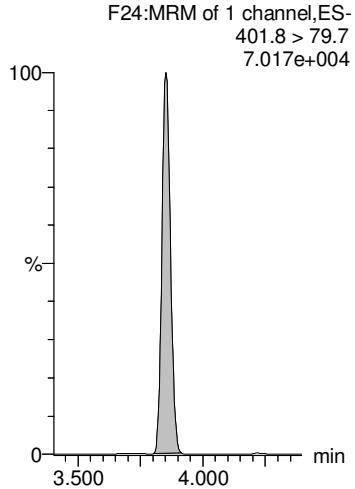
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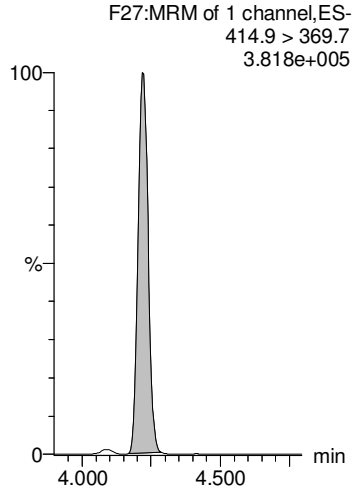
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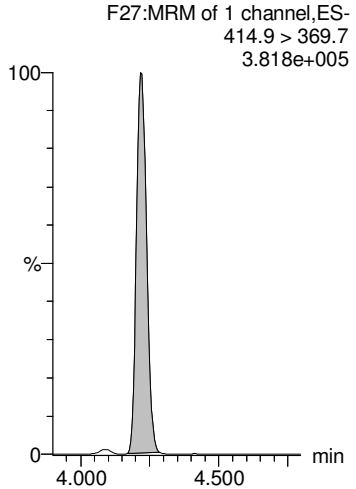
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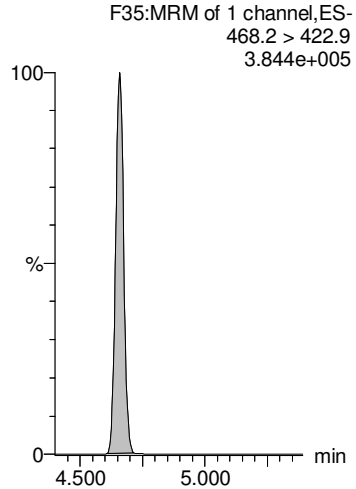
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13C2-PFOA-EIS



13C5-PFNA-EIS

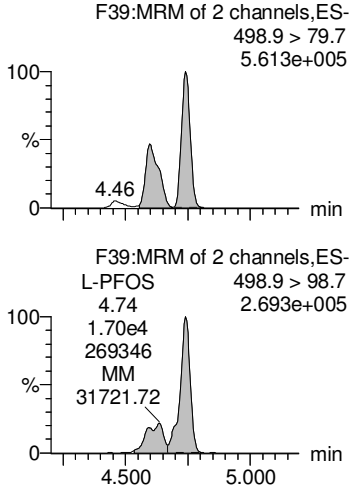


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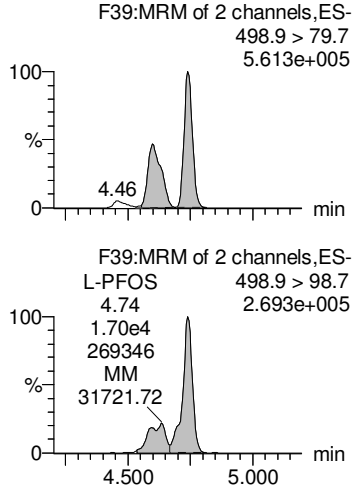
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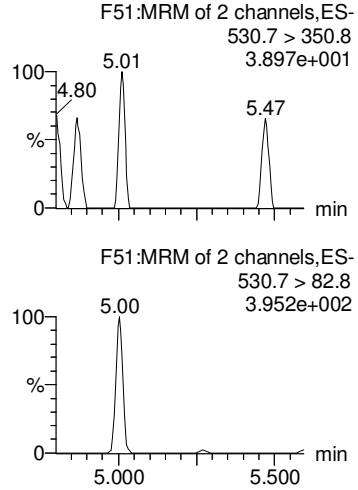
L-PFOS



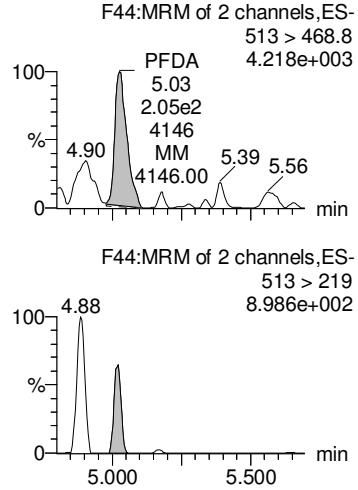
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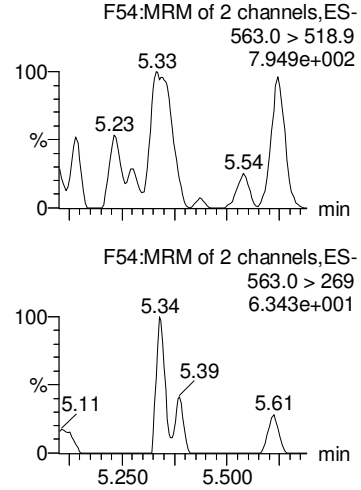
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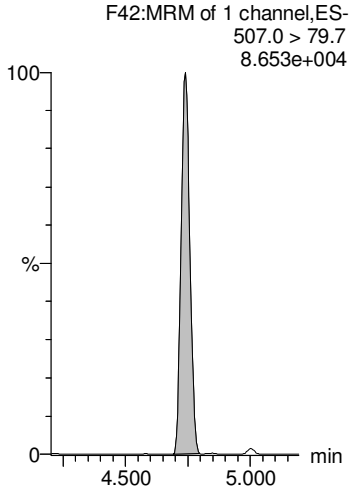
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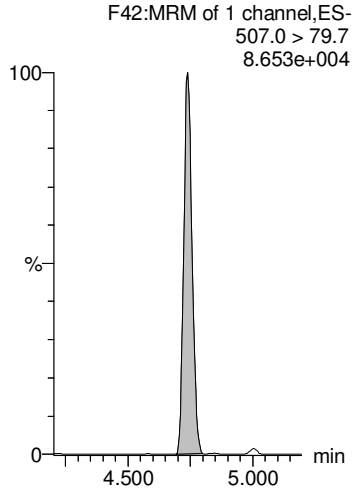
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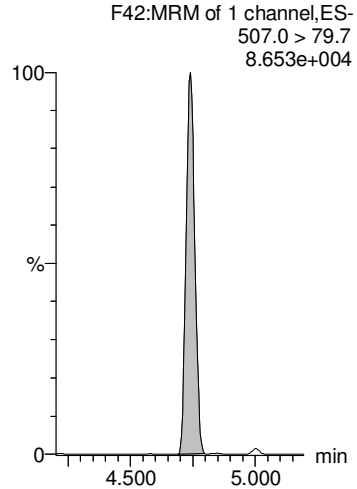
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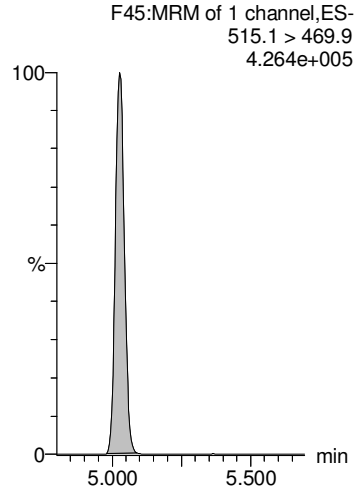
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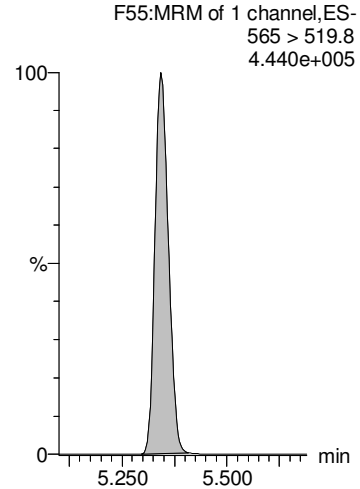
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13C2-PFDA-EIS



13C2-PFUdA-EIS

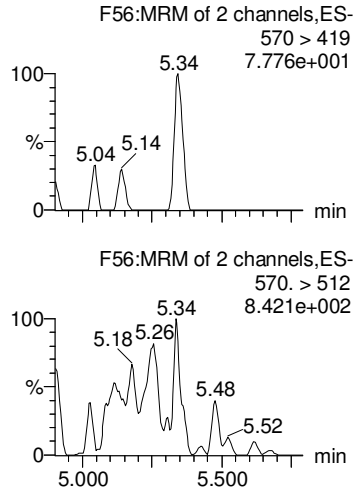


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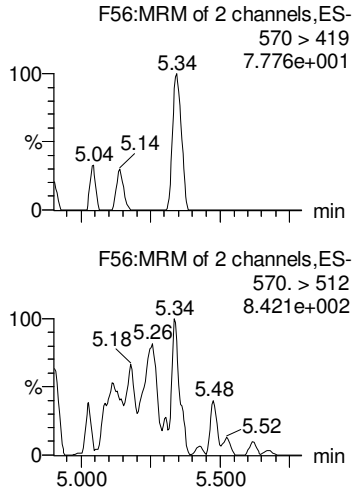
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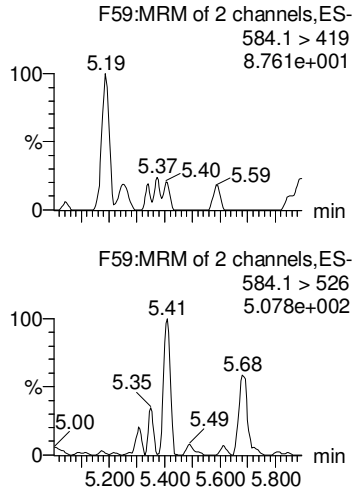
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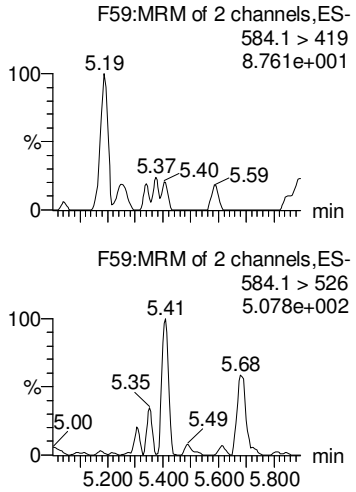
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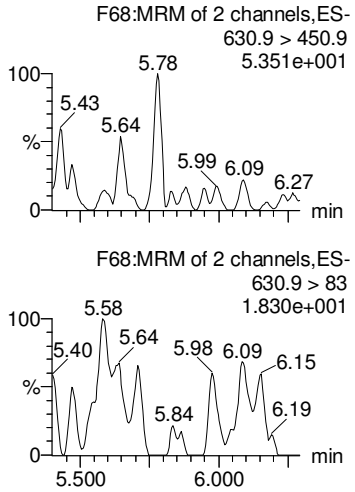
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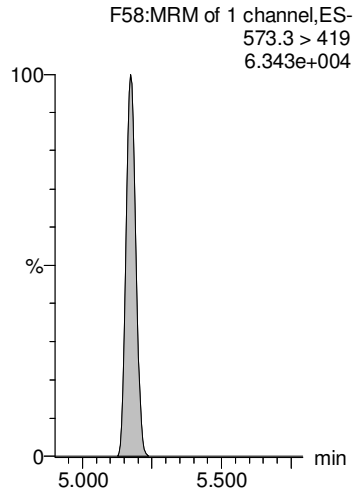
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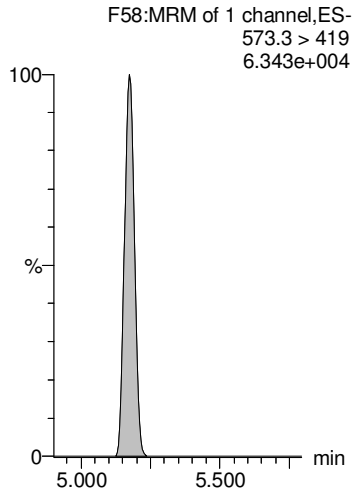
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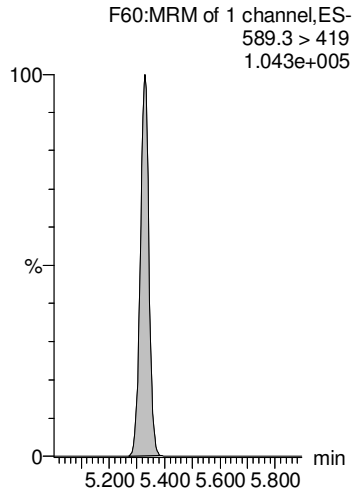
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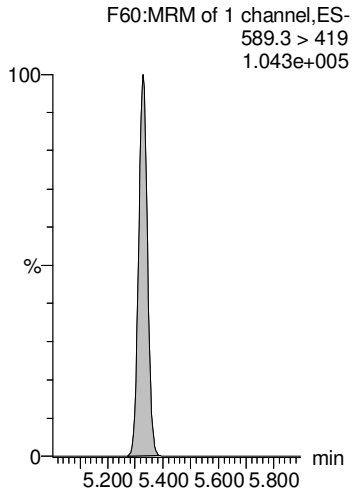
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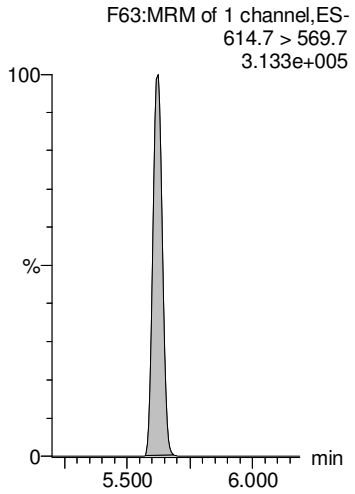
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

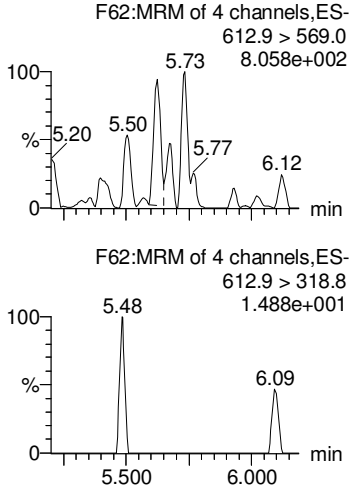


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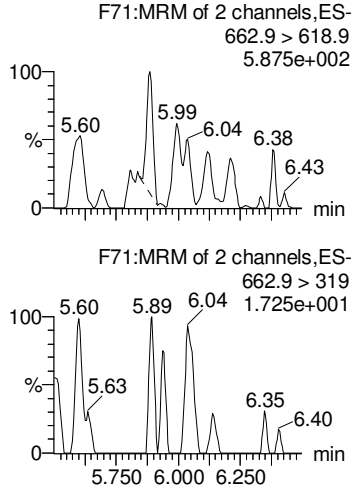
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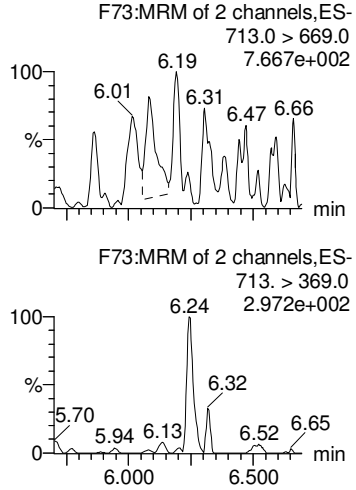
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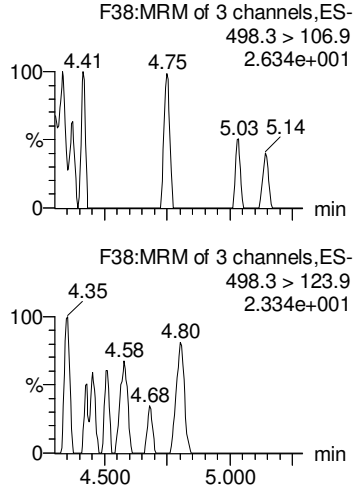
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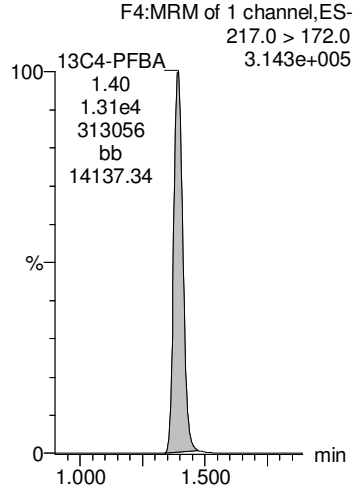
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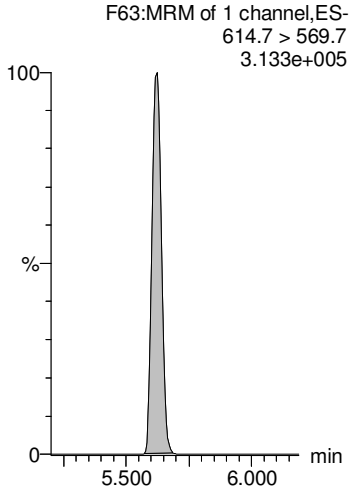
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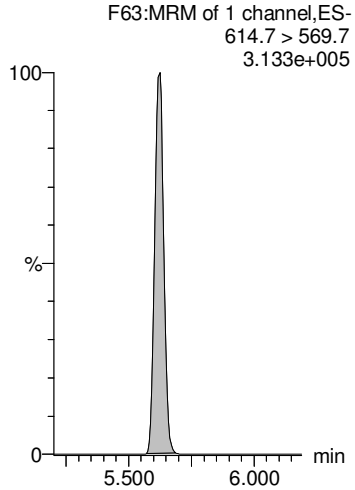
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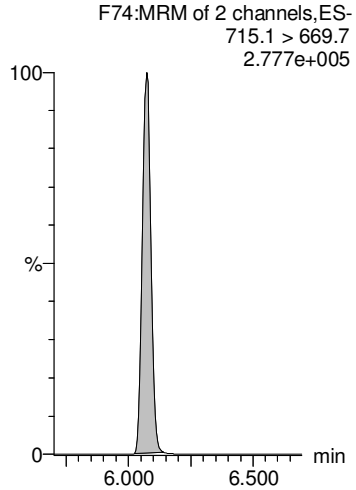
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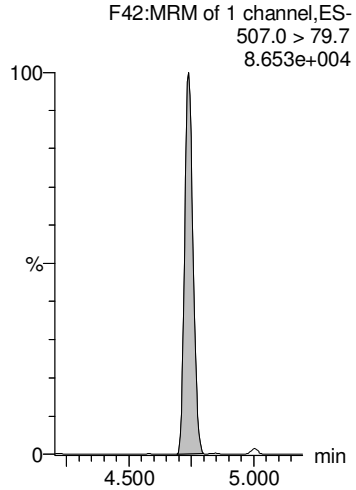
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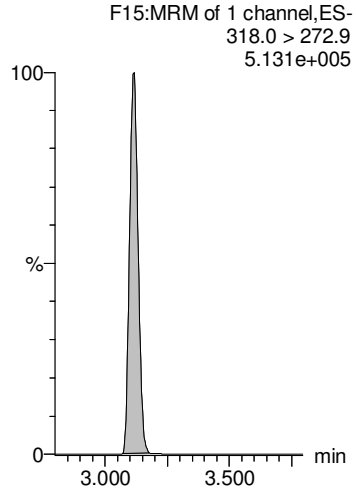
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13C8-PFOS-EIS



13C5-PFHxA

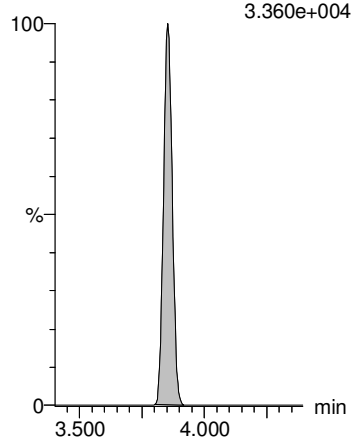


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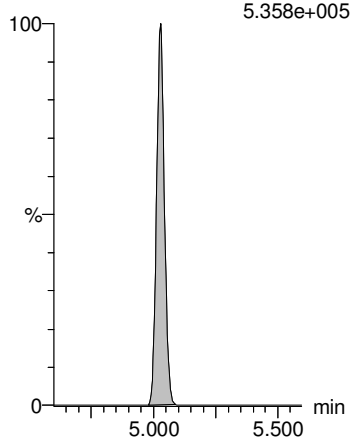
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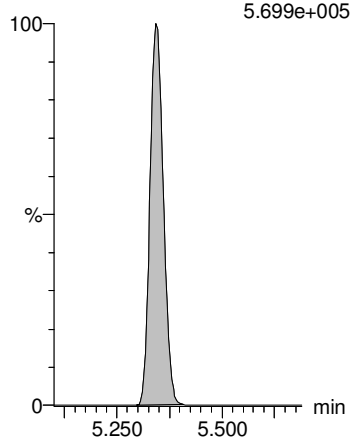
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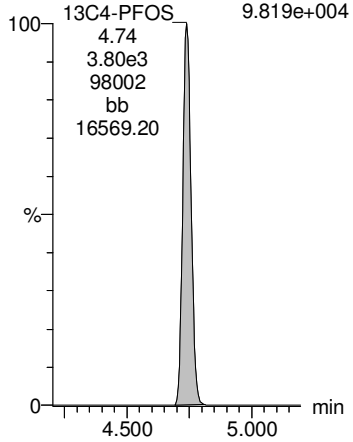
13C6-PFDA



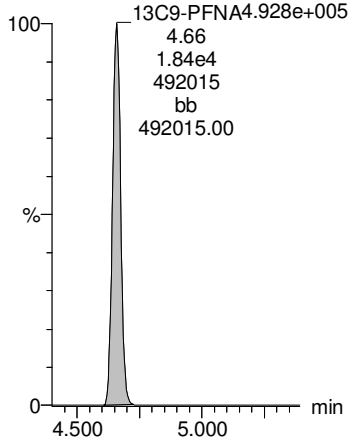
13C7-PFUdA



13C4-PFOS



13C9-PFNA



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	#	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	7.84e3	5.62e2	0.252		2.54	2.54	174	292.4565		3.269	NO
2	7	PFHxA	313.0 > 269.0	4.61e5	8.24e3	0.252		3.06	3.06	699	3141.2645		17.431	NO
3	9	HFPO-DA	285.1 > 168.9		1.48e3	0.252		3.27						
4	11	PFHpA	363.0 > 318.9	2.33e5	5.64e3	0.252		3.66	3.66	516	1770.3294		30.808	NO
5	12	ADONA	376.8 > 250.9		5.64e3	0.252		3.75						
6	51	13C3-PFBS-EIS	302.0 > 98.8	5.62e2		0.252	122.770	2.61	2.54	562	18.1863	36.6		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	8.24e3		0.252	1761.472	3.06	3.06	8240	18.5931	37.4		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	1.48e3		0.252	328.229	3.34	3.27	1480	17.9075	36.1		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	5.64e3		0.252	1290.921	3.68	3.66	5640	17.3685	35.0		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	5.64e3		0.252	1290.921	3.68	3.66	5640	17.3685	35.0		
11	-1													
12	13	L-PFHxS	398.9 > 79.7	4.36e4	1.29e3	0.252		3.80	3.80	422	1610.9995		2.382	NO
13	1...	Total PFHxS	398.9 > 79.7	4.36e4	1.29e3	0.252		3.93		422	1610.9995			
14	16	L-PFOA	412.8 > 368.9	8.74e5	7.76e3	0.252		4.17	4.17	1410			2.786	NO
15	1...	Total PFOA	412.8 > 368.9	8.74e5	7.76e3	0.252		4.60		0.000				
16	21	PFNA	463.0 > 418.8	4.67e3	7.98e3	0.252		4.62	4.62	7.32	26.7480		8.163	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	1.29e3		0.252	309.268	3.80	3.80	1290	16.6126	33.5		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	1.29e3		0.252	309.268	3.80	3.80	1290	16.6126	33.5		
19	69	13C2-PFOA-EIS	414.9 > 369.7	7.76e3		0.252	1782.464	4.17	4.17	7760	17.3041	34.8		
20	69	13C2-PFOA-EIS	414.9 > 369.7	7.76e3		0.252	1782.464	4.17	4.17	7760	17.3041	34.8		
21	65	13C5-PFNA-EIS	468.2 > 422.9	7.98e3		0.252	1750.823	4.62	4.62	7980	18.1020	36.5		
22	-1													
23	23	L-PFOS	498.9 > 79.7	1.68e4	1.47e3	0.252		4.70	4.70	143	607.0235		2.460	NO
24	1...	Total PFOS	498.9 > 79.7	1.68e4	1.47e3	0.252		5.13		143	607.0235			
25	25	9Cl-PF30NS	530.7 > 350.8		1.47e3	0.252		4.91						
26	26	PFDA	513 > 468.8	1.63e2	8.71e3	0.252		4.99	4.99	0.234	0.6001		15.140	NO
27	33	PFUdA	563.0 > 518.9		8.14e3	0.252		5.32						
28	71	13C8-PFOS-EIS	507.0 > 79.7	1.47e3		0.252	346.443	4.70	4.70	1470	16.8891	34.0		
29	71	13C8-PFOS-EIS	507.0 > 79.7	1.47e3		0.252	346.443	4.70	4.70	1470	16.8891	34.0		
30	71	13C8-PFOS-EIS	507.0 > 79.7	1.47e3		0.252	346.443	4.70	4.70	1470	16.8891	34.0		
31	73	13C2-PFDA-EIS	515.1 > 469.9	8.71e3		0.252	1915.540	4.99	4.99	8710	18.0718	36.4		
32	79	13C2-PFUdA-EIS	565 > 519.8	8.14e3		0.252	2194.474	5.32	5.32	8140	14.7455	29.7		
33	-1													
34	29	L-MeFOSAA	570 > 419		2.06e3	0.252		5.14						
35	1...	Total N-MeFOSAA	570. > 419	0.00e0	2.06e3	0.252		5.19		0.000				
36	31	L-EtFOSAA	584.1 > 419		1.96e3	0.252		5.30						

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Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-17-19.qld

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Name: 200227P1-19, Date: 27-Feb-2020, Time: 18:40:11, ID: 2000330-05@5X I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

	#	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	1.96e3	0.252		5.37		0.000				
38	35	11Cl-PF30UdS	630.9 > 450.9		5.52e3	0.252		5.53						
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.06e3		0.252	482.560	5.15	5.14	2060	16.9649	34.2		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.06e3		0.252	482.560	5.15	5.14	2060	16.9649	34.2		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	1.96e3		0.252	553.305	5.29	5.30	1960	14.0378	28.3		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	1.96e3		0.252	553.305	5.29	5.30	1960	14.0378	28.3		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	5.52e3		0.252	1946.588	5.58	5.60	5520	11.2723	22.7		
44	-1													
45	37	PFDoA	612.9 > 569.0		5.52e3	0.252		5.60						
46	39	PFTrDA	662.9 > 618.9		5.52e3	0.252		5.85						
47	41	PFTeDA	713.0 > 669.0		4.78e3	0.252		6.06						
48	1...	TDCA	498.3>106.9			0.252		4.59						
49	99	13C4-PFBA	217.0 > 172.0	5.26e3	5.26e3	0.252	1.000	1.32	1.32	12.5	49.6603	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	5.52e3		0.252	1946.588	5.58	5.60	5520	11.2723	22.7		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	5.52e3		0.252	1946.588	5.58	5.60	5520	11.2723	22.7		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	4.78e3		0.252	2085.576	6.01	6.06	4780	9.1012	18.3		
53	71	13C8-PFOS-EIS	507.0 > 79.7	1.47e3		0.252	346.443	4.70	4.70	1470	16.8891	34.0		
54	1...	13C5-PFHxA	318.0 > 272.9	8.90e3	8.90e3	0.252	1.000	3.05	3.06	12.5	49.6603	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	5.89e2	5.89e2	0.252	1.000	3.80	3.80	12.5	49.6603	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	9.99e3	9.99e3	0.252	1.000	4.99	4.99	12.5	49.6603	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.03e4	1.03e4	0.252	1.000	5.31	5.32	12.5	49.6603	100.0		
59	1...	13C4-PFOS	503 > 79.7	1.69e3	1.69e3	0.252	1.000	4.70	4.70	12.5	49.6603	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	9.11e3	9.11e3	0.252	1.000	4.61	4.62	12.5	49.6603	100.0		

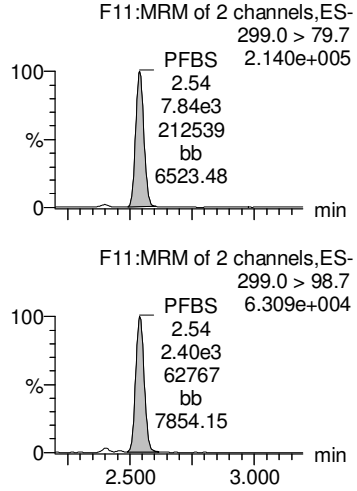
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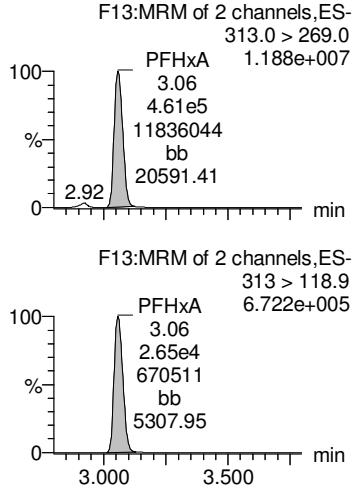
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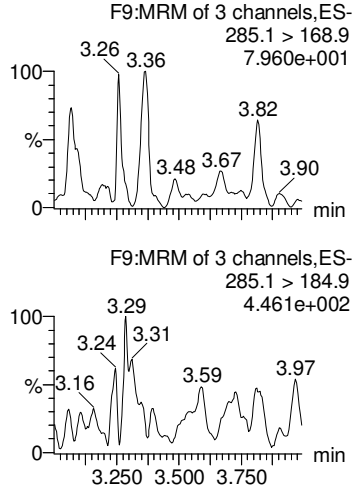
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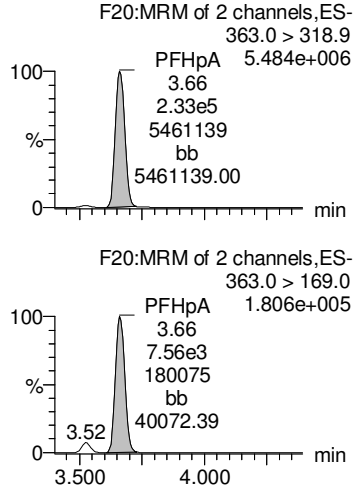
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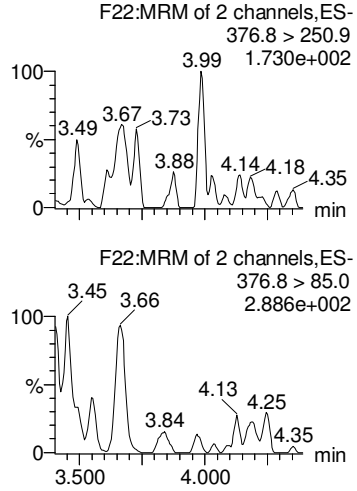
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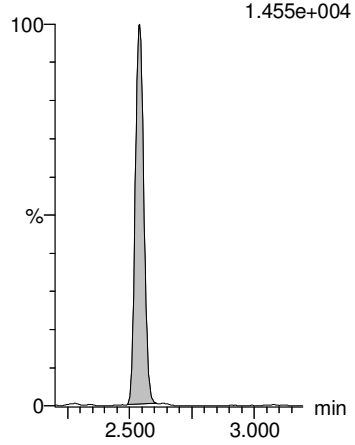
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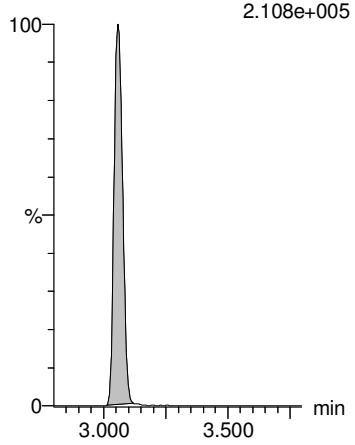
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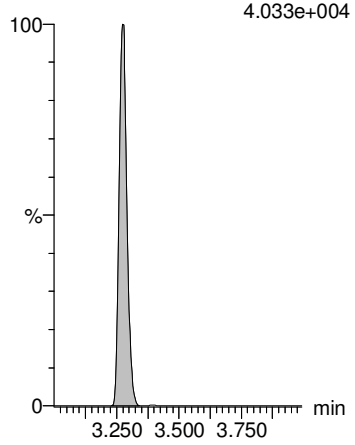
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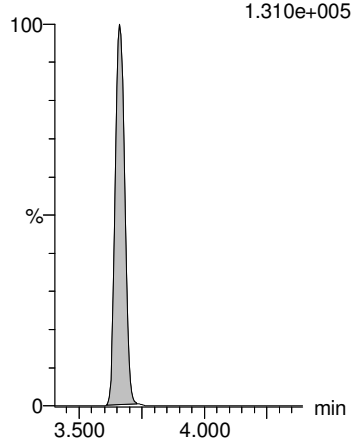
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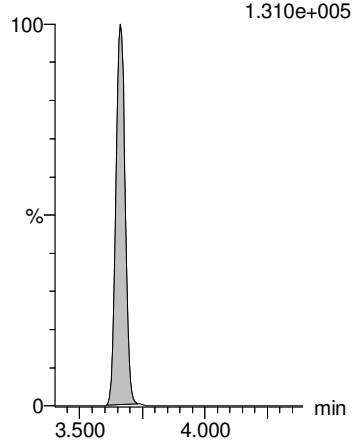
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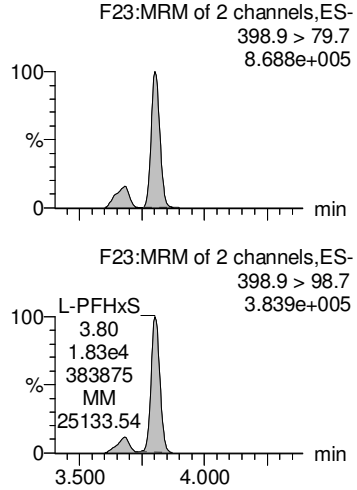


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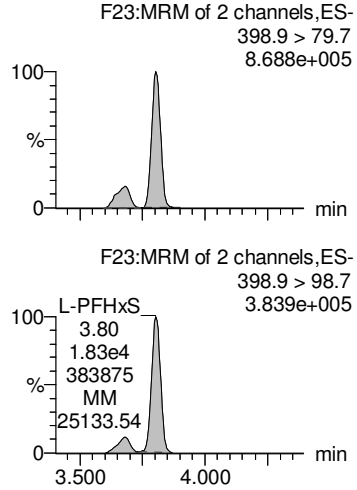
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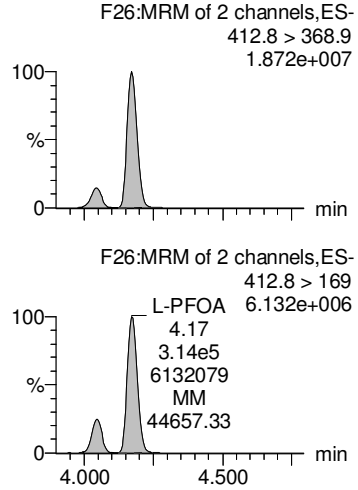
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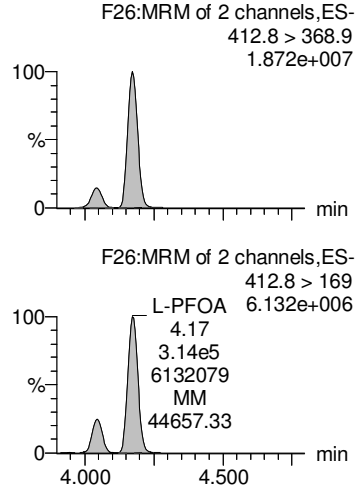
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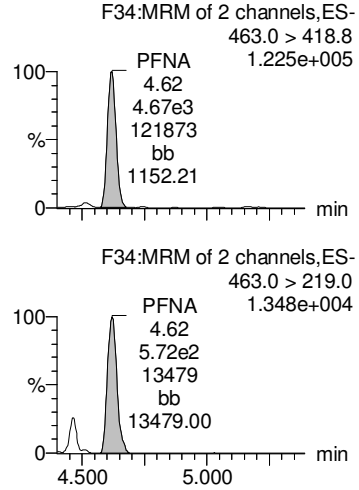
L-PFOA



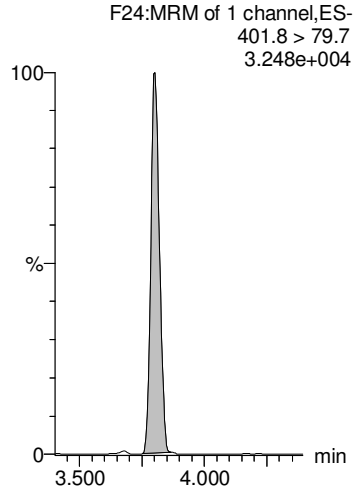
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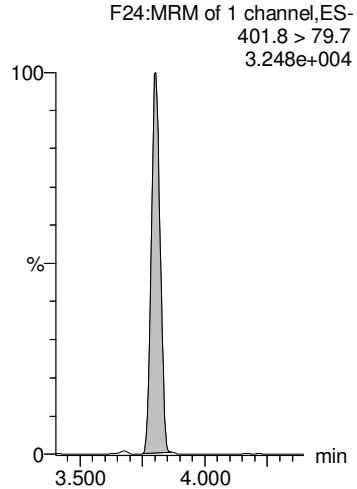
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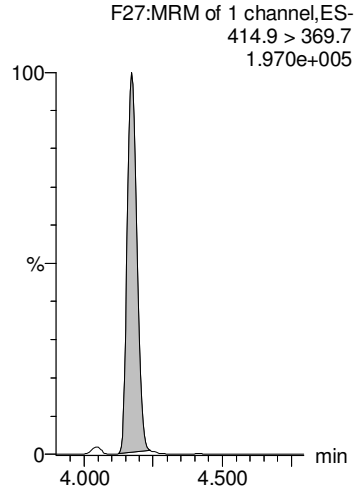
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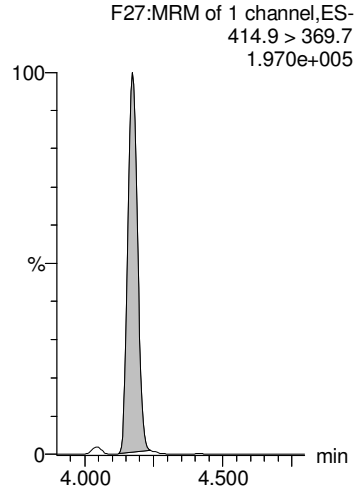
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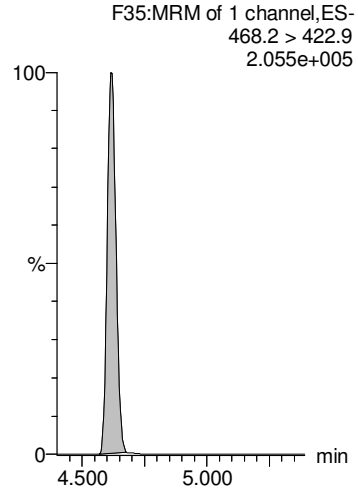
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13C2-PFOA-EIS



13C5-PFNA-EIS

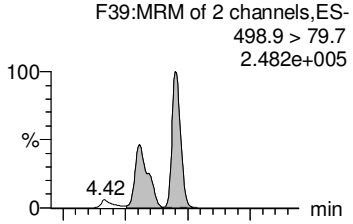


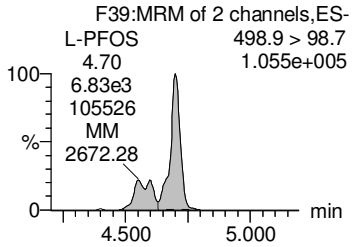
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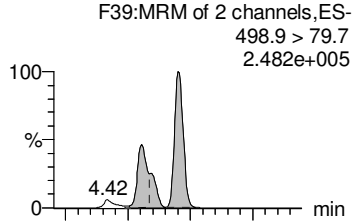
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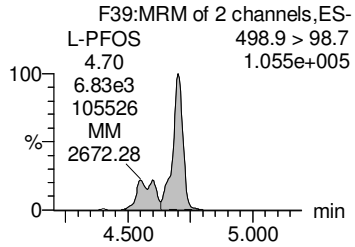
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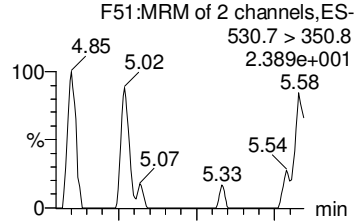


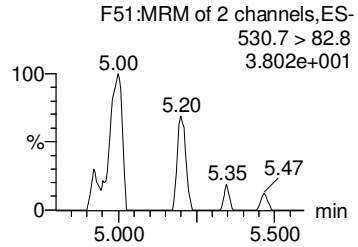
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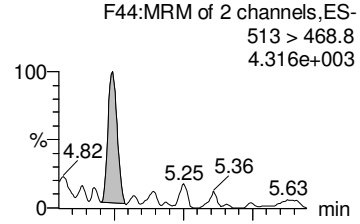


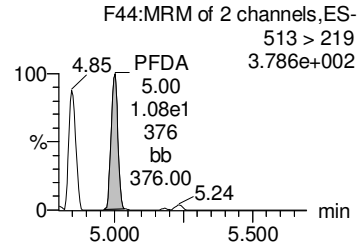
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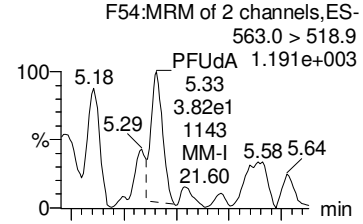


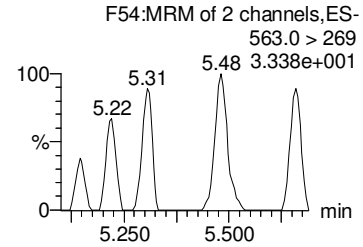
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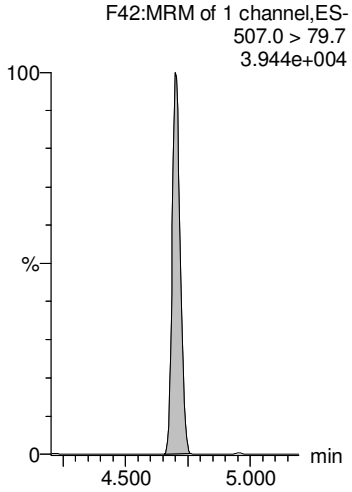


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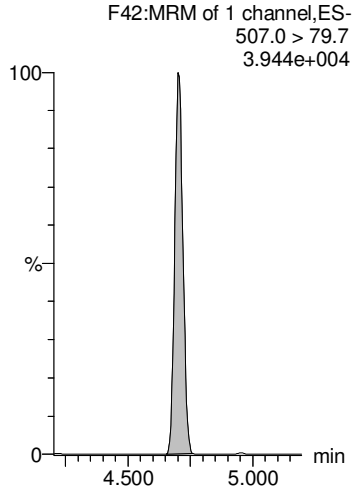




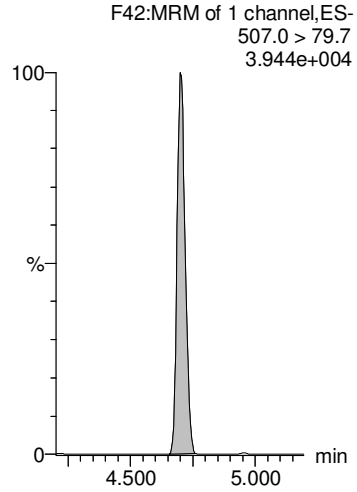
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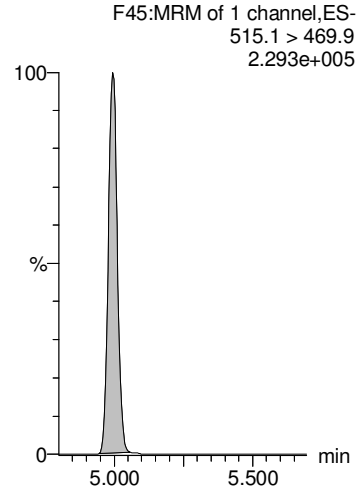
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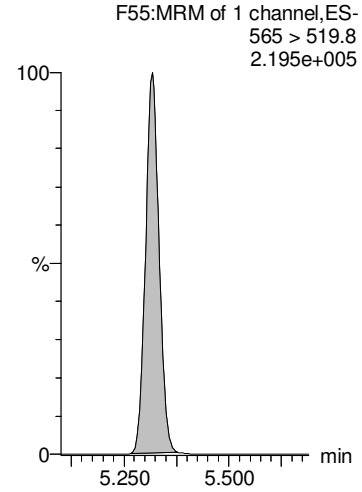
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13C2-PFDA-EIS



13C2-PFUdA-EIS

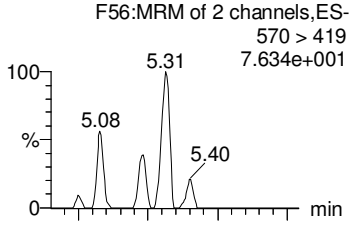


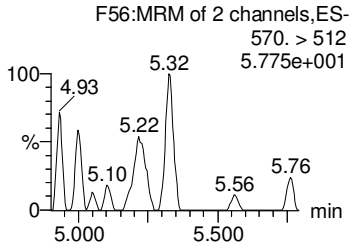
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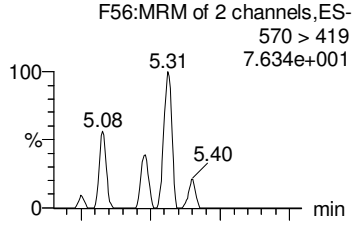
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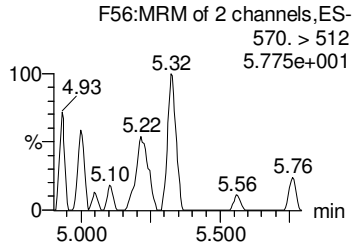
L-MeFOSAA



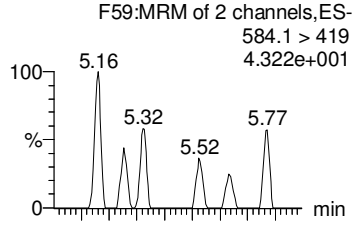


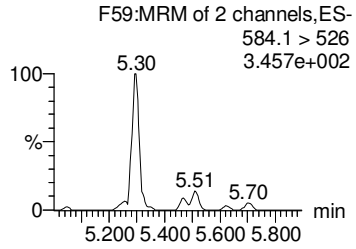
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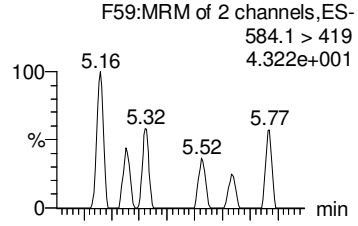


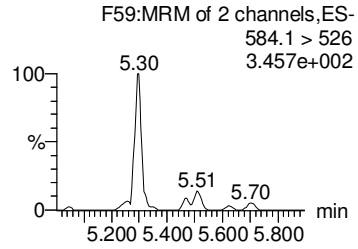
L-EtFOSAA



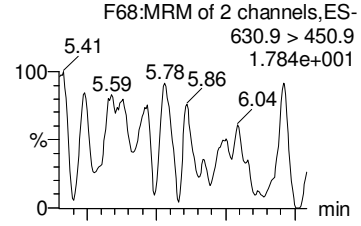


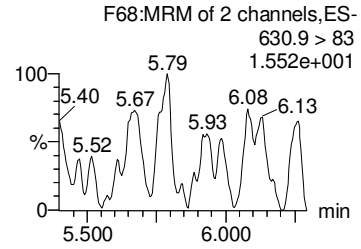
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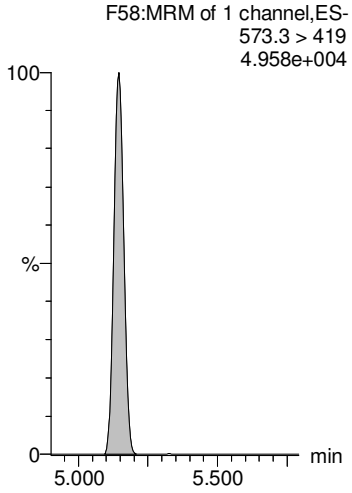


11Cl-PF30UdS

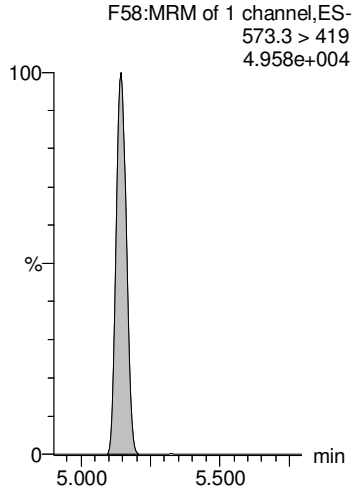




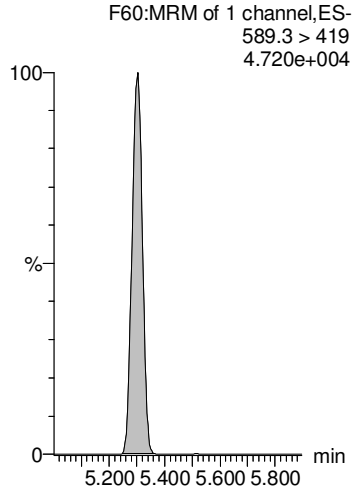
d3-N-MeFOSAA-EIS



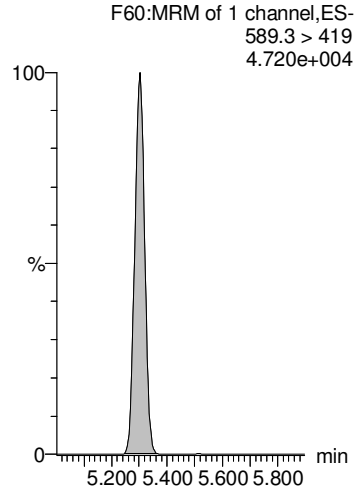
d3-N-MeFOSAA-EIS



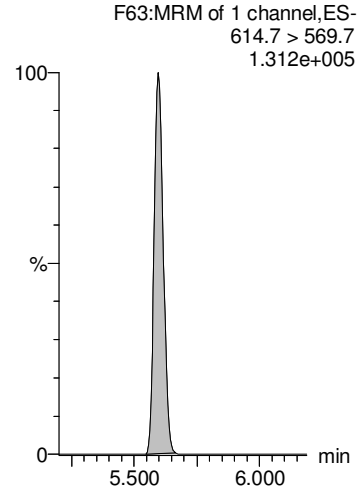
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

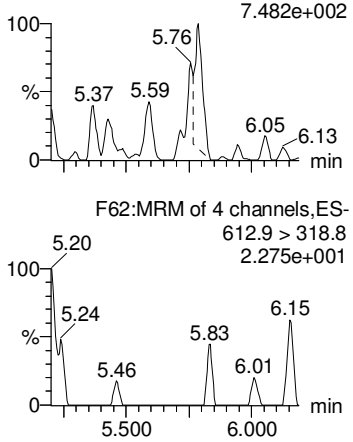


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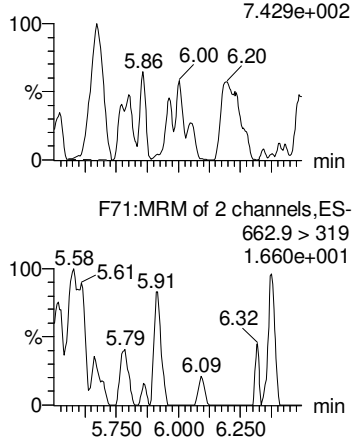
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Name: 200227P1-19, Date: 27-Feb-2020, Time: 18:40:11, ID: 2000330-05@5X I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

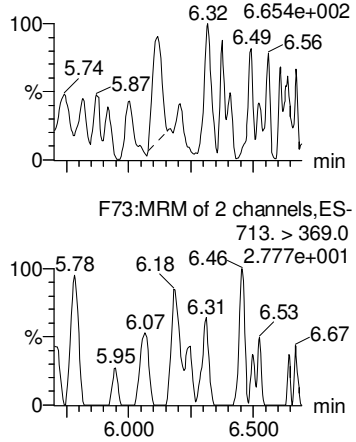
PFDoA



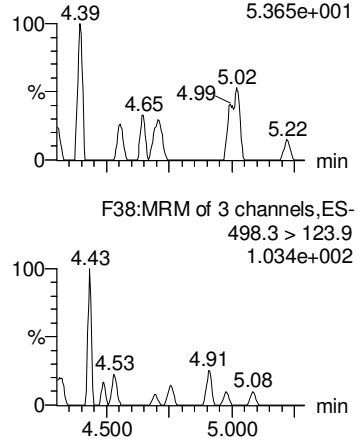
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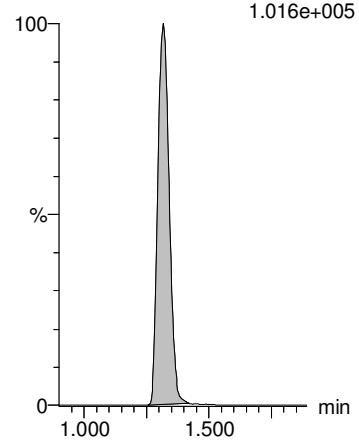
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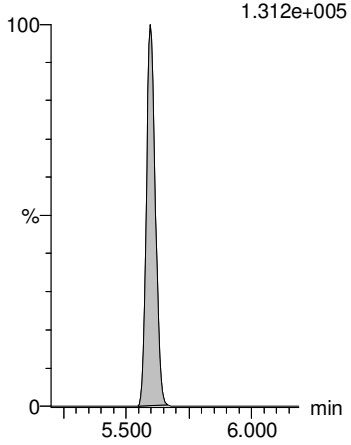
TDCA



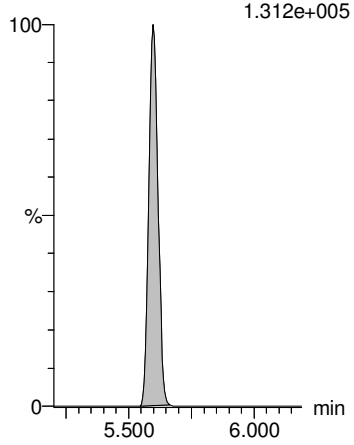
13C4-PFBA



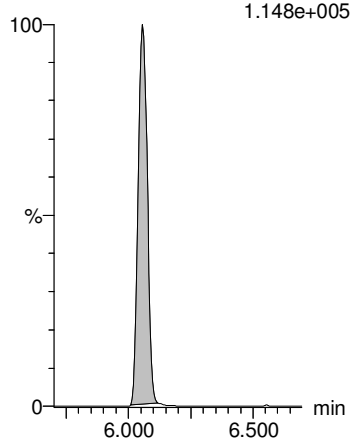
13C2-PFDoA-EIS



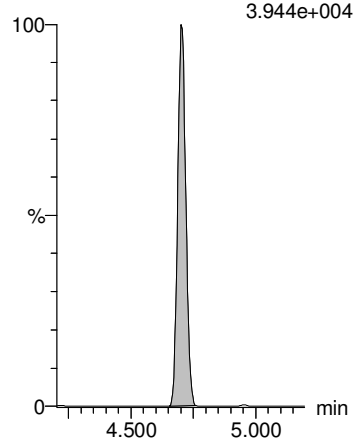
13C2-PFDoA-EIS



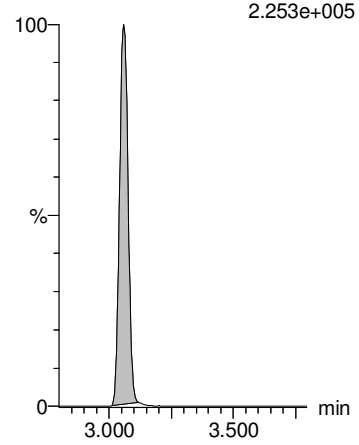
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

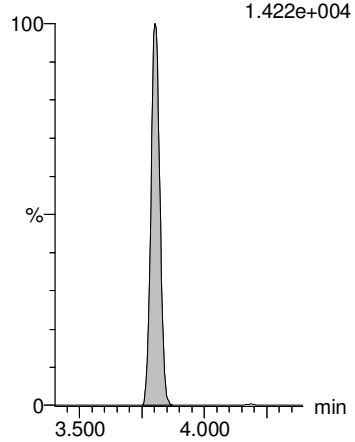


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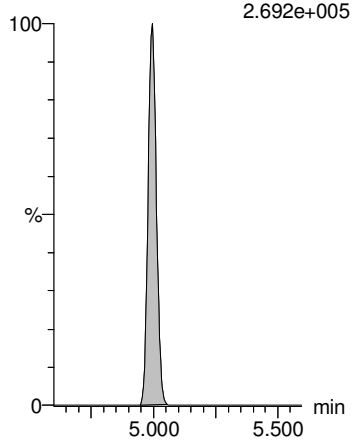
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Name: 200227P1-19, Date: 27-Feb-2020, Time: 18:40:11, ID: 2000330-05@5X I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

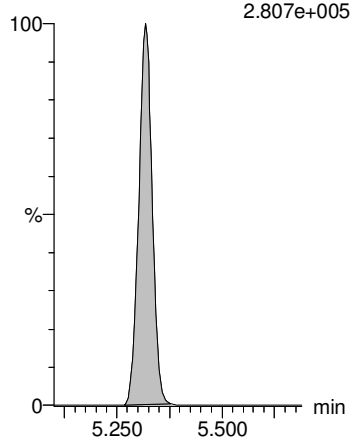
18O2-PFHxS



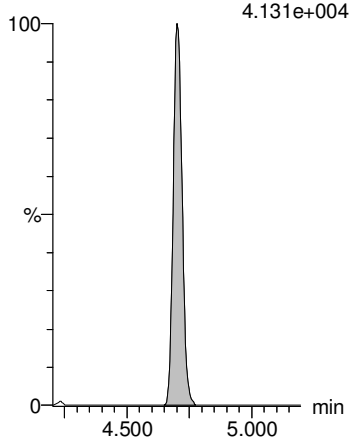
13C6-PFDA



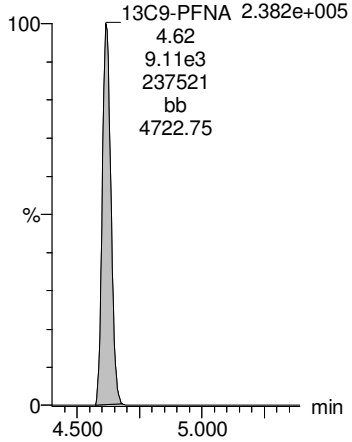
13C7-PFUdA



13C4-PFOS



13C9-PFNA



Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-19_UG.qld

Last Altered: Monday, March 02, 2020 12:09:11 Pacific Standard Time
Printed: Monday, March 02, 2020 12:10:03 Pacific Standard Time

Name: 200227P1-19, Date: 27-Feb-2020, Time: 18:40:11, ID: 2000330-05@5X I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

	#	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	874351.063	7763.708	0.252		4.17	1.408	4.36		NO	2.784	NO
2	1...	Total PFOA	412.8 > 368.9	874351.063	7763.708	0.252			1.408	4.36		NO		
3	1...	13C8-PFOA	420.9 > 376.0	8422.001	8422.001	0.252	1.000	4.17	0.013	0.0497	100.0	NO		
4	69	13C2-PFOA-EIS	414.9 > 369.7	7763.708		0.252	1782.464	4.17	7763.708	17.3	34844.8	YES		
5	69	13C2-PFOA-EIS	414.9 > 369.7	7763.708		0.252	1782.464	4.17	7763.708	17.3	34844.8	YES		

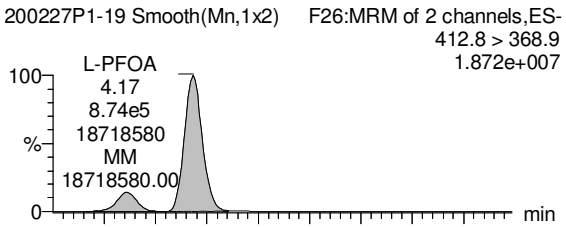
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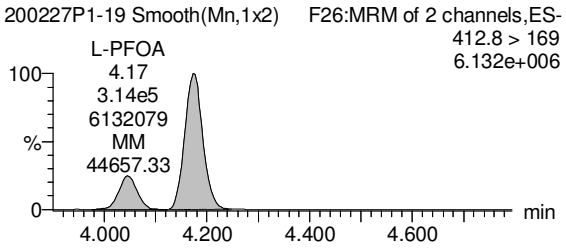
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Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:51:32
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

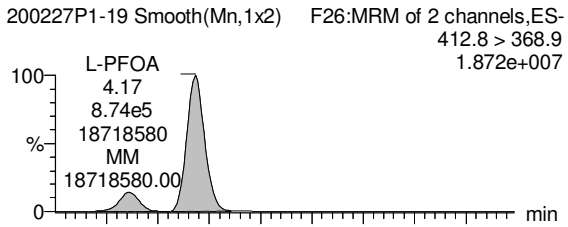
Name: 200227P1-19, Date: 27-Feb-2020, Time: 18:40:11, ID: 2000330-05@5X I003MW14S-20200214 0.25171, Description: I003MW14S-20200214

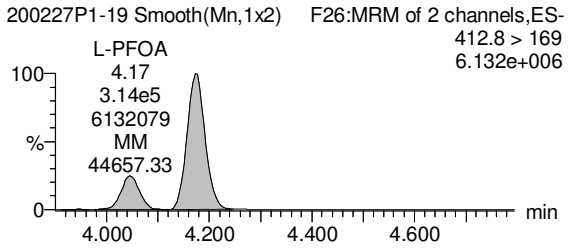
L-PFOA



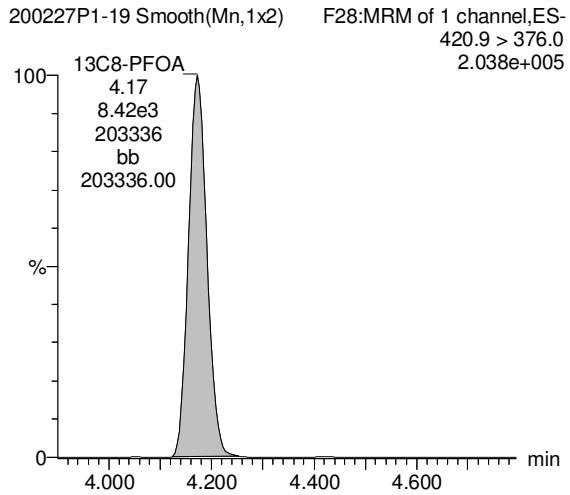


Total PFOA

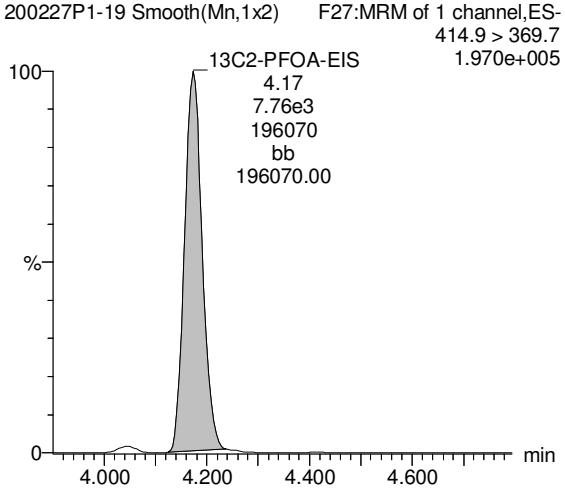




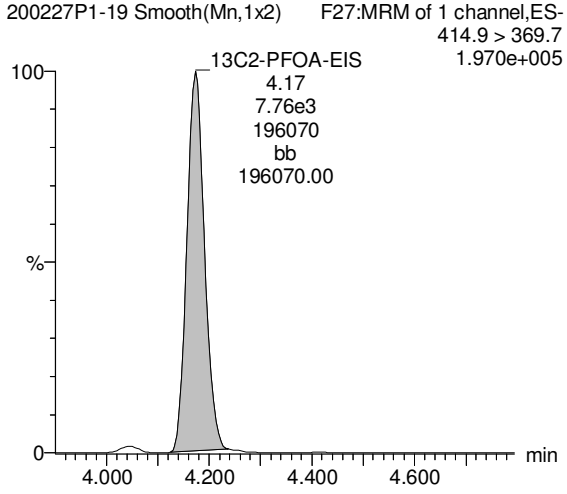
13C8-PFOA



13C2-PFOA-EIS



13C2-PFOA-EIS



Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld ***SEE DILUTION**

Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
Printed: Friday, February 28, 2020 14:45:41 Pacific Standard Time

Name: 200224P1-43, Date: 25-Feb-2020, Time: 00:32:13, ID: B0B0137-MS1 Matrix Spike 0.24799, Description: Matrix Spike

	#	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	2.10e4	1.38e3	0.248		2.60	2.60	191	321.9230			3.149	NO
2	7	PFHxA	313.0 > 269.0	9.71e5	1.69e4	0.248		3.11	3.11	720	3189.3143	*E		16.815	NO
3	9	HFPO-DA	285.1 > 168.9	2.91e3	3.17e3	0.248		3.33	3.33	11.5	43.7767			2.600	NO
4	11	PFHpA	363.0 > 318.9	5.10e5	1.11e4	0.248		3.71	3.71	574	1930.6823			24.146	NO
5	12	ADONA	376.8 > 250.9	2.86e4	1.11e4	0.248		3.80	3.81	32.2	41.9703			3.977	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.38e3		0.248	121.548	2.64	2.60	1380	45.6929		90.7		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.69e4		0.248	1744.841	3.11	3.11	16900	38.9673		77.3		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.17e3		0.248	328.216	3.38	3.33	3170	38.9395		77.3		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.11e4		0.248	1063.335	3.72	3.71	11100	42.1107		83.5		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.11e4		0.248	1063.335	3.72	3.71	11100	42.1107		83.5		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	1.00e5	2.75e3	0.248		3.85	3.85	455	1839.5757			2.312	NO
13	1...	Total PFHxS	398.9 > 79.7	1.00e5	2.75e3	0.248		3.93		455	1839.5757				
14	16	L-PFOA	412.8 > 368.9	1.76e6	1.49e4	0.248		4.22	4.22	1470	5392.9286	*E		2.932	NO
15	1...	Total PFOA	412.8 > 368.9	1.76e6	1.49e4	0.248		4.60		1470	5392.9286				
16	21	PFNA	463.0 > 418.8	2.52e4	1.44e4	0.248		4.65	4.66	21.9	68.8873			7.679	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.75e3		0.248	253.005	3.85	3.85	2750	43.8780		87.1		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.75e3		0.248	253.005	3.85	3.85	2750	43.8780		87.1		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.49e4		0.248	1468.721	4.22	4.22	14900	40.9392		81.2		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.49e4		0.248	1468.721	4.22	4.22	14900	40.9392		81.2		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.44e4		0.248	1278.380	4.65	4.65	14400	45.5032		90.3		
22	-1														
23	23	L-PFOS	498.9 > 79.7	4.02e4	3.37e3	0.248		4.74	4.74	149	645.1174			2.236	NO
24	1...	Total PFOS	498.9 > 79.7	4.02e4	3.37e3	0.248		5.13		149	645.1174				
25	25	9Cl-PF30NS	530.7 > 350.8	3.09e3	3.37e3	0.248		4.94	4.95	11.5	41.5837			12.201	NO
26	26	PFDA	513 > 468.8	1.60e4	1.44e4	0.248		5.03	5.03	13.8	44.8333			9.691	NO
27	33	PFUdA	563.0 > 518.9	1.28e4	1.59e4	0.248		5.34	5.34	10.0	40.7889			21.617	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.37e3		0.248	286.356	4.74	4.74	3370	47.3906		94.0		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.37e3		0.248	286.356	4.74	4.74	3370	47.3906		94.0		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.37e3		0.248	286.356	4.74	4.74	3370	47.3906		94.0		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.44e4		0.248	1461.559	5.02	5.03	14400	39.8376		79.0		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.59e4		0.248	1646.627	5.34	5.34	15900	38.9612		77.3		
33	-1														
34	29	L-MeFOSAA	570 > 419	4.91e3	2.87e3	0.248		5.17	5.17	21.4	42.5540			2.131	NO
35	1...	Total N-MeFOSAA	570. > 419	4.91e3	2.87e3	0.248		5.19		21.4	42.5540				
36	31	L-EtFOSAA	584.1 > 419	3.69e3	3.83e3	0.248		5.32	5.33	12.0	38.3700			1.082	NO

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Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

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Name: 200224P1-43, Date: 25-Feb-2020, Time: 00:32:13, ID: B0B0137-MS1 Matrix Spike 0.24799, 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	3.69e3	3.83e3	0.248		5.37		12.0	38.3700			
38	35	11Cl-PF30UdS	630.9 > 450.9	5.95e3	1.33e4	0.248		5.55	5.55	5.59	42.9028		17.757	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.87e3		0.248	287.523	5.17	5.17	2870	40.3053	80.0		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	2.87e3		0.248	287.523	5.17	5.17	2870	40.3053	80.0		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.83e3		0.248	355.877	5.31	5.32	3830	43.4385	86.2		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.83e3		0.248	355.877	5.31	5.32	3830	43.4385	86.2		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.248	1443.711	5.61	5.62	13300	37.2062	73.8		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.18e4	1.33e4	0.248		5.62	5.62	11.0	39.2150		10.511	NO
46	39	PFTrDA	662.9 > 618.9	1.24e4	1.33e4	0.248		5.87	5.86	11.6	39.6265		66.145	NO
47	41	PFTeDA	713.0 > 669.0	1.19e4	1.42e4	0.248		6.07	6.07	10.5	40.9011		13.938	NO
48	1...	TDCA	498.3>106.9			0.248		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.24e4	1.24e4	0.248	1.000	1.40	1.40	12.5	50.4053	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.248	1443.711	5.61	5.62	13300	37.2062	73.8		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.33e4		0.248	1443.711	5.61	5.62	13300	37.2062	73.8		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.42e4		0.248	1671.855	6.04	6.07	14200	34.2026	67.9		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.37e3		0.248	286.356	4.74	4.74	3370	47.3906	94.0		
54	1...	13C5-PFHxA	318.0 > 272.9	1.87e4	1.87e4	0.248	1.000	3.11	3.11	12.5	50.4053	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.35e3	1.35e3	0.248	1.000	3.85	3.85	12.5	50.4053	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.87e4	1.87e4	0.248	1.000	5.02	5.02	12.5	50.4053	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	1.91e4	1.91e4	0.248	1.000	5.34	5.34	12.5	50.4053	100.0		
59	1...	13C4-PFOS	503 > 79.7	3.78e3	3.78e3	0.248	1.000	4.74	4.74	12.5	50.4053	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.72e4	1.72e4	0.248	1.000	4.65	4.65	12.5	50.4053	100.0		

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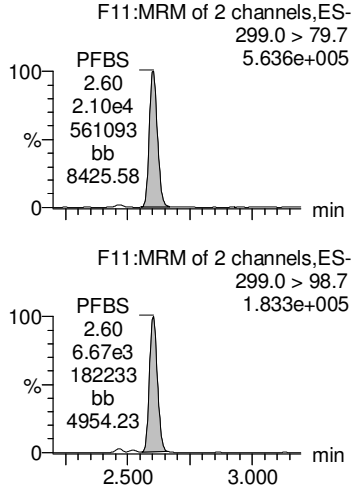
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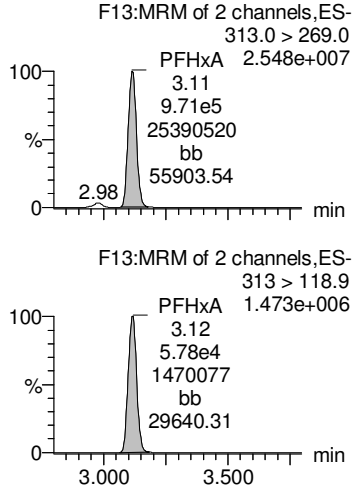
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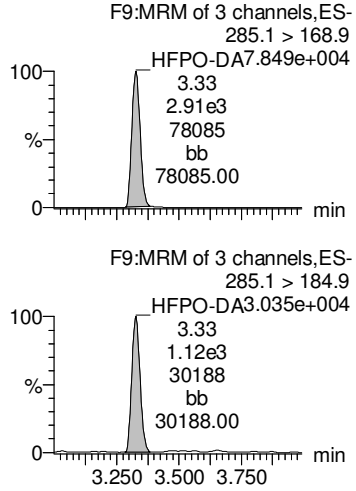
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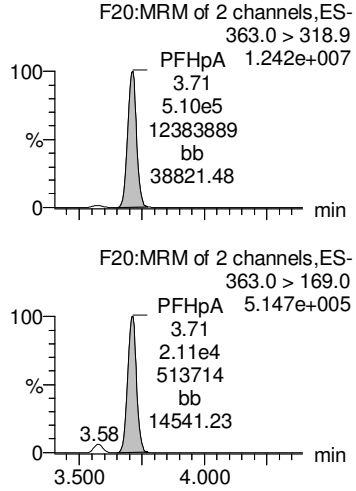
PFHxA



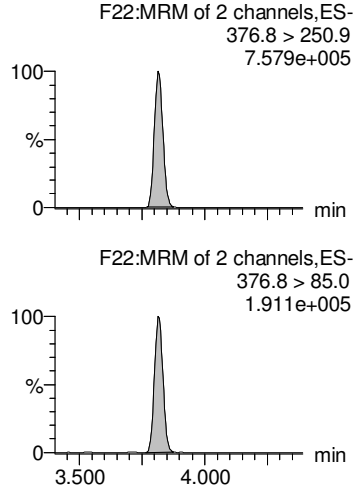
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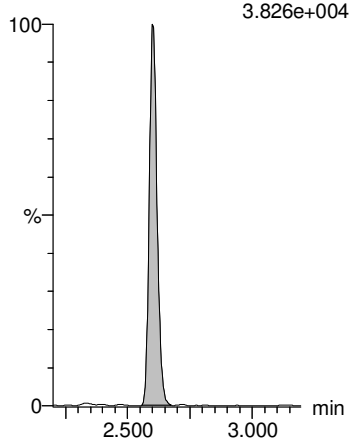
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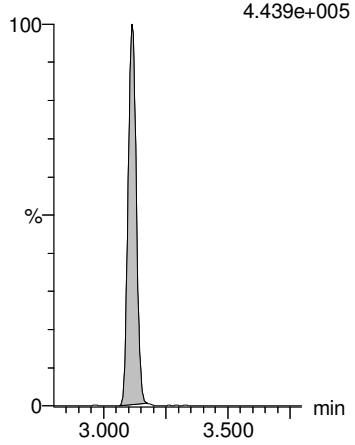
ADONA



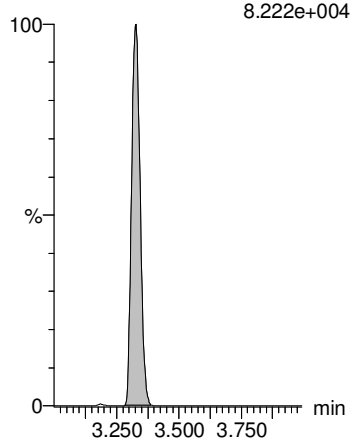
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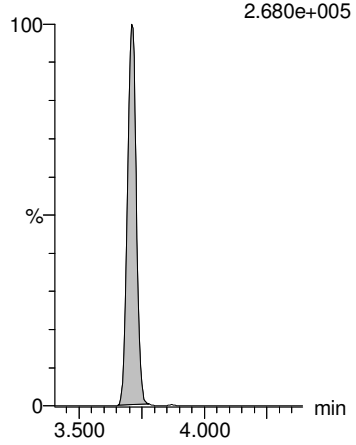
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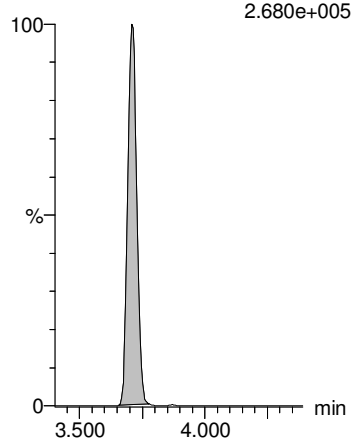
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13C4-PFHpA-EIS



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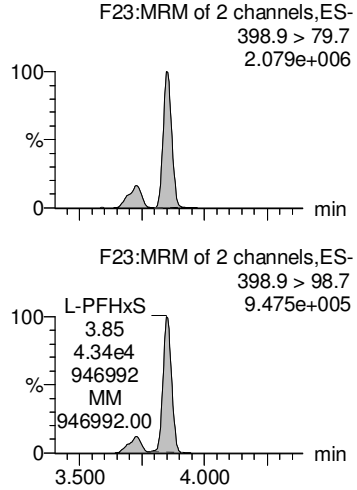


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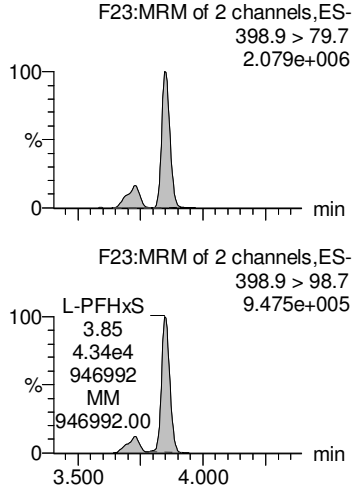
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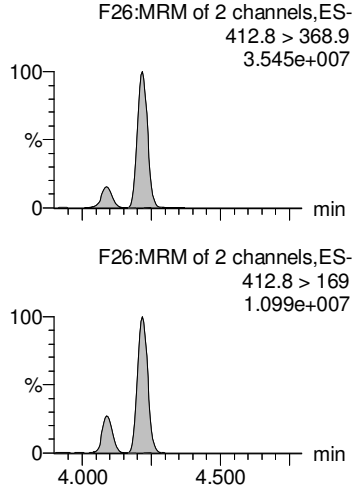
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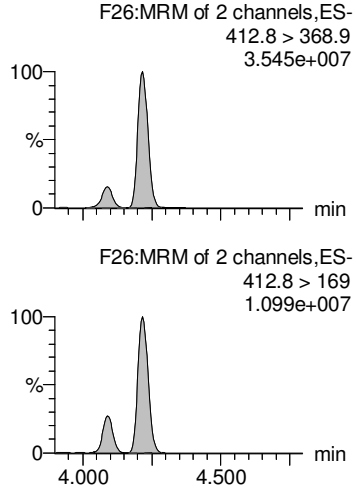
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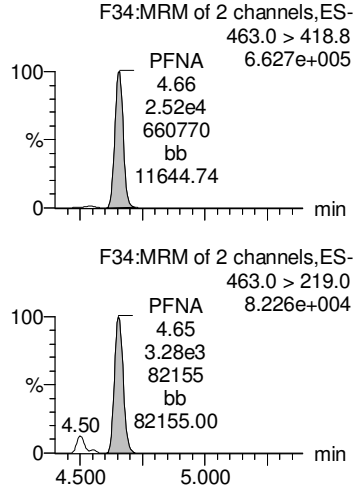
L-PFOA



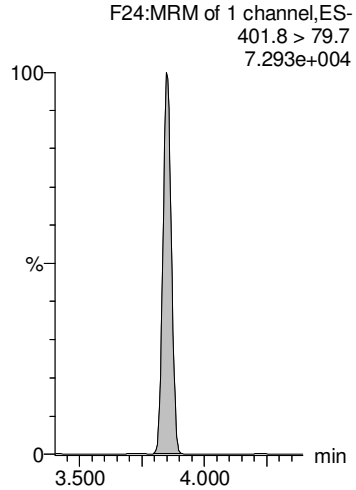
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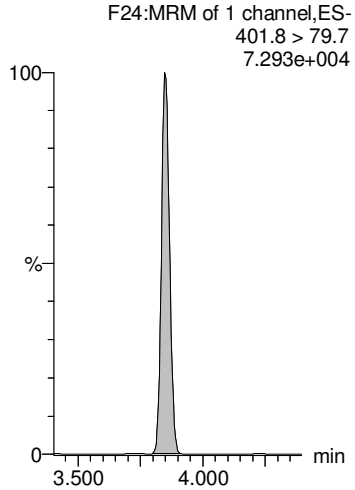
PFNA



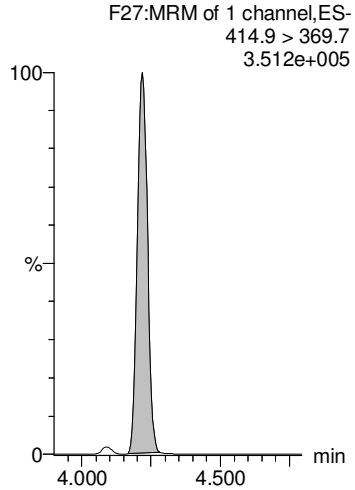
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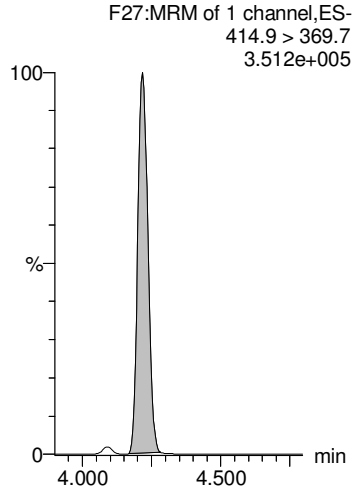
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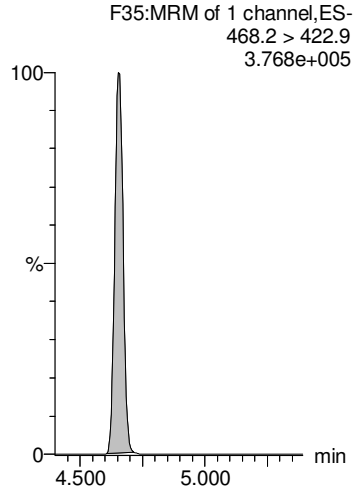
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13C2-PFOA-EIS



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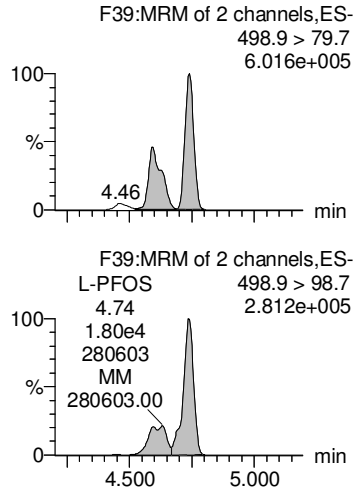


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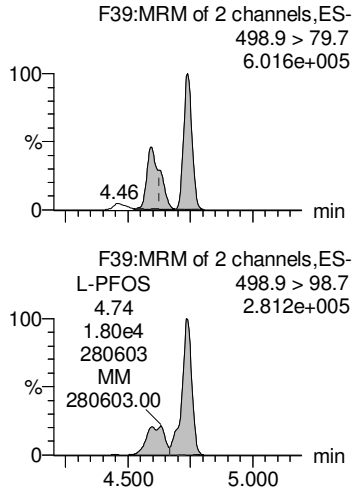
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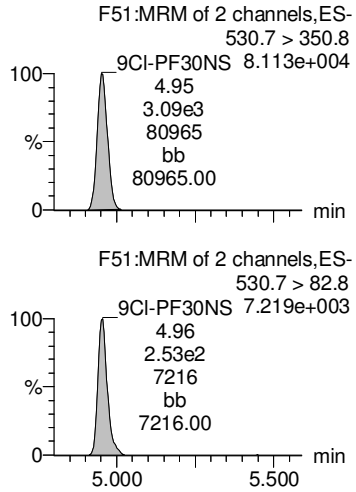
L-PFOS



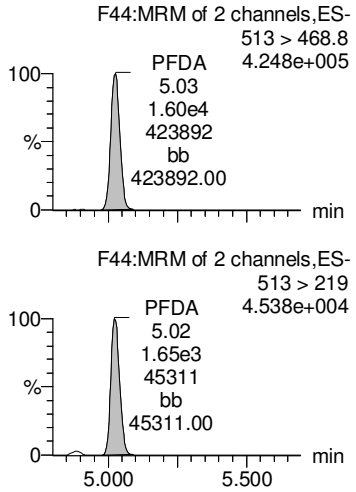
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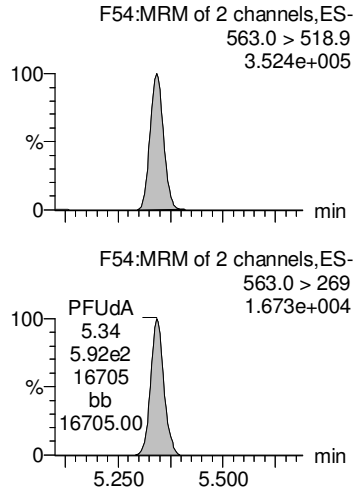
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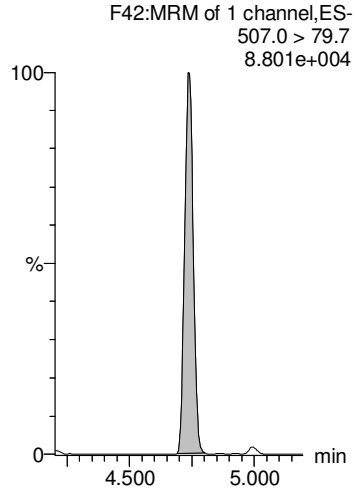
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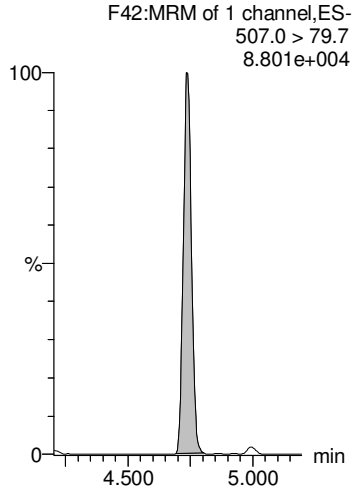
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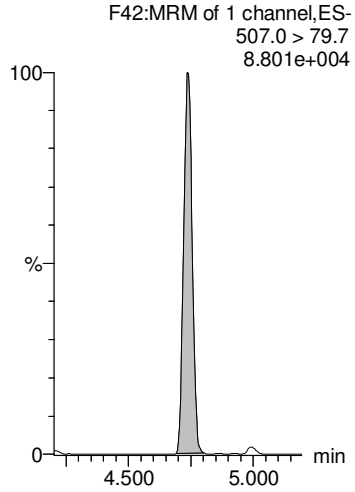
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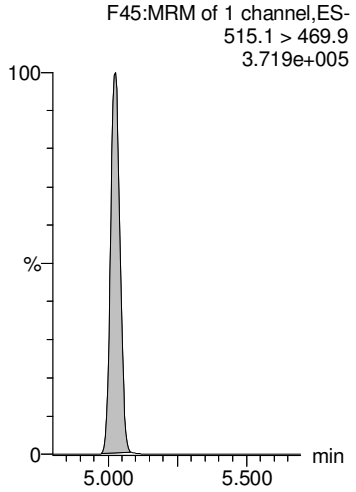
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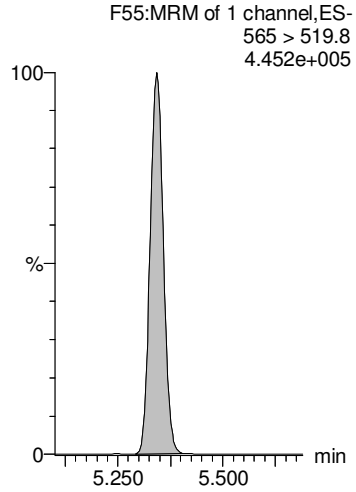
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13C2-PFDA-EIS



13C2-PFUdA-EIS

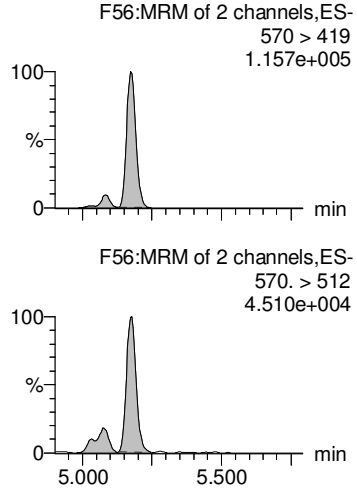


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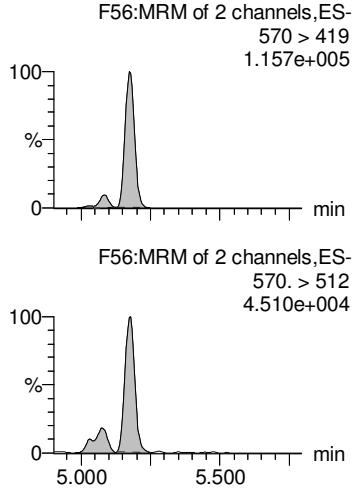
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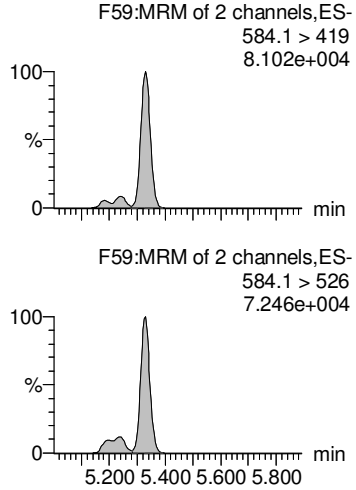
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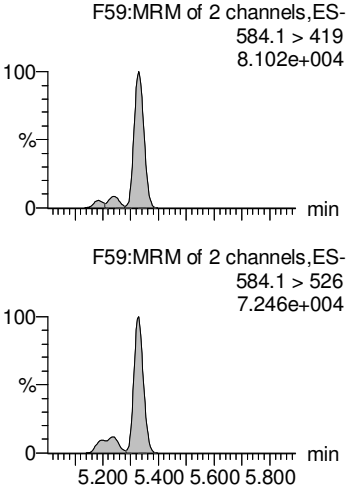
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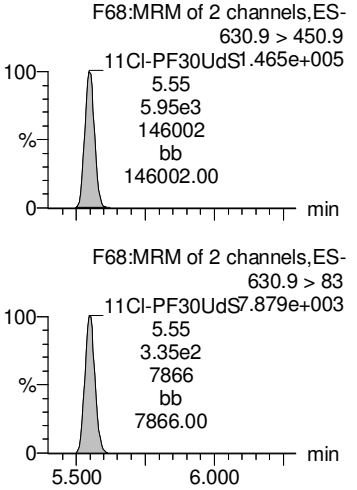
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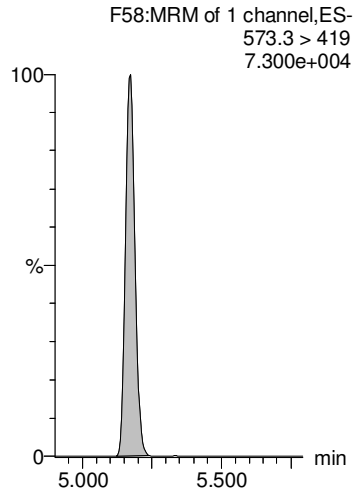
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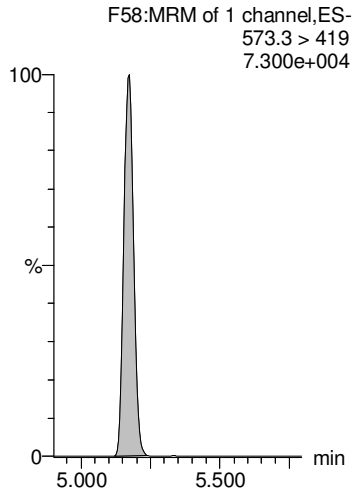
11Cl-PF30UdS



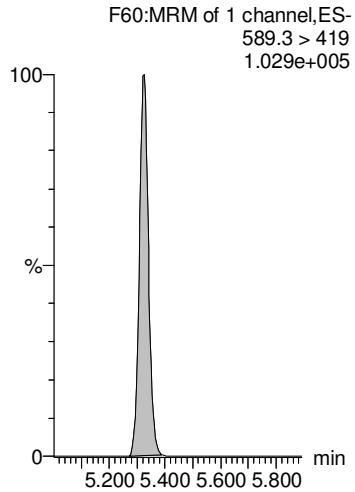
d3-N-MeFOSAA-EIS



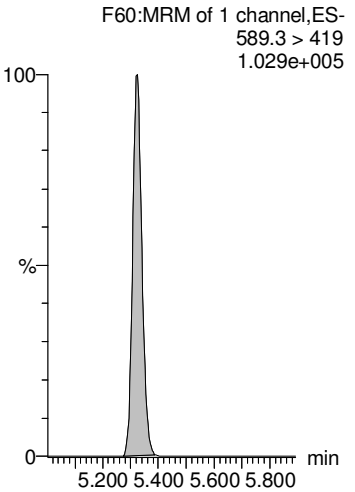
d3-N-MeFOSAA-EIS



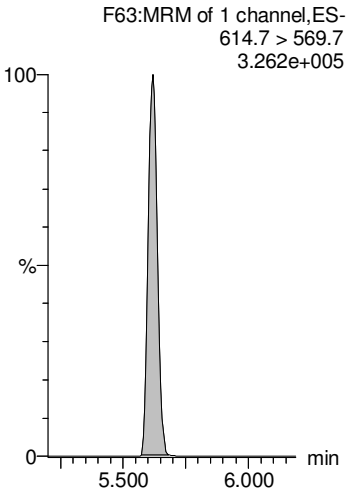
d5-N-EtFOSAA-EIS



d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

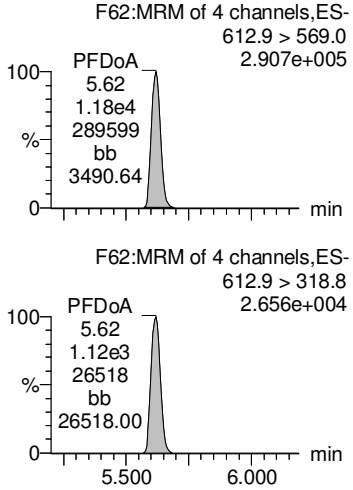


Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

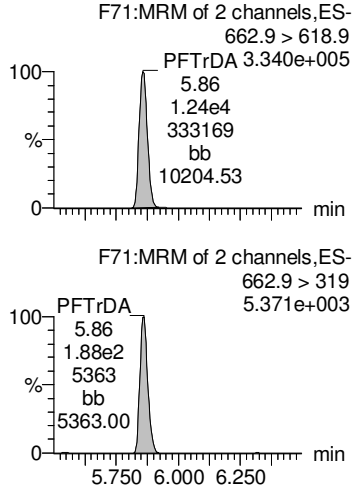
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Printed: Friday, February 28, 2020 14:45:41 Pacific Standard Time

Name: 200224P1-43, Date: 25-Feb-2020, Time: 00:32:13, ID: B0B0137-MS1 Matrix Spike 0.24799, Description: Matrix Spike

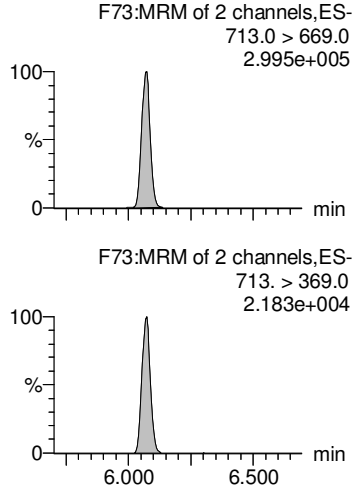
PFDoA



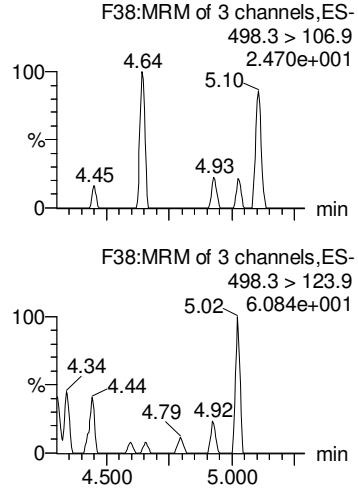
PFTrDA



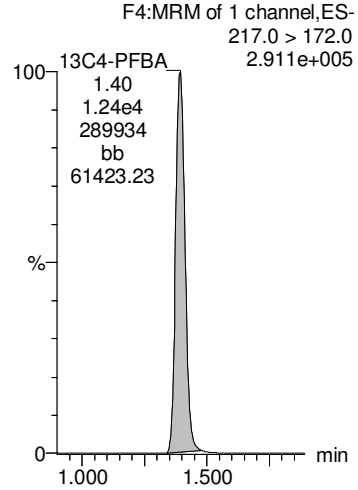
PFTeDA



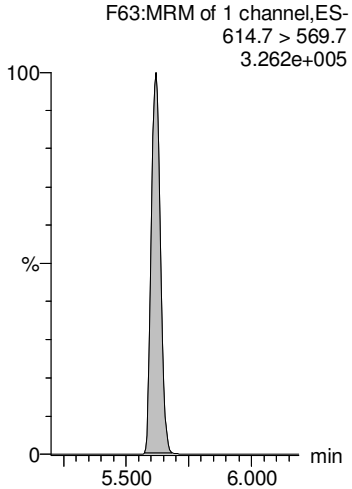
TDCA



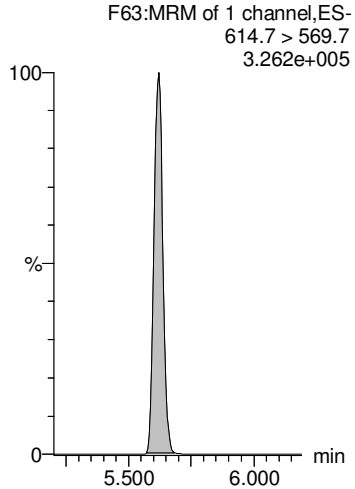
13C4-PFBA



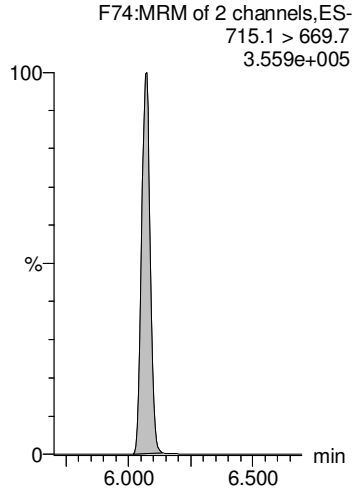
13C2-PFDoA-EIS



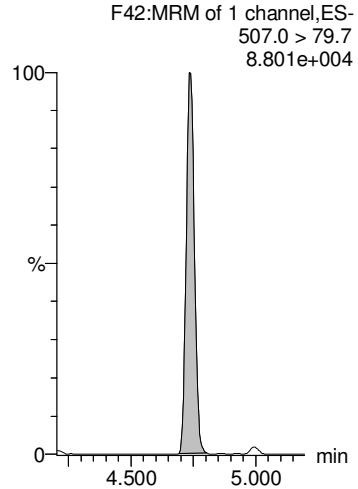
13C2-PFDoA-EIS



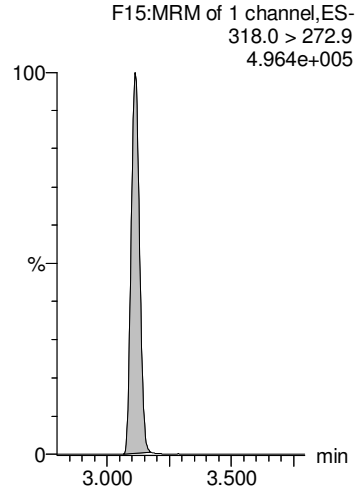
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

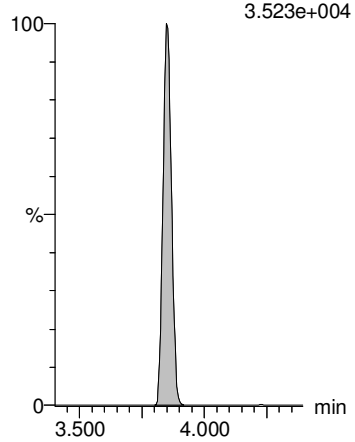


Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

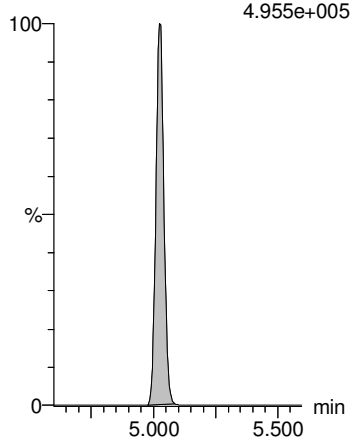
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Printed: Friday, February 28, 2020 14:45:41 Pacific Standard Time

Name: 200224P1-43, Date: 25-Feb-2020, Time: 00:32:13, ID: B0B0137-MS1 Matrix Spike 0.24799, Description: Matrix Spike

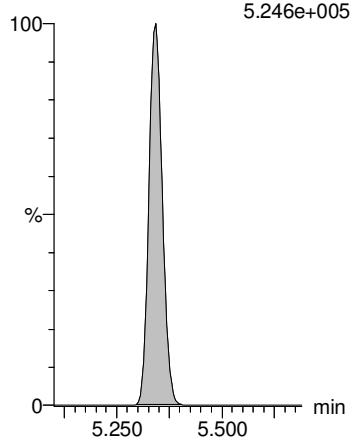
18O2-PFHxS



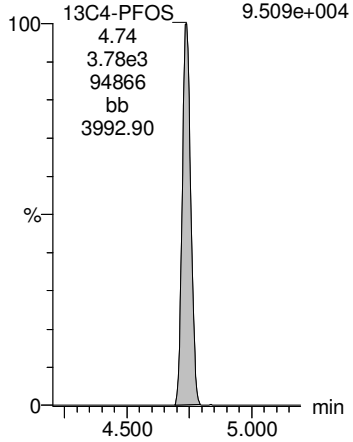
13C6-PFDA



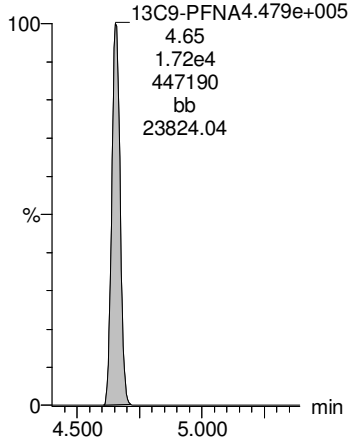
13C7-PFUdA



13C4-PFOS



13C9-PFNA



Vista Analytical Laboratory

MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200228P2\200228P2-82-83.qld

Last Altered: Monday, March 02, 2020 08:05:55 Pacific Standard Time
Printed: Monday, March 02, 2020 08:08:21 Pacific Standard Time

Name: 200228P2-82, Date: 29-Feb-2020, Time: 04:24:13, ID: B0B0137-MS1@5X Matrix Spike 0.24799, Description: Matrix Spike

	#	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	200137.359	3410.657	0.248		3.08	733.500	3397.0		NO	17.025	NO
2	57	13C2-PFHxA-EIS	315.0 > 270.0	3410.657		0.248	1583.988	3.08	3410.657	8.7	17.2	YES		
3	1...	13C5-PFHxA	318.0 > 272.9	3607.258	3607.258	0.248	1.000	3.08	12.500	50.4	100.0	NO		
4	-1													

BP 3/2/2020

Vista Analytical Laboratory

MM 3/2/2020

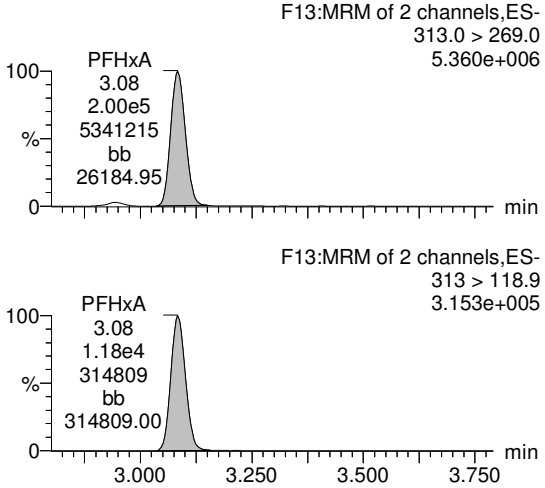
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Printed: Monday, March 02, 2020 08:08:21 Pacific Standard Time

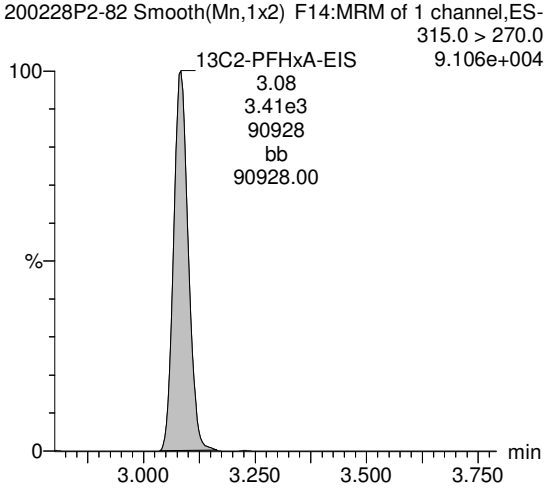
Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-82, Date: 29-Feb-2020, Time: 04:24:13, ID: B0B0137-MS1@5X Matrix Spike 0.24799, Description: Matrix Spike

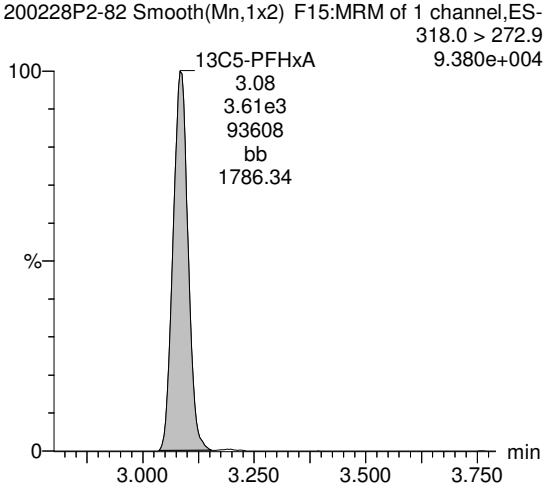
PFHxA



13C2-PFHxA-EIS



13C5-PFHxA



BP 3/2/2020

Vista Analytical Laboratory

MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200228P2\200228P2-82-83_UG.qld

Last Altered: Monday, March 02, 2020 08:13:30 Pacific Standard Time
Printed: Monday, March 02, 2020 08:13:56 Pacific Standard Time

Name: 200228P2-82, Date: 29-Feb-2020, Time: 04:24:13, ID: B0B0137-MS1@5X Matrix Spike 0.24799, Description: Matrix Spike

	#	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	370077.375	3296.123	0.248		4.19	1.403	4.49		NO	2.886	NO
2	1...	Total PFOA	412.8 > 368.9	370077.375	3296.123	0.248			1.403	4.49		NO		
3	1...	13C8-PFOA	420.9 > 376.0	3769.152	3769.152	0.248	1.000	4.19	0.013	0.0504	100.0	NO		
4	69	13C2-PFOA-EIS	414.9 > 369.7	3296.123		0.248	1520.439	4.19	3296.123	8.74	17343.0	YES		
5	69	13C2-PFOA-EIS	414.9 > 369.7	3296.123		0.248	1520.439	4.19	3296.123	8.74	17343.0	YES		

BP 3/2/2020

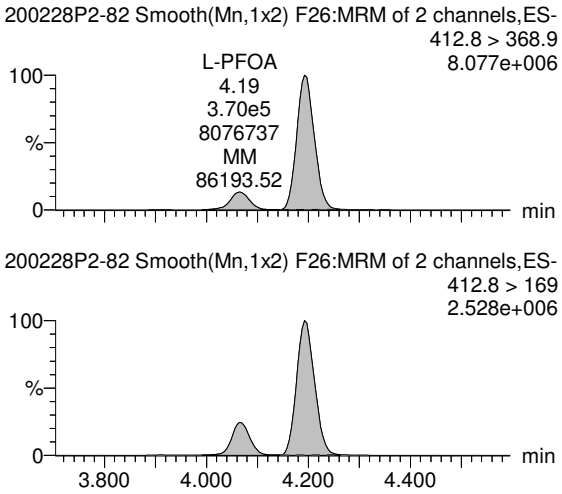
Dataset: P:\PFAS5.PRO\RESULTS\200228P2\200228P2-82-83_UG.qld

Last Altered: Monday, March 02, 2020 08:13:30 Pacific Standard Time
Printed: Monday, March 02, 2020 08:13:56 Pacific Standard Time

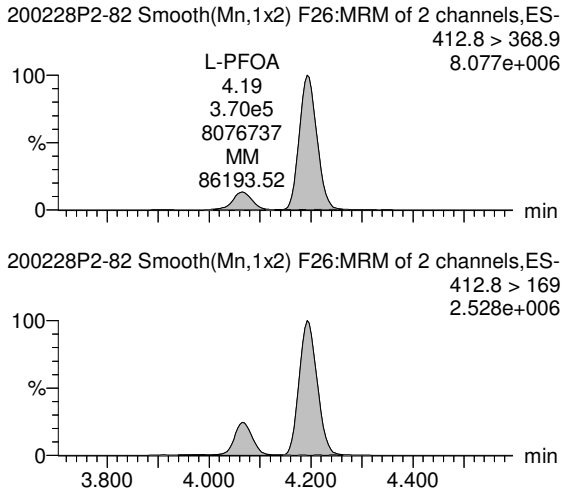
Method: P:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-82, Date: 29-Feb-2020, Time: 04:24:13, ID: B0B0137-MS1@5X Matrix Spike 0.24799, Description: Matrix Spike

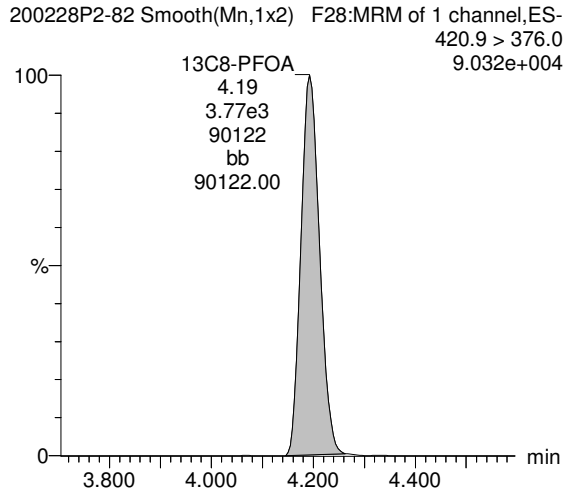
L-PFOA



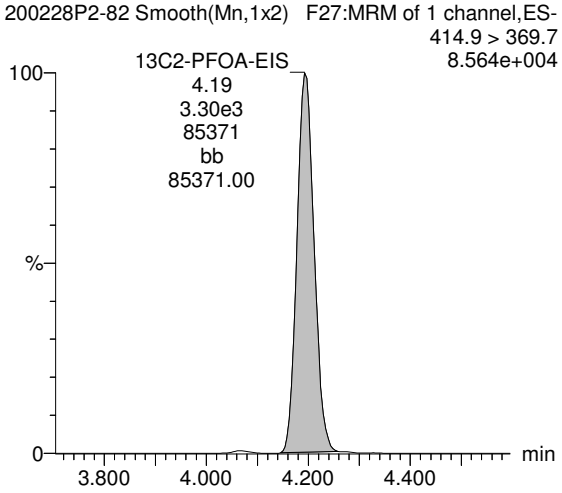
Total PFOA



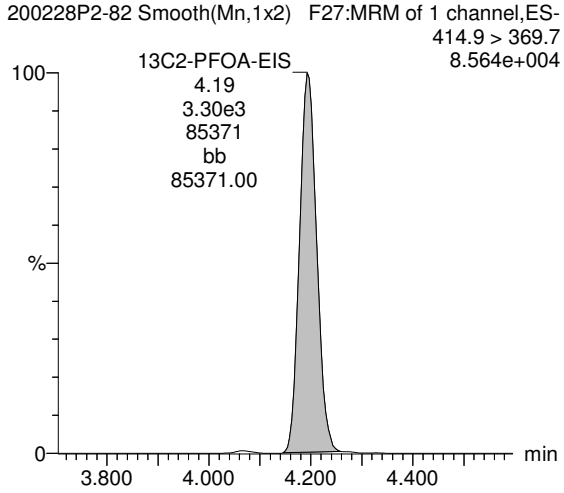
13C8-PFOA



13C2-PFOA-EIS



13C2-PFOA-EIS



Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld ***SEE DILUTION**

Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
Printed: Friday, February 28, 2020 14:54:51 Pacific Standard Time

Name: 200224P1-44, Date: 25-Feb-2020, Time: 00:42:44, ID: B0B0137-MSD1 Matrix Spike Dup 0.24718, 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	2.10e4	1.35e3	0.247		2.60	2.60	194	328.1915			3.104	NO
2	7	PFHxA	313.0 > 269.0	9.80e5	1.82e4	0.247		3.11	3.11	673	2993.1722	*E		16.514	NO
3	9	HFPO-DA	285.1 > 168.9	2.83e3	3.64e3	0.247		3.32	3.33	9.73	37.2760			2.484	NO
4	11	PFHpA	363.0 > 318.9	4.87e5	1.17e4	0.247		3.71	3.71	518	1748.1438			23.502	NO
5	12	ADONA	376.8 > 250.9	2.94e4	1.17e4	0.247		3.80	3.81	31.3	40.8472			4.145	NO
6	51	13C3-PFBS-EIS	302.0 > 98.8	1.35e3		0.247	121.548	2.64	2.60	1350	45.0914		89.2		
7	57	13C2-PFHxA-EIS	315.0 > 270.0	1.82e4		0.247	1744.841	3.11	3.11	18200	42.1787		83.4		
8	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3.64e3		0.247	328.216	3.38	3.32	3640	44.8170		88.6		
9	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.247	1063.335	3.72	3.71	11700	44.6958		88.4		
10	59	13C4-PFHpA-EIS	367.2 > 321.8	1.17e4		0.247	1063.335	3.72	3.71	11700	44.6958		88.4		
11	-1														
12	13	L-PFHxS	398.9 > 79.7	9.72e4	2.93e3	0.247		3.85	3.85	415	1668.1403			2.310	NO
13	1...	Total PFHxS	398.9 > 79.7	9.72e4	2.93e3	0.247		3.93		415	1668.1403				
14	16	L-PFOA	412.8 > 368.9	1.70e6	1.53e4	0.247		4.22	4.22	1390	5081.9517	***E**		2.832	NO
15	1...	Total PFOA	412.8 > 368.9	1.70e6	1.53e4	0.247		4.60		1390	5081.9517				
16	21	PFNA	463.0 > 418.8	2.37e4	1.50e4	0.247		4.65	4.66	19.7	62.3262			7.344	NO
17	61	13C3-PFHxS-EIS	401.8 > 79.7	2.93e3		0.247	253.005	3.85	3.85	2930	46.7734		92.5		
18	61	13C3-PFHxS-EIS	401.8 > 79.7	2.93e3		0.247	253.005	3.85	3.85	2930	46.7734		92.5		
19	69	13C2-PFOA-EIS	414.9 > 369.7	1.53e4		0.247	1468.721	4.22	4.22	15300	42.1120		83.3		
20	69	13C2-PFOA-EIS	414.9 > 369.7	1.53e4		0.247	1468.721	4.22	4.22	15300	42.1120		83.3		
21	65	13C5-PFNA-EIS	468.2 > 422.9	1.50e4		0.247	1278.380	4.65	4.65	15000	47.5051		93.9		
22	-1														
23	23	L-PFOS	498.9 > 79.7	4.11e4	3.43e3	0.247		4.74	4.74	150	648.9825			2.196	NO
24	1...	Total PFOS	498.9 > 79.7	4.11e4	3.43e3	0.247		5.13		150	648.9825				
25	25	9Cl-PF30NS	530.7 > 350.8	3.04e3	3.43e3	0.247		4.94	4.95	11.1	40.2862			15.732	NO
26	26	PFDA	513 > 468.8	1.66e4	1.67e4	0.247		5.03	5.03	12.4	40.4688			9.658	NO
27	33	PFUdA	563.0 > 518.9	1.27e4	1.61e4	0.247		5.34	5.34	9.84	40.0847			19.715	NO
28	71	13C8-PFOS-EIS	507.0 > 79.7	3.43e3		0.247	286.356	4.74	4.74	3430	48.4269		95.8		
29	71	13C8-PFOS-EIS	507.0 > 79.7	3.43e3		0.247	286.356	4.74	4.74	3430	48.4269		95.8		
30	71	13C8-PFOS-EIS	507.0 > 79.7	3.43e3		0.247	286.356	4.74	4.74	3430	48.4269		95.8		
31	73	13C2-PFDA-EIS	515.1 > 469.9	1.67e4		0.247	1461.559	5.02	5.03	16700	46.2568		91.5		
32	79	13C2-PFUdA-EIS	565 > 519.8	1.61e4		0.247	1646.627	5.34	5.34	16100	39.5420		78.2		
33	-1														
34	29	L-MeFOSAA	570 > 419	4.11e3	3.32e3	0.247		5.17	5.18	15.5	30.9599			2.001	NO
35	1...	Total N-MeFOSAA	570. > 419	4.11e3	3.32e3	0.247		5.19		15.5	30.9599				
36	31	L-EtFOSAA	584.1 > 419	4.07e3	3.78e3	0.247		5.33	5.33	13.5	43.0936			1.280	NO

Dataset: P:\PFAS5.PRO\RESULTS\200224P1\200224P1-41-49.qld

Last Altered: Friday, February 28, 2020 14:43:40 Pacific Standard Time
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Name: 200224P1-44, Date: 25-Feb-2020, Time: 00:42:44, ID: B0B0137-MSD1 Matrix Spike Dup 0.24718, 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	4.07e3	3.78e3	0.247		5.37		13.5	43.0936			
38	35	11Cl-PF30UdS	630.9 > 450.9	6.01e3	1.46e4	0.247		5.55	5.55	5.13	39.5276		18.969	NO
39	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.32e3		0.247	287.523	5.17	5.17	3320	46.7496	92.4		
40	77	d3-N-MeFOSAA-EIS	573.3 > 419	3.32e3		0.247	287.523	5.17	5.17	3320	46.7496	92.4		
41	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.78e3		0.247	355.877	5.31	5.33	3780	42.9943	85.0		
42	81	d5-N-EtFOSAA-EIS	589.3 > 419	3.78e3		0.247	355.877	5.31	5.33	3780	42.9943	85.0		
43	83	13C2-PFDoA-EIS	614.7 > 569.7	1.46e4		0.247	1443.711	5.61	5.62	14600	41.0093	81.1		
44	-1													
45	37	PFDoA	612.9 > 569.0	1.12e4	1.46e4	0.247		5.62	5.62	9.56	34.0488		8.934	NO
46	39	PFTrDA	662.9 > 618.9	1.19e4	1.46e4	0.247		5.87	5.86	10.1	34.5669		49.356	NO
47	41	PFTeDA	713.0 > 669.0	1.04e4	1.30e4	0.247		6.07	6.07	9.94	38.8957		15.942	NO
48	1...	TDCA	498.3>106.9			0.247		4.59						
49	99	13C4-PFBA	217.0 > 172.0	1.31e4	1.31e4	0.247	1.000	1.40	1.40	12.5	50.5704	100.0		
50	83	13C2-PFDoA-EIS	614.7 > 569.7	1.46e4		0.247	1443.711	5.61	5.62	14600	41.0093	81.1		
51	83	13C2-PFDoA-EIS	614.7 > 569.7	1.46e4		0.247	1443.711	5.61	5.62	14600	41.0093	81.1		
52	89	13C2-PFTeDA-EIS	715.1 > 669.7	1.30e4		0.247	1671.855	6.04	6.07	13000	31.5329	62.4		
53	71	13C8-PFOS-EIS	507.0 > 79.7	3.43e3		0.247	286.356	4.74	4.74	3430	48.4269	95.8		
54	1...	13C5-PFHxA	318.0 > 272.9	2.02e4	2.02e4	0.247	1.000	3.11	3.11	12.5	50.5704	100.0		
55	-1													
56	1...	18O2-PFHxS	403.0 > 102.6	1.38e3	1.38e3	0.247	1.000	3.85	3.85	12.5	50.5704	100.0		
57	1...	13C6-PFDA	519.1 > 473.7	1.91e4	1.91e4	0.247	1.000	5.02	5.02	12.5	50.5704	100.0		
58	1...	13C7-PFUdA	570.1 > 524.8	2.10e4	2.10e4	0.247	1.000	5.34	5.34	12.5	50.5704	100.0		
59	1...	13C4-PFOS	503 > 79.7	4.11e3	4.11e3	0.247	1.000	4.74	4.74	12.5	50.5704	100.0		
60	1...	13C9-PFNA	472.2 > 426.9	1.89e4	1.89e4	0.247	1.000	4.65	4.65	12.5	50.5704	100.0		

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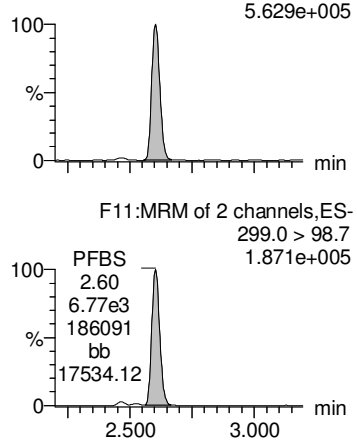
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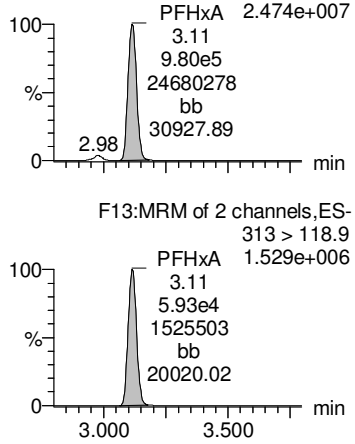
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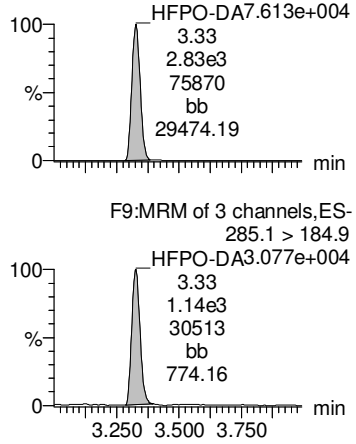
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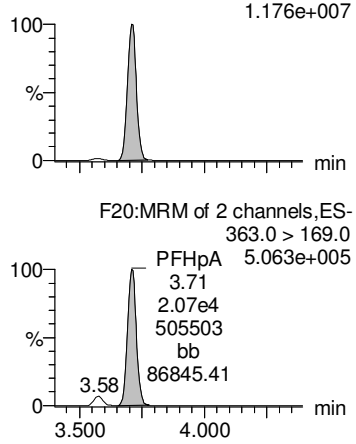
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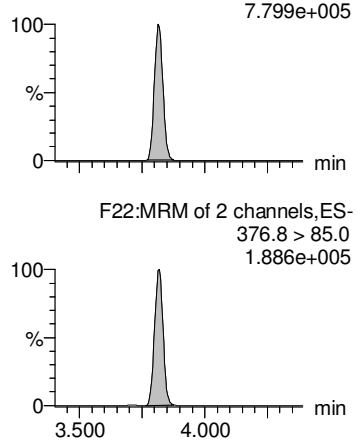
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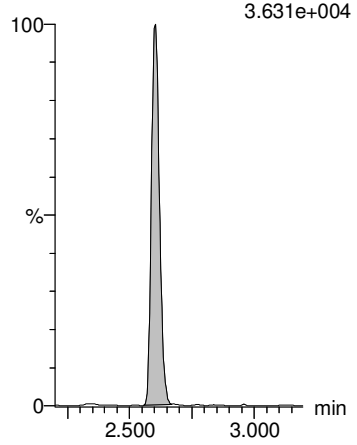
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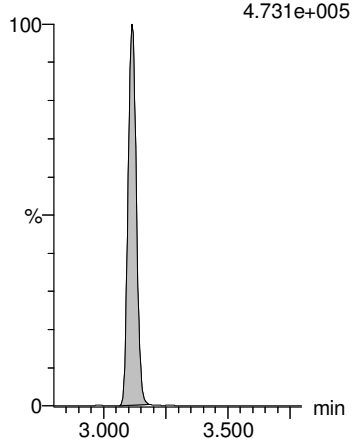
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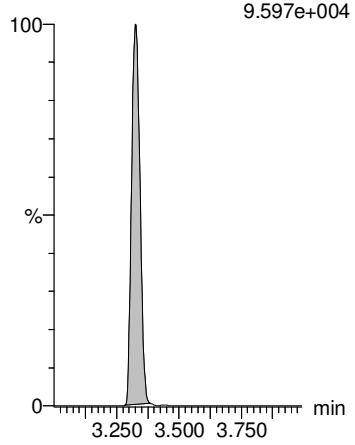
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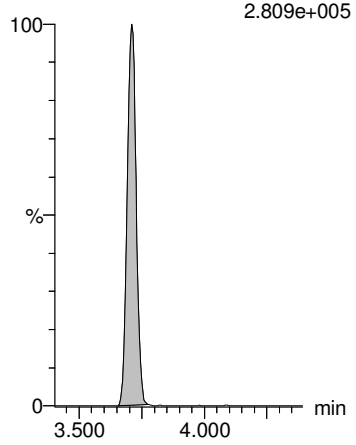
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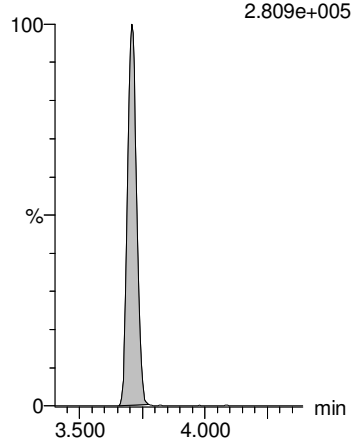
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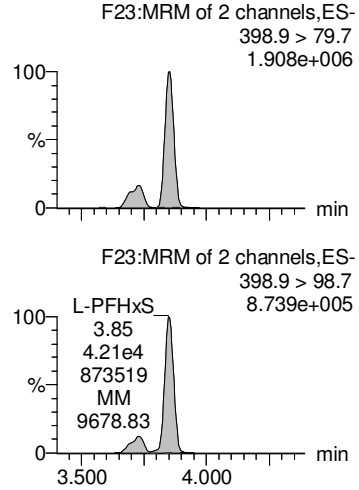


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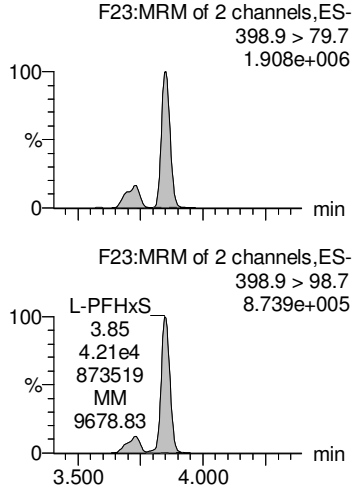
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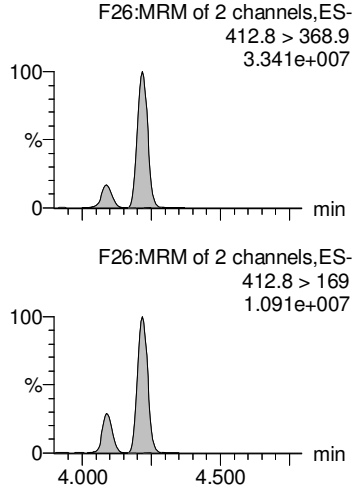
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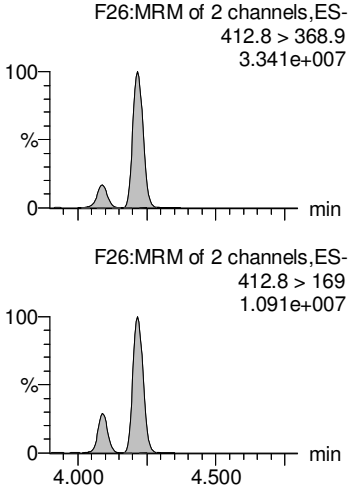
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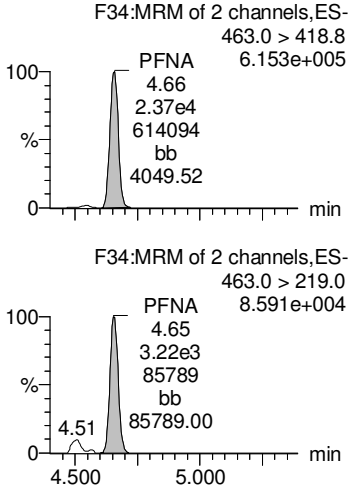
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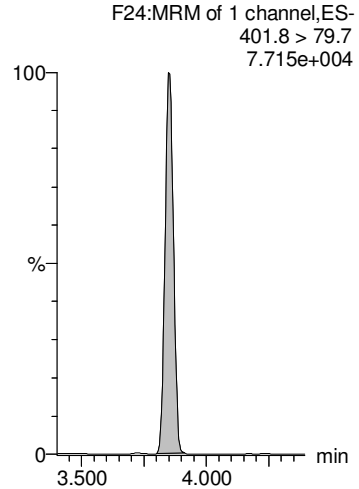
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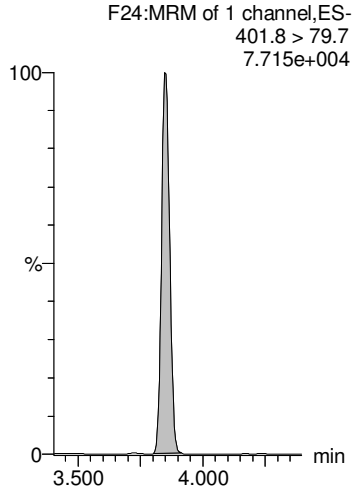
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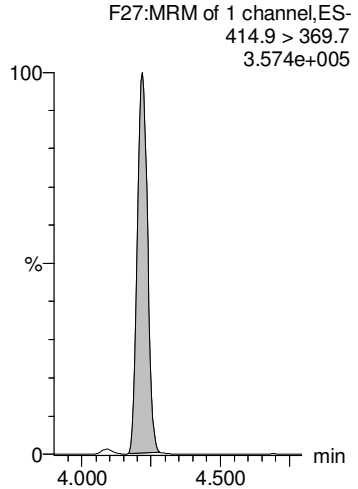
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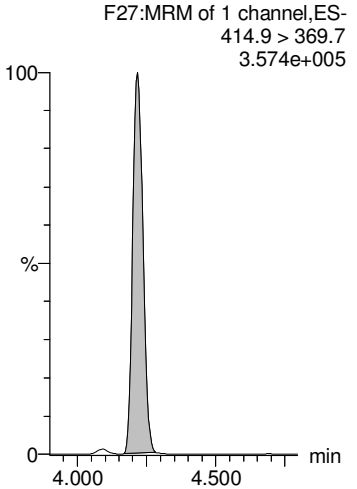
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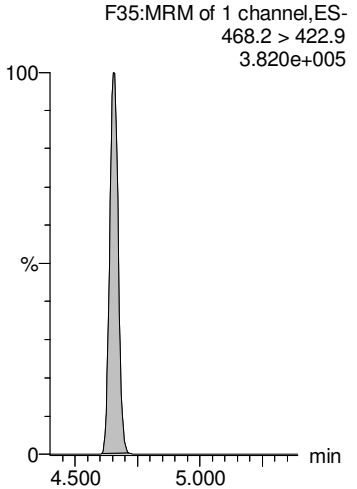
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13C2-PFOA-EIS



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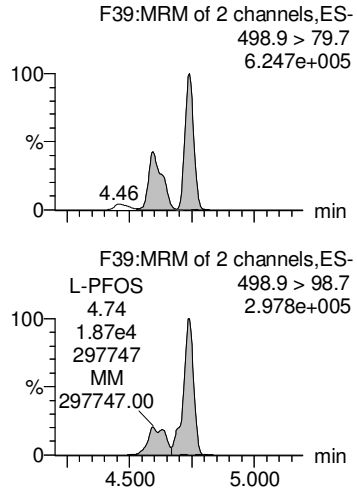


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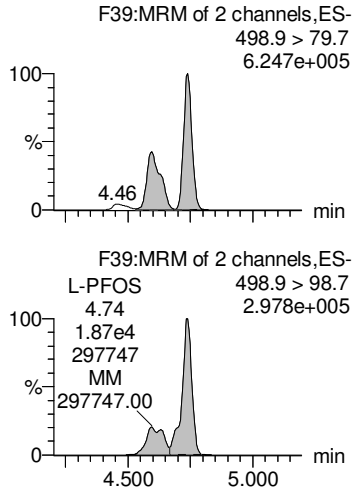
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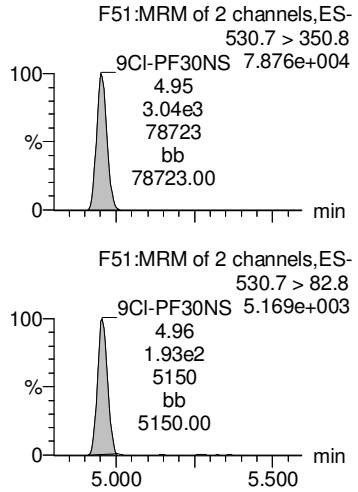
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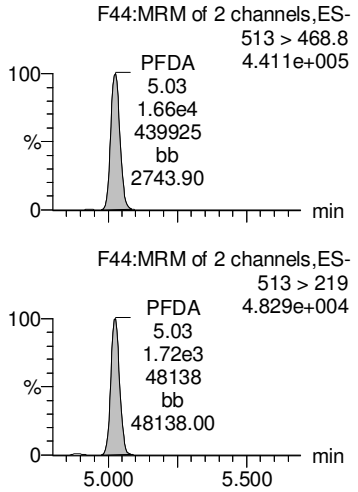
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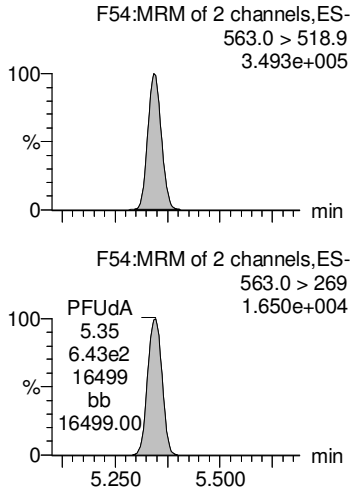
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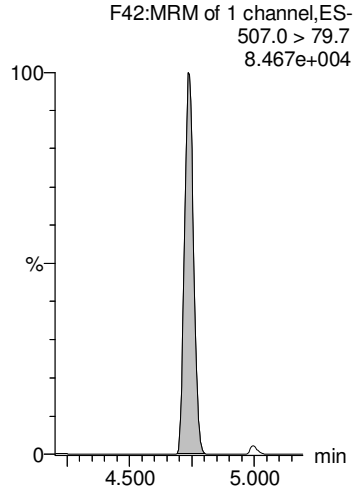
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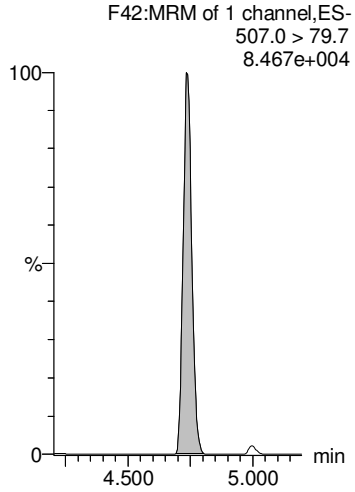
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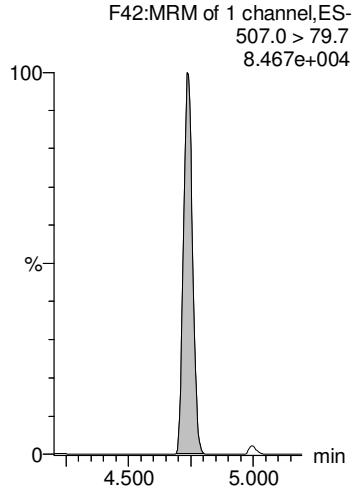
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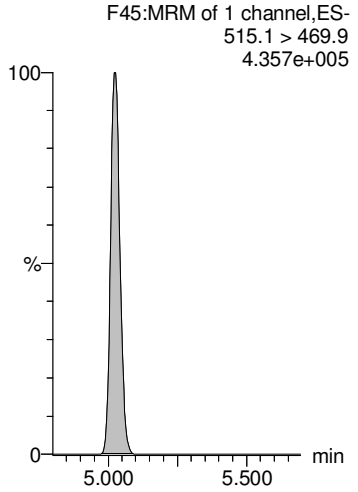
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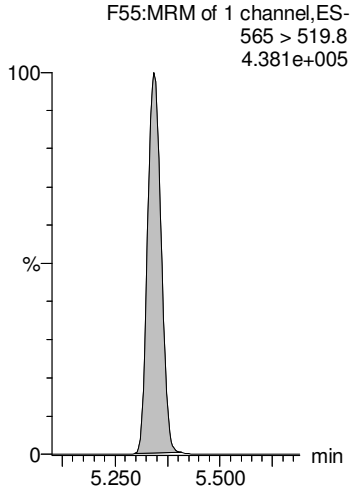
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13C2-PFDA-EIS



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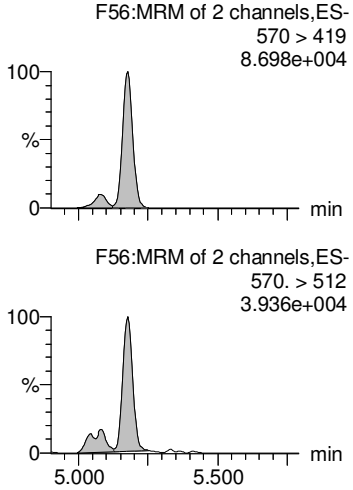


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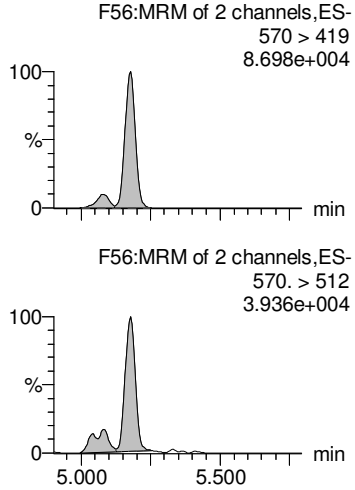
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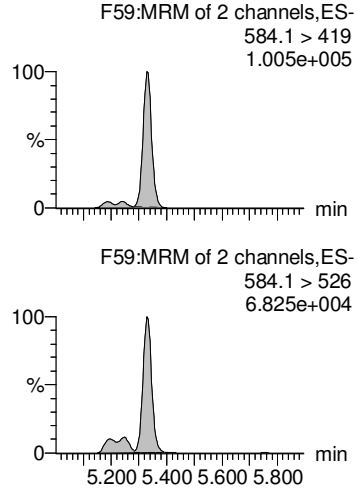
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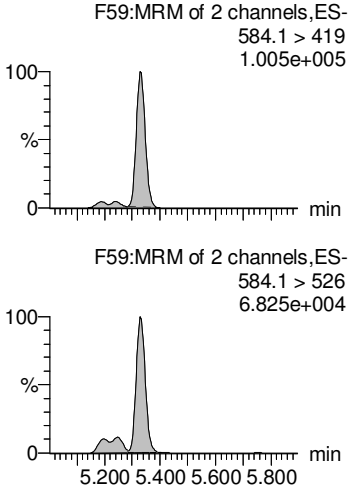
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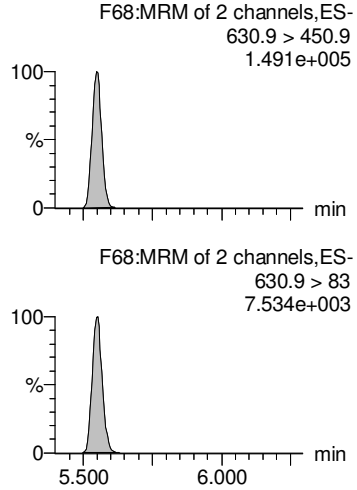
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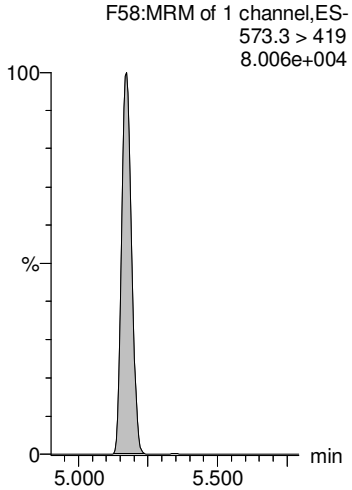
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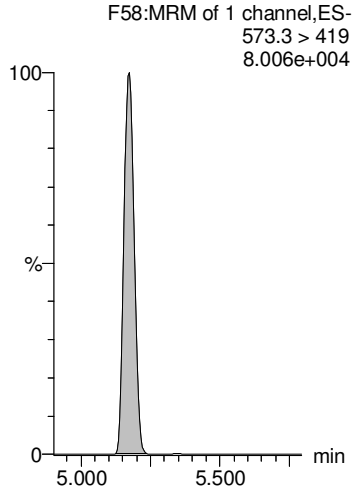
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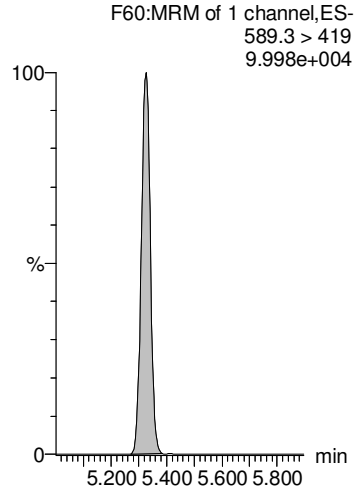
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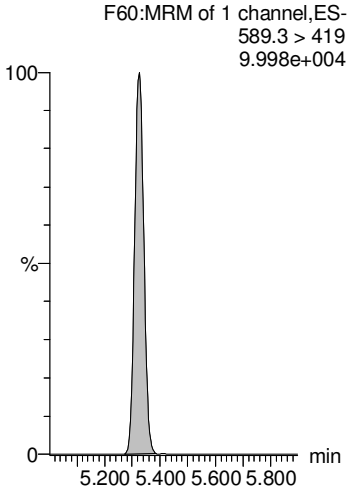
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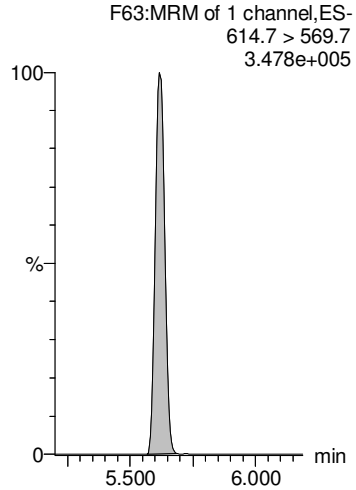
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d5-N-EtFOSAA-EIS



13C2-PFDoA-EIS

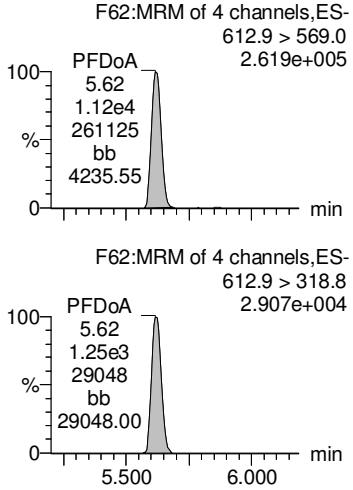


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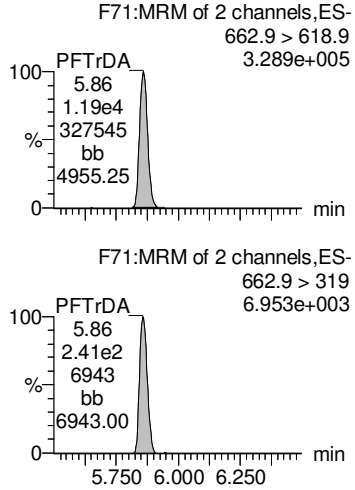
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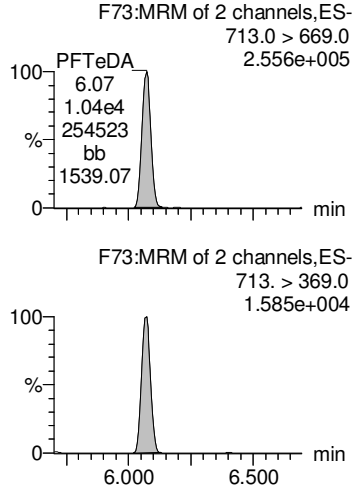
PFDoA



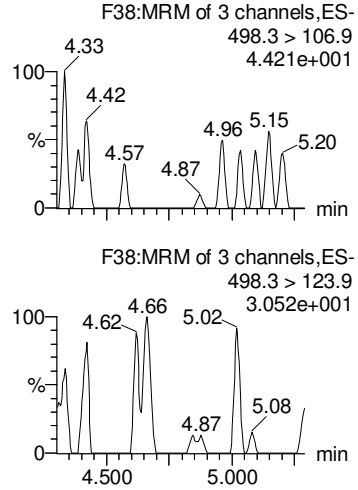
PFTrDA



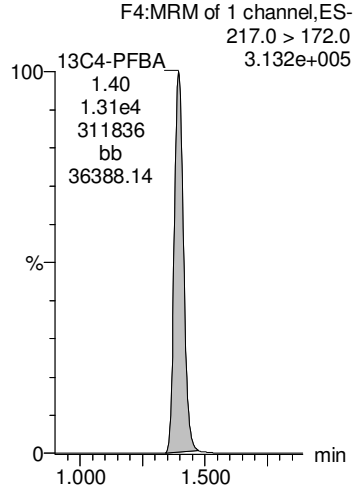
PFTeDA



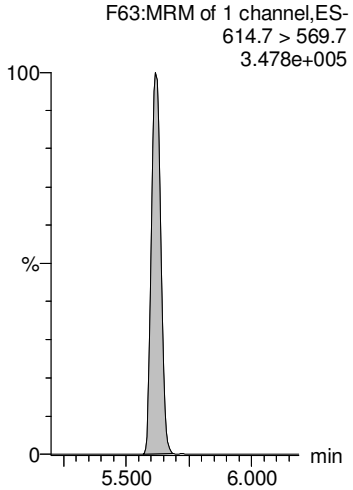
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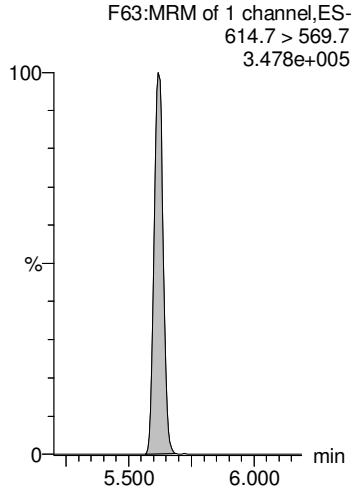
13C4-PFBA



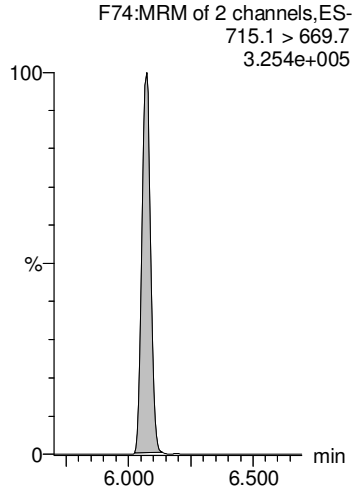
13C2-PFDoA-EIS



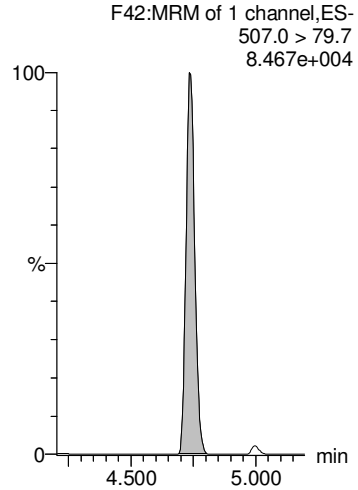
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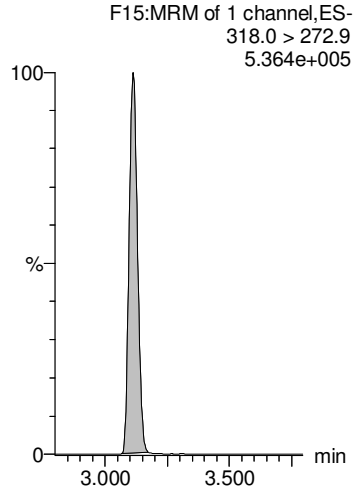
13C2-PFTeDA-EIS



13C8-PFOS-EIS



13C5-PFHxA

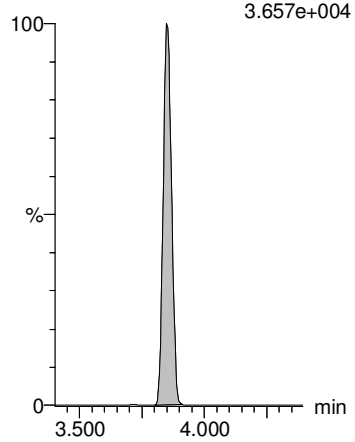


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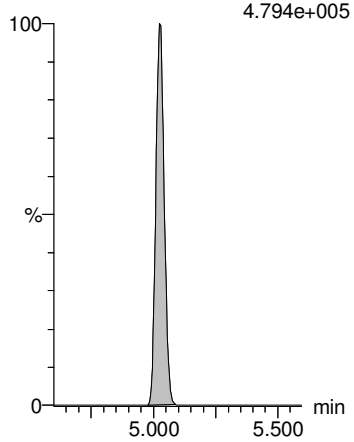
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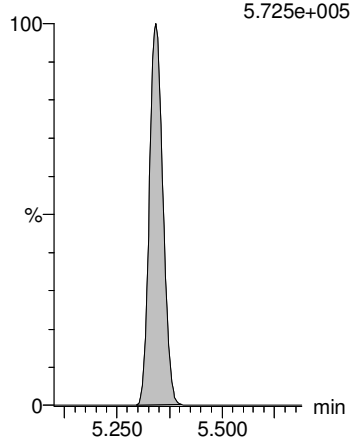
18O2-PFHxS



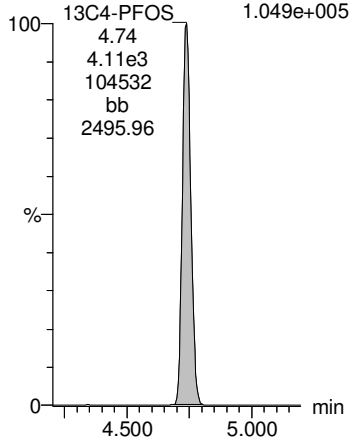
13C6-PFDA



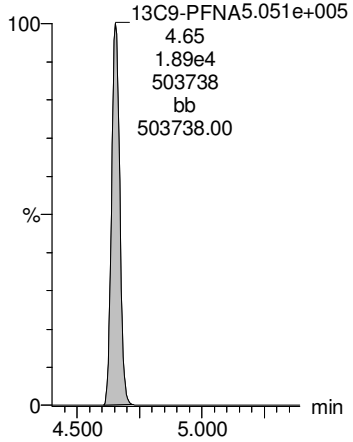
13C7-PFUdA



13C4-PFOS



13C9-PFNA



Vista Analytical Laboratory

MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200228P2\200228P2-82-83.qld

Last Altered: Monday, March 02, 2020 08:05:55 Pacific Standard Time
Printed: Monday, March 02, 2020 08:08:31 Pacific Standard Time

Name: 200228P2-83, Date: 29-Feb-2020, Time: 04:34:42, ID: B0B0137-MSD1@5X Matrix Spike Dup 0.24718, Description: Matrix Spike Dup

	#	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	199911.266	3556.105	0.247		3.08	702.704	3265.0		NO	16.990	NO
2	57	13C2-PFHxA-EIS	315.0 > 270.0	3556.105		0.247	1583.988	3.08	3556.105	9.1	18.0	YES		
3	1...	13C5-PFHxA	318.0 > 272.9	3859.376	3859.376	0.247	1.000	3.08	12.500	50.6	100.0	NO		
4	-1													

BP 3/2/2020

Vista Analytical Laboratory

MM 3/2/2020

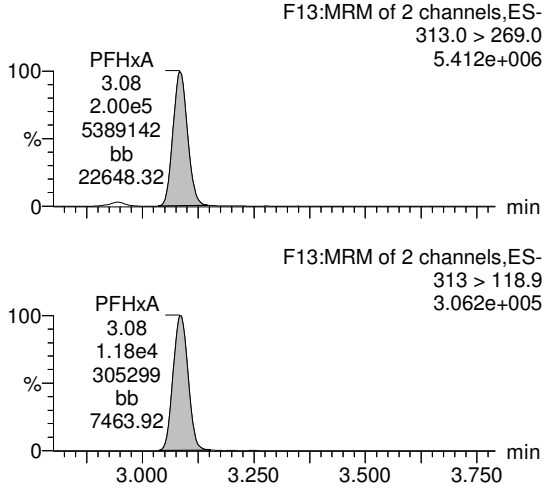
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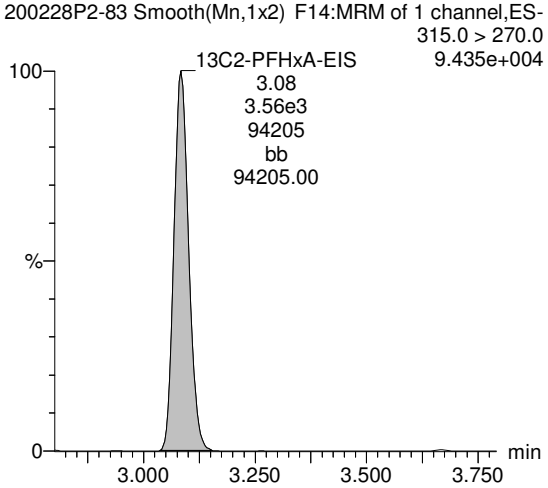
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Calibration: P:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-83, Date: 29-Feb-2020, Time: 04:34:42, ID: B0B0137-MSD1@5X Matrix Spike Dup 0.24718, Description: Matrix Spike Dup

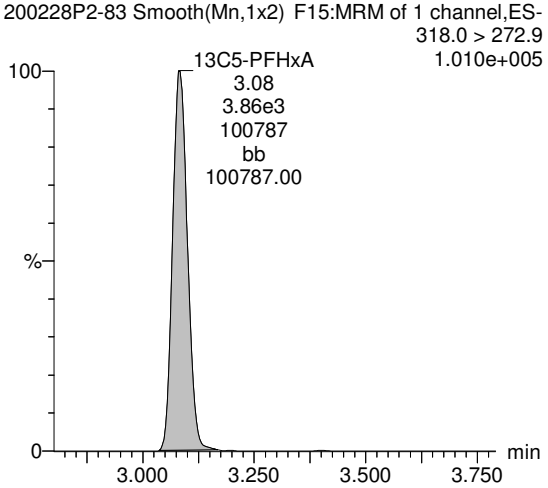
PFHxA



13C2-PFHxA-EIS



13C5-PFHxA



BP 3/2/2020

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MM 3/2/2020

Dataset: P:\PFAS5.PRO\RESULTS\200228P2\200228P2-82-83_UG.qld

Last Altered: Monday, March 02, 2020 08:13:30 Pacific Standard Time
Printed: Monday, March 02, 2020 08:14:51 Pacific Standard Time

Name: 200228P2-83, Date: 29-Feb-2020, Time: 04:34:42, ID: B0B0137-MSD1@5X Matrix Spike Dup 0.24718, Description: Matrix Spike Dup

	#	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	376493.813	3419.575	0.247		4.19	1.376	4.42		NO	2.874	NO
2	1...	Total PFOA	412.8 > 368.9	376493.813	3419.575	0.247			1.376	4.42		NO		
3	1...	13C8-PFOA	420.9 > 376.0	3686.131	3686.131	0.247	1.000	4.19	0.013	0.0506	100.0	NO		
4	69	13C2-PFOA-EIS	414.9 > 369.7	3419.575		0.247	1520.439	4.20	3419.575	9.10	17992.6	YES		
5	69	13C2-PFOA-EIS	414.9 > 369.7	3419.575		0.247	1520.439	4.20	3419.575	9.10	17992.6	YES		

Vista Analytical Laboratory

MM 3/2/2020

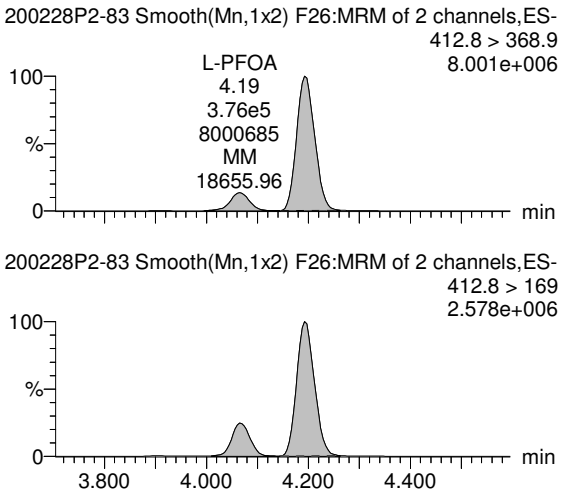
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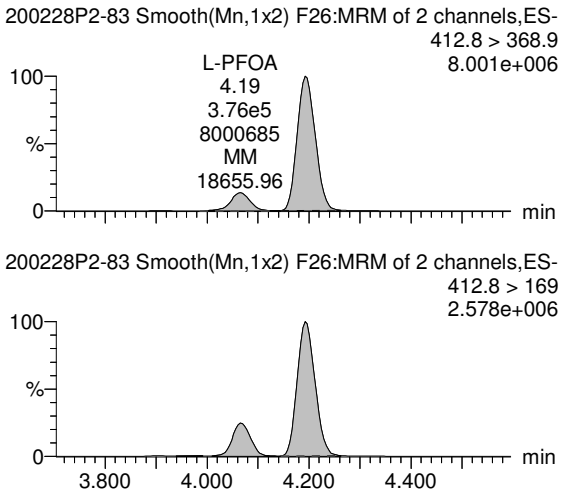
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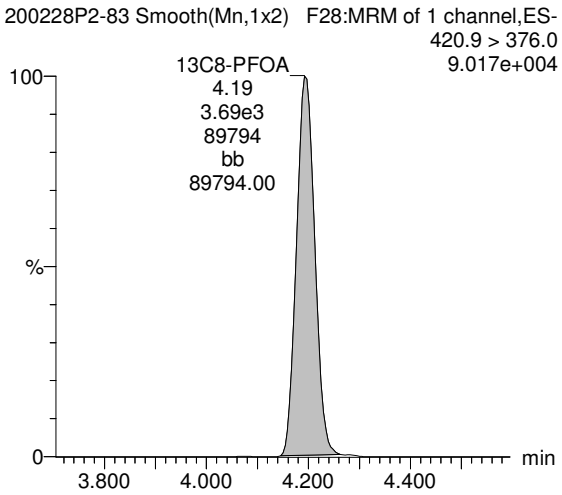
L-PFOA



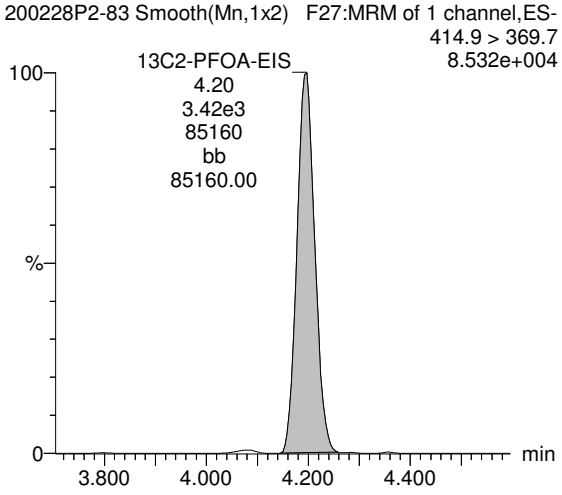
Total PFOA



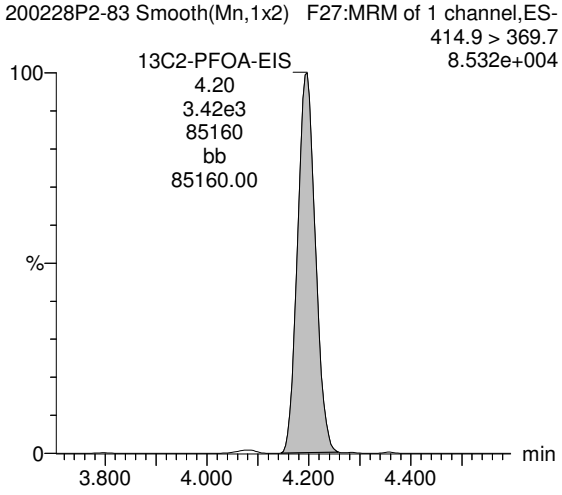
13C8-PFOA



13C2-PFOA-EIS



13C2-PFOA-EIS



INSTRUMENT BLANKS (IB)

AND

CONTINUTING CALIBRATION VERIFICATIONS (CCV)

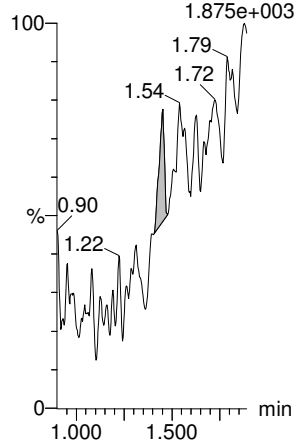
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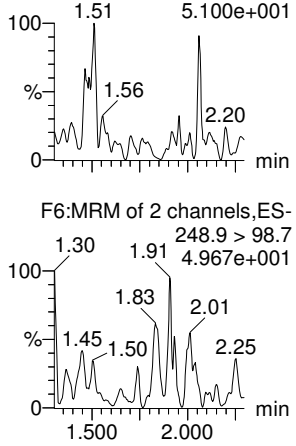
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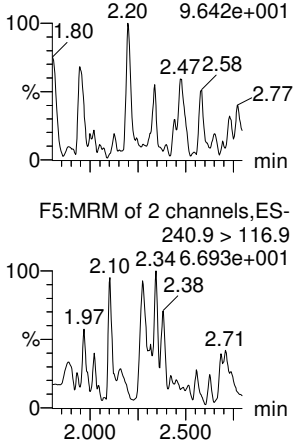
PFBA



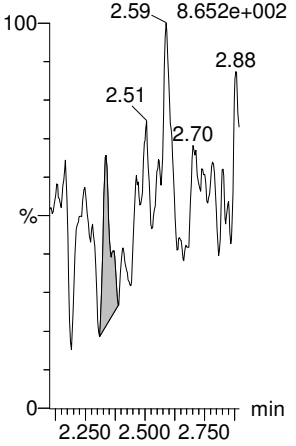
PFPrS



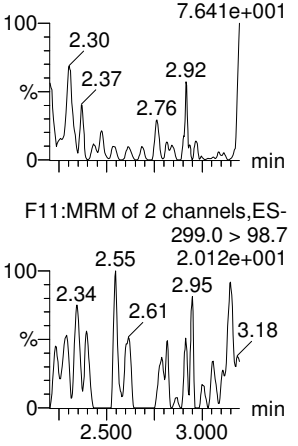
3:3 FTCA



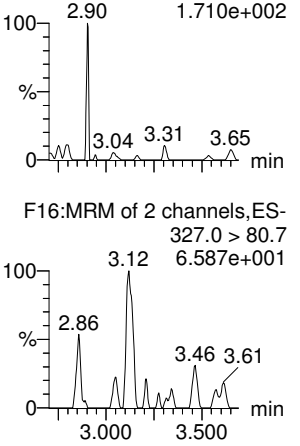
PFPeA



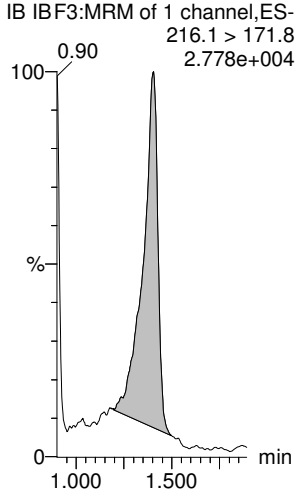
PFBS



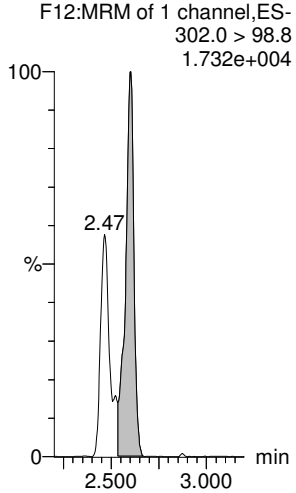
4:2 FTS



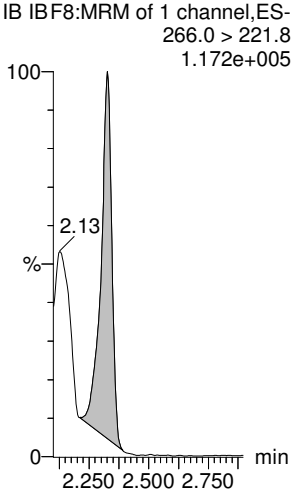
13C3-PFBA-EIS



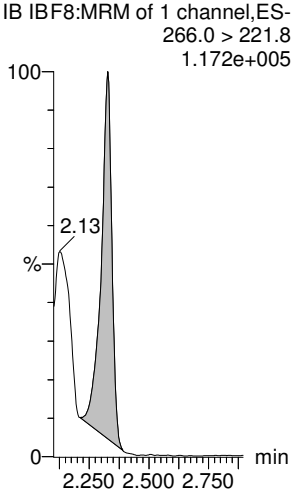
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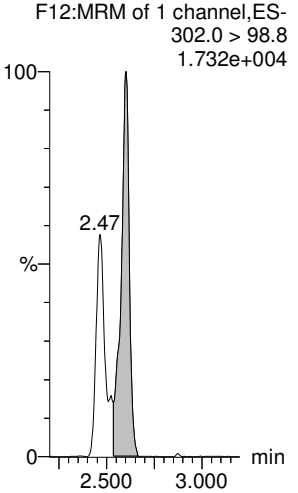
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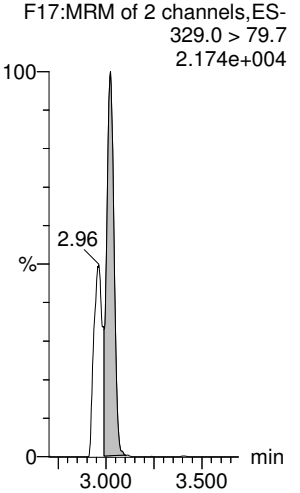
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

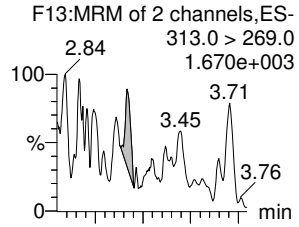


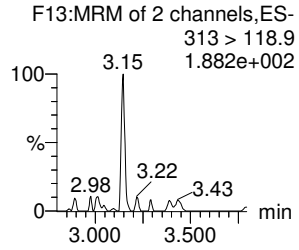
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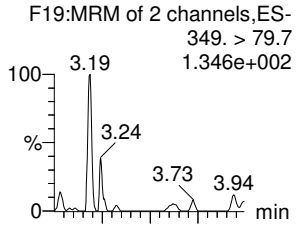
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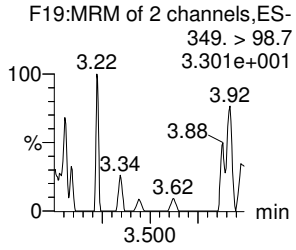
PFHxA



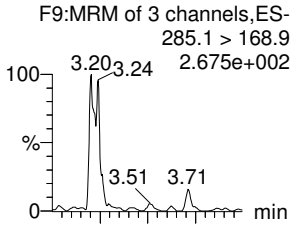


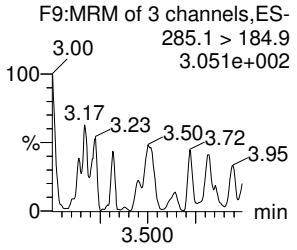
PFPeS



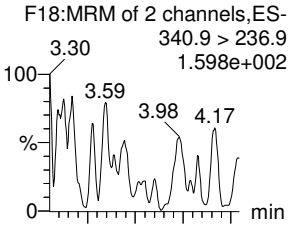


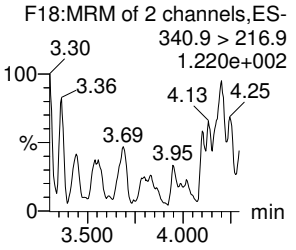
HFPO-DA



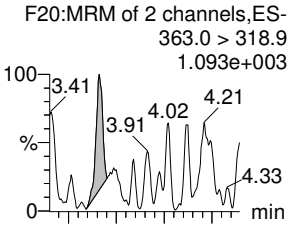


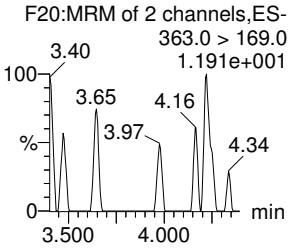
5:3 FTCA



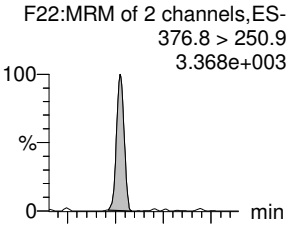


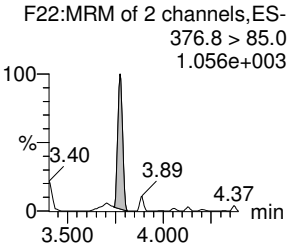
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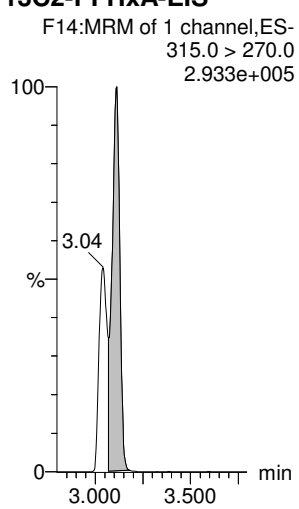


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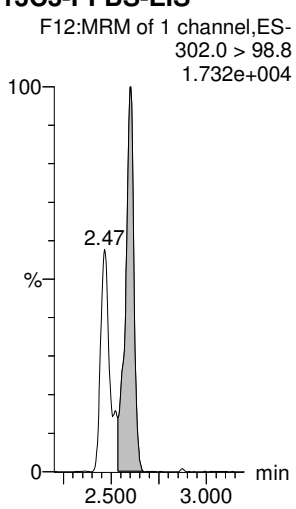




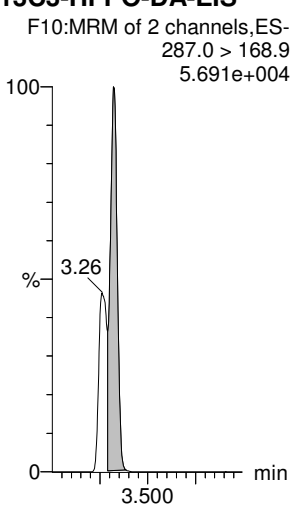
13C2-PFHxA-EIS



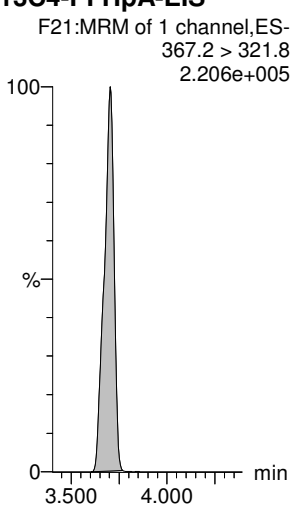
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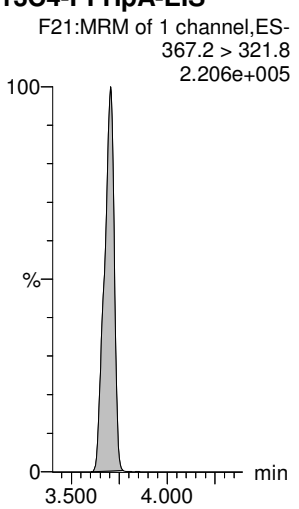
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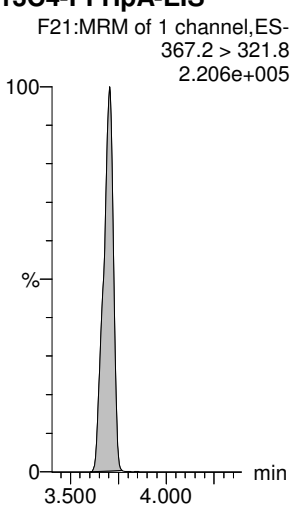
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

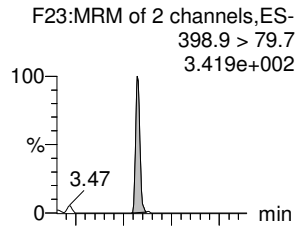


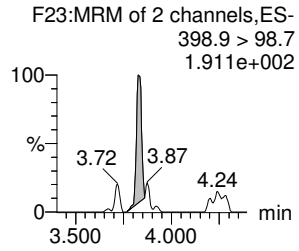
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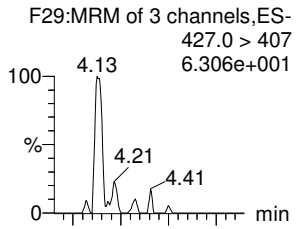
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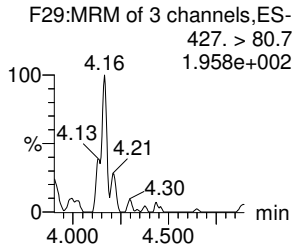
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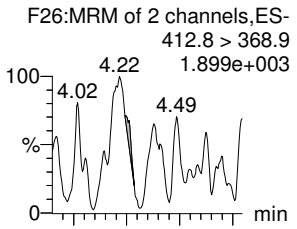


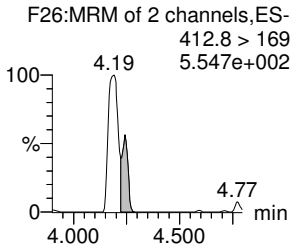
6:2 FTS



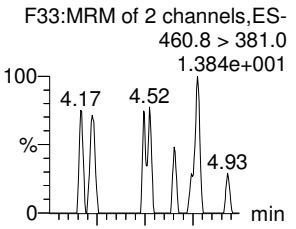


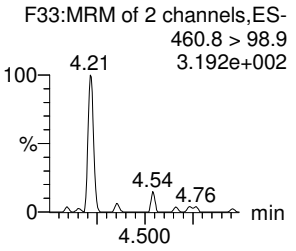
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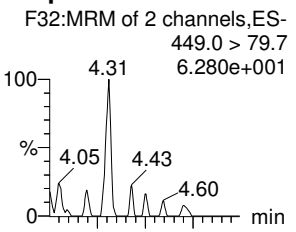


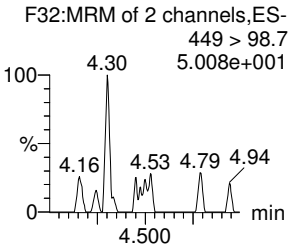
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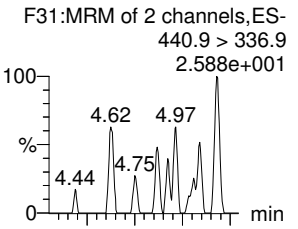


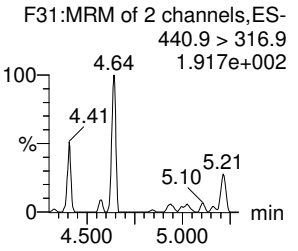
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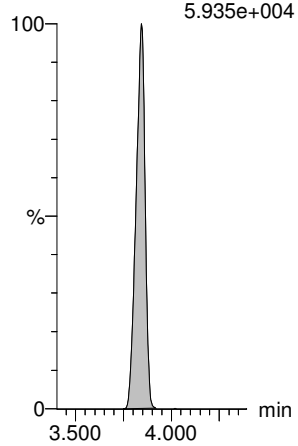


7:3 FTCA

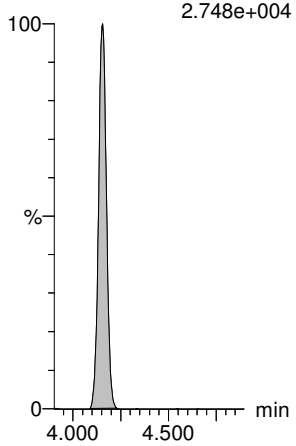




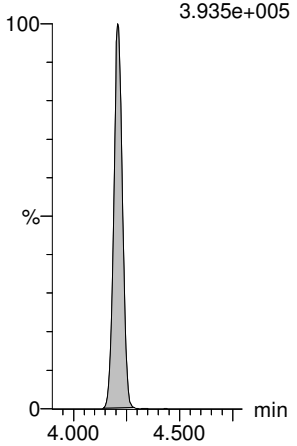
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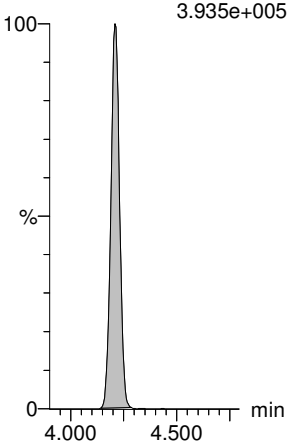
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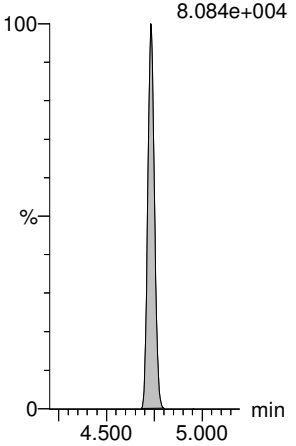
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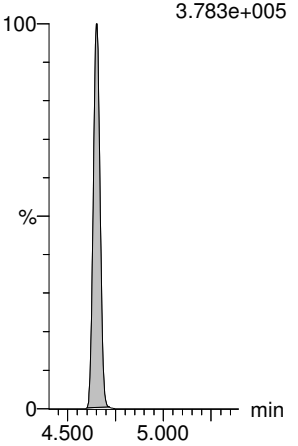
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13C8-PFOS-EIS



13C5-PFNA-EIS

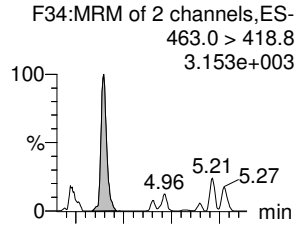


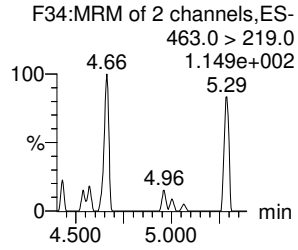
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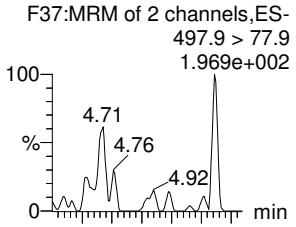
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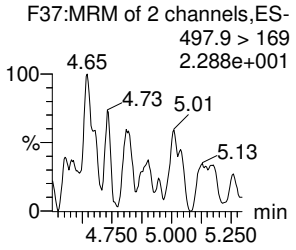
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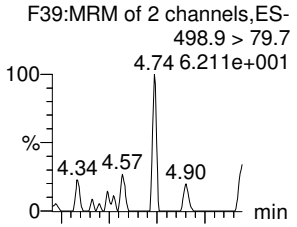


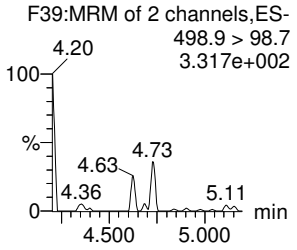
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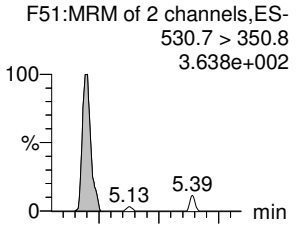


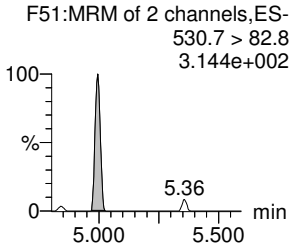
L-PFOS



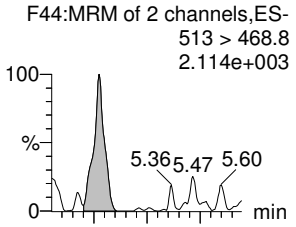


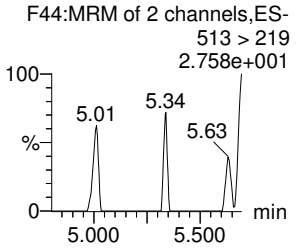
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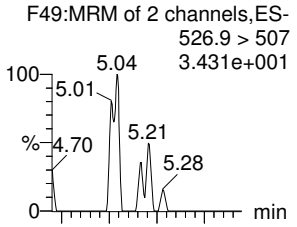


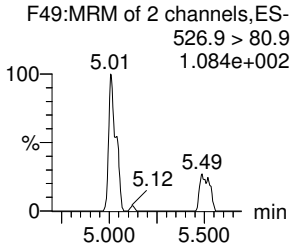
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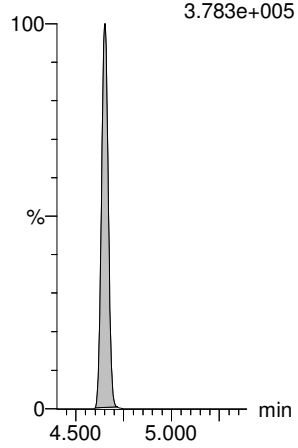


8:2 FTS

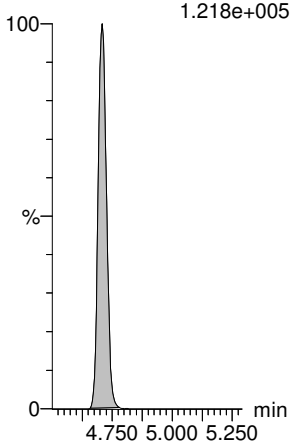




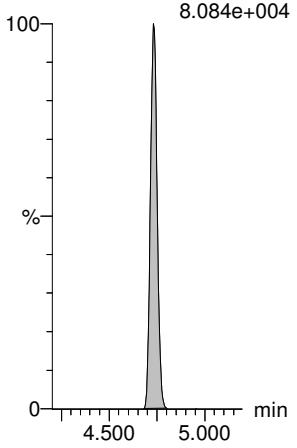
13C5-PFNA-EIS



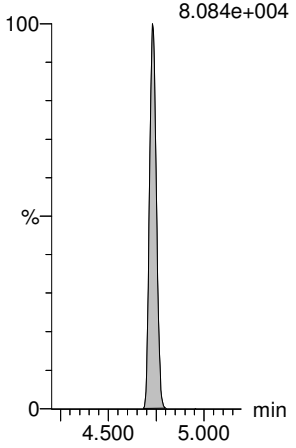
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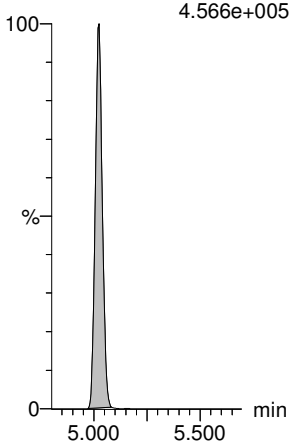
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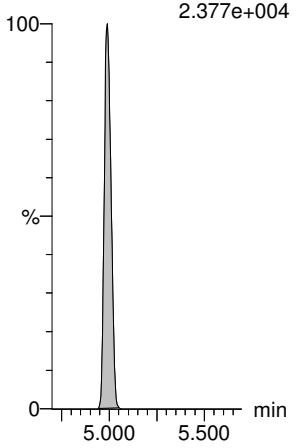
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

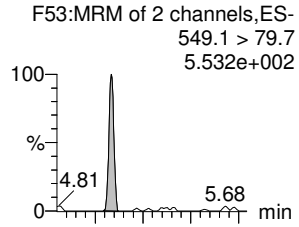


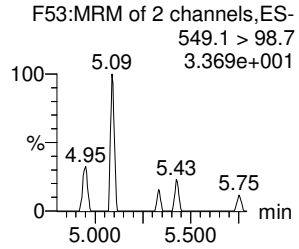
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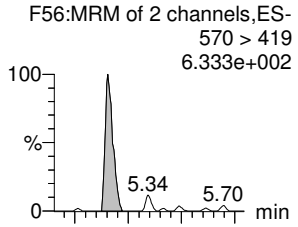
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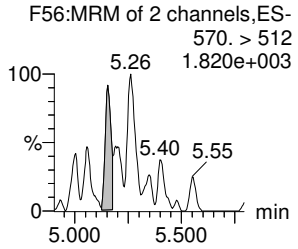
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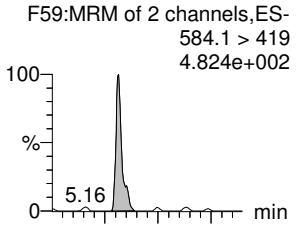


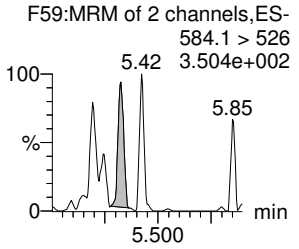
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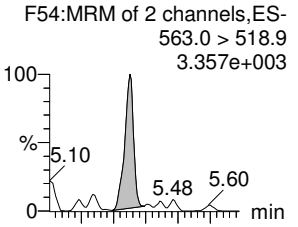


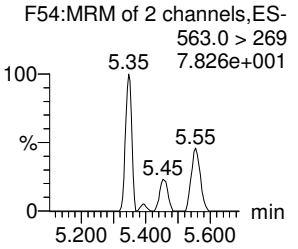
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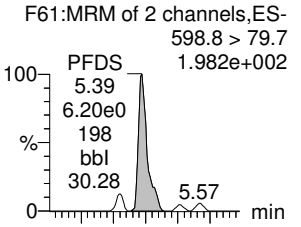


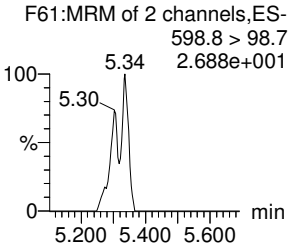
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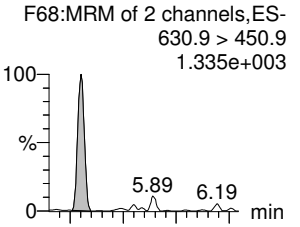


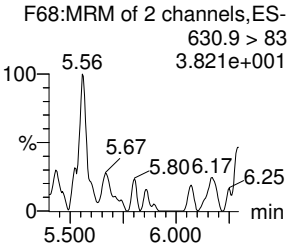
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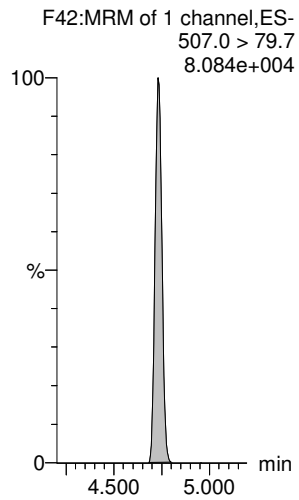


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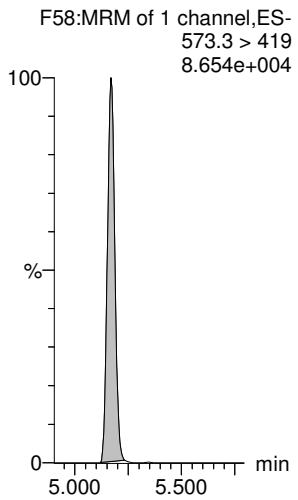




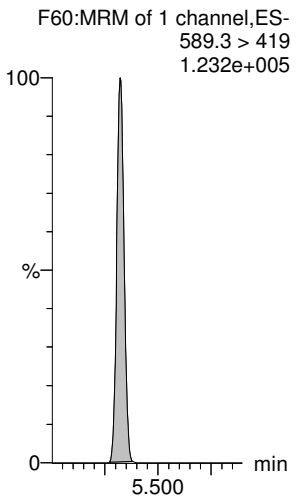
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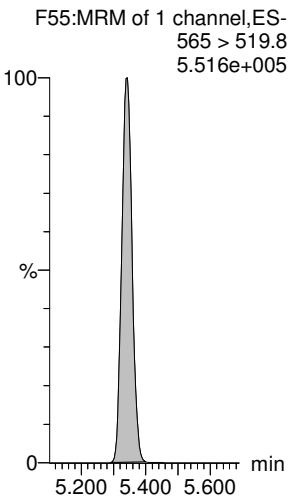
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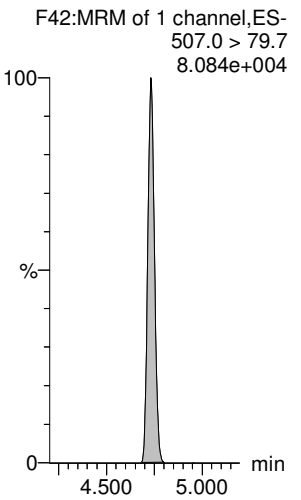
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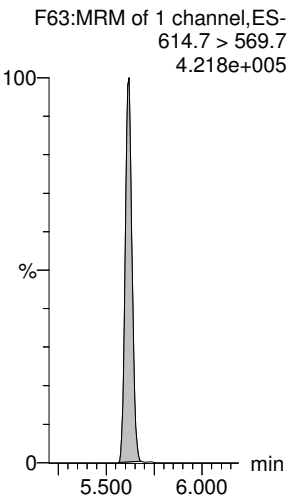
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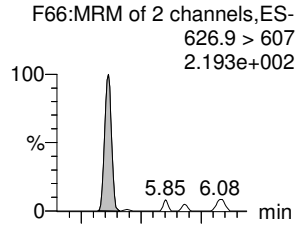


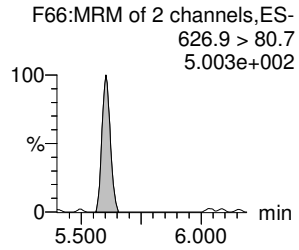
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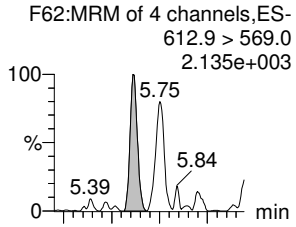
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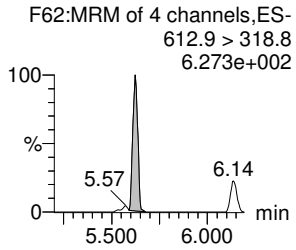
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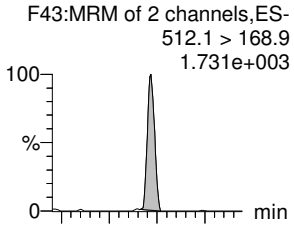


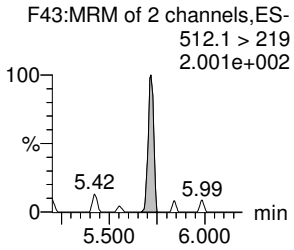
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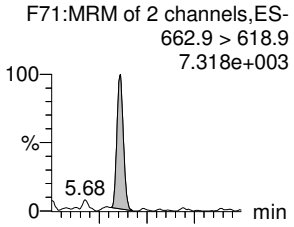


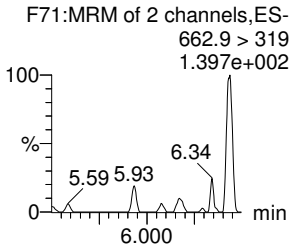
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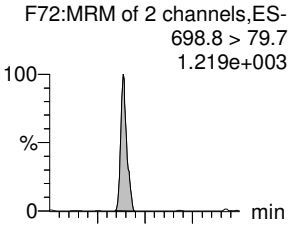


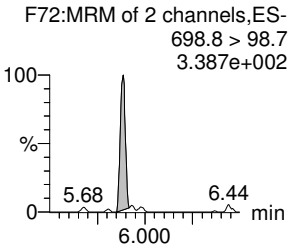
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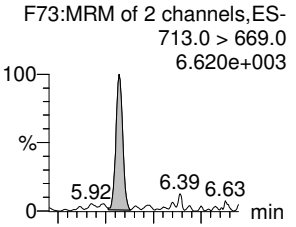


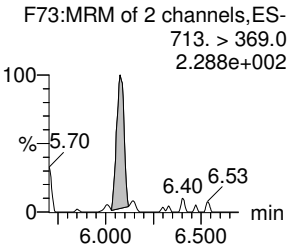
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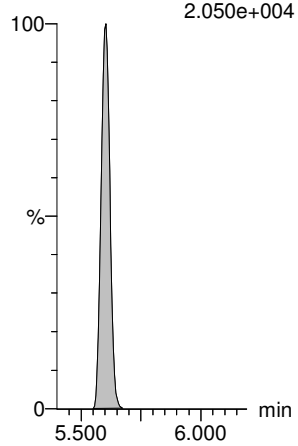


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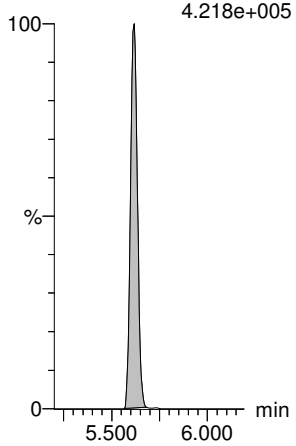




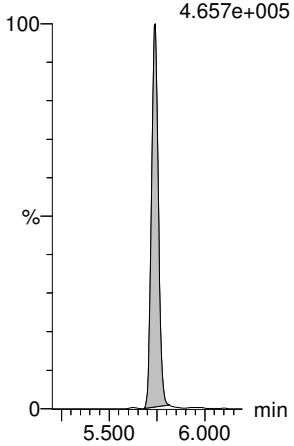
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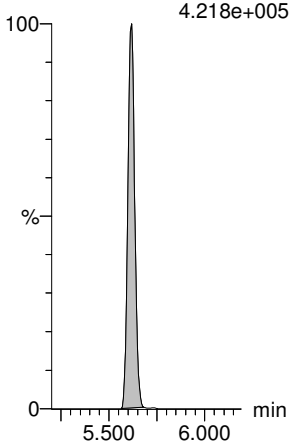
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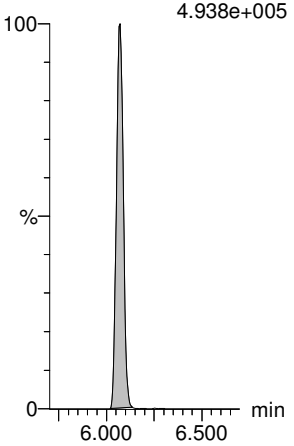
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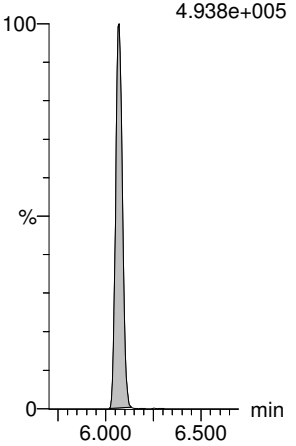
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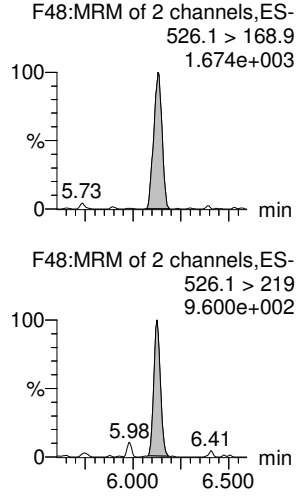


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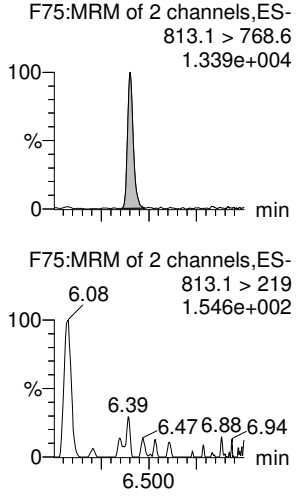
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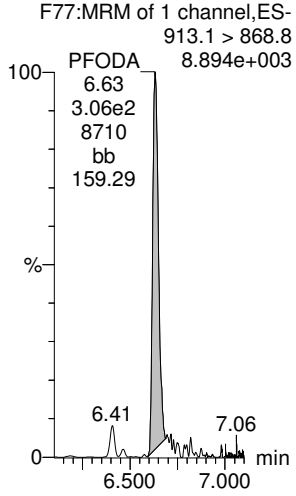
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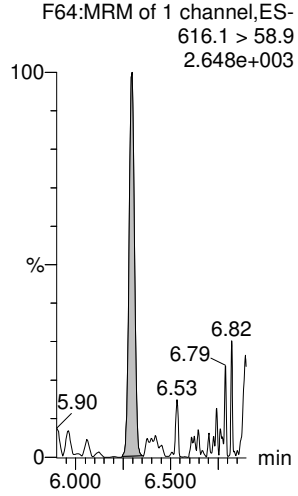
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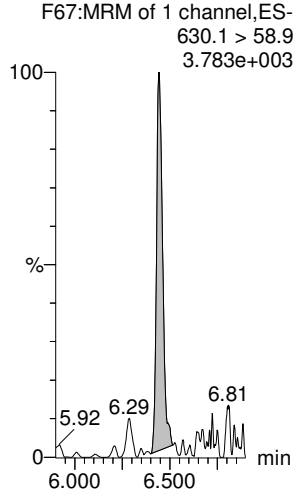
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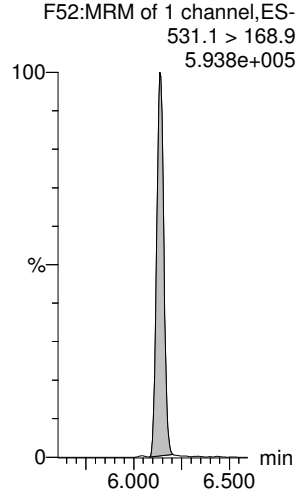
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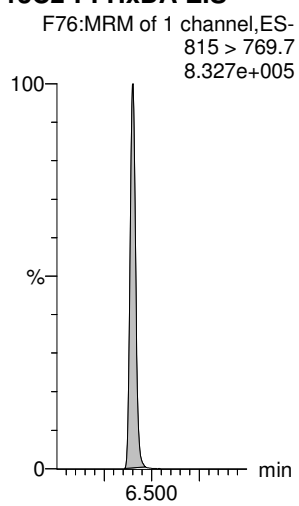
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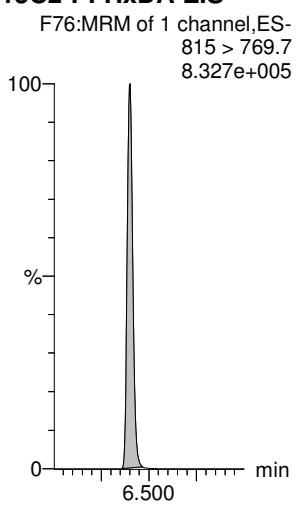
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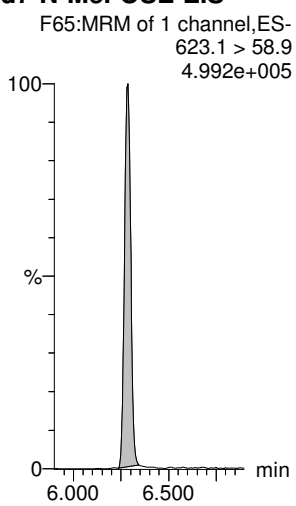
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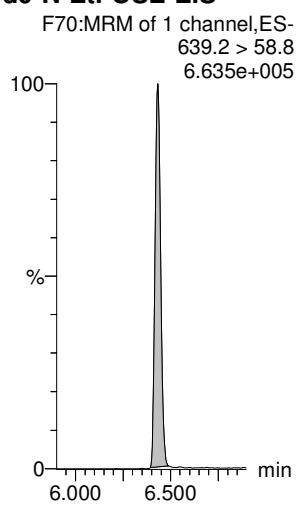
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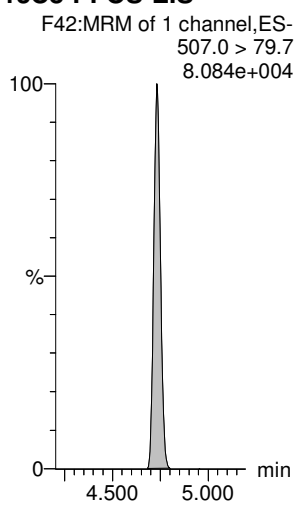
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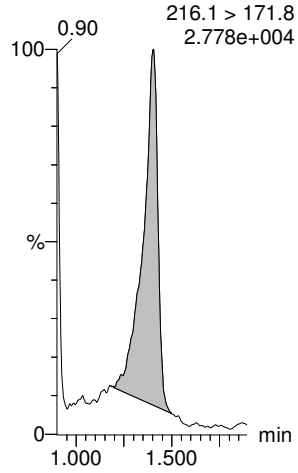


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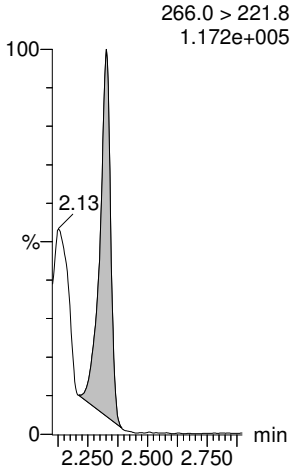
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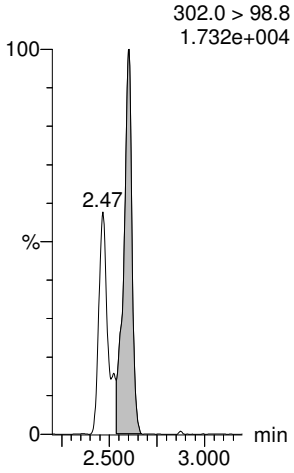
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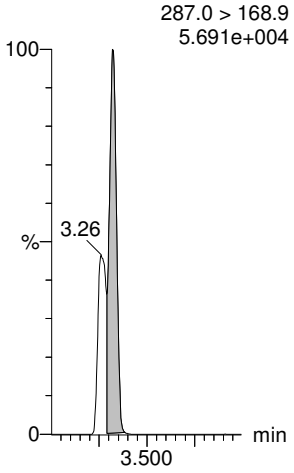
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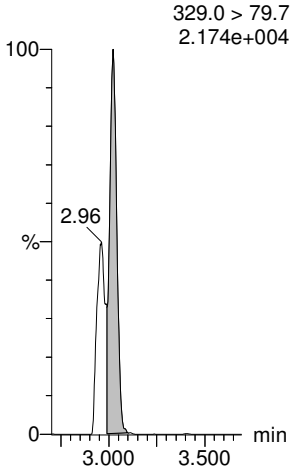
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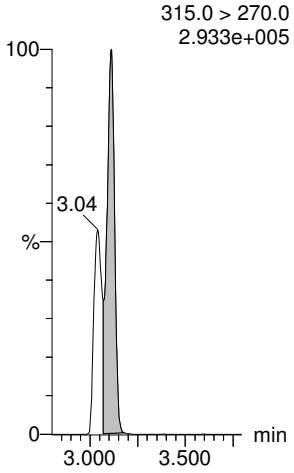
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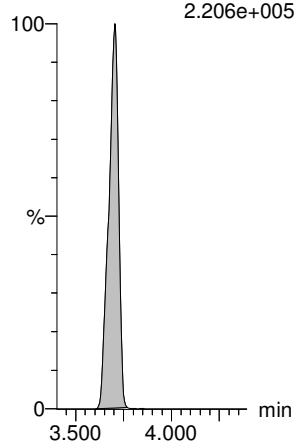
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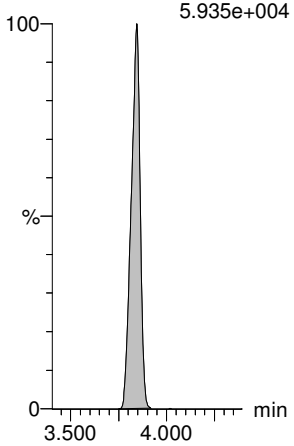
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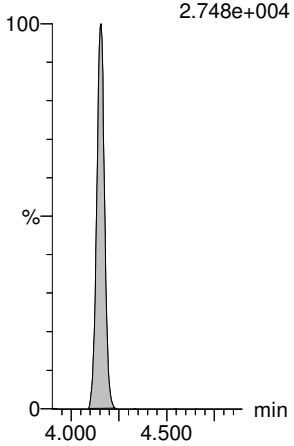
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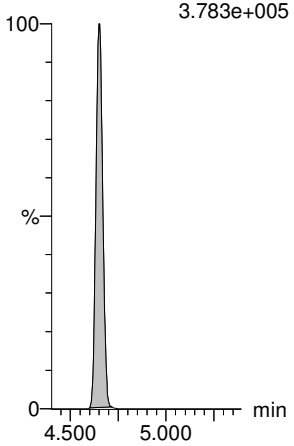
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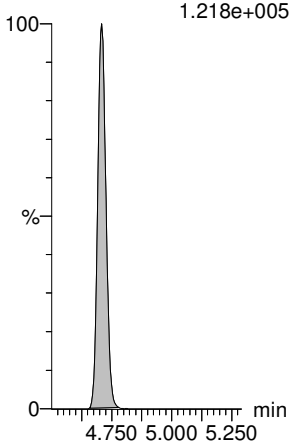
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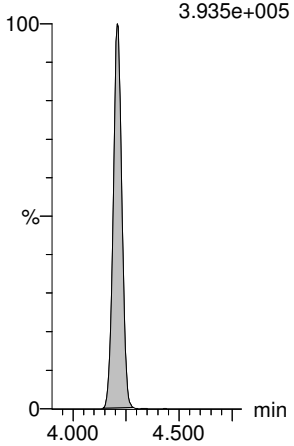
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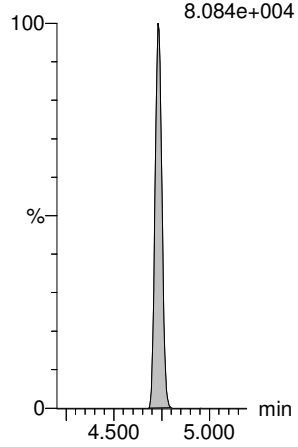


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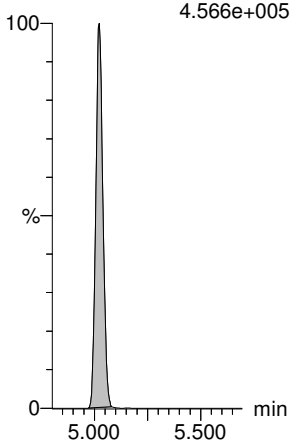
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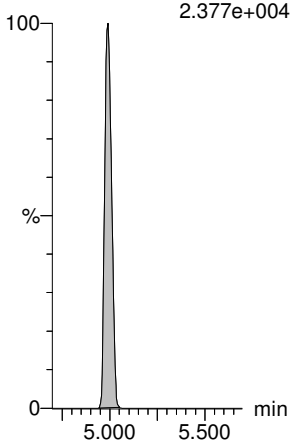
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.084e+004



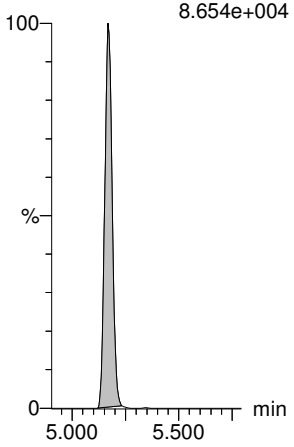
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.566e+005



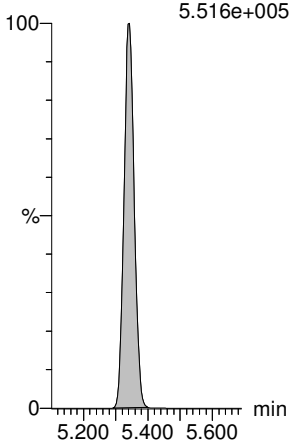
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.377e+004



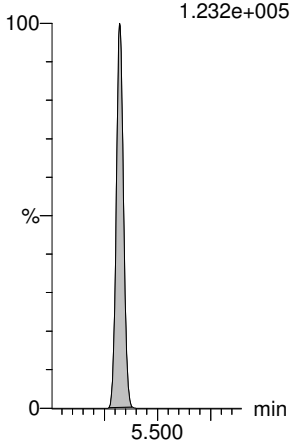
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.654e+004



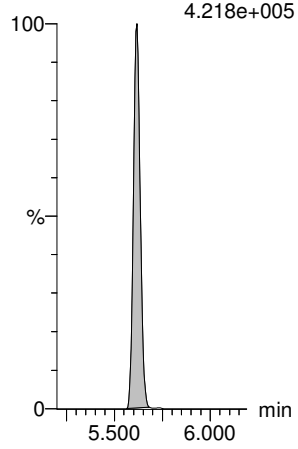
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.516e+005



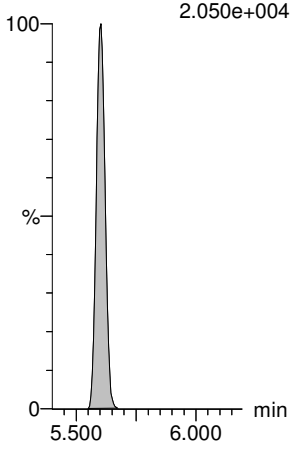
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.232e+005



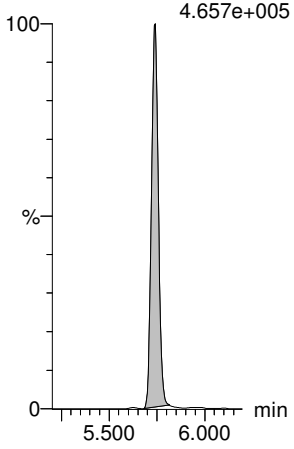
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.218e+005



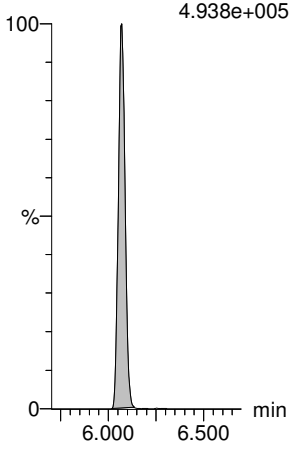
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.050e+004



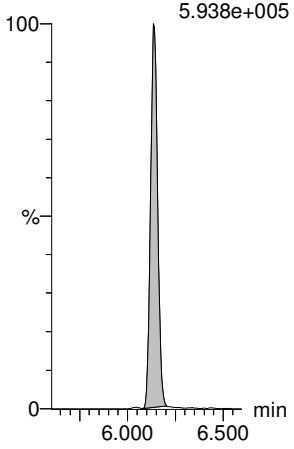
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.657e+005



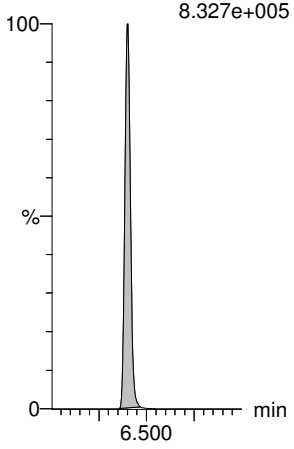
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.938e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.938e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.327e+005

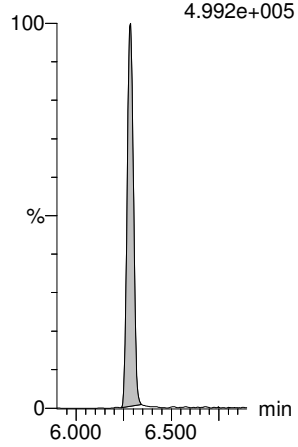


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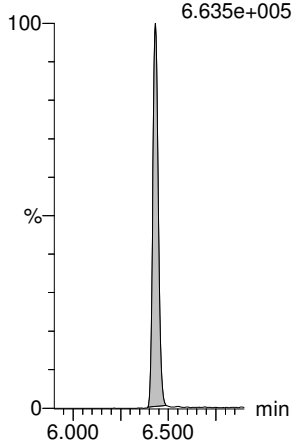
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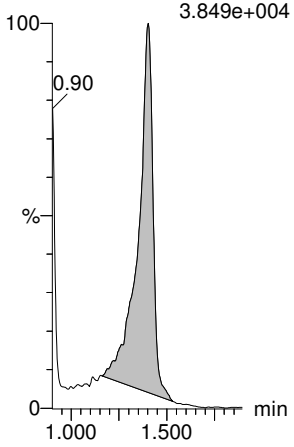
d7-N-MeFOSE-RSD



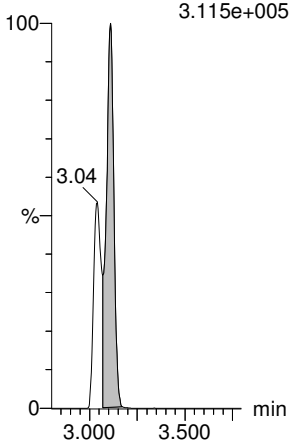
d9-N-EtFOSE-RSD



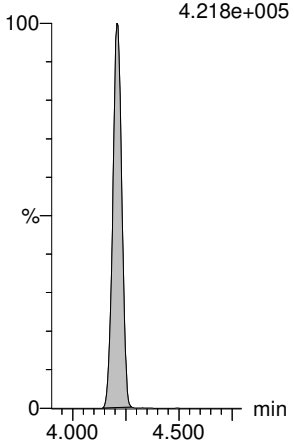
13C4-PFBA



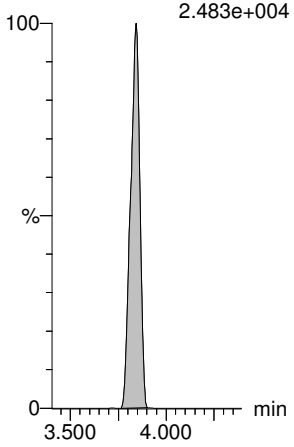
13C5-PFHxA



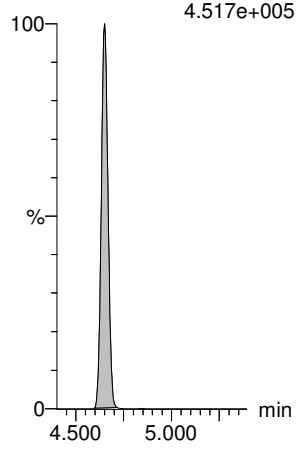
13C8-PFOA



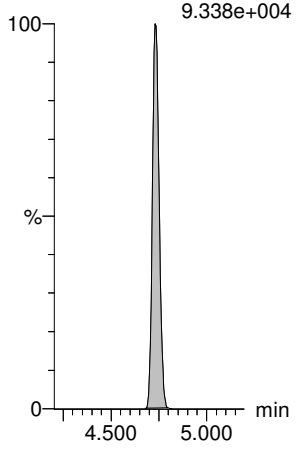
18O2-PFHxS



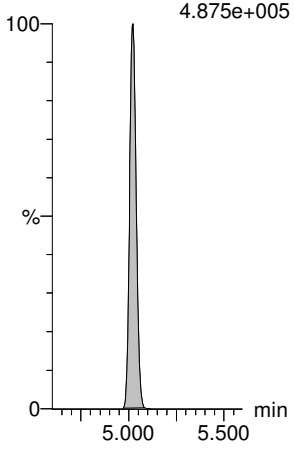
13C9-PFNA



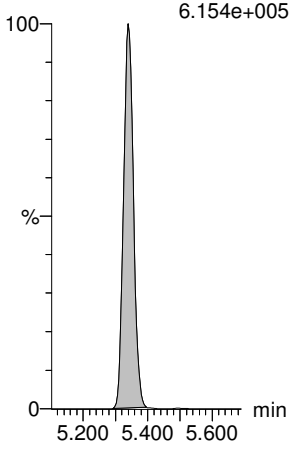
13C4-PFOS



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	17.345	2286.095	1.00	1.45	0.095		0.121		NO		
2	2	PFPrS	248.9 > 79.7		860.988	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		5796.285	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	13.667	5796.285	1.00	2.34	0.029				NO		
5	5	PFBS	299.0 > 79.7		860.988	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		941.953	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2286.095		1.00	1.40	2286.095	12.500	3.41	27.2	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	5796.285		1.00	2.33	5796.285	12.500	5.53	44.3	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	5796.285		1.00	2.33	5796.285	12.500	5.53	44.3	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	941.953		1.00	3.02	941.953	12.500	7.21	57.6	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	30.871	13532.109	1.00	3.17	0.029				NO		YES
15	8	PFPeS	349.>79.7		860.988	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9		2427.415	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		12934.563	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	36.457	12934.563	1.00	3.66	0.035				NO		YES
19	12	ADONA	376.8 > 250.9	152.260	12934.563	1.00	3.77	0.147		0.0180		NO	5.101	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	13532.109		1.00	3.11	13532.109	12.500	7.76	62.0	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2427.415		1.00	3.32	2427.415	12.500	7.40	59.2	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	8.673	3183.174	1.00	3.82	0.034		0.115		NO	1.625	NO
28	15	6:2 FTS	427.0 > 407		1292.694	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	8.364	18580.375	1.00	4.25	0.006				NO	0.840	YES
30	18	PFecHS	460.8 > 381.0		18580.375	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7		3277.543	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9		15172.096	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3183.174		1.00	3.84	3183.174	12.500	12.6	100.7	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1292.694		1.00	4.16	1292.694	12.500	11.7	93.7	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18580.375		1.00	4.21	18580.375	12.500	12.7	101.2	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18580.375		1.00	4.21	18580.375	12.500	12.7	101.2	NO		

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37	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	15172.096		1.00	4.65	15172.096	12.500	11.9	94.9	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	106.009	15172.096	1.00	4.65	0.087		0.0372		NO		YES
41	22	PFOSA	497.9 > 77.9		4830.583	1.00						NO		YES
42	23	L-PFOS	498.9 > 79.7		3277.543	1.00						NO		YES
43	25	9Cl-PF30NS	530.7 > 350.8	14.631	3277.543	1.00	4.95	0.056				NO	1.868	YES
44	26	PFDA	513 > 468.8	124.631	17507.664	1.00	5.02	0.089		0.0262		NO		YES
45	27	8:2 FTS	526.9 > 507		978.842	1.00						NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	15172.096		1.00	4.65	15172.096	12.500	11.9	94.9	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4830.583		1.00	4.71	4830.583	12.500	12.6	100.6	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17507.664		1.00	5.02	17507.664	12.500	12.0	95.8	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	978.842		1.00	4.99	978.842	12.500	10.3	82.7	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	16.454	3277.543	1.00	5.09	0.063				NO		YES
54	29	L-MeFOSAA	570 > 419	25.995	3466.039	1.00	5.15	0.094		0.0886		NO	0.511	YES
55	31	L-EtFOSAA	584.1 > 419	15.557	4789.026	1.00	5.31	0.041				NO	1.600	NO
56	33	PFUdA	563.0 > 518.9	102.787	20059.785	1.00	5.35	0.064				NO		YES
57	34	PFDS	598.8 > 79.7	6.203	3277.543	1.00	5.39	0.024				NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9	46.891	17273.014	1.00	5.55	0.034		0.0586		NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3466.039		1.00	5.17	3466.039	12.500	12.1	96.4	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4789.026		1.00	5.32	4789.026	12.500	13.5	107.7	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20059.785		1.00	5.34	20059.785	12.500	12.2	97.5	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	7.233	857.662	1.00	5.61	0.105		0.0212		NO	0.367	NO
67	37	PFDoA	612.9 > 569.0	91.874	17273.014	1.00	5.61	0.066		0.0180		NO	5.047	NO
68	38	N-MeFOSA	512.1 > 168.9	73.919	19370.490	1.00	5.72	0.569		0.295		NO	11.266	YES
69	39	PFTrDA	662.9 > 618.9	281.626	17273.014	1.00	5.86	0.204		0.0666		NO		YES
70	40	PFDoS	698.8 > 79.7	44.184	20111.619	1.00	5.89	0.027		0.00540		NO	4.287	NO
71	41	PFTeDA	713.0 > 669.0	268.223	20111.619	1.00	6.07	0.167		0.0448		NO	26.911	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	857.662		1.00	5.60	857.662	12.500	11.9	95.5	NO		

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73	83	13C2-PFDoA-EIS	614.7 > 569.7	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	19370.490		1.00	5.74	19370.490	149.200	145	96.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	20111.619		1.00	6.07	20111.619	12.500	12.0	96.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	20111.619		1.00	6.07	20111.619	12.500	12.0	96.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	82.263	25283.104	1.00	6.13	0.485		0.629		NO	2.216	NO
80	43	PFHxDA	813.1 > 768.6	452.754	27486.043	1.00	6.40	0.206		0.114		NO		YES
81	44	PFODA	913.1 > 868.8	305.747	27486.043	1.00	6.63	0.139		0.140		NO		
82	45	N-MeFOSE	616.1 > 58.9	85.350	18314.305	1.00	6.30	0.695		0.565		NO		
83	46	N-EtFOSE	630.1 > 58.9	137.752	21844.439	1.00	6.44	0.941		0.745		NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25283.104		1.00	6.14	25283.104	149.200	146	98.1	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	27486.043		1.00	6.40	27486.043	12.500	11.7	93.9	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	27486.043		1.00	6.40	27486.043	12.500	11.7	93.9	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	18314.305		1.00	6.28	18314.305	149.200	138	92.5	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	21844.439		1.00	6.43	21844.439	149.200	142	95.1	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2286.095	3284.042	1.00	1.40	8.702	12.500	11.4	91.6	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	5796.285	13974.849	1.00	2.33	5.185	12.500	9.06	72.5	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	860.988	1369.801	1.00	2.60	7.857	12.500	7.21	57.7	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2427.415	13974.849	1.00	3.32	2.171	12.500	11.7	93.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	941.953	1369.801	1.00	3.02	8.596	12.500	7.14	57.1	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	13532.109	13974.849	1.00	3.11	12.104	12.500	12.5	99.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	12934.563	13974.849	1.00	3.70	11.570	12.500	19.2	153.4	YES		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3183.174	1369.801	1.00	3.84	29.048	12.500	12.5	100.0	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1292.694	3743.210	1.00	4.16	4.317	12.500	11.2	89.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	15172.096	17839.887	1.00	4.65	10.631	12.500	11.4	91.2	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4830.583	21430.529	1.00	4.71	2.818	12.500	12.1	96.6	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18580.375	20545.320	1.00	4.21	11.305	12.500	12.6	100.7	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3277.543	3743.210	1.00	4.73	10.945	12.500	11.4	91.4	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17507.664	19231.645	1.00	5.02	11.379	12.500	12.1	96.6	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	978.842	3743.210	1.00	4.99	3.269	12.500	10.4	83.1	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3466.039	21430.529	1.00	5.17	2.022	12.500	11.5	91.7	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20059.785	21430.529	1.00	5.34	11.700	12.500	11.6	92.5	NO		

Dataset: Untitled

Last Altered: Tuesday, February 25, 2020 11:29:51 Pacific Standard Time
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Name: 200224P1-13, Date: 24-Feb-2020, Time: 19:17:04, 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	4789.026	21430.529	1.00	5.32	2.793	12.500	12.2	98.0	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	17273.014	19231.645	1.00	5.62	11.227	12.500	11.0	88.0	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	857.662	3743.210	1.00	5.60	2.864	12.500	11.7	93.7	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	19370.490	21430.529	1.00	5.74	11.298	149.200	129	86.2	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20111.619	21430.529	1.00	6.07	11.731	12.500	10.6	85.1	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25283.104	21430.529	1.00	6.14	14.747	149.200	136	90.9	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	27486.043	21430.529	1.00	6.40	16.032	12.500	10.5	83.7	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	18314.305	21430.529	1.00	6.28	10.682	149.200	126	84.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	21844.439	21430.529	1.00	6.43	12.741	149.200	128	85.5	NO		
119	99	13C4-PFBA	217.0 > 172.0	3284.042	3284.042	1.00	1.40	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	13974.849	13974.849	1.00	3.11	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20545.320	20545.320	1.00	4.21	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1369.801	1369.801	1.00	3.84	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17839.887	17839.887	1.00	4.65	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3743.210	3743.210	1.00	4.73	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19231.645	19231.645	1.00	5.02	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21430.529	21430.529	1.00	5.34	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:	~~ST200220R~~ ST200224 P1 -11	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-12	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-13	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-14	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-15	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-16	L M H	☑ Ⓐ RK 2/25/20	☑ Ⓐ	☑	☑	☑	☑	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 20200287

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: RK / 2/25/20
Initials/Date

Comments:

Ⓐ 0.2915 >130%.

Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-34.qld

Last Altered: Tuesday, February 25, 2020 14:31:19 Pacific Standard Time VJ 02/25/20
Printed: Tuesday, February 25, 2020 14:31:53 Pacific Standard Time

ST200224P1

Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, 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	8171.913	8818.802	1.00	1.40	11.583	10.000	9.99	99.9	NO		
2	2	PFPrS	248.9 > 79.7	2043.792	1572.286	1.00	1.73	16.249	10.000	9.74	97.4	NO	2.365	NO
3	3	3:3 FTCA	240.9 > 176.9	968.082	13919.684	1.00	2.19	0.869	10.000	9.35	93.5	NO	3.639	NO
4	4	PFPeA	263.1 > 218.9	10936.507	13919.684	1.00	2.33	9.821	10.000	9.83	98.3	NO		
5	5	PFBS	299.0 > 79.7	3120.664	1572.286	1.00	2.60	24.810	10.000	10.4	103.7	NO	3.632	NO
6	6	4:2 FTS	327.0 > 307	1847.504	1724.618	1.00	3.03	13.391	10.000	9.99	99.9	NO	0.963	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	8818.802		1.00	1.40	8818.802	12.500	13.1	105.1	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1572.286		1.00	2.60	1572.286	12.500	12.9	103.5	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	13919.684		1.00	2.33	13919.684	12.500	13.3	106.3	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	13919.684		1.00	2.33	13919.684	12.500	13.3	106.3	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1572.286		1.00	2.60	1572.286	12.500	12.9	103.5	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1724.618		1.00	3.03	1724.618	12.500	13.2	105.5	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	18249.186	23086.209	1.00	3.11	9.881	10.000	10.8	107.7	NO	16.778	NO
15	8	PFPeS	349.>79.7	2598.768	1572.286	1.00	3.31	20.661	10.000	9.78	97.8	NO	2.177	NO
16	9	HFPO-DA	285.1 > 168.9	3651.751	4064.840	1.00	3.33	11.230	10.000	10.6	106.4	NO	2.599	NO
17	10	5:3 FTCA	340.9 > 236.9	2436.344	14274.828	1.00	3.65	2.133	10.000	9.29	92.9	NO	1.789	NO
18	11	PFHpA	363.0 > 318.9	13976.438	14274.828	1.00	3.71	12.239	10.000	10.0	100.2	NO	21.274	NO
19	12	ADONA	376.8 > 250.9	34533.230	14274.828	1.00	3.81	30.240	10.000	9.77	97.7	NO	3.815	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	23086.209		1.00	3.11	23086.209	12.500	13.2	105.8	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1572.286		1.00	2.60	1572.286	12.500	12.9	103.5	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4064.840		1.00	3.33	4064.840	12.500	12.4	99.1	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14274.828		1.00	3.71	14274.828	12.500	13.4	107.4	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14274.828		1.00	3.71	14274.828	12.500	13.4	107.4	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14274.828		1.00	3.71	14274.828	12.500	13.4	107.4	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2847.616	3322.535	1.00	3.85	10.713	10.000	9.87	98.7	NO	2.201	NO
28	15	6:2 FTS	427.0 > 407	1945.861	1496.857	1.00	4.16	16.250	10.000	9.53	95.3	NO	1.194	NO
29	16	L-PFOA	412.8 > 368.9	19263.930	20339.049	1.00	4.22	11.839	10.000	10.1	100.6	NO	3.032	NO
30	18	PFecHS	460.8 > 381.0	3128.707	20339.049	1.00	4.23	1.923	10.000	10.7	107.4	NO	0.534	NO
31	19	PFHpS	449.0 > 79.7	2989.720	3404.723	1.00	4.33	10.976	10.000	11.5	114.9	NO	2.016	NO
32	20	7:3 FTCA	440.9 > 336.9	2482.157	17336.096	1.00	4.64	1.790	10.000	9.10	91.0	NO	1.502	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3322.535		1.00	3.85	3322.535	12.500	13.1	105.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1496.857		1.00	4.16	1496.857	12.500	13.6	108.5	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	20339.049		1.00	4.22	20339.049	12.500	13.8	110.8	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	20339.049		1.00	4.22	20339.049	12.500	13.8	110.8	NO		

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Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, 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	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	17336.096		1.00	4.66	17336.096	12.500	13.6	108.5	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	18656.617	17336.096	1.00	4.66	13.452	10.000	10.5	104.9	NO	7.137	NO
41	22	PFOSA	497.9 > 77.9	3269.382	4482.810	1.00	4.71	9.116	10.000	11.1	111.3	NO	26.654	NO
42	23	L-PFOS	498.9 > 79.7	3137.564	3404.723	1.00	4.74	11.519	10.000	11.5	115.2	NO	2.360	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3794.835	3404.723	1.00	4.95	13.932	10.000	12.6	125.6	NO	21.876	NO
44	26	PFDA	513 > 468.8	19259.139	19146.486	1.00	5.03	12.574	10.000	10.1	101.1	NO	9.365	NO
45	27	8:2 FTS	526.9 > 507	1396.613	1230.919	1.00	5.00	14.183	10.000	9.57	95.7	NO	2.158	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	17336.096		1.00	4.66	17336.096	12.500	13.6	108.5	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4482.810		1.00	4.71	4482.810	12.500	11.7	93.3	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	19146.486		1.00	5.03	19146.486	12.500	13.1	104.8	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1230.919		1.00	4.99	1230.919	12.500	13.0	104.0	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2856.940	3404.723	1.00	5.09	10.489	10.000	11.6	116.4	NO	2.159	NO
54	29	L-MeFOSAA	570 > 419	5727.284	3545.936	1.00	5.18	20.190	10.000	9.98	99.8	NO	1.938	NO
55	31	L-EtFOSAA	584.1 > 419	5574.299	4664.559	1.00	5.33	14.938	10.000	11.8	118.2	NO	1.217	NO
56	33	PFUdA	563.0 > 518.9	17237.814	20265.197	1.00	5.34	10.633	10.000	10.7	107.1	NO	20.851	NO
57	34	PFDS	598.8 > 79.7	2620.264	3404.723	1.00	5.39	9.620	10.000	11.0	109.7	NO	2.099	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	8066.058	19790.924	1.00	5.55	5.095	10.000	9.70	97.0	NO	20.507	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3545.936		1.00	5.17	3545.936	12.500	12.3	98.7	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4664.559		1.00	5.33	4664.559	12.500	13.1	104.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20265.197		1.00	5.34	20265.197	12.500	12.3	98.5	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19790.924		1.00	5.62	19790.924	12.500	13.7	109.7	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1523.578	845.653	1.00	5.61	22.521	10.000	10.5	104.6	NO	0.947	NO
67	37	PFDoA	612.9 > 569.0	17819.639	19790.924	1.00	5.62	11.255	10.000	9.92	99.2	NO	9.400	NO
68	38	N-MeFOSA	512.1 > 168.9	7483.844	20432.809	1.00	5.71	54.647	50.000	52.7	105.4	NO	1.675	NO
69	39	PFTrDA	662.9 > 618.9	19278.125	19790.924	1.00	5.86	12.176	10.000	10.3	102.8	NO	60.314	NO
70	40	PFDoS	698.8 > 79.7	3174.610	20977.719	1.00	5.88	1.892	10.000	11.0	110.0	NO	3.299	NO
71	41	PFTeDA	713.0 > 669.0	18768.869	20977.719	1.00	6.07	11.184	10.000	10.8	108.4	NO	17.314	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	845.653		1.00	5.60	845.653	12.500	11.8	94.2	NO		

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Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, 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	19790.924		1.00	5.62	19790.924	12.500	13.7	109.7	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	20432.809		1.00	5.74	20432.809	149.200	152	102.2	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19790.924		1.00	5.62	19790.924	12.500	13.7	109.7	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	20977.719		1.00	6.07	20977.719	12.500	12.5	100.4	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	20977.719		1.00	6.07	20977.719	12.500	12.5	100.4	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	9000.920	26441.531	1.00	6.13	50.789	50.000	51.8	103.7	NO	1.736	NO
80	43	PFHxDA	813.1 > 768.6	19585.217	31367.500	1.00	6.40	7.805	10.000	10.6	105.7	NO	112.526	NO
81	44	PFODA	913.1 > 868.8	23471.656	31367.500	1.00	6.63	9.353	10.000	11.3	112.6	NO		
82	45	N-MeFOSE	616.1 > 58.9	6872.543	19132.545	1.00	6.29	53.594	50.000	51.3	102.7	NO		
83	46	N-EtFOSE	630.1 > 58.9	7881.873	23816.928	1.00	6.44	49.376	50.000	50.9	101.8	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	26441.531		1.00	6.14	26441.531	149.200	153	102.6	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	31367.500		1.00	6.40	31367.500	12.500	13.4	107.2	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	31367.500		1.00	6.40	31367.500	12.500	13.4	107.2	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	19132.545		1.00	6.29	19132.545	149.200	144	96.6	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	23816.928		1.00	6.43	23816.928	149.200	155	103.7	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3404.723		1.00	4.74	3404.723	12.500	11.9	95.1	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	8785.485	10815.622	1.00	1.40	10.154	12.500	13.1	104.7	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	13919.684	22903.256	1.00	2.33	7.597	12.500	13.3	106.2	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1572.286	1363.899	1.00	2.60	14.410	12.500	13.2	105.7	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4064.840	22903.256	1.00	3.33	2.218	12.500	11.9	95.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1724.618	1363.899	1.00	3.03	15.806	12.500	13.1	105.0	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	23086.209	22903.256	1.00	3.11	12.600	12.500	13.0	103.7	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	14274.828	22903.256	1.00	3.71	7.791	12.500	12.9	103.3	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3322.535	1363.899	1.00	3.85	30.451	12.500	13.1	104.8	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1496.857	4092.919	1.00	4.16	4.571	12.500	11.9	95.1	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	17336.096	18643.834	1.00	4.66	11.623	12.500	12.5	99.7	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4482.810	21886.436	1.00	4.71	2.560	12.500	11.0	87.8	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	20339.049	23016.061	1.00	4.22	11.046	12.500	12.3	98.4	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3404.723	4092.919	1.00	4.74	10.398	12.500	10.9	86.8	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	19146.486	20484.311	1.00	5.03	11.684	12.500	12.4	99.2	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1230.919	4092.919	1.00	4.99	3.759	12.500	11.9	95.6	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3545.936	21886.436	1.00	5.17	2.025	12.500	11.5	91.9	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20265.197	21886.436	1.00	5.34	11.574	12.500	11.4	91.5	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-34.qld

Last Altered: Tuesday, February 25, 2020 14:31:19 Pacific Standard Time
Printed: Tuesday, February 25, 2020 14:31:53 Pacific Standard Time

Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, 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	4664.559	21886.436	1.00	5.33	2.664	12.500	11.7	93.4	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19790.924	20484.311	1.00	5.62	12.077	12.500	11.8	94.7	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	845.653	4092.919	1.00	5.60	2.583	12.500	10.6	84.5	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	20432.809	21886.436	1.00	5.74	11.670	149.200	133	89.0	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20977.719	21886.436	1.00	6.07	11.981	12.500	10.9	86.9	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	26441.531	21886.436	1.00	6.14	15.102	149.200	139	93.1	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	31367.500	21886.436	1.00	6.40	17.915	12.500	11.7	93.5	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19132.545	21886.436	1.00	6.29	10.927	149.200	129	86.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	23816.928	21886.436	1.00	6.43	13.603	149.200	136	91.3	NO		
119	99	13C4-PFBA	217.0 > 172.0	10815.622	10815.622	1.00	1.40	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	22903.256	22903.256	1.00	3.11	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	23016.061	23016.061	1.00	4.22	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1363.899	1363.899	1.00	3.85	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	18643.834	18643.834	1.00	4.66	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4092.919	4092.919	1.00	4.74	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	20484.311	20484.311	1.00	5.03	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21886.436	21886.436	1.00	5.34	12.500	12.500	12.5	100.0	NO		

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: 25 Feb 2020 15:44:07

Compound name: PFBA

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1	1 200224P1-1	IPA	24-Feb-20	17:10:52
2	2 200224P1-2	IPA	24-Feb-20	17:21:28
3	3 200224P1-3	ST200224P1-1 PFC CS-2 20B1102	24-Feb-20	17:32:01
4	4 200224P1-4	ST200224P1-2 PFC CS-1 20B1103	24-Feb-20	17:42:30
5	5 200224P1-5	ST200224P1-3 PFC CS0 20B1104	24-Feb-20	17:53:02
6	6 200224P1-6	ST200224P1-4 PFC CS1 20B1105	24-Feb-20	18:03:31
7	7 200224P1-7	ST200224P1-5 PFC CS2 20B1106	24-Feb-20	18:14:02
8	8 200224P1-8	ST200224P1-6 PFC CS3 20B1107	24-Feb-20	18:24:31
9	9 200224P1-9	ST200224P1-7 PFC CS4 20B1108	24-Feb-20	18:35:02
10	10 200224P1-10	ST200224P1-8 PFC CS5 20B1109	24-Feb-20	18:45:33
11	11 200224P1-11	ST200224P1-9 PFC CS6 20B1110	24-Feb-20	18:56:04
12	12 200224P1-12	ST200224P1-10 PFC CS7 20B1111	24-Feb-20	19:06:33
13	13 200224P1-13	IB	24-Feb-20	19:17:04
14	14 200224P1-14	ICV200224P1-1 PFC ICV 20B1112	24-Feb-20	19:27:32
15	15 200224P1-15	IB	24-Feb-20	19:38:05
16	16 200224P1-16	B0B0168-BS2 OPR 2	24-Feb-20	19:48:34
17	17 200224P1-17	B0B0115-BLK1 Method Blank 0.01	24-Feb-20	19:59:05
18	18 200224P1-18	B0B0115-BS1 OPR 0.01	24-Feb-20	20:09:34
19	19 200224P1-19	B0B0115-BSD1 LCSD 0.01	24-Feb-20	20:20:06
20	20 200224P1-20	2000302-14 RB6 Bisson's NP 2-11 0.01	24-Feb-20	20:30:35
21	21 200224P1-21	2000302-15 RB7 Bisson's NP 2-18 0.01	24-Feb-20	20:41:04
22	22 200224P1-22	2000302-16 RB8 Bisson's P 2-21 0.01	24-Feb-20	20:51:37
23	23 200224P1-23	2000302-17 RB9 WNF BT 2-11 0.01	24-Feb-20	21:02:06
24	24 200224P1-24	2000302-18 JB1 HF 2-12 0.01	24-Feb-20	21:12:37
25	25 200224P1-25	2000302-19 JB2 HF 2-19 0.01	24-Feb-20	21:23:07
26	26 200224P1-26	B0B0110-BLK1 Method Blank 0.25	24-Feb-20	21:33:38
27	27 200224P1-27	B0B0110-BS1 OPR 0.25	24-Feb-20	21:44:08
28	28 200224P1-28	B0B0110-MS1 Matrix Spike 0.25355	24-Feb-20	21:54:39
29	29 200224P1-29	B0B0110-MSD1 Matrix Spike Dup 0.25492	24-Feb-20	22:05:08
30	30 200224P1-30	2000303-01 RW-3 0.24925	24-Feb-20	22:15:39
31	31 200224P1-31	2000303-02 RW-4 0.25385	24-Feb-20	22:26:10
32	32 200224P1-32	2000303-03 RW-5 0.24988	24-Feb-20	22:36:38

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Compound name: PFBA

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33	33 200224P1-33	IB	24-Feb-20	22:47:08
34	34 200224P1-34	ST200224P1-11 PFC CS3 20B1107	24-Feb-20	22:57:40
35	35 200224P1-35	IB	24-Feb-20	23:08:09
36	36 200224P1-36	2000303-04 RW-6 0.25734	24-Feb-20	23:18:39
37	37 200224P1-37	2000303-05 RW-7 0.25767	24-Feb-20	23:29:11
38	38 200224P1-38	2000303-06 RW-8 0.25242	24-Feb-20	23:39:42
39	39 200224P1-39	2000303-07 RW-3 DUP 0.26025	24-Feb-20	23:50:12
40	40 200224P1-40	2000303-08 FRB-4 0.2607	25-Feb-20	00:00:40
41	41 200224P1-41	B0B0137-BLK1 Method Blank 0.25	25-Feb-20	00:11:13
42	42 200224P1-42	B0B0137-BS1 OPR 0.25	25-Feb-20	00:21:42
43	43 200224P1-43	B0B0137-MS1 Matrix Spike 0.24799	25-Feb-20	00:32:13
44	44 200224P1-44	B0B0137-MSD1 Matrix Spike Dup 0.24718	25-Feb-20	00:42:44
45	45 200224P1-45	2000330-01 EB03-20200214 0.25119	25-Feb-20	00:53:12
46	46 200224P1-46	2000330-02 I003MW05S-20200214 0.25637	25-Feb-20	01:03:42
47	47 200224P1-47	2000330-03 I003MW12S-20200214 0.25031	25-Feb-20	01:14:14
48	48 200224P1-48	2000330-04 DUP04-20200214 0.25435	25-Feb-20	01:24:44
49	49 200224P1-49	2000330-05 I003MW14S-20200214 0.25171	25-Feb-20	01:35:15
50	50 200224P1-50	IB	25-Feb-20	01:45:44
51	51 200224P1-51	ST200220P1-12 PFC CS3 20B1107	25-Feb-20	01:56:16
52	52 200224P1-52	IB	25-Feb-20	02:06:44
53	53 200224P1-53	B0B0178-BLK1 Method Blank 0.25	25-Feb-20	02:17:16
54	54 200224P1-54	B0B0178-BS1 OPR 0.25	25-Feb-20	02:27:47
55	55 200224P1-55	B0B0178-MS1 Matrix Spike 0.24454	25-Feb-20	02:38:15
56	56 200224P1-56	B0B0178-MSD1 Matrix Spike Dup 0.24557	25-Feb-20	02:48:46
57	57 200224P1-57	2000334-01 FD01_021120 0.25195	25-Feb-20	02:59:17
58	58 200224P1-58	2000334-02 06302840007300_021120 0.24168	25-Feb-20	03:09:46
59	59 200224P1-59	2000334-03 06302840007260_021120 0.24476	25-Feb-20	03:20:17
60	60 200224P1-60	2000334-04 064A3000000100_021120 0.24299	25-Feb-20	03:30:49
61	61 200224P1-61	2000334-05 064A3500006600_021120 0.24128	25-Feb-20	03:41:17
62	62 200224P1-62	2000334-06 06302730000100_021120 0.24477	25-Feb-20	03:51:49
63	63 200224P1-63	2000334-07 06302840006600_021120 0.24554	25-Feb-20	04:02:19
64	64 200224P1-64	2000334-08 06302840007350_021120 0.25412	25-Feb-20	04:12:48
65	65 200224P1-65	2000334-09 TPARK-WELL1_021220 0.24837	25-Feb-20	04:23:20
66	66 200224P1-66	2000334-10 TPARK-WELL2_021220 0.24783	25-Feb-20	04:33:49
67	67 200224P1-67	IB	25-Feb-20	04:44:20
68	68 200224P1-68	ST200224P1-13 PFC CS3 20B1107	25-Feb-20	04:54:51

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Compound name: PFBA

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70	70	200224P1-70	B0B0165-BLK1 Method Blank 0.25	25-Feb-20	05:15:52
71	71	200224P1-71	B0B0165-BS1 OPR 0.25	25-Feb-20	05:26:21
72	72	200224P1-72	B0B0165-MS1 Matrix Spike 0.2523	25-Feb-20	05:36:52
73	73	200224P1-73	B0B0165-MSD1 Matrix Spike Dup 0.25324	25-Feb-20	05:47:21
74	74	200224P1-74	2000343-01 GW2002111305MK 0.251	25-Feb-20	05:57:52
75	75	200224P1-75	2000343-02 GW2002111305GSC 0.24856	25-Feb-20	06:08:23
76	76	200224P1-76	2000343-03 GW2002111350MK 0.25474	25-Feb-20	06:18:52
77	77	200224P1-77	2000343-04 GW2002111400GSC 0.24761	25-Feb-20	06:29:23
78	78	200224P1-78	2000343-05 GW2002111435MK 0.25424	25-Feb-20	06:39:54
79	79	200224P1-79	2000343-06 GW2002111455GSC 0.24081	25-Feb-20	06:50:25
80	80	200224P1-80	2000343-07 GW2002111525MK 0.24827	25-Feb-20	07:00:53
81	81	200224P1-81	2000343-08 GW2002111530GSC 0.25174	25-Feb-20	07:11:25
82	82	200224P1-82	2000343-09 GW2002111605GSC 0.25577	25-Feb-20	07:21:53
83	83	200224P1-83	2000343-10 GW2002120815GSC 0.25137	25-Feb-20	07:32:26
84	84	200224P1-84	IB	25-Feb-20	07:42:55
85	85	200224P1-85	ST200224P1-14 PFC CS3 20B1107	25-Feb-20	07:53:26
86	86	200224P1-86	IB	25-Feb-20	08:03:57
87	87	200224P1-87	2000343-11 GW2002120925MK 0.25235	25-Feb-20	08:14:26
88	88	200224P1-88	2000343-12 GW2002120910GSC 0.24691	25-Feb-20	08:24:57
89	89	200224P1-89	2000343-13 GW2002120945GSC 0.24513	25-Feb-20	08:35:25
90	90	200224P1-90	2000343-14 GW2002121005MK 0.24005	25-Feb-20	08:45:57
91	91	200224P1-91	2000343-15 GW2002121045MK 0.25349	25-Feb-20	08:56:28
92	92	200224P1-92	2000343-16 GW2002121135MK 0.24822	25-Feb-20	09:06:57
93	93	200224P1-93	2000343-17 GW2002121225MK 0.25257	25-Feb-20	09:17:28
94	94	200224P1-94	2000343-18 GW2002121450MK 0.25418	25-Feb-20	09:27:59
95	95	200224P1-95	2000343-19 GW2002121535GSC 0.24983	25-Feb-20	09:38:27
96	96	200224P1-96	2000343-20 GW2002121605MK 0.24945	25-Feb-20	09:48:59
97	97	200224P1-97	IB	25-Feb-20	09:59:28
98	98	200224P1-98	ST200224P1-15 PFC CS3 20B1107	25-Feb-20	10:10:00
99	99	200224P1-99	IB	25-Feb-20	10:20:29
100	100	200224P1-100	B0B0072-BS2 OPR 0.125	25-Feb-20	10:30:59
101	101	200224P1-101	2000305-01 8 Chestnut Dr 0.11658	25-Feb-20	10:41:31
102	102	200224P1-102	2000305-02 10 Chestnut Dr 0.11788	25-Feb-20	10:51:59
103	103	200224P1-103	IB	25-Feb-20	11:02:31
104	104	200224P1-104	ST200224P1-16 PFC CS3 20B1107	25-Feb-20	11:13:00

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Last Altered: Tuesday, February 25, 2020 15:44:07 Pacific Standard Time
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Compound name: PFBA

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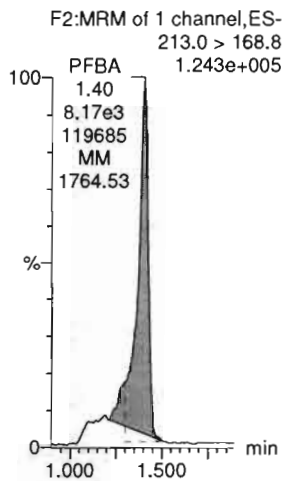
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Printed: Tuesday, February 25, 2020 14:31:53 Pacific Standard Time

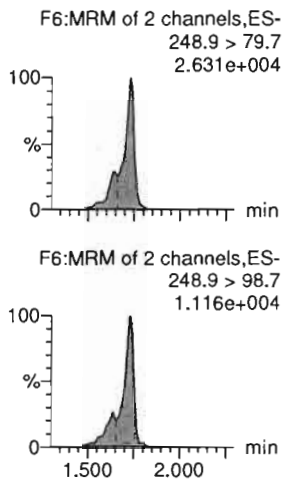
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Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

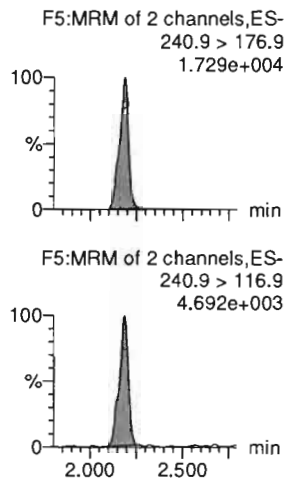
PFBA



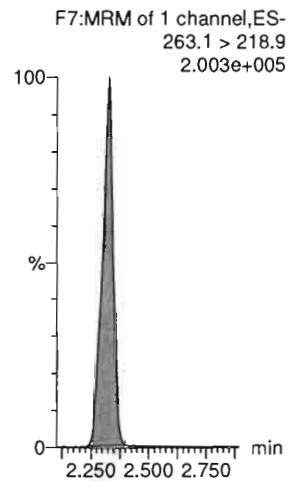
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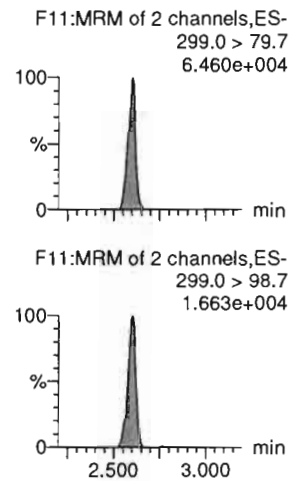
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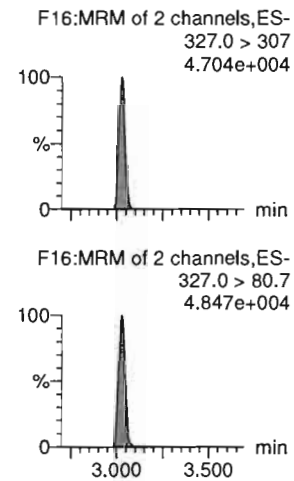
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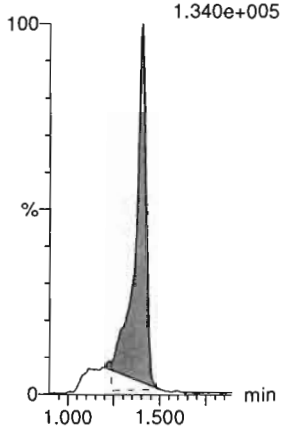
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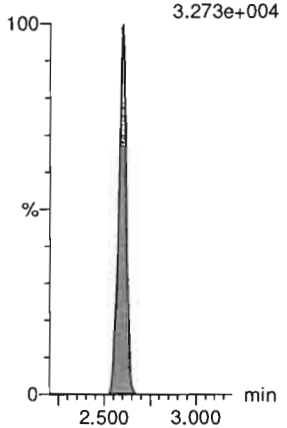
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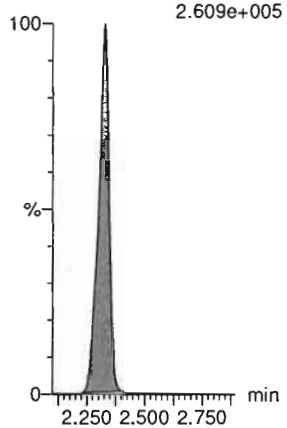
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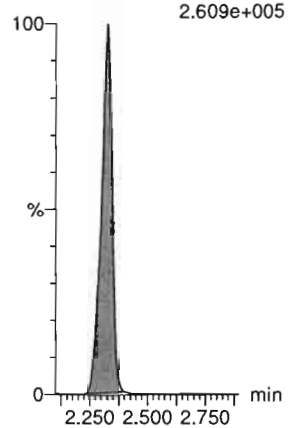
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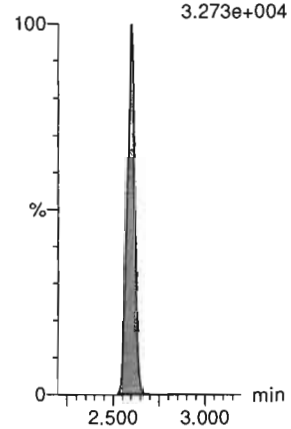
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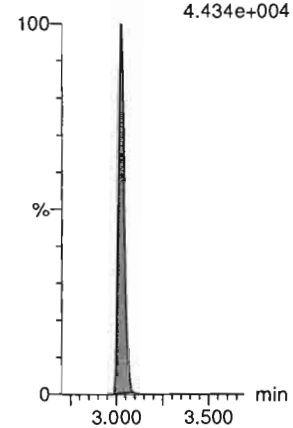
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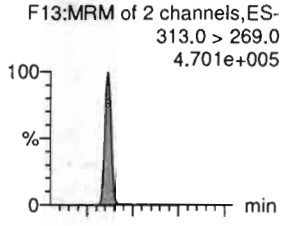


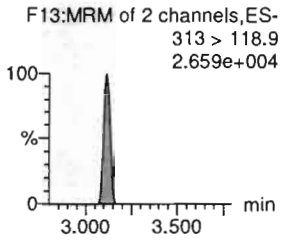
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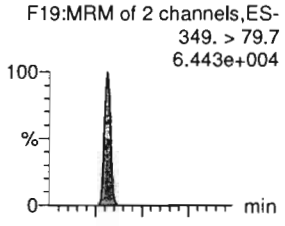
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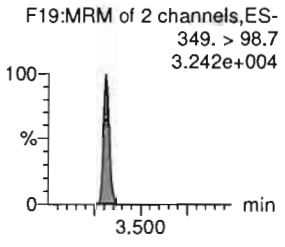
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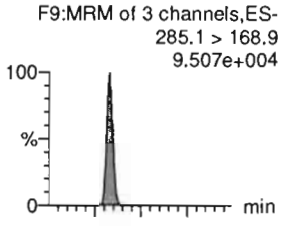


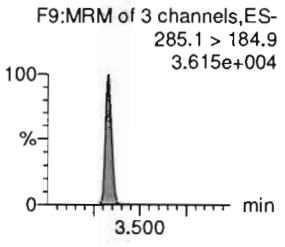
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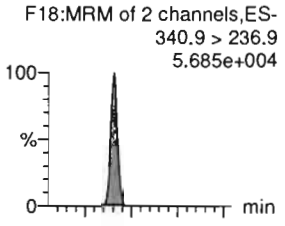


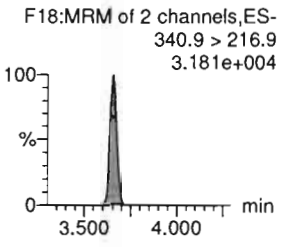
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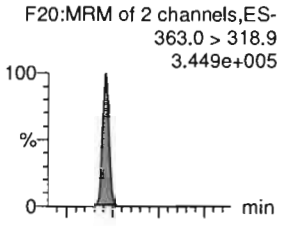


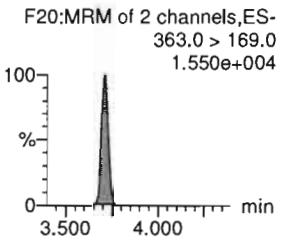
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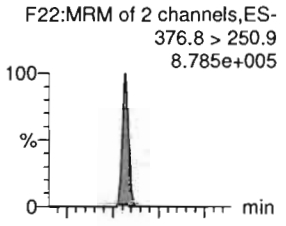


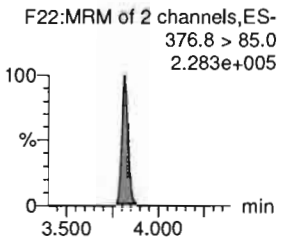
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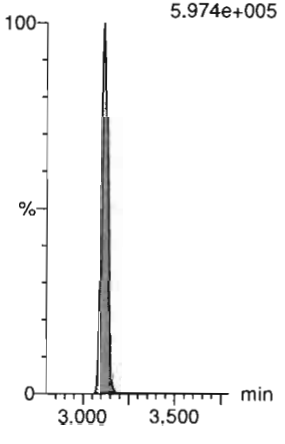


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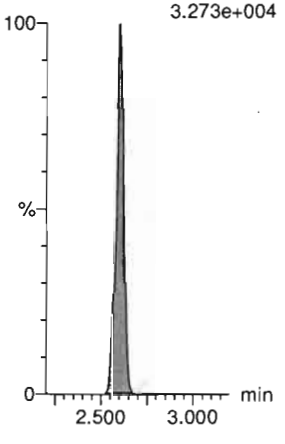




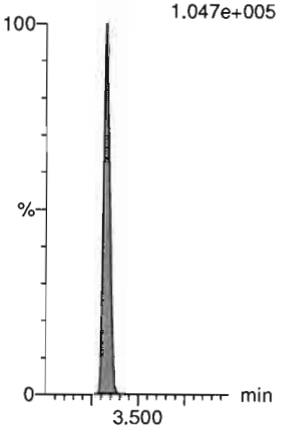
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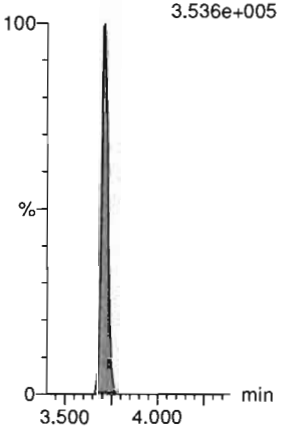
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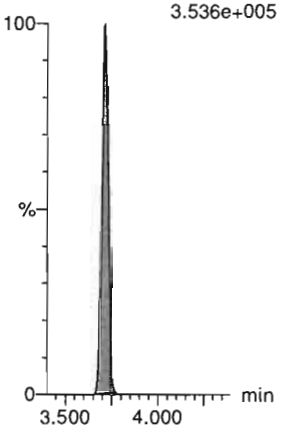
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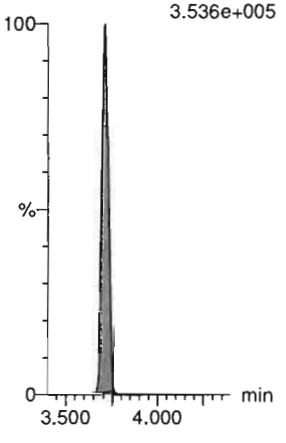
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13C4-PFHpA-EIS



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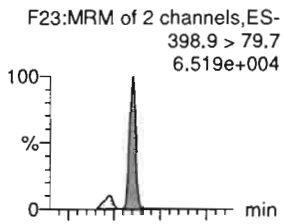


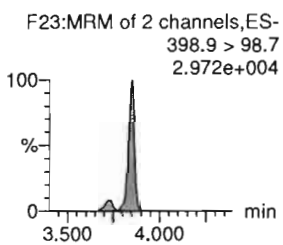
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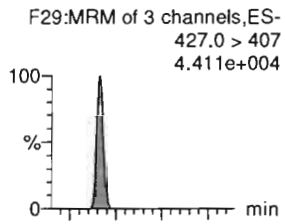
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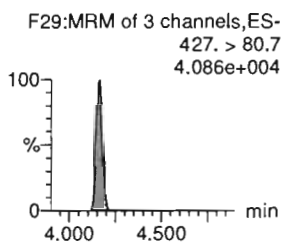
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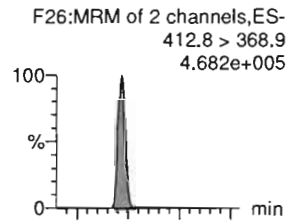


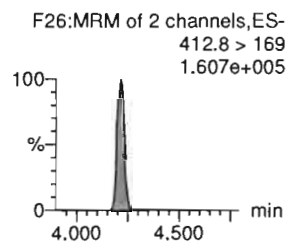
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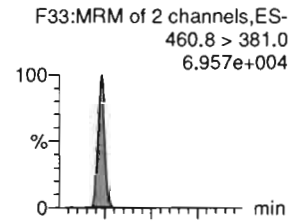


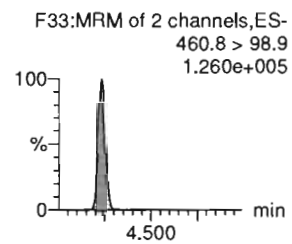
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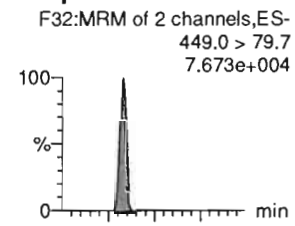


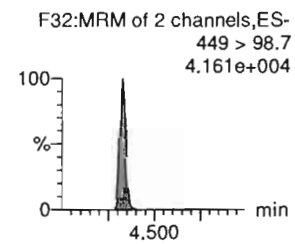
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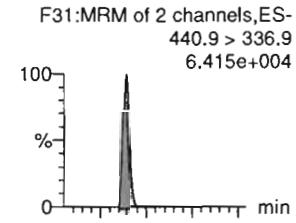


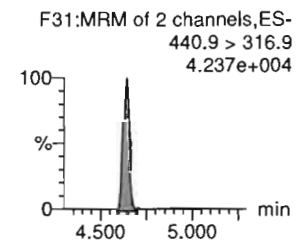
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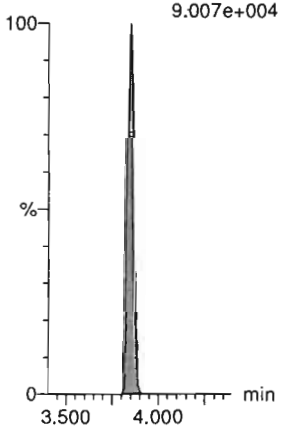


7:3 FTCA

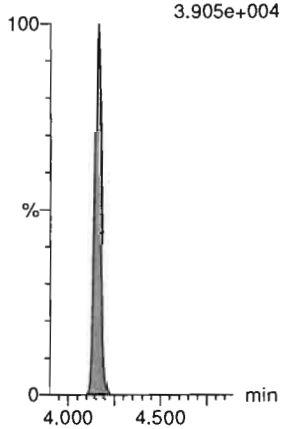




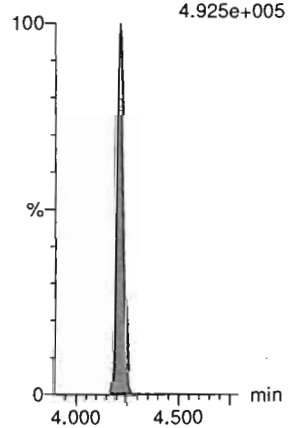
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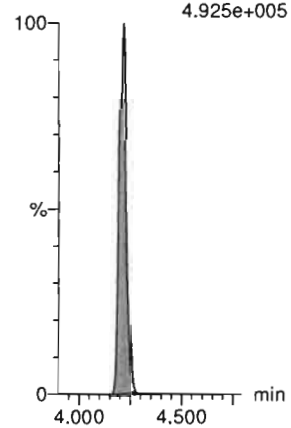
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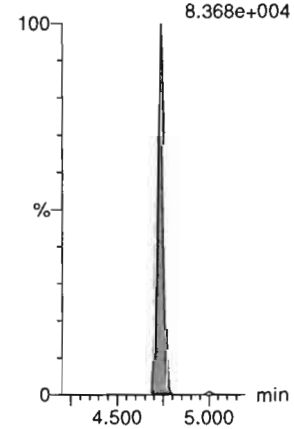
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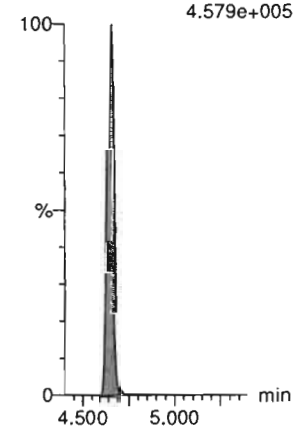
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13C8-PFOS-EIS



13C5-PFNA-EIS

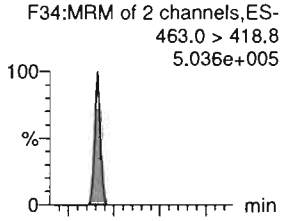


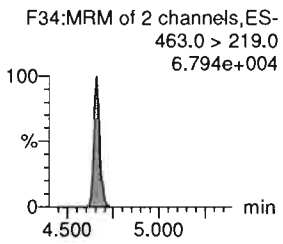
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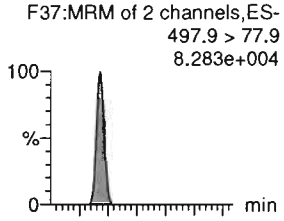
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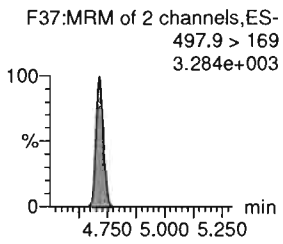
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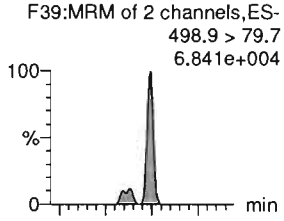


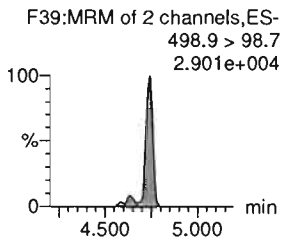
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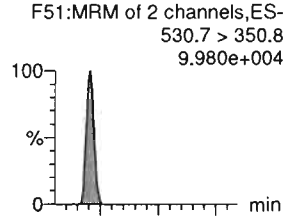


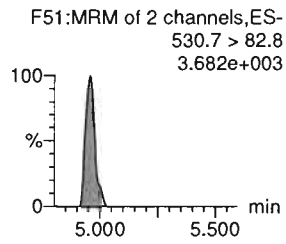
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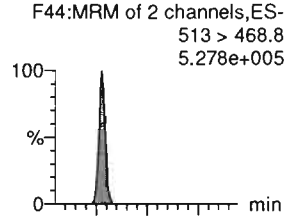


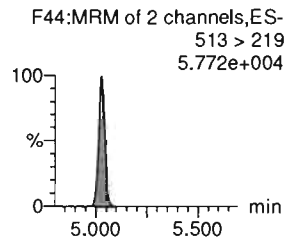
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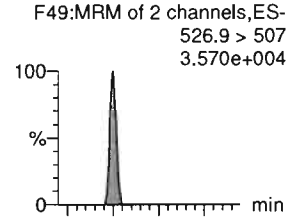


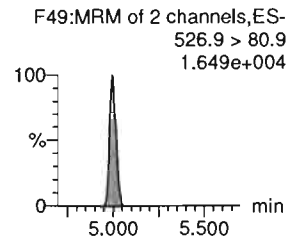
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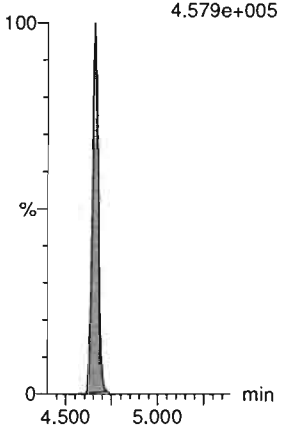


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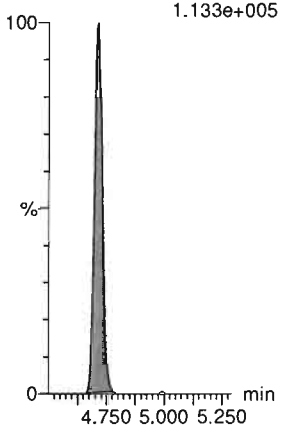




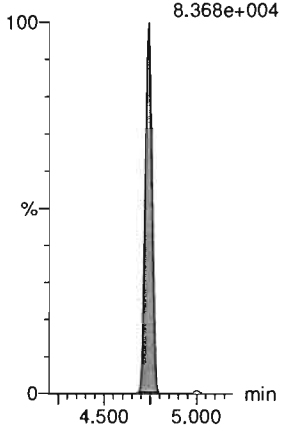
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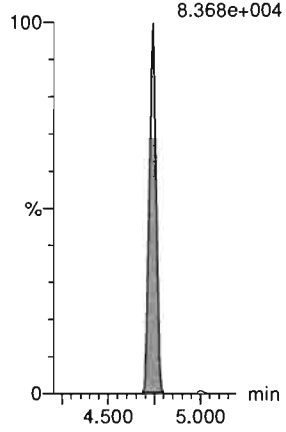
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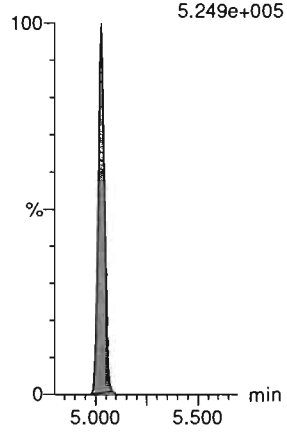
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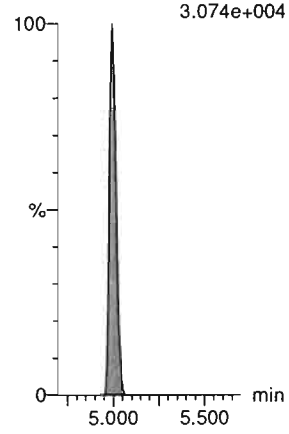
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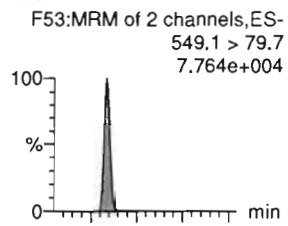


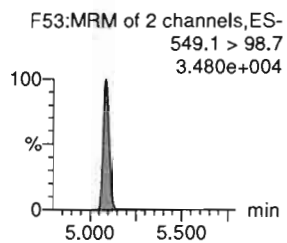
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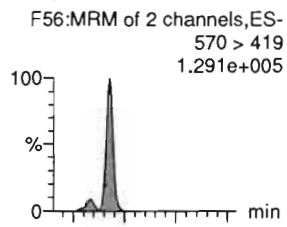
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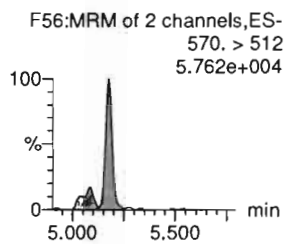
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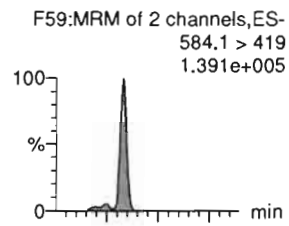


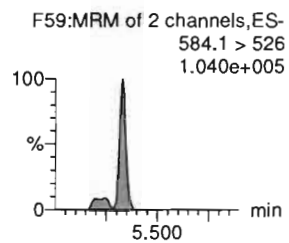
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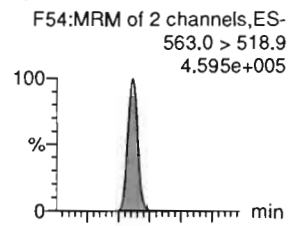


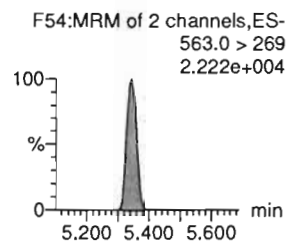
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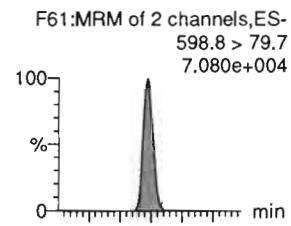


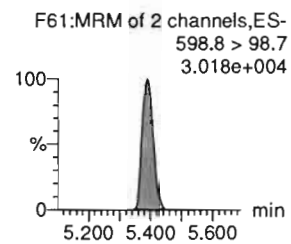
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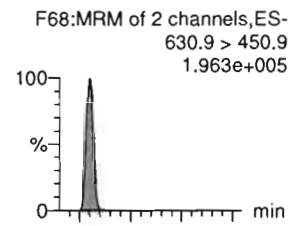


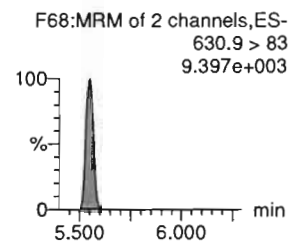
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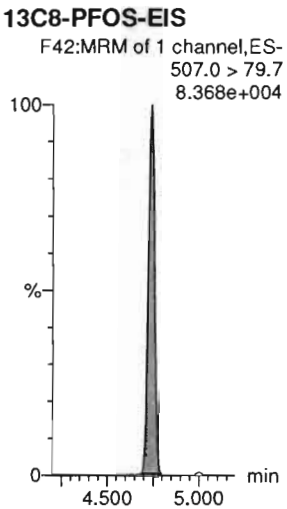


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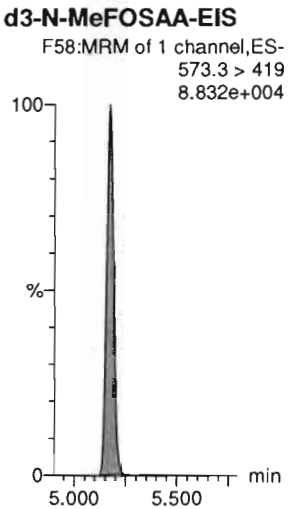




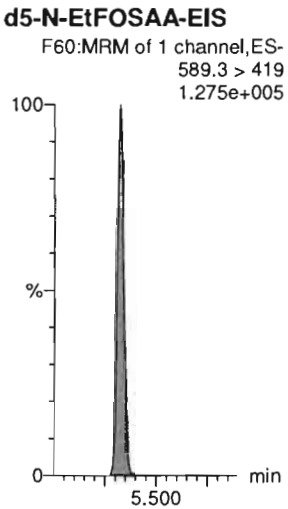
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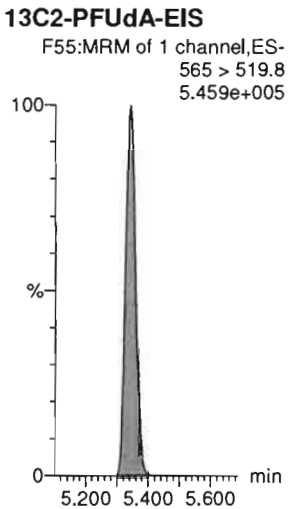
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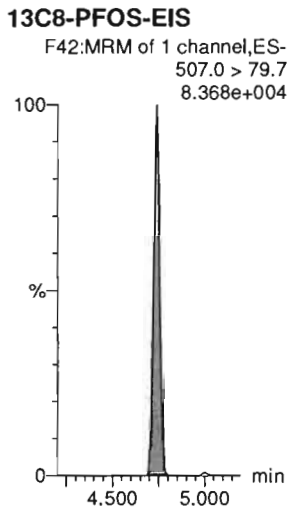
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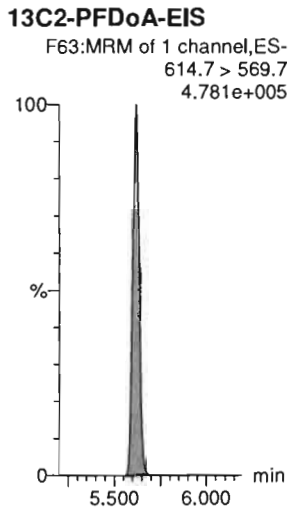
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13C8-PFOS-EIS



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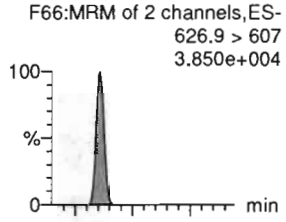


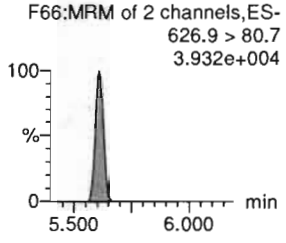
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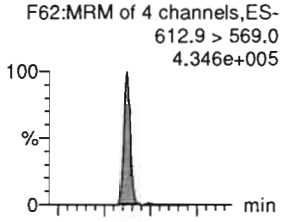
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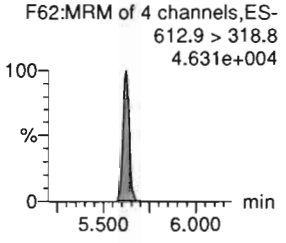
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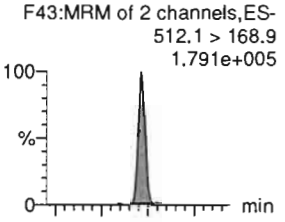


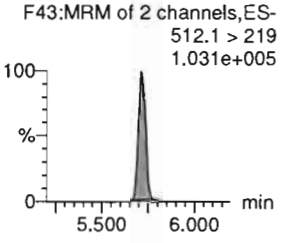
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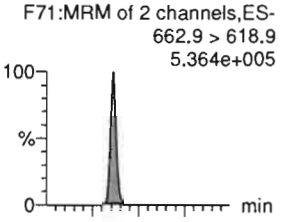


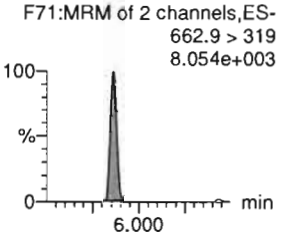
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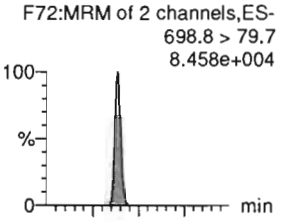


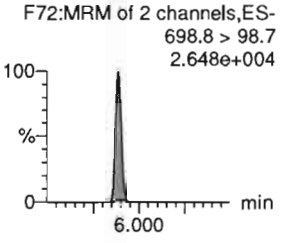
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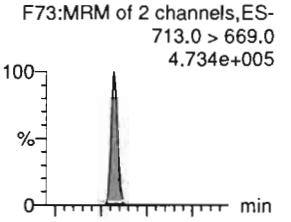


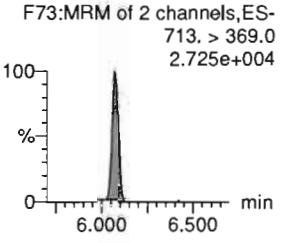
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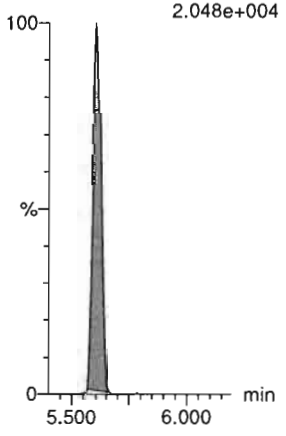


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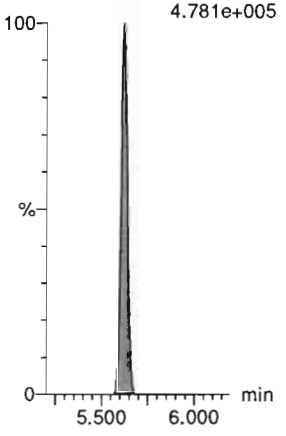




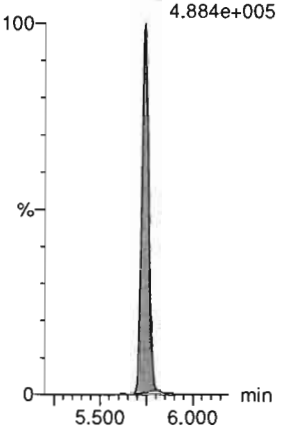
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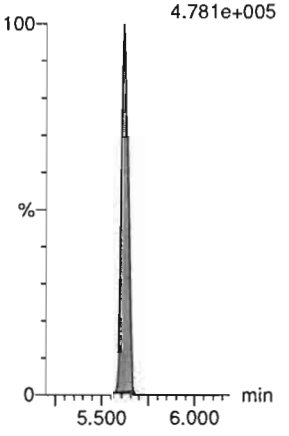
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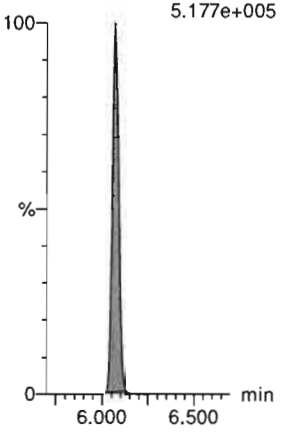
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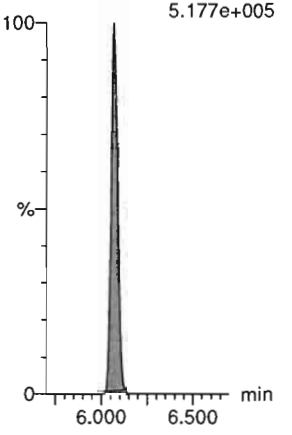
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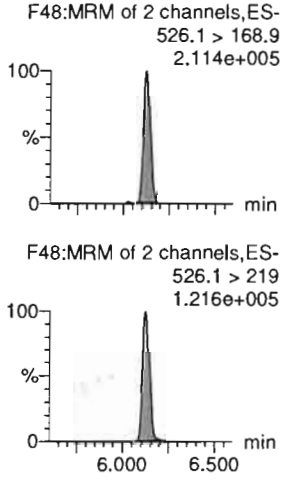


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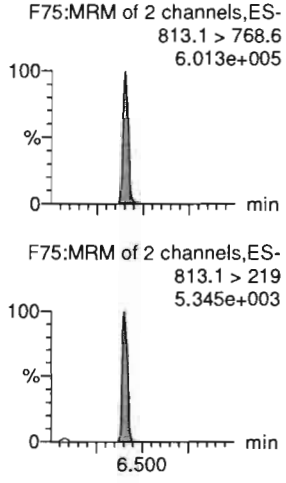
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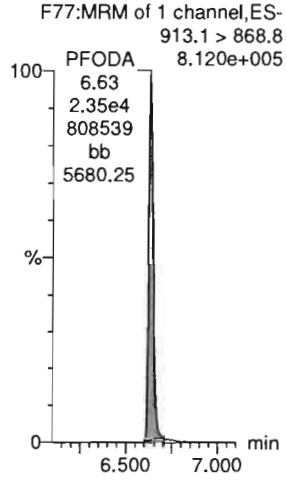
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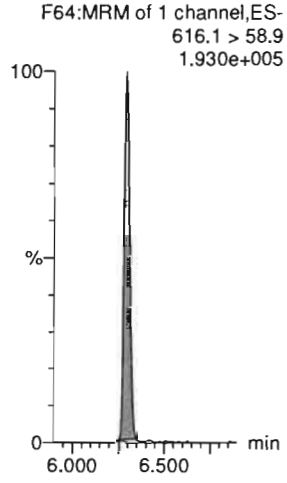
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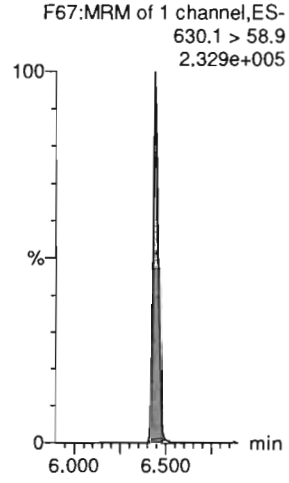
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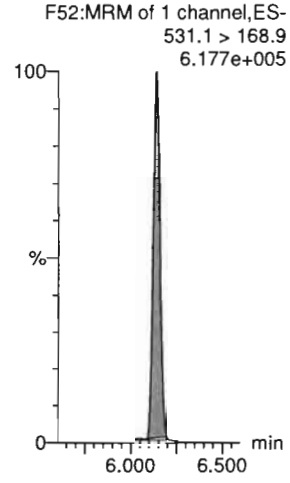
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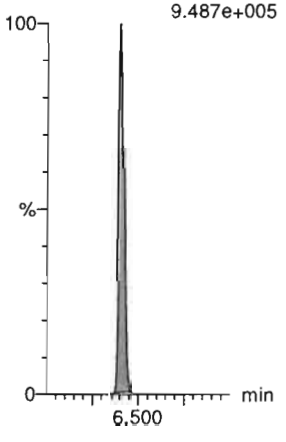
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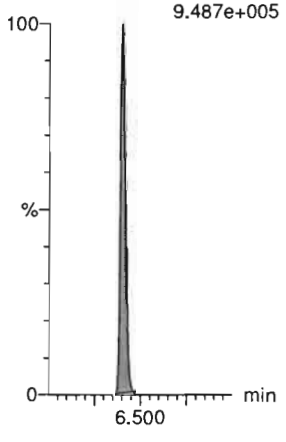
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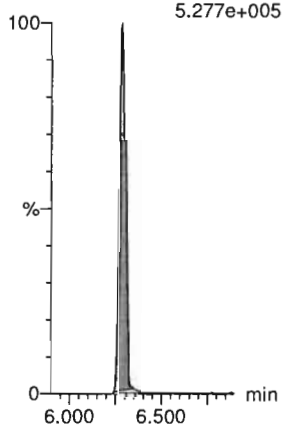
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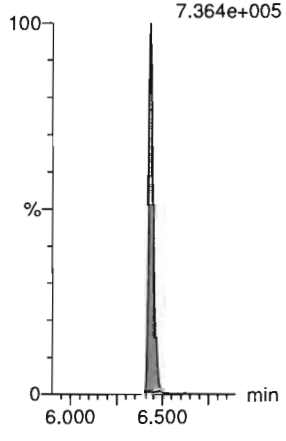
13C2-PFHxDA-EIS



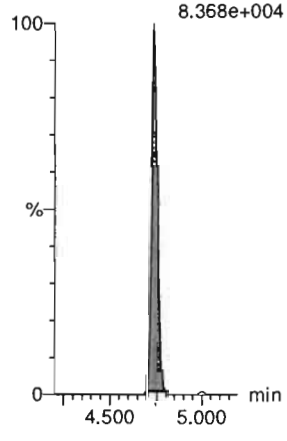
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

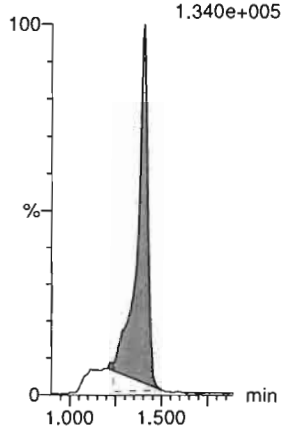


Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-34.qld

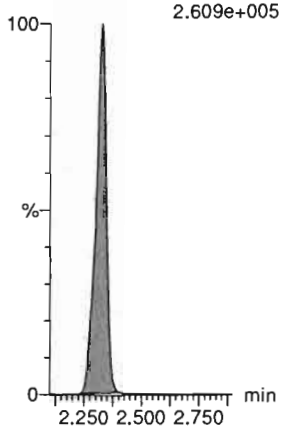
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Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

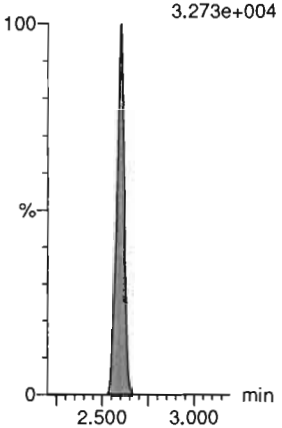
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.340e+005



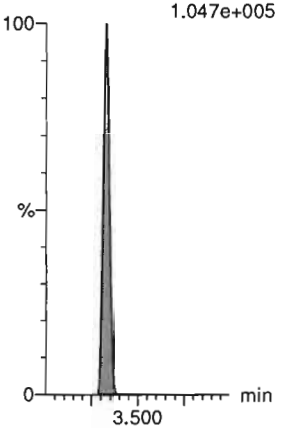
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.609e+005



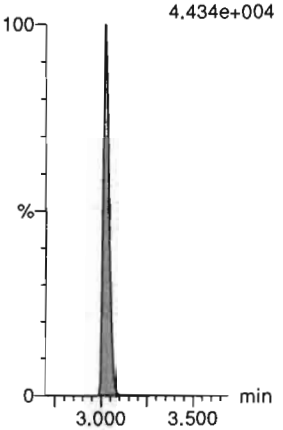
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.273e+004



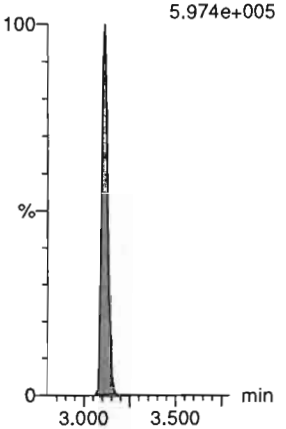
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.047e+005



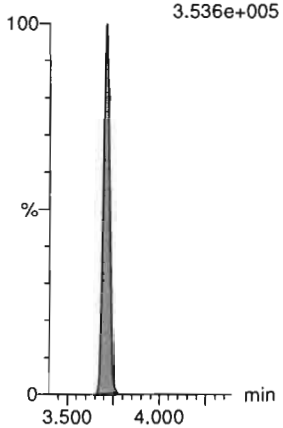
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.434e+004



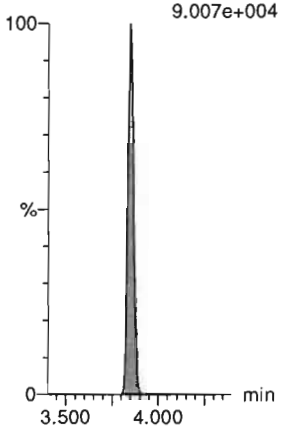
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.974e+005



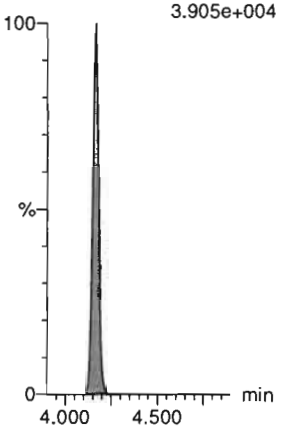
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.536e+005



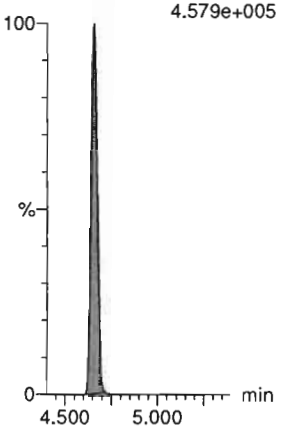
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.007e+004



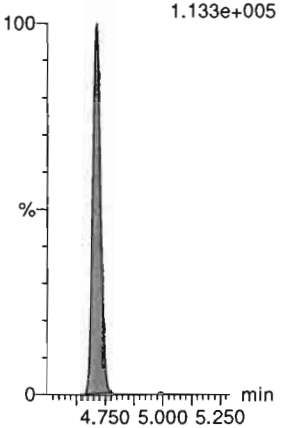
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.905e+004



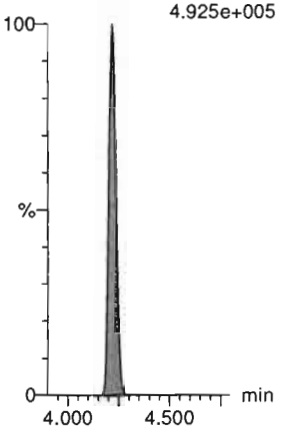
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.579e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.133e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.925e+005

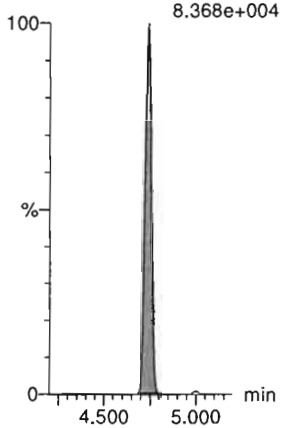


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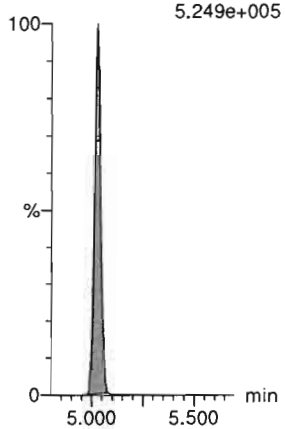
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Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

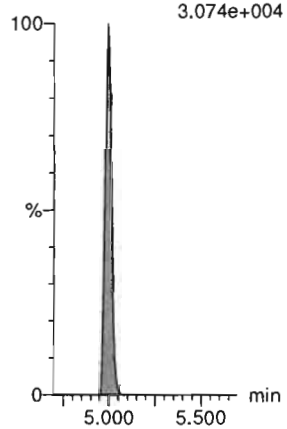
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.368e+004



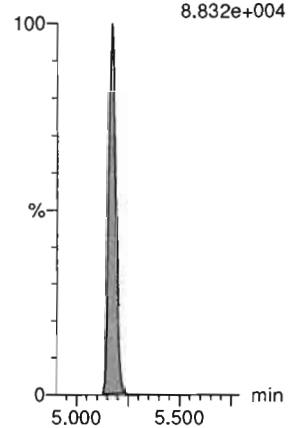
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.249e+005



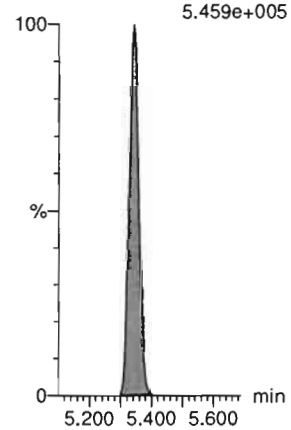
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.074e+004



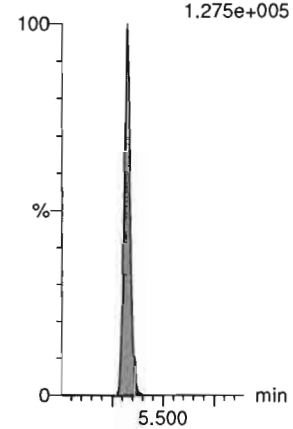
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.832e+004



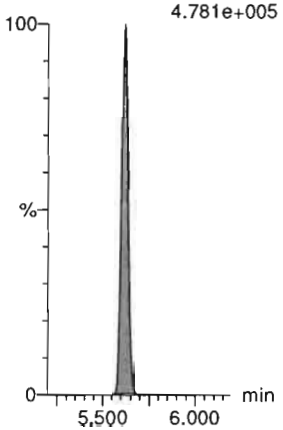
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.459e+005



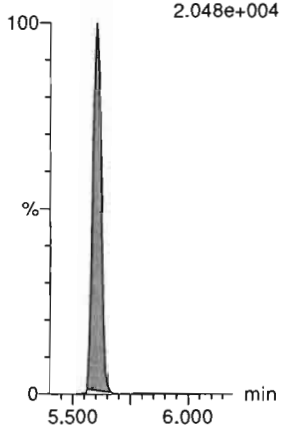
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.275e+005



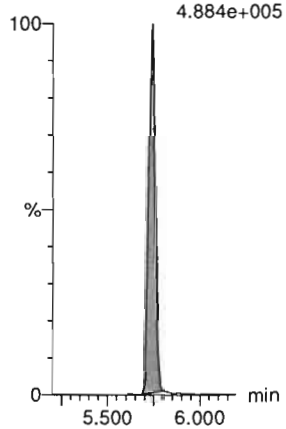
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.781e+005



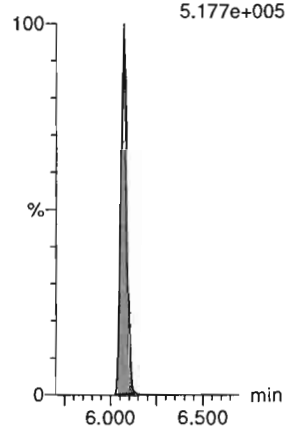
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.048e+004



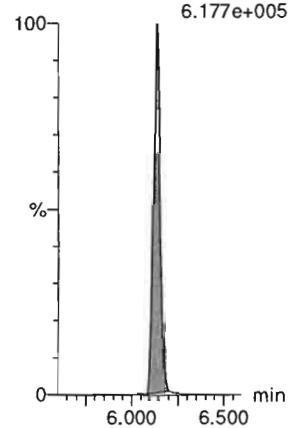
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.884e+005



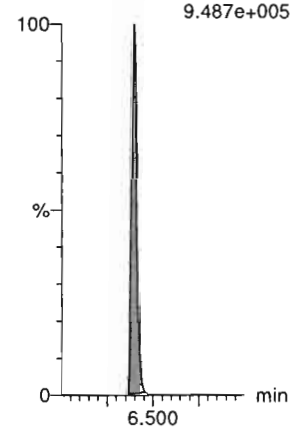
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.177e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.177e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.487e+005

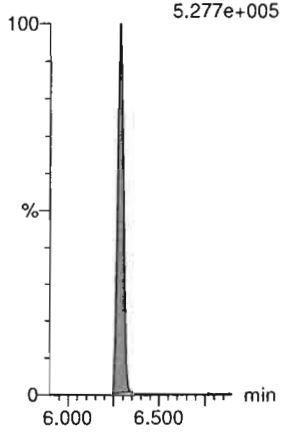


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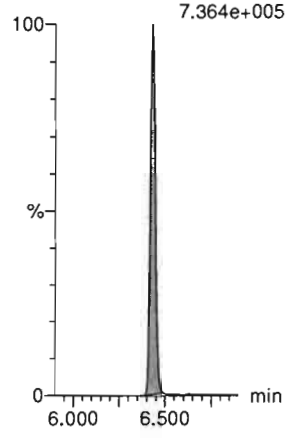
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Printed: Tuesday, February 25, 2020 14:31:53 Pacific Standard Time

Name: 200224P1-34, Date: 24-Feb-2020, Time: 22:57:40, ID: ST200220P1-11 PFC CS3 20B1107, Description: PFC CS3 20B1107

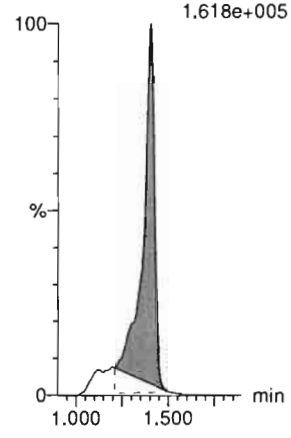
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.277e+005



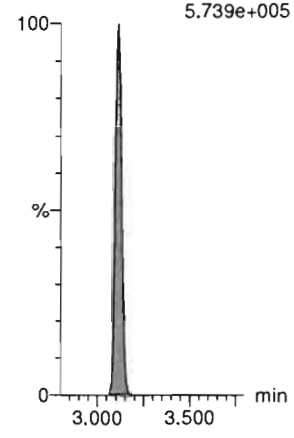
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.364e+005



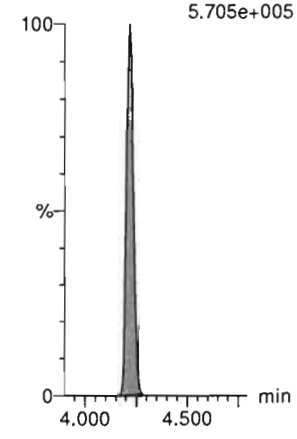
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.618e+005



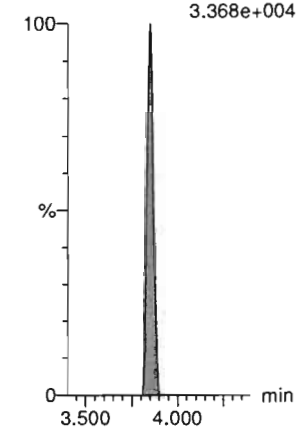
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
5.739e+005



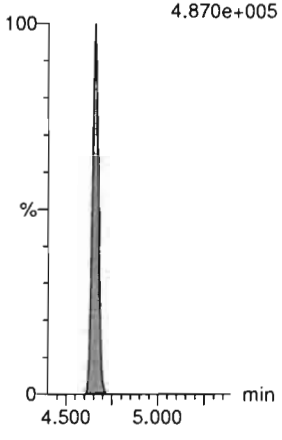
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
5.705e+005



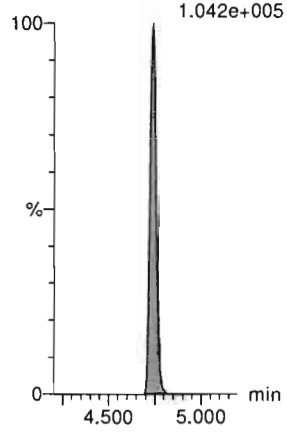
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.368e+004



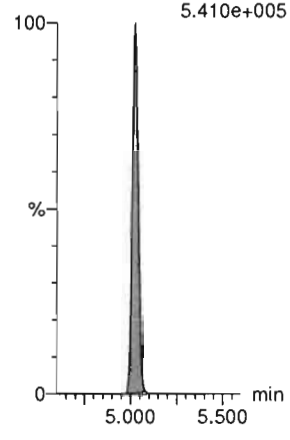
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.870e+005



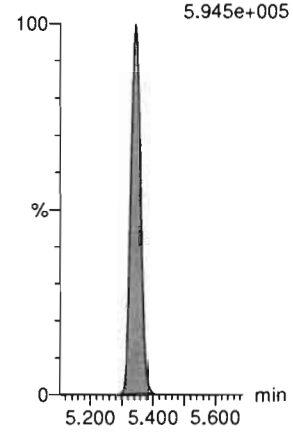
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.042e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.410e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.945e+005



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Last Altered: Tuesday, February 25, 2020 14:13:12 Pacific Standard Time
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ST200224P1

Name: 200224P1-51, Date: 25-Feb-2020, Time: 01:56:16, 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	7588.695	8165.585	1.00	1.40	11.617	10.000	10.0	100.2	NO		
2	2	PFPrS	248.9 > 79.7	1966.882	1553.705	1.00	1.73	15.824	10.000	9.49	94.9	NO	2.322	NO
3	3	3:3 FTCA	240.9 > 176.9	966.912	13730.321	1.00	2.19	0.880	10.000	9.46	94.6	NO	3.704	NO
4	4	PFPeA	263.1 > 218.9	10734.611	13730.321	1.00	2.33	9.773	10.000	9.78	97.8	NO		
5	5	PFBS	299.0 > 79.7	2918.795	1553.705	1.00	2.60	23.483	10.000	9.82	98.2	NO	3.038	NO
6	6	4:2 FTS	327.0 > 307	1788.142	1617.852	1.00	3.03	13.816	10.000	10.3	103.1	NO	0.849	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	8165.585		1.00	1.40	8165.585	12.500	12.2	97.3	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1553.705		1.00	2.60	1553.705	12.500	12.8	102.3	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	13730.321		1.00	2.33	13730.321	12.500	13.1	104.9	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	13730.321		1.00	2.33	13730.321	12.500	13.1	104.9	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1553.705		1.00	2.60	1553.705	12.500	12.8	102.3	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1617.852		1.00	3.03	1617.852	12.500	12.4	99.0	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	17533.367	23315.686	1.00	3.11	9.400	10.000	10.2	102.5	NO	17.591	NO
15	8	PFPeS	349.>79.7	2743.343	1553.705	1.00	3.31	22.071	10.000	10.5	104.5	NO	2.332	NO
16	9	HFPO-DA	285.1 > 168.9	3515.360	4136.531	1.00	3.32	10.623	10.000	10.1	100.6	NO	2.587	NO
17	10	5:3 FTCA	340.9 > 236.9	2374.024	14017.736	1.00	3.65	2.117	10.000	9.21	92.1	NO	1.718	NO
18	11	PFHpA	363.0 > 318.9	14051.904	14017.736	1.00	3.71	12.530	10.000	10.3	102.6	NO	24.106	NO
19	12	ADONA	376.8 > 250.9	35585.578	14017.736	1.00	3.81	31.733	10.000	10.2	102.5	NO	4.061	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	23315.686		1.00	3.11	23315.686	12.500	13.4	106.9	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1553.705		1.00	2.60	1553.705	12.500	12.8	102.3	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4136.531		1.00	3.32	4136.531	12.500	12.6	100.8	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14017.736		1.00	3.71	14017.736	12.500	13.2	105.5	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14017.736		1.00	3.71	14017.736	12.500	13.2	105.5	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14017.736		1.00	3.71	14017.736	12.500	13.2	105.5	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2921.429	3445.016	1.00	3.85	10.600	10.000	9.76	97.6	NO	2.146	NO
28	15	6:2 FTS	427.0 > 407	1888.531	1481.248	1.00	4.16	15.937	10.000	9.35	93.5	NO	1.193	NO
29	16	L-PFOA	412.8 > 368.9	19412.527	20306.584	1.00	4.22	11.950	10.000	10.2	101.6	NO	3.079	NO
30	18	PFecHS	460.8 > 381.0	2986.565	20306.584	1.00	4.23	1.838	10.000	10.3	102.7	NO	0.505	NO
31	19	PFHpS	449.0 > 79.7	2851.217	3882.386	1.00	4.33	9.180	10.000	9.57	95.7	NO	2.010	NO
32	20	7:3 FTCA	440.9 > 336.9	2530.401	15684.124	1.00	4.64	2.017	10.000	10.3	102.7	NO	1.441	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3445.016		1.00	3.85	3445.016	12.500	13.6	108.9	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1481.248		1.00	4.16	1481.248	12.500	13.4	107.4	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	20306.584		1.00	4.22	20306.584	12.500	13.8	110.6	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	20306.584		1.00	4.22	20306.584	12.500	13.8	110.6	NO		

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Name: 200224P1-51, Date: 25-Feb-2020, Time: 01:56:16, 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	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	15684.124		1.00	4.65	15684.124	12.500	12.3	98.2	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16419.354	15684.124	1.00	4.65	13.086	10.000	10.2	102.0	NO	7.159	NO
41	22	PFOSA	497.9 > 77.9	3344.854	5053.217	1.00	4.71	8.274	10.000	10.1	101.0	NO	30.052	NO
42	23	L-PFOS	498.9 > 79.7	2989.356	3882.386	1.00	4.74	9.625	10.000	9.63	96.3	NO	2.299	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3831.176	3882.386	1.00	4.95	12.335	10.000	11.1	111.0	NO	13.985	NO
44	26	PFDA	513 > 468.8	19602.543	18116.301	1.00	5.02	13.525	10.000	10.9	108.8	NO	9.865	NO
45	27	8:2 FTS	526.9 > 507	1144.371	1055.036	1.00	4.99	13.558	10.000	9.15	91.5	NO	2.892	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	15684.124		1.00	4.65	15684.124	12.500	12.3	98.2	NO		
47	67	13C8-PFOSA-EIS	506 > 78	5053.217		1.00	4.71	5053.217	12.500	13.2	105.2	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18116.301		1.00	5.02	18116.301	12.500	12.4	99.2	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1055.036		1.00	4.99	1055.036	12.500	11.1	89.2	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2516.664	3882.386	1.00	5.09	8.103	10.000	8.95	89.5	NO	2.066	NO
54	29	L-MeFOSAA	570 > 419	5806.318	3052.320	1.00	5.17	23.778	10.000	11.8	117.5	NO	1.912	NO
55	31	L-EtFOSAA	584.1 > 419	5003.847	4420.721	1.00	5.33	14.149	10.000	11.2	112.0	NO	1.240	NO
56	33	PFUdA	563.0 > 518.9	15911.034	19306.371	1.00	5.34	10.302	10.000	10.4	103.7	NO	22.885	NO
57	34	PFDS	598.8 > 79.7	2726.151	3882.386	1.00	5.39	8.777	10.000	9.98	99.8	NO	2.210	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7732.067	19343.043	1.00	5.55	4.997	10.000	9.51	95.1	NO	19.086	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3052.320		1.00	5.17	3052.320	12.500	10.6	84.9	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4420.721		1.00	5.32	4420.721	12.500	12.4	99.4	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	19306.371		1.00	5.34	19306.371	12.500	11.7	93.8	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	19343.043		1.00	5.62	19343.043	12.500	13.4	107.2	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1619.484	837.787	1.00	5.61	24.163	10.000	11.2	112.3	NO	1.102	NO
67	37	PFDoA	612.9 > 569.0	16644.438	19343.043	1.00	5.62	10.756	10.000	9.47	94.7	NO	9.916	NO
68	38	N-MeFOSA	512.1 > 168.9	7490.383	20173.119	1.00	5.71	55.399	50.000	53.4	106.8	NO	1.577	NO
69	39	PFTrDA	662.9 > 618.9	19116.213	19343.043	1.00	5.86	12.353	10.000	10.4	104.4	NO	46.567	NO
70	40	PFDoS	698.8 > 79.7	3087.530	19921.559	1.00	5.88	1.937	10.000	11.3	112.7	NO	2.898	NO
71	41	PFTeDA	713.0 > 669.0	17977.289	19921.559	1.00	6.07	11.280	10.000	10.9	109.3	NO	16.634	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	837.787		1.00	5.60	837.787	12.500	11.7	93.3	NO		

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Name: 200224P1-51, Date: 25-Feb-2020, Time: 01:56:16, 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	19343.043		1.00	5.62	19343.043	12.500	13.4	107.2	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	20173.119		1.00	5.74	20173.119	149.200	151	100.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	19343.043		1.00	5.62	19343.043	12.500	13.4	107.2	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	19921.559		1.00	6.07	19921.559	12.500	11.9	95.3	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	19921.559		1.00	6.07	19921.559	12.500	11.9	95.3	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	8937.825	26850.295	1.00	6.12	49.665	50.000	50.7	101.4	NO	1.651	NO
80	43	PFHxDA	813.1 > 768.6	18715.191	30359.029	1.00	6.40	7.706	10.000	10.4	104.3	NO	125.559	NO
81	44	PFODA	913.1 > 868.8	22054.053	30359.029	1.00	6.63	9.081	10.000	10.9	109.3	NO		
82	45	N-MeFOSE	616.1 > 58.9	7241.067	20275.924	1.00	6.29	53.283	50.000	51.0	102.1	NO		
83	46	N-EtFOSE	630.1 > 58.9	7876.941	22829.217	1.00	6.44	51.480	50.000	53.1	106.2	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	26850.295		1.00	6.14	26850.295	149.200	155	104.2	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	30359.029		1.00	6.40	30359.029	12.500	13.0	103.7	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	30359.029		1.00	6.40	30359.029	12.500	13.0	103.7	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	20275.924		1.00	6.28	20275.924	149.200	153	102.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	22829.217		1.00	6.43	22829.217	149.200	148	99.4	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3882.386		1.00	4.74	3882.386	12.500	13.6	108.5	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	8122.968	10099.104	1.00	1.40	10.054	12.500	13.0	103.6	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	13730.321	23958.572	1.00	2.33	7.164	12.500	12.5	100.2	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1553.705	1446.408	1.00	2.60	13.427	12.500	12.3	98.5	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4136.531	23958.572	1.00	3.32	2.158	12.500	11.6	92.8	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1617.852	1446.408	1.00	3.03	13.982	12.500	11.6	92.9	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	23315.686	23958.572	1.00	3.11	12.165	12.500	12.5	100.1	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	14017.736	23958.572	1.00	3.71	7.314	12.500	12.1	97.0	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3445.016	1446.408	1.00	3.85	29.772	12.500	12.8	102.5	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1481.248	3952.537	1.00	4.16	4.684	12.500	12.2	97.4	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	15684.124	17289.057	1.00	4.65	11.340	12.500	12.2	97.2	NO		
101	68	13C8-PFOSA-RSD	506 > 78	5053.217	19627.242	1.00	4.71	3.218	12.500	13.8	110.3	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	20306.584	23024.498	1.00	4.22	11.024	12.500	12.3	98.2	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3882.386	3952.537	1.00	4.74	12.278	12.500	12.8	102.5	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18116.301	20453.594	1.00	5.02	11.072	12.500	11.7	94.0	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1055.036	3952.537	1.00	4.99	3.337	12.500	10.6	84.8	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3052.320	19627.242	1.00	5.17	1.944	12.500	11.0	88.2	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	19306.371	19627.242	1.00	5.34	12.296	12.500	12.2	97.2	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	4420.721	19627.242	1.00	5.32	2.815	12.500	12.3	98.7	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	19343.043	20453.594	1.00	5.62	11.821	12.500	11.6	92.7	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	837.787	3952.537	1.00	5.60	2.650	12.500	10.8	86.7	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	20173.119	19627.242	1.00	5.74	12.848	149.200	146	98.0	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	19921.559	19627.242	1.00	6.07	12.687	12.500	11.5	92.0	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	26850.295	19627.242	1.00	6.14	17.100	149.200	157	105.4	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	30359.029	19627.242	1.00	6.40	19.335	12.500	12.6	100.9	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	20275.924	19627.242	1.00	6.28	12.913	149.200	152	102.1	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	22829.217	19627.242	1.00	6.43	14.539	149.200	146	97.6	NO		
119	99	13C4-PFBA	217.0 > 172.0	10099.104	10099.104	1.00	1.40	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	23958.572	23958.572	1.00	3.11	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	23024.498	23024.498	1.00	4.22	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1446.408	1446.408	1.00	3.85	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17289.057	17289.057	1.00	4.65	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3952.537	3952.537	1.00	4.74	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	20453.594	20453.594	1.00	5.02	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19627.242	19627.242	1.00	5.34	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: 25 Feb 2020 15:44:07

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200224P1-1	IPA	24-Feb-20	17:10:52
2	2	200224P1-2	IPA	24-Feb-20	17:21:28
3	3	200224P1-3	ST200224P1-1 PFC CS-2 20B1102	24-Feb-20	17:32:01
4	4	200224P1-4	ST200224P1-2 PFC CS-1 20B1103	24-Feb-20	17:42:30
5	5	200224P1-5	ST200224P1-3 PFC CS0 20B1104	24-Feb-20	17:53:02
6	6	200224P1-6	ST200224P1-4 PFC CS1 20B1105	24-Feb-20	18:03:31
7	7	200224P1-7	ST200224P1-5 PFC CS2 20B1106	24-Feb-20	18:14:02
8	8	200224P1-8	ST200224P1-6 PFC CS3 20B1107	24-Feb-20	18:24:31
9	9	200224P1-9	ST200224P1-7 PFC CS4 20B1108	24-Feb-20	18:35:02
10	10	200224P1-10	ST200224P1-8 PFC CS5 20B1109	24-Feb-20	18:45:33
11	11	200224P1-11	ST200224P1-9 PFC CS6 20B1110	24-Feb-20	18:56:04
12	12	200224P1-12	ST200224P1-10 PFC CS7 20B1111	24-Feb-20	19:06:33
13	13	200224P1-13	IB	24-Feb-20	19:17:04
14	14	200224P1-14	ICV200224P1-1 PFC ICV 20B1112	24-Feb-20	19:27:32
15	15	200224P1-15	IB	24-Feb-20	19:38:05
16	16	200224P1-16	B0B0168-BS2 OPR 2	24-Feb-20	19:48:34
17	17	200224P1-17	B0B0115-BLK1 Method Blank 0.01	24-Feb-20	19:59:05
18	18	200224P1-18	B0B0115-BS1 OPR 0.01	24-Feb-20	20:09:34
19	19	200224P1-19	B0B0115-BSD1 LCSD 0.01	24-Feb-20	20:20:06
20	20	200224P1-20	2000302-14 RB6 Bisson's NP 2-11 0.01	24-Feb-20	20:30:35
21	21	200224P1-21	2000302-15 RB7 Bisson's NP 2-18 0.01	24-Feb-20	20:41:04
22	22	200224P1-22	2000302-16 RB8 Bisson's P 2-21 0.01	24-Feb-20	20:51:37
23	23	200224P1-23	2000302-17 RB9 WNF BT 2-11 0.01	24-Feb-20	21:02:06
24	24	200224P1-24	2000302-18 JB1 HF 2-12 0.01	24-Feb-20	21:12:37
25	25	200224P1-25	2000302-19 JB2 HF 2-19 0.01	24-Feb-20	21:23:07
26	26	200224P1-26	B0B0110-BLK1 Method Blank 0.25	24-Feb-20	21:33:38
27	27	200224P1-27	B0B0110-BS1 OPR 0.25	24-Feb-20	21:44:08
28	28	200224P1-28	B0B0110-MS1 Matrix Spike 0.25355	24-Feb-20	21:54:39
29	29	200224P1-29	B0B0110-MSD1 Matrix Spike Dup 0.25492	24-Feb-20	22:05:08
30	30	200224P1-30	2000303-01 RW-3 0.24925	24-Feb-20	22:15:39
31	31	200224P1-31	2000303-02 RW-4 0.25385	24-Feb-20	22:26:10
32	32	200224P1-32	2000303-03 RW-5 0.24988	24-Feb-20	22:36:38

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Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
33	33 200224P1-33	IB	24-Feb-20	22:47:08
34	34 200224P1-34	ST200224P1-11 PFC CS3 20B1107	24-Feb-20	22:57:40
35	35 200224P1-35	IB	24-Feb-20	23:08:09
36	36 200224P1-36	2000303-04 RW-6 0.25734	24-Feb-20	23:18:39
37	37 200224P1-37	2000303-05 RW-7 0.25767	24-Feb-20	23:29:11
38	38 200224P1-38	2000303-06 RW-8 0.25242	24-Feb-20	23:39:42
39	39 200224P1-39	2000303-07 RW-3 DUP 0.26025	24-Feb-20	23:50:12
40	40 200224P1-40	2000303-08 FRB-4 0.2607	25-Feb-20	00:00:40
41	41 200224P1-41	B0B0137-BLK1 Method Blank 0.25	25-Feb-20	00:11:13
42	42 200224P1-42	B0B0137-BS1 OPR 0.25	25-Feb-20	00:21:42
43	43 200224P1-43	B0B0137-MS1 Matrix Spike 0.24799	25-Feb-20	00:32:13
44	44 200224P1-44	B0B0137-MSD1 Matrix Spike Dup 0.24718	25-Feb-20	00:42:44
45	45 200224P1-45	2000330-01 EB03-20200214 0.25119	25-Feb-20	00:53:12
46	46 200224P1-46	2000330-02 I003MW05S-20200214 0.25637	25-Feb-20	01:03:42
47	47 200224P1-47	2000330-03 I003MW12S-20200214 0.25031	25-Feb-20	01:14:14
48	48 200224P1-48	2000330-04 DUP04-20200214 0.25435	25-Feb-20	01:24:44
49	49 200224P1-49	2000330-05 I003MW14S-20200214 0.25171	25-Feb-20	01:35:15
50	50 200224P1-50	IB	25-Feb-20	01:45:44
51	51 200224P1-51	ST200220P1-12 PFC CS3 20B1107	25-Feb-20	01:56:16
52	52 200224P1-52	IB	25-Feb-20	02:06:44
53	53 200224P1-53	B0B0178-BLK1 Method Blank 0.25	25-Feb-20	02:17:16
54	54 200224P1-54	B0B0178-BS1 OPR 0.25	25-Feb-20	02:27:47
55	55 200224P1-55	B0B0178-MS1 Matrix Spike 0.24454	25-Feb-20	02:38:15
56	56 200224P1-56	B0B0178-MSD1 Matrix Spike Dup 0.24557	25-Feb-20	02:48:46
57	57 200224P1-57	2000334-01 FD01_021120 0.25195	25-Feb-20	02:59:17
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59	59 200224P1-59	2000334-03 06302840007260_021120 0.24476	25-Feb-20	03:20:17
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61	61 200224P1-61	2000334-05 064A3500006600_021120 0.24128	25-Feb-20	03:41:17
62	62 200224P1-62	2000334-06 06302730000100_021120 0.24477	25-Feb-20	03:51:49
63	63 200224P1-63	2000334-07 06302840006600_021120 0.24554	25-Feb-20	04:02:19
64	64 200224P1-64	2000334-08 06302840007350_021120 0.25412	25-Feb-20	04:12:48
65	65 200224P1-65	2000334-09 TPARK-WELL1_021220 0.24837	25-Feb-20	04:23:20
66	66 200224P1-66	2000334-10 TPARK-WELL2_021220 0.24783	25-Feb-20	04:33:49
67	67 200224P1-67	IB	25-Feb-20	04:44:20
68	68 200224P1-68	ST200224P1-13 PFC CS3 20B1107	25-Feb-20	04:54:51

Vista Analytical Laboratory

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Compound name: PFBA

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72	72	200224P1-72	B0B0165-MS1 Matrix Spike 0.2523	25-Feb-20	05:36:52
73	73	200224P1-73	B0B0165-MSD1 Matrix Spike Dup 0.25324	25-Feb-20	05:47:21
74	74	200224P1-74	2000343-01 GW2002111305MK 0.251	25-Feb-20	05:57:52
75	75	200224P1-75	2000343-02 GW2002111305GSC 0.24856	25-Feb-20	06:08:23
76	76	200224P1-76	2000343-03 GW2002111350MK 0.25474	25-Feb-20	06:18:52
77	77	200224P1-77	2000343-04 GW2002111400GSC 0.24761	25-Feb-20	06:29:23
78	78	200224P1-78	2000343-05 GW2002111435MK 0.25424	25-Feb-20	06:39:54
79	79	200224P1-79	2000343-06 GW2002111455GSC 0.24081	25-Feb-20	06:50:25
80	80	200224P1-80	2000343-07 GW2002111525MK 0.24827	25-Feb-20	07:00:53
81	81	200224P1-81	2000343-08 GW2002111530GSC 0.25174	25-Feb-20	07:11:25
82	82	200224P1-82	2000343-09 GW2002111605GSC 0.25577	25-Feb-20	07:21:53
83	83	200224P1-83	2000343-10 GW2002120815GSC 0.25137	25-Feb-20	07:32:26
84	84	200224P1-84	IB	25-Feb-20	07:42:55
85	85	200224P1-85	ST200224P1-14 PFC CS3 20B1107	25-Feb-20	07:53:26
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88	88	200224P1-88	2000343-12 GW2002120910GSC 0.24691	25-Feb-20	08:24:57
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90	90	200224P1-90	2000343-14 GW2002121005MK 0.24005	25-Feb-20	08:45:57
91	91	200224P1-91	2000343-15 GW2002121045MK 0.25349	25-Feb-20	08:56:28
92	92	200224P1-92	2000343-16 GW2002121135MK 0.24822	25-Feb-20	09:06:57
93	93	200224P1-93	2000343-17 GW2002121225MK 0.25257	25-Feb-20	09:17:28
94	94	200224P1-94	2000343-18 GW2002121450MK 0.25418	25-Feb-20	09:27:59
95	95	200224P1-95	2000343-19 GW2002121535GSC 0.24983	25-Feb-20	09:38:27
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97	97	200224P1-97	IB	25-Feb-20	09:59:28
98	98	200224P1-98	ST200224P1-15 PFC CS3 20B1107	25-Feb-20	10:10:00
99	99	200224P1-99	IB	25-Feb-20	10:20:29
100	100	200224P1-100	B0B0072-BS2 OPR 0.125	25-Feb-20	10:30:59
101	101	200224P1-101	2000305-01 8 Chestnut Dr 0.11658	25-Feb-20	10:41:31
102	102	200224P1-102	2000305-02 10 Chestnut Dr 0.11788	25-Feb-20	10:51:59
103	103	200224P1-103	IB	25-Feb-20	11:02:31
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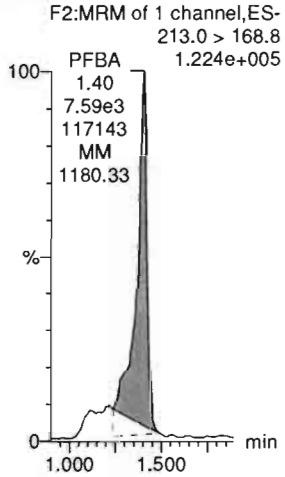
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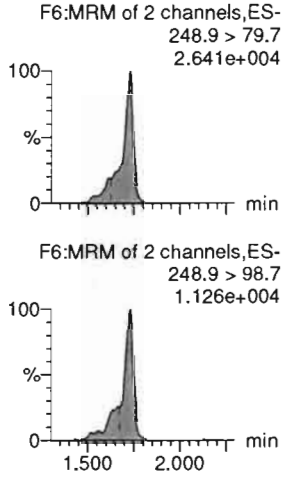
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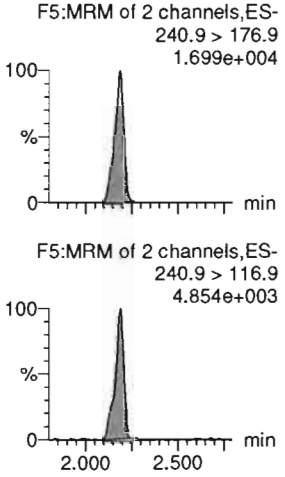
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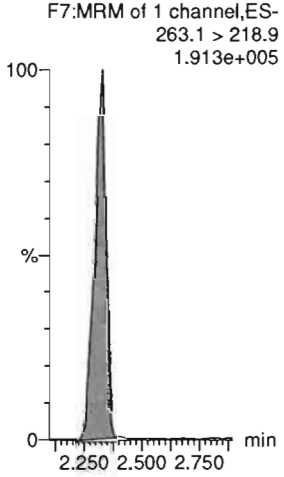
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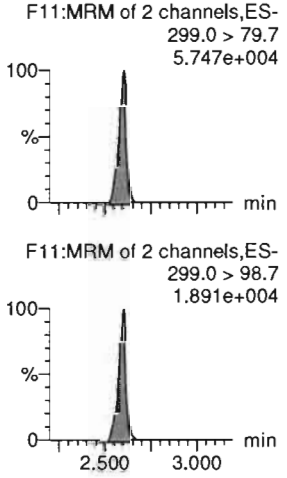
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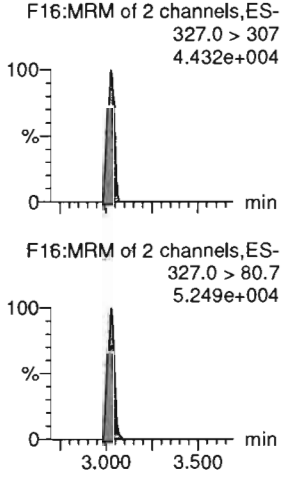
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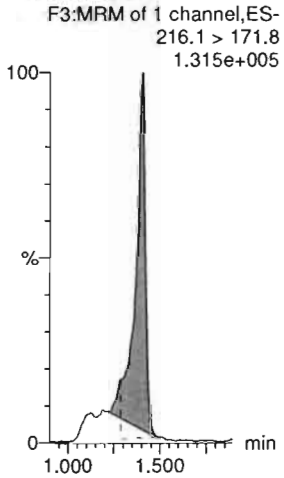
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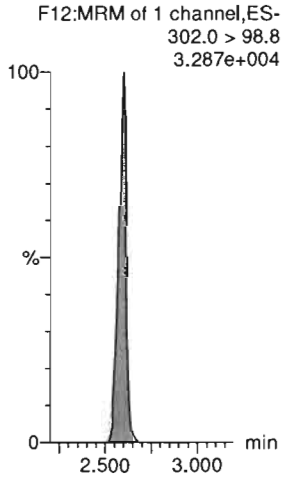
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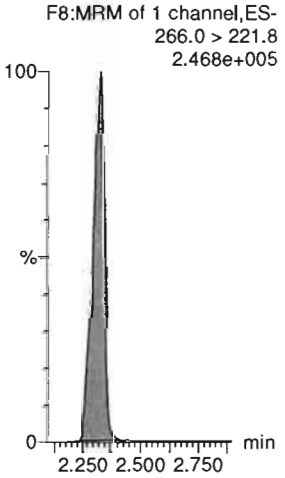
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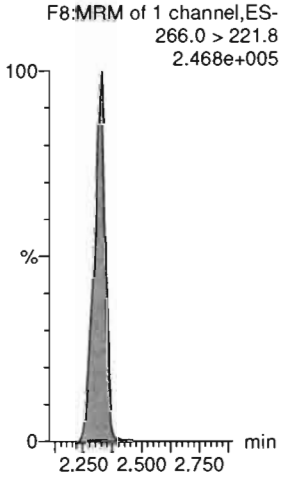
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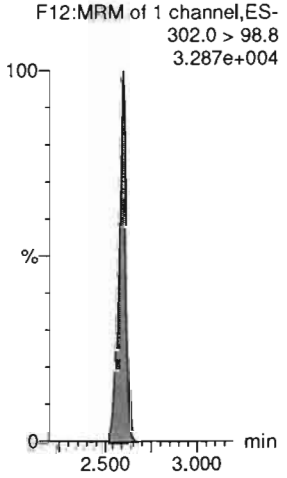
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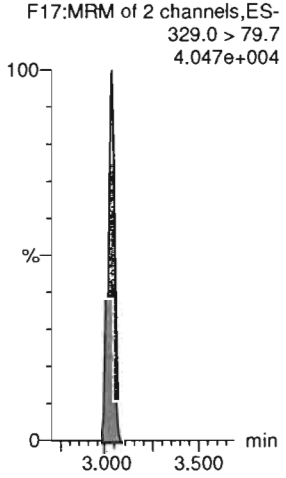
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

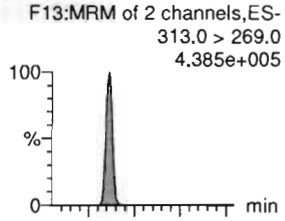


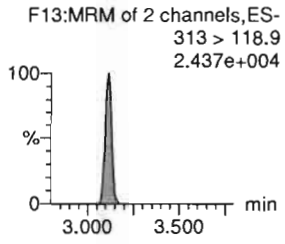
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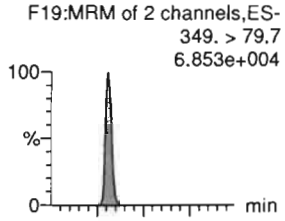
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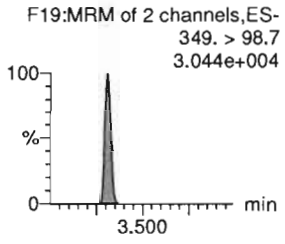
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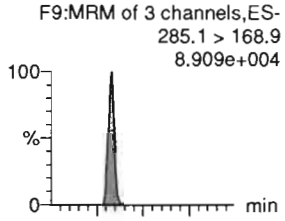


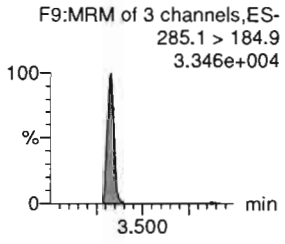
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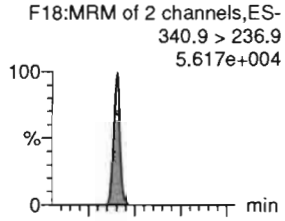


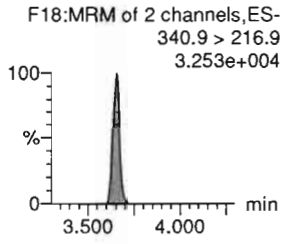
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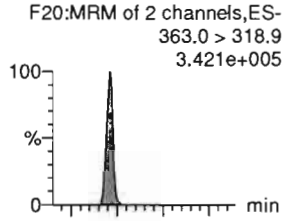


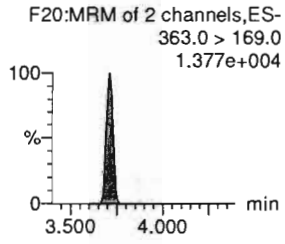
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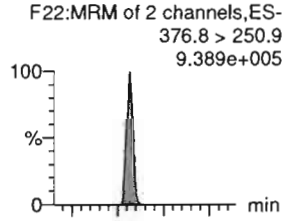


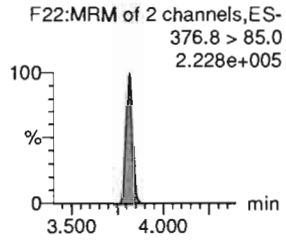
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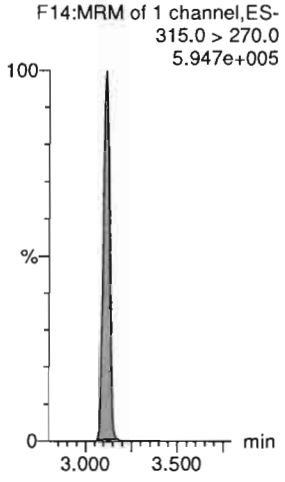


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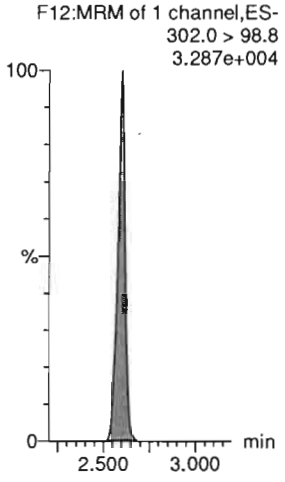




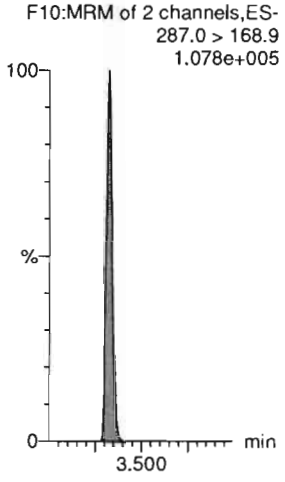
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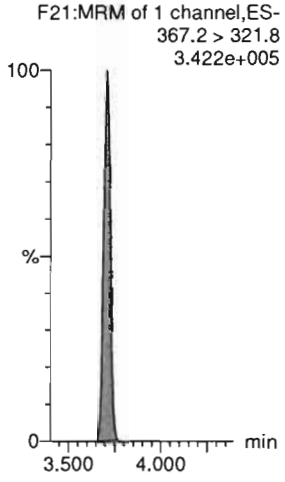
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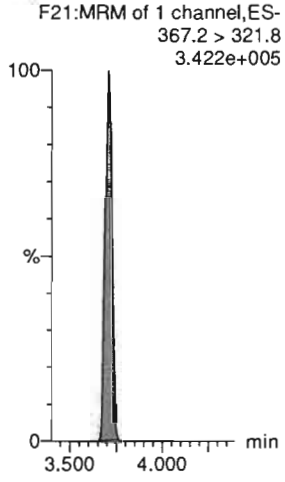
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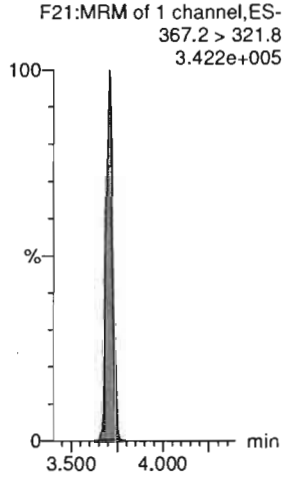
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



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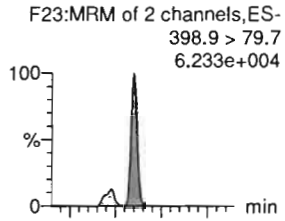
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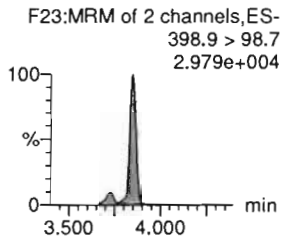
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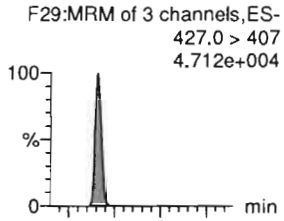
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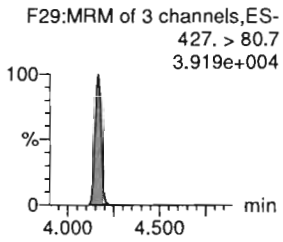
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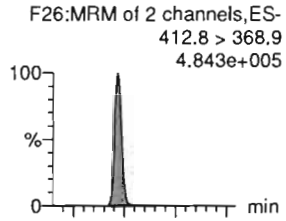


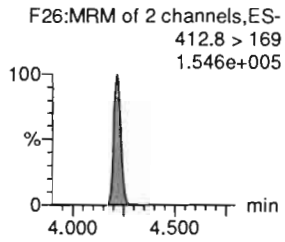
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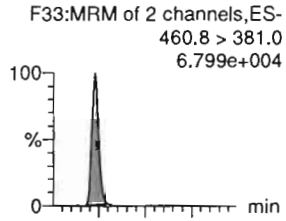


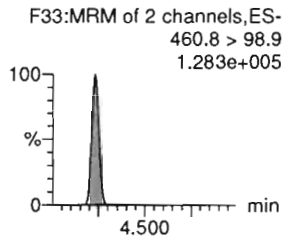
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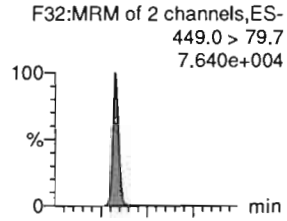


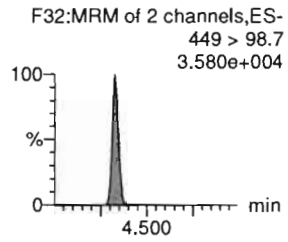
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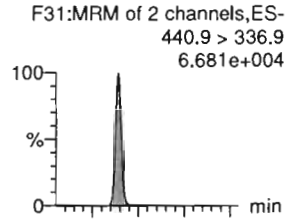


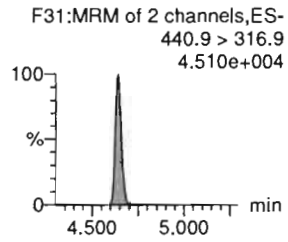
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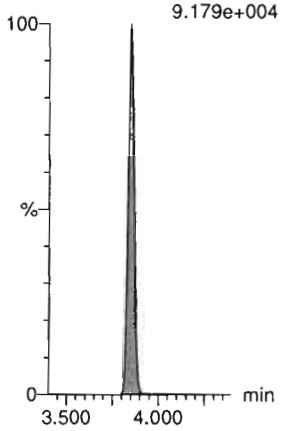


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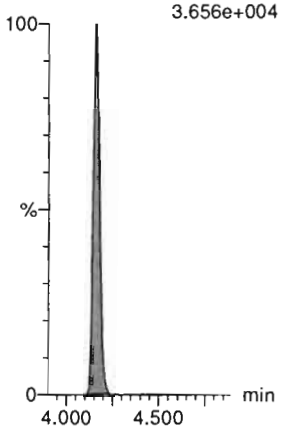




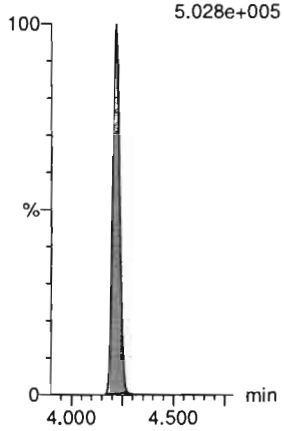
13C3-PFHxS-EIS



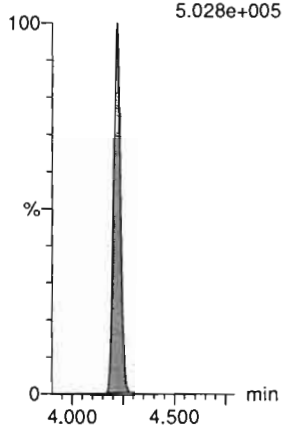
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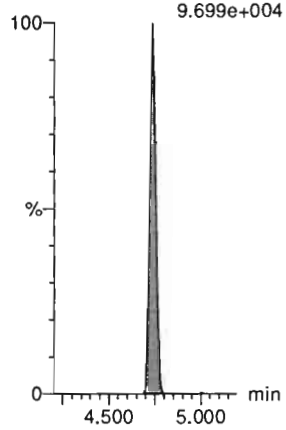
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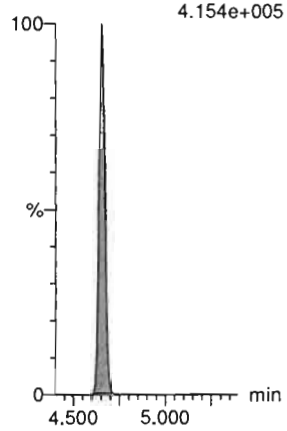
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13C8-PFOS-EIS



13C5-PFNA-EIS

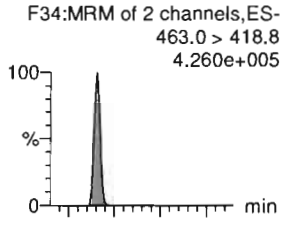


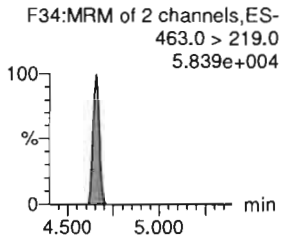
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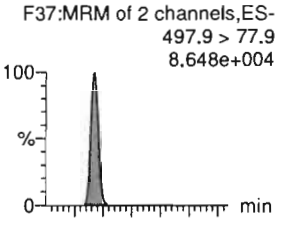
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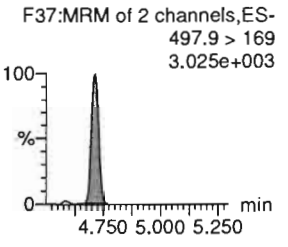
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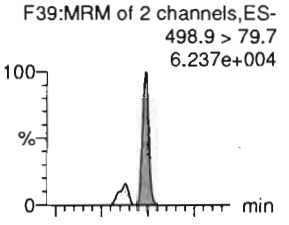


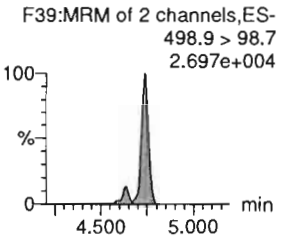
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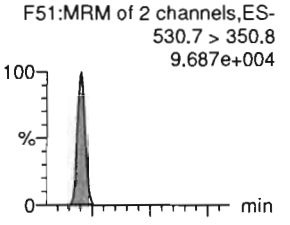


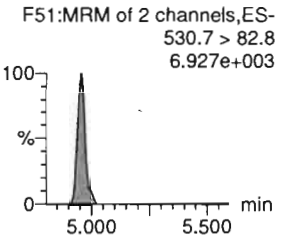
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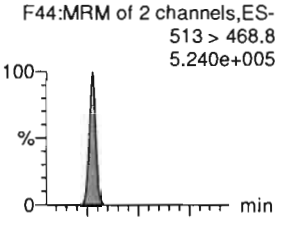


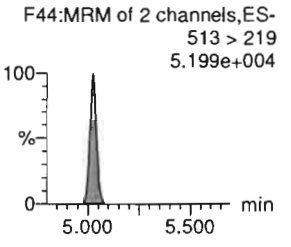
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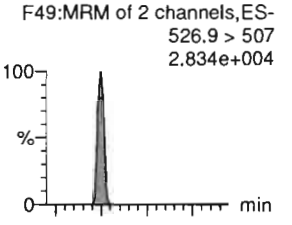


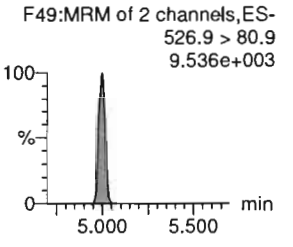
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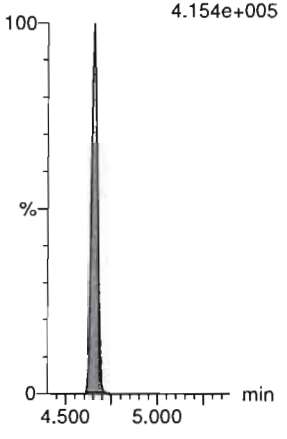


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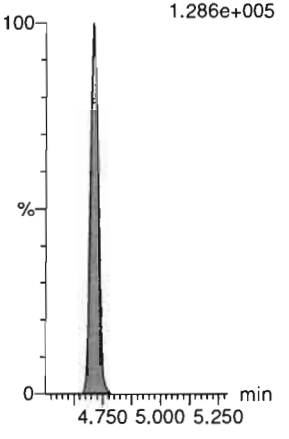




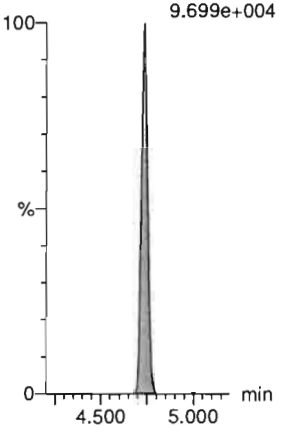
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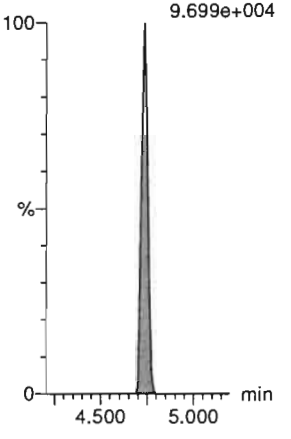
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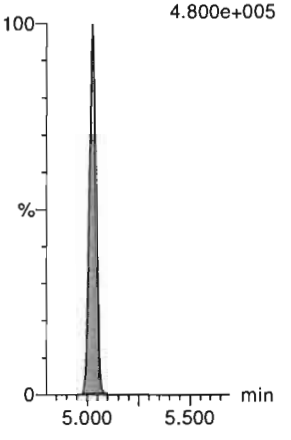
13C8-PFOS-EIS



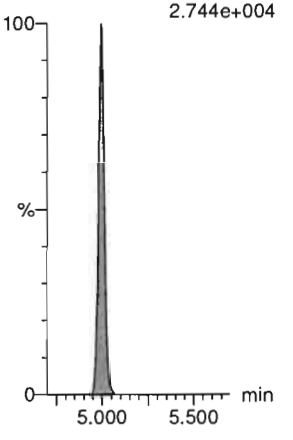
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

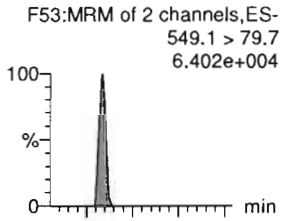


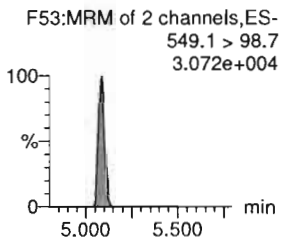
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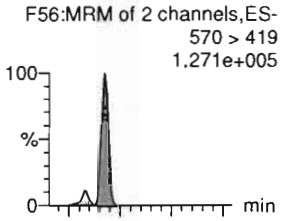
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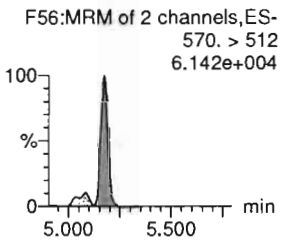
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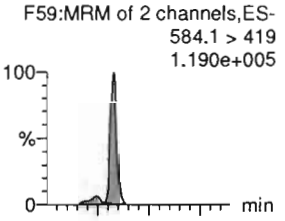


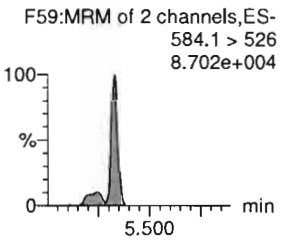
L-MeFOSAA



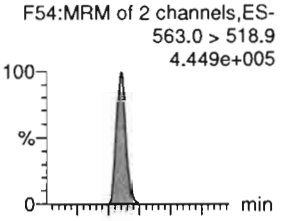


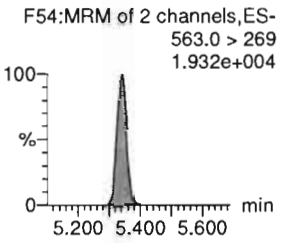
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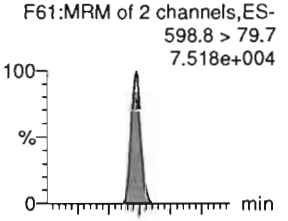


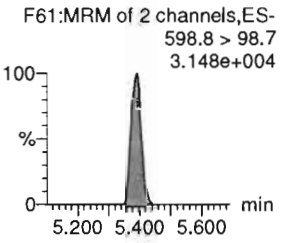
PFUdA



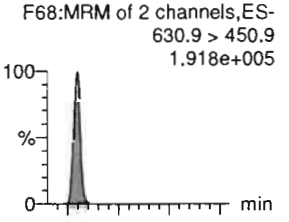


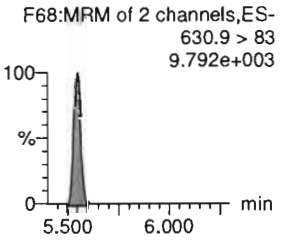
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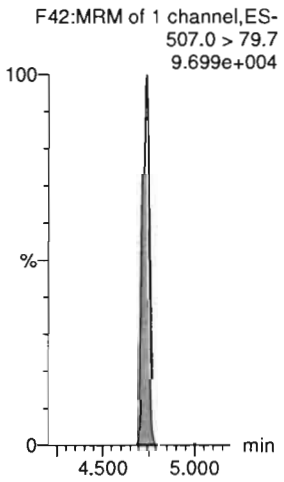


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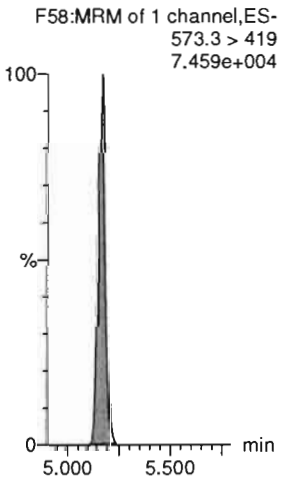




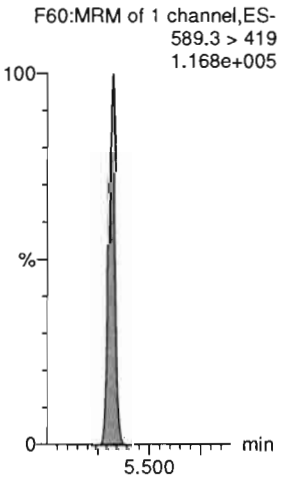
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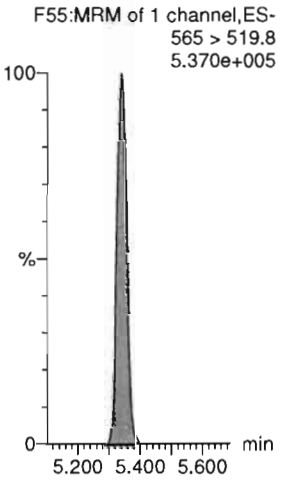
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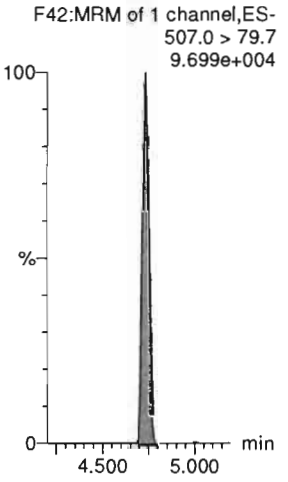
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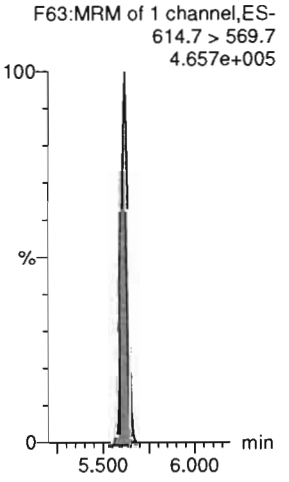
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13C8-PFOS-EIS



13C2-PFDoA-EIS

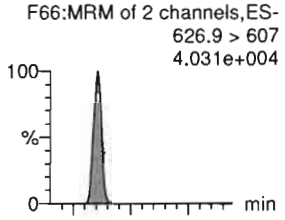


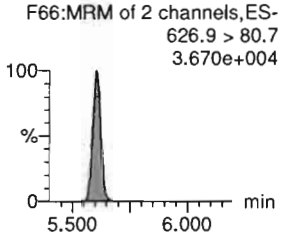
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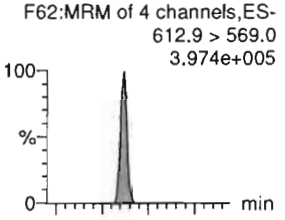
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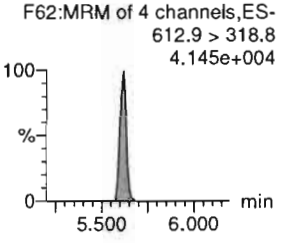
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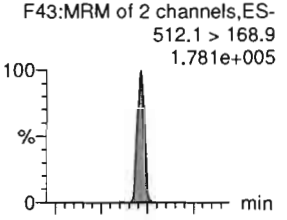


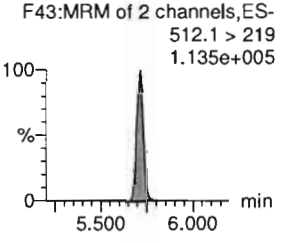
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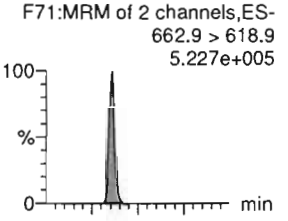


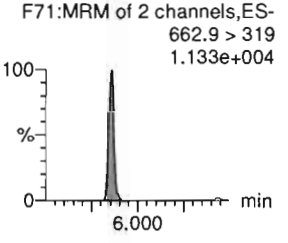
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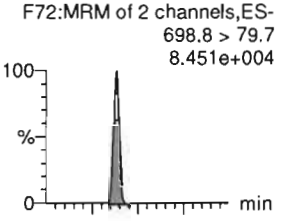


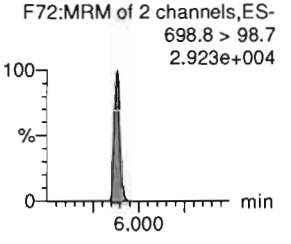
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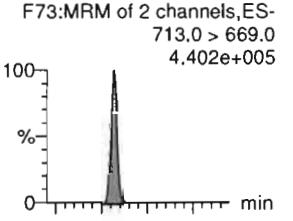


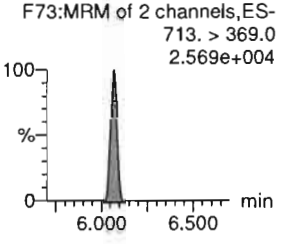
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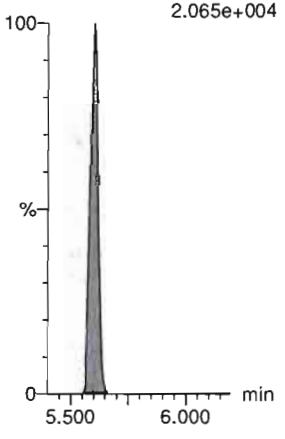


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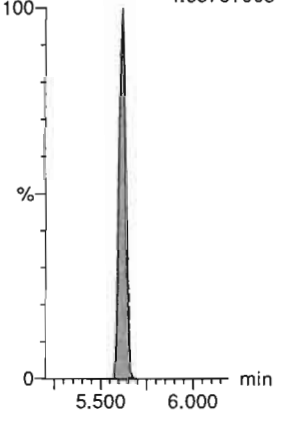




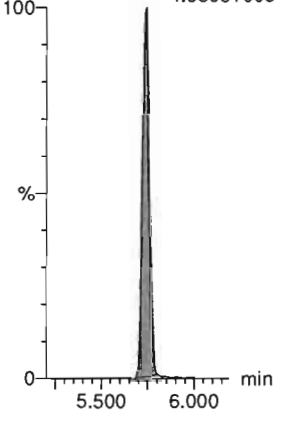
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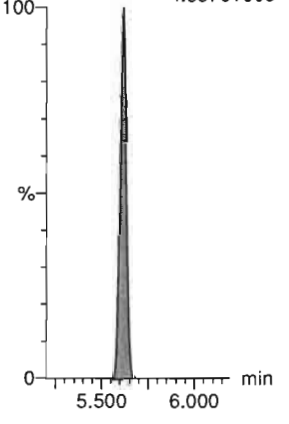
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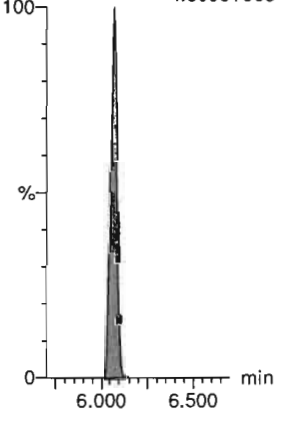
d3-N-MeFOSA-EIS



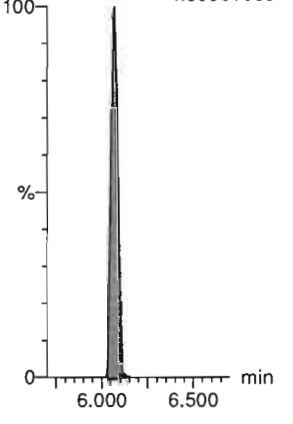
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

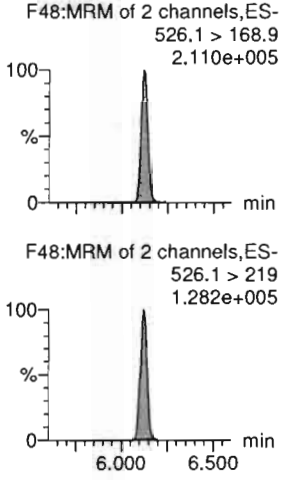


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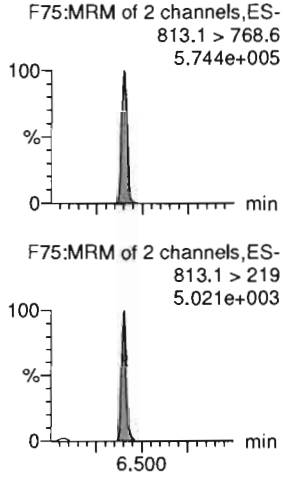
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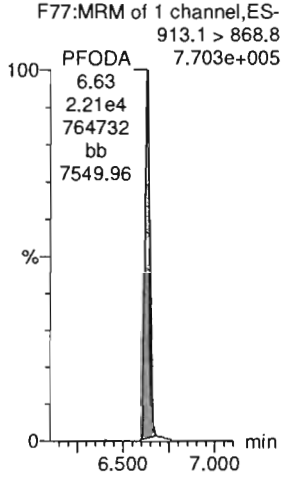
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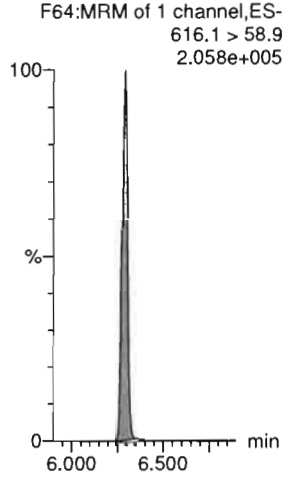
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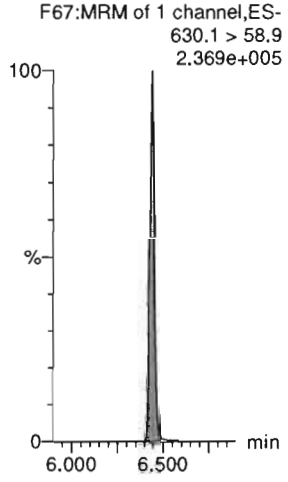
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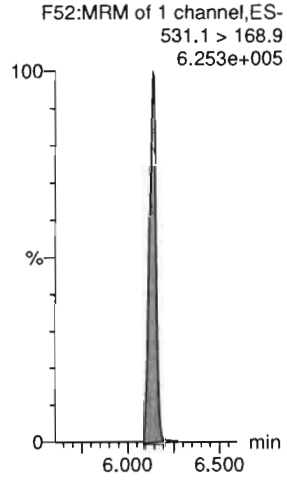
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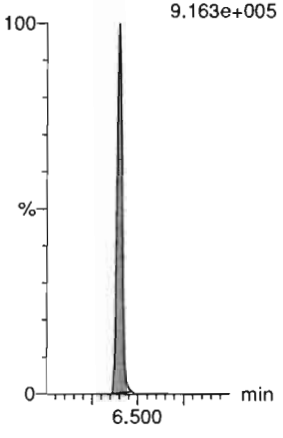
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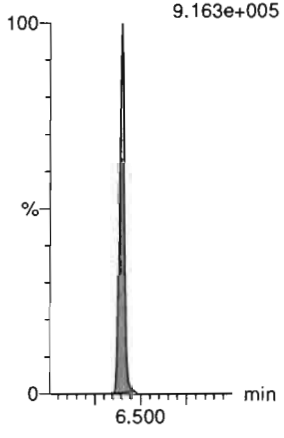
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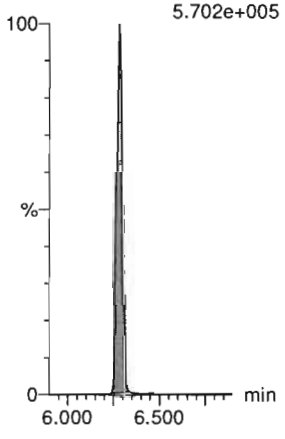
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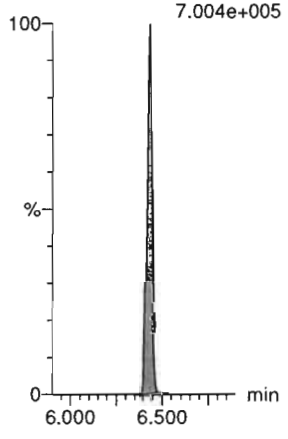
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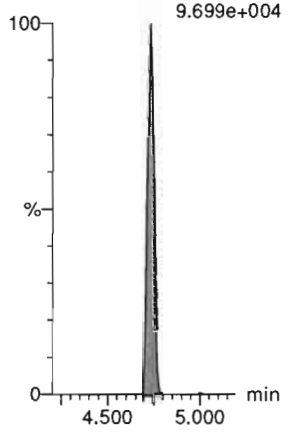
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d9-N-EtFOSE-EIS



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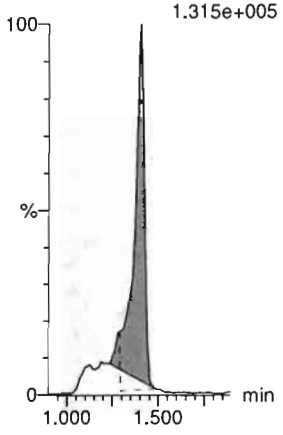


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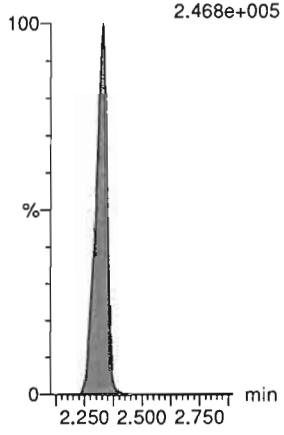
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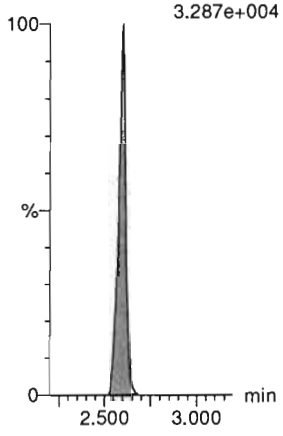
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F3:MRM of 1 channel,ES-
216.1 > 171.8
1.315e+005



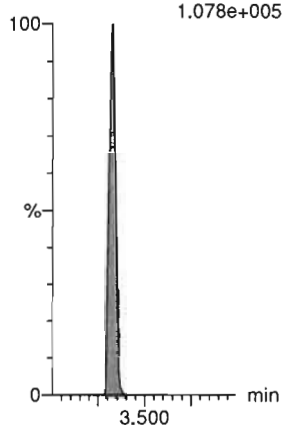
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F8:MRM of 1 channel,ES-
266.0 > 221.8
2.468e+005



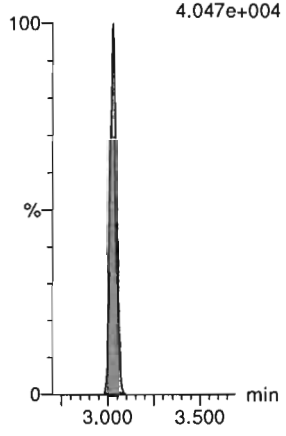
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F12:MRM of 1 channel,ES-
302.0 > 98.8
3.287e+004



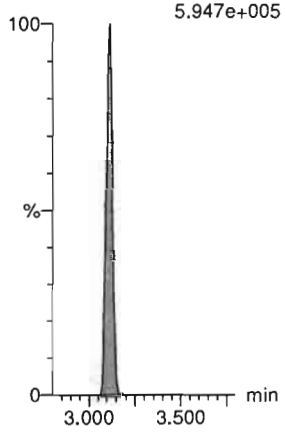
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F10:MRM of 2 channels,ES-
287.0 > 168.9
1.078e+005



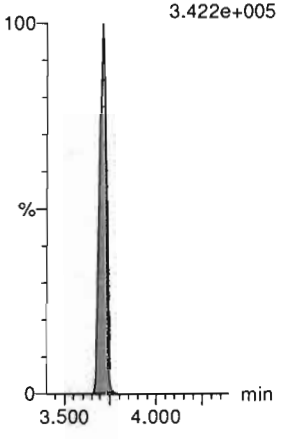
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F17:MRM of 2 channels,ES-
329.0 > 79.7
4.047e+004



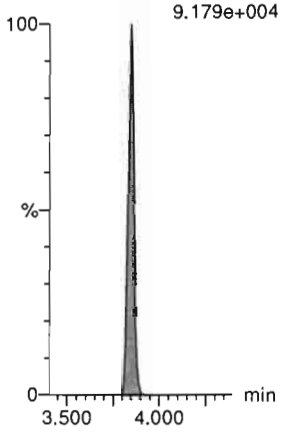
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.947e+005



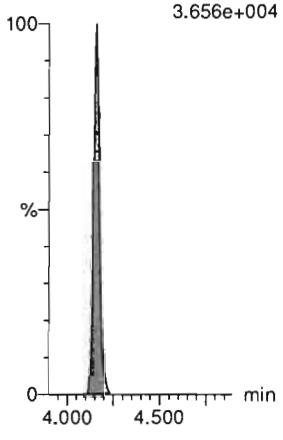
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F21:MRM of 1 channel,ES-
367.2 > 321.8
3.422e+005



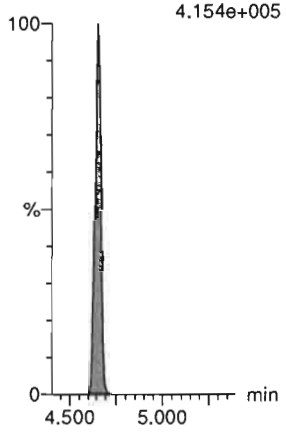
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F24:MRM of 1 channel,ES-
401.8 > 79.7
9.179e+004



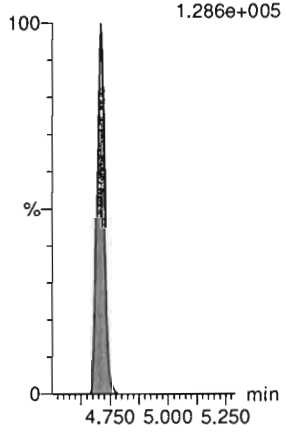
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.656e+004



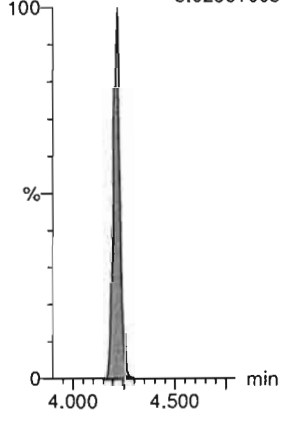
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.154e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.286e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.028e+005

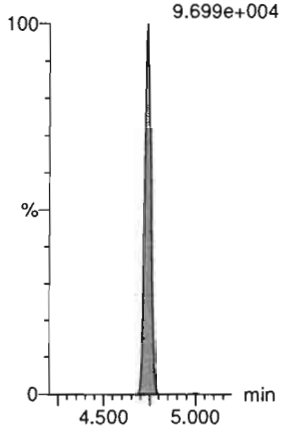


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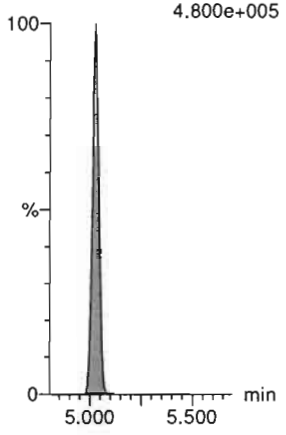
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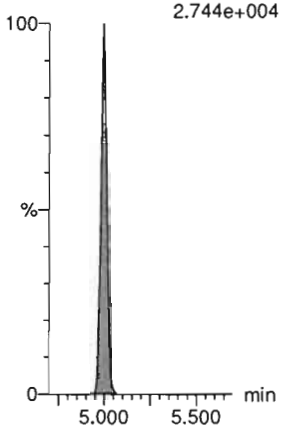
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.699e+004



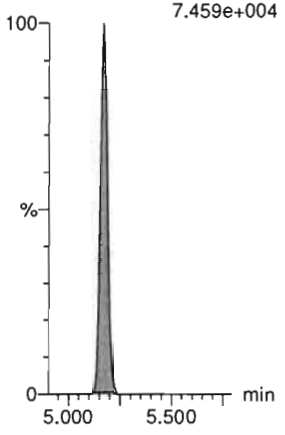
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.800e+005



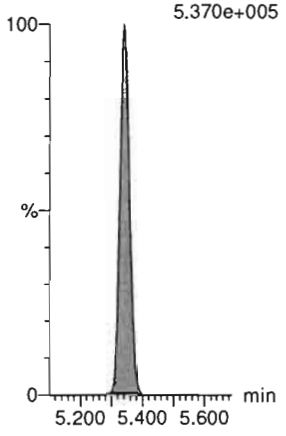
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F50:MRM of 1 channel,ES-
529 > 79.7
2.744e+004



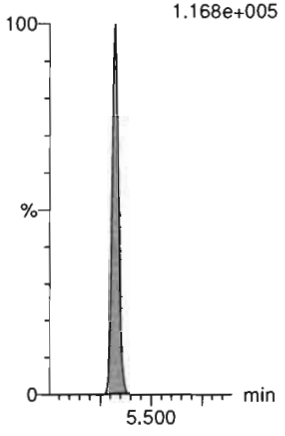
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F58:MRM of 1 channel,ES-
573.3 > 419
7.459e+004



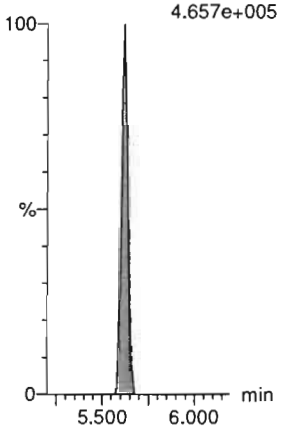
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F55:MRM of 1 channel,ES-
565 > 519.8
5.370e+005



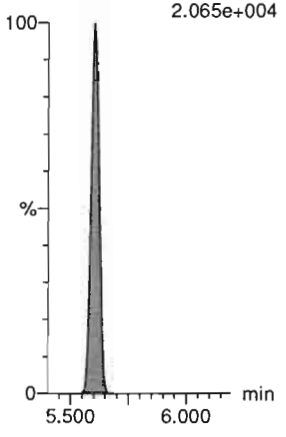
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F60:MRM of 1 channel,ES-
589.3 > 419
1.168e+005



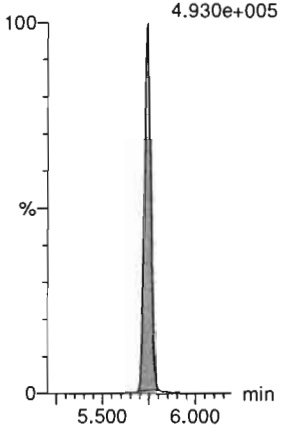
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.657e+005



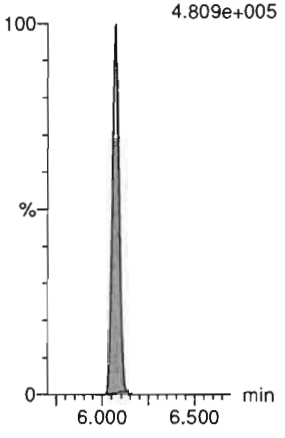
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.065e+004



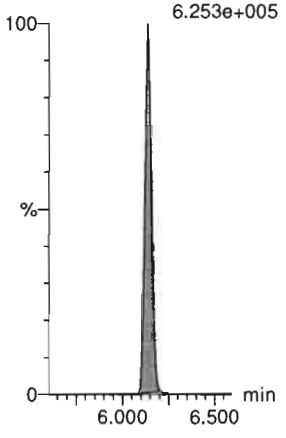
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.930e+005



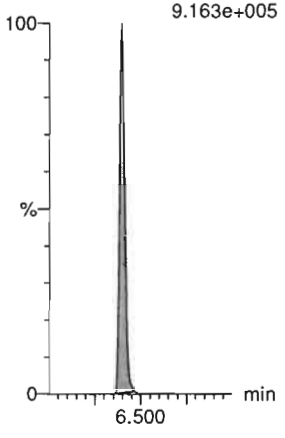
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.809e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.253e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.163e+005

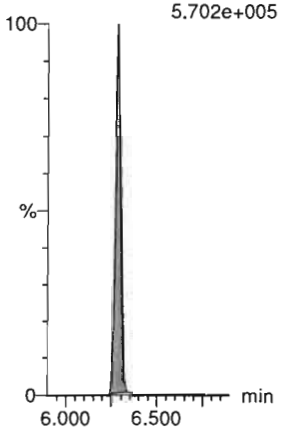


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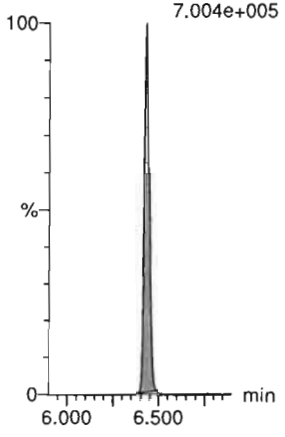
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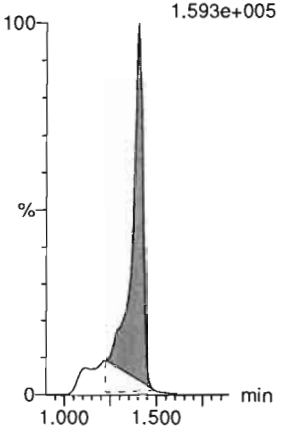
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.702e+005



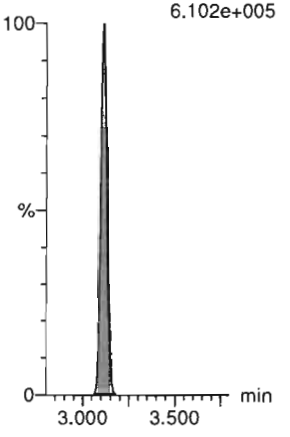
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.004e+005



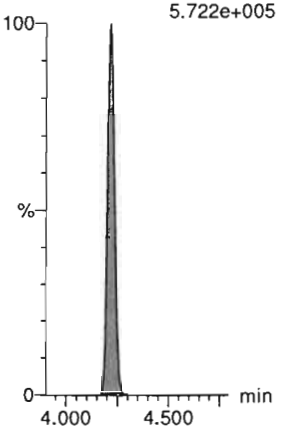
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.593e+005



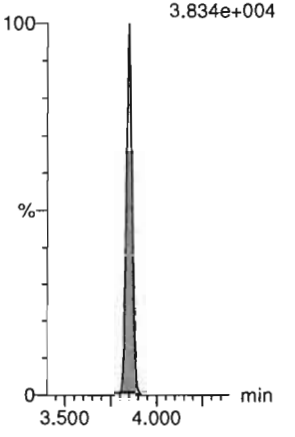
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
6.102e+005



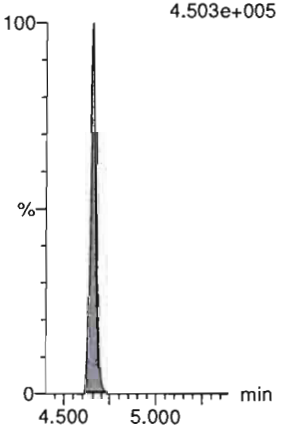
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
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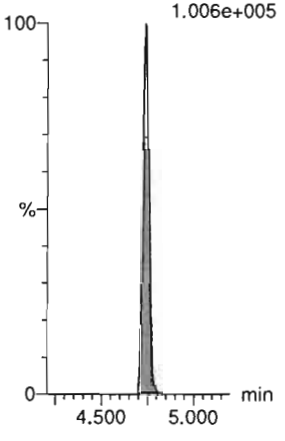
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.834e+004



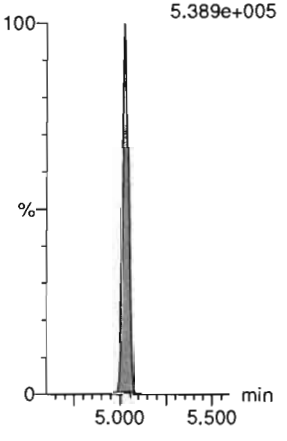
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.503e+005



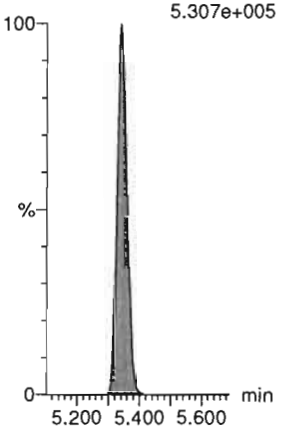
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.006e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.389e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.307e+005



Vista Analytical Laboratory

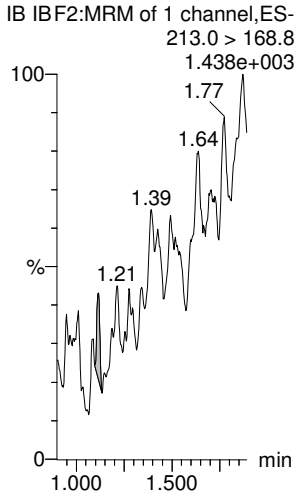
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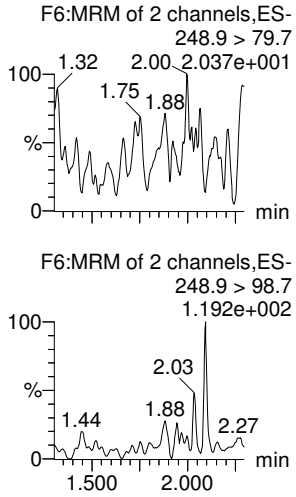
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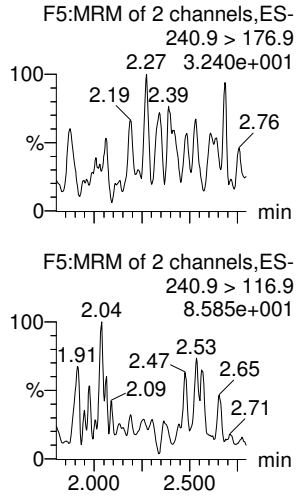
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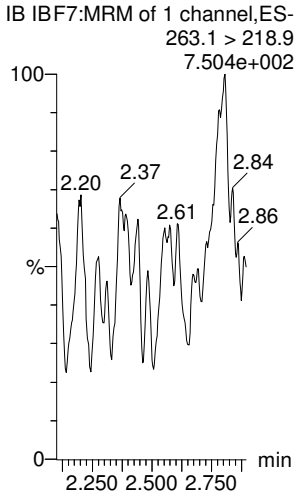
PFPrS



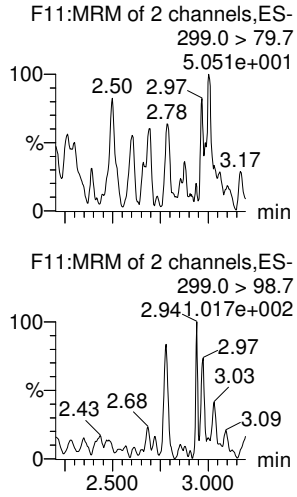
3:3 FTCA



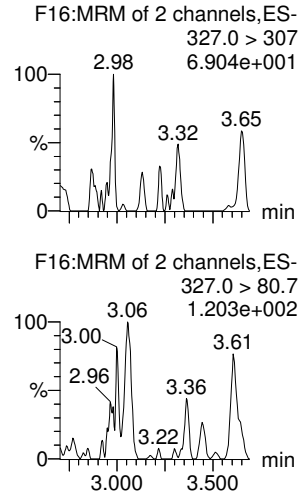
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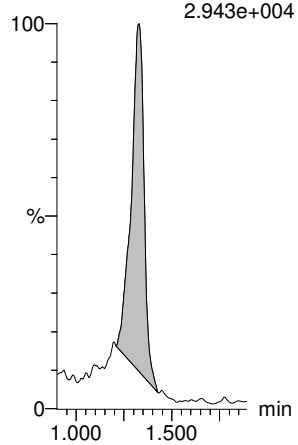
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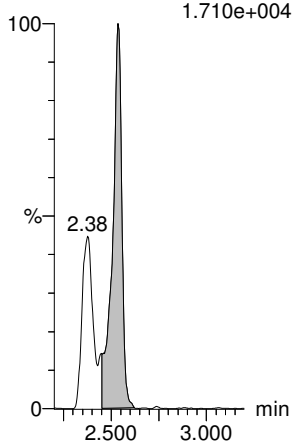
4:2 FTS



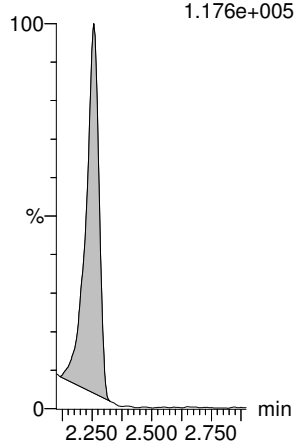
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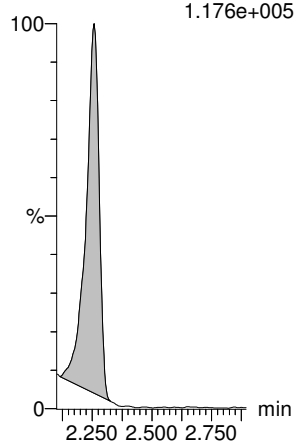
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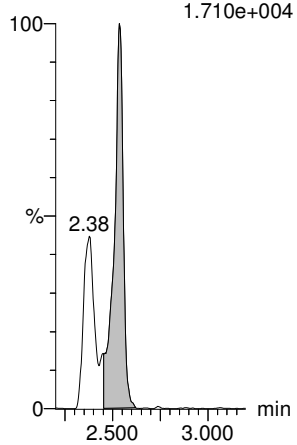
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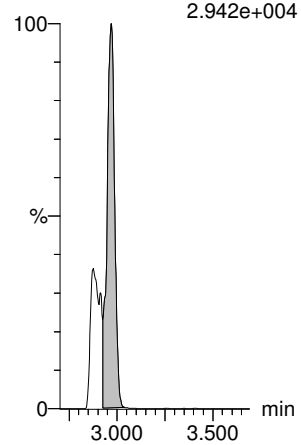
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

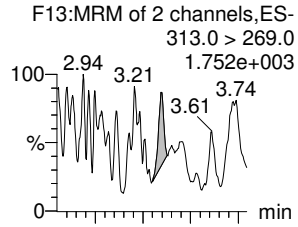


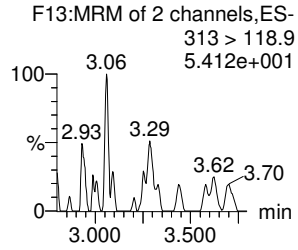
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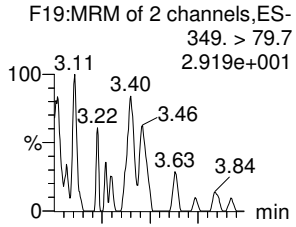
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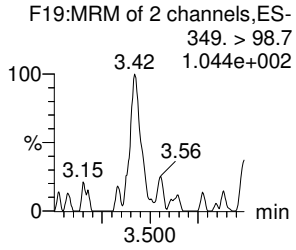
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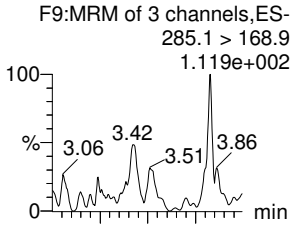


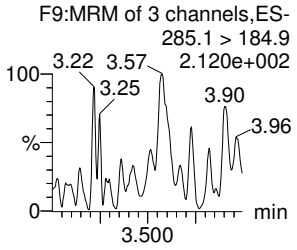
PFPeS



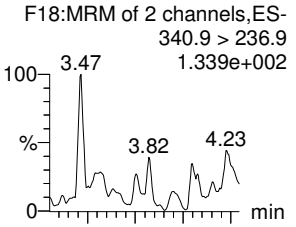


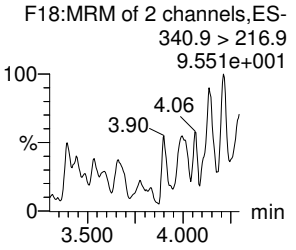
HFPO-DA



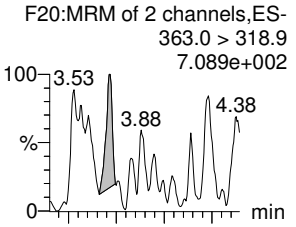


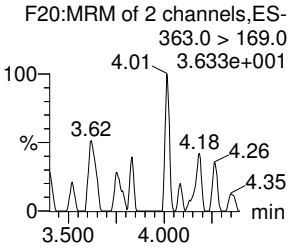
5:3 FTCA



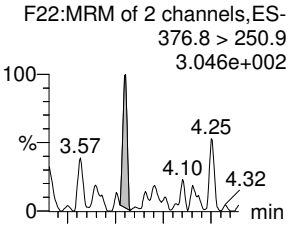


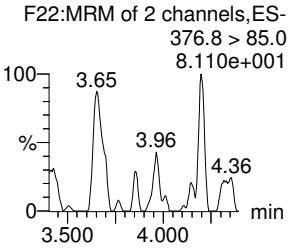
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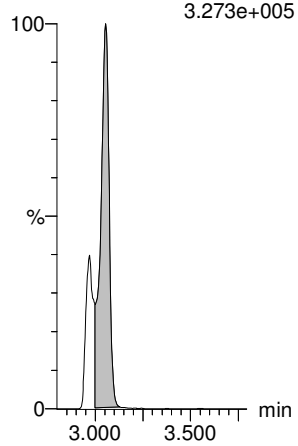


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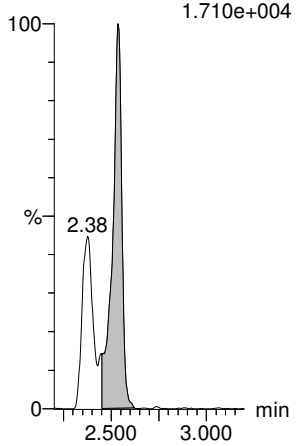




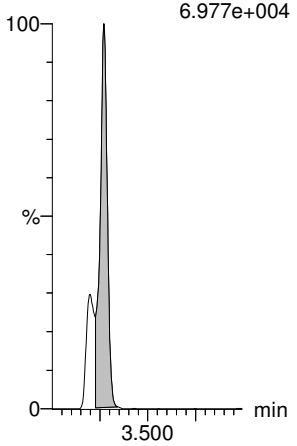
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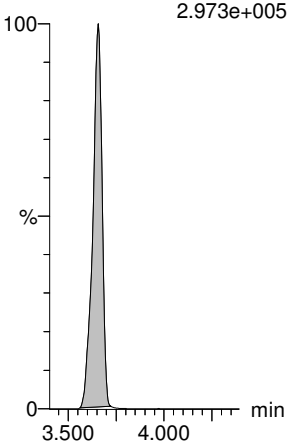
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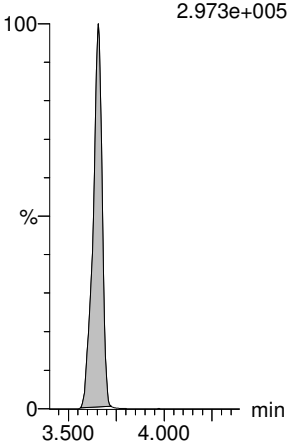
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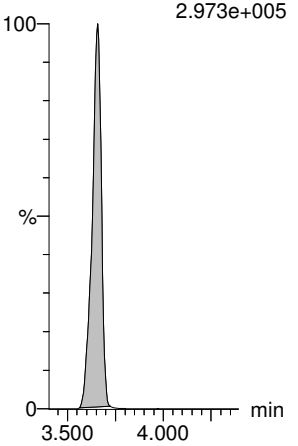
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

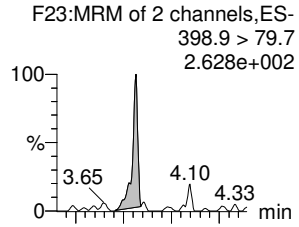


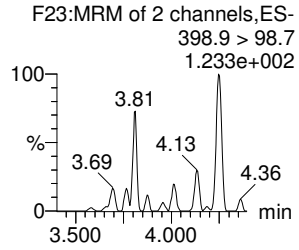
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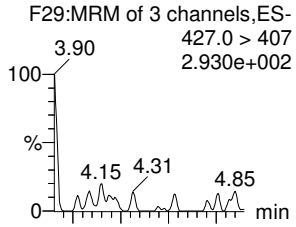
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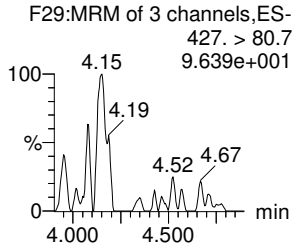
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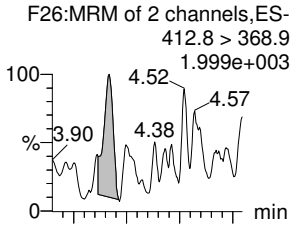


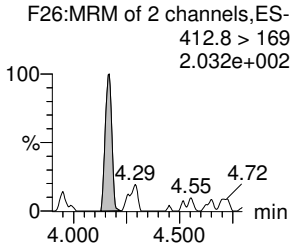
6:2 FTS



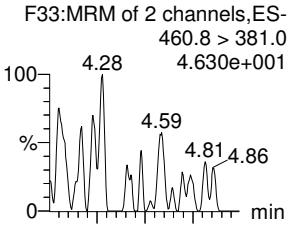


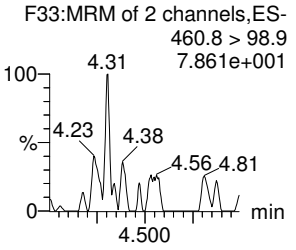
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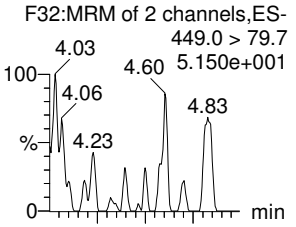


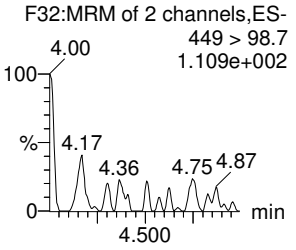
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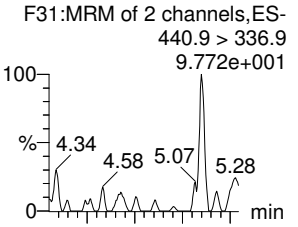


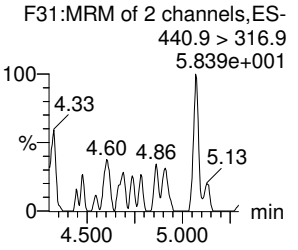
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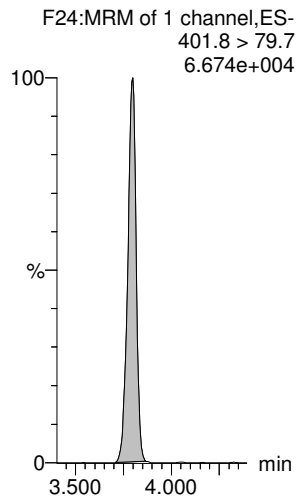


7:3 FTCA

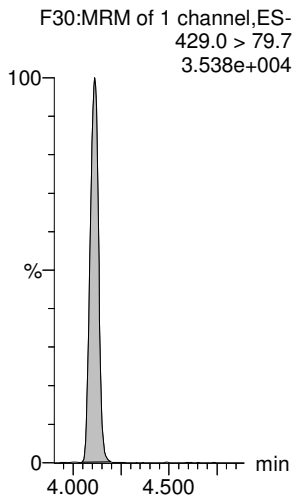




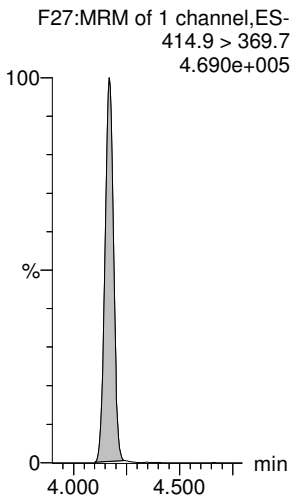
13C3-PFHxS-EIS



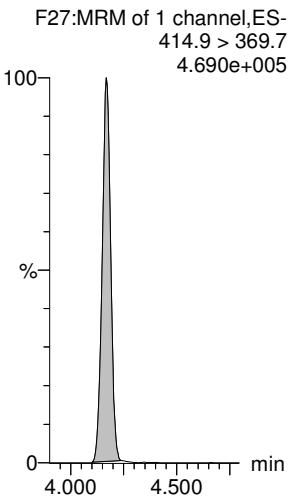
13C2-6:2 FTS-EIS



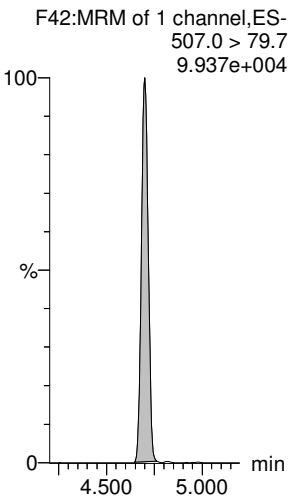
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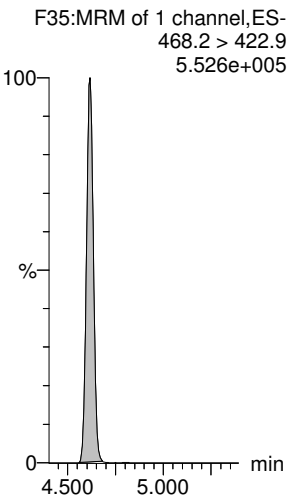
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13C8-PFOS-EIS



13C5-PFNA-EIS

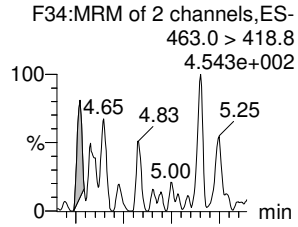


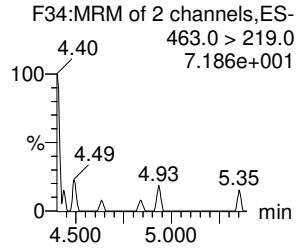
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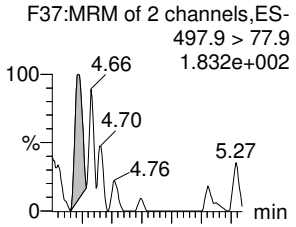
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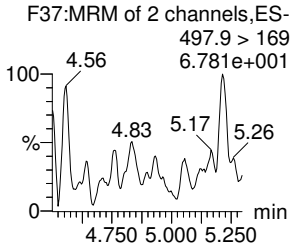
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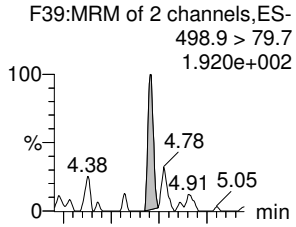


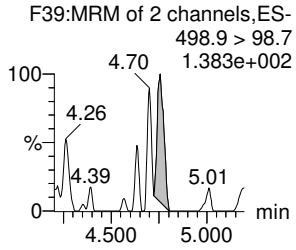
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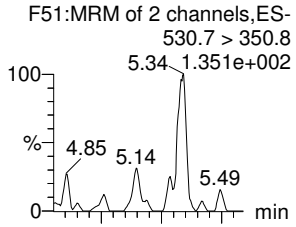


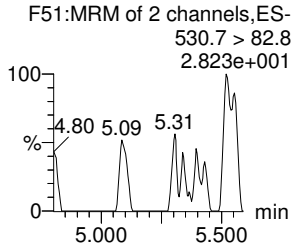
L-PFOS



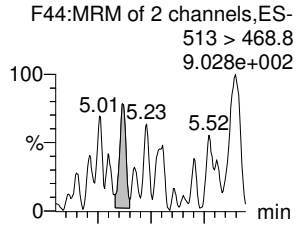


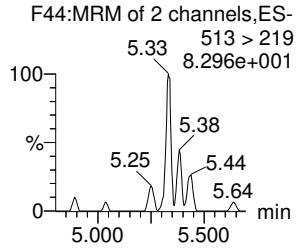
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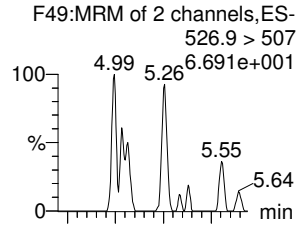


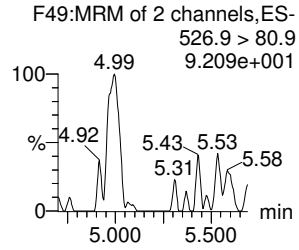
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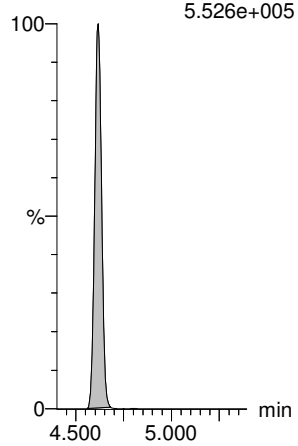


8:2 FTS

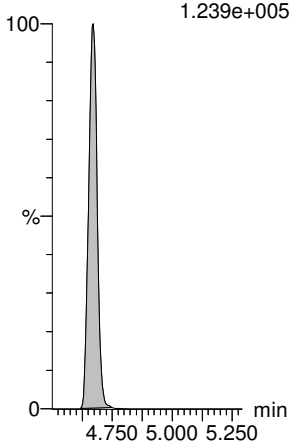




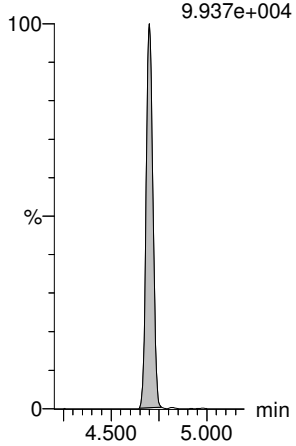
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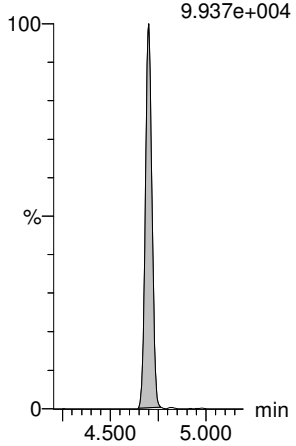
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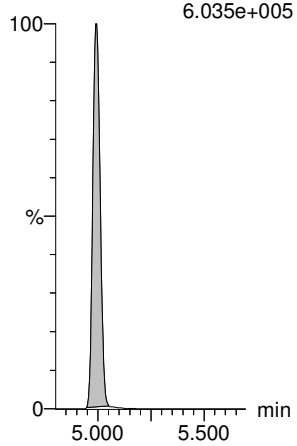
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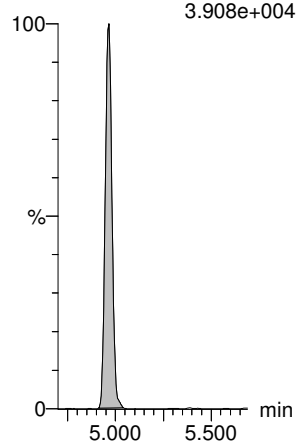
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

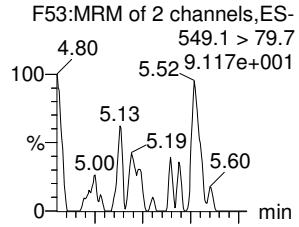


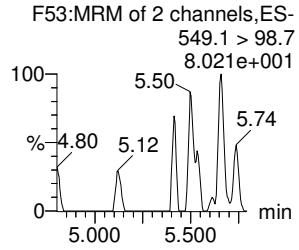
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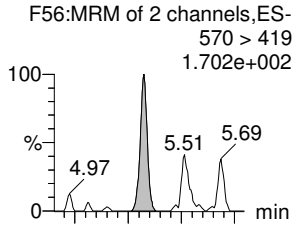
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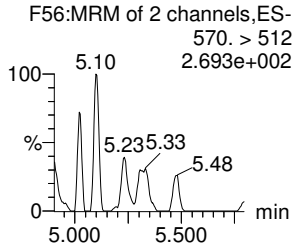
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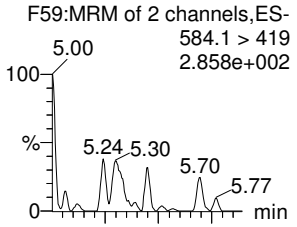


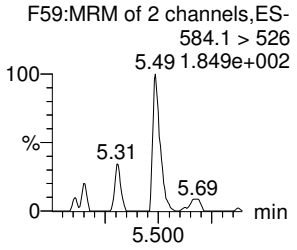
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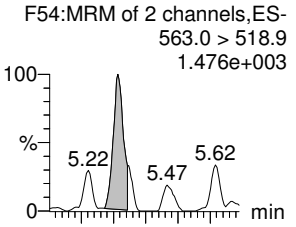


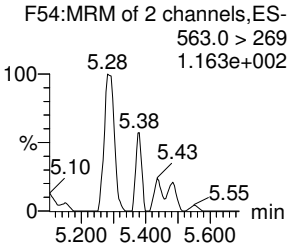
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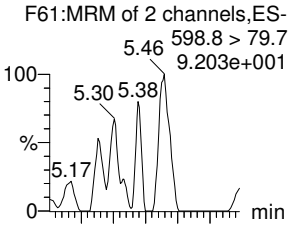


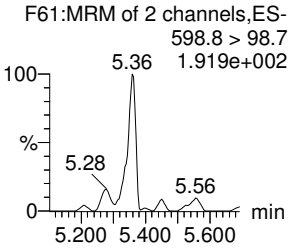
PFUdA



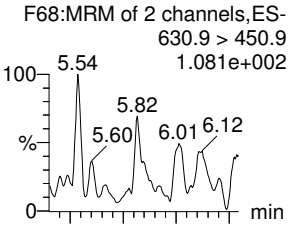


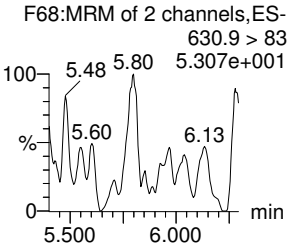
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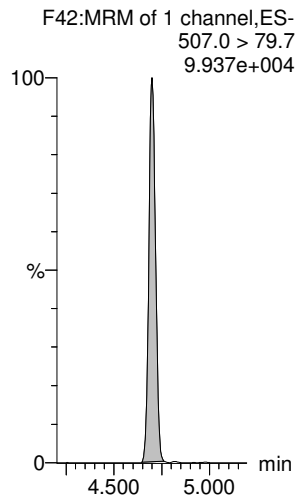


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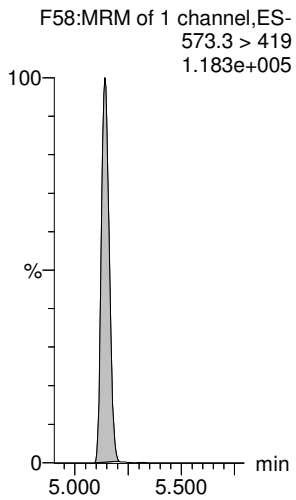




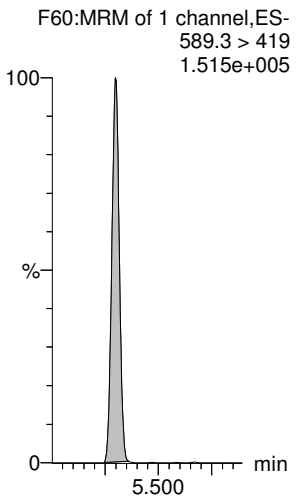
13C8-PFOS-EIS



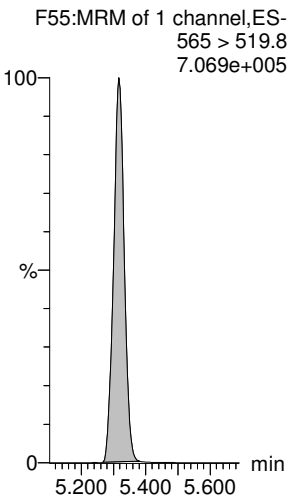
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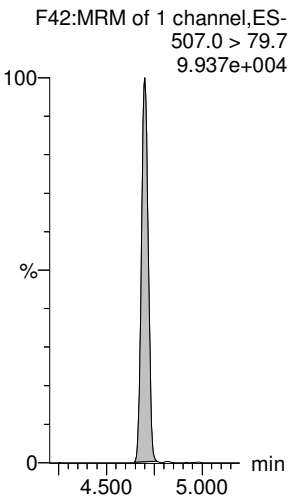
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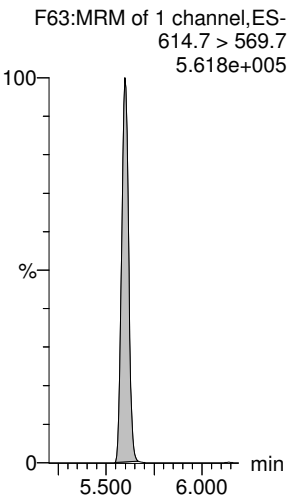
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13C8-PFOS-EIS



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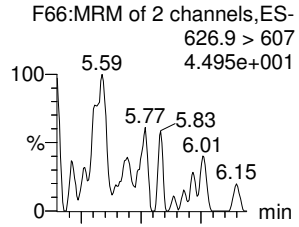


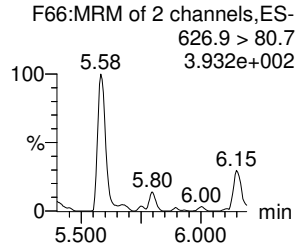
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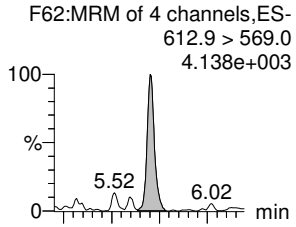
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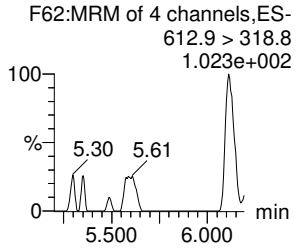
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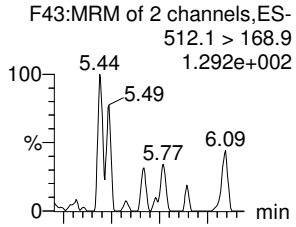


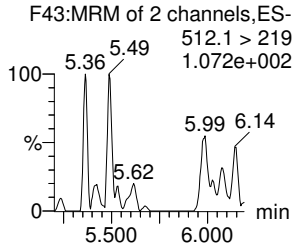
PFDoA



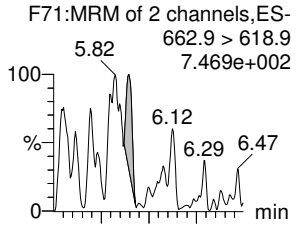


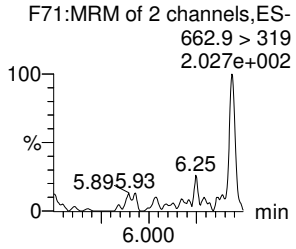
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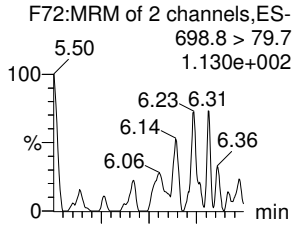


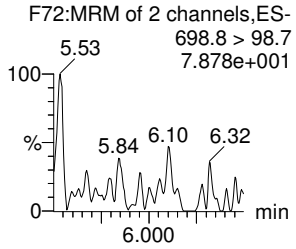
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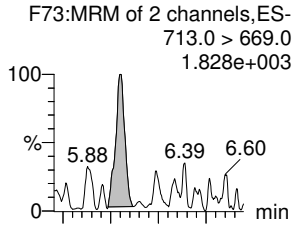


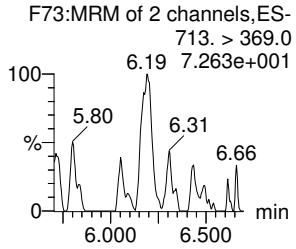
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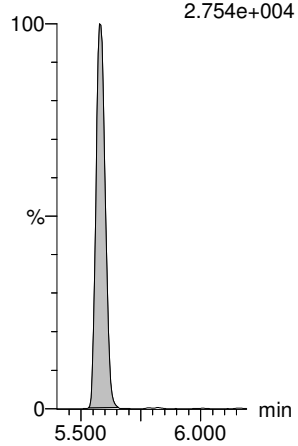


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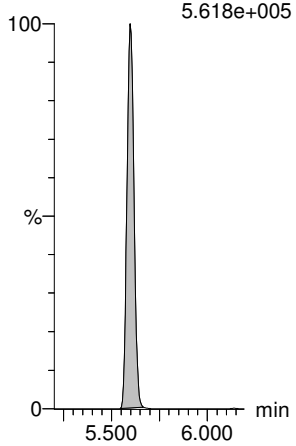




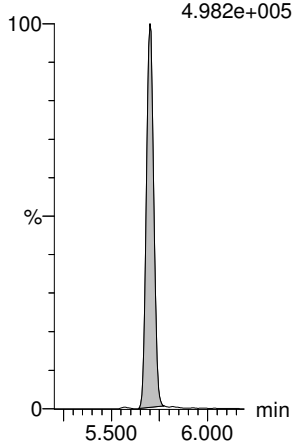
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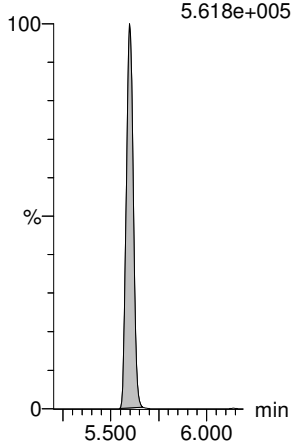
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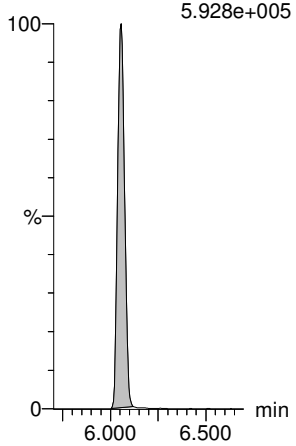
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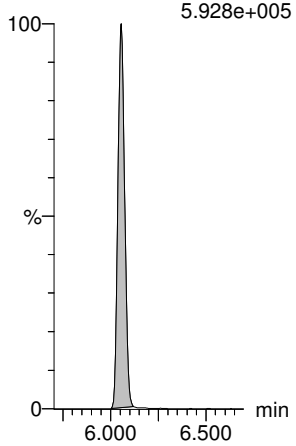
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

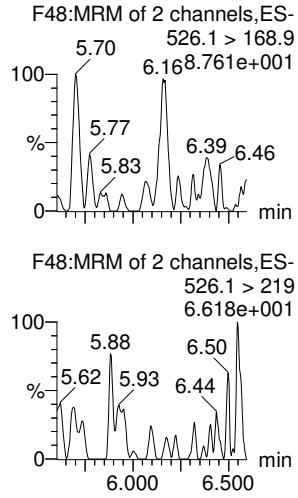


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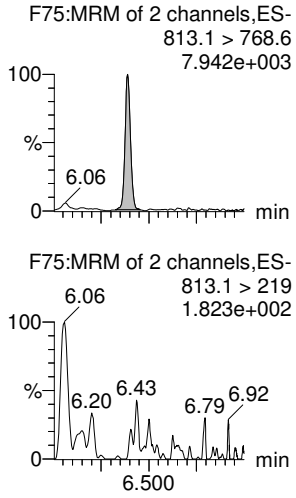
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

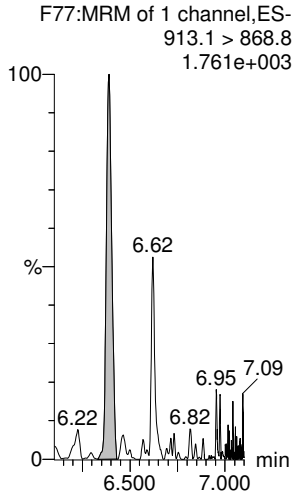
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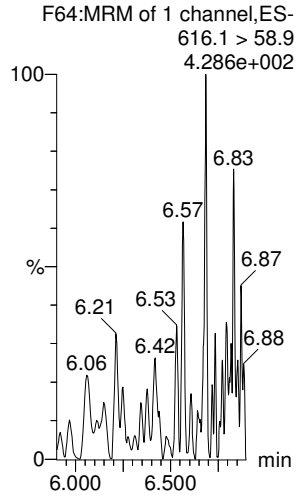
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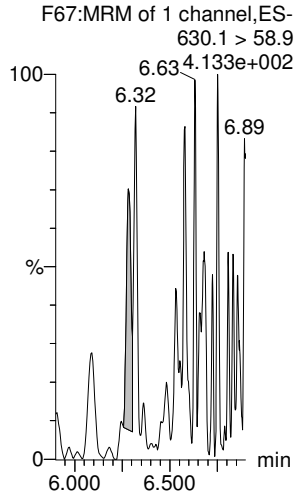
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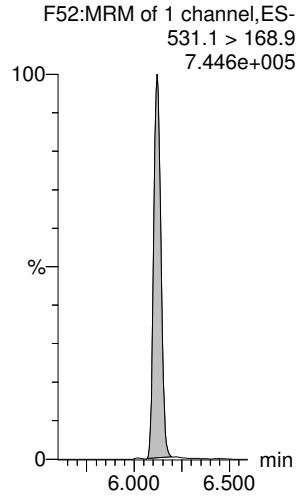
N-MeFOSE



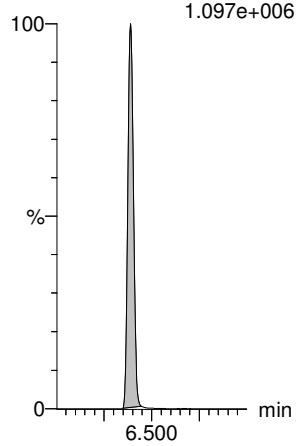
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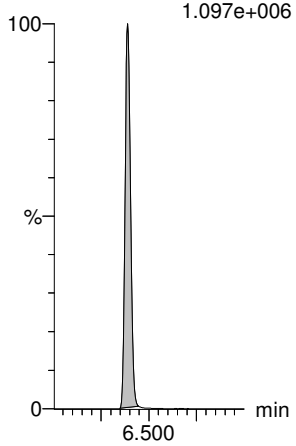
d5-N-ETFOSA-EIS



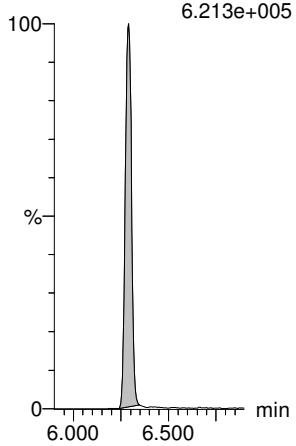
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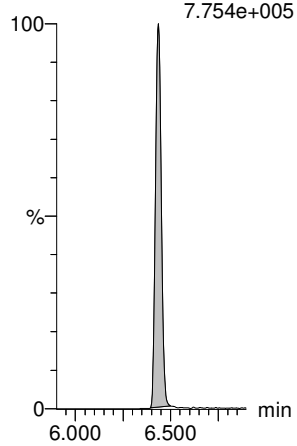
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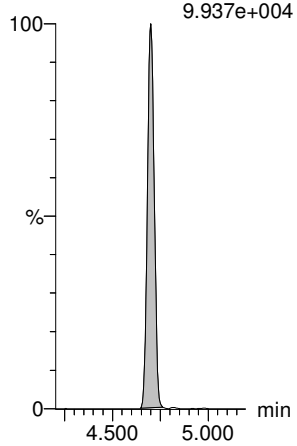
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

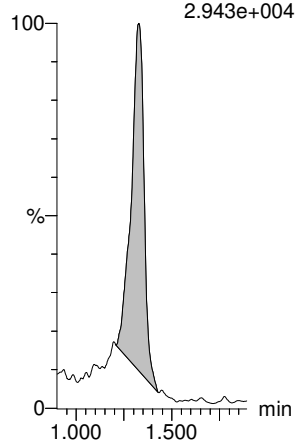


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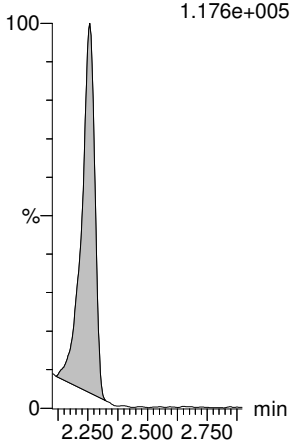
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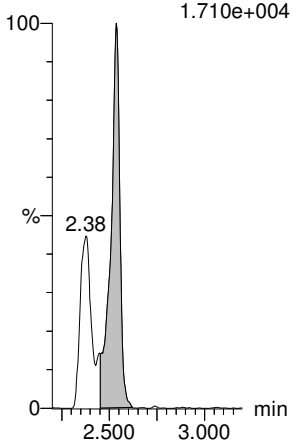
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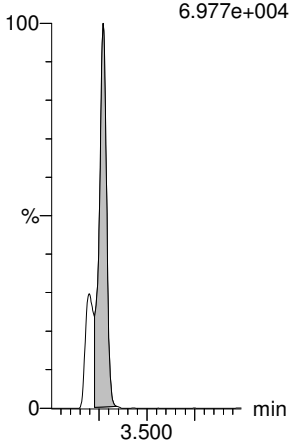
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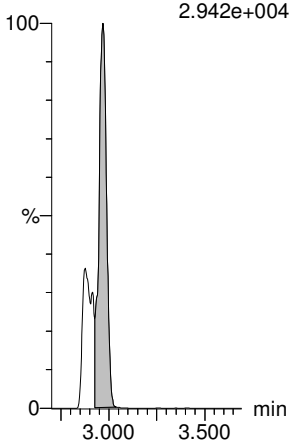
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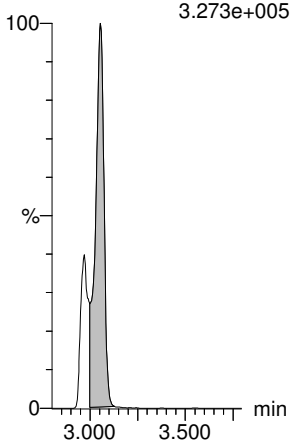
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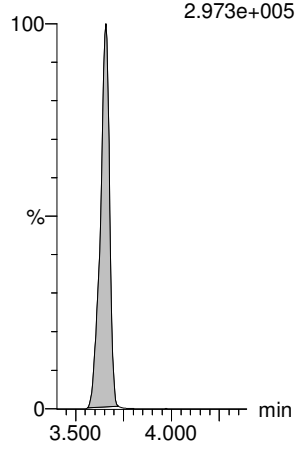
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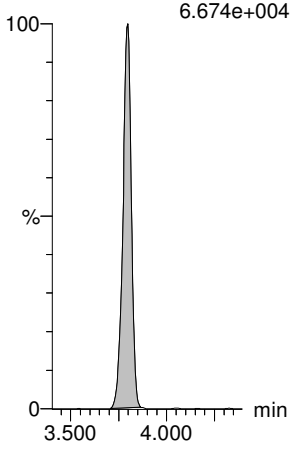
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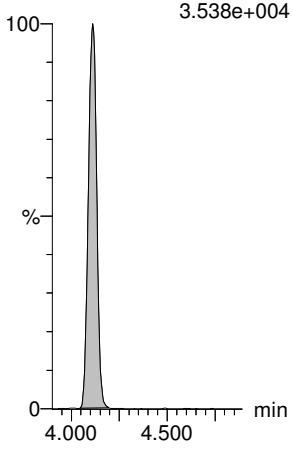
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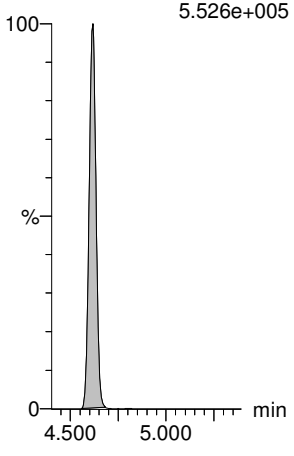
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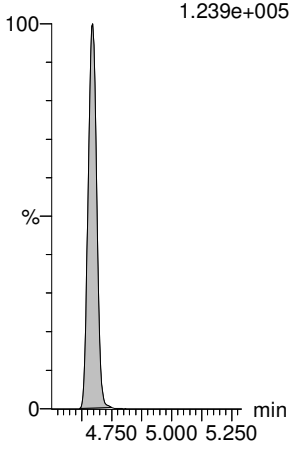
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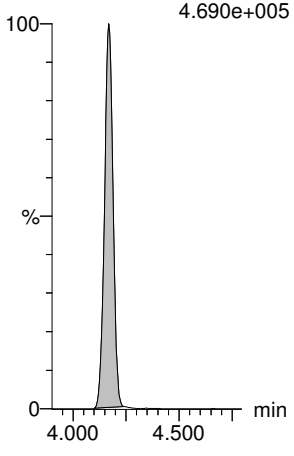
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13C8-PFOSA-RSD



13C2-PFOA-RSD

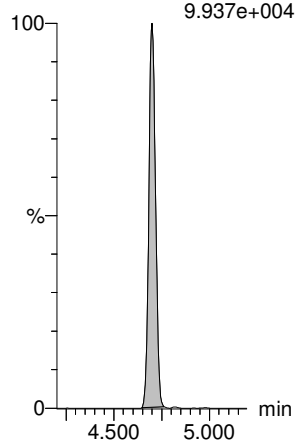


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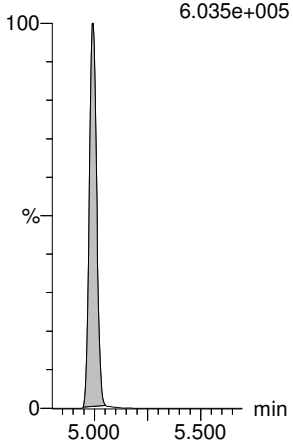
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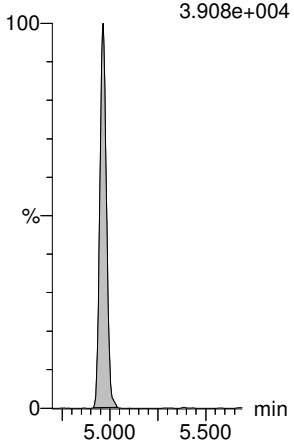
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F42:MRM of 1 channel,ES-
507.0 > 79.7
9.937e+004



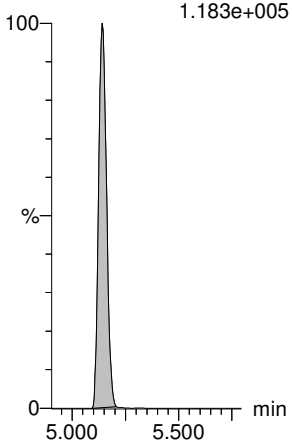
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F45:MRM of 1 channel,ES-
515.1 > 469.9
6.035e+005



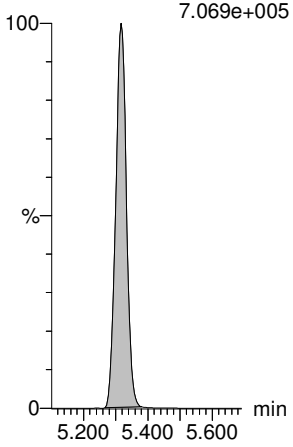
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F50:MRM of 1 channel,ES-
529 > 79.7
3.908e+004



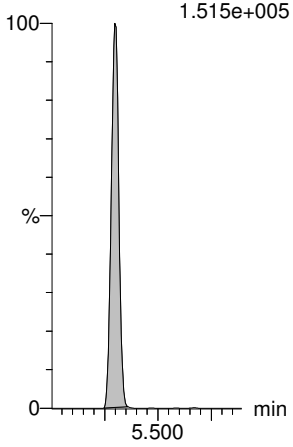
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.183e+005



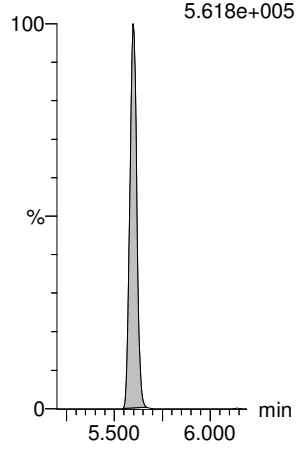
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F55:MRM of 1 channel,ES-
565 > 519.8
7.069e+005



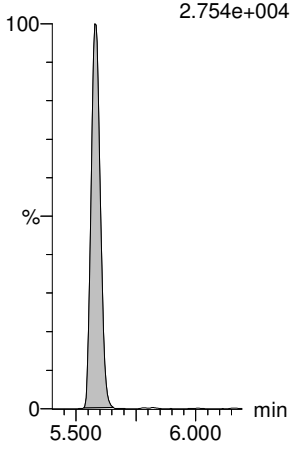
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.515e+005



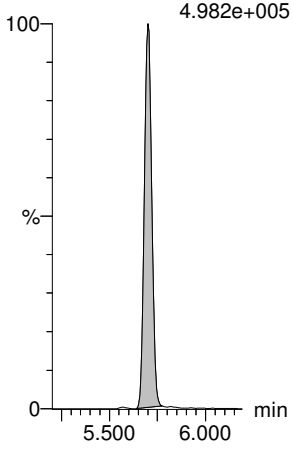
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F63:MRM of 1 channel,ES-
614.7 > 569.7
5.618e+005



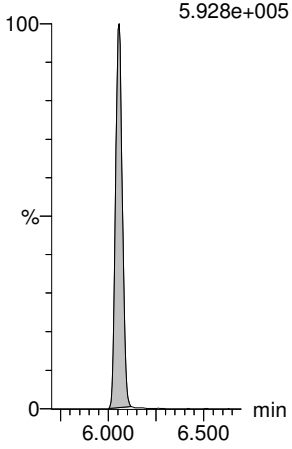
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.754e+004



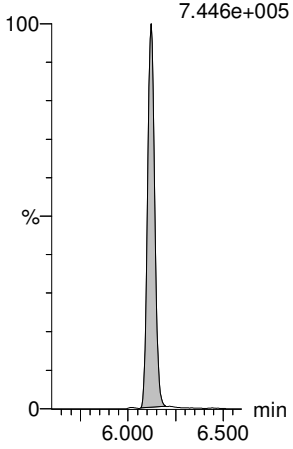
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.982e+005



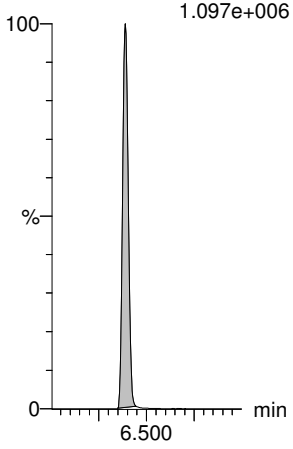
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.928e+005



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

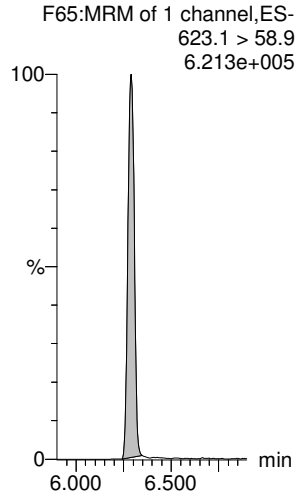


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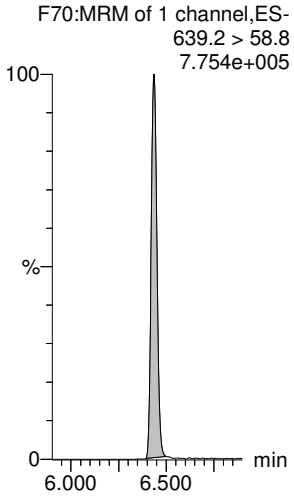
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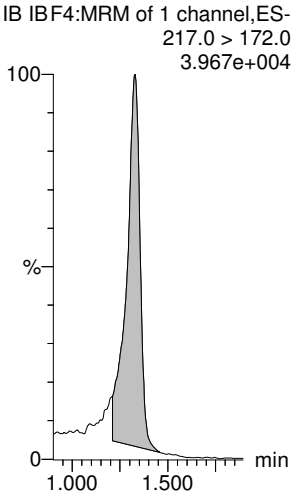
d7-N-MeFOSE-RSD



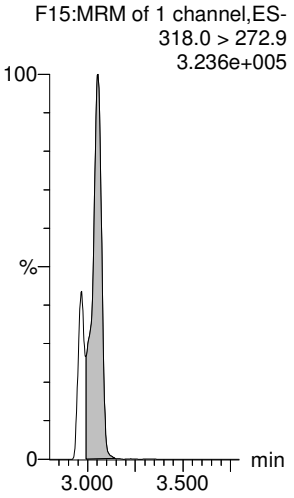
d9-N-EtFOSE-RSD



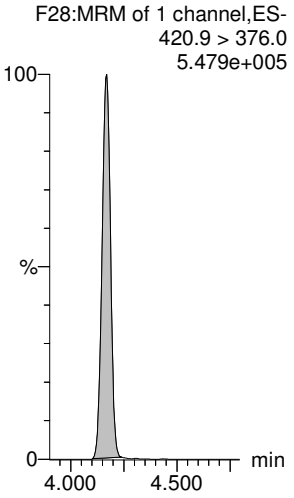
13C4-PFBA



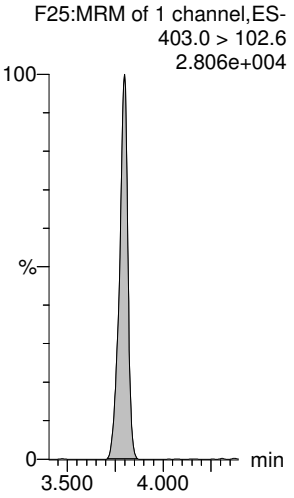
13C5-PFHxA



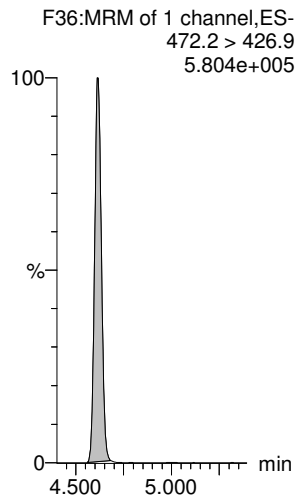
13C8-PFOA



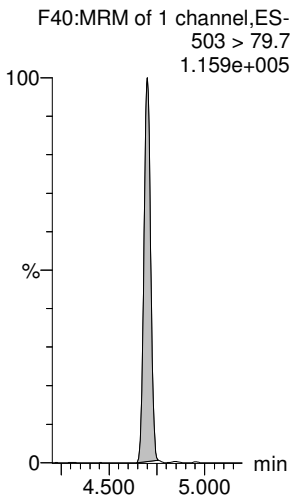
18O2-PFHxS



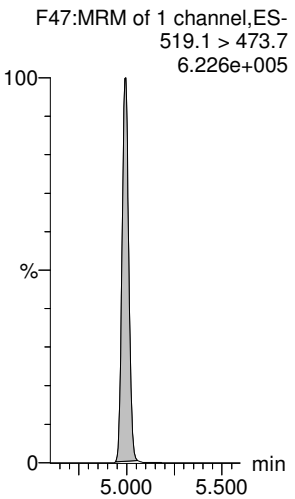
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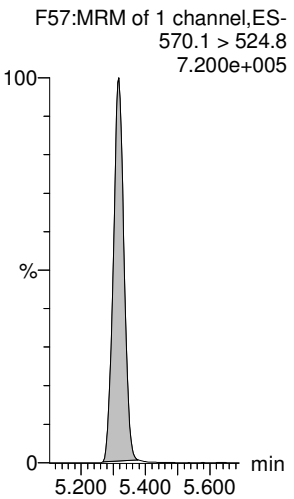
13C4-PFOS



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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	#	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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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		

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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		

LC Calibration Standards Review Checklist Q5

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
Calibration ID:	ST200227P1-11	L (M) H	☑	☑	☑	☑	☐	☑	☐
Calibration ID:	-12	L (M) H	☑	☑	☑	☑	☐	☑	☐
Calibration ID:	-13	(L) M H	☑	☑ A	☑	☐	☑	☑	☐
Calibration ID:	-14	L (M) H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-15	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: 20200226

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: DPV 02/28/20
Initials/Date

Comments:

(A) Low criteria limit : 6:2 FTS

Dataset: P:\PFAS5.PRO\RESULTS\200227P1\200227P1-39.qld

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✓OPV 02/28/20

Name: 200227P1-39, Date: 27-Feb-2020, Time: 22:10:19, ID: ST200227P1-11 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	5900.716	6782.078	1.00	1.33	10.876	10.000	9.38	93.8	NO		
2	2	PFPrS	248.9 > 79.7	1307.310	1349.337	1.00	1.66	12.111	10.000	8.66	86.6	NO	2.570	NO
3	3	3:3 FTCA	240.9 > 176.9	1019.110	11708.038	1.00	2.12	1.088	10.000	11.7	117.1	NO	4.000	NO
4	4	PFPeA	263.1 > 218.9	9340.746	11708.038	1.00	2.26	9.973	10.000	10.5	104.5	NO		
5	5	PFBS	299.0 > 79.7	2679.165	1349.337	1.00	2.54	24.819	10.000	10.4	104.1	NO	3.306	NO
6	6	4:2 FTS	327.0 > 307	1761.417	1489.982	1.00	2.98	14.777	10.000	11.4	113.8	NO	0.914	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	6782.078		1.00	1.33	6782.078	12.500	10.6	84.5	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1349.337		1.00	2.54	1349.337	12.500	11.0	87.9	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	11708.038		1.00	2.26	11708.038	12.500	10.1	80.7	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	11708.038		1.00	2.26	11708.038	12.500	10.1	80.7	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1349.337		1.00	2.54	1349.337	12.500	11.0	87.9	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1489.982		1.00	2.97	1489.982	12.500	8.99	71.9	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	15113.559	19786.051	1.00	3.06	9.548	10.000	10.7	106.9	NO	17.178	NO
15	8	PFPeS	349.>79.7	2424.614	1349.337	1.00	3.26	22.461	10.000	9.11	91.1	NO	2.480	NO
16	9	HFPO-DA	285.1 > 168.9	3475.833	4045.544	1.00	3.28	10.740	10.000	10.3	102.8	NO	2.725	NO
17	10	5:3 FTCA	340.9 > 236.9	2362.905	13118.667	1.00	3.60	2.251	10.000	10.8	107.7	NO	1.838	NO
18	11	PFHpA	363.0 > 318.9	13498.151	13118.667	1.00	3.66	12.862	10.000	11.0	110.4	NO	36.639	NO
19	12	ADONA	376.8 > 250.9	30364.299	13118.667	1.00	3.77	28.932	10.000	11.0	109.9	NO	4.024	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	19786.051		1.00	3.06	19786.051	12.500	11.2	89.9	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1349.337		1.00	2.54	1349.337	12.500	11.0	87.9	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4045.544		1.00	3.27	4045.544	12.500	12.3	98.6	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13118.667		1.00	3.66	13118.667	12.500	10.2	81.3	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13118.667		1.00	3.66	13118.667	12.500	10.2	81.3	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13118.667		1.00	3.66	13118.667	12.500	10.2	81.3	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2473.689	3016.369	1.00	3.80	10.251	10.000	9.73	97.3	NO	2.330	NO
28	15	6:2 FTS	427.0 > 407	2127.608	1553.935	1.00	4.12	17.115	10.000	10.8	108.1	NO	1.189	NO
29	16	L-PFOA	412.8 > 368.9	16179.879	16086.611	1.00	4.17	12.572	10.000	10.4	103.6	NO	2.863	NO
30	18	PFecHS	460.8 > 381.0	2435.016	16086.611	1.00	4.19	1.892	10.000	11.1	110.6	NO	0.484	NO
31	19	PFHpS	449.0 > 79.7	2652.912	3535.161	1.00	4.29	9.380	10.000	9.66	96.6	NO	2.034	NO
32	20	7:3 FTCA	440.9 > 336.9	2146.111	16955.629	1.00	4.60	1.582	10.000	10.2	101.6	NO	1.316	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3016.369		1.00	3.80	3016.369	12.500	9.75	78.0	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1553.935		1.00	4.12	1553.935	12.500	10.4	83.5	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	16086.611		1.00	4.17	16086.611	12.500	9.02	72.2	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	16086.611		1.00	4.17	16086.611	12.500	9.02	72.2	NO		

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Name: 200227P1-39, Date: 27-Feb-2020, Time: 22:10:19, ID: ST200227P1-11 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	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16955.629		1.00	4.62	16955.629	12.500	9.68	77.5	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16231.182	16955.629	1.00	4.62	11.966	10.000	11.1	110.5	NO	8.040	NO
41	22	PFOSA	497.9 > 77.9	2793.139	4154.367	1.00	4.67	8.404	10.000	10.7	106.8	NO	22.202	NO
42	23	L-PFOS	498.9 > 79.7	2653.159	3535.161	1.00	4.70	9.381	10.000	10.0	100.3	NO	2.284	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2513.729	3535.161	1.00	4.92	8.888	10.000	8.84	88.4	NO	16.590	NO
44	26	PFDA	513 > 468.8	17471.336	18249.229	1.00	4.99	11.967	10.000	10.3	103.5	NO	9.575	NO
45	27	8:2 FTS	526.9 > 507	1384.760	1107.757	1.00	4.96	15.626	10.000	11.2	111.7	NO	2.303	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	16955.629		1.00	4.62	16955.629	12.500	9.68	77.5	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4154.367		1.00	4.68	4154.367	12.500	9.25	74.0	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18249.229		1.00	4.99	18249.229	12.500	9.53	76.2	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1107.757		1.00	4.96	1107.757	12.500	8.34	66.7	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2623.124	3535.161	1.00	5.06	9.275	10.000	9.58	95.8	NO	2.309	NO
54	29	L-MeFOSAA	570 > 419	4612.206	5175.678	1.00	5.14	11.139	10.000	8.53	85.3	NO	1.947	NO
55	31	L-EtFOSAA	584.1 > 419	5185.939	5819.308	1.00	5.31	11.140	10.000	10.6	106.0	NO	1.288	NO
56	33	PFUdA	563.0 > 518.9	16424.488	19564.033	1.00	5.32	10.494	10.000	11.2	111.6	NO	24.996	NO
57	34	PFDS	598.8 > 79.7	2187.180	3535.161	1.00	5.36	7.734	10.000	9.24	92.4	NO	1.865	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7297.718	17626.346	1.00	5.53	5.175	10.000	11.6	115.6	NO	20.804	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	5175.678		1.00	5.14	5175.678	12.500	10.7	85.8	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5819.308		1.00	5.30	5819.308	12.500	10.5	84.1	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	19564.033		1.00	5.32	19564.033	12.500	8.92	71.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	17626.346		1.00	5.60	17626.346	12.500	9.05	72.4	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1777.375	941.596	1.00	5.58	23.595	10.000	10.8	108.3	NO	1.013	NO
67	37	PFDoA	612.9 > 569.0	17680.961	17626.346	1.00	5.60	12.539	10.000	10.7	107.3	NO	11.455	NO
68	38	N-MeFOSA	512.1 > 168.9	7442.056	21212.379	1.00	5.67	52.345	50.000	47.6	95.3	NO	1.568	NO
69	39	PFTrDA	662.9 > 618.9	17517.934	17626.346	1.00	5.84	12.423	10.000	10.1	101.1	NO	59.181	NO
70	40	PFDoS	698.8 > 79.7	2772.840	19390.803	1.00	5.87	1.787	10.000	12.3	123.2	NO	3.449	NO
71	41	PFTeDA	713.0 > 669.0	17732.166	19390.803	1.00	6.06	11.431	10.000	12.6	126.2	NO	15.337	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	941.596		1.00	5.58	941.596	12.500	9.04	72.3	NO		

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Name: 200227P1-39, Date: 27-Feb-2020, Time: 22:10:19, ID: ST200227P1-11 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	17626.346		1.00	5.60	17626.346	12.500	9.05	72.4	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	21212.379		1.00	5.70	21212.379	149.200	144	96.6	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	17626.346		1.00	5.60	17626.346	12.500	9.05	72.4	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	19390.803		1.00	6.06	19390.803	12.500	9.30	74.4	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	19390.803		1.00	6.06	19390.803	12.500	9.30	74.4	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	10016.966	29372.277	1.00	6.10	50.882	50.000	49.7	99.3	NO	1.643	NO
80	43	PFHxDA	813.1 > 768.6	16346.419	28271.152	1.00	6.39	7.228	10.000	10.1	100.9	NO	148.099	NO
81	44	PFODA	913.1 > 868.8	23781.107	28271.152	1.00	6.62	10.515	10.000	11.6	115.7	NO		
82	45	N-MeFOSE	616.1 > 58.9	8155.841	22376.131	1.00	6.30	54.382	50.000	51.3	102.6	NO		
83	46	N-EtFOSE	630.1 > 58.9	9350.375	26825.328	1.00	6.44	52.006	50.000	53.2	106.5	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	29372.277		1.00	6.12	29372.277	149.200	136	91.2	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	28271.152		1.00	6.39	28271.152	12.500	9.19	73.6	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	28271.152		1.00	6.39	28271.152	12.500	9.19	73.6	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	22376.131		1.00	6.29	22376.131	149.200	134	90.0	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	26825.328		1.00	6.43	26825.328	149.200	139	93.0	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3535.161		1.00	4.70	3535.161	12.500	10.2	81.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	6782.078	8590.916	1.00	1.33	9.868	12.500	12.1	97.2	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	11708.038	19839.254	1.00	2.26	7.377	12.500	12.5	99.9	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1349.742	1315.874	1.00	2.54	12.822	12.500	11.8	94.1	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4045.544	19839.254	1.00	3.27	2.549	12.500	14.6	116.7	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1489.982	1315.874	1.00	2.97	14.154	12.500	10.0	80.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	19786.051	19839.254	1.00	3.06	12.466	12.500	12.7	101.9	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13118.667	19839.254	1.00	3.66	8.266	12.500	12.2	97.9	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3016.369	1315.874	1.00	3.80	28.654	12.500	11.8	94.5	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1553.935	3881.302	1.00	4.12	5.005	12.500	11.5	91.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16955.629	17903.762	1.00	4.62	11.838	12.500	12.5	99.7	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4154.367	20199.059	1.00	4.68	2.571	12.500	11.9	95.2	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	16086.611	19634.213	1.00	4.17	10.241	12.500	11.2	89.3	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3535.161	3881.302	1.00	4.70	11.385	12.500	12.3	98.2	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18249.229	18604.520	1.00	4.99	12.261	12.500	12.5	99.8	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1107.757	3881.302	1.00	4.96	3.568	12.500	9.71	77.7	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	5175.678	20199.059	1.00	5.14	3.203	12.500	14.1	112.9	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	19564.033	20199.059	1.00	5.32	12.107	12.500	11.5	92.0	NO		

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Name: 200227P1-39, Date: 27-Feb-2020, Time: 22:10:19, ID: ST200227P1-11 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	5819.308	20199.059	1.00	5.30	3.601	12.500	14.9	119.2	NO		
110	84 13C2-PFDoA-RSD	614.7 > 569.7	17626.346	18604.520	1.00	5.60	11.843	12.500	12.2	97.6	NO		
111	86 13C2-10:2 FTS-RSD	632.9 > 80.0	941.596	3881.302	1.00	5.58	3.032	12.500	10.6	84.9	NO		
112	88 d3-N-MeFOSA-RSD	515.2 > 168.9	21212.379	20199.059	1.00	5.70	13.127	149.200	176	117.7	NO		
113	90 13C2-PFTeDA-RSD	715.1 > 669.7	19390.803	20199.059	1.00	6.06	12.000	12.500	11.4	91.5	NO		
114	92 d5-N-ETFOSA-RSD	531.1 > 168.9	29372.277	20199.059	1.00	6.12	18.177	149.200	175	117.1	NO		
115	94 13C2-PFHxDA-RSD	815 > 769.7	28271.152	20199.059	1.00	6.39	17.495	12.500	11.9	95.5	NO		
116	-1												
117	96 d7-N-MeFOSE-RSD	623.1 > 58.9	22376.131	20199.059	1.00	6.29	13.847	149.200	170	113.7	NO		
118	98 d9-N-EtFOSE-RSD	639.2 > 58.8	26825.328	20199.059	1.00	6.43	16.601	149.200	177	118.6	NO		
119	99 13C4-PFBA	217.0 > 172.0	8590.916	8590.916	1.00	1.33	12.500	12.500	12.5	100.0	NO		
120	1... 13C5-PFHxA	318.0 > 272.9	19839.254	19839.254	1.00	3.06	12.500	12.500	12.5	100.0	NO		
121	1... 13C8-PFOA	420.9 > 376.0	19634.213	19634.213	1.00	4.17	12.500	12.500	12.5	100.0	NO		
122	1... 18O2-PFHxS	403.0 > 102.6	1315.874	1315.874	1.00	3.80	12.500	12.500	12.5	100.0	NO		
123	1... 13C9-PFNA	472.2 > 426.9	17903.762	17903.762	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1... 13C4-PFOS	503 > 79.7	3881.302	3881.302	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1... 13C6-PFDA	519.1 > 473.7	18604.520	18604.520	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1... 13C7-PFUdA	570.1 > 524.8	20199.059	20199.059	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

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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
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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Last Altered: Friday, February 28, 2020 11:57:34 Pacific Standard Time
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Compound name: PFBA

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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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Dataset: Untitled

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Compound name: PFBA

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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
73	73	200227P1-73	2000353-06 S9MW21-20Q1 0.24253	28-Feb-20	04:07:28
74	74	200227P1-74	2000353-07@5X S9MW22-20Q1 0.251	28-Feb-20	04:18:00
75	75	200227P1-75	2000353-08@5X S9MW23-20Q1 0.25701	28-Feb-20	04:28:30
76	76	200227P1-76	IB	28-Feb-20	04:38:59
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
84	84	200227P1-84	2000319-17@10X W-SB03-20200211 0.25482	28-Feb-20	06:03:03
85	85	200227P1-85	2000319-18@10X DUP01-20200211 0.25556	28-Feb-20	06:13:33
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
90	90	200227P1-90	PACKERS QC	28-Feb-20	07:06:05
91	91	200227P1-91	FLIPPER QC	28-Feb-20	07:16:35
92	92	200227P1-92	ST200227P1-15 PFC CS3 20B1107	28-Feb-20	07:27:04
93	93	200227P1-93	IB	28-Feb-20	07:37:35

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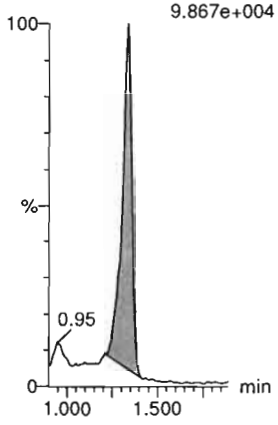
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Printed: Friday, February 28, 2020 11:49:22 Pacific Standard Time

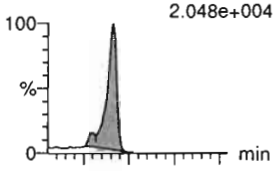
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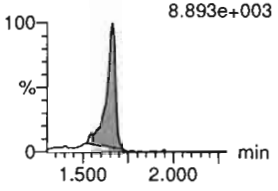
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
9.867e+004



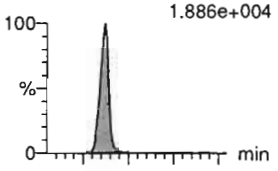
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.7
2.048e+004



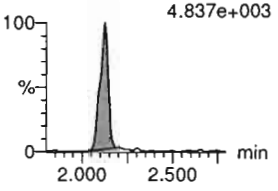
F6:MRM of 2 channels,ES-
248.9 > 98.7
8.893e+003



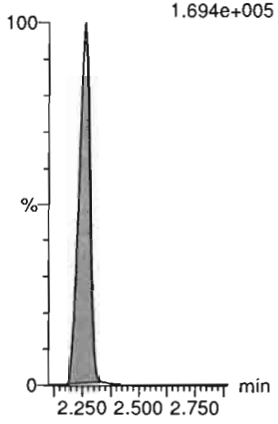
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
1.886e+004



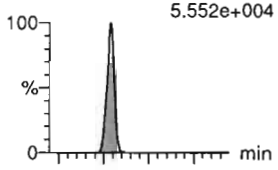
F5:MRM of 2 channels,ES-
240.9 > 116.9
4.837e+003



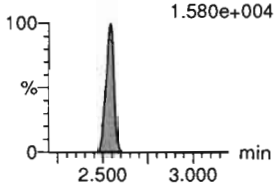
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
1.694e+005



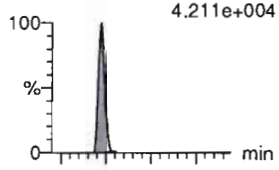
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
5.552e+004



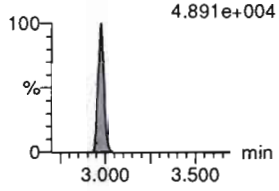
F11:MRM of 2 channels,ES-
299.0 > 98.7
1.580e+004



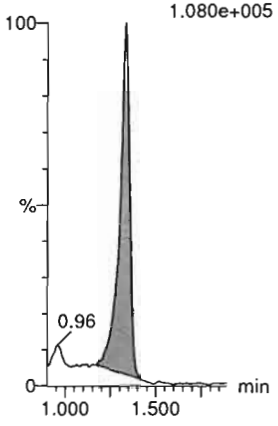
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 307
4.211e+004



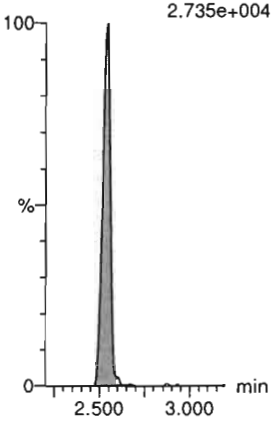
F16:MRM of 2 channels,ES-
327.0 > 80.7
4.891e+004



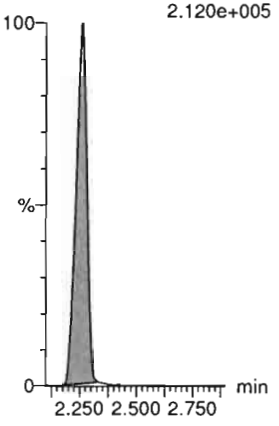
13C3-PFBA-EIS
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.080e+005



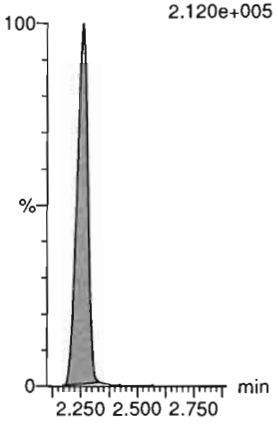
13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.735e+004



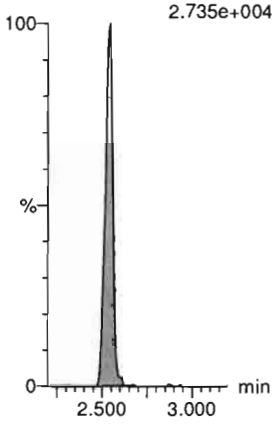
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.120e+005



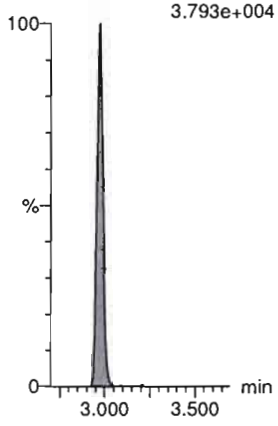
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.120e+005



13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.735e+004



13C2-4:2 FTS-EIS
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.793e+004



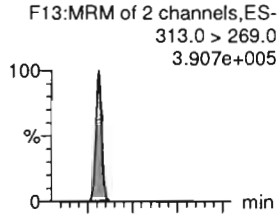
RK 2/28/2020

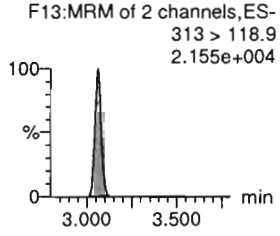
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Printed: Friday, February 28, 2020 11:49:22 Pacific Standard Time

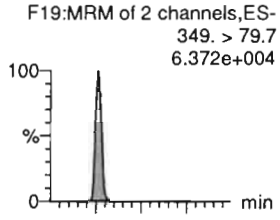
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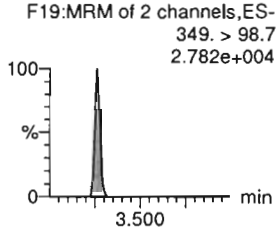
PFHxA



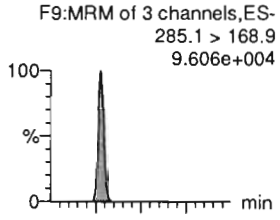


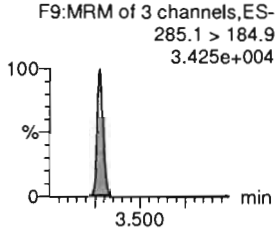
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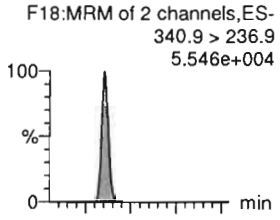


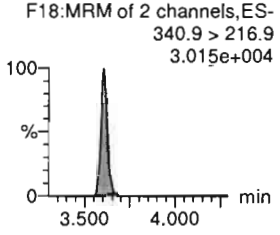
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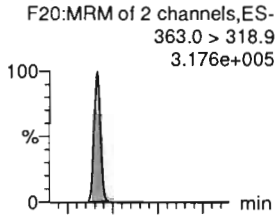


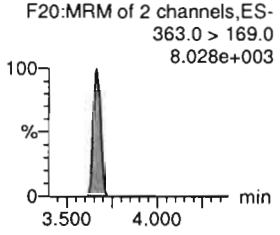
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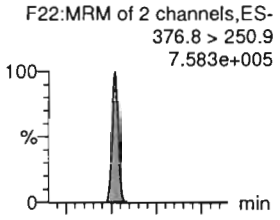


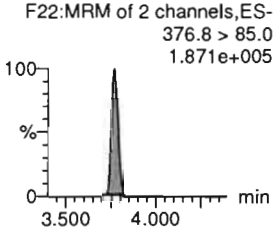
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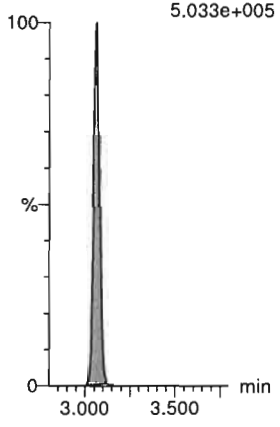


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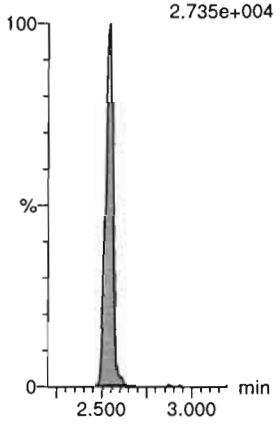




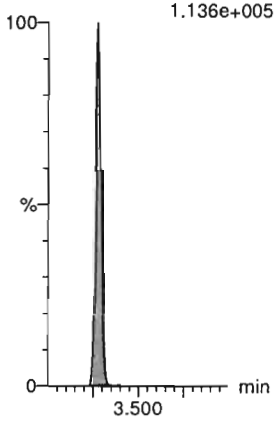
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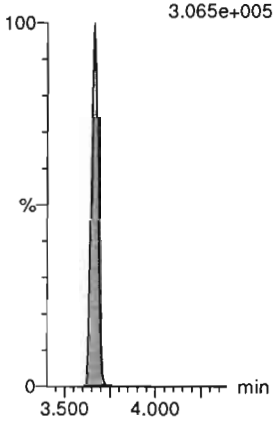
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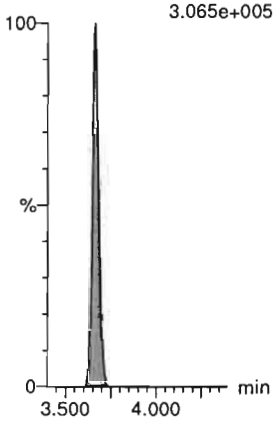
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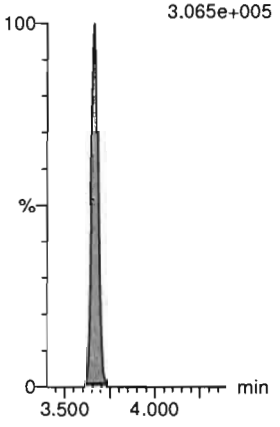
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13C4-PFHpA-EIS



13C4-PFHpA-EIS



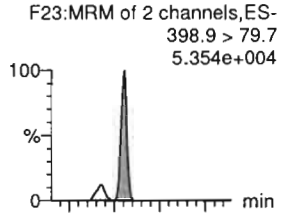
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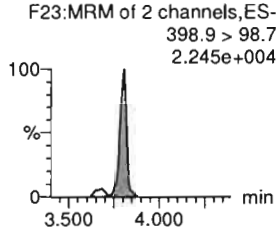
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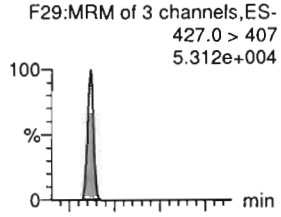
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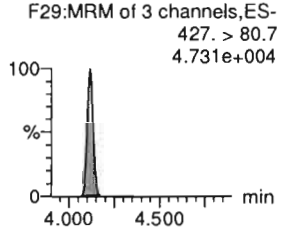
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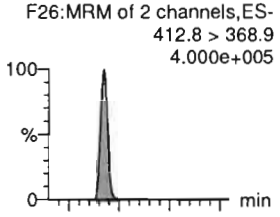


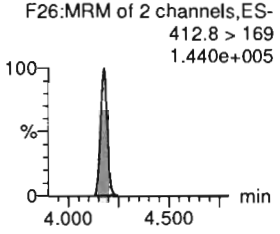
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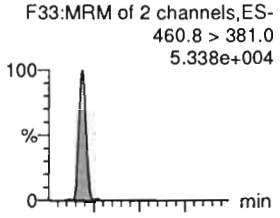


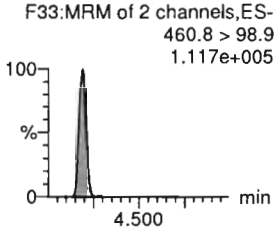
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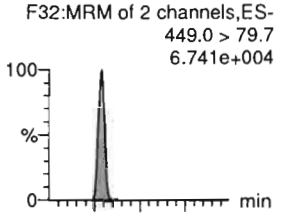


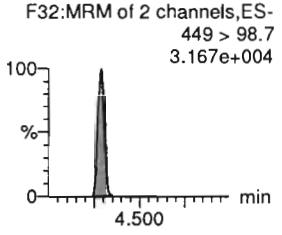
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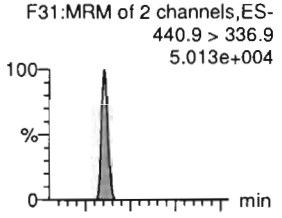


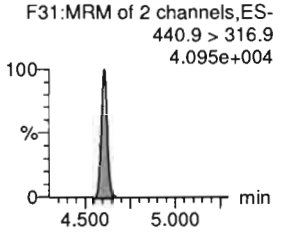
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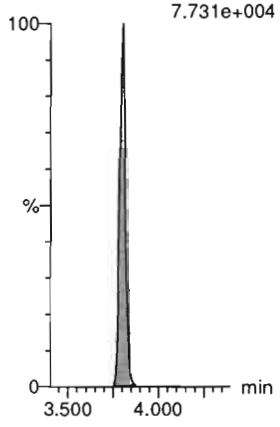


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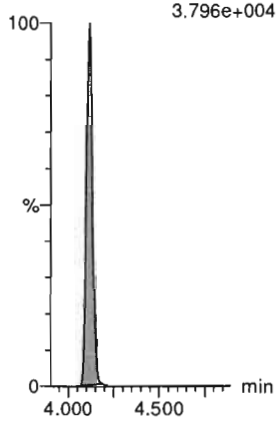




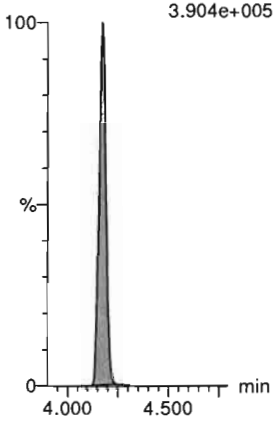
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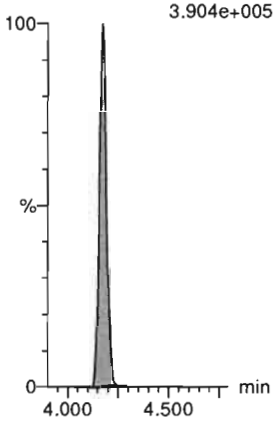
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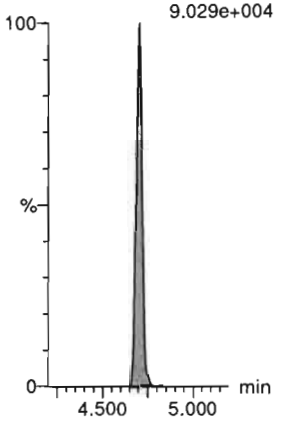
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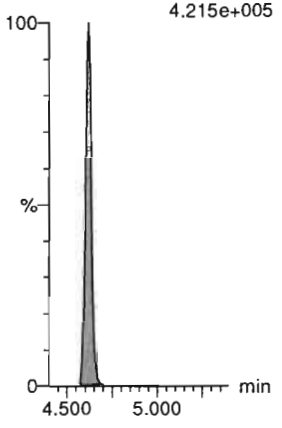
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13C8-PFOS-EIS



13C5-PFNA-EIS



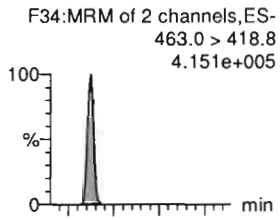
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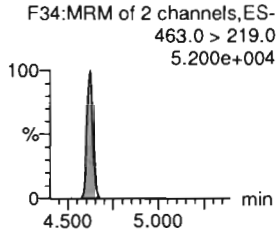
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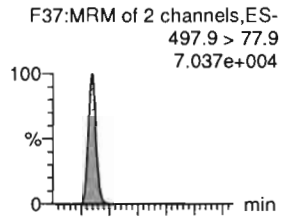
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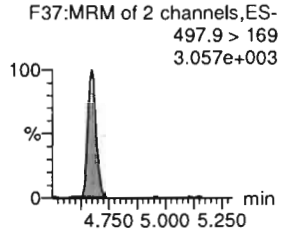
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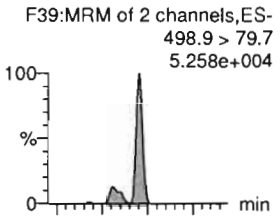


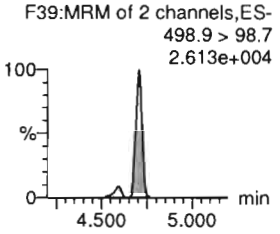
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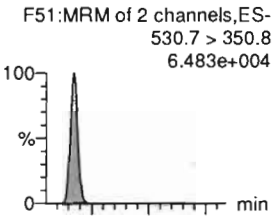


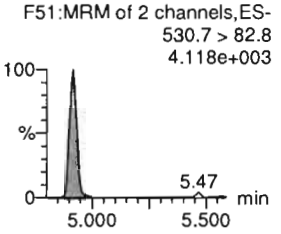
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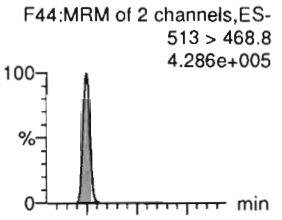


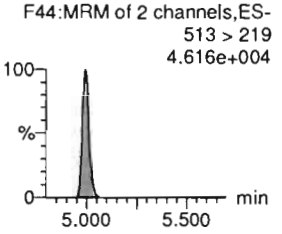
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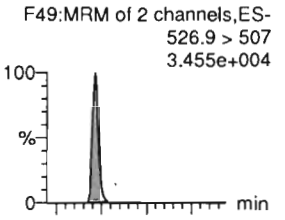


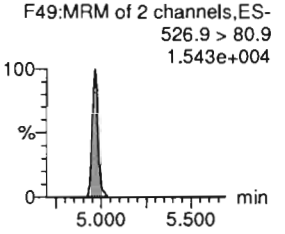
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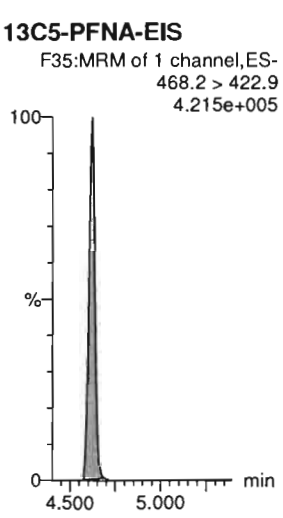


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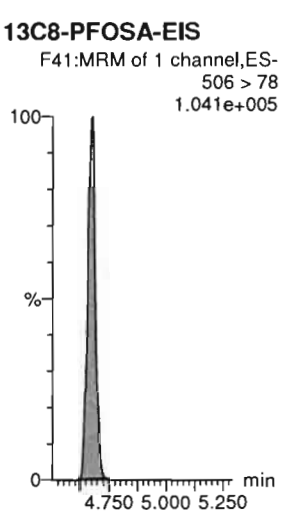




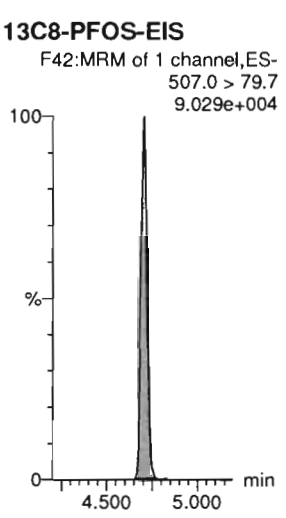
13C5-PFNA-EIS



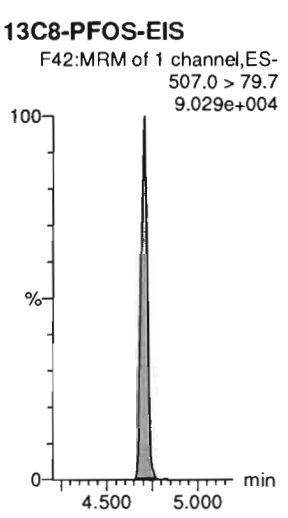
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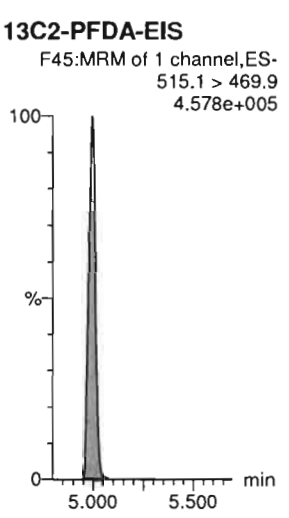
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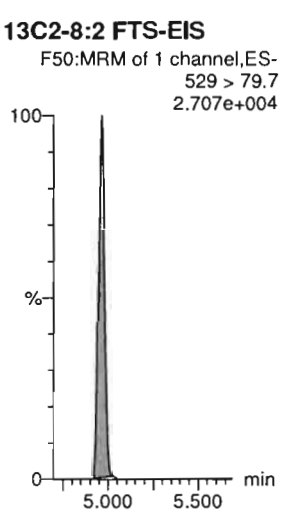
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS



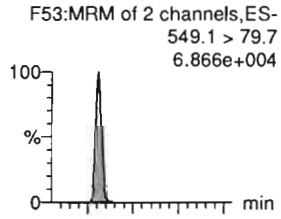
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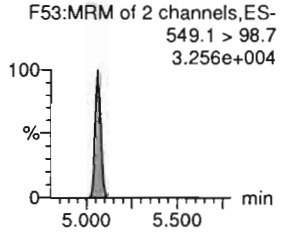
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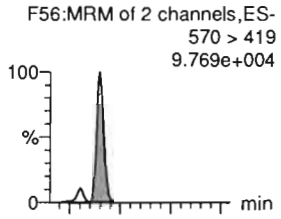
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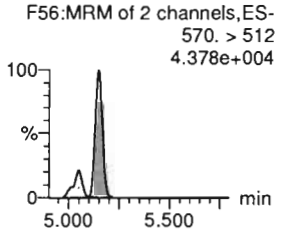
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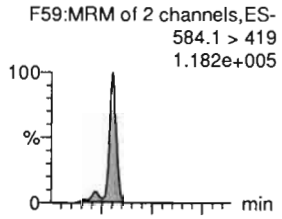


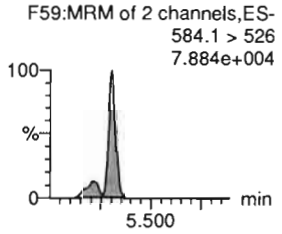
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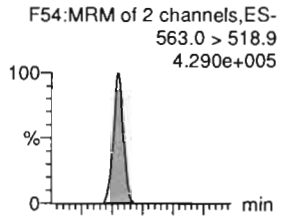


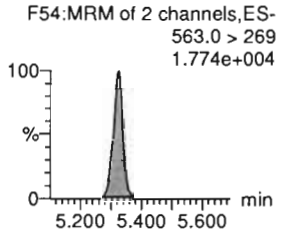
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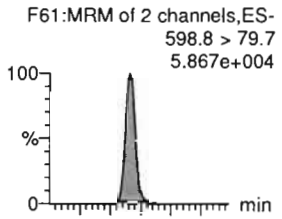


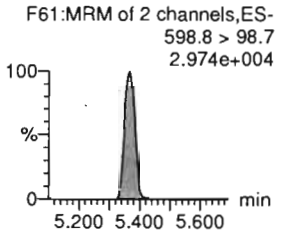
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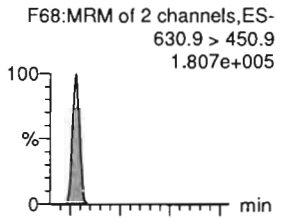


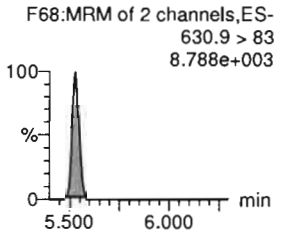
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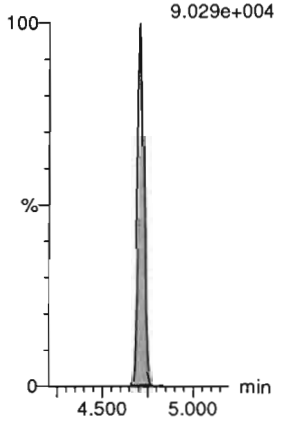


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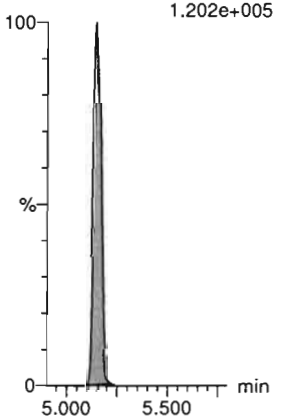




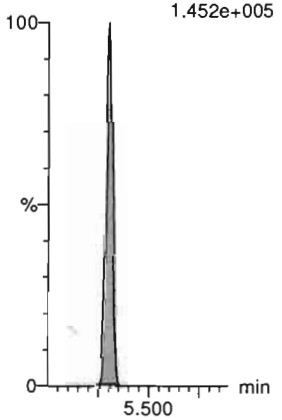
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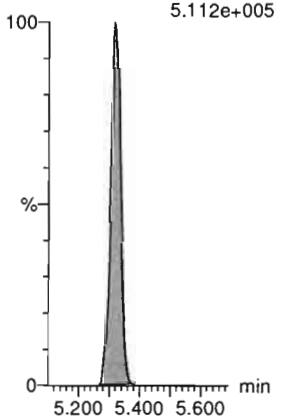
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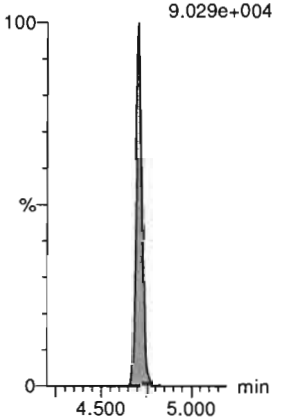
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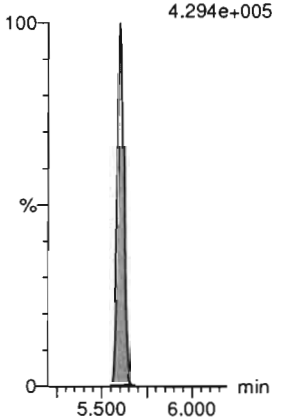
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13C8-PFOS-EIS



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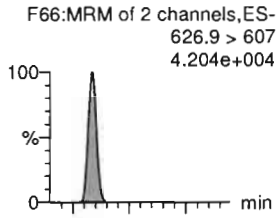
RK 2/28/2020

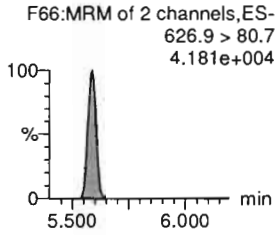
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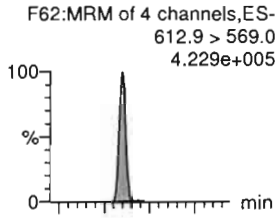
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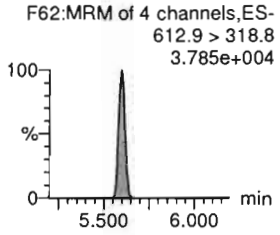
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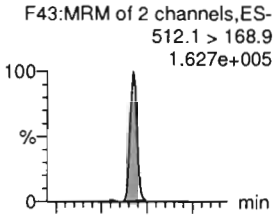


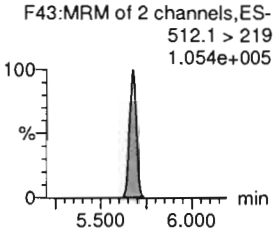
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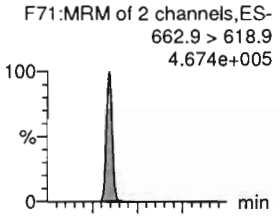


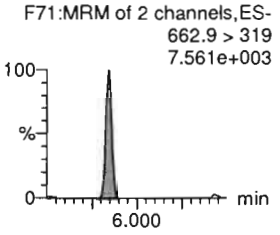
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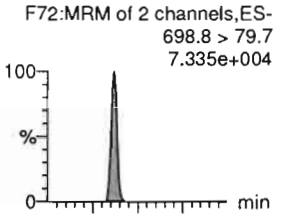


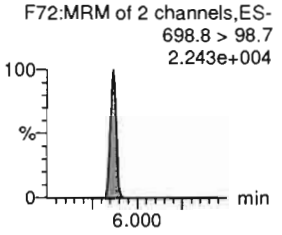
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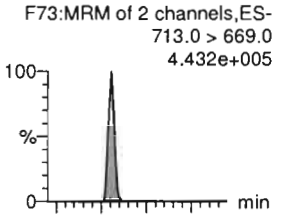


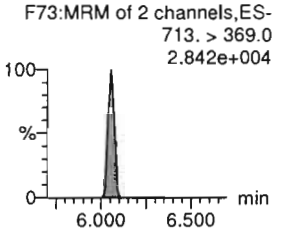
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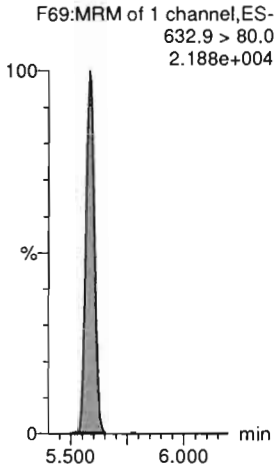


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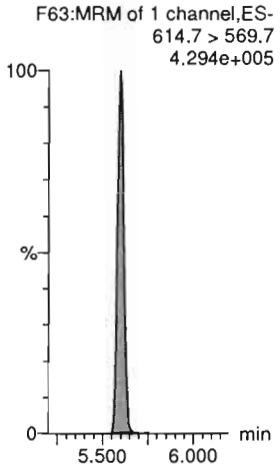




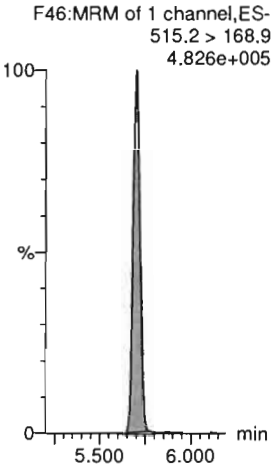
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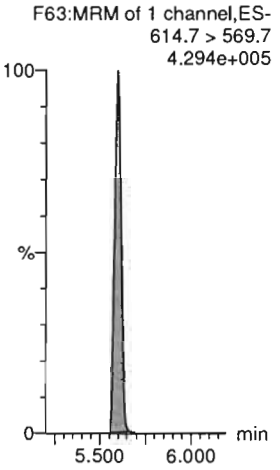
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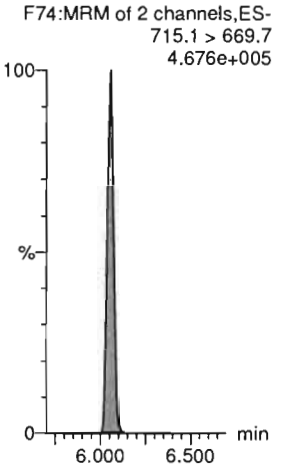
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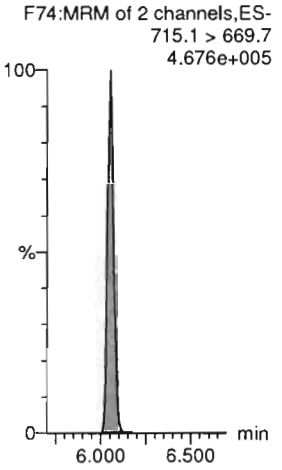
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13C2-PFTeDA-EIS



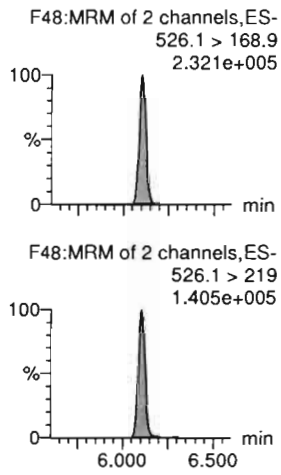
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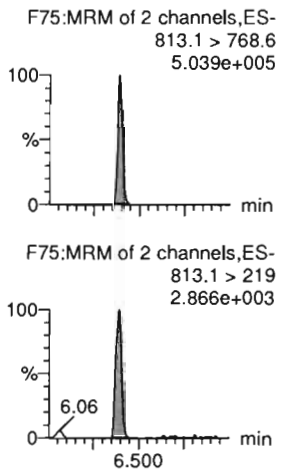
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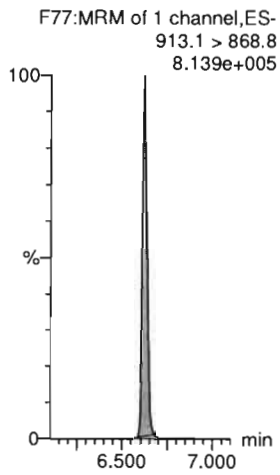
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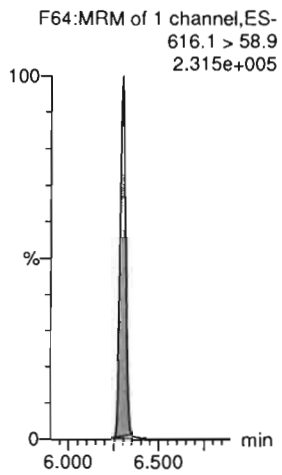
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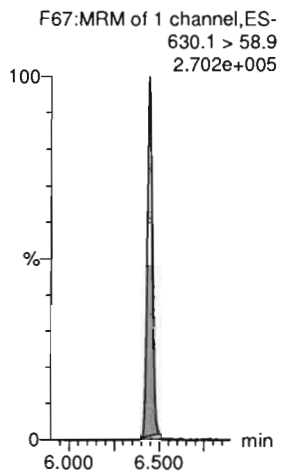
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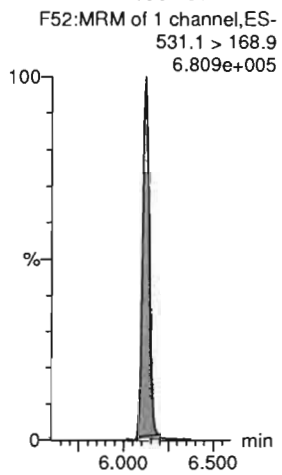
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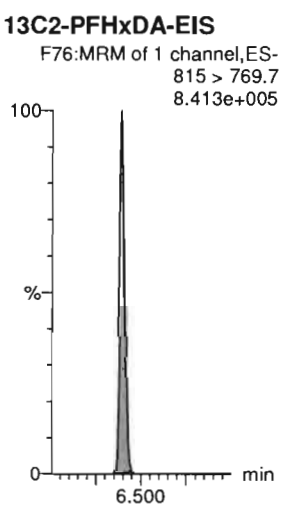
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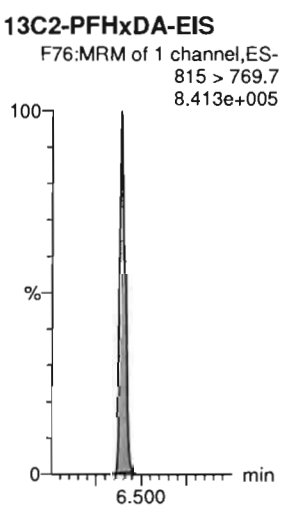
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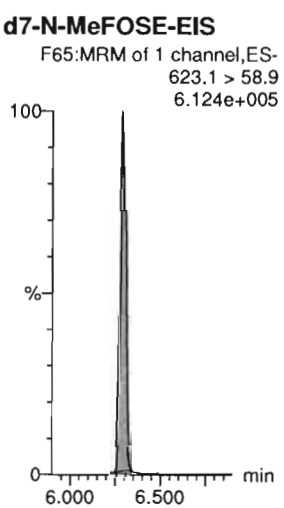
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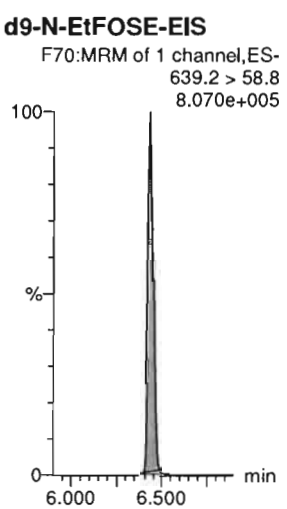
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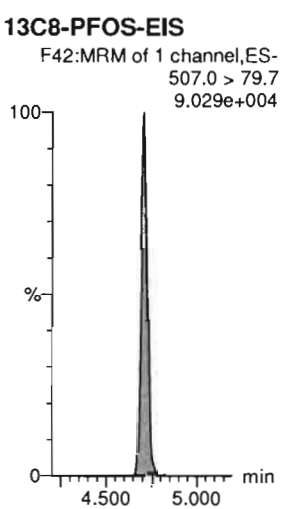
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d9-N-EtFOSE-EIS



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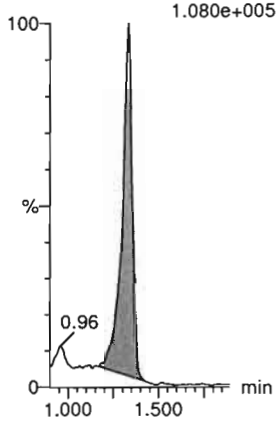
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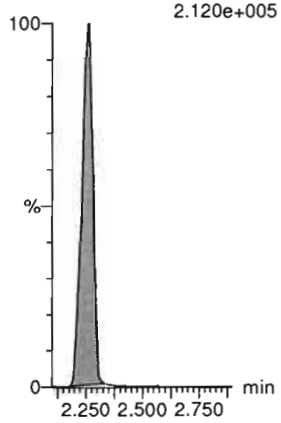
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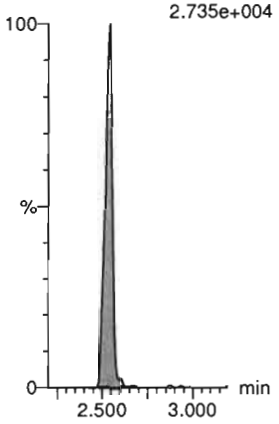
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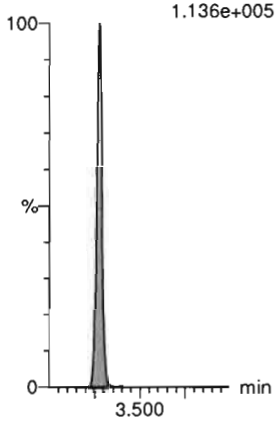
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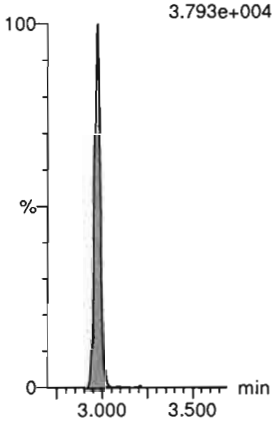
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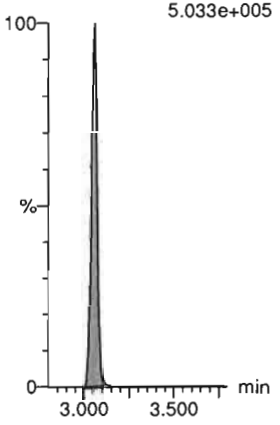
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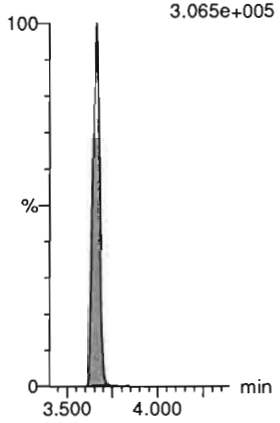
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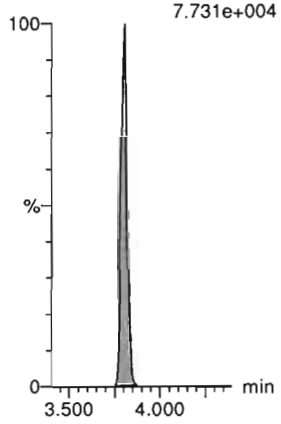
13C2-PFHxA-RSD



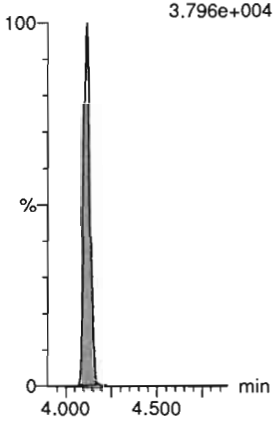
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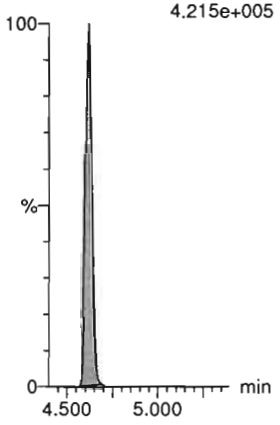
13C3-PFHxS-RSD



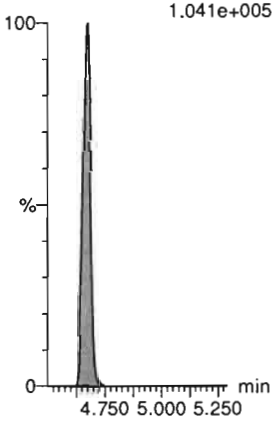
13C2-6:2 FTS-RSD



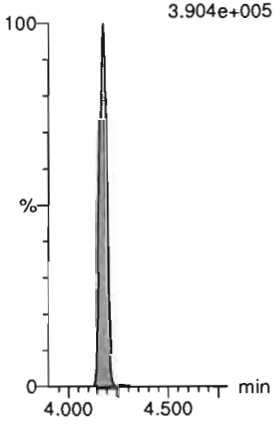
13C5-PFNA-RSD



13C8-PFOSA-RSD



13C2-PFOA-RSD



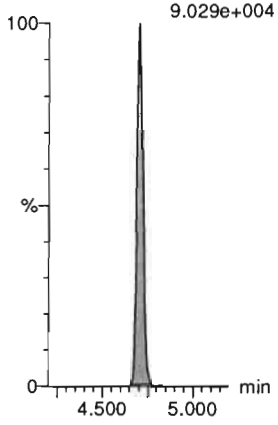
RK 2/28/2020

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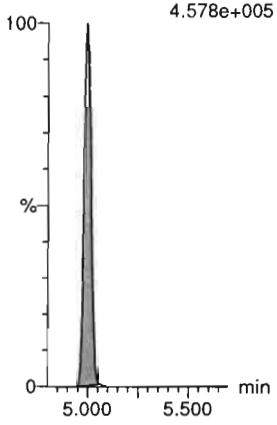
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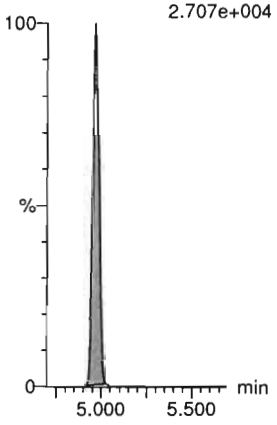
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.029e+004



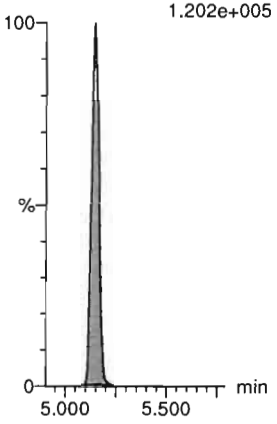
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.578e+005



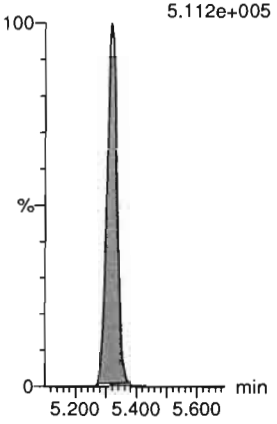
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.707e+004



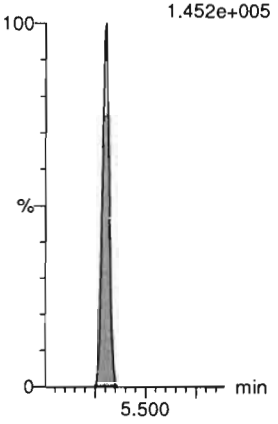
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.202e+005



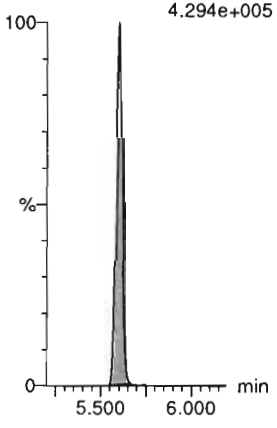
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.112e+005



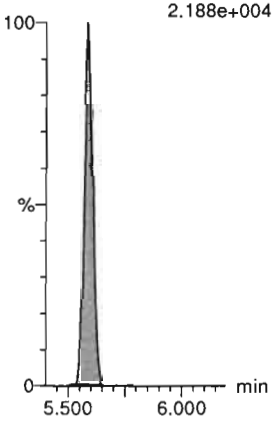
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.452e+005



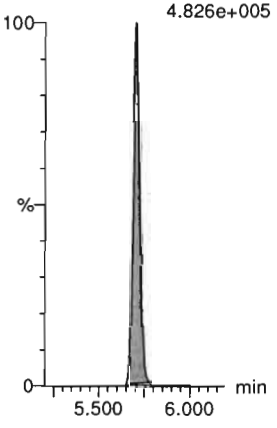
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F63:MRM of 1 channel,ES-
614.7 > 569.7
4.294e+005



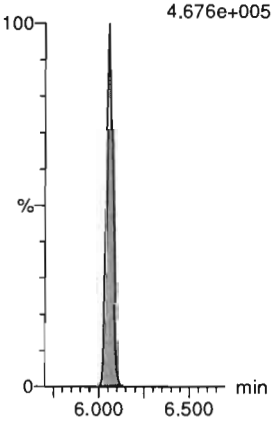
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.188e+004



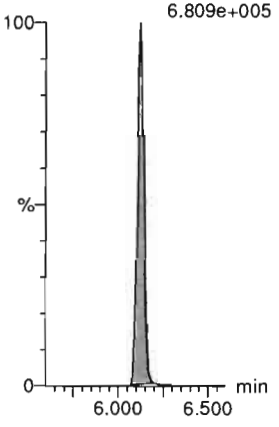
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.826e+005



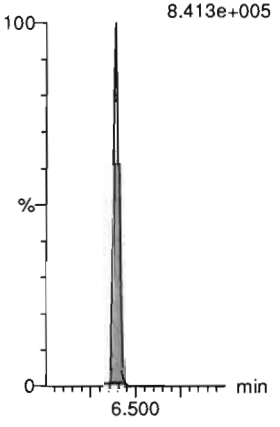
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.676e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.809e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.413e+005



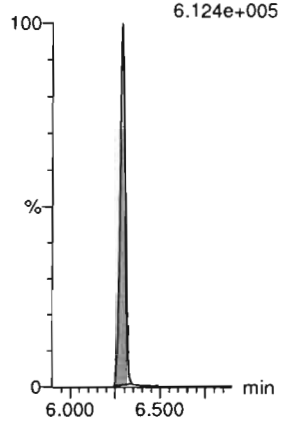
RK 2/28/2020

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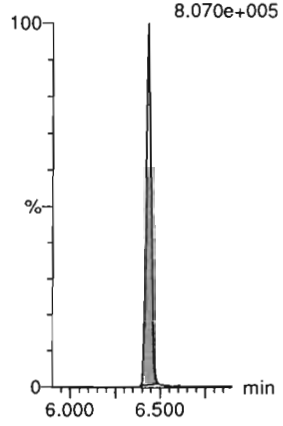
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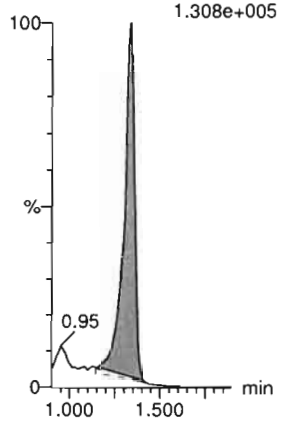
d7-N-MeFOSE-RSD



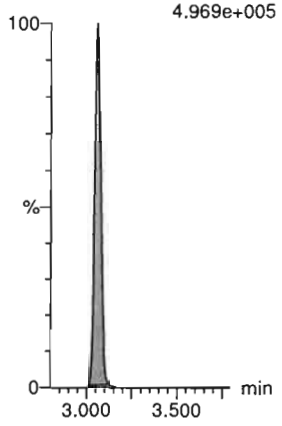
d9-N-EtFOSE-RSD



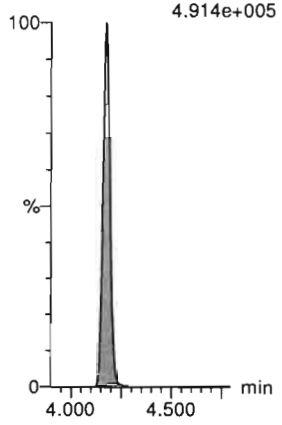
13C4-PFBA



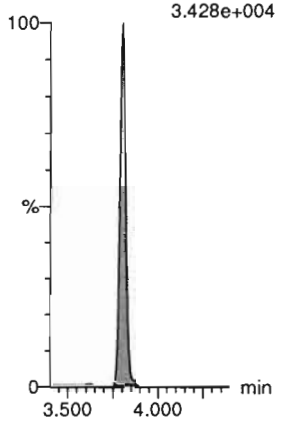
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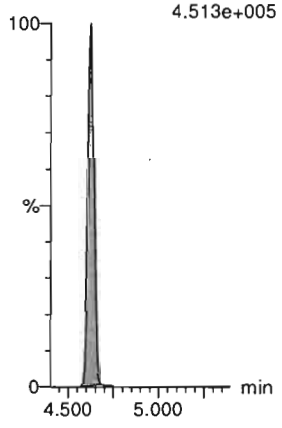
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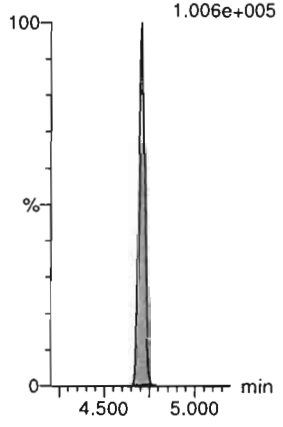
18O2-PFHxS



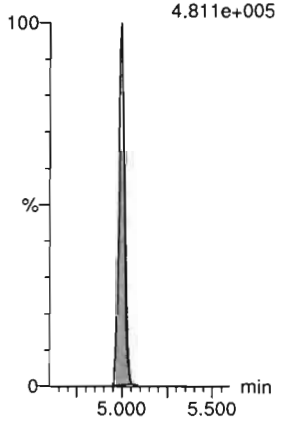
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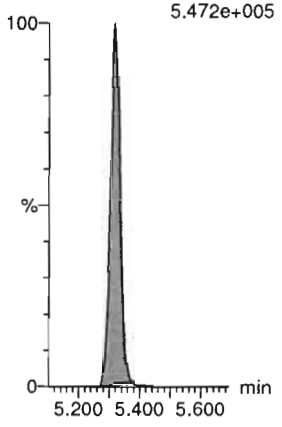
13C4-PFOS



13C6-PFDA



13C7-PFUdA



RK 2/28/2020

Vista Analytical Laboratory

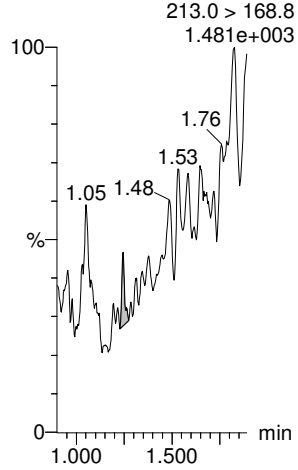
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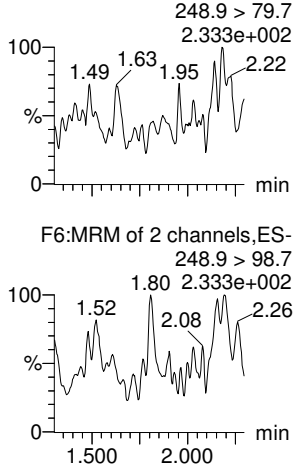
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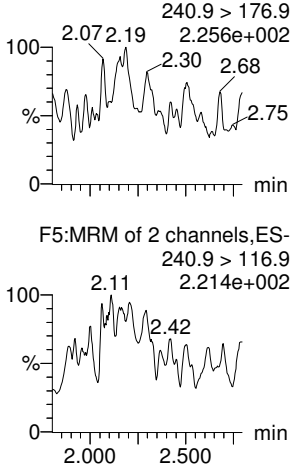
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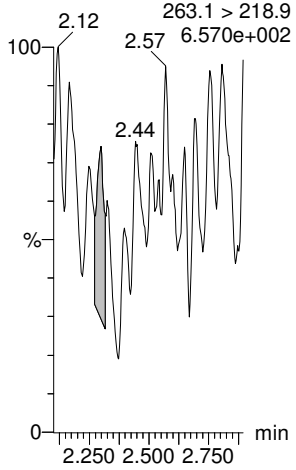
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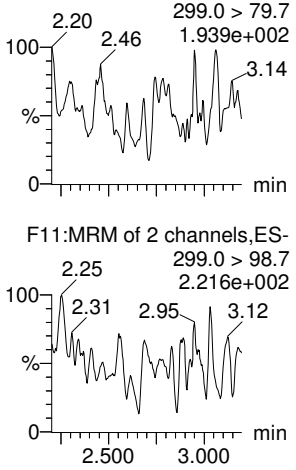
3:3 FTCA



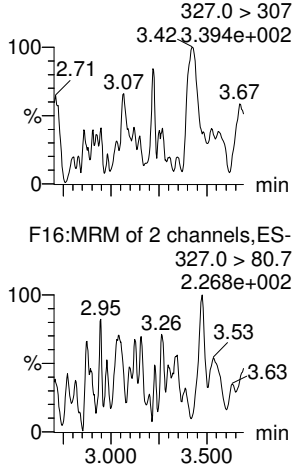
PFPeA



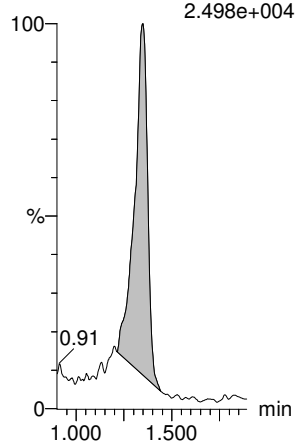
PFBS



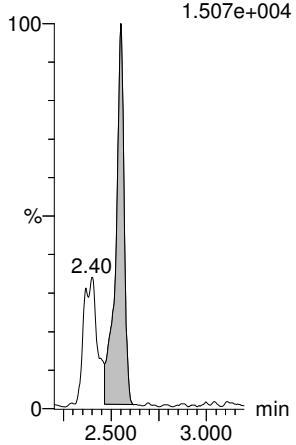
4:2 FTS



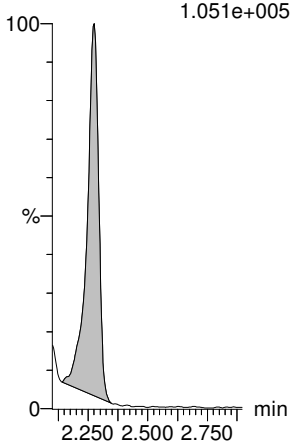
13C3-PFBA-EIS



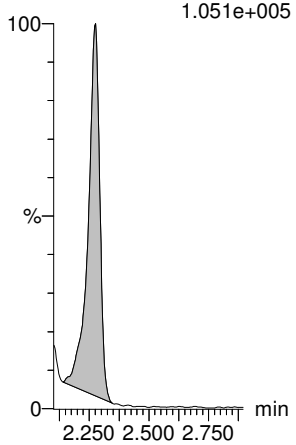
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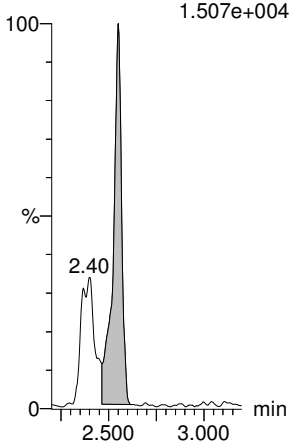
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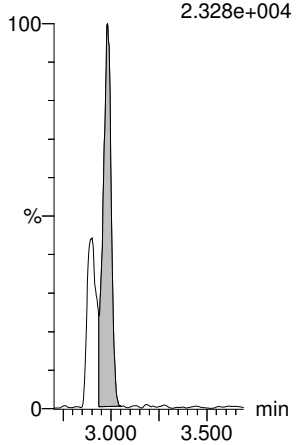
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

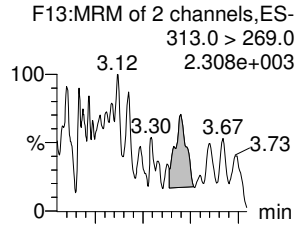


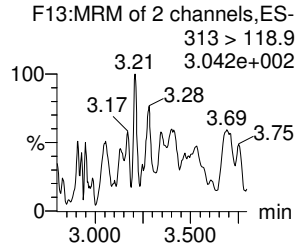
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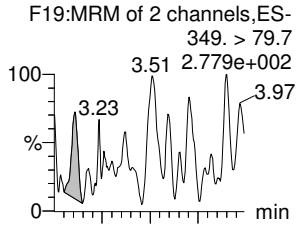
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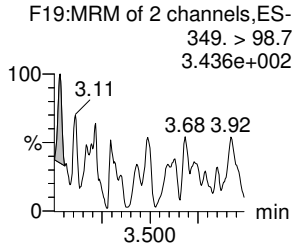
PFHxA



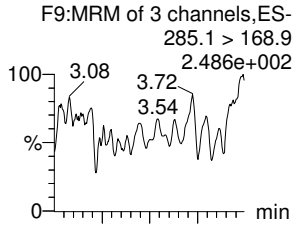


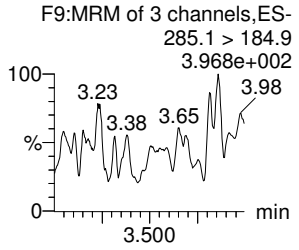
PFPeS



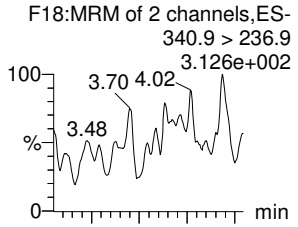


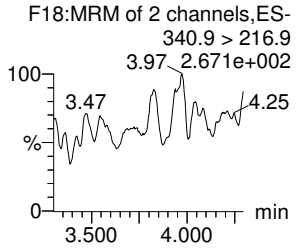
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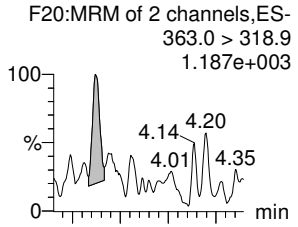


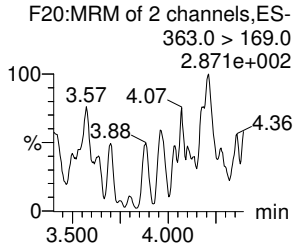
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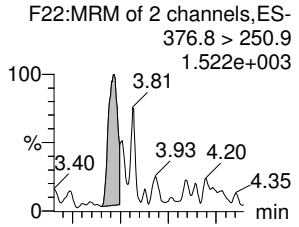


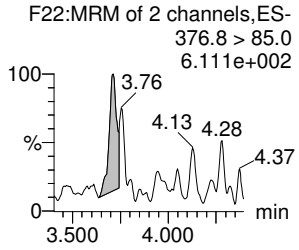
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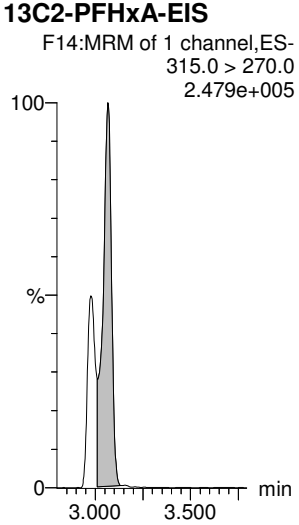


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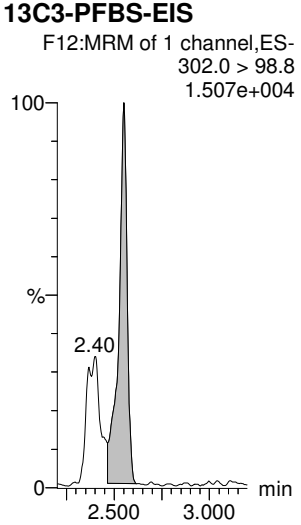




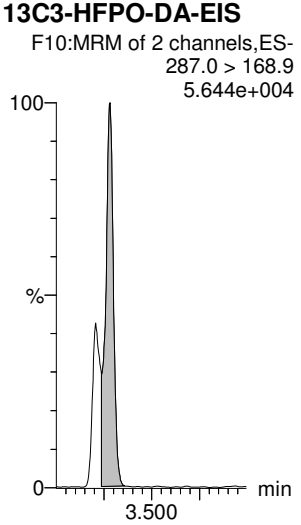
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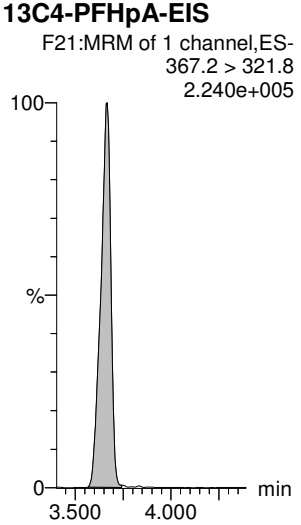
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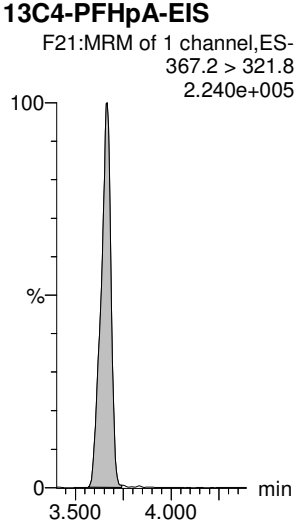
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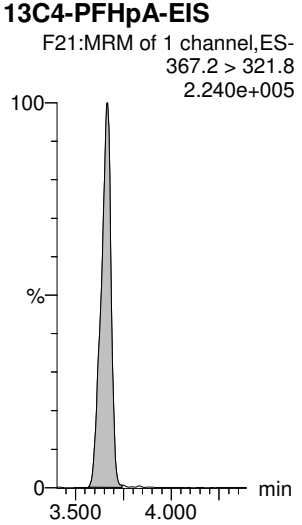
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

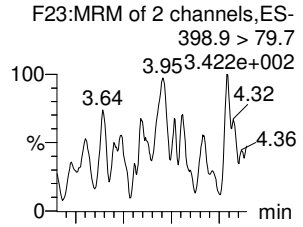


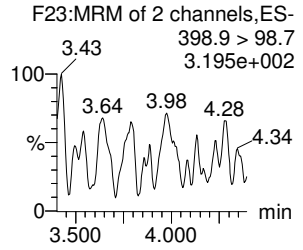
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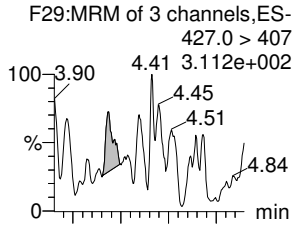
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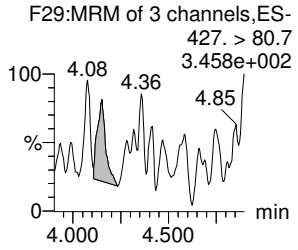
L-PFHxS



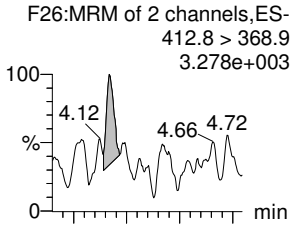


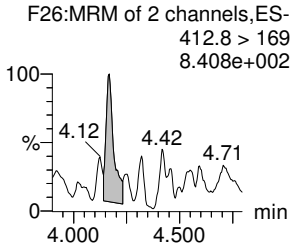
6:2 FTS



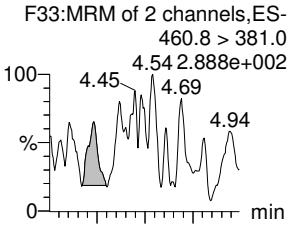


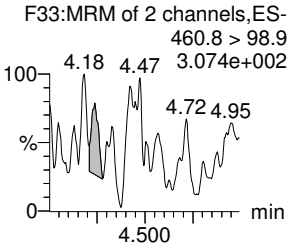
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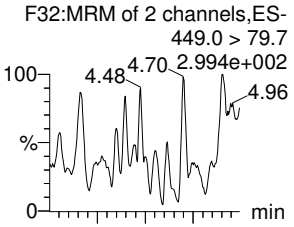


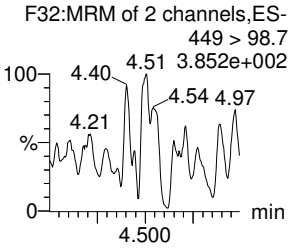
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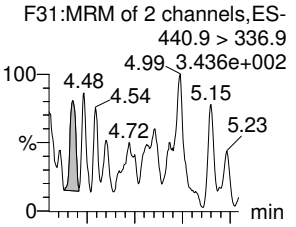


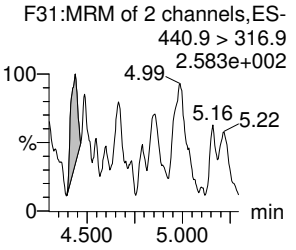
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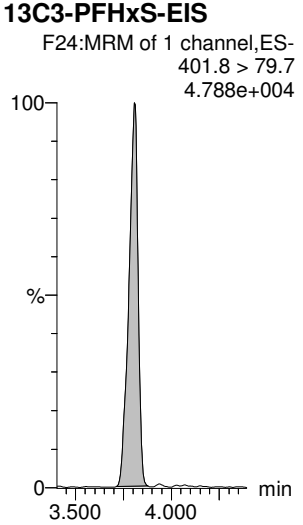


7:3 FTCA

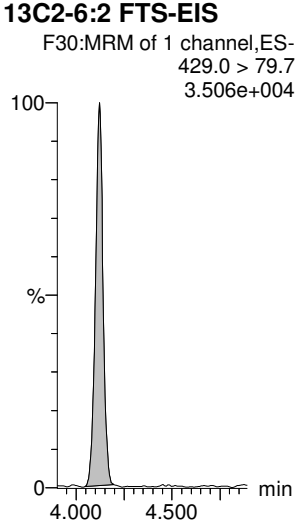




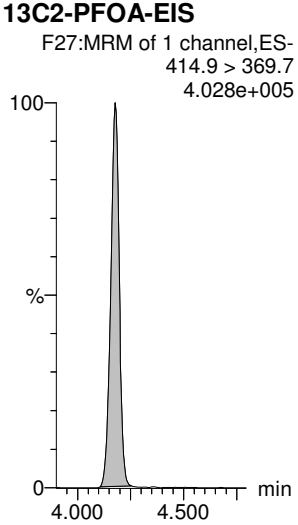
13C3-PFHxS-EIS



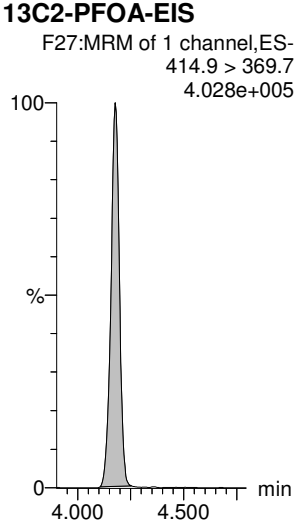
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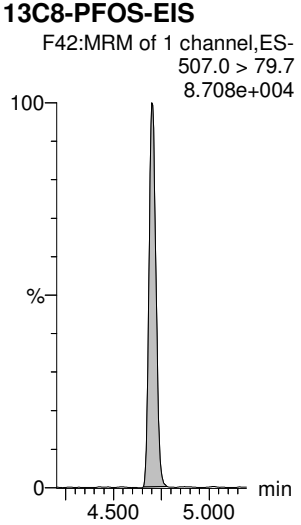
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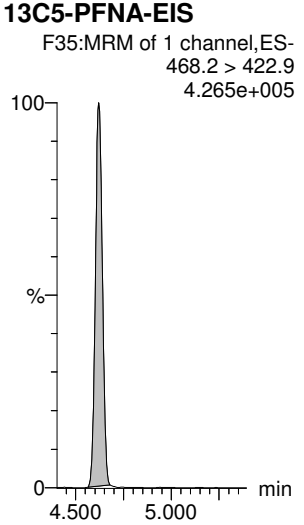
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13C8-PFOS-EIS



13C5-PFNA-EIS

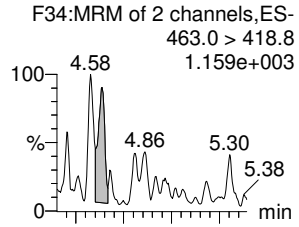


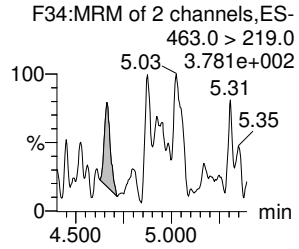
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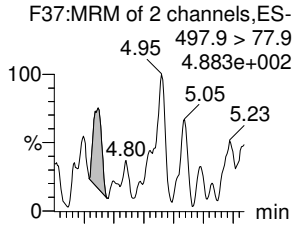
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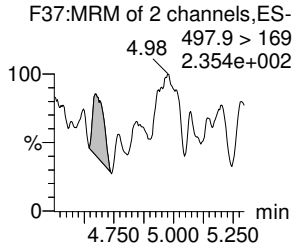
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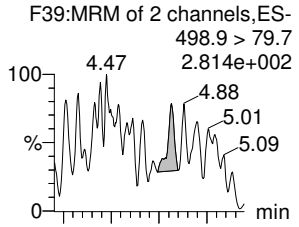


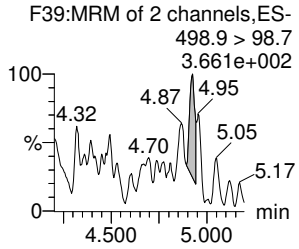
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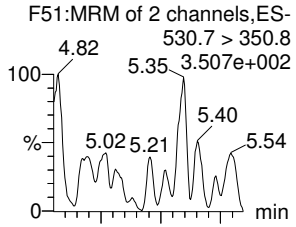


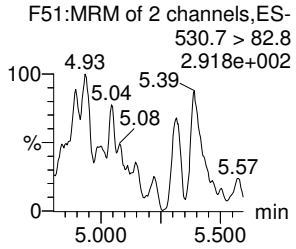
L-PFOS



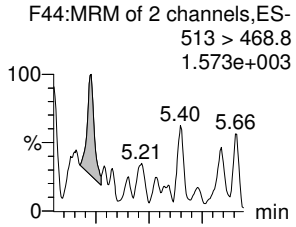


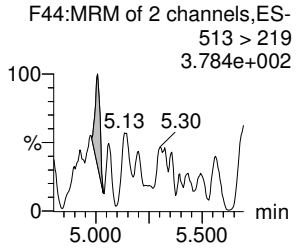
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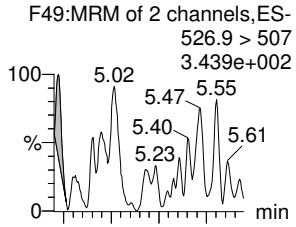


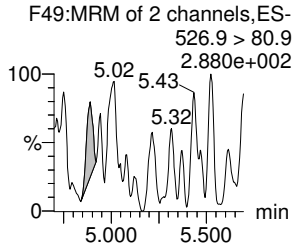
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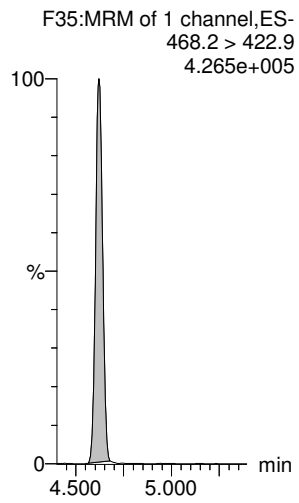


8:2 FTS

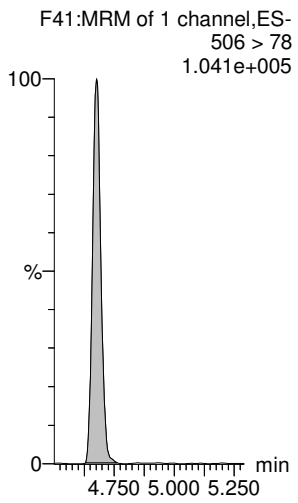




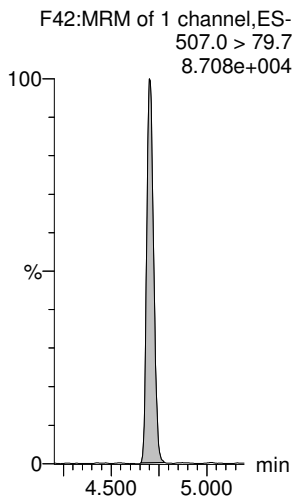
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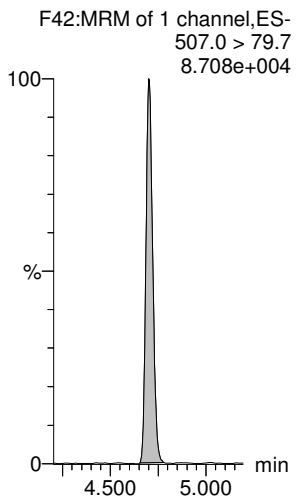
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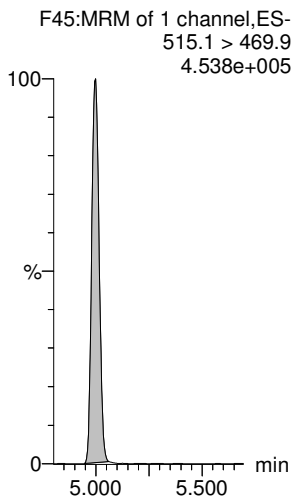
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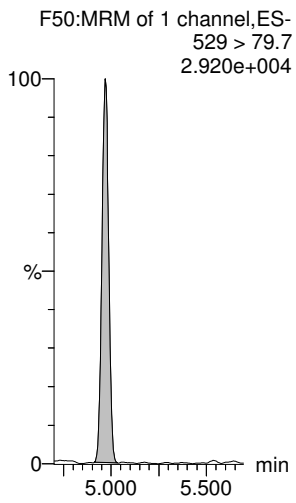
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

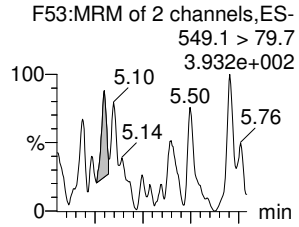


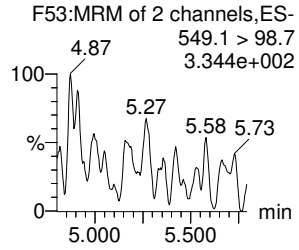
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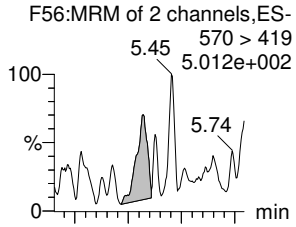
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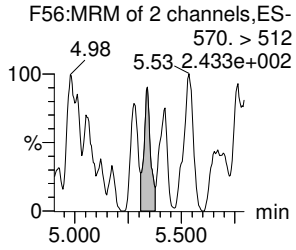
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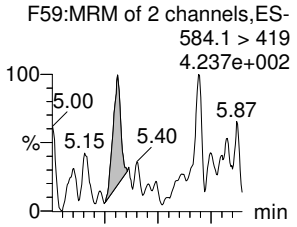


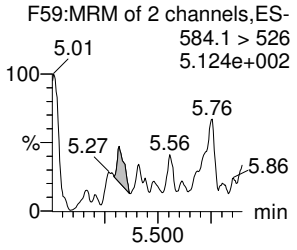
L-MeFOSAA



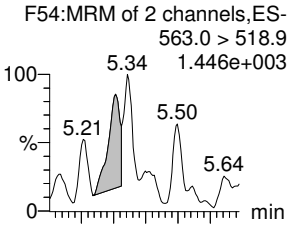


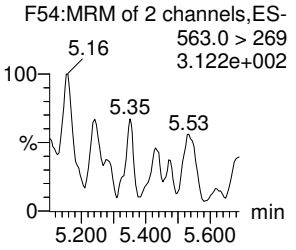
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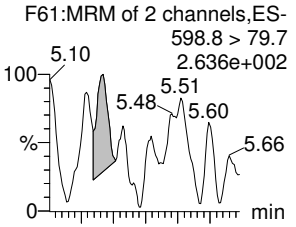


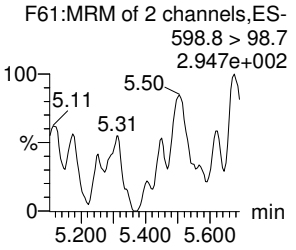
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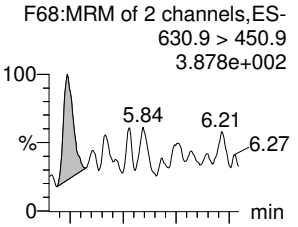


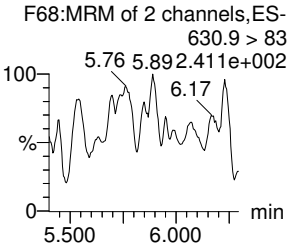
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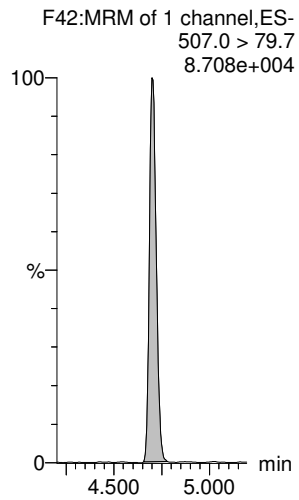


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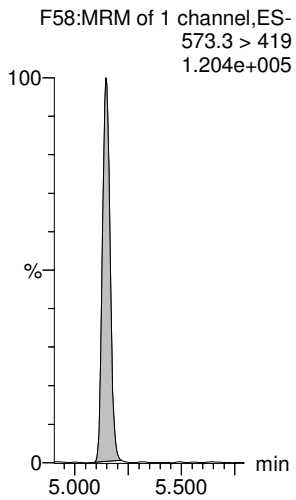




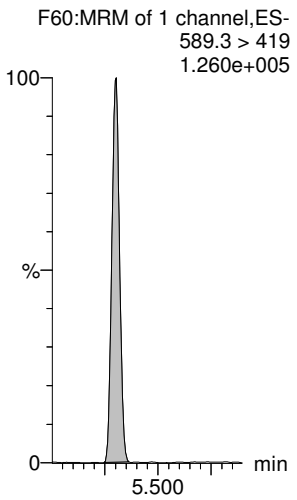
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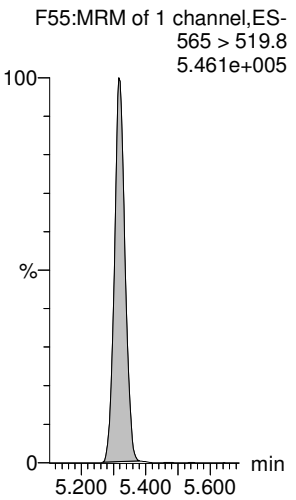
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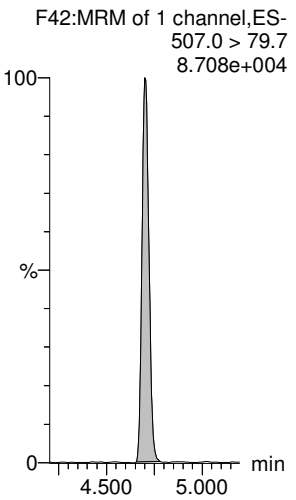
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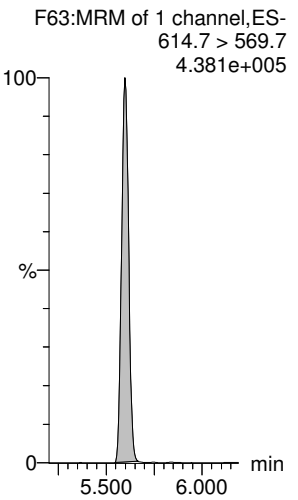
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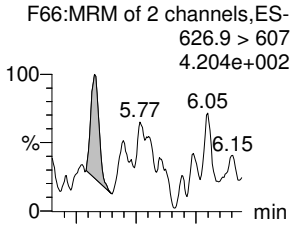


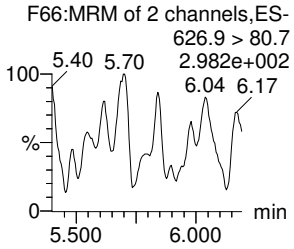
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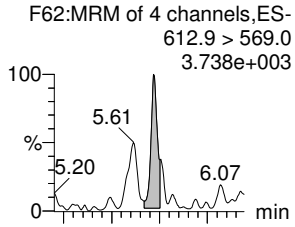
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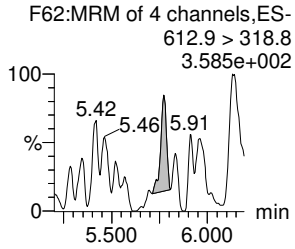
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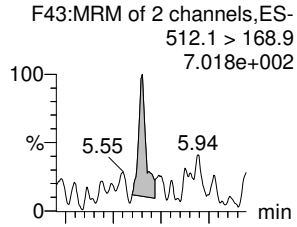


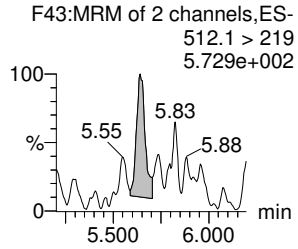
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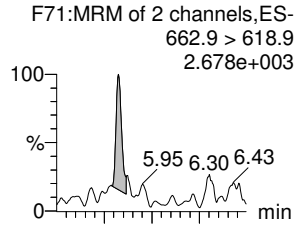


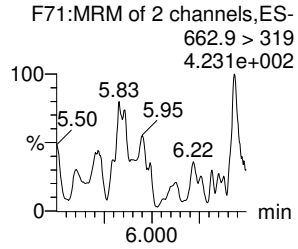
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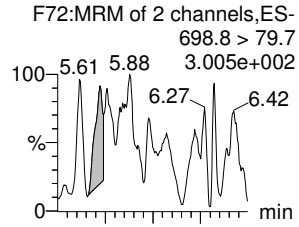


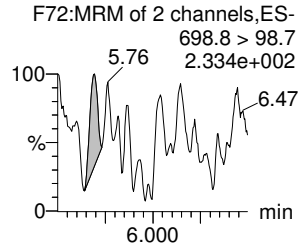
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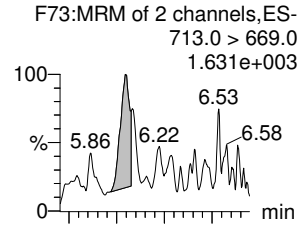


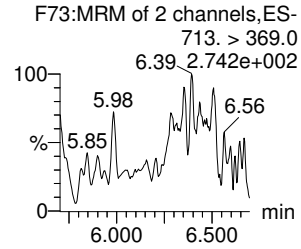
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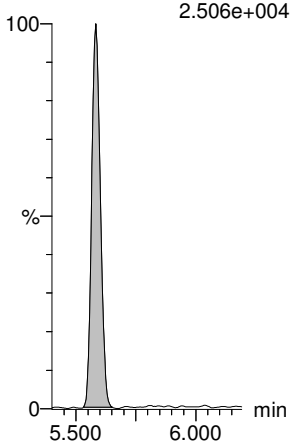


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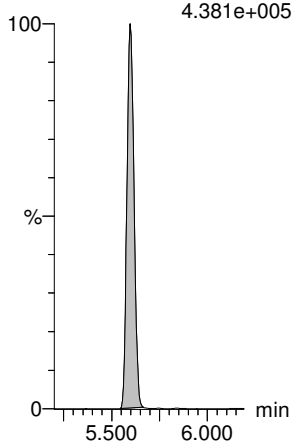




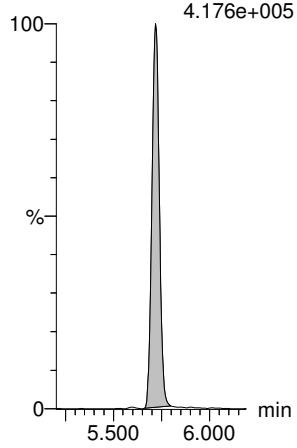
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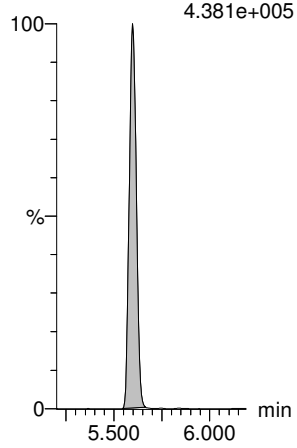
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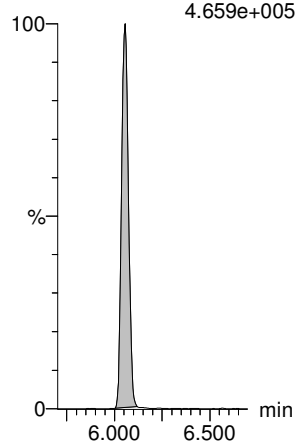
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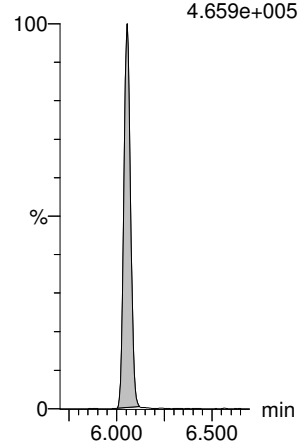
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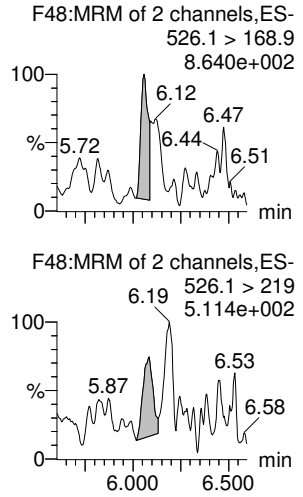


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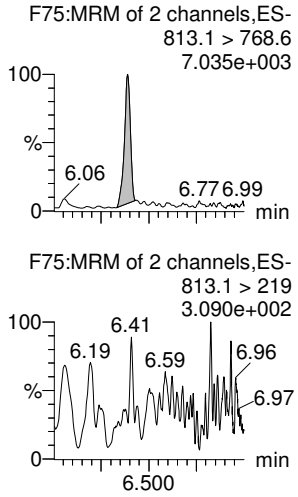
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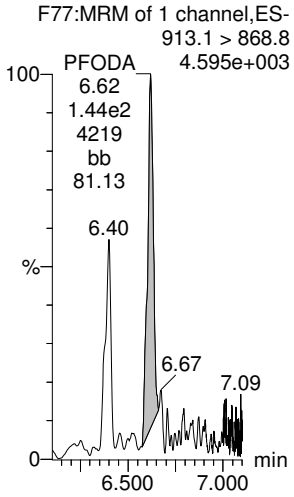
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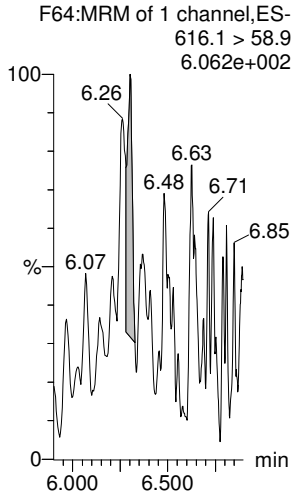
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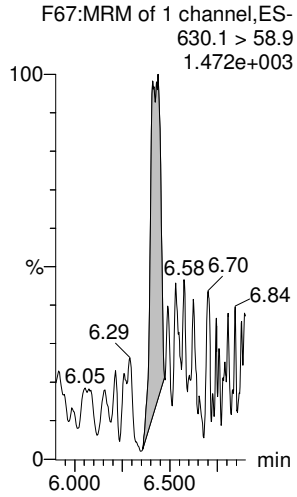
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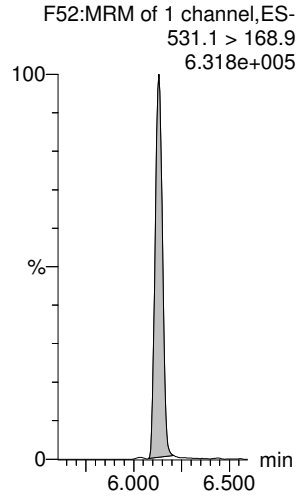
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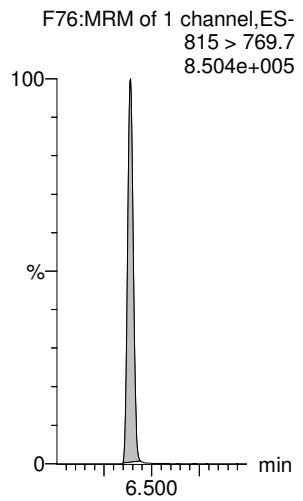
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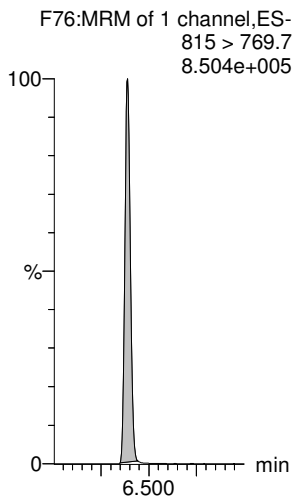
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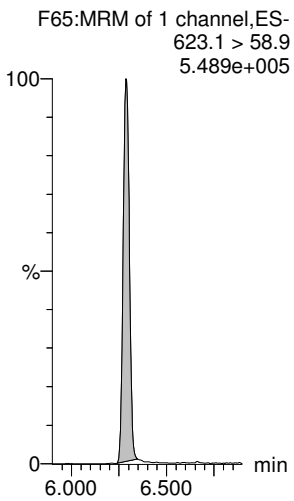
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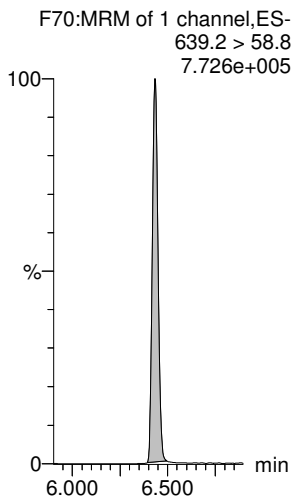
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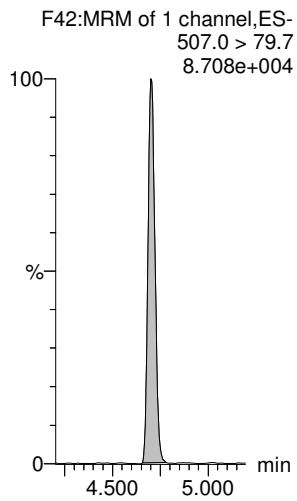
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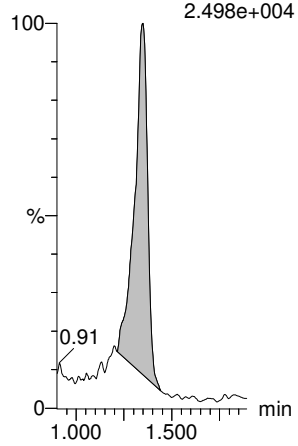


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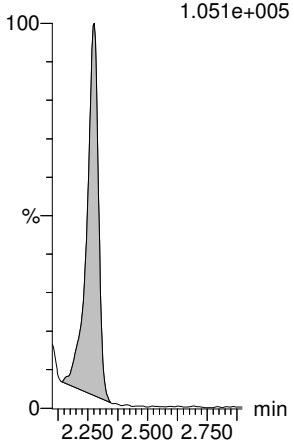
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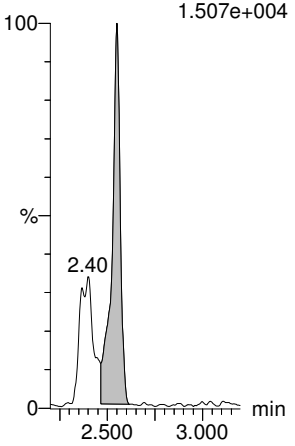
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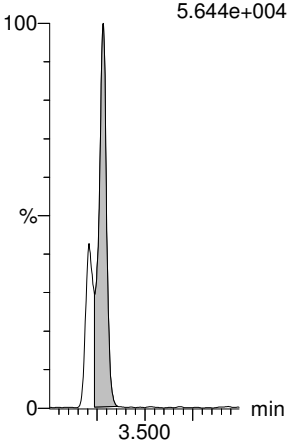
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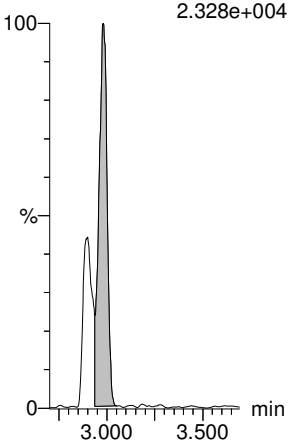
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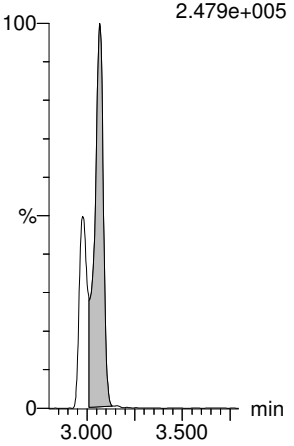
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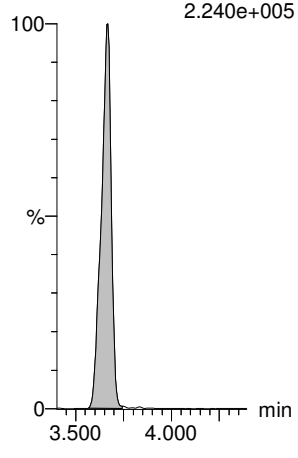
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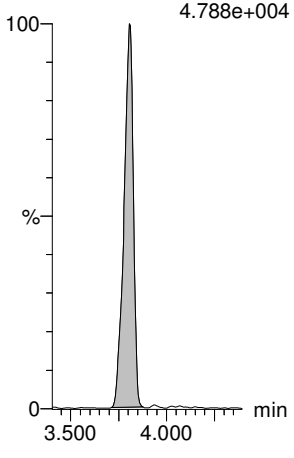
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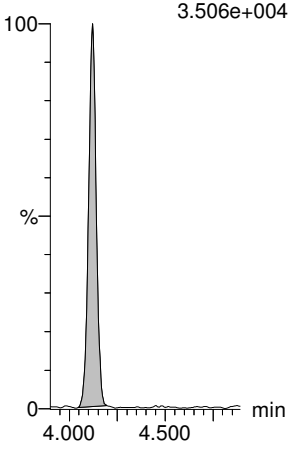
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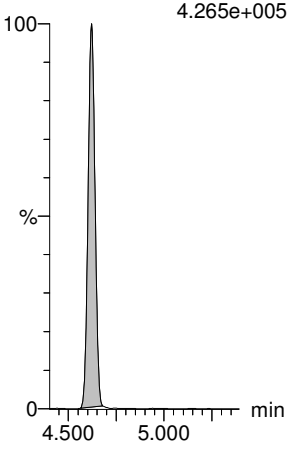
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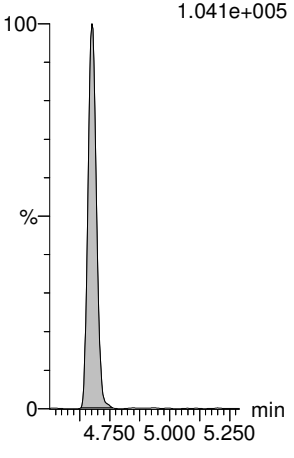
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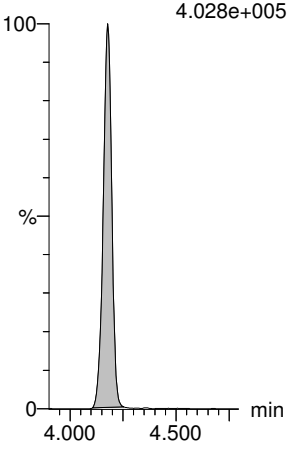
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13C8-PFOSA-RSD



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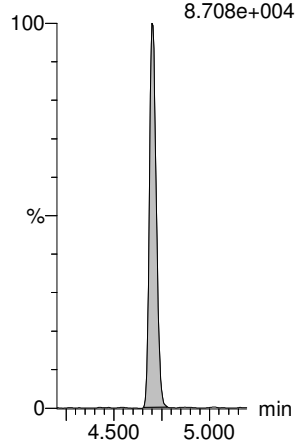


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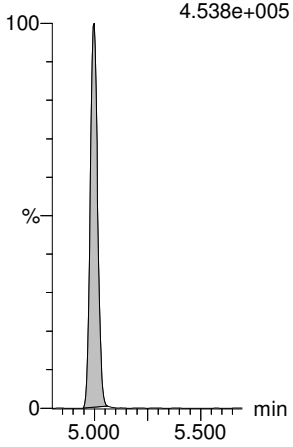
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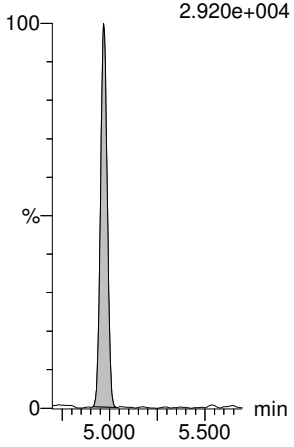
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.708e+004



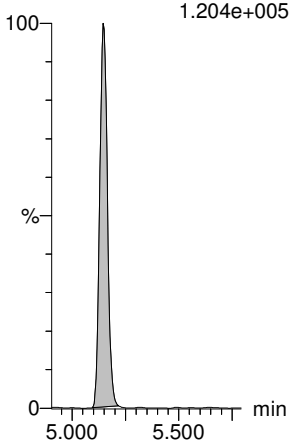
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.538e+005



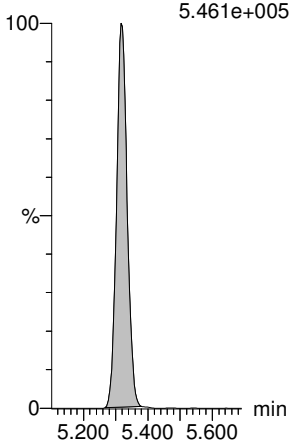
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.920e+004



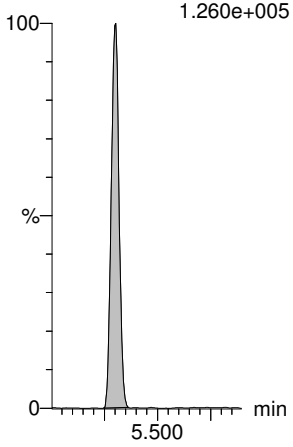
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.204e+005



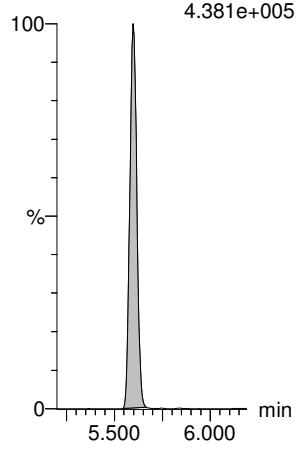
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.461e+005



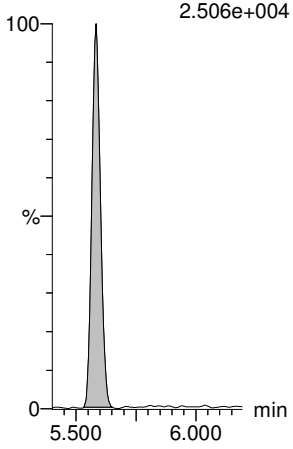
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.260e+005



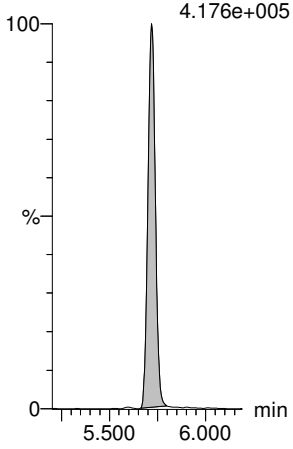
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.381e+005



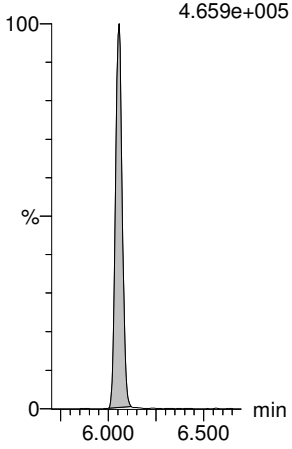
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.506e+004



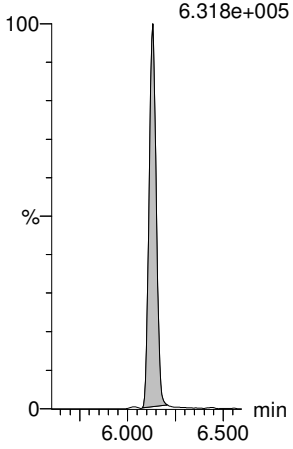
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.176e+005



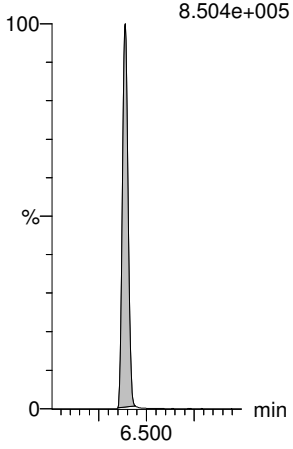
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.659e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.318e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.504e+005

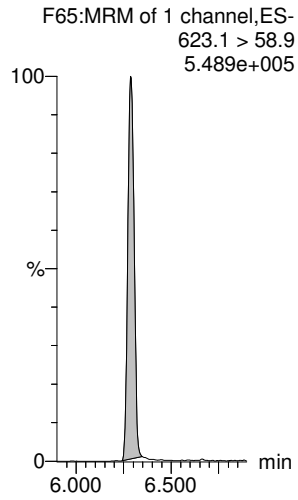


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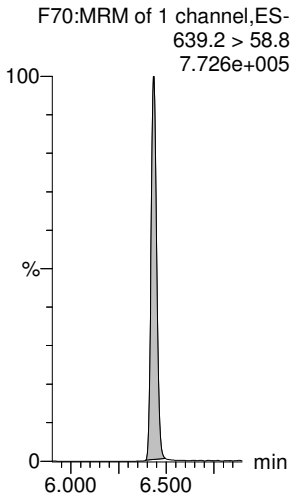
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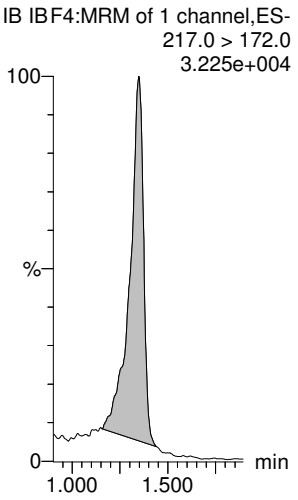
d7-N-MeFOSE-RSD



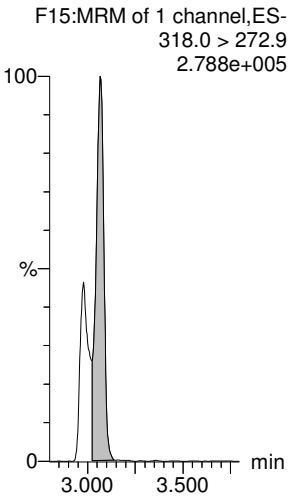
d9-N-EtFOSE-RSD



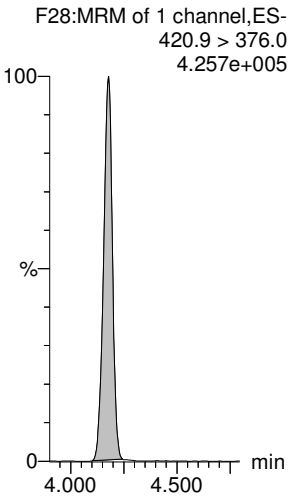
13C4-PFBA



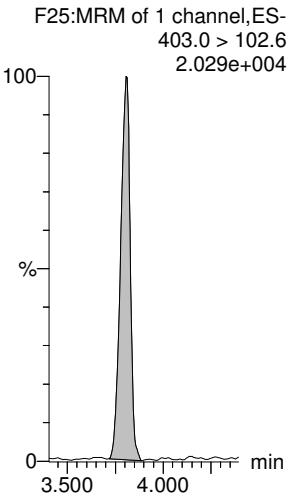
13C5-PFHxA



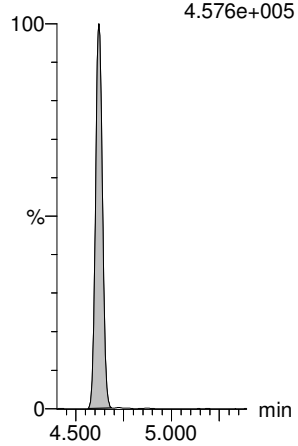
13C8-PFOA



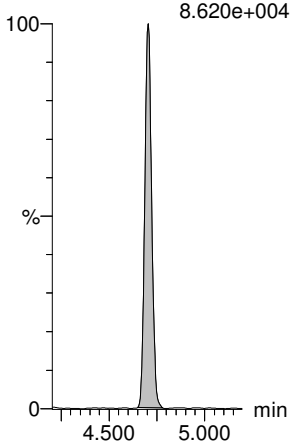
18O2-PFHxS



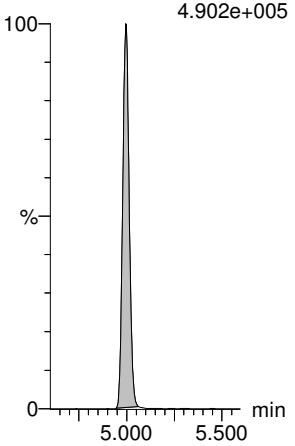
13C9-PFNA



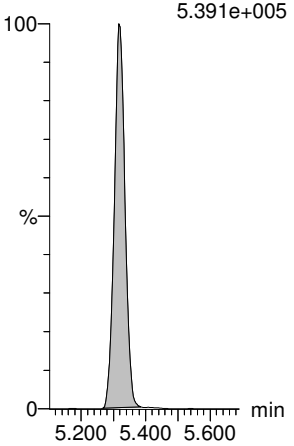
13C4-PFOS



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	5.015	1782.178	1.00	1.24	0.035				NO		
2	2	PFPrS	248.9 > 79.7		740.304	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		5750.177	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	10.206	5750.177	1.00	2.30	0.022				NO		
5	5	PFBS	299.0 > 79.7		740.304	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1126.016	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	1782.178		1.00	1.35	1782.178	12.500	3.31	26.5	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	5750.177		1.00	2.28	5750.177	12.500	6.15	49.2	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	5750.177		1.00	2.28	5750.177	12.500	6.15	49.2	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1126.016		1.00	2.98	1126.016	12.500	8.48	67.9	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	83.727	12825.148	1.00	3.45	0.082				NO		YES
15	8	PFPeS	349.>79.7	6.891	740.304	1.00	3.11	0.116				NO	1.266	NO
16	9	HFPO-DA	285.1 > 168.9		2589.484	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		13378.766	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	41.243	13378.766	1.00	3.62	0.039				NO		YES
19	12	ADONA	376.8 > 250.9	79.272	13378.766	1.00	3.72	0.074				NO	3.419	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	12825.148		1.00	3.07	12825.148	12.500	8.10	64.8	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2589.484		1.00	3.28	2589.484	12.500	8.09	64.7	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7		2635.958	1.00						NO		YES
28	15	6:2 FTS	427.0 > 407	5.891	1575.977	1.00	4.19	0.047				NO	0.559	YES
29	16	L-PFOA	412.8 > 368.9	85.615	18192.574	1.00	4.17	0.059				NO	2.641	NO
30	18	PFecHS	460.8 > 381.0	7.885	18192.574	1.00	4.23	0.005		0.0411		NO	1.152	YES
31	19	PFHpS	449.0 > 79.7		3555.921	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9	7.956	17837.137	1.00	4.42	0.006		0.170		NO	1.092	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2635.958		1.00	3.81	2635.958	12.500	12.5	100.0	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1575.977		1.00	4.12	1575.977	12.500	12.9	103.0	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18192.574		1.00	4.18	18192.574	12.500	12.0	95.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18192.574		1.00	4.18	18192.574	12.500	12.0	95.7	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	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	17837.137		1.00	4.62	17837.137	12.500	12.8	102.1	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	39.889	17837.137	1.00	4.64	0.028				NO	4.725	NO
41	22	PFOSA	497.9 > 77.9	11.734	4148.417	1.00	4.68	0.035				NO	2.003	YES
42	23	L-PFOS	498.9 > 79.7	5.464	3555.921	1.00	4.82	0.019		0.0469		NO	0.670	YES
43	25	9Cl-PF30NS	530.7 > 350.8		3555.921	1.00						NO		YES
44	26	PFDA	513 > 468.8	44.669	17897.027	1.00	4.98	0.031				NO	7.086	NO
45	27	8:2 FTS	526.9 > 507	6.191	1193.054	1.00	4.72	0.065		0.00832		NO	1.026	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	17837.137		1.00	4.62	17837.137	12.500	12.8	102.1	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4148.417		1.00	4.68	4148.417	12.500	13.2	105.3	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17897.027		1.00	5.00	17897.027	12.500	11.4	91.3	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1193.054		1.00	4.97	1193.054	12.500	13.8	110.5	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	7.344	3555.921	1.00	5.05	0.026		0.0263		NO		YES
54	29	L-MeFOSAA	570 > 419	18.215	4927.294	1.00	5.32	0.046				NO	2.369	NO
55	31	L-EtFOSAA	584.1 > 419	14.159	5275.209	1.00	5.31	0.034		0.0922		NO	2.828	YES
56	33	PFUdA	563.0 > 518.9	41.826	20550.580	1.00	5.31	0.025				NO		YES
57	34	PFDS	598.8 > 79.7	7.570	3555.921	1.00	5.27	0.027		0.0196		NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9	15.881	18249.848	1.00	5.49	0.011				NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4927.294		1.00	5.14	4927.294	12.500	11.7	93.7	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5275.209		1.00	5.30	5275.209	12.500	11.1	88.5	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20550.580		1.00	5.32	20550.580	12.500	11.3	90.8	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	12.419	1020.376	1.00	5.58	0.152		0.0846		NO		YES
67	37	PFDoA	612.9 > 569.0	140.161	18249.848	1.00	5.72	0.096		0.0593		NO	15.754	YES
68	38	N-MeFOSA	512.1 > 168.9	27.066	18102.660	1.00	5.65	0.223				NO	1.022	NO
69	39	PFTrDA	662.9 > 618.9	75.651	18249.848	1.00	5.82	0.052				NO		YES
70	40	PFDoS	698.8 > 79.7	9.840	18944.115	1.00	5.72	0.006				NO	1.325	NO
71	41	PFTeDA	713.0 > 669.0	75.225	18944.115	1.00	6.05	0.050				NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	1020.376		1.00	5.58	1020.376	12.500	14.3	114.0	NO		

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73	83	13C2-PFDoA-EIS	614.7 > 569.7	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	18102.660		1.00	5.72	18102.660	149.200	143	95.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18944.115		1.00	6.06	18944.115	12.500	12.0	96.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18944.115		1.00	6.06	18944.115	12.500	12.0	96.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	33.433	27158.578	1.00	6.06	0.184		0.197		NO	1.862	NO
80	43	PFHxDA	813.1 > 768.6	242.782	28228.824	1.00	6.39	0.108				NO		YES
81	44	PFODA	913.1 > 868.8	143.659	28228.824	1.00	6.62	0.064		0.0383		NO		
82	45	N-MeFOSE	616.1 > 58.9	11.728	20182.398	1.00	6.30	0.087				NO		
83	46	N-EtFOSE	630.1 > 58.9	76.697	25715.291	1.00	6.44	0.445				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	27158.578		1.00	6.13	27158.578	149.200	145	97.3	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	28228.824		1.00	6.39	28228.824	12.500	10.9	87.3	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	28228.824		1.00	6.39	28228.824	12.500	10.9	87.3	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	20182.398		1.00	6.29	20182.398	149.200	135	90.6	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	25715.291		1.00	6.43	25715.291	149.200	142	95.5	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	1782.178	2511.324	1.00	1.35	8.871	12.500	11.0	88.3	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	5750.177	12951.961	1.00	2.28	5.550	12.500	9.55	76.4	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	740.304	1163.393	1.00	2.55	7.954	12.500	7.20	57.6	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2589.484	12951.961	1.00	3.28	2.499	12.500	12.5	100.3	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1126.016	1163.393	1.00	2.98	12.098	12.500	8.53	68.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	12825.148	12951.961	1.00	3.07	12.378	12.500	12.8	102.4	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13378.766	12951.961	1.00	3.67	12.912	12.500	19.4	155.0	YES		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2635.958	1163.393	1.00	3.81	28.322	12.500	11.4	91.4	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1575.977	3581.447	1.00	4.12	5.500	12.500	12.6	100.6	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	17837.137	19049.443	1.00	4.62	11.705	12.500	12.6	100.6	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4148.417	20450.689	1.00	4.68	2.536	12.500	13.3	106.3	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18192.574	20122.490	1.00	4.18	11.301	12.500	12.2	97.8	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3555.921	3581.447	1.00	4.70	12.411	12.500	13.4	106.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17897.027	19159.363	1.00	5.00	11.676	12.500	11.9	94.8	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1193.054	3581.447	1.00	4.97	4.164	12.500	11.6	92.9	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4927.294	20450.689	1.00	5.14	3.012	12.500	12.8	102.1	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20550.580	20450.689	1.00	5.32	12.561	12.500	12.2	97.7	NO		

Dataset: Untitled

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Name: 200228P2-13, Date: 28-Feb-2020, Time: 14:51:49, 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	5275.209	20450.689	1.00	5.30	3.224	12.500	12.4	99.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18249.848	19159.363	1.00	5.60	11.907	12.500	12.4	99.5	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	1020.376	3581.447	1.00	5.58	3.561	12.500	12.6	100.5	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	18102.660	20450.689	1.00	5.72	11.065	149.200	144	96.7	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18944.115	20450.689	1.00	6.06	11.579	12.500	12.2	97.8	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	27158.578	20450.689	1.00	6.13	16.600	149.200	151	100.9	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	28228.824	20450.689	1.00	6.39	17.254	12.500	11.9	95.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	20182.398	20450.689	1.00	6.29	12.336	149.200	141	94.2	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	25715.291	20450.689	1.00	6.43	15.718	149.200	151	101.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	2511.324	2511.324	1.00	1.35	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	12951.961	12951.961	1.00	3.07	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20122.490	20122.490	1.00	4.18	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1163.393	1163.393	1.00	3.81	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	19049.443	19049.443	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3581.447	3581.447	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19159.363	19159.363	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20450.689	20450.689	1.00	5.32	12.500	12.500	12.5	100.0	NO		

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JLM 4/29/2020

Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 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	6026.250	6479.714	1.00	1.37	11.625	10.000	10.4	104.3	NO		
2	2	PFPrS	248.9 > 79.7	1451.020	1289.331	1.00	1.69	14.068	10.000	10.4	103.9	NO	2.148	NO
3	3	3:3 FTCA	240.9 > 176.9	832.191	11920.956	1.00	2.15	0.873	10.000	9.05	90.5	NO	3.921	NO
4	4	PFPeA	263.1 > 218.9	9303.960	11920.956	1.00	2.29	9.756	10.000	10.3	103.5	NO		
5	5	PFBS	299.0 > 79.7	2655.923	1289.331	1.00	2.57	25.749	10.000	11.0	110.1	NO	3.103	NO
6	6	4:2 FTS	327.0 > 307	1759.742	1728.663	1.00	3.00	12.725	10.000	9.80	98.0	NO	0.857	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	6479.714		1.00	1.36	6479.714	12.500	12.1	96.4	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1289.331		1.00	2.56	1289.331	12.500	13.5	107.6	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	11920.956		1.00	2.29	11920.956	12.500	12.7	102.0	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	11920.956		1.00	2.29	11920.956	12.500	12.7	102.0	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1289.331		1.00	2.56	1289.331	12.500	13.5	107.6	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1728.663		1.00	3.00	1728.663	12.500	13.0	104.2	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	15620.217	19889.371	1.00	3.08	9.817	10.000	11.1	111.4	NO	17.841	NO
15	8	PFPeS	349.>79.7	2741.726	1289.331	1.00	3.28	26.581	10.000	12.5	125.0	NO	2.438	NO
16	9	HFPO-DA	285.1 > 168.9	3538.915	4065.308	1.00	3.30	10.881	10.000	10.6	106.2	NO	2.536	NO
17	10	5:3 FTCA	340.9 > 236.9	2211.533	13439.728	1.00	3.62	2.057	10.000	10.1	101.3	NO	1.794	NO
18	11	PFHpA	363.0 > 318.9	13228.525	13439.728	1.00	3.68	12.304	10.000	10.4	104.4	NO	34.109	NO
19	12	ADONA	376.8 > 250.9	29154.330	13439.728	1.00	3.79	27.116	10.000	10.4	103.7	NO	4.047	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	19889.371		1.00	3.08	19889.371	12.500	12.6	100.5	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1289.331		1.00	2.56	1289.331	12.500	13.5	107.6	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4065.308		1.00	3.30	4065.308	12.500	12.7	101.5	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13439.728		1.00	3.68	13439.728	12.500	12.9	103.0	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13439.728		1.00	3.68	13439.728	12.500	12.9	103.0	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13439.728		1.00	3.68	13439.728	12.500	12.9	103.0	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2515.972	2948.466	1.00	3.82	10.666	10.000	9.57	95.7	NO	2.115	NO
28	15	6:2 FTS	427.0 > 407	2015.738	1703.462	1.00	4.14	14.791	10.000	9.41	94.1	NO	1.046	NO
29	16	L-PFOA	412.8 > 368.9	16209.389	17279.393	1.00	4.19	11.726	10.000	9.73	97.3	NO	3.179	NO
30	18	PFecHS	460.8 > 381.0	2403.554	17279.393	1.00	4.21	1.739	10.000	10.3	103.0	NO	0.519	NO
31	19	PFHpS	449.0 > 79.7	2791.103	3460.159	1.00	4.31	10.083	10.000	11.3	112.7	NO	1.928	NO
32	20	7:3 FTCA	440.9 > 336.9	2091.023	16724.156	1.00	4.62	1.563	10.000	8.82	88.2	NO	1.514	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2948.466		1.00	3.82	2948.466	12.500	14.0	111.8	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1703.462		1.00	4.14	1703.462	12.500	13.9	111.3	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	17279.393		1.00	4.19	17279.393	12.500	11.4	90.9	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	17279.393		1.00	4.19	17279.393	12.500	11.4	90.9	NO		

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Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 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	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16724.156		1.00	4.64	16724.156	12.500	12.0	95.8	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	15403.742	16724.156	1.00	4.64	11.513	10.000	10.8	108.0	NO	7.720	NO
41	22	PFOSA	497.9 > 77.9	2426.701	4064.102	1.00	4.69	7.464	10.000	9.21	92.1	NO	26.100	NO
42	23	L-PFOS	498.9 > 79.7	2641.261	3460.159	1.00	4.72	9.542	10.000	10.6	105.7	NO	2.402	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2808.454	3460.159	1.00	4.94	10.146	10.000	10.8	107.9	NO	14.144	NO
44	26	PFDA	513 > 468.8	17619.838	18741.766	1.00	5.01	11.752	10.000	10.5	105.0	NO	10.860	NO
45	27	8:2 FTS	526.9 > 507	1365.061	1118.198	1.00	4.98	15.260	10.000	11.8	118.1	NO	2.465	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	16724.156		1.00	4.64	16724.156	12.500	12.0	95.8	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4064.102		1.00	4.69	4064.102	12.500	12.9	103.2	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18741.766		1.00	5.01	18741.766	12.500	11.9	95.6	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1118.198		1.00	4.98	1118.198	12.500	12.9	103.5	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2643.497	3460.159	1.00	5.07	9.550	10.000	10.3	103.2	NO	2.298	NO
54	29	L-MeFOSAA	570 > 419	5155.262	5520.631	1.00	5.16	11.673	10.000	8.95	89.5	NO	2.064	NO
55	31	L-EtFOSAA	584.1 > 419	4832.863	5358.026	1.00	5.31	11.275	10.000	10.4	104.2	NO	1.265	NO
56	33	PFUdA	563.0 > 518.9	16400.160	20886.771	1.00	5.33	9.815	10.000	9.59	95.9	NO	25.772	NO
57	34	PFDS	598.8 > 79.7	2315.405	3460.159	1.00	5.37	8.365	10.000	10.3	103.1	NO	2.037	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	6842.021	17349.141	1.00	5.53	4.930	10.000	11.3	112.9	NO	18.070	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	5520.631		1.00	5.15	5520.631	12.500	13.1	105.0	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5358.026		1.00	5.31	5358.026	12.500	11.2	89.9	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20886.771		1.00	5.33	20886.771	12.500	11.5	92.3	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	17349.141		1.00	5.61	17349.141	12.500	11.5	92.3	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1674.341	996.488	1.00	5.59	21.003	10.000	10.3	103.3	NO	0.975	NO
67	37	PFDoA	612.9 > 569.0	17903.947	17349.141	1.00	5.61	12.900	10.000	11.0	110.3	NO	9.934	NO
68	38	N-MeFOSA	512.1 > 168.9	6374.320	17987.037	1.00	5.71	52.874	50.000	50.2	100.3	NO	1.655	NO
69	39	PFTrDA	662.9 > 618.9	18008.230	17349.141	1.00	5.85	12.975	10.000	11.4	113.9	NO	56.998	NO
70	40	PFDoS	698.8 > 79.7	2605.116	18727.982	1.00	5.87	1.739	10.000	10.3	103.2	NO	3.328	NO
71	41	PFTeDA	713.0 > 669.0	16717.451	18727.982	1.00	6.06	11.158	10.000	10.6	106.4	NO	14.175	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	996.488		1.00	5.59	996.488	12.500	13.9	111.4	NO		

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Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 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	17349.141		1.00	5.61	17349.141	12.500	11.5	92.3	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	17987.037		1.00	5.74	17987.037	149.200	142	95.3	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	17349.141		1.00	5.61	17349.141	12.500	11.5	92.3	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18727.982		1.00	6.06	18727.982	12.500	11.9	95.1	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18727.982		1.00	6.06	18727.982	12.500	11.9	95.1	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	9233.459	26666.244	1.00	6.12	51.662	50.000	50.9	101.8	NO	1.672	NO
80	43	PFHxDA	813.1 > 768.6	15946.577	26158.857	1.00	6.39	7.620	10.000	10.6	105.9	NO	148.552	NO
81	44	PFODA	913.1 > 868.8	23399.875	26158.857	1.00	6.62	11.182	10.000	11.3	112.6	NO		
82	45	N-MeFOSE	616.1 > 58.9	7101.195	19018.480	1.00	6.30	55.709	50.000	51.1	102.2	NO		
83	46	N-EtFOSE	630.1 > 58.9	8614.773	24436.277	1.00	6.45	52.599	50.000	54.0	108.0	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	26666.244		1.00	6.14	26666.244	149.200	143	95.5	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	26158.857		1.00	6.39	26158.857	12.500	10.1	80.9	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	26158.857		1.00	6.39	26158.857	12.500	10.1	80.9	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	19018.480		1.00	6.29	19018.480	149.200	127	85.4	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	24436.277		1.00	6.44	24436.277	149.200	135	90.7	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3460.159		1.00	4.72	3460.159	12.500	12.7	101.5	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	6847.660	8401.559	1.00	1.36	10.188	12.500	12.7	101.4	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	11920.956	19476.637	1.00	2.29	7.651	12.500	13.2	105.3	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1289.331	1205.302	1.00	2.56	13.371	12.500	12.1	96.8	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4065.308	19476.637	1.00	3.30	2.609	12.500	13.1	104.7	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1728.663	1205.302	1.00	3.00	17.928	12.500	12.6	101.1	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	19889.371	19476.637	1.00	3.08	12.765	12.500	13.2	105.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13439.728	19476.637	1.00	3.68	8.626	12.500	12.9	103.5	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2948.466	1205.302	1.00	3.82	30.578	12.500	12.3	98.7	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1703.462	3753.509	1.00	4.14	5.673	12.500	13.0	103.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16724.156	16962.338	1.00	4.64	12.324	12.500	13.2	105.9	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4064.102	19644.926	1.00	4.69	2.586	12.500	13.6	108.4	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	17279.393	18763.465	1.00	4.19	11.511	12.500	12.4	99.6	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3460.159	3753.509	1.00	4.72	11.523	12.500	12.4	99.3	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18741.766	18387.654	1.00	5.01	12.741	12.500	12.9	103.5	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1118.198	3753.509	1.00	4.98	3.724	12.500	10.4	83.1	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	5520.631	19644.926	1.00	5.15	3.513	12.500	14.9	119.1	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20886.771	19644.926	1.00	5.33	13.290	12.500	12.9	103.4	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-75.qld

Last Altered: Saturday, February 29, 2020 12:13:05 Pacific Standard Time
Printed: Saturday, February 29, 2020 12:13:46 Pacific Standard Time

Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 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	5358.026	19644.926	1.00	5.31	3.409	12.500	13.1	104.8	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	17349.141	18387.654	1.00	5.61	11.794	12.500	12.3	98.6	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	996.488	3753.509	1.00	5.59	3.319	12.500	11.7	93.7	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	17987.037	19644.926	1.00	5.74	11.445	149.200	149	100.0	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18727.982	19644.926	1.00	6.06	11.917	12.500	12.6	100.6	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	26666.244	19644.926	1.00	6.14	16.968	149.200	154	103.2	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	26158.857	19644.926	1.00	6.39	16.645	12.500	11.5	91.8	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19018.480	19644.926	1.00	6.29	12.101	149.200	138	92.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	24436.277	19644.926	1.00	6.44	15.549	149.200	149	99.9	NO		
119	99	13C4-PFBA	217.0 > 172.0	8401.559	8401.559	1.00	1.37	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	19476.637	19476.637	1.00	3.08	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	18763.465	18763.465	1.00	4.19	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1205.302	1205.302	1.00	3.82	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	16962.338	16962.338	1.00	4.64	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3753.509	3753.509	1.00	4.72	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	18387.654	18387.654	1.00	5.01	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19644.926	19644.926	1.00	5.33	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

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Printed: Saturday, February 29, 2020 12:22:53 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200228P2-1	IPA	28-Feb-20	12:45:37
2	2	200228P2-2	IPA	28-Feb-20	12:56:16
3	3	200228P2-3	ST200228P2-1 PFC CS-2 20B1102	28-Feb-20	13:06:47
4	4	200228P2-4	ST200228P2-2 PFC CS-1 20B1103	28-Feb-20	13:17:15
5	5	200228P2-5	ST200228P2-3 PFC CS0 20B1104	28-Feb-20	13:27:47
6	6	200228P2-6	ST200228P2-4 PFC CS1 20B1105	28-Feb-20	13:38:16
7	7	200228P2-7	ST200228P2-5 PFC CS2 20B1106	28-Feb-20	13:48:48
8	8	200228P2-8	ST200228P2-6 PFC CS3 20B1107	28-Feb-20	13:59:16
9	9	200228P2-9	ST200228P2-7 PFC CS4 20B1108	28-Feb-20	14:09:48
10	10	200228P2-10	ST200228P2-8 PFC CS5 20B1109	28-Feb-20	14:20:17
11	11	200228P2-11	ST200228P2-9 PFC CS6 20B1110	28-Feb-20	14:30:48
12	12	200228P2-12	ST200228P2-10 PFC CS7 20B1111	28-Feb-20	14:41:18
13	13	200228P2-13	IB	28-Feb-20	14:51:49
14	14	200228P2-14	ICV200228P2-1 PFC ICV 20B1112	28-Feb-20	15:02:18
15	15	200228P2-15	IB	28-Feb-20	15:12:50
16	16	200228P2-16	2000328-04 W-SB01-20200213 0.26272	28-Feb-20	16:50:41
17	17	200228P2-17	2000328-05 EB13-20200213 0.2557	28-Feb-20	17:01:23
18	18	200228P2-18	2000328-04@20X W-SB01-20200213 0.26272	28-Feb-20	17:11:52
19	19	200228P2-19	IB	28-Feb-20	17:22:24
20	20	200228P2-20	B0B0233-BLK1 Method Blank 2	28-Feb-20	17:32:54
21	21	200228P2-21	B0B0233-BS1 OPR 2	28-Feb-20	17:43:23
22	22	200228P2-22	B0B0233-MS1 Matrix Spike 2.11	28-Feb-20	17:53:55
23	23	200228P2-23	B0B0233-MSD1 Matrix Spike Dup 2.1	28-Feb-20	18:04:25
24	24	200228P2-24	2000386-01 SRS-70-5' 2.2	28-Feb-20	18:14:54
25	25	200228P2-25	2000386-02 SRS-70-10' 2.16	28-Feb-20	18:25:25
26	26	200228P2-26	2000386-03 SRS-65-5' 2.22	28-Feb-20	18:35:55
27	27	200228P2-27	2000386-04 SRS-65-10' 2.16	28-Feb-20	18:46:26
28	28	200228P2-28	2000386-05 SRS-60-5' 2.19	28-Feb-20	18:56:57
29	29	200228P2-29	2000386-06 SRS-60-10 2.12	28-Feb-20	19:07:25
30	30	200228P2-30	2000386-07 SRS-68-5 2.18	28-Feb-20	19:17:57
31	31	200228P2-31	IB	28-Feb-20	19:28:26
32	32	200228P2-32	ST200228P2-11 PFC CS3 20B1107	28-Feb-20	19:38:56

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Dataset: Untitled

Last Altered: Saturday, February 29, 2020 12:21:43 Pacific Standard Time
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Compound name: PFBA

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33	33 200228P2-33	2000386-08 SRS-69-5 2.22	28-Feb-20	19:49:27
34	34 200228P2-34	2000391-01 SRS-58-5' 2.18	28-Feb-20	19:59:58
35	35 200228P2-35	2000391-02 SRS-58-10' 2.19	28-Feb-20	20:10:27
36	36 200228P2-36	2000391-03 SRS-59-5 2.28	28-Feb-20	20:20:59
37	37 200228P2-37	2000391-04 SRS-59-10' 2.1	28-Feb-20	20:31:30
38	38 200228P2-38	2000391-05 SRS-62-10' 2.17	28-Feb-20	20:41:58
39	39 200228P2-39	2000391-06 SRS-61-5' 2.29	28-Feb-20	20:52:30
40	40 200228P2-40	2000391-07 SRS-61-10 2.23	28-Feb-20	21:02:59
41	41 200228P2-41	2000391-08 SRS-63-10 2.48	28-Feb-20	21:13:30
42	42 200228P2-42	2000391-09 SRS-71-5 2.23	28-Feb-20	21:24:01
43	43 200228P2-43	ST200228P2-12 PFC CS3 20B1107	28-Feb-20	21:34:30
44	44 200228P2-44	IB	28-Feb-20	21:45:01
45	45 200228P2-45	B0B0155-BLK1 Method Blank 0.25	28-Feb-20	21:55:30
46	46 200228P2-46	B0B0155-BS1 OPR 0.25	28-Feb-20	22:06:02
47	47 200228P2-47	B0B0155-BSD1 LCSD 0.25	28-Feb-20	22:16:32
48	48 200228P2-48	2000333-01 EB02-20200217 0.24792	28-Feb-20	22:27:01
49	49 200228P2-49	2000333-02@5X 18-GW-18BGMP10E-20200217 0.25617	28-Feb-20	22:37:33
50	50 200228P2-50	2000333-03@5X 18-GW-18BGMP10F-20200217 0.24799	28-Feb-20	22:48:01
51	51 200228P2-51	2000333-04@5X 18-GW-18BGMP08C-20200217 0.25669	28-Feb-20	22:58:34
52	52 200228P2-52	2000333-05@5X 24-GW-18BGMP08D-20200217 0.25341	28-Feb-20	23:09:03
53	53 200228P2-53	2000333-06@5X 24-GW-18BGMP08E-20200217 0.25283	28-Feb-20	23:19:34
54	54 200228P2-54	2000333-07@5X 24-GW-18PS1-20200217 0.24759	28-Feb-20	23:30:04
55	55 200228P2-55	2000333-08@5X DUP01-20200217 0.24854	28-Feb-20	23:40:33
56	56 200228P2-56	B0B0160-BLK1 Method Blank 0.25	28-Feb-20	23:51:05
57	57 200228P2-57	B0B0160-BS1 OPR 0.25	29-Feb-20	00:01:35
58	58 200228P2-58	B0B0160-BSD1 LCSD 0.25	29-Feb-20	00:12:04
59	59 200228P2-59	2000345-01@5X ET-LW01-20200218 0.25307	29-Feb-20	00:22:36
60	60 200228P2-60	2000346-01 EB03-20200218 0.25369	29-Feb-20	00:33:06
61	61 200228P2-61	ST200228P2-13 PFC CS0 20B1104	29-Feb-20	00:43:35
62	62 200228P2-62	IB	29-Feb-20	00:54:07
63	63 200228P2-63	2000346-02@5X 18 -GW-18BGMW19C-20200218 0.25031	29-Feb-20	01:04:35
64	64 200228P2-64	2000346-03@5X 18-GW-18IDP2-D-20200218 0.25907	29-Feb-20	01:15:08
65	65 200228P2-65	2000346-04@5X 18-GW-18DW540-20200218 0.25311	29-Feb-20	01:25:37
66	66 200228P2-66	2000346-05@5X 18-GW-18DW450-20200218 0.24811	29-Feb-20	01:36:08
67	67 200228P2-67	IB	29-Feb-20	01:46:38
68	68 200228P2-68	2000353-01 S9MW30-20Q1 0.25885	29-Feb-20	01:57:07

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Compound name: PFBA

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69	69 200228P2-69	2000353-07 S9MW22-20Q1 0.251	29-Feb-20	02:07:39
70	70 200228P2-70	2000353-08 S9MW23-20Q1 0.25701	29-Feb-20	02:18:10
71	71 200228P2-71	2000353-10@15X S9MW68L1-20Q1 0.25186	29-Feb-20	02:28:38
72	72 200228P2-72	IB	29-Feb-20	02:39:10
73	73 200228P2-73	2000353-11 S9MW71L9-20Q1 0.252	29-Feb-20	02:49:38
74	74 200228P2-74	2000354-06@10X S9SMW2A-20Q1 0.23864	29-Feb-20	03:00:10
75	75 200228P2-75	ST200228P2-14 PFC CS3 20B1107	29-Feb-20	03:10:41
76	76 200228P2-76	IB	29-Feb-20	03:21:09
77	77 200228P2-77	2000354-07 S9SMW10-20Q1 0.24862	29-Feb-20	03:31:42
78	78 200228P2-78	2000354-08@5X S9MW15-20Q1 0.25813	29-Feb-20	03:42:12
79	79 200228P2-79	IB	29-Feb-20	03:52:41
80	80 200228P2-80	2000354-09 S9MW61L1-20Q1 0.25585	29-Feb-20	04:03:12
81	81 200228P2-81	2000354-10 91MW10-20Q1 0.24621	29-Feb-20	04:13:43
82	82 200228P2-82	B0B0137-MS1@5X Matrix Spike 0.24799	29-Feb-20	04:24:13
83	83 200228P2-83	B0B0137-MSD1@5X Matrix Spike Dup 0.24718	29-Feb-20	04:34:42
84	84 200228P2-84	2000330-04@5X DUP04-20200214 0.25435	29-Feb-20	04:45:13
85	85 200228P2-85	ST200228P2-15 PFC CS3 20B1107	29-Feb-20	04:55:43
86	86 200228P2-86	IB	29-Feb-20	05:06:14

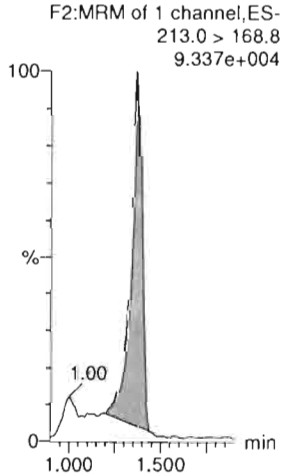
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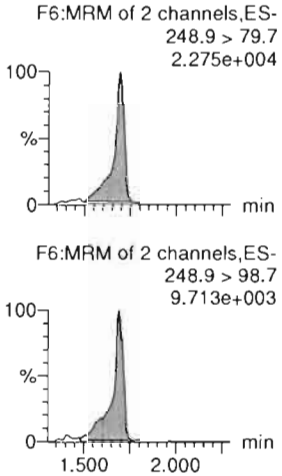
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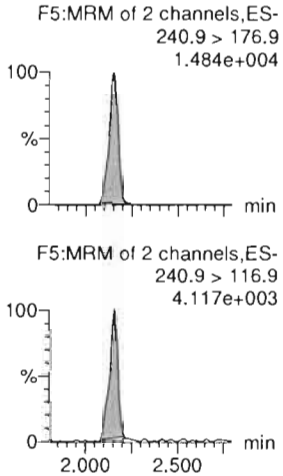
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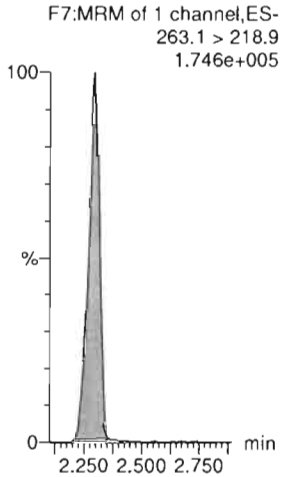
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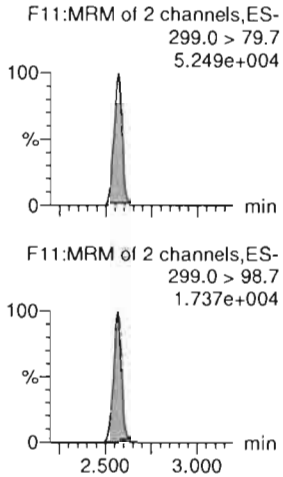
3:3 FTCA



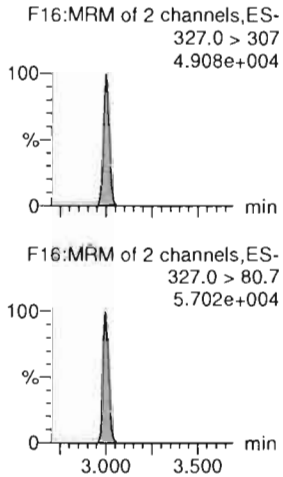
PFPeA



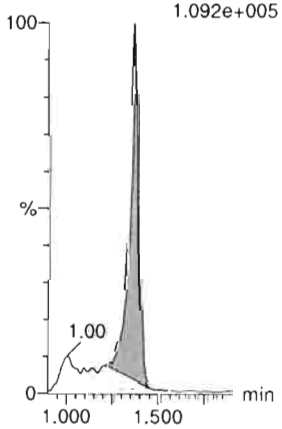
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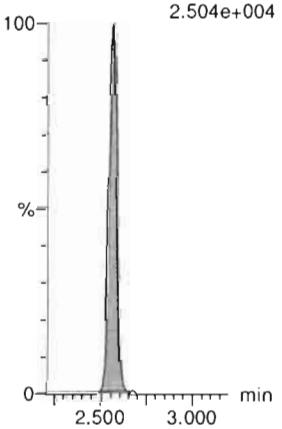
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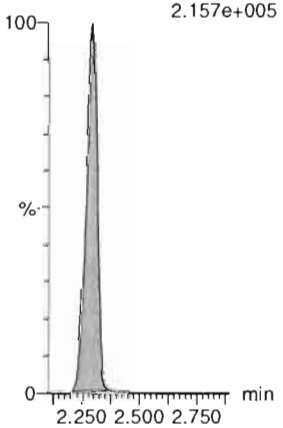
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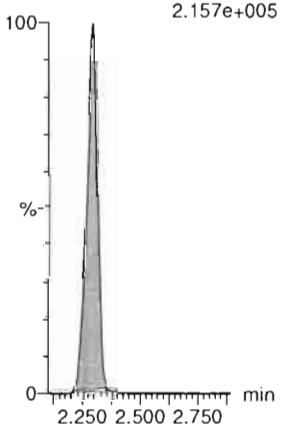
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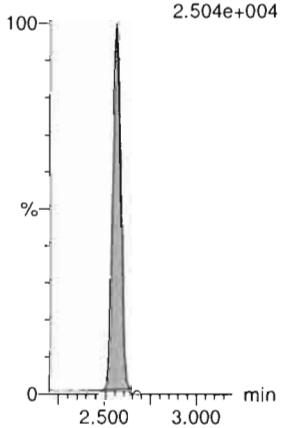
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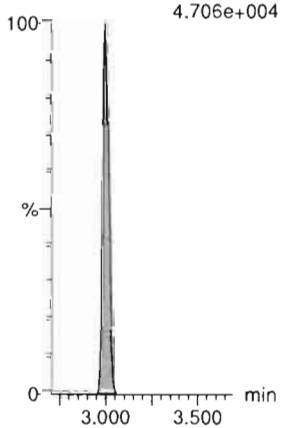
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13C3-PFBS-EIS



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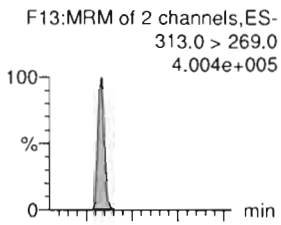


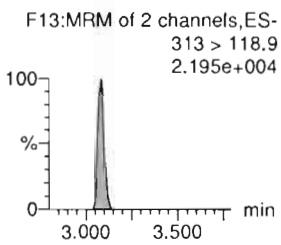
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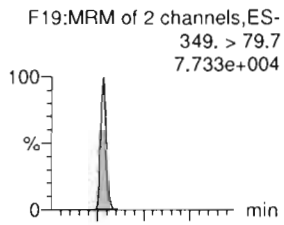
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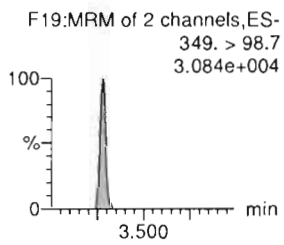
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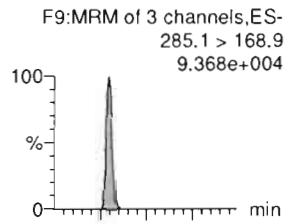


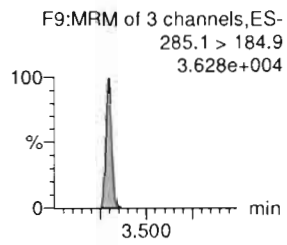
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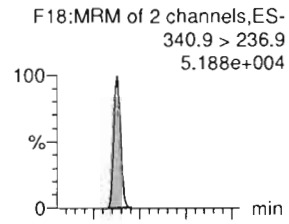


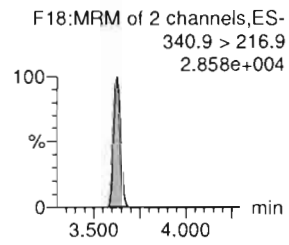
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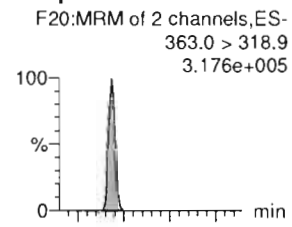


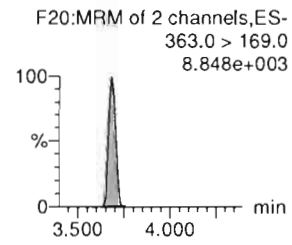
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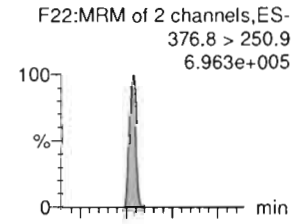


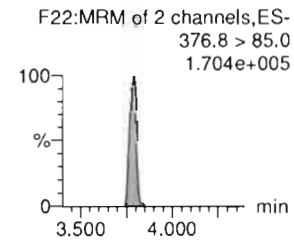
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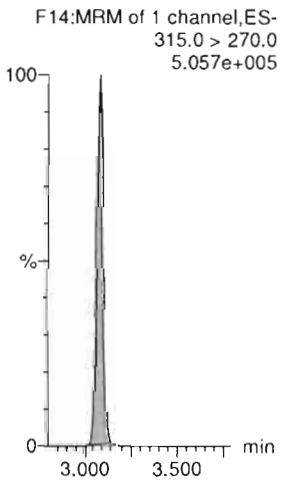


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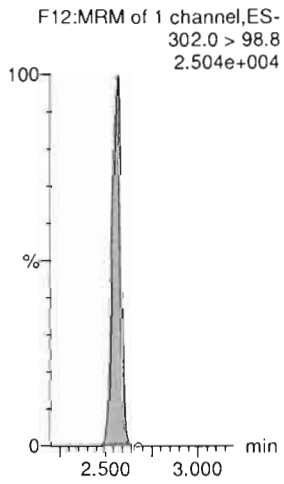




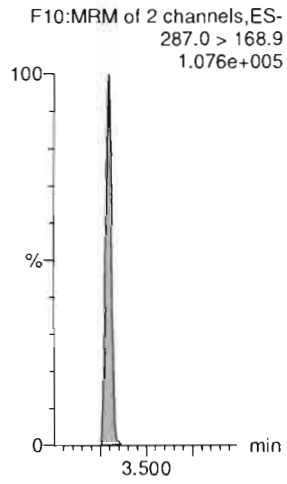
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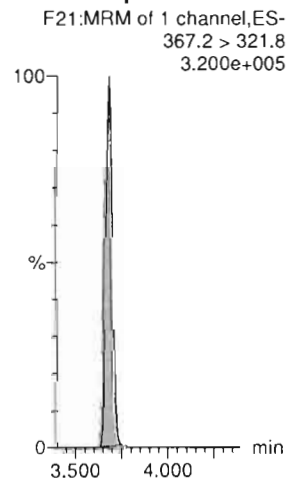
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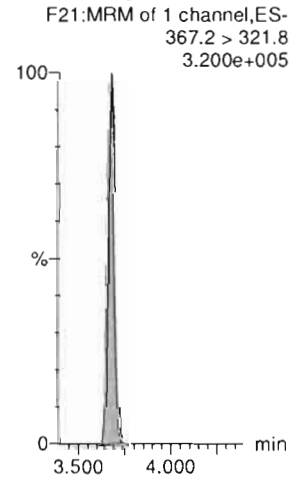
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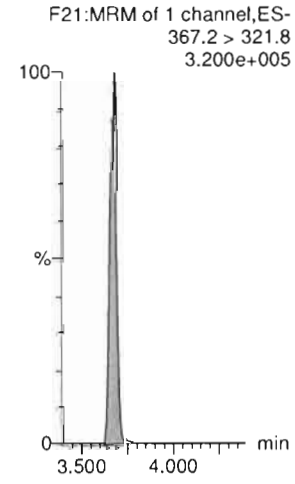
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13C4-PFHpA-EIS



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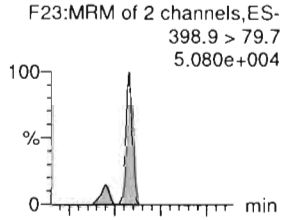


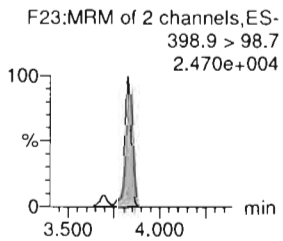
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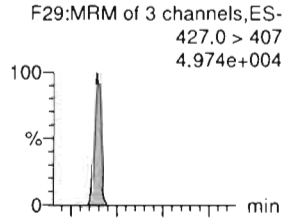
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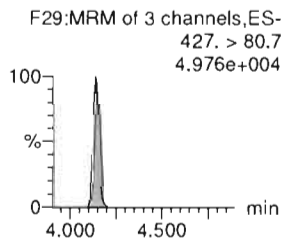
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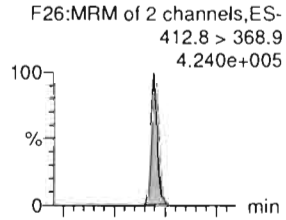


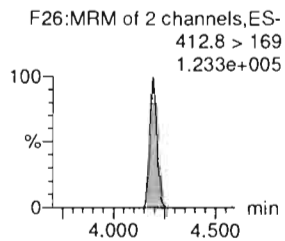
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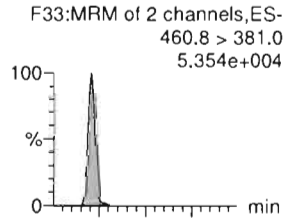


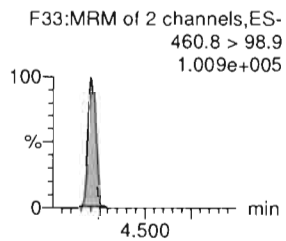
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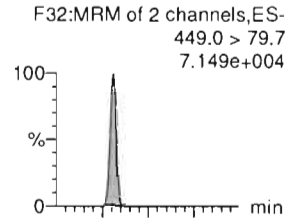


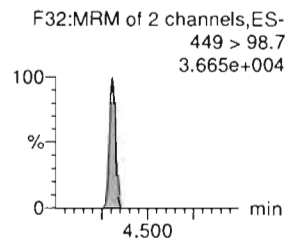
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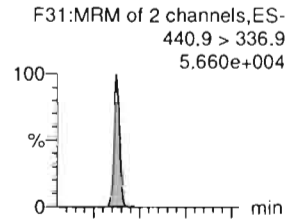


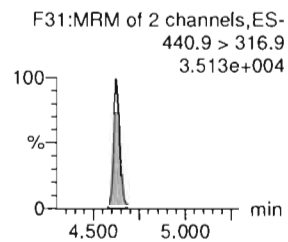
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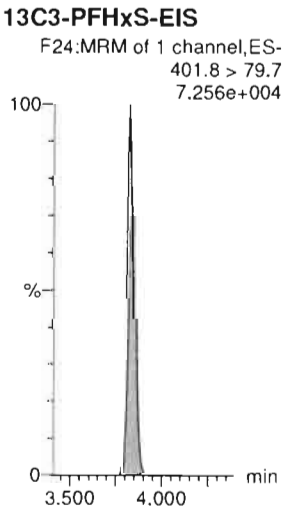


7:3 FTCA

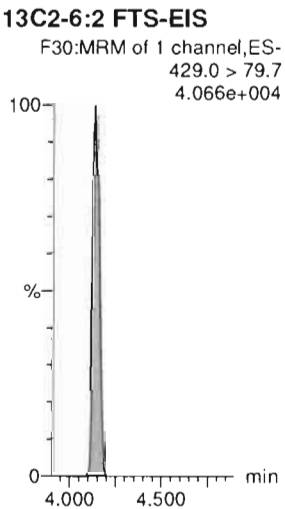




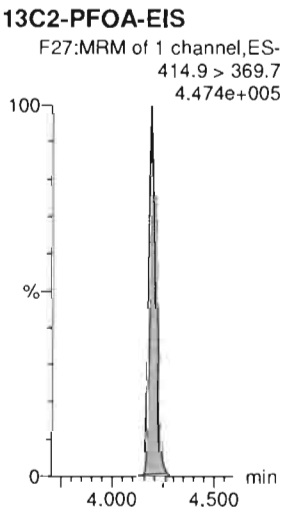
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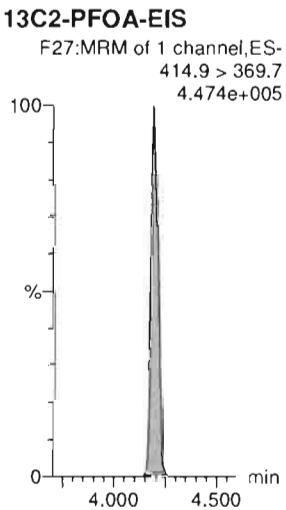
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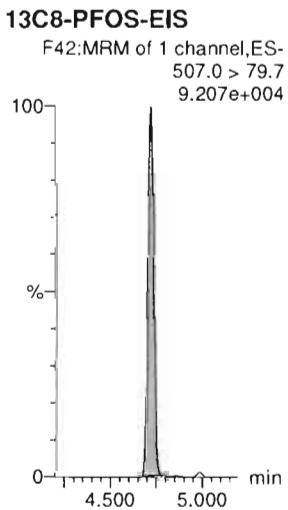
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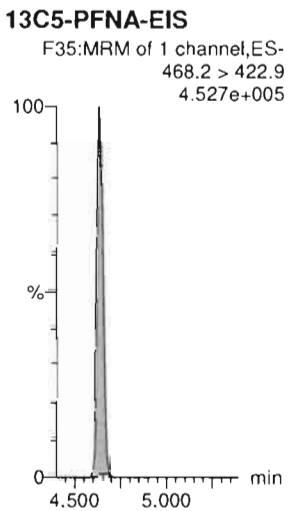
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13C8-PFOS-EIS



13C5-PFNA-EIS

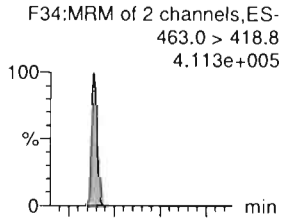


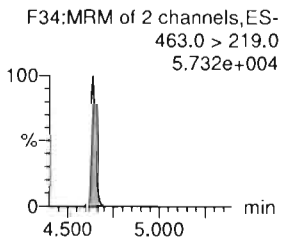
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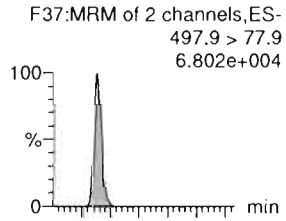
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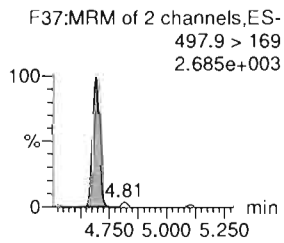
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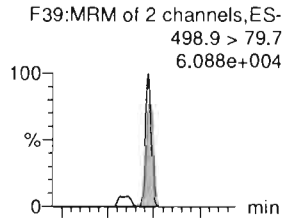


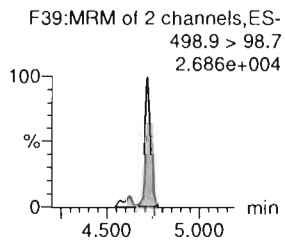
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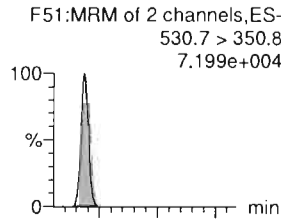


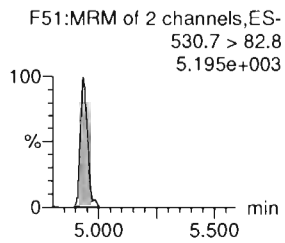
L-PFOS



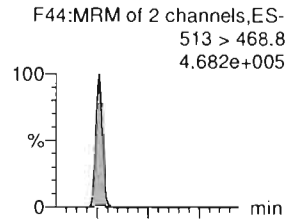


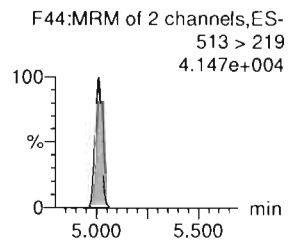
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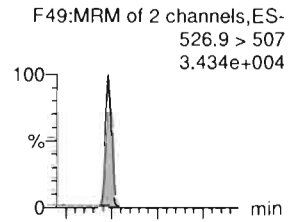


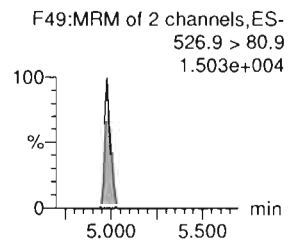
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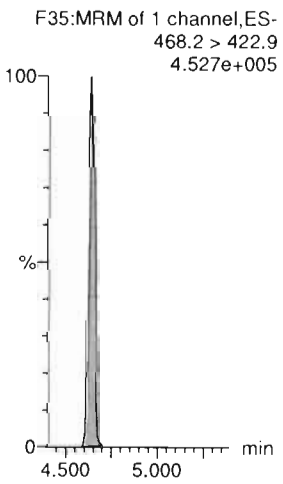


8:2 FTS

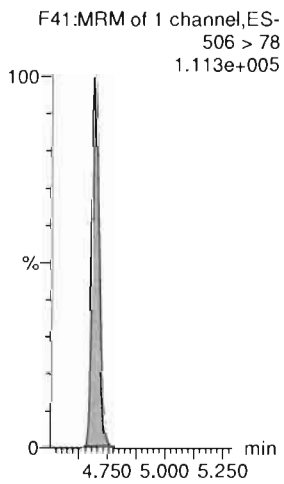




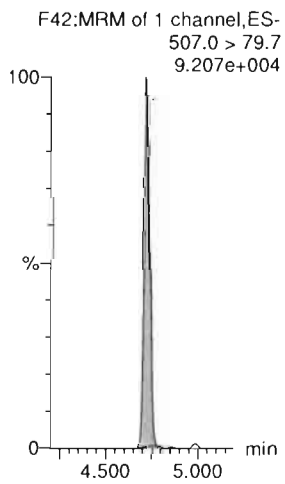
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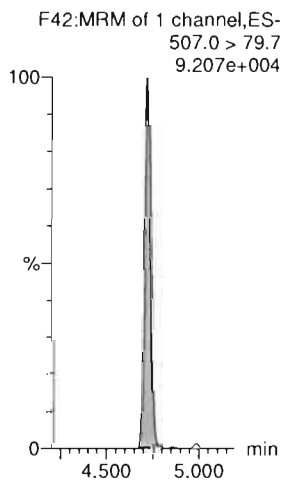
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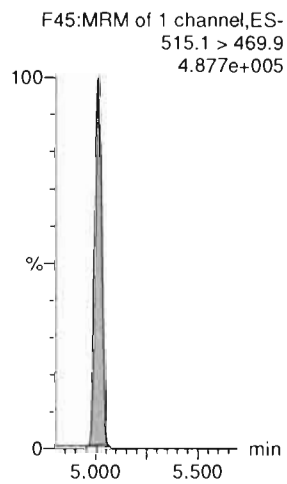
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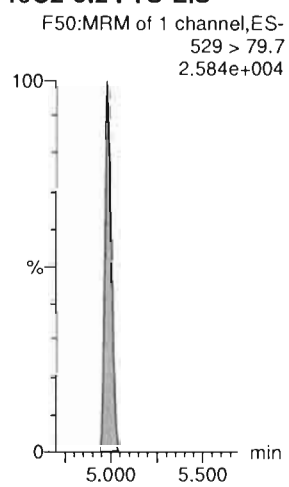
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

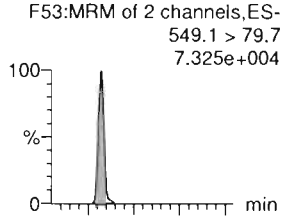


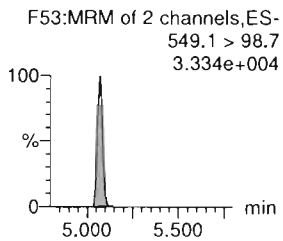
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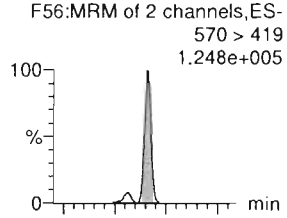
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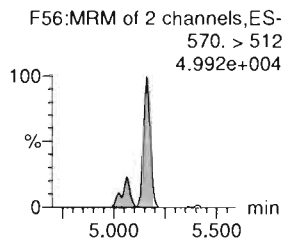
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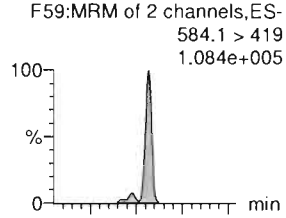


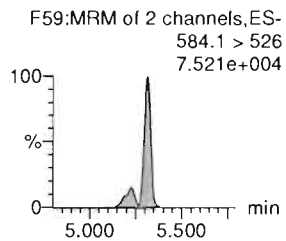
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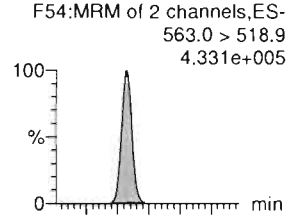


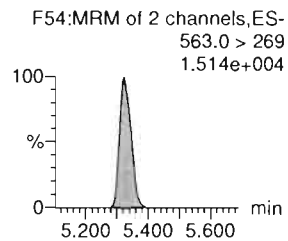
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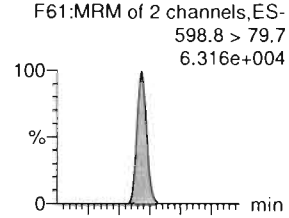


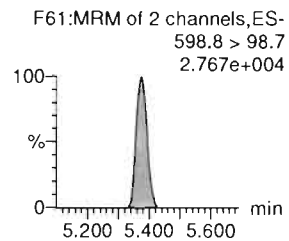
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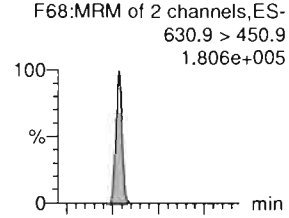


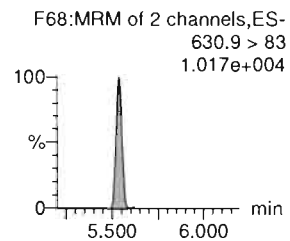
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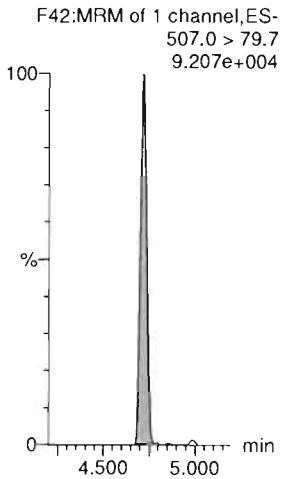


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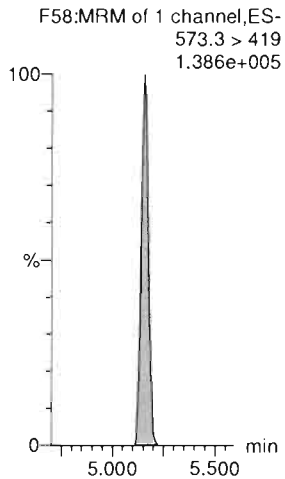




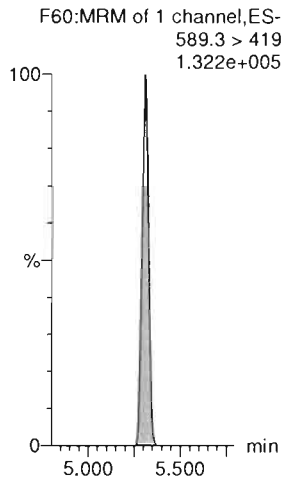
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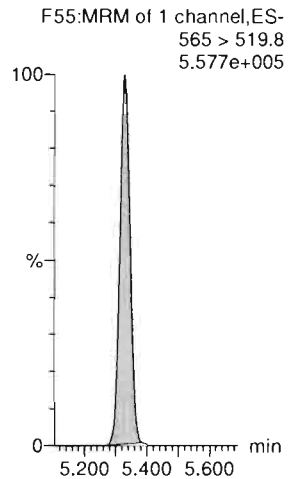
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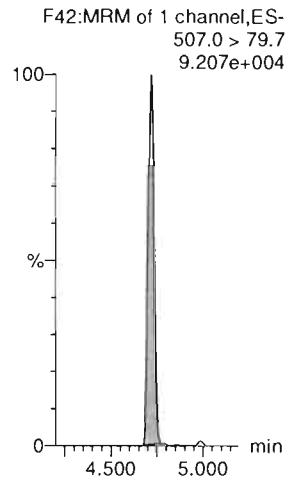
d5-N-EtFOSAA-EIS



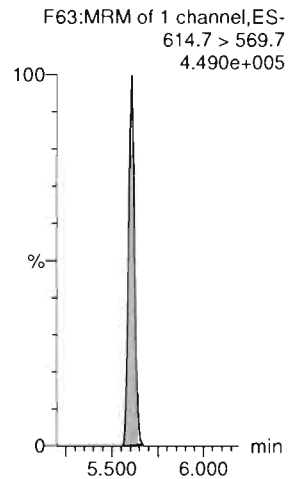
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13C8-PFOS-EIS



13C2-PFDoA-EIS

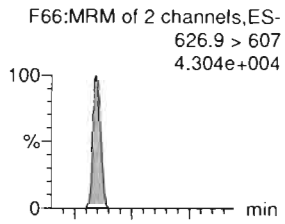


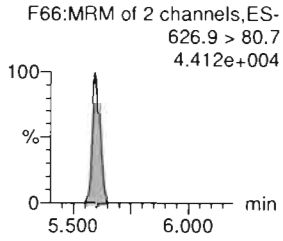
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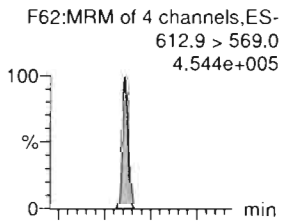
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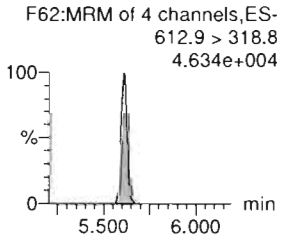
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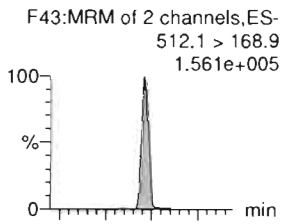


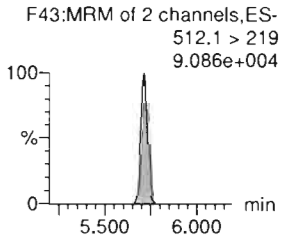
PFDoA



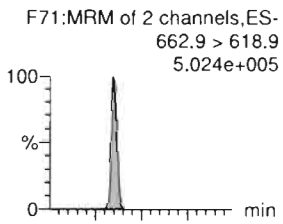


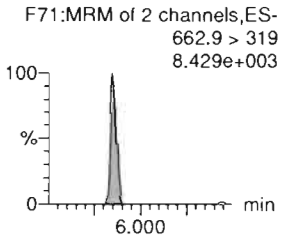
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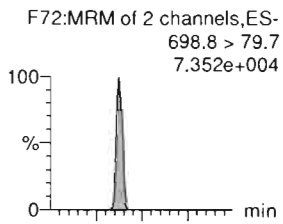


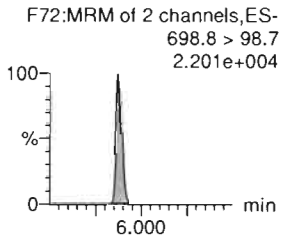
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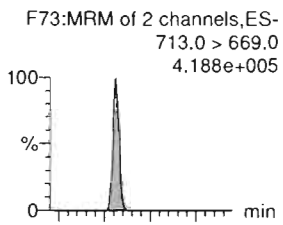


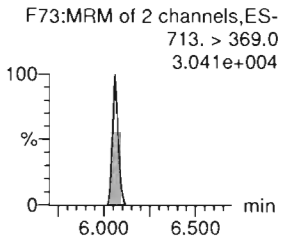
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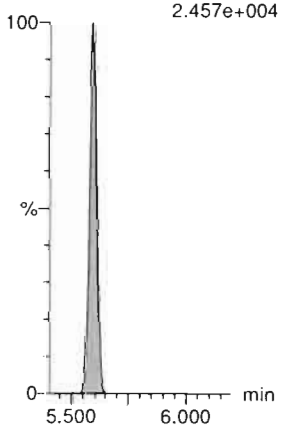


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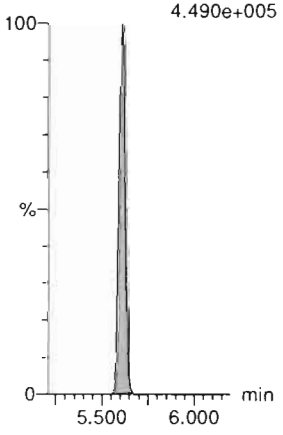




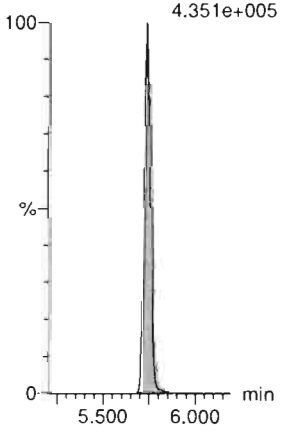
13C2-10:2 FTS-EIS



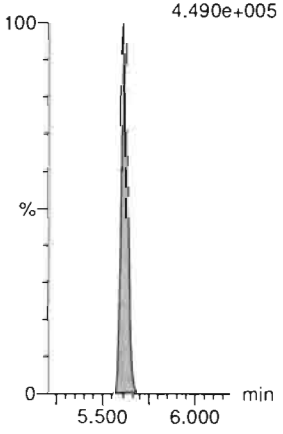
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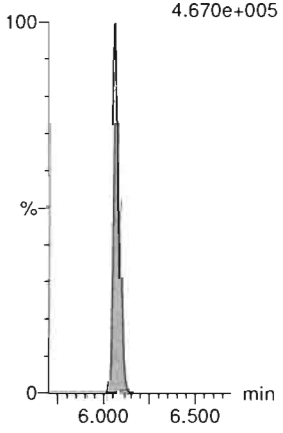
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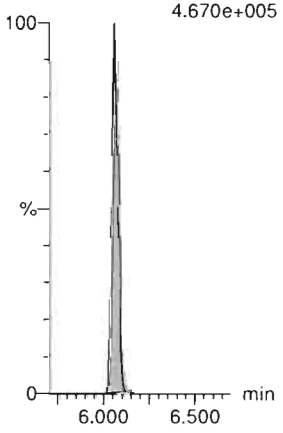
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13C2-PFTeDA-EIS



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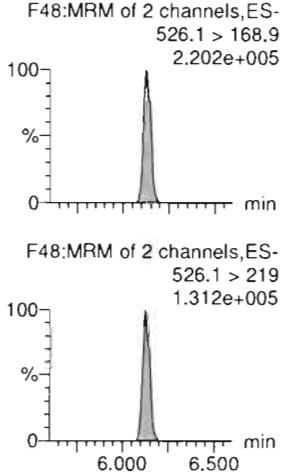


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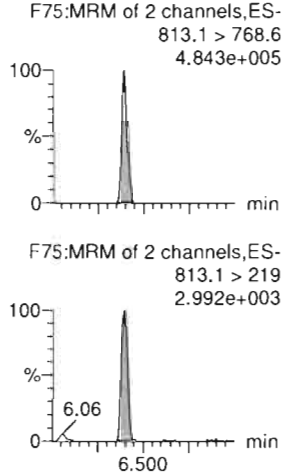
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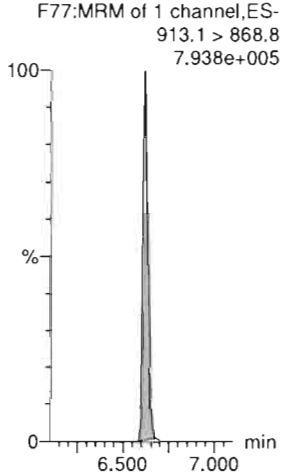
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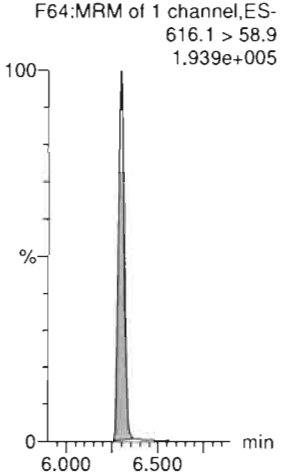
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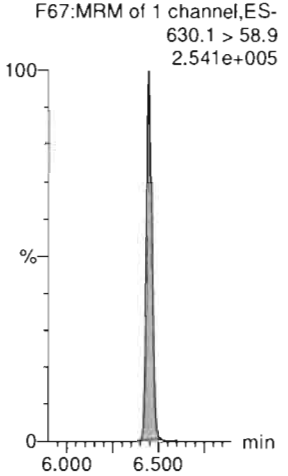
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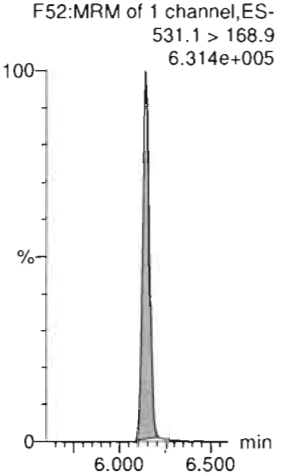
N-MeFOSE



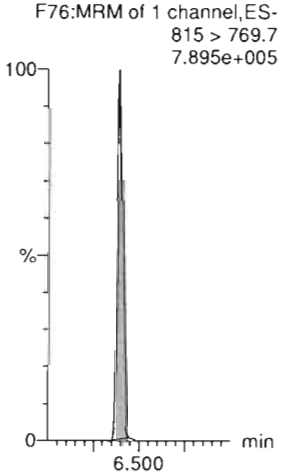
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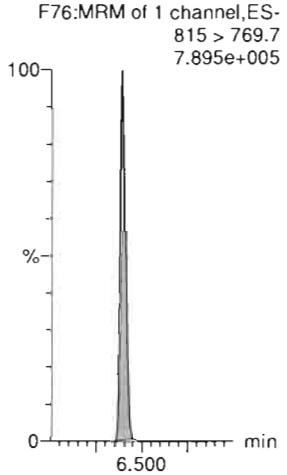
d5-N-ETFOSA-EIS



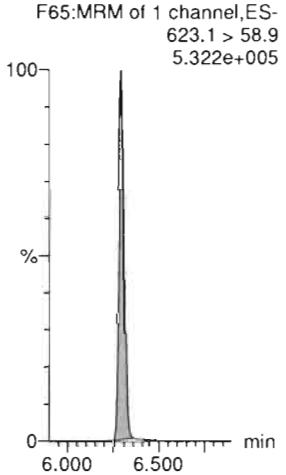
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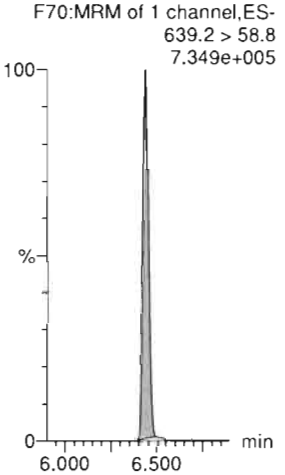
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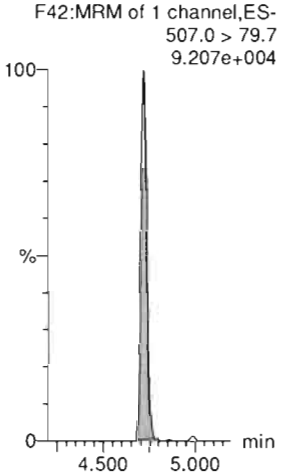
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d9-N-EtFOSE-EIS



13C8-PFOS-EIS

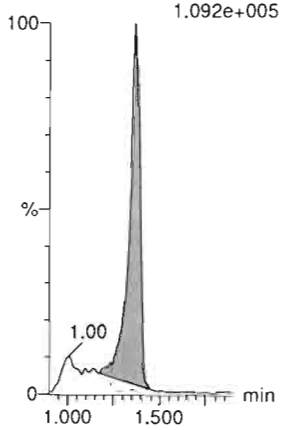


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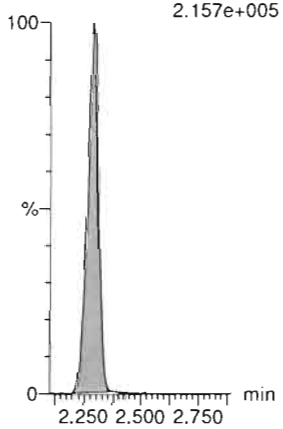
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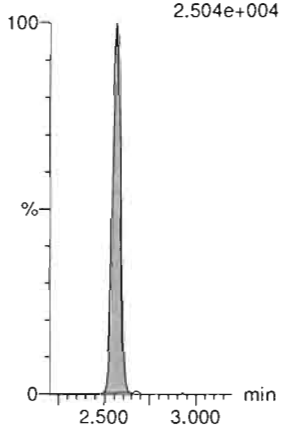
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.092e+005



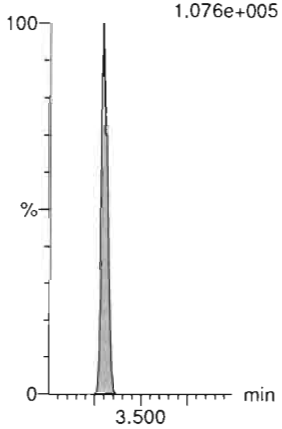
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.157e+005



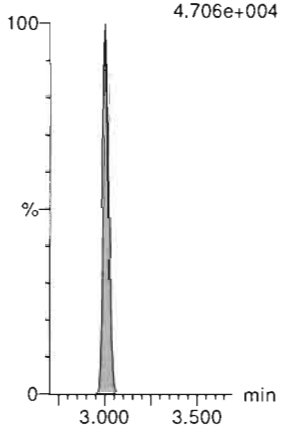
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.504e+004



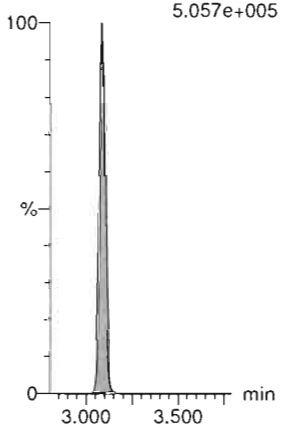
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.076e+005



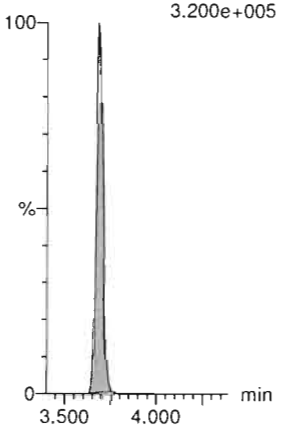
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.706e+004



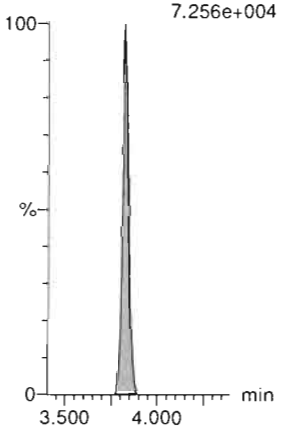
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.057e+005



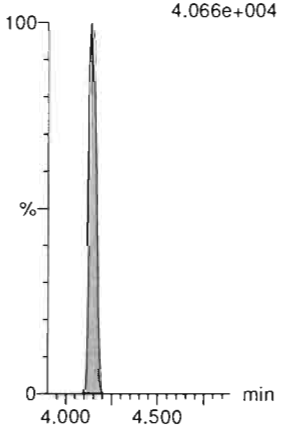
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.200e+005



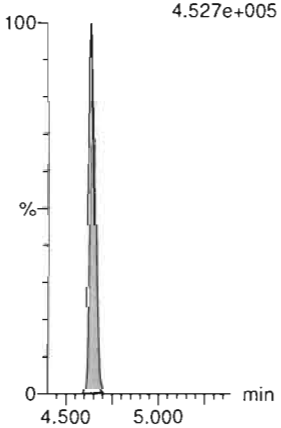
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.256e+004



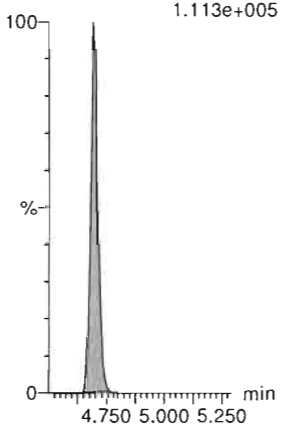
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.066e+004



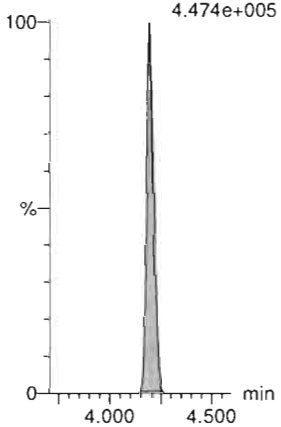
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.527e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.113e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.474e+005

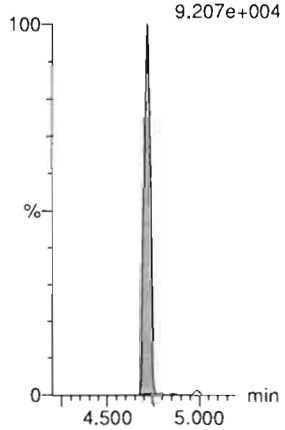


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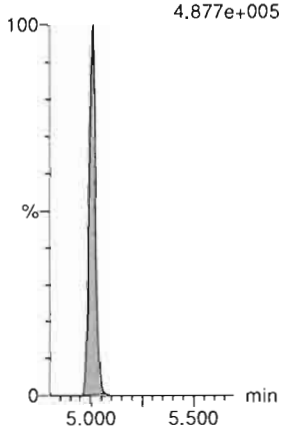
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Printed: Saturday, February 29, 2020 12:13:46 Pacific Standard Time

Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

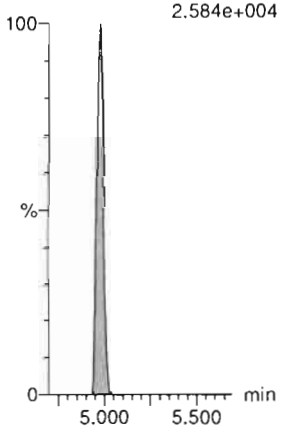
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.207e+004



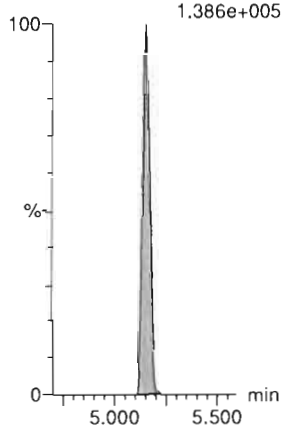
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.877e+005



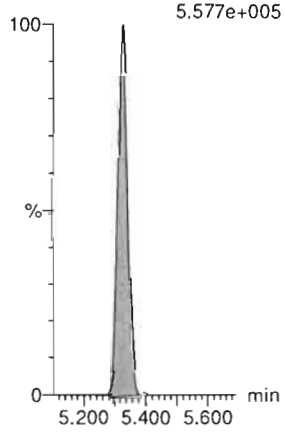
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.584e+004



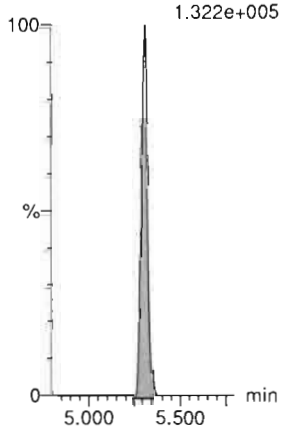
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.386e+005



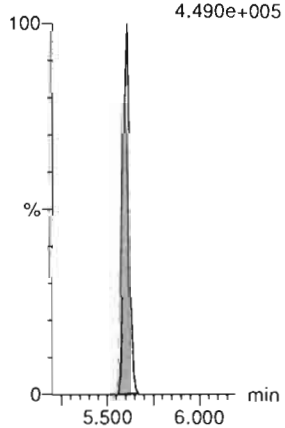
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.577e+005



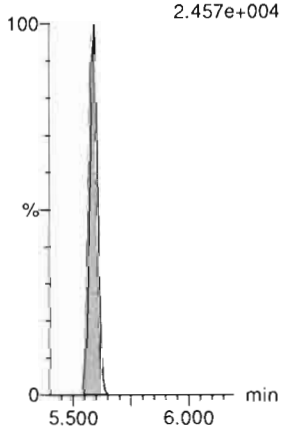
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.322e+005



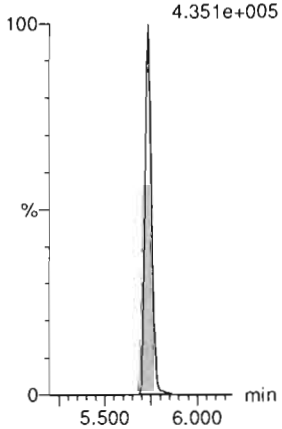
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.490e+005



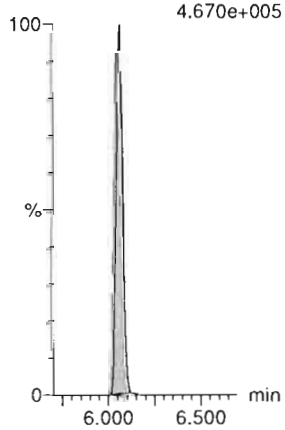
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.457e+004



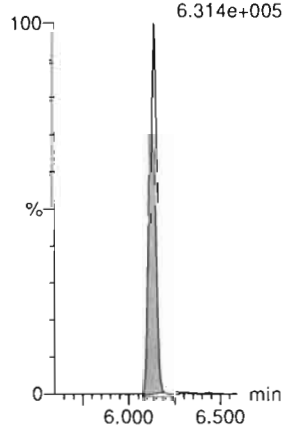
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.351e+005



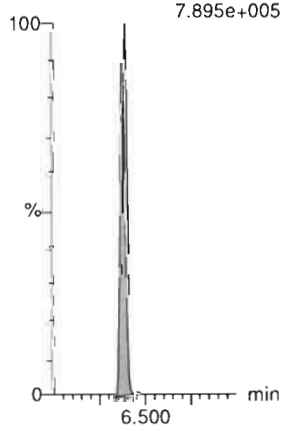
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.670e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.314e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
7.895e+005

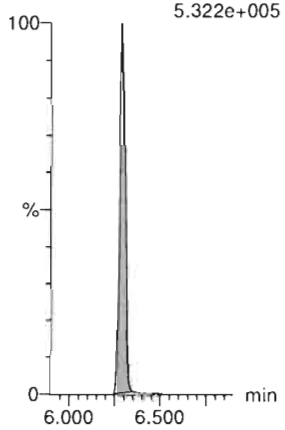


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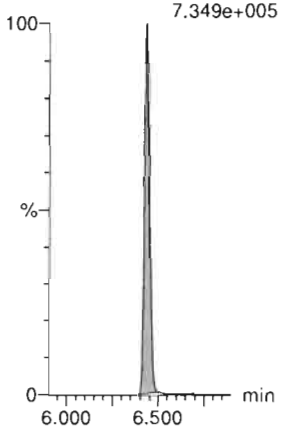
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Printed: Saturday, February 29, 2020 12:13:46 Pacific Standard Time

Name: 200228P2-75, Date: 29-Feb-2020, Time: 03:10:41, ID: ST200228P2-14 PFC CS3 20B1107, Description: PFC CS3 20B1107

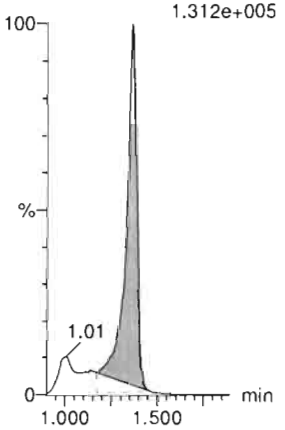
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.322e+005



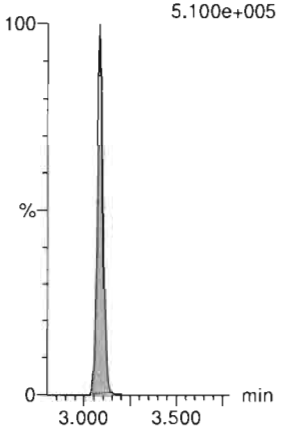
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.349e+005



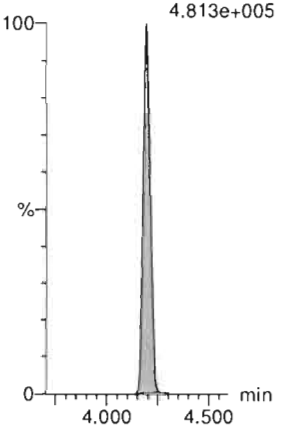
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.312e+005



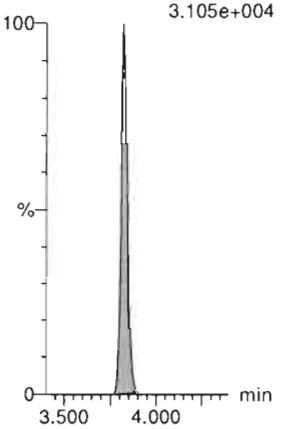
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
5.100e+005



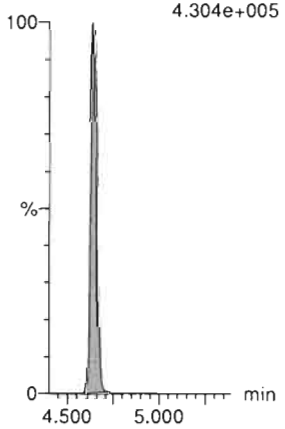
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
4.813e+005



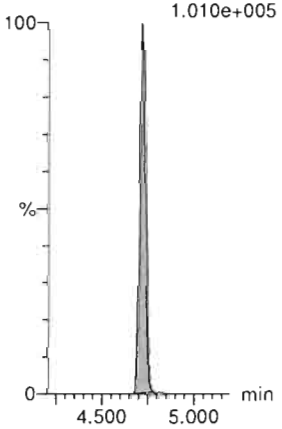
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.105e+004



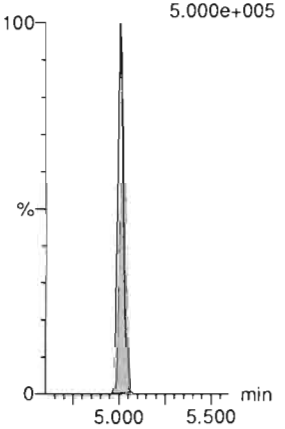
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.304e+005



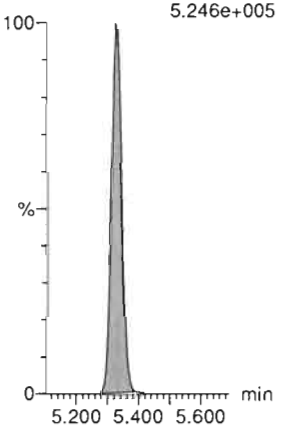
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.010e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.000e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.246e+005



Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-85.qld

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VJM 2/29/2020

Name: 200228P2-85, Date: 29-Feb-2020, Time: 04:55:43, ID: ST200228P2-15 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	6330.943	6859.898	1.00	1.37	11.536	10.000	10.3	103.5	NO		
2	2	PFPrS	248.9 > 79.7	1585.073	1284.286	1.00	1.69	15.428	10.000	11.4	113.9	NO	2.473	NO
3	3	3:3 FTCA	240.9 > 176.9	865.088	11442.575	1.00	2.15	0.945	10.000	9.80	98.0	NO	3.849	NO
4	4	PFPeA	263.1 > 218.9	8965.025	11442.575	1.00	2.29	9.793	10.000	10.4	103.9	NO		
5	5	PFBS	299.0 > 79.7	2603.510	1284.286	1.00	2.56	25.340	10.000	10.8	108.3	NO	3.236	NO
6	6	4:2 FTS	327.0 > 307	1733.432	1668.541	1.00	3.00	12.986	10.000	10.0	100.1	NO	0.870	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	6859.898		1.00	1.37	6859.898	12.500	12.8	102.1	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1284.286		1.00	2.57	1284.286	12.500	13.4	107.2	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	11442.575		1.00	2.29	11442.575	12.500	12.2	97.9	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	11442.575		1.00	2.29	11442.575	12.500	12.2	97.9	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1284.286		1.00	2.57	1284.286	12.500	13.4	107.2	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1668.541		1.00	3.00	1668.541	12.500	12.6	100.6	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	13910.085	17693.641	1.00	3.08	9.827	10.000	11.1	111.5	NO	16.429	NO
15	8	PFPeS	349.>79.7	2681.487	1284.286	1.00	3.28	26.099	10.000	12.3	122.8	NO	2.642	NO
16	9	HFPO-DA	285.1 > 168.9	3557.832	4108.905	1.00	3.30	10.824	10.000	10.6	105.6	NO	2.737	NO
17	10	5:3 FTCA	340.9 > 236.9	2028.985	12782.099	1.00	3.63	1.984	10.000	9.77	97.7	NO	1.772	NO
18	11	PFHpA	363.0 > 318.9	13369.422	12782.099	1.00	3.69	13.074	10.000	11.1	111.0	NO	38.268	NO
19	12	ADONA	376.8 > 250.9	27037.494	12782.099	1.00	3.79	26.441	10.000	10.1	101.1	NO	3.892	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	17693.641		1.00	3.08	17693.641	12.500	11.2	89.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1284.286		1.00	2.57	1284.286	12.500	13.4	107.2	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4108.905		1.00	3.30	4108.905	12.500	12.8	102.6	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	12782.099		1.00	3.68	12782.099	12.500	12.2	98.0	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	12782.099		1.00	3.68	12782.099	12.500	12.2	98.0	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	12782.099		1.00	3.68	12782.099	12.500	12.2	98.0	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2436.993	2911.622	1.00	3.83	10.462	10.000	9.38	93.8	NO	2.352	NO
28	15	6:2 FTS	427.0 > 407	2065.865	1536.191	1.00	4.14	16.810	10.000	10.7	107.0	NO	1.337	NO
29	16	L-PFOA	412.8 > 368.9	15485.828	16010.600	1.00	4.19	12.090	10.000	10.0	100.4	NO	3.090	NO
30	18	PFecHS	460.8 > 381.0	2295.104	16010.600	1.00	4.21	1.792	10.000	10.6	106.1	NO	0.443	NO
31	19	PFHpS	449.0 > 79.7	2613.873	3447.407	1.00	4.31	9.478	10.000	10.6	105.9	NO	1.957	NO
32	20	7:3 FTCA	440.9 > 336.9	1918.689	18046.537	1.00	4.62	1.329	10.000	7.52	75.2	NO	1.334	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2911.622		1.00	3.82	2911.622	12.500	13.8	110.4	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1536.191		1.00	4.14	1536.191	12.500	12.5	100.4	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	16010.600		1.00	4.19	16010.600	12.500	10.5	84.2	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	16010.600		1.00	4.19	16010.600	12.500	10.5	84.2	NO		

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Printed: Saturday, February 29, 2020 12:20:09 Pacific Standard Time

Name: 200228P2-85, Date: 29-Feb-2020, Time: 04:55:43, ID: ST200228P2-15 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	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	18046.537		1.00	4.63	18046.537	12.500	12.9	103.3	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16023.996	18046.537	1.00	4.63	11.099	10.000	10.4	104.1	NO	8.460	NO
41	22	PFOSA	497.9 > 77.9	2301.782	3825.172	1.00	4.69	7.522	10.000	9.29	92.9	NO	24.005	NO
42	23	L-PFOS	498.9 > 79.7	2545.336	3447.407	1.00	4.72	9.229	10.000	10.2	102.3	NO	2.408	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2389.135	3447.407	1.00	4.94	8.663	10.000	9.21	92.1	NO	16.209	NO
44	26	PFDA	513 > 468.8	15925.775	18086.891	1.00	5.01	11.006	10.000	9.83	98.3	NO	10.187	NO
45	27	8:2 FTS	526.9 > 507	1123.302	1084.024	1.00	4.98	12.953	10.000	10.0	100.1	NO	2.381	NO
46	65	13C5-PFNA-EIS	468.2 > 422.9	18046.537		1.00	4.63	18046.537	12.500	12.9	103.3	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3825.172		1.00	4.69	3825.172	12.500	12.1	97.1	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18086.891		1.00	5.01	18086.891	12.500	11.5	92.2	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1084.024		1.00	4.98	1084.024	12.500	12.5	100.4	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2628.455	3447.407	1.00	5.07	9.531	10.000	10.3	103.0	NO	2.524	NO
54	29	L-MeFOSAA	570 > 419	4894.521	5075.907	1.00	5.16	12.053	10.000	9.25	92.5	NO	1.804	NO
55	31	L-EtFOSAA	584.1 > 419	4825.947	5532.531	1.00	5.31	10.904	10.000	10.1	100.8	NO	1.271	NO
56	33	PFUdA	563.0 > 518.9	16380.731	19595.504	1.00	5.33	10.449	10.000	10.2	102.2	NO	25.922	NO
57	34	PFDS	598.8 > 79.7	2176.634	3447.407	1.00	5.38	7.892	10.000	9.73	97.3	NO	2.071	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	6832.640	15986.734	1.00	5.53	5.342	10.000	12.2	122.4	NO	20.089	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	5075.907		1.00	5.16	5075.907	12.500	12.1	96.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5532.531		1.00	5.31	5532.531	12.500	11.6	92.8	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	19595.504		1.00	5.33	19595.504	12.500	10.8	86.6	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	15986.734		1.00	5.61	15986.734	12.500	10.6	85.1	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	1670.377	883.594	1.00	5.59	23.630	10.000	11.6	116.2	NO	0.871	NO
67	37	PFDoA	612.9 > 569.0	17277.711	15986.734	1.00	5.61	13.509	10.000	11.6	115.6	NO	10.043	NO
68	38	N-MeFOSA	512.1 > 168.9	6067.726	17879.430	1.00	5.71	50.634	50.000	48.0	96.0	NO	1.567	NO
69	39	PFTrDA	662.9 > 618.9	16311.400	15986.734	1.00	5.85	12.754	10.000	11.2	112.0	NO	80.322	YES
70	40	PFDoS	698.8 > 79.7	2548.875	17048.152	1.00	5.87	1.869	10.000	11.1	111.0	NO	3.574	NO
71	41	PFTeDA	713.0 > 669.0	15786.906	17048.152	1.00	6.06	11.575	10.000	11.0	110.4	NO	15.805	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	883.594		1.00	5.59	883.594	12.500	12.3	98.7	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-85.qld

Last Altered: Saturday, February 29, 2020 12:19:29 Pacific Standard Time
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Name: 200228P2-85, Date: 29-Feb-2020, Time: 04:55:43, ID: ST200228P2-15 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	15986.734		1.00	5.61	15986.734	12.500	10.6	85.1	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	17879.430		1.00	5.74	17879.430	149.200	141	94.7	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	15986.734		1.00	5.61	15986.734	12.500	10.6	85.1	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	17048.152		1.00	6.06	17048.152	12.500	10.8	86.6	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	17048.152		1.00	6.06	17048.152	12.500	10.8	86.6	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	8941.395	25877.145	1.00	6.12	51.553	50.000	50.8	101.5	NO	1.706	NO
80	43	PFHxDA	813.1 > 768.6	14589.600	24682.637	1.00	6.39	7.389	10.000	10.3	102.6	NO	206.415	NO
81	44	PFODA	913.1 > 868.8	23142.357	24682.637	1.00	6.62	11.720	10.000	11.8	118.1	NO		
82	45	N-MeFOSE	616.1 > 58.9	7217.457	19432.428	1.00	6.29	55.415	50.000	50.8	101.6	NO		
83	46	N-EtFOSE	630.1 > 58.9	7916.847	22778.234	1.00	6.45	51.856	50.000	53.2	106.5	NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25877.145		1.00	6.14	25877.145	149.200	138	92.7	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	24682.637		1.00	6.39	24682.637	12.500	9.54	76.4	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	24682.637		1.00	6.39	24682.637	12.500	9.54	76.4	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	19432.428		1.00	6.29	19432.428	149.200	130	87.3	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	22778.234		1.00	6.44	22778.234	149.200	126	84.6	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3447.407		1.00	4.72	3447.407	12.500	12.6	101.1	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	6859.898	8425.529	1.00	1.37	10.177	12.500	12.7	101.3	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	11442.575	18506.867	1.00	2.29	7.729	12.500	13.3	106.3	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1284.286	1359.617	1.00	2.57	11.807	12.500	10.7	85.5	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	4108.905	18506.867	1.00	3.30	2.775	12.500	13.9	111.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1668.541	1359.617	1.00	3.00	15.340	12.500	10.8	86.5	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	17693.641	18506.867	1.00	3.08	11.951	12.500	12.4	98.9	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	12782.099	18506.867	1.00	3.68	8.633	12.500	13.0	103.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2911.622	1359.617	1.00	3.82	26.769	12.500	10.8	86.4	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1536.191	3514.195	1.00	4.14	5.464	12.500	12.5	99.9	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	18046.537	17941.354	1.00	4.63	12.573	12.500	13.5	108.1	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3825.172	19547.619	1.00	4.69	2.446	12.500	12.8	102.5	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	16010.600	16923.029	1.00	4.19	11.826	12.500	12.8	102.3	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3447.407	3514.195	1.00	4.72	12.262	12.500	13.2	105.6	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18086.891	15625.543	1.00	5.01	14.469	12.500	14.7	117.5	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1084.024	3514.195	1.00	4.98	3.856	12.500	10.8	86.1	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	5075.907	19547.619	1.00	5.16	3.246	12.500	13.8	110.1	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	19595.504	19547.619	1.00	5.33	12.531	12.500	12.2	97.5	NO		

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-85.qld

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Name: 200228P2-85, Date: 29-Feb-2020, Time: 04:55:43, ID: ST200228P2-15 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	5532.531	19547.619	1.00	5.31	3.538	12.500	13.6	108.7	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	15986.734	15625.543	1.00	5.61	12.789	12.500	13.4	106.9	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	883.594	3514.195	1.00	5.59	3.143	12.500	11.1	88.7	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	17879.430	19547.619	1.00	5.74	11.433	149.200	149	99.9	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	17048.152	19547.619	1.00	6.06	10.902	12.500	11.5	92.0	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25877.145	19547.619	1.00	6.14	16.548	149.200	150	100.6	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	24682.637	19547.619	1.00	6.39	15.784	12.500	10.9	87.1	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19432.428	19547.619	1.00	6.29	12.426	149.200	142	94.9	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	22778.234	19547.619	1.00	6.44	14.566	149.200	140	93.6	NO		
119	99	13C4-PFBA	217.0 > 172.0	8425.529	8425.529	1.00	1.37	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	18506.867	18506.867	1.00	3.08	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	16923.029	16923.029	1.00	4.19	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1359.617	1359.617	1.00	3.82	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17941.354	17941.354	1.00	4.63	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3514.195	3514.195	1.00	4.72	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	15625.543	15625.543	1.00	5.01	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19547.619	19547.619	1.00	5.33	12.500	12.500	12.5	100.0	NO		

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Dataset: Untitled

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200228P2-1	IPA	28-Feb-20	12:45:37
2	2	200228P2-2	IPA	28-Feb-20	12:56:16
3	3	200228P2-3	ST200228P2-1 PFC CS-2 20B1102	28-Feb-20	13:06:47
4	4	200228P2-4	ST200228P2-2 PFC CS-1 20B1103	28-Feb-20	13:17:15
5	5	200228P2-5	ST200228P2-3 PFC CS0 20B1104	28-Feb-20	13:27:47
6	6	200228P2-6	ST200228P2-4 PFC CS1 20B1105	28-Feb-20	13:38:16
7	7	200228P2-7	ST200228P2-5 PFC CS2 20B1106	28-Feb-20	13:48:48
8	8	200228P2-8	ST200228P2-6 PFC CS3 20B1107	28-Feb-20	13:59:16
9	9	200228P2-9	ST200228P2-7 PFC CS4 20B1108	28-Feb-20	14:09:48
10	10	200228P2-10	ST200228P2-8 PFC CS5 20B1109	28-Feb-20	14:20:17
11	11	200228P2-11	ST200228P2-9 PFC CS6 20B1110	28-Feb-20	14:30:48
12	12	200228P2-12	ST200228P2-10 PFC CS7 20B1111	28-Feb-20	14:41:18
13	13	200228P2-13	IB	28-Feb-20	14:51:49
14	14	200228P2-14	ICV200228P2-1 PFC ICV 20B1112	28-Feb-20	15:02:18
15	15	200228P2-15	IB	28-Feb-20	15:12:50
16	16	200228P2-16	2000328-04 W-SB01-20200213 0.26272	28-Feb-20	16:50:41
17	17	200228P2-17	2000328-05 EB13-20200213 0.2557	28-Feb-20	17:01:23
18	18	200228P2-18	2000328-04@20X W-SB01-20200213 0.26272	28-Feb-20	17:11:52
19	19	200228P2-19	IB	28-Feb-20	17:22:24
20	20	200228P2-20	B0B0233-BLK1 Method Blank 2	28-Feb-20	17:32:54
21	21	200228P2-21	B0B0233-BS1 OPR 2	28-Feb-20	17:43:23
22	22	200228P2-22	B0B0233-MS1 Matrix Spike 2.11	28-Feb-20	17:53:55
23	23	200228P2-23	B0B0233-MSD1 Matrix Spike Dup 2.1	28-Feb-20	18:04:25
24	24	200228P2-24	2000386-01 SRS-70-5' 2.2	28-Feb-20	18:14:54
25	25	200228P2-25	2000386-02 SRS-70-10' 2.16	28-Feb-20	18:25:25
26	26	200228P2-26	2000386-03 SRS-65-5' 2.22	28-Feb-20	18:35:55
27	27	200228P2-27	2000386-04 SRS-65-10' 2.16	28-Feb-20	18:46:26
28	28	200228P2-28	2000386-05 SRS-60-5' 2.19	28-Feb-20	18:56:57
29	29	200228P2-29	2000386-06 SRS-60-10 2.12	28-Feb-20	19:07:25
30	30	200228P2-30	2000386-07 SRS-68-5 2.18	28-Feb-20	19:17:57
31	31	200228P2-31	IB	28-Feb-20	19:28:26
32	32	200228P2-32	ST200228P2-11 PFC CS3 20B1107	28-Feb-20	19:38:56

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Dataset: Untitled

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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
33	33	200228P2-33	2000386-08 SRS-69-5 2.22	28-Feb-20	19:49:27
34	34	200228P2-34	2000391-01 SRS-58-5' 2.18	28-Feb-20	19:59:58
35	35	200228P2-35	2000391-02 SRS-58-10' 2.19	28-Feb-20	20:10:27
36	36	200228P2-36	2000391-03 SRS-59-5 2.28	28-Feb-20	20:20:59
37	37	200228P2-37	2000391-04 SRS-59-10' 2.1	28-Feb-20	20:31:30
38	38	200228P2-38	2000391-05 SRS-62-10' 2.17	28-Feb-20	20:41:58
39	39	200228P2-39	2000391-06 SRS-61-5' 2.29	28-Feb-20	20:52:30
40	40	200228P2-40	2000391-07 SRS-61-10 2.23	28-Feb-20	21:02:59
41	41	200228P2-41	2000391-08 SRS-63-10 2.48	28-Feb-20	21:13:30
42	42	200228P2-42	2000391-09 SRS-71-5 2.23	28-Feb-20	21:24:01
43	43	200228P2-43	ST200228P2-12 PFC CS3 20B1107	28-Feb-20	21:34:30
44	44	200228P2-44	IB	28-Feb-20	21:45:01
45	45	200228P2-45	B0B0155-BLK1 Method Blank 0.25	28-Feb-20	21:55:30
46	46	200228P2-46	B0B0155-BS1 OPR 0.25	28-Feb-20	22:06:02
47	47	200228P2-47	B0B0155-BSD1 LCSD 0.25	28-Feb-20	22:16:32
48	48	200228P2-48	2000333-01 EB02-20200217 0.24792	28-Feb-20	22:27:01
49	49	200228P2-49	2000333-02@5X 18-GW-18BGMP10E-20200217 0.25617	28-Feb-20	22:37:33
50	50	200228P2-50	2000333-03@5X 18-GW-18BGMP10F-20200217 0.24799	28-Feb-20	22:48:01
51	51	200228P2-51	2000333-04@5X 18-GW-18BGMP08C-20200217 0.25669	28-Feb-20	22:58:34
52	52	200228P2-52	2000333-05@5X 24-GW-18BGMP08D-20200217 0.25341	28-Feb-20	23:09:03
53	53	200228P2-53	2000333-06@5X 24-GW-18BGMP08E-20200217 0.25283	28-Feb-20	23:19:34
54	54	200228P2-54	2000333-07@5X 24-GW-18PS1-20200217 0.24759	28-Feb-20	23:30:04
55	55	200228P2-55	2000333-08@5X DUP01-20200217 0.24854	28-Feb-20	23:40:33
56	56	200228P2-56	B0B0160-BLK1 Method Blank 0.25	28-Feb-20	23:51:05
57	57	200228P2-57	B0B0160-BS1 OPR 0.25	29-Feb-20	00:01:35
58	58	200228P2-58	B0B0160-BSD1 LCSD 0.25	29-Feb-20	00:12:04
59	59	200228P2-59	2000345-01@5X ET-LW01-20200218 0.25307	29-Feb-20	00:22:36
60	60	200228P2-60	2000346-01 EB03-20200218 0.25369	29-Feb-20	00:33:06
61	61	200228P2-61	ST200228P2-13 PFC CS0 20B1104	29-Feb-20	00:43:35
62	62	200228P2-62	IB	29-Feb-20	00:54:07
63	63	200228P2-63	2000346-02@5X 18 -GW-18BGMW19C-20200218 0.25031	29-Feb-20	01:04:35
64	64	200228P2-64	2000346-03@5X 18-GW-18IDP2-D-20200218 0.25907	29-Feb-20	01:15:08
65	65	200228P2-65	2000346-04@5X 18-GW-18DW540-20200218 0.25311	29-Feb-20	01:25:37
66	66	200228P2-66	2000346-05@5X 18-GW-18DW450-20200218 0.24811	29-Feb-20	01:36:08
67	67	200228P2-67	IB	29-Feb-20	01:46:38
68	68	200228P2-68	2000353-01 S9MW30-20Q1 0.25885	29-Feb-20	01:57:07

Vista Analytical Laboratory

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70	70	200228P2-70	2000353-08 S9MW23-20Q1 0.25701	29-Feb-20	02:18:10
71	71	200228P2-71	2000353-10@15X S9MW68L1-20Q1 0.25186	29-Feb-20	02:28:38
72	72	200228P2-72	IB	29-Feb-20	02:39:10
73	73	200228P2-73	2000353-11 S9MW71L9-20Q1 0.252	29-Feb-20	02:49:38
74	74	200228P2-74	2000354-06@10X S9SMW2A-20Q1 0.23864	29-Feb-20	03:00:10
75	75	200228P2-75	ST200228P2-14 PFC CS3 20B1107	29-Feb-20	03:10:41
76	76	200228P2-76	IB	29-Feb-20	03:21:09
77	77	200228P2-77	2000354-07 S9SMW10-20Q1 0.24862	29-Feb-20	03:31:42
78	78	200228P2-78	2000354-08@5X S9MW15-20Q1 0.25813	29-Feb-20	03:42:12
79	79	200228P2-79	IB	29-Feb-20	03:52:41
80	80	200228P2-80	2000354-09 S9MW61L1-20Q1 0.25585	29-Feb-20	04:03:12
81	81	200228P2-81	2000354-10 91MW10-20Q1 0.24621	29-Feb-20	04:13:43
82	82	200228P2-82	B0B0137-MS1@5X Matrix Spike 0.24799	29-Feb-20	04:24:13
83	83	200228P2-83	B0B0137-MSD1@5X Matrix Spike Dup 0.24718	29-Feb-20	04:34:42
84	84	200228P2-84	2000330-04@5X DUP04-20200214 0.25435	29-Feb-20	04:45:13
85	85	200228P2-85	ST200228P2-15 PFC CS3 20B1107	29-Feb-20	04:55:43
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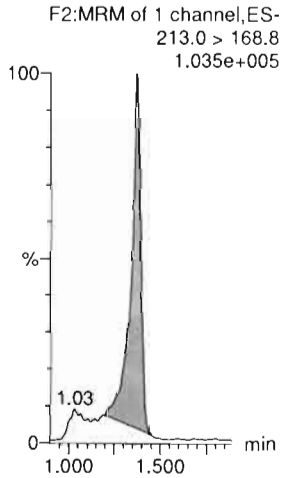
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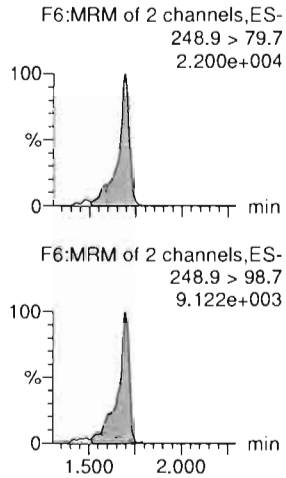
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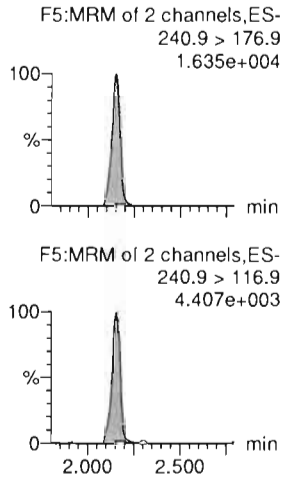
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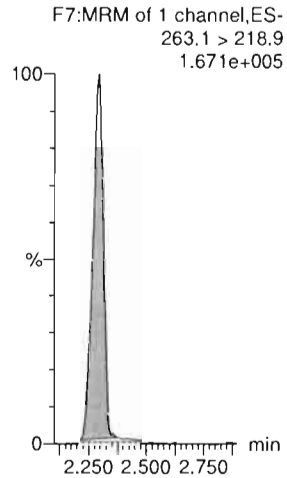
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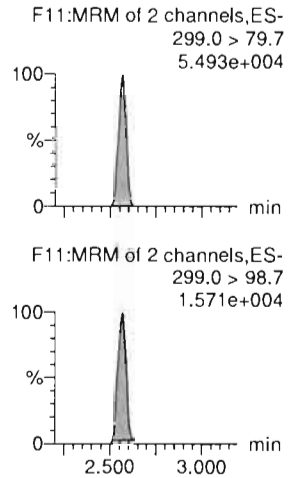
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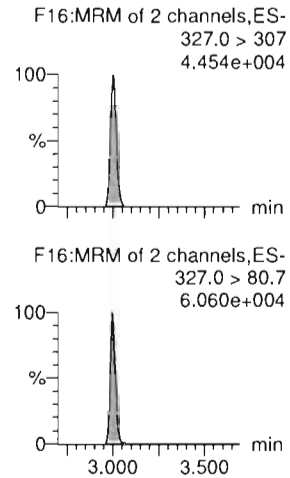
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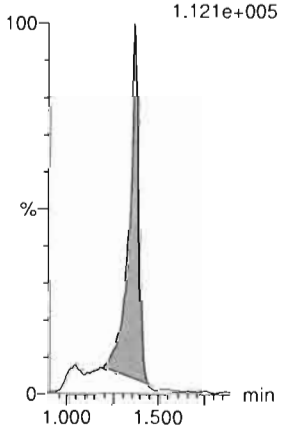
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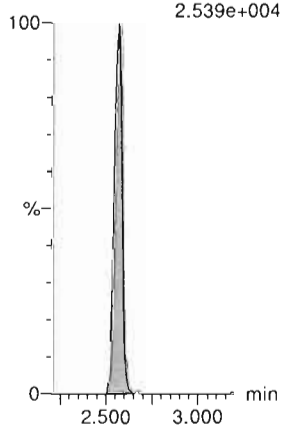
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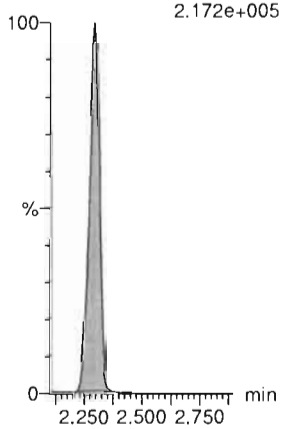
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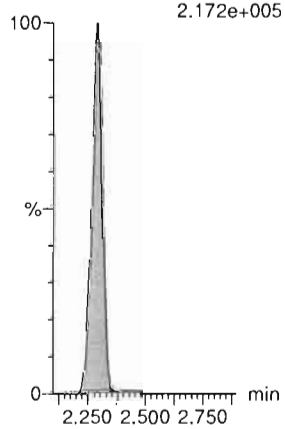
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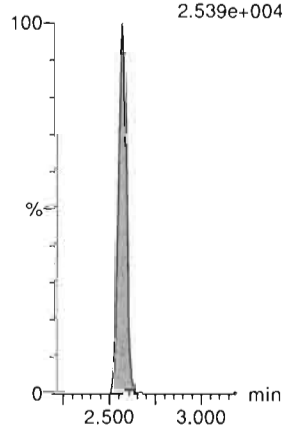
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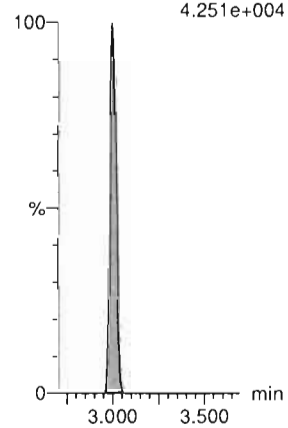
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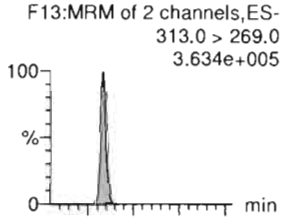


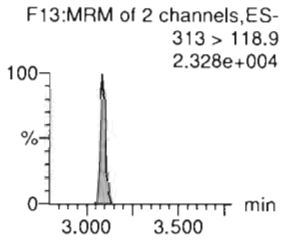
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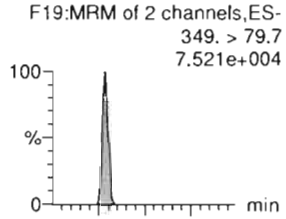
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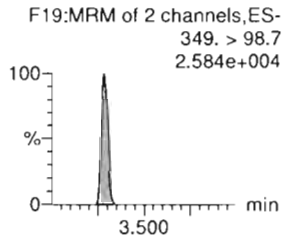
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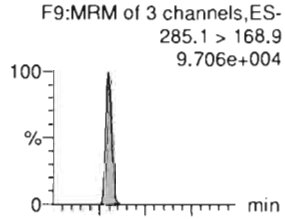


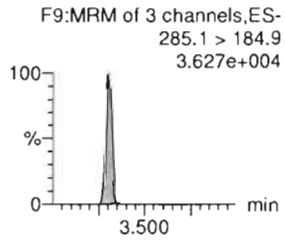
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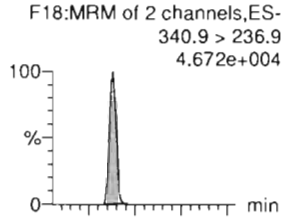


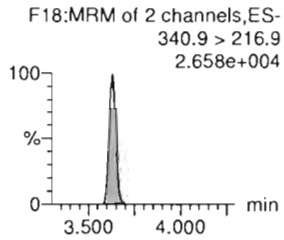
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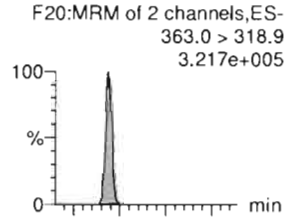


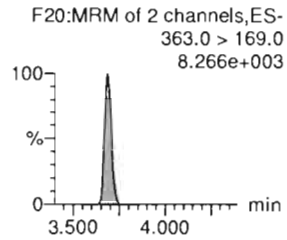
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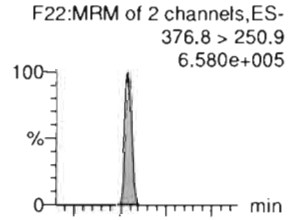


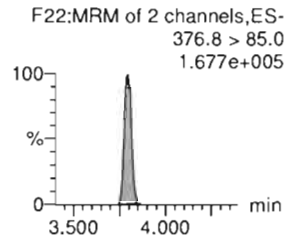
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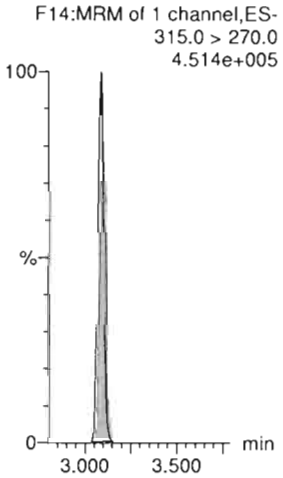


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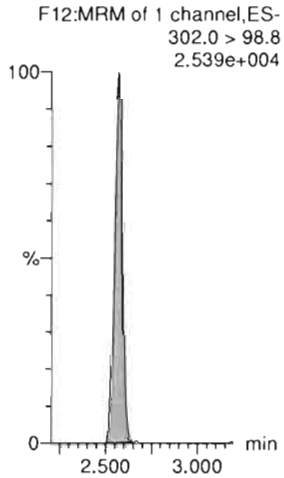




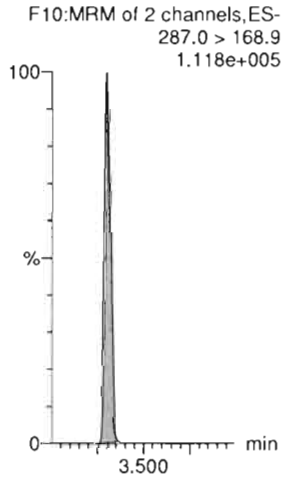
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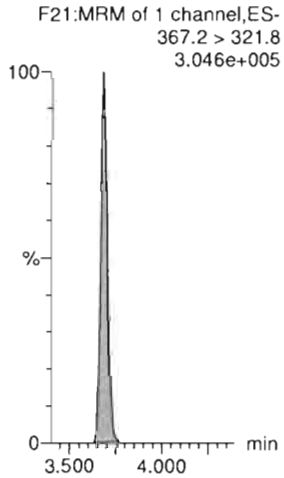
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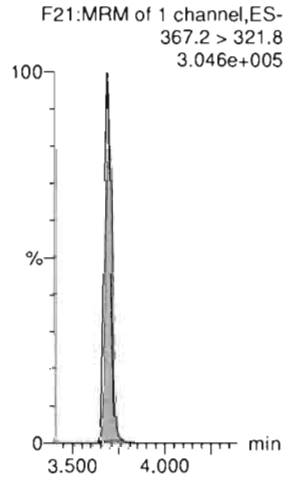
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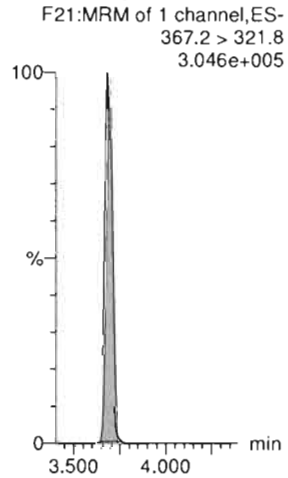
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13C4-PFHpA-EIS



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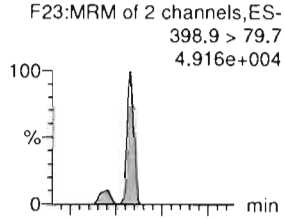


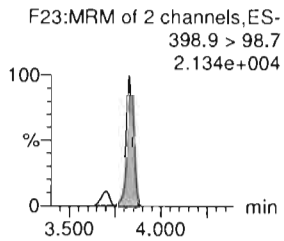
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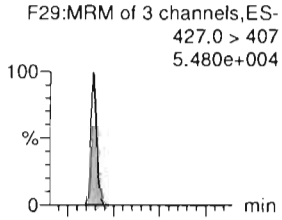
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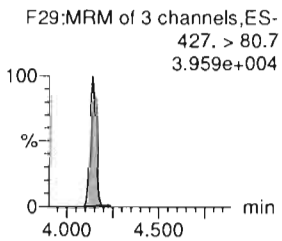
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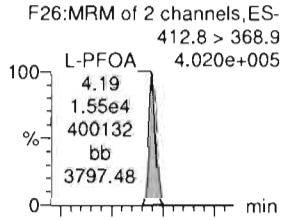


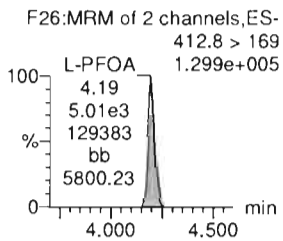
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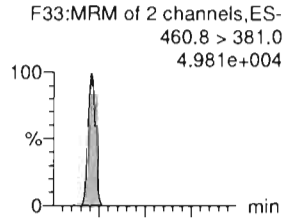


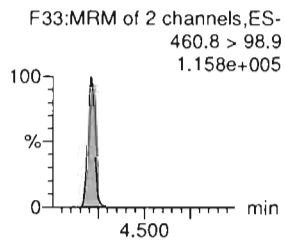
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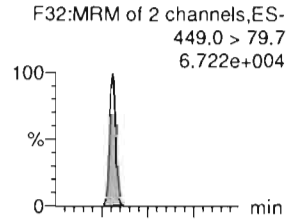


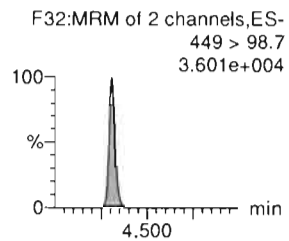
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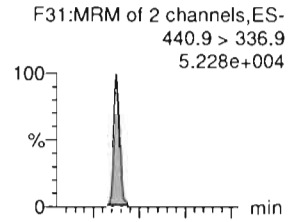


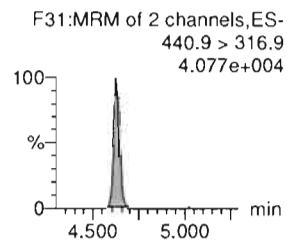
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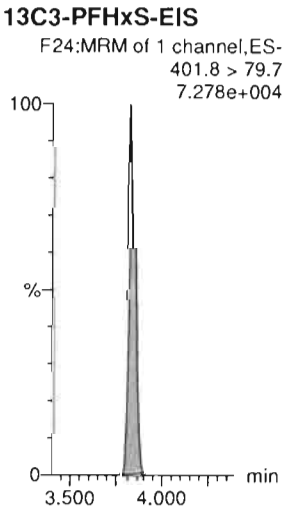


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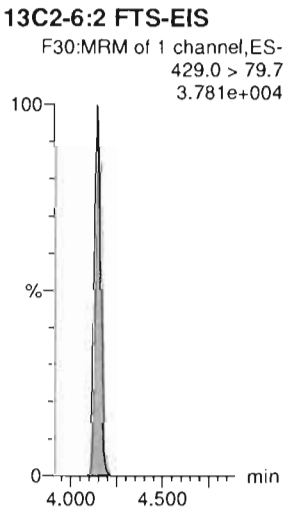




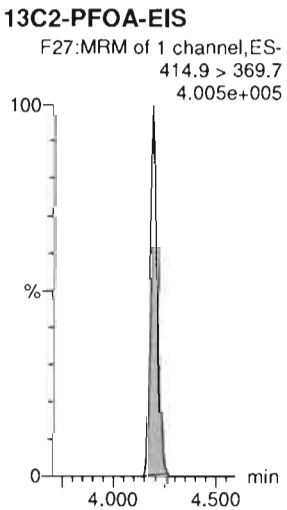
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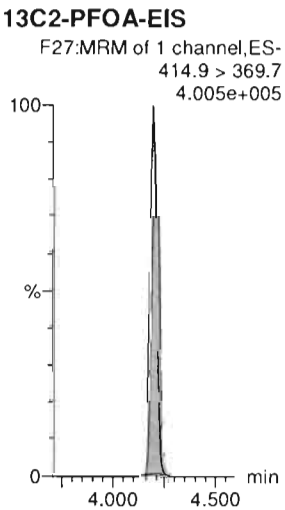
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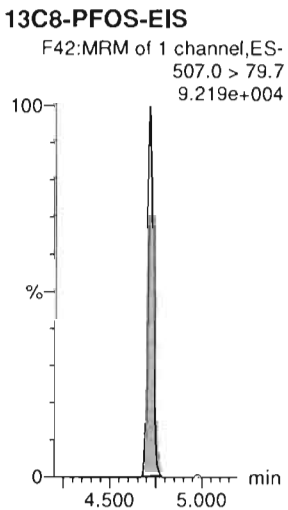
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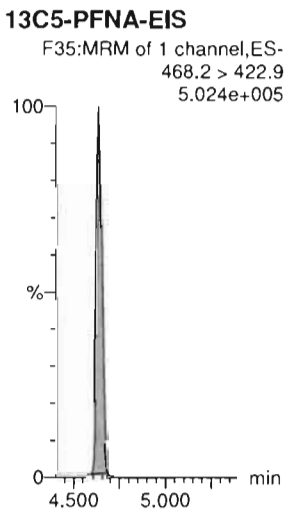
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13C8-PFOS-EIS



13C5-PFNA-EIS

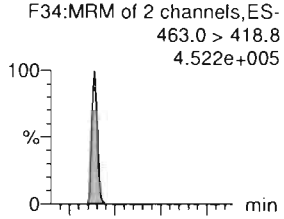


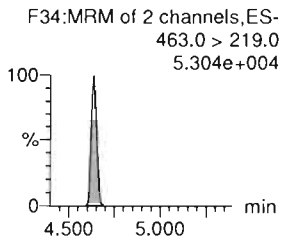
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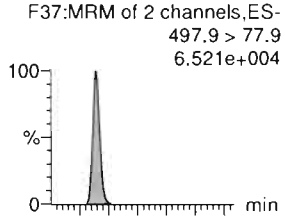
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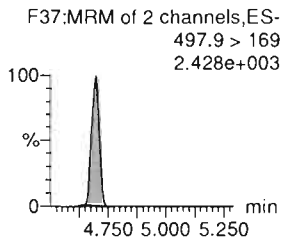
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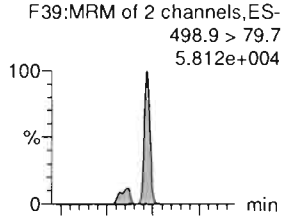


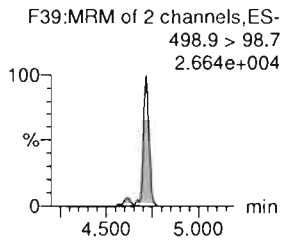
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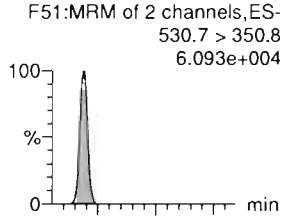


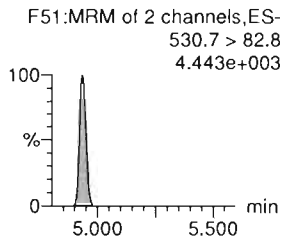
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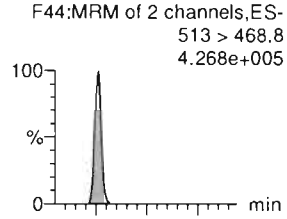


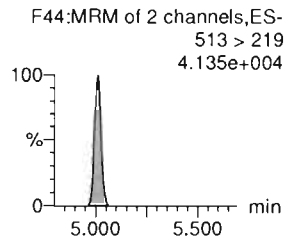
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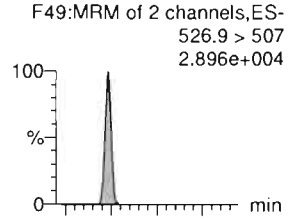


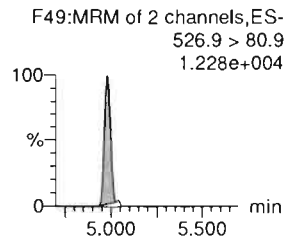
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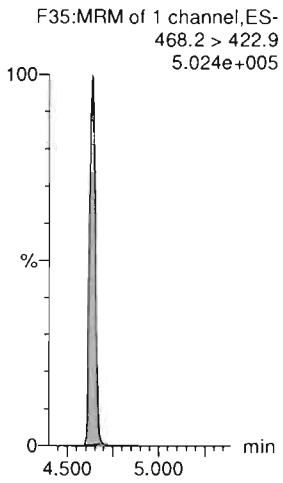


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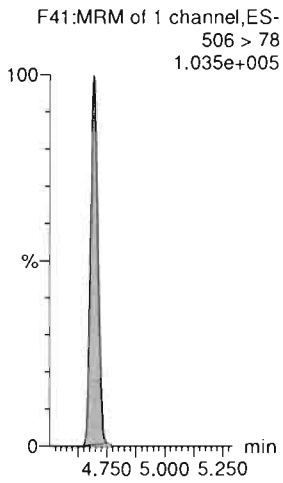




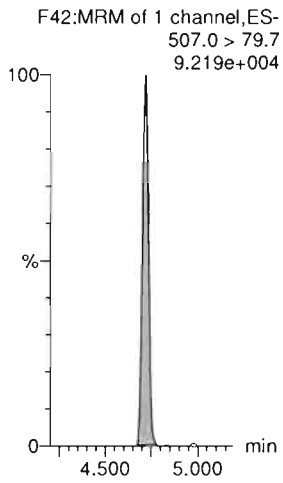
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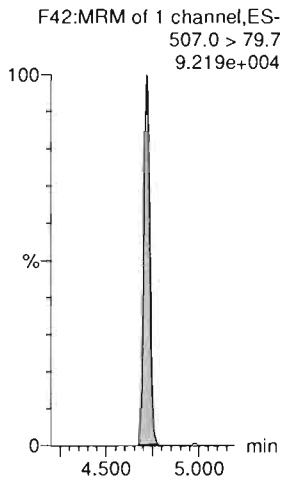
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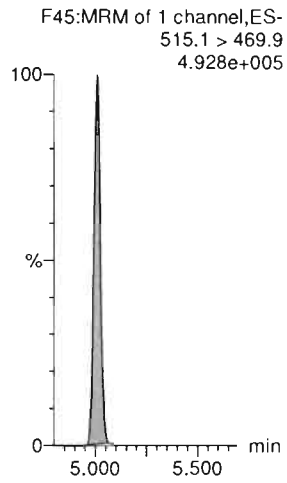
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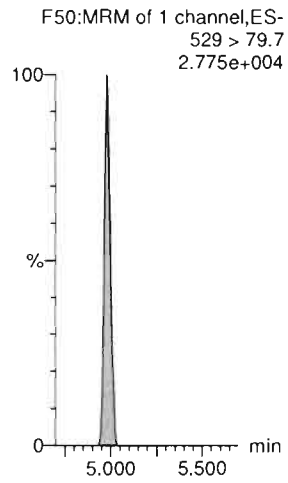
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

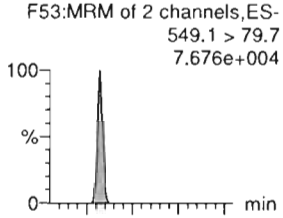


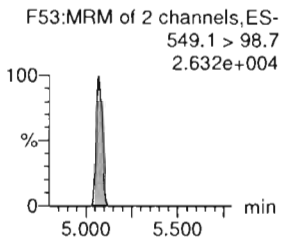
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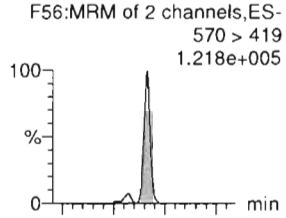
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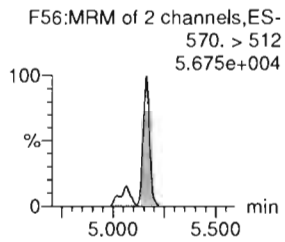
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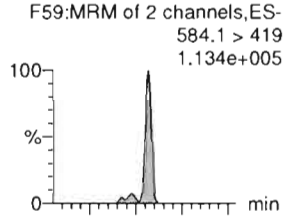


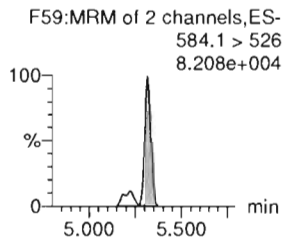
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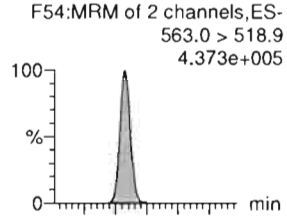


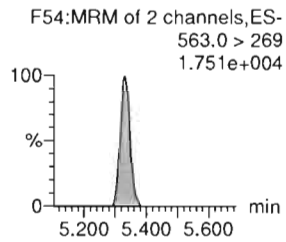
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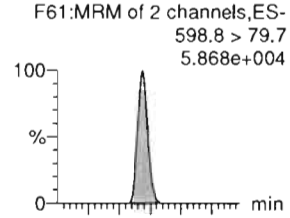


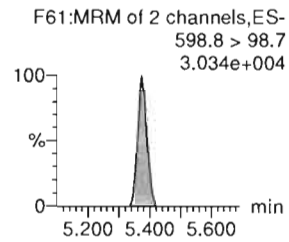
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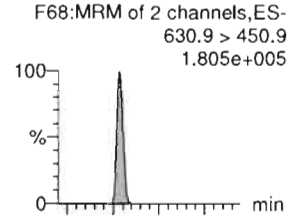


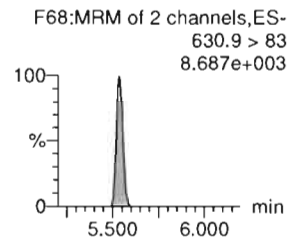
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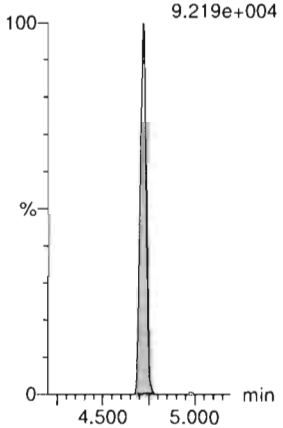


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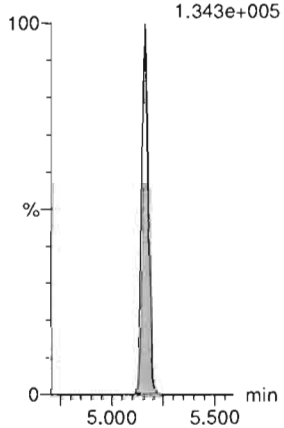




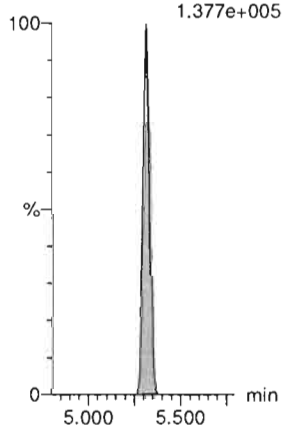
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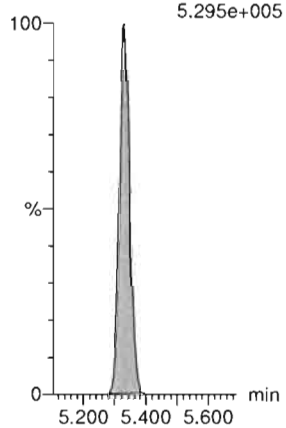
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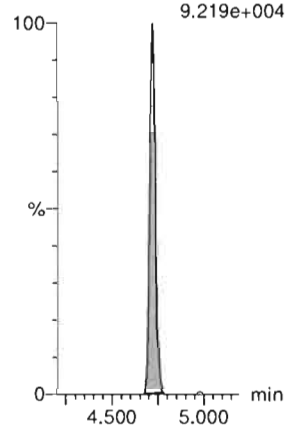
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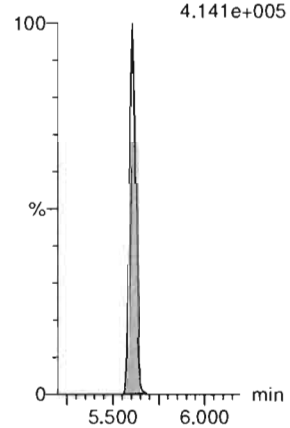
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13C8-PFOS-EIS



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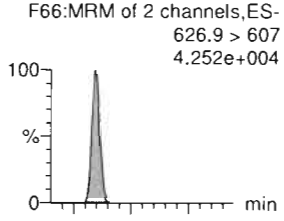


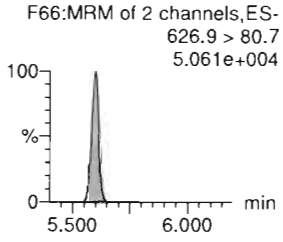
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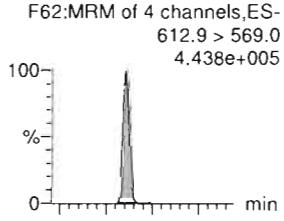
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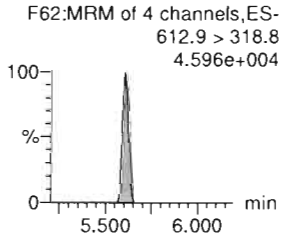
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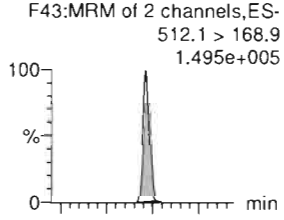


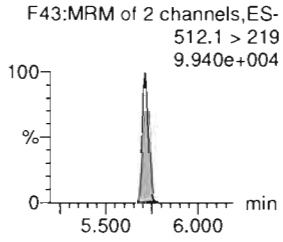
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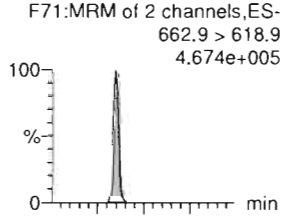


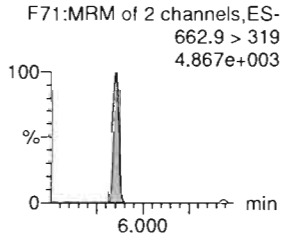
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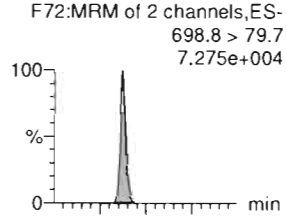


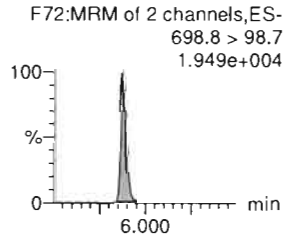
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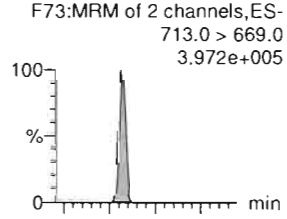


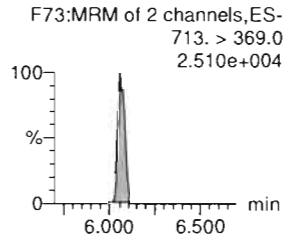
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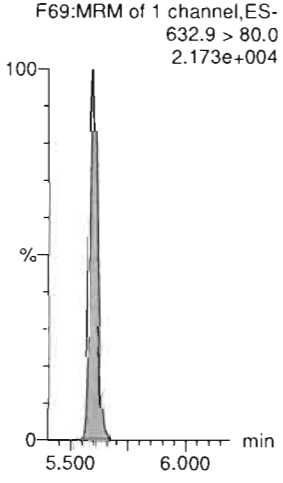


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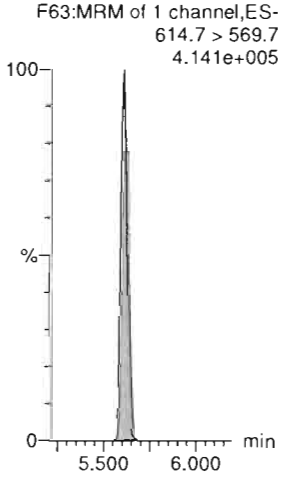




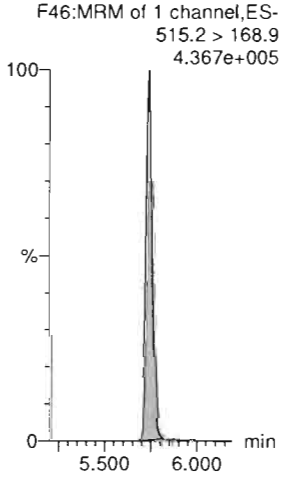
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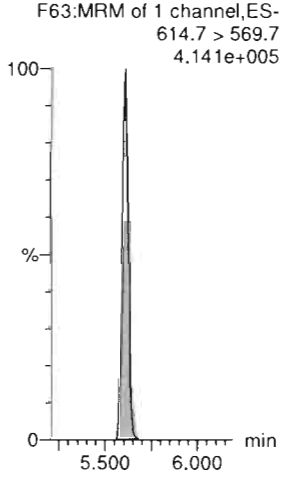
13C2-PFDoA-EIS



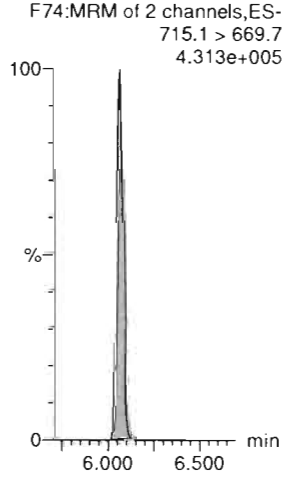
d3-N-MeFOSA-EIS



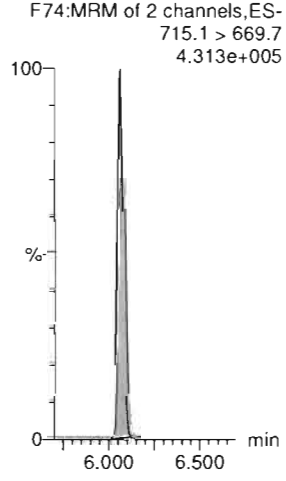
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

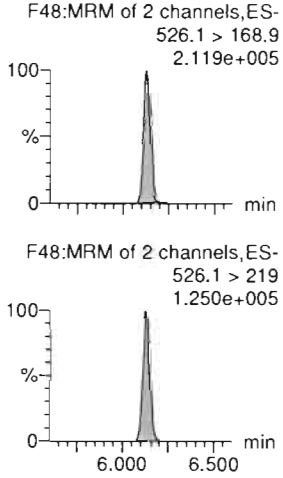


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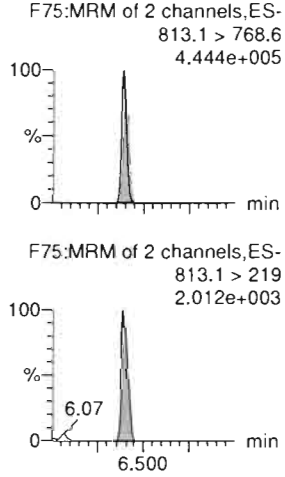
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Name: 200228P2-85, Date: 29-Feb-2020, Time: 04:55:43, ID: ST200228P2-15 PFC CS3 20B1107, Description: PFC CS3 20B1107

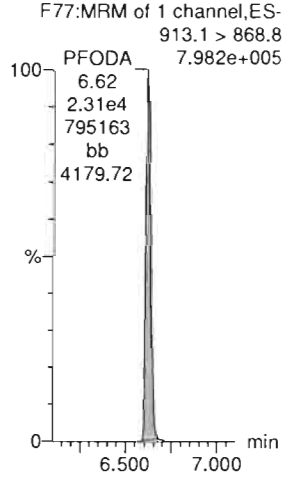
N-EtFOSA



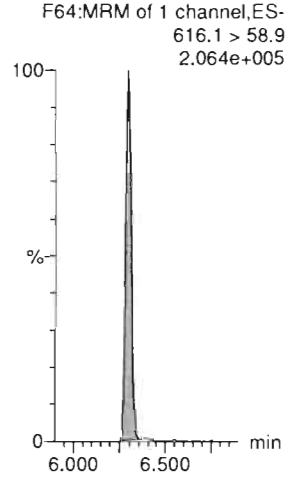
PFHxDA



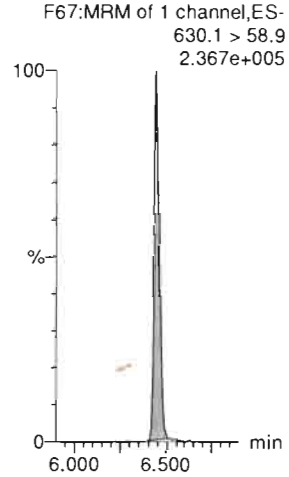
PFODA



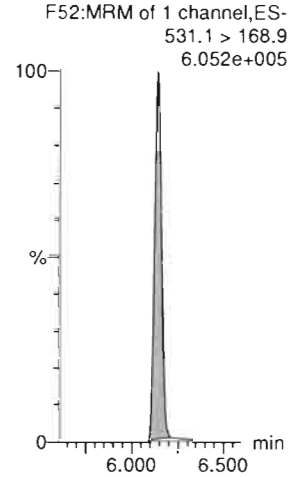
N-MeFOSE



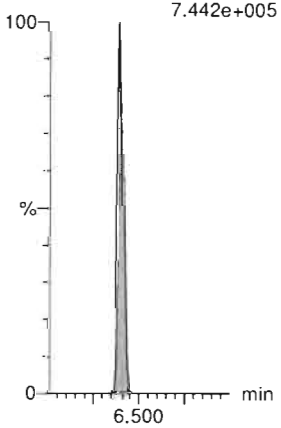
N-EtFOSE



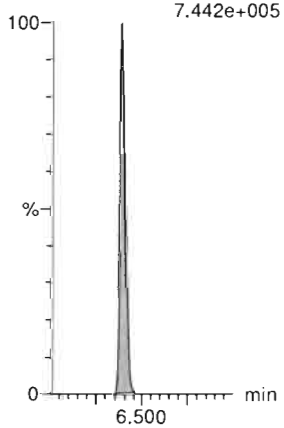
d5-N-ETFOSA-EIS



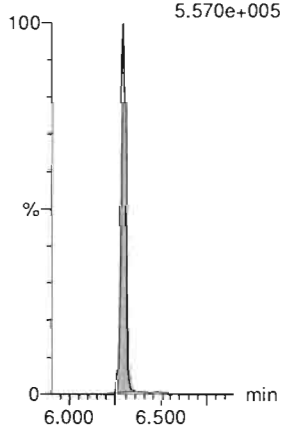
13C2-PFHxDA-EIS



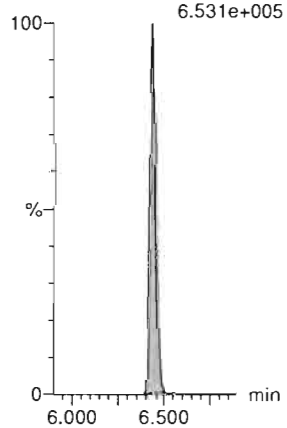
13C2-PFHxDA-EIS



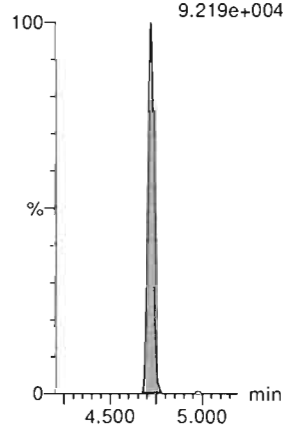
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

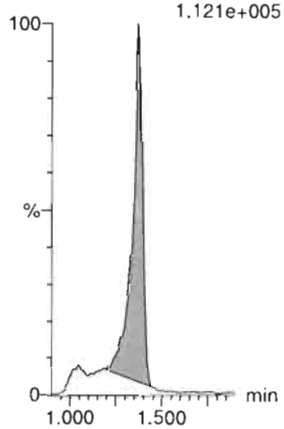


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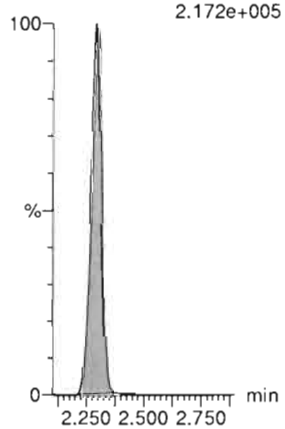
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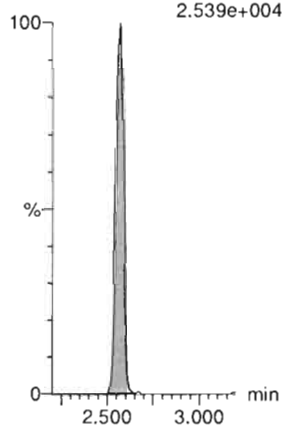
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.121e+005



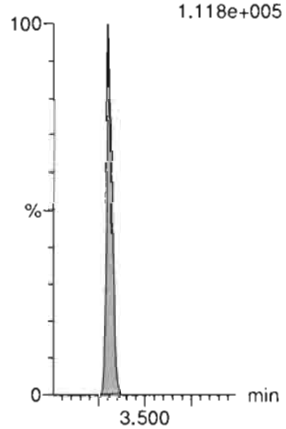
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.172e+005



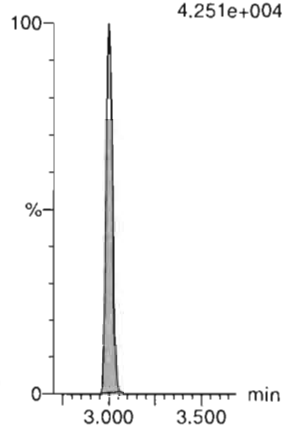
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.539e+004



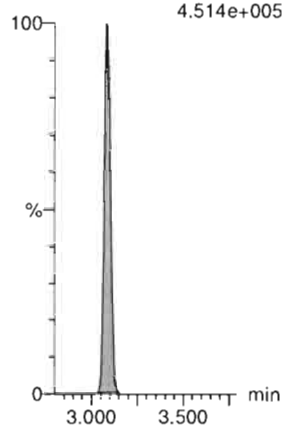
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.118e+005



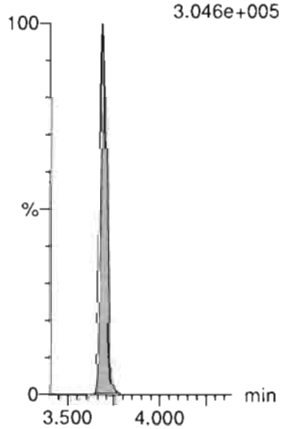
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.251e+004



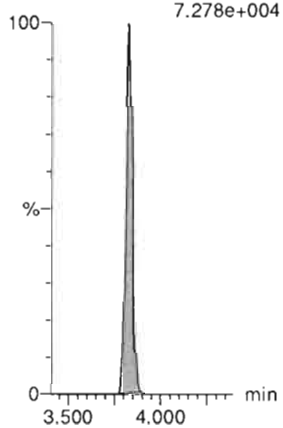
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.514e+005



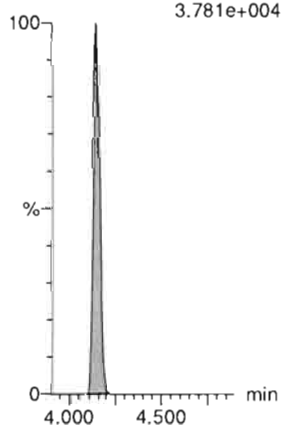
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.046e+005



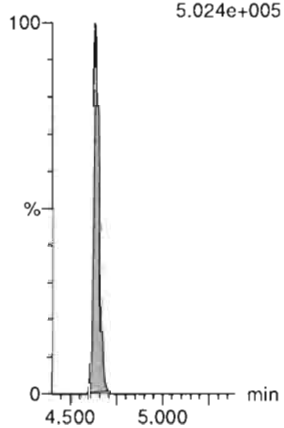
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.278e+004



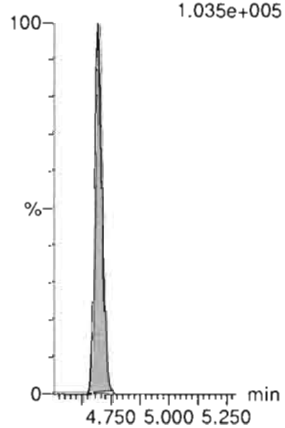
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.781e+004



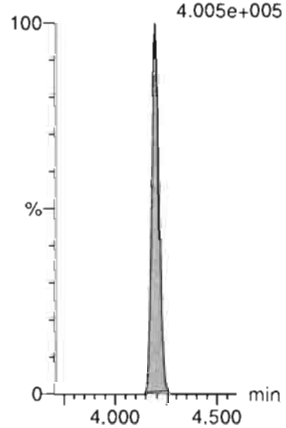
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.024e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.035e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.005e+005

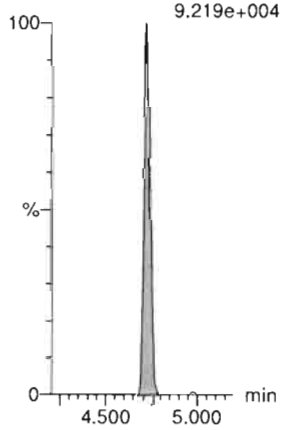


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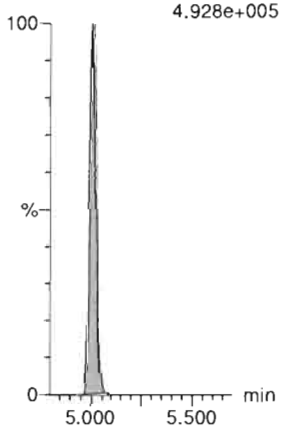
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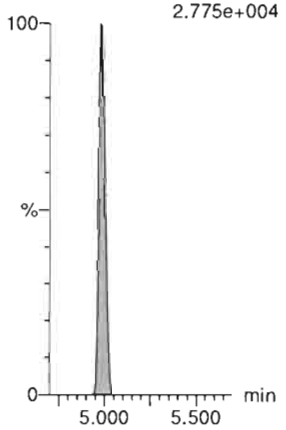
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.219e+004



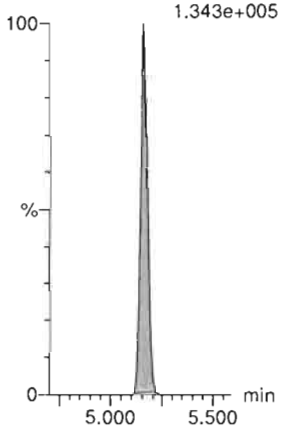
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.928e+005



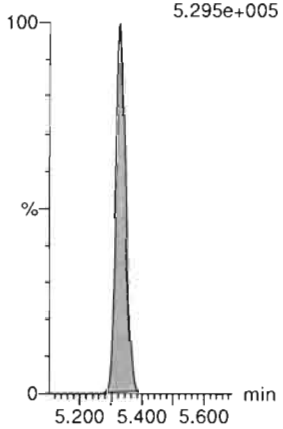
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.775e+004



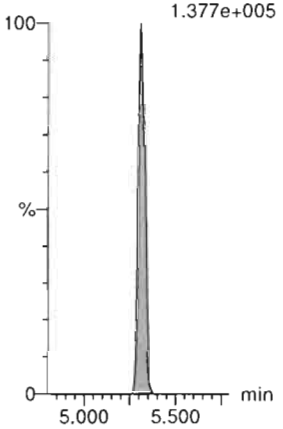
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.343e+005



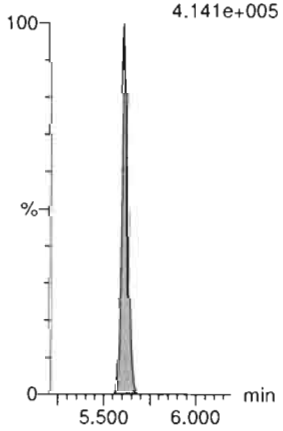
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.295e+005



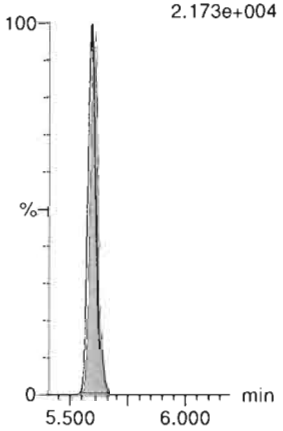
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.377e+005



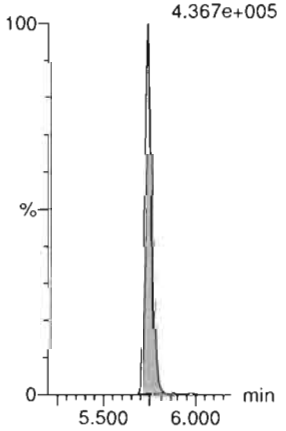
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.141e+005



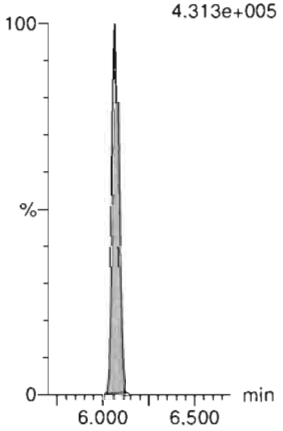
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.173e+004



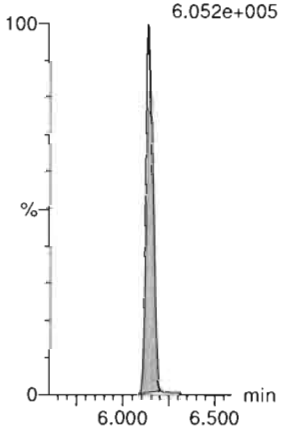
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.367e+005



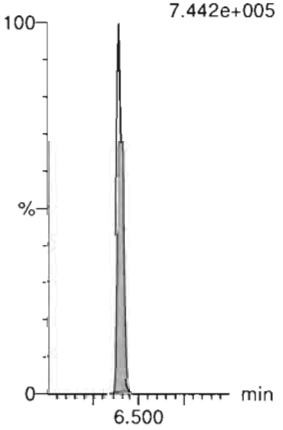
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.313e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.052e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
7.442e+005

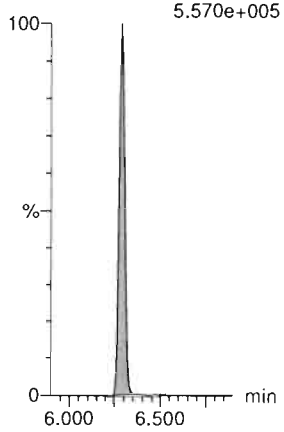


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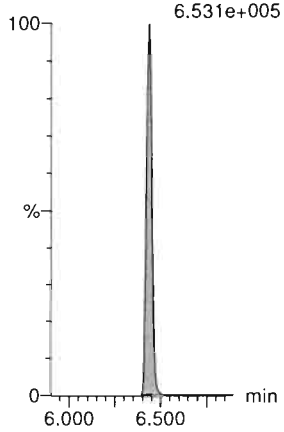
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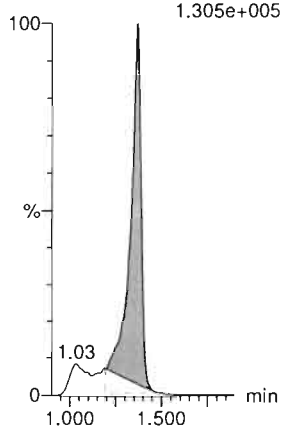
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.570e+005



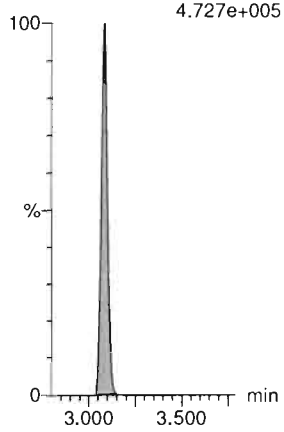
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.531e+005



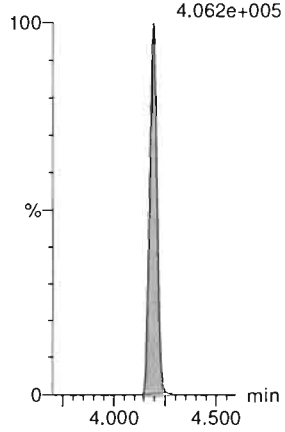
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.305e+005



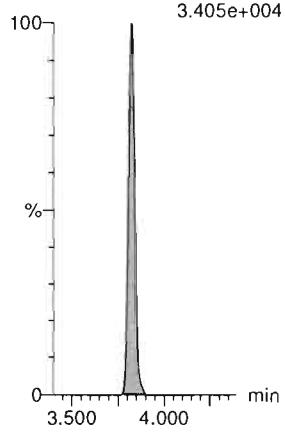
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
4.727e+005



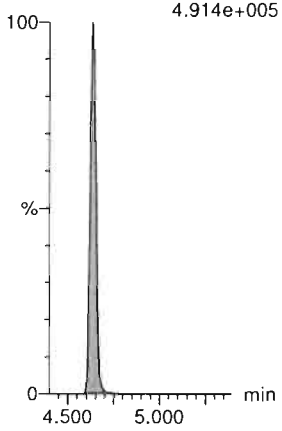
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
4.062e+005



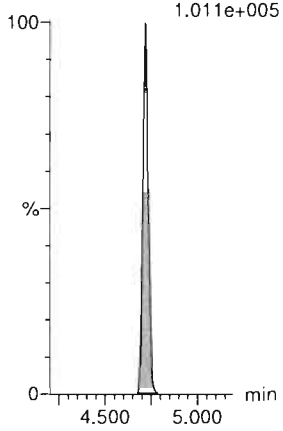
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.405e+004



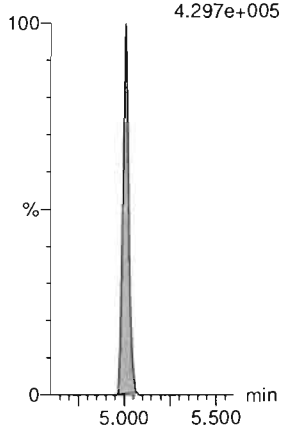
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.914e+005



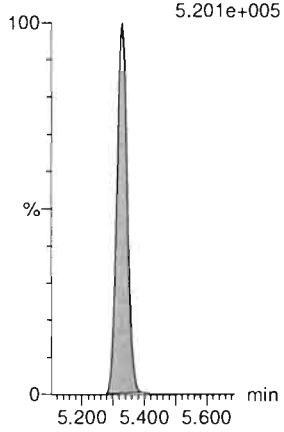
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.011e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
4.297e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.201e+005



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\200224P1\200224P1-CRV.qld

Last Altered: Tuesday, February 25, 2020 12:06:07 Pacific Standard Time
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Low point
PFHpA : 0.5
L-PFHxS : 0.5
6:2 : 0.5
PFHpS : 0.5
7:3 FTCA : 0.5
9Cl : 0.5
PFNS : 0.5
PFDS : 0.5
PFDoS : 0.5

High point
5:3 FTCA : 100
7:3 FTCA : 100
L-PFOS : 250

2/25/2020

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 12:06:07

Compound name: PFBA
Correlation coefficient: r = 0.999553, r^2 = 0.999106
Calibration curve: 1.16537 * x + -0.0554753
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	200224P1-3	Standard	0.250	1.40	136.372	7166.275	0.238	0.3	0.7	NO	0.999	NO	bb
2	2	200224P1-4	Standard	0.500	1.40	264.350	7101.446	0.465	0.4	-10.6	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	1.40	725.028	7700.430	1.177	1.1	5.8	NO	0.999	NO	MM
4	4	200224P1-6	Standard	2.000	1.40	3057.783	16103.117	2.374	2.1	4.2	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	1.40	3768.728	7977.686	5.905	5.1	2.3	NO	0.999	NO	MM
6	6	200224P1-8	Standard	10.000	1.40	7880.729	8391.387	11.739	10.1	1.2	NO	0.999	NO	MM
7	7	200224P1-9	Standard	50.000	1.40	37356.859	8240.380	56.667	48.7	-2.7	NO	0.999	NO	MM
8	8	200224P1-10	Standard	100.000	1.40	78900.563	8345.953	118.172	101.5	1.5	NO	0.999	NO	MM
9	9	200224P1-11	Standard	250.000	1.40	205176.422	9219.262	278.190	238.8	-4.5	NO	0.999	NO	MM
10	10	200224P1-12	Standard	500.000	1.40	391272.406	8217.197	595.204	510.8	2.2	NO	0.999	NO	MM

Compound name: PFPrS
Correlation coefficient: r = 0.999809, r^2 = 0.999618
Calibration curve: 1.6727 * x + -0.0506783
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	200224P1-3	Standard	0.250	1.73	41.736	1345.453	0.388	0.3	4.8	NO	1.000	NO	MM
2	2	200224P1-4	Standard	0.500	1.73	85.739	1427.682	0.751	0.5	-4.2	NO	1.000	NO	MM
3	3	200224P1-5	Standard	1.000	1.73	181.294	1480.760	1.530	0.9	-5.5	NO	1.000	NO	MM
4	4	200224P1-6	Standard	2.000	1.73	578.679	2303.825	3.140	1.9	-4.6	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	1.73	1009.271	1485.064	8.495	5.1	2.2	NO	1.000	NO	MM
6	6	200224P1-8	Standard	10.000	1.73	1988.614	1519.355	16.361	9.8	-1.9	NO	1.000	NO	MM
7	7	200224P1-9	Standard	50.000	1.73	9685.632	1509.052	80.229	48.0	-4.0	NO	1.000	NO	MM
8	8	200224P1-10	Standard	100.000	1.73	19323.936	1413.523	170.885	102.2	2.2	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	1.73	46094.695	1410.576	408.474	244.2	-2.3	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	1.73	89543.055	1322.983	846.034	505.8	1.2	NO	1.000	NO	bb

VY 02/25/02

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999580
Calibration curve: -2.59383e-005 * x^2 + 0.0934904 * x + -0.00212579
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	200224P1-3	Standard	0.250	2.18	20.582	11548.764	0.022	0.3	4.4	NO	1.000	NO	MM
2	2	200224P1-4	Standard	0.500	2.18	42.416	12199.752	0.043	0.5	-2.5	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	2.19	81.257	12758.060	0.080	0.9	-12.5	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	2.18	280.852	19789.869	0.177	1.9	-3.9	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	2.19	509.633	12660.391	0.503	5.4	8.3	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	2.18	943.991	13091.457	0.901	9.7	-3.1	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	2.19	4880.028	13191.591	4.624	50.2	0.4	NO	1.000	NO	bd
8	8	200224P1-10	Standard	100.000	2.19	9394.156	12931.854	9.080	99.9	-0.1	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	2.18	4783.633	12731.405	4.697	51.0	-79.6	YES	1.000	NO	bbX
10	10	200224P1-12	Standard	500.000	2.18	9285.669	12361.681	9.390	103.4	-79.3	YES	1.000	NO	bbX

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999949
Calibration curve: -8.16235e-005 * x^2 + 0.995801 * x + 0.0429123
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	200224P1-3	Standard	0.250	2.32	274.363	11548.764	0.297	0.3	2.1	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	2.33	557.958	12199.752	0.572	0.5	6.2	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	2.32	1077.469	12758.060	1.056	1.0	1.7	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	2.33	3273.593	19789.869	2.068	2.0	1.7	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	2.32	5449.585	12660.391	5.381	5.4	7.3	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	2.32	10392.366	13091.457	9.923	9.9	-0.7	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	2.33	51779.336	13191.591	49.065	49.4	-1.1	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	2.33	102406.125	12931.854	98.986	100.2	0.2	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	2.32	248384.469	12731.405	243.870	250.0	-0.0	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	2.32	472281.719	12361.681	477.566	500.0	0.0	NO	1.000	NO	bb

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Compound name: PFBS
Correlation coefficient: r = 0.999839, r^2 = 0.999677
Calibration curve: 2.3892 * x + 0.0222262
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	200224P1-3	Standard	0.250	2.60	68.228	1345.453	0.634	0.3	2.4	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	2.60	125.828	1427.682	1.102	0.5	-9.6	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	2.60	280.921	1480.760	2.371	1.0	-1.7	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	2.60	944.091	2303.825	5.122	2.1	6.7	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	2.60	1442.961	1485.064	12.146	5.1	1.5	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	2.60	2938.999	1519.355	24.180	10.1	1.1	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	2.60	14566.907	1509.052	120.663	50.5	1.0	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	2.60	28172.814	1413.523	249.137	104.3	4.3	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	2.60	66126.000	1410.576	585.984	245.3	-1.9	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	2.60	126367.234	1322.983	1193.961	499.7	-0.1	NO	1.000	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.998563
Calibration curve: -0.000173905 * x^2 + 1.35738 * x + -0.154108
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	200224P1-3	Standard	0.250	3.02	14.770	1548.894	0.119	0.2	-19.5	NO	0.999	NO	bb
2	2	200224P1-4	Standard	0.500	3.02	68.266	1644.001	0.519	0.5	-0.8	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	3.03	144.255	1403.385	1.285	1.1	6.0	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	3.03	547.146	2576.340	2.655	2.1	3.5	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	3.02	912.876	1688.734	6.757	5.1	1.9	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	3.02	1823.976	1634.026	13.953	10.4	4.1	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	3.02	9302.433	1546.006	75.213	55.9	11.9	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	3.03	17047.689	1710.538	124.578	93.0	-7.0	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	3.03	41690.293	1592.094	327.323	249.2	-0.3	NO	0.999	NO	bb
10	10	200224P1-12	Standard	500.000	3.02	73755.336	1448.219	636.604	501.3	0.3	NO	0.999	NO	bb

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Compound name: PFHxA
Correlation coefficient: r = 0.999829, r^2 = 0.999659
Calibration curve: 0.910113 * x + 0.0756208
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	200224P1-3	Standard	0.250	3.11	508.122	20131.379	0.316	0.3	5.4	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	3.11	843.632	20962.051	0.503	0.5	-6.1	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	3.11	1790.509	21738.801	1.030	1.0	4.8	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	3.11	5286.134	32462.195	2.035	2.2	7.7	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	3.11	8718.009	21627.785	5.039	5.5	9.1	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	3.11	17274.947	21810.516	9.901	10.8	8.0	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	3.11	85140.430	22397.953	47.516	52.1	4.3	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	3.11	165938.188	22606.160	91.755	100.7	0.7	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	3.11	395886.656	21637.717	228.702	251.2	0.5	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	3.11	742417.313	20616.865	450.127	494.5	-1.1	NO	1.000	NO	bb

Compound name: PFPeS
Correlation coefficient: r = 0.998368, r^2 = 0.996738
Calibration curve: 2.0955 * x + 0.166232
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	200224P1-3	Standard	0.250	3.31	68.318	1345.453	0.635	0.2	-10.6	NO	0.997	NO	bb
2	2	200224P1-4	Standard	0.500	3.31	114.510	1427.682	1.003	0.4	-20.2	NO	0.997	NO	bb
3	3	200224P1-5	Standard	1.000	3.31	310.251	1480.760	2.619	1.2	17.1	NO	0.997	NO	bb
4	4	200224P1-6	Standard	2.000	3.31	811.456	2303.825	4.403	2.0	1.1	NO	0.997	NO	bb
5	5	200224P1-7	Standard	5.000	3.30	1481.071	1485.064	12.466	5.9	17.4	NO	0.997	NO	bb
6	6	200224P1-8	Standard	10.000	3.31	2812.013	1519.355	23.135	11.0	9.6	NO	0.997	NO	bb
7	7	200224P1-9	Standard	50.000	3.30	13738.850	1509.052	113.804	54.2	8.5	NO	0.997	NO	bb
8	8	200224P1-10	Standard	100.000	3.31	26711.373	1413.523	236.213	112.6	12.6	NO	0.997	NO	bb
9	9	200224P1-11	Standard	250.000	3.31	59125.027	1410.576	523.944	250.0	-0.0	NO	0.997	NO	bb
10	10	200224P1-12	Standard	500.000	3.31	106757.633	1322.983	1008.683	481.3	-3.7	NO	0.997	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999876
Calibration curve: -0.000249903 * x^2 + 1.05727 * x + 0.00892307
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	200224P1-3	Standard	0.250	3.32	78.484	3986.637	0.246	0.2	-10.3	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	3.32	171.834	4094.030	0.525	0.5	-2.4	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	3.32	351.073	4092.465	1.072	1.0	0.6	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	3.32	1102.272	6198.401	2.223	2.1	4.8	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	3.32	1866.948	4085.053	5.713	5.4	8.0	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	3.32	3535.471	4102.695	10.772	10.2	2.0	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	3.32	17965.859	4200.757	53.460	51.2	2.4	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	3.32	34524.086	4233.007	101.949	98.7	-1.3	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	3.32	81670.250	4129.927	247.190	248.4	-0.7	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	3.32	153428.609	4106.303	467.052	501.1	0.2	NO	1.000	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999862
Calibration curve: -0.000158789 * x^2 + 0.230947 * x + 0.00275595
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	200224P1-3	Standard	0.250	3.65	61.391	12856.865	0.060	0.2	-1.4	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	3.65	132.253	12574.997	0.131	0.6	11.5	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	3.65	246.880	13914.661	0.222	0.9	-5.1	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	3.65	761.535	21060.346	0.452	1.9	-2.6	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	3.65	1265.453	13978.898	1.132	4.9	-1.9	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	3.65	2409.722	13291.691	2.266	9.9	-1.3	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	3.65	12067.475	13383.134	11.271	50.5	1.1	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	3.65	23883.623	13914.952	21.455	99.7	-0.3	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	3.65	12266.630	13376.500	11.463	51.4	-79.4	YES	1.000	NO	bbX
10	10	200224P1-12	Standard	500.000	3.65	23630.762	12232.721	24.147	113.4	-77.3	YES	1.000	NO	bbX

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Compound name: PFHpA
Correlation coefficient: r = 0.999793, r^2 = 0.999586
Calibration curve: 1.19852 * x + 0.230417
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 200224P1-3	Standard	0.250	3.71	339.731	12856.865	0.330	0.1	-66.7	YES	1.000	NO	bbX
2	2 200224P1-4	Standard	0.500	3.71	746.721	12574.997	0.742	0.4	-14.6	NO	1.000	NO	bb
3	3 200224P1-5	Standard	1.000	3.71	1543.329	13914.661	1.386	1.0	-3.5	NO	1.000	NO	bb
4	4 200224P1-6	Standard	2.000	3.71	4438.820	21060.346	2.635	2.0	0.3	NO	1.000	NO	bb
5	5 200224P1-7	Standard	5.000	3.71	7028.966	13978.898	6.285	5.1	1.0	NO	1.000	NO	bb
6	6 200224P1-8	Standard	10.000	3.71	14374.950	13291.691	13.519	11.1	10.9	NO	1.000	NO	bb
7	7 200224P1-9	Standard	50.000	3.71	68430.352	13383.134	63.915	53.1	6.3	NO	1.000	NO	bb
8	8 200224P1-10	Standard	100.000	3.71	134891.750	13914.952	121.175	100.9	0.9	NO	1.000	NO	bb
9	9 200224P1-11	Standard	250.000	3.71	319323.063	13376.500	298.399	248.8	-0.5	NO	1.000	NO	bb
10	10 200224P1-12	Standard	500.000	3.71	582137.188	12232.721	594.857	496.1	-0.8	NO	1.000	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.999711
Calibration curve: -0.000580124 * x^2 + 3.09298 * x + 0.0913703
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 200224P1-3	Standard	0.250	3.81	839.422	12856.865	0.816	0.2	-6.3	NO	1.000	NO	bb
2	2 200224P1-4	Standard	0.500	3.81	1676.539	12574.997	1.667	0.5	1.9	NO	1.000	NO	bb
3	3 200224P1-5	Standard	1.000	3.81	3411.136	13914.661	3.064	1.0	-3.9	NO	1.000	NO	bb
4	4 200224P1-6	Standard	2.000	3.81	10427.085	21060.346	6.189	2.0	-1.4	NO	1.000	NO	bb
5	5 200224P1-7	Standard	5.000	3.81	18073.967	13978.898	16.162	5.2	4.0	NO	1.000	NO	bb
6	6 200224P1-8	Standard	10.000	3.81	33810.285	13291.691	31.796	10.3	2.7	NO	1.000	NO	bb
7	7 200224P1-9	Standard	50.000	3.81	172853.672	13383.134	161.447	52.7	5.4	NO	1.000	NO	bb
8	8 200224P1-10	Standard	100.000	3.81	333581.094	13914.952	299.661	98.7	-1.3	NO	1.000	NO	bb
9	9 200224P1-11	Standard	250.000	3.81	777191.125	13376.500	726.265	246.1	-1.5	NO	1.000	NO	bb
10	10 200224P1-12	Standard	500.000	3.81	1376818.625	12232.721	1406.901	502.1	0.4	NO	1.000	NO	bb

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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999496
Calibration curve: -0.000217812 * x^2 + 1.09724 * x + -0.0921085
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	200224P1-3	Standard	0.250	3.84	81.169	2744.309	0.370	0.4	68.4	YES	0.999	NO	MMX
2	2	200224P1-4	Standard	0.500	3.84	105.785	3061.979	0.432	0.5	-4.5	NO	0.999	NO	MM
3	3	200224P1-5	Standard	1.000	3.84	277.924	3248.573	1.069	1.1	5.9	NO	0.999	NO	MM
4	4	200224P1-6	Standard	2.000	3.85	833.608	5075.390	2.053	2.0	-2.2	NO	0.999	NO	MM
5	5	200224P1-7	Standard	5.000	3.85	1363.916	3237.224	5.267	4.9	-2.2	NO	0.999	NO	MM
6	6	200224P1-8	Standard	10.000	3.85	2702.632	3162.559	10.682	9.8	-1.6	NO	0.999	NO	MM
7	7	200224P1-9	Standard	50.000	3.85	13851.981	2962.812	58.441	53.9	7.8	NO	0.999	NO	MM
8	8	200224P1-10	Standard	100.000	3.85	26463.207	3148.994	105.046	97.7	-2.3	NO	0.999	NO	MM
9	9	200224P1-11	Standard	250.000	3.85	60633.250	2943.699	257.470	246.8	-1.3	NO	0.999	NO	MM
10	10	200224P1-12	Standard	500.000	3.85	115032.742	2900.742	495.704	501.9	0.4	NO	0.999	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999220
Calibration curve: -0.000663398 * x^2 + 1.71333 * x + -0.0167933
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	200224P1-3	Standard	0.250	4.16	20.382	1435.118	0.178	0.1	-54.6	YES	0.999	NO	bbX
2	2	200224P1-4	Standard	0.500	4.15	107.807	1344.487	1.002	0.6	19.0	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	4.16	161.363	1425.165	1.415	0.8	-16.4	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	4.16	472.230	1993.174	2.962	1.7	-13.0	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	4.16	1038.430	1458.684	8.899	5.2	4.3	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	4.16	1985.163	1378.990	17.995	10.6	5.6	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	4.16	9488.903	1385.509	85.608	51.0	2.0	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	4.16	18820.664	1508.383	155.967	94.5	-5.5	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	4.16	44766.746	1411.550	396.433	257.0	2.8	NO	0.999	NO	bb
10	10	200224P1-12	Standard	500.000	4.16	79324.914	1442.129	687.568	496.9	-0.6	NO	0.999	NO	bb

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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999613
Calibration curve: -4.19407e-005 * x^2 + 1.15819 * x + 0.187509
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	200224P1-3	Standard	0.250	4.22	573.156	16852.594	0.425	0.2	-17.9	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	4.21	1027.626	17452.742	0.736	0.5	-5.3	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	4.21	1978.401	17850.266	1.385	1.0	3.4	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	4.22	5863.516	28194.887	2.600	2.1	4.1	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	4.21	10115.088	19195.934	6.587	5.5	10.5	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	4.21	18075.213	18359.018	12.307	10.5	4.7	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	4.21	82467.789	17850.746	57.748	49.8	-0.4	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	4.21	177406.359	18652.064	118.892	102.9	2.9	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	4.22	395190.219	17649.271	279.891	243.7	-2.5	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	4.21	723513.375	15817.853	571.754	502.6	0.5	NO	1.000	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999448
Calibration curve: -1.73721e-005 * x^2 + 0.1789 * x + 0.00291759
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	200224P1-3	Standard	0.250	4.23	47.950	16852.594	0.036	0.2	-27.0	NO	0.999	NO	bb
2	2	200224P1-4	Standard	0.500	4.22	155.573	17452.742	0.111	0.6	21.3	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	4.23	241.682	17850.266	0.169	0.9	-7.0	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	4.23	885.406	28194.887	0.393	2.2	8.9	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	4.23	1426.125	19195.934	0.929	5.2	3.5	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	4.22	2743.939	18359.018	1.868	10.4	4.4	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	4.22	13560.010	17850.746	9.495	53.3	6.7	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	4.23	25388.846	18652.064	17.015	96.0	-4.0	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	4.23	61331.035	17649.271	43.437	248.8	-0.5	NO	0.999	NO	dd
10	10	200224P1-12	Standard	500.000	4.23	107930.906	15817.853	85.292	501.1	0.2	NO	0.999	NO	bb

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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.998890
Calibration curve: -6.74582e-005 * x^2 + 0.938221 * x + 0.202734
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	200224P1-3	Standard	0.250	4.33	33.848	3529.190	0.120			NO	0.999	NO	bbXI
2	2	200224P1-4	Standard	0.500	4.32	159.670	3347.551	0.596	0.4	-16.1	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	4.32	340.023	3297.781	1.289	1.2	15.8	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	4.33	994.666	5347.358	2.325	2.3	13.1	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	4.33	1578.989	3504.957	5.631	5.8	15.8	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	4.33	3101.130	3579.456	10.830	11.3	13.4	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	4.33	14406.848	3726.055	48.331	51.5	3.0	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	4.33	27673.563	3653.259	94.688	101.4	1.4	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	4.33	63505.016	3586.146	221.355	239.9	-4.1	NO	0.999	NO	bb
10	10	200224P1-12	Standard	500.000	4.33	124048.094	3395.956	456.602	504.8	1.0	NO	0.999	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998973
Calibration curve: -0.000105376 * x^2 + 0.197356 * x + 0.00169411
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	200224P1-3	Standard	0.250	4.64	15.769	13882.507	0.014	0.1	-74.7	YES	0.999	NO	bbX
2	2	200224P1-4	Standard	0.500	4.64	119.936	15185.840	0.099	0.5	-1.6	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	4.64	223.924	15326.798	0.183	0.9	-8.3	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	4.64	728.772	23821.994	0.382	1.9	-3.4	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	4.64	1436.932	15892.408	1.130	5.7	14.7	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	4.64	2524.623	15979.745	1.975	10.1	0.5	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	4.64	12270.160	16359.094	9.376	48.8	-2.5	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	4.64	25252.412	16798.279	18.791	100.6	0.6	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	4.64	12650.054	15900.648	9.945	51.8	-79.3	YES	0.999	NO	bbX
10	10	200224P1-12	Standard	500.000	4.64	23902.898	14688.693	20.341	109.5	-78.1	YES	0.999	NO	bbX

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Compound name: PFNA
Coefficient of Determination: R^2 = 0.999166
Calibration curve: -0.000268646 * x^2 + 1.28148 * x + 0.0396902
Response type: Internal Std (Ref 65), 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 200224P1-3	Standard	0.250	4.66	322.424	13882.507	0.290	0.2	-21.8	NO	0.999	NO	bb
2	2 200224P1-4	Standard	0.500	4.65	845.489	15185.840	0.696	0.5	2.4	NO	0.999	NO	bb
3	3 200224P1-5	Standard	1.000	4.65	1705.355	15326.798	1.391	1.1	5.5	NO	0.999	NO	bb
4	4 200224P1-6	Standard	2.000	4.65	5357.802	23821.994	2.811	2.2	8.2	NO	0.999	NO	bb
5	5 200224P1-7	Standard	5.000	4.65	9053.937	15892.408	7.121	5.5	10.7	NO	0.999	NO	bb
6	6 200224P1-8	Standard	10.000	4.65	16878.578	15979.745	13.203	10.3	2.9	NO	0.999	NO	bb
7	7 200224P1-9	Standard	50.000	4.65	89258.406	16359.094	68.202	53.8	7.6	NO	0.999	NO	bb
8	8 200224P1-10	Standard	100.000	4.65	167828.625	16798.279	124.885	99.5	-0.5	NO	0.999	NO	bb
9	9 200224P1-11	Standard	250.000	4.65	373352.563	15900.648	293.504	241.2	-3.5	NO	0.999	NO	bb
10	10 200224P1-12	Standard	500.000	4.65	679568.688	14688.693	578.309	504.6	0.9	NO	0.999	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999552
Calibration curve: 0.00013095 * x^2 + 0.814789 * x + 0.0292228
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 200224P1-3	Standard	0.250	4.71	93.173	4298.058	0.271	0.3	18.7	NO	1.000	NO	bb
2	2 200224P1-4	Standard	0.500	4.71	99.717	3955.620	0.315	0.4	-29.8	NO	1.000	NO	MM
3	3 200224P1-5	Standard	1.000	4.71	292.653	4772.500	0.767	0.9	-9.5	NO	1.000	NO	bb
4	4 200224P1-6	Standard	2.000	4.71	981.393	7342.294	1.671	2.0	0.7	NO	1.000	NO	bb
5	5 200224P1-7	Standard	5.000	4.71	1664.801	4527.179	4.597	5.6	12.0	NO	1.000	NO	bb
6	6 200224P1-8	Standard	10.000	4.71	3344.030	4803.264	8.702	10.6	6.3	NO	1.000	NO	bb
7	7 200224P1-9	Standard	50.000	4.71	16147.125	4828.938	41.798	50.8	1.7	NO	1.000	NO	bb
8	8 200224P1-10	Standard	100.000	4.71	31341.814	4631.820	84.583	102.1	2.1	NO	1.000	NO	bb
9	9 200224P1-11	Standard	250.000	4.71	71065.867	4309.161	206.148	243.4	-2.6	NO	1.000	NO	bb
10	10 200224P1-12	Standard	500.000	4.71	136709.813	3860.943	442.605	502.6	0.5	NO	1.000	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999598
Calibration curve: -0.000489933 * x^2 + 1.01299 * x + -0.0852149
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 200224P1-3	Standard	0.250	4.74	30.904	3529.190	0.109	0.2	-23.1	NO	1.000	NO	MM
2	2 200224P1-4	Standard	0.500	4.74	103.076	3347.551	0.385	0.5	-7.2	NO	1.000	NO	MM
3	3 200224P1-5	Standard	1.000	4.74	306.650	3297.781	1.162	1.2	23.2	NO	1.000	NO	MM
4	4 200224P1-6	Standard	2.000	4.74	870.199	5347.358	2.034	2.1	4.7	NO	1.000	NO	MM
5	5 200224P1-7	Standard	5.000	4.74	1351.491	3504.957	4.820	4.9	-2.9	NO	1.000	NO	MM
6	6 200224P1-8	Standard	10.000	4.74	3037.890	3579.456	10.609	10.6	6.1	NO	1.000	NO	MM
7	7 200224P1-9	Standard	50.000	4.74	14772.333	3726.055	49.558	50.2	0.5	NO	1.000	NO	MM
8	8 200224P1-10	Standard	100.000	4.74	27733.607	3653.259	94.893	98.4	-1.6	NO	1.000	NO	MM
9	9 200224P1-11	Standard	250.000	4.74	63989.098	3586.146	223.043	250.7	0.3	NO	1.000	NO	MM
10	10 200224P1-12	Standard	500.000	4.74	121068.555	3395.956	445.635	635.1	27.0	NO	1.000	NO	MMX

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.998130
Calibration curve: -0.000196834 * x^2 + 1.10022 * x + 0.142463
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 200224P1-3	Standard	0.250	4.95	39.585	3529.190	0.140			NO	0.998	NO	bbXI
2	2 200224P1-4	Standard	0.500	4.95	157.146	3347.551	0.587	0.4	-19.2	NO	0.998	NO	bb
3	3 200224P1-5	Standard	1.000	4.95	304.893	3297.781	1.156	0.9	-7.9	NO	0.998	NO	bb
4	4 200224P1-6	Standard	2.000	4.95	1074.659	5347.358	2.512	2.2	7.7	NO	0.998	NO	bb
5	5 200224P1-7	Standard	5.000	4.95	2001.594	3504.957	7.138	6.4	27.3	NO	0.998	NO	bb
6	6 200224P1-8	Standard	10.000	4.95	3655.042	3579.456	12.764	11.5	15.0	NO	0.998	NO	bd
7	7 200224P1-9	Standard	50.000	4.95	17765.820	3726.055	59.600	54.6	9.1	NO	0.998	NO	bb
8	8 200224P1-10	Standard	100.000	4.95	30507.473	3653.259	104.384	96.4	-3.6	NO	0.998	NO	bb
9	9 200224P1-11	Standard	250.000	4.95	72860.992	3586.146	253.967	241.1	-3.6	NO	0.998	NO	bb
10	10 200224P1-12	Standard	500.000	4.95	137394.016	3395.956	505.727	505.2	1.0	NO	0.998	NO	bb

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999336
Calibration curve: -0.000254486 * x^2 + 1.24117 * x + 0.0564918
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	200224P1-3	Standard	0.250	5.02	411.345	16004.663	0.321	0.2	-14.7	NO	0.999	NO	bb
2	2	200224P1-4	Standard	0.500	5.02	893.151	16320.475	0.684	0.5	1.1	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	5.02	1963.758	16595.439	1.479	1.1	14.6	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	5.02	6034.574	27533.326	2.740	2.2	8.1	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	5.02	10079.230	18359.920	6.862	5.5	9.8	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	5.02	18021.176	18269.482	12.330	9.9	-0.9	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	5.02	89155.547	18571.713	60.008	48.8	-2.4	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	5.02	173919.703	17073.396	127.332	104.8	4.8	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	5.03	420764.031	18370.953	286.297	242.7	-2.9	NO	0.999	NO	bb
10	10	200224P1-12	Standard	500.000	5.02	741410.688	16546.582	560.094	503.1	0.6	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998357
Calibration curve: -0.000892314 * x^2 + 1.51653 * x + -0.242142
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	200224P1-3	Standard	0.250	5.01	10.369	1136.127	0.114	0.2	-6.0	NO	0.998	NO	bb
2	2	200224P1-4	Standard	0.500	4.99	49.522	1127.481	0.549	0.5	4.4	NO	0.998	NO	bb
3	3	200224P1-5	Standard	1.000	4.99	110.273	1173.557	1.175	0.9	-6.5	NO	0.998	NO	bb
4	4	200224P1-6	Standard	2.000	5.00	368.015	1622.534	2.835	2.0	1.6	NO	0.998	NO	bb
5	5	200224P1-7	Standard	5.000	4.99	759.377	1252.813	7.577	5.2	3.4	NO	0.998	NO	bb
6	6	200224P1-8	Standard	10.000	4.99	1381.310	1183.121	14.594	9.8	-1.6	NO	0.998	NO	bb
7	7	200224P1-9	Standard	50.000	4.99	6277.686	963.784	81.420	55.7	11.3	NO	0.998	NO	bb
8	8	200224P1-10	Standard	100.000	4.99	12783.751	1198.283	133.355	93.2	-6.8	NO	0.998	NO	bb
9	9	200224P1-11	Standard	250.000	4.99	30815.645	1191.621	323.253	250.1	0.0	NO	0.998	NO	bb
10	10	200224P1-12	Standard	500.000	4.99	51751.215	1207.112	535.899	501.5	0.3	NO	0.998	NO	bb

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Compound name: PFNS
Coefficient of Determination: R^2 = 0.999766
Calibration curve: -5.28546e-005 * x^2 + 0.890419 * x + 0.13443
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	200224P1-3	Standard	0.250	5.09	36.405	3529.190	0.129			NO	1.000	NO	bbXl
2	2	200224P1-4	Standard	0.500	5.09	160.400	3347.551	0.599	0.5	4.3	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	5.09	245.029	3297.781	0.929	0.9	-10.8	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	5.09	769.437	5347.358	1.799	1.9	-6.5	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	5.09	1343.359	3504.957	4.791	5.2	4.6	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	5.09	2842.320	3579.456	9.926	11.0	10.0	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	5.09	12950.193	3726.055	43.445	48.8	-2.4	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	5.09	26279.365	3653.259	89.918	101.4	1.4	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	5.09	62420.117	3586.146	217.574	247.8	-0.9	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	5.09	117607.602	3395.956	432.896	500.9	0.2	NO	1.000	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.998601
Calibration curve: -0.000689253 * x^2 + 2.03896 * x + -0.0868417
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	200224P1-3	Standard	0.250	5.19	85.254	2933.353	0.363	0.2	-11.7	NO	0.999	NO	MM
2	2	200224P1-4	Standard	0.500	5.17	232.922	3099.126	0.939	0.5	0.7	NO	0.999	NO	MM
3	3	200224P1-5	Standard	1.000	5.17	679.519	3466.312	2.450	1.2	24.5	NO	0.999	NO	MM
4	4	200224P1-6	Standard	2.000	5.17	1552.236	5322.982	3.645	1.8	-8.4	NO	0.999	NO	MM
5	5	200224P1-7	Standard	5.000	5.17	2596.295	3417.761	9.496	4.7	-5.9	NO	0.999	NO	MM
6	6	200224P1-8	Standard	10.000	5.17	5128.110	3594.041	17.835	8.8	-11.8	NO	0.999	NO	MM
7	7	200224P1-9	Standard	50.000	5.17	27347.725	3786.723	90.275	45.0	-10.0	NO	0.999	NO	MM
8	8	200224P1-10	Standard	100.000	5.17	53822.051	3300.564	203.837	103.6	3.6	NO	0.999	NO	MM
9	9	200224P1-11	Standard	250.000	5.18	120968.305	3157.269	478.928	257.3	2.9	NO	0.999	NO	MM
10	10	200224P1-12	Standard	500.000	5.17	237422.594	3530.722	840.560	495.2	-1.0	NO	0.999	NO	MM

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 10:34:33

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999396, r^2 = 0.998791
Calibration curve: 1.25799 * x + 0.0651757
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 200224P1-3	Standard	0.250	5.32	101.806	3949.541	0.322	0.2	-18.3	NO	0.999	NO	bb
2	2 200224P1-4	Standard	0.500	5.32	205.602	3965.913	0.648	0.5	-7.3	NO	0.999	NO	bb
3	3 200224P1-5	Standard	1.000	5.33	478.187	4471.408	1.337	1.0	1.1	NO	0.999	NO	MM
4	4 200224P1-6	Standard	2.000	5.33	1557.743	7209.571	2.701	2.1	4.8	NO	0.999	NO	MM
5	5 200224P1-7	Standard	5.000	5.33	2737.281	4584.042	7.464	5.9	17.6	NO	0.999	NO	MM
6	6 200224P1-8	Standard	10.000	5.33	5241.830	4448.461	14.729	11.7	16.6	NO	0.999	NO	MM
7	7 200224P1-9	Standard	50.000	5.32	23311.633	4456.500	65.387	51.9	3.9	NO	0.999	NO	MM
8	8 200224P1-10	Standard	100.000	5.33	48661.391	4708.313	129.190	102.6	2.6	NO	0.999	NO	MM
9	9 200224P1-11	Standard	250.000	5.33	111946.063	4342.176	322.264	256.1	2.4	NO	0.999	NO	MM
10	10 200224P1-12	Standard	500.000	5.32	200421.078	4090.969	612.389	486.7	-2.7	NO	0.999	NO	MM

Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999717
Calibration curve: -0.000141737 * x^2 + 0.984121 * x + 0.107182
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 200224P1-3	Standard	0.250	5.34	438.367	17856.426	0.307	0.2	-18.8	NO	1.000	NO	bb
2	2 200224P1-4	Standard	0.500	5.34	966.633	18910.217	0.639	0.5	8.1	NO	1.000	NO	MM
3	3 200224P1-5	Standard	1.000	5.34	1595.361	20397.084	0.978	0.9	-11.5	NO	1.000	NO	bd
4	4 200224P1-6	Standard	2.000	5.34	5232.535	30308.746	2.158	2.1	4.2	NO	1.000	NO	bb
5	5 200224P1-7	Standard	5.000	5.34	8767.043	19374.834	5.656	5.6	12.9	NO	1.000	NO	bb
6	6 200224P1-8	Standard	10.000	5.34	17012.521	20582.834	10.332	10.4	4.1	NO	1.000	NO	bb
7	7 200224P1-9	Standard	50.000	5.34	80331.813	19924.607	50.397	51.5	3.0	NO	1.000	NO	bb
8	8 200224P1-10	Standard	100.000	5.34	146607.672	19004.904	96.428	99.3	-0.7	NO	1.000	NO	bb
9	9 200224P1-11	Standard	250.000	5.34	358403.625	19160.859	233.812	246.2	-1.5	NO	1.000	NO	bb
10	10 200224P1-12	Standard	500.000	5.34	687953.188	18757.855	458.443	502.0	0.4	NO	1.000	NO	bb

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.999565
Calibration curve: -0.000216684 * x^2 + 0.855752 * x + 0.256312
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	200224P1-3	Standard	0.250	5.39	46.192	3529.190	0.164			NO	1.000	NO	bbXI
2	2	200224P1-4	Standard	0.500	5.39	165.268	3347.551	0.617	0.4	-15.7	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	5.39	287.329	3297.781	1.089	1.0	-2.7	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	5.39	899.891	5347.358	2.104	2.2	8.0	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	5.38	1414.053	3504.957	5.043	5.6	12.0	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	5.38	2401.520	3579.456	8.386	9.5	-4.8	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	5.38	13155.079	3726.055	44.132	52.0	3.9	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	5.39	24683.932	3653.259	84.459	101.0	1.0	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	5.39	56269.043	3586.146	196.133	244.0	-2.4	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	5.39	102123.547	3395.956	375.901	503.0	0.6	NO	1.000	NO	bb

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.999284
Calibration curve: -0.000190975 * x^2 + 0.526751 * x + 0.00305913
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	200224P1-3	Standard	0.250	5.55	196.905	18058.627	0.136	0.3	1.2	NO	0.999	NO	bb
2	2	200224P1-4	Standard	0.500	5.55	423.988	18464.592	0.287	0.5	7.8	NO	0.999	NO	bb
3	3	200224P1-5	Standard	1.000	5.55	708.575	19899.895	0.445	0.8	-16.1	NO	0.999	NO	bb
4	4	200224P1-6	Standard	2.000	5.55	2514.621	29718.598	1.058	2.0	0.2	NO	0.999	NO	bb
5	5	200224P1-7	Standard	5.000	5.55	4192.778	19920.688	2.631	5.0	-0.0	NO	0.999	NO	bb
6	6	200224P1-8	Standard	10.000	5.55	7929.614	18046.383	5.493	10.5	4.6	NO	0.999	NO	bb
7	7	200224P1-9	Standard	50.000	5.55	37210.609	17850.395	26.057	50.4	0.8	NO	0.999	NO	bb
8	8	200224P1-10	Standard	100.000	5.55	77764.898	18359.934	52.945	104.5	4.5	NO	0.999	NO	bb
9	9	200224P1-11	Standard	250.000	5.55	178318.203	19286.211	115.574	240.3	-3.9	NO	0.999	NO	bb
10	10	200224P1-12	Standard	500.000	5.55	326725.250	18797.547	217.266	504.9	1.0	NO	0.999	NO	bb

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998442
Calibration curve: -0.00115884 * x^2 + 2.15968 * x + 0.0595807
Response type: Internal Std (Ref 85), 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	200224P1-3	Standard	0.250	5.61	48.266	950.863	0.635	0.3	6.5	NO	0.998	NO	bb
2	2	200224P1-4	Standard	0.500	5.61	69.321	863.617	1.003	0.4	-12.6	NO	0.998	NO	bb
3	3	200224P1-5	Standard	1.000	5.60	133.476	900.557	1.853	0.8	-16.9	NO	0.998	NO	bb
4	4	200224P1-6	Standard	2.000	5.61	517.467	1347.572	4.800	2.2	9.9	NO	0.998	NO	bb
5	5	200224P1-7	Standard	5.000	5.61	933.048	955.119	12.211	5.6	12.9	NO	0.998	NO	bb
6	6	200224P1-8	Standard	10.000	5.60	1659.898	898.146	23.102	10.7	7.3	NO	0.998	NO	bb
7	7	200224P1-9	Standard	50.000	5.61	6830.157	738.498	115.609	55.1	10.3	NO	0.998	NO	bb
8	8	200224P1-10	Standard	100.000	5.60	13981.378	894.849	195.304	95.3	-4.7	NO	0.998	NO	bb
9	9	200224P1-11	Standard	250.000	5.60	33967.891	927.840	457.621	243.7	-2.5	NO	0.998	NO	bb
10	10	200224P1-12	Standard	500.000	5.60	58040.945	911.575	795.888	505.7	1.1	NO	0.998	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999865
Calibration curve: -0.000456707 * x^2 + 1.13484 * x + 0.0460625
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	200224P1-3	Standard	0.250	5.62	521.350	18058.627	0.361	0.3	11.0	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	5.62	876.719	18464.592	0.594	0.5	-3.5	NO	1.000	NO	MM
3	3	200224P1-5	Standard	1.000	5.62	1788.249	19899.895	1.123	0.9	-5.0	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	5.62	5916.821	29718.598	2.489	2.2	7.7	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	5.62	9387.926	19920.688	5.891	5.2	3.2	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	5.62	17238.762	18046.383	11.941	10.5	5.3	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	5.62	77610.539	17850.395	54.348	48.8	-2.4	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	5.62	159337.266	18359.934	108.482	99.5	-0.5	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	5.62	395816.313	19286.211	256.541	251.5	0.6	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	5.62	680975.063	18797.547	452.835	499.3	-0.1	NO	1.000	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.998832
Calibration curve: -4.55015e-005 * x^2 + 1.03454 * x + 0.263969
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	200224P1-3	Standard	1.250	5.71	161.978	19135.012	1.263	1.0	-22.7	NO	0.999	NO	bb
2	2	200224P1-4	Standard	2.500	5.71	395.853	19595.973	3.014	2.7	6.3	NO	0.999	NO	bb
3	3	200224P1-5	Standard	5.000	5.71	722.048	19634.850	5.487	5.0	1.0	NO	0.999	NO	bb
4	4	200224P1-6	Standard	10.000	5.71	2248.824	30720.959	10.922	10.3	3.1	NO	0.999	NO	bb
5	5	200224P1-7	Standard	25.000	5.71	4149.454	20224.887	30.611	29.4	17.5	NO	0.999	NO	bb
6	6	200224P1-8	Standard	50.000	5.71	7890.274	19994.334	58.878	56.8	13.6	NO	0.999	NO	bb
7	7	200224P1-9	Standard	250.000	5.71	36773.094	20771.154	264.143	258.0	3.2	NO	0.999	NO	bb
8	8	200224P1-10	Standard	500.000	5.71	71312.195	20632.793	515.673	509.6	1.9	NO	0.999	NO	bb
9	9	200224P1-11	Standard	1250.000	5.71	166256.516	21211.605	1169.429	1192.7	-4.6	NO	0.999	NO	bb
10	10	200224P1-12	Standard	2500.000	5.71	303308.750	19457.396	2325.782	2529.2	1.2	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.997851
Calibration curve: -0.000311303 * x^2 + 1.17491 * x + 0.125522
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	200224P1-3	Standard	0.250	5.86	513.590	18058.627	0.356	0.2	-21.7	NO	0.998	NO	bb
2	2	200224P1-4	Standard	0.500	5.86	1030.137	18464.592	0.697	0.5	-2.6	NO	0.998	NO	bb
3	3	200224P1-5	Standard	1.000	5.86	2012.095	19899.895	1.264	1.0	-3.1	NO	0.998	NO	bb
4	4	200224P1-6	Standard	2.000	5.86	5929.686	29718.598	2.494	2.0	0.9	NO	0.998	NO	bb
5	5	200224P1-7	Standard	5.000	5.86	10240.279	19920.688	6.426	5.4	7.4	NO	0.998	NO	bb
6	6	200224P1-8	Standard	10.000	5.86	19768.611	18046.383	13.693	11.6	15.8	NO	0.998	NO	bb
7	7	200224P1-9	Standard	50.000	5.86	85143.297	17850.395	59.623	51.3	2.7	NO	0.998	NO	bb
8	8	200224P1-10	Standard	100.000	5.86	177820.734	18359.934	121.066	105.9	5.9	NO	0.998	NO	bb
9	9	200224P1-11	Standard	250.000	5.86	396292.594	19286.211	256.850	232.9	-6.9	NO	0.998	NO	bb
10	10	200224P1-12	Standard	500.000	5.86	777496.688	18797.547	517.020	508.4	1.7	NO	0.998	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.998514
Calibration curve: -2.58614e-005 * x^2 + 0.169877 * x + 0.0265444
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 200224P1-3	Standard	0.250	5.88	36.153	22775.025	0.020			NO	0.999	NO	bbXI
2	2 200224P1-4	Standard	0.500	5.88	190.130	21882.232	0.109	0.5	-3.4	NO	0.999	NO	bb
3	3 200224P1-5	Standard	1.000	5.88	305.607	21555.465	0.177	0.9	-11.3	NO	0.999	NO	bb
4	4 200224P1-6	Standard	2.000	5.88	970.758	34093.008	0.356	1.9	-3.0	NO	0.999	NO	bb
5	5 200224P1-7	Standard	5.000	5.88	1625.651	21568.131	0.942	5.4	7.9	NO	0.999	NO	bb
6	6 200224P1-8	Standard	10.000	5.88	3060.928	20898.189	1.831	10.6	6.4	NO	0.999	NO	bb
7	7 200224P1-9	Standard	50.000	5.88	14379.063	20978.863	8.568	50.7	1.3	NO	0.999	NO	bb
8	8 200224P1-10	Standard	100.000	5.88	28585.850	20056.393	17.816	106.4	6.4	NO	0.999	NO	bb
9	9 200224P1-11	Standard	250.000	5.88	65026.105	21002.322	38.702	236.2	-5.5	NO	0.999	NO	bb
10	10 200224P1-12	Standard	500.000	5.88	115268.000	18155.297	79.363	506.0	1.2	NO	0.999	NO	bb

Compound name: PFTeDA
Correlation coefficient: r = 0.999103, r^2 = 0.998207
Calibration curve: 1.02091 * x + 0.120931
Response type: Internal Std (Ref 89), 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 200224P1-3	Standard	0.250	6.07	604.736	22775.025	0.332	0.2	-17.3	NO	0.998	NO	bb
2	2 200224P1-4	Standard	0.500	6.07	969.204	21882.232	0.554	0.4	-15.2	NO	0.998	NO	bb
3	3 200224P1-5	Standard	1.000	6.07	1935.114	21555.465	1.122	1.0	-1.9	NO	0.998	NO	bb
4	4 200224P1-6	Standard	2.000	6.07	6188.311	34093.008	2.269	2.1	5.2	NO	0.998	NO	bb
5	5 200224P1-7	Standard	5.000	6.07	9936.858	21568.131	5.759	5.5	10.5	NO	0.998	NO	bb
6	6 200224P1-8	Standard	10.000	6.07	18417.316	20898.189	11.016	10.7	6.7	NO	0.998	NO	bb
7	7 200224P1-9	Standard	50.000	6.07	90214.227	20978.863	53.753	52.5	5.1	NO	0.998	NO	bb
8	8 200224P1-10	Standard	100.000	6.07	181059.703	20056.393	112.844	110.4	10.4	NO	0.998	NO	db
9	9 200224P1-11	Standard	250.000	6.07	424397.063	21002.322	252.589	247.3	-1.1	NO	0.998	NO	bb
10	10 200224P1-12	Standard	500.000	6.07	724656.063	18155.297	498.929	488.6	-2.3	NO	0.998	NO	bb

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999080
Calibration curve: -2.62185e-005 * x^2 + 0.983637 * x + -0.133463
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	200224P1-3	Standard	1.250	6.13	121.228	23126.414	0.782	0.9	-25.5	NO	0.999	NO	bb
2	2	200224P1-4	Standard	2.500	6.13	382.688	25167.715	2.269	2.4	-2.3	NO	0.999	NO	bb
3	3	200224P1-5	Standard	5.000	6.13	925.650	25694.840	5.375	5.6	12.0	NO	0.999	NO	bb
4	4	200224P1-6	Standard	10.000	6.12	2698.687	39082.672	10.302	10.6	6.1	NO	0.999	NO	bb
5	5	200224P1-7	Standard	25.000	6.12	4435.700	26045.955	25.409	26.0	3.9	NO	0.999	NO	bb
6	6	200224P1-8	Standard	50.000	6.12	8690.263	25778.506	50.297	51.3	2.7	NO	0.999	NO	bb
7	7	200224P1-9	Standard	250.000	6.12	43545.832	26176.828	248.198	254.2	1.7	NO	0.999	NO	bb
8	8	200224P1-10	Standard	500.000	6.12	83530.828	24506.379	508.553	524.5	4.9	NO	0.999	NO	bb
9	9	200224P1-11	Standard	1250.000	6.13	189442.328	24847.535	1137.529	1194.6	-4.4	NO	0.999	NO	bb
10	10	200224P1-12	Standard	2500.000	6.12	338716.094	21826.023	2315.421	2523.9	1.0	NO	0.999	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999882
Calibration curve: -0.000184036 * x^2 + 0.728837 * x + 0.122772
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	200224P1-3	Standard	0.250	6.40	618.370	28365.557	0.273	0.2	-17.8	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	6.40	1114.448	28569.834	0.488	0.5	0.1	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	6.40	2086.021	29348.578	0.888	1.1	5.1	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	6.40	5921.020	45340.902	1.632	2.1	3.6	NO	1.000	NO	bb
5	5	200224P1-7	Standard	5.000	6.40	9853.921	29770.211	4.137	5.5	10.3	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	6.40	17390.453	29268.613	7.427	10.0	0.5	NO	1.000	NO	bb
7	7	200224P1-9	Standard	50.000	6.40	85434.273	30209.182	35.351	48.9	-2.1	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	6.40	174551.234	30589.645	71.328	100.2	0.2	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	6.40	411098.969	30050.643	171.003	250.3	0.1	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	6.40	701488.188	27532.283	318.484	499.9	-0.0	NO	1.000	NO	bb

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999890
Calibration curve: -6.13069e-005 * x^2 + 0.829601 * x + 0.0231405
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	200224P1-3	Standard	0.250	6.63	521.328	28365.557	0.230	0.2	-0.4	NO	1.000	NO	bb
2	2	200224P1-4	Standard	0.500	6.63	1008.894	28569.834	0.441	0.5	0.8	NO	1.000	NO	bb
3	3	200224P1-5	Standard	1.000	6.63	2033.462	29348.578	0.866	1.0	1.6	NO	1.000	NO	bb
4	4	200224P1-6	Standard	2.000	6.63	5967.747	45340.902	1.645	2.0	-2.2	NO	1.000	NO	bd
5	5	200224P1-7	Standard	5.000	6.63	10474.771	29770.211	4.398	5.3	5.5	NO	1.000	NO	bb
6	6	200224P1-8	Standard	10.000	6.63	20744.082	29268.613	8.859	10.7	6.6	NO	1.000	NO	bd
7	7	200224P1-9	Standard	50.000	6.63	99070.070	30209.182	40.993	49.6	-0.9	NO	1.000	NO	bb
8	8	200224P1-10	Standard	100.000	6.63	203138.328	30589.645	83.009	100.8	0.8	NO	1.000	NO	bb
9	9	200224P1-11	Standard	250.000	6.63	484965.813	30050.643	201.729	247.7	-0.9	NO	1.000	NO	bb
10	10	200224P1-12	Standard	500.000	6.63	881744.750	27532.283	400.323	501.1	0.2	NO	1.000	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999899, r^2 = 0.999799
Calibration curve: 1.04207 * x + 0.106927
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	200224P1-3	Standard	1.250	6.29	176.879	18140.182	1.455	1.3	3.5	NO	1.000	NO	MM
2	2	200224P1-4	Standard	2.500	6.30	300.569	19312.184	2.322	2.1	-15.0	NO	1.000	NO	bb
3	3	200224P1-5	Standard	5.000	6.29	698.681	19214.861	5.425	5.1	2.1	NO	1.000	NO	bb
4	4	200224P1-6	Standard	10.000	6.29	2246.020	31244.594	10.725	10.2	1.9	NO	1.000	NO	bb
5	5	200224P1-7	Standard	25.000	6.29	3421.058	19091.467	26.736	25.6	2.2	NO	1.000	NO	bb
6	6	200224P1-8	Standard	50.000	6.29	6955.559	19799.531	52.414	50.2	0.4	NO	1.000	NO	bb
7	7	200224P1-9	Standard	250.000	6.29	36301.371	19704.221	274.873	263.7	5.5	NO	1.000	NO	bb
8	8	200224P1-10	Standard	500.000	6.29	69931.117	20018.727	521.198	500.1	0.0	NO	1.000	NO	bb
9	9	200224P1-11	Standard	1250.000	6.29	170159.844	19482.320	1303.122	1250.4	0.0	NO	1.000	NO	bb
10	10	200224P1-12	Standard	2500.000	6.29	321943.531	18547.436	2589.791	2485.1	-0.6	NO	1.000	NO	bb

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Compound name: N-EtFOSE
Coefficient of Determination: R^2 = 0.998207
Calibration curve: 9.1222e-006 * x^2 + 0.964862 * x + 0.221803
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	200224P1-3	Standard	1.250	6.44	161.712	21915.723	1.101	0.9	-27.1	NO	0.998	NO	MM
2	2	200224P1-4	Standard	2.500	6.44	432.368	21994.529	2.933	2.8	12.4	NO	0.998	NO	bb
3	3	200224P1-5	Standard	5.000	6.45	787.679	22203.223	5.293	5.3	5.1	NO	0.998	NO	bb
4	4	200224P1-6	Standard	10.000	6.44	2470.742	34589.184	10.658	10.8	8.1	NO	0.998	NO	bb
5	5	200224P1-7	Standard	25.000	6.44	4171.082	24121.846	25.799	26.5	6.0	NO	0.998	NO	bb
6	6	200224P1-8	Standard	50.000	6.44	7977.935	22968.217	51.824	53.5	6.9	NO	0.998	NO	bb
7	7	200224P1-9	Standard	250.000	6.44	40108.617	22913.018	261.171	269.8	7.9	NO	0.998	NO	bb
8	8	200224P1-10	Standard	500.000	6.44	77740.023	23006.582	504.152	519.7	3.9	NO	0.998	NO	bb
9	9	200224P1-11	Standard	1250.000	6.44	186605.969	24339.252	1143.898	1172.3	-6.2	NO	0.998	NO	bb
10	10	200224P1-12	Standard	2500.000	6.44	369390.094	22028.686	2501.874	2532.1	1.3	NO	0.998	NO	bb

Compound name: 13C3-PFBA-EIS
Response Factor: 671.311
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	200224P1-3	Standard	12.500	1.40	7166.275		7166.275	10.7	-14.6	NO		NO	MMX
2	2	200224P1-4	Standard	12.500	1.40	7101.446		7101.446	10.6	-15.4	NO		NO	MMX
3	3	200224P1-5	Standard	12.500	1.40	7700.430		7700.430	11.5	-8.2	NO		NO	MMX
4	4	200224P1-6	Standard	12.500	1.40	16103.117		16103.117	24.0	91.9	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	1.40	7977.686		7977.686	11.9	-4.9	NO		NO	MMX
6	6	200224P1-8	Standard	12.500	1.40	8391.387		8391.387	12.5	0.0	NO		NO	MM
7	7	200224P1-9	Standard	12.500	1.40	8240.380		8240.380	12.3	-1.8	NO		NO	MMX
8	8	200224P1-10	Standard	12.500	1.40	8345.953		8345.953	12.4	-0.5	NO		NO	MMX
9	9	200224P1-11	Standard	12.500	1.40	9219.262		9219.262	13.7	9.9	NO		NO	MMX
10	10	200224P1-12	Standard	12.500	1.40	8217.197		8217.197	12.2	-2.1	NO		NO	MMX

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Compound name: 13C3-PFBA-RSD
Response Factor: 0.776096
RRF SD: 0.0348481, Relative SD: 4.49018
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 200224P1-3	Standard	12.500	1.40	7145.209	8935.012	9.996	12.9	3.0	NO		NO	MM
2	2 200224P1-4	Standard	12.500	1.40	6878.031	9221.452	9.323	12.0	-3.9	NO		NO	MM
3	3 200224P1-5	Standard	12.500	1.40	7673.404	9836.372	9.751	12.6	0.5	NO		NO	MM
4	4 200224P1-6	Standard	12.500	1.40	16103.117	21017.055	9.577	12.3	-1.3	NO		NO	bb
5	5 200224P1-7	Standard	12.500	1.40	7742.239	10147.369	9.537	12.3	-1.7	NO		NO	MM
6	6 200224P1-8	Standard	12.500	1.40	8491.223	10119.501	10.489	13.5	8.1	NO		NO	MM
7	7 200224P1-9	Standard	12.500	1.40	7812.244	10796.234	9.045	11.7	-6.8	NO		NO	MM
8	8 200224P1-10	Standard	12.500	1.40	7659.479	10237.711	9.352	12.1	-3.6	NO		NO	MM
9	9 200224P1-11	Standard	12.500	1.40	8691.187	11165.936	9.730	12.5	0.3	NO		NO	MM
10	10 200224P1-12	Standard	12.500	1.40	8223.784	10067.188	10.211	13.2	5.3	NO		NO	MM

Compound name: 13C3-PFPeA-EIS
Response Factor: 1047.32
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 200224P1-3	Standard	12.500	2.33	11548.764		11548.764	11.0	-11.8	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	2.32	12199.752		12199.752	11.6	-6.8	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	2.33	12758.060		12758.060	12.2	-2.5	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	2.32	19789.869		19789.869	18.9	51.2	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	2.32	12660.391		12660.391	12.1	-3.3	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	2.32	13091.457		13091.457	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	2.33	13191.591		13191.591	12.6	0.8	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	2.32	12931.854		12931.854	12.3	-1.2	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	2.32	12731.405		12731.405	12.2	-2.8	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	2.32	12361.681		12361.681	11.8	-5.6	NO		NO	bbX

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Compound name: 13C3-PFPeA-RSD
Response Factor: 0.572112
RRF SD: 0.0158007, Relative SD: 2.76181
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 200224P1-3	Standard	12.500	2.33	11548.764	21189.260	6.813	11.9	-4.7	NO		NO	bb
2	2 200224P1-4	Standard	12.500	2.32	12199.752	21604.697	7.059	12.3	-1.3	NO		NO	bb
3	3 200224P1-5	Standard	12.500	2.33	12758.060	21521.652	7.410	13.0	3.6	NO		NO	bb
4	4 200224P1-6	Standard	12.500	2.32	19789.869	34103.773	7.254	12.7	1.4	NO		NO	bb
5	5 200224P1-7	Standard	12.500	2.32	12660.391	22452.619	7.048	12.3	-1.4	NO		NO	bb
6	6 200224P1-8	Standard	12.500	2.32	13091.457	22413.924	7.301	12.8	2.1	NO		NO	bb
7	7 200224P1-9	Standard	12.500	2.33	13191.591	23119.367	7.132	12.5	-0.3	NO		NO	bb
8	8 200224P1-10	Standard	12.500	2.32	12931.854	23035.342	7.017	12.3	-1.9	NO		NO	bb
9	9 200224P1-11	Standard	12.500	2.32	12731.405	22619.594	7.036	12.3	-1.6	NO		NO	bb
10	10 200224P1-12	Standard	12.500	2.32	12361.681	20756.783	7.444	13.0	4.1	NO		NO	bb

Compound name: 13C3-PFBS-EIS
Response Factor: 121.548
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 200224P1-3	Standard	12.500	2.60	1345.453		1345.453	11.1	-11.4	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	2.60	1427.682		1427.682	11.7	-6.0	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	2.60	1480.760		1480.760	12.2	-2.5	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	2.60	2303.825		2303.825	19.0	51.6	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	2.60	1485.064		1485.064	12.2	-2.3	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	2.60	1519.355		1519.355	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	2.60	1509.052		1509.052	12.4	-0.7	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	2.60	1413.523		1413.523	11.6	-7.0	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	2.60	1410.576		1410.576	11.6	-7.2	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	2.60	1322.983		1322.983	10.9	-12.9	NO		NO	bbX

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Compound name: 13C3-PFBS-RSD
Response Factor: 1.09021
RRF SD: 0.0267682, Relative SD: 2.45532
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 200224P1-3	Standard	12.500	2.60	1345.453	1270.900	13.233	12.1	-2.9	NO		NO	bb
2	2 200224P1-4	Standard	12.500	2.60	1427.682	1292.412	13.808	12.7	1.3	NO		NO	bb
3	3 200224P1-5	Standard	12.500	2.60	1480.760	1373.994	13.471	12.4	-1.1	NO		NO	bb
4	4 200224P1-6	Standard	12.500	2.60	2303.825	2157.271	13.349	12.2	-2.0	NO		NO	bb
5	5 200224P1-7	Standard	12.500	2.60	1485.064	1323.920	14.021	12.9	2.9	NO		NO	bb
6	6 200224P1-8	Standard	12.500	2.60	1519.355	1415.144	13.420	12.3	-1.5	NO		NO	bb
7	7 200224P1-9	Standard	12.500	2.60	1509.052	1406.714	13.409	12.3	-1.6	NO		NO	bb
8	8 200224P1-10	Standard	12.500	2.60	1413.523	1307.147	13.517	12.4	-0.8	NO		NO	bb
9	9 200224P1-11	Standard	12.500	2.60	1410.576	1282.198	13.752	12.6	0.9	NO		NO	bb
10	10 200224P1-12	Standard	12.500	2.60	1322.983	1156.923	14.294	13.1	4.9	NO		NO	bb

Compound name: 13C3-HFPO-DA-EIS
Response Factor: 328.216
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 200224P1-3	Standard	12.500	3.32	3986.637		3986.637	12.1	-2.8	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	3.32	4094.030		4094.030	12.5	-0.2	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	3.32	4092.465		4092.465	12.5	-0.2	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	3.32	6198.401		6198.401	18.9	51.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	3.32	4085.053		4085.053	12.4	-0.4	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	3.32	4102.695		4102.695	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	3.32	4200.757		4200.757	12.8	2.4	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	3.32	4233.007		4233.007	12.9	3.2	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	3.32	4129.927		4129.927	12.6	0.7	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	3.32	4106.303		4106.303	12.5	0.1	NO		NO	bbX

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Compound name: 13C3-HFPO-DA-RSD
Response Factor: 0.18604
RRF SD: 0.00529665, Relative SD: 2.84705
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 200224P1-3	Standard	12.500	3.32	3986.637	21189.260	2.352	12.6	1.1	NO		NO	bb
2	2 200224P1-4	Standard	12.500	3.32	4094.030	21604.697	2.369	12.7	1.9	NO		NO	bb
3	3 200224P1-5	Standard	12.500	3.32	4092.465	21521.652	2.377	12.8	2.2	NO		NO	bb
4	4 200224P1-6	Standard	12.500	3.32	6198.401	34103.773	2.272	12.2	-2.3	NO		NO	bb
5	5 200224P1-7	Standard	12.500	3.32	4085.053	22452.619	2.274	12.2	-2.2	NO		NO	bb
6	6 200224P1-8	Standard	12.500	3.32	4102.695	22413.924	2.288	12.3	-1.6	NO		NO	bb
7	7 200224P1-9	Standard	12.500	3.32	4200.757	23119.367	2.271	12.2	-2.3	NO		NO	bb
8	8 200224P1-10	Standard	12.500	3.32	4233.007	23035.342	2.297	12.3	-1.2	NO		NO	bb
9	9 200224P1-11	Standard	12.500	3.32	4129.927	22619.594	2.282	12.3	-1.9	NO		NO	bb
10	10 200224P1-12	Standard	12.500	3.32	4106.303	20756.783	2.473	13.3	6.3	NO		NO	bb

Compound name: 13C2-4:2 FTS-EIS
Response Factor: 130.722
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 200224P1-3	Standard	12.500	3.03	1548.894		1548.894	11.8	-5.2	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	3.02	1644.001		1644.001	12.6	0.6	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	3.03	1403.385		1403.385	10.7	-14.1	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	3.03	2576.340		2576.340	19.7	57.7	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	3.03	1688.734		1688.734	12.9	3.3	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	3.03	1634.026		1634.026	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	3.03	1546.006		1546.006	11.8	-5.4	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	3.02	1710.538		1710.538	13.1	4.7	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	3.02	1592.094		1592.094	12.2	-2.6	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	3.02	1448.219		1448.219	11.1	-11.4	NO		NO	bbX

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Compound name: 13C2-4:2 FTS-RSD
Response Factor: 1.20378
RRF SD: 0.0891365, Relative SD: 7.40474
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	200224P1-3	Standard	12.500	3.03	1548.894	1270.900	15.234	12.7	1.2	NO		NO	bb
2	2	200224P1-4	Standard	12.500	3.02	1644.001	1292.412	15.901	13.2	5.7	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.03	1403.385	1373.994	12.767	10.6	-15.2	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.03	2576.340	2157.271	14.928	12.4	-0.8	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.03	1688.734	1323.920	15.944	13.2	6.0	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.03	1634.026	1415.144	14.433	12.0	-4.1	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.03	1546.006	1406.714	13.738	11.4	-8.7	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.02	1710.538	1307.147	16.358	13.6	8.7	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.02	1592.094	1282.198	15.521	12.9	3.1	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.02	1448.219	1156.923	15.647	13.0	4.0	NO		NO	bb

Compound name: 13C2-PFHxA-EIS
Response Factor: 1744.84
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	200224P1-3	Standard	12.500	3.11	20131.379		20131.379	11.5	-7.7	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	3.11	20962.051		20962.051	12.0	-3.9	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	3.11	21738.801		21738.801	12.5	-0.3	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	3.11	32462.195		32462.195	18.6	48.8	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	3.11	21627.785		21627.785	12.4	-0.8	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	3.11	21810.516		21810.516	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.11	22397.953		22397.953	12.8	2.7	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	3.11	22606.160		22606.160	13.0	3.6	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	3.11	21637.717		21637.717	12.4	-0.8	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	3.11	20616.865		20616.865	11.8	-5.5	NO		NO	bbX

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Compound name: 13C2-PFHxA-RSD
Response Factor: 0.971864
RRF SD: 0.0188701, Relative SD: 1.94164
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	200224P1-3	Standard	12.500	3.11	20131.379	21189.260	11.876	12.2	-2.2	NO		NO	bb
2	2	200224P1-4	Standard	12.500	3.11	20962.051	21604.697	12.128	12.5	-0.2	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.11	21738.801	21521.652	12.626	13.0	3.9	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.11	32462.195	34103.773	11.898	12.2	-2.1	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.11	21627.785	22452.619	12.041	12.4	-0.9	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.11	21810.516	22413.924	12.163	12.5	0.1	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.11	22397.953	23119.367	12.110	12.5	-0.3	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.11	22606.160	23035.342	12.267	12.6	1.0	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.11	21637.717	22619.594	11.957	12.3	-1.6	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.11	20616.865	20756.783	12.416	12.8	2.2	NO		NO	bb

Compound name: 13C4-PFHpA-EIS
Response Factor: 1063.34
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	200224P1-3	Standard	12.500	3.71	12856.865		12856.865	12.1	-3.3	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	3.71	12574.997		12574.997	11.8	-5.4	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	3.71	13914.661		13914.661	13.1	4.7	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	3.71	21060.346		21060.346	19.8	58.4	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	3.71	13978.898		13978.898	13.1	5.2	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	3.71	13291.691		13291.691	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.71	13383.134		13383.134	12.6	0.7	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	3.71	13914.952		13914.952	13.1	4.7	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	3.71	13376.500		13376.500	12.6	0.6	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	3.71	12232.721		12232.721	11.5	-8.0	NO		NO	bbX

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Compound name: 13C4-PFHpA-RSD
Response Factor: 0.603214
RRF SD: 0.0209471, Relative SD: 3.47258
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	200224P1-3	Standard	12.500	3.71	12856.865	21189.260	7.585	12.6	0.6	NO		NO	bb
2	2	200224P1-4	Standard	12.500	3.71	12574.997	21604.697	7.276	12.1	-3.5	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.71	13914.661	21521.652	8.082	13.4	7.2	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.71	21060.346	34103.773	7.719	12.8	2.4	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.71	13978.898	22452.619	7.782	12.9	3.2	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.71	13291.691	22413.924	7.413	12.3	-1.7	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.71	13383.134	23119.367	7.236	12.0	-4.0	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.71	13914.952	23035.342	7.551	12.5	0.1	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.71	13376.500	22619.594	7.392	12.3	-2.0	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.71	12232.721	20756.783	7.367	12.2	-2.3	NO		NO	bb

Compound name: 13C3-PFHxS-EIS
Response Factor: 253.005
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	200224P1-3	Standard	12.500	3.85	2744.309		2744.309	10.8	-13.2	NO		NO	bdX
2	2	200224P1-4	Standard	12.500	3.84	3061.979		3061.979	12.1	-3.2	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	3.85	3248.573		3248.573	12.8	2.7	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	3.85	5075.390		5075.390	20.1	60.5	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	3.85	3237.224		3237.224	12.8	2.4	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	3.84	3162.559		3162.559	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.85	2962.812		2962.812	11.7	-6.3	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	3.84	3148.994		3148.994	12.4	-0.4	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	3.85	2943.699		2943.699	11.6	-6.9	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	3.85	2900.742		2900.742	11.5	-8.3	NO		NO	bbX

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Compound name: 13C3-PFHxS-RSD
Response Factor: 2.32439
RRF SD: 0.126187, Relative SD: 5.42883
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	200224P1-3	Standard	12.500	3.85	2744.309	1270.900	26.992	11.6	-7.1	NO		NO	bd
2	2	200224P1-4	Standard	12.500	3.84	3061.979	1292.412	29.615	12.7	1.9	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.85	3248.573	1373.994	29.554	12.7	1.7	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.85	5075.390	2157.271	29.409	12.7	1.2	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.85	3237.224	1323.920	30.565	13.1	5.2	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.84	3162.559	1415.144	27.935	12.0	-3.9	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.85	2962.812	1406.714	26.327	11.3	-9.4	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.84	3148.994	1307.147	30.113	13.0	3.6	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.85	2943.699	1282.198	28.698	12.3	-1.2	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.85	2900.742	1156.923	31.341	13.5	7.9	NO		NO	bb

Compound name: 13C2-6:2 FTS-EIS
Response Factor: 110.319
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	200224P1-3	Standard	12.500	4.16	1435.118		1435.118	13.0	4.1	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	4.16	1344.487		1344.487	12.2	-2.5	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	4.16	1425.165		1425.165	12.9	3.3	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	4.16	1993.174		1993.174	18.1	44.5	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	4.16	1458.684		1458.684	13.2	5.8	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	4.16	1378.990		1378.990	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	4.16	1385.509		1385.509	12.6	0.5	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	4.16	1508.383		1508.383	13.7	9.4	NO		NO	bdX
9	9	200224P1-11	Standard	12.500	4.16	1411.550		1411.550	12.8	2.4	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	4.16	1442.129		1442.129	13.1	4.6	NO		NO	bbX

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Compound name: 13C2-6:2 FTS-RSD
Response Factor: 0.384732
RRF SD: 0.0285461, Relative SD: 7.41974
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 200224P1-3	Standard	12.500	4.16	1435.118	3509.510	5.112	13.3	6.3	NO		NO	bb
2	2 200224P1-4	Standard	12.500	4.16	1344.487	3429.658	4.900	12.7	1.9	NO		NO	bb
3	3 200224P1-5	Standard	12.500	4.16	1425.165	3562.231	5.001	13.0	4.0	NO		NO	bb
4	4 200224P1-6	Standard	12.500	4.16	1993.174	5661.441	4.401	11.4	-8.5	NO		NO	bb
5	5 200224P1-7	Standard	12.500	4.16	1458.684	3847.620	4.739	12.3	-1.5	NO		NO	bb
6	6 200224P1-8	Standard	12.500	4.16	1378.990	3752.839	4.593	11.9	-4.5	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.16	1385.509	4162.643	4.161	10.8	-13.5	NO		NO	bb
8	8 200224P1-10	Standard	12.500	4.16	1492.042	3706.318	5.032	13.1	4.6	NO		NO	MM
9	9 200224P1-11	Standard	12.500	4.16	1411.550	3692.311	4.779	12.4	-0.6	NO		NO	bb
10	10 200224P1-12	Standard	12.500	4.16	1442.129	3354.045	5.375	14.0	11.8	NO		NO	bb

Compound name: 13C5-PFNA-EIS
Response Factor: 1278.38
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 200224P1-3	Standard	12.500	4.65	13882.507		13882.507	10.9	-13.1	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	4.65	15185.840		15185.840	11.9	-5.0	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	4.65	15326.798		15326.798	12.0	-4.1	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	4.65	23821.994		23821.994	18.6	49.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	4.65	15892.408		15892.408	12.4	-0.5	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	4.65	15979.745		15979.745	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.65	16359.094		16359.094	12.8	2.4	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	4.65	16798.279		16798.279	13.1	5.1	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	4.65	15900.648		15900.648	12.4	-0.5	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	4.65	14688.693		14688.693	11.5	-8.1	NO		NO	bbX

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Compound name: 13C5-PFNA-RSD
Response Factor: 0.932918
RRF SD: 0.0447402, Relative SD: 4.79573
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 200224P1-3	Standard	12.500	4.65	13882.507	13653.749	12.709	13.6	9.0	NO		NO	bb
2	2 200224P1-4	Standard	12.500	4.65	15185.840	17194.314	11.040	11.8	-5.3	NO		NO	bb
3	3 200224P1-5	Standard	12.500	4.65	15326.798	16303.628	11.751	12.6	0.8	NO		NO	bb
4	4 200224P1-6	Standard	12.500	4.65	23821.994	27074.707	10.998	11.8	-5.7	NO		NO	bb
5	5 200224P1-7	Standard	12.500	4.65	15892.408	18110.285	10.969	11.8	-5.9	NO		NO	bb
6	6 200224P1-8	Standard	12.500	4.65	15979.745	17380.516	11.493	12.3	-1.4	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.65	16359.094	16979.621	12.043	12.9	3.3	NO		NO	bb
8	8 200224P1-10	Standard	12.500	4.65	16798.279	17745.928	11.832	12.7	1.5	NO		NO	bb
9	9 200224P1-11	Standard	12.500	4.65	15900.648	16415.125	12.108	13.0	3.8	NO		NO	bb
10	10 200224P1-12	Standard	12.500	4.65	14688.693	15732.798	11.670	12.5	0.1	NO		NO	bb

Compound name: 13C8-PFOSA-EIS
Response Factor: 384.261
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 200224P1-3	Standard	12.500	4.71	4298.058		4298.058	11.2	-10.5	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	4.71	3955.620		3955.620	10.3	-17.6	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	4.71	4772.500		4772.500	12.4	-0.6	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	4.71	7342.294		7342.294	19.1	52.9	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	4.71	4527.179		4527.179	11.8	-5.7	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	4.71	4803.264		4803.264	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.71	4828.938		4828.938	12.6	0.5	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	4.71	4631.820		4631.820	12.1	-3.6	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	4.71	4309.161		4309.161	11.2	-10.3	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	4.71	3860.943		3860.943	10.0	-19.6	NO		NO	bbX

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Compound name: 13C8-PFOSA-RSD
Response Factor: 0.233413
RRF SD: 0.0127285, Relative SD: 5.45321
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	200224P1-3	Standard	12.500	4.71	4298.058	18190.213	2.954	12.7	1.2	NO		NO	bb
2	2	200224P1-4	Standard	12.500	4.71	3955.620	18450.373	2.680	11.5	-8.1	NO		NO	bb
3	3	200224P1-5	Standard	12.500	4.71	4772.500	19805.885	3.012	12.9	3.2	NO		NO	bb
4	4	200224P1-6	Standard	12.500	4.71	7342.294	28715.367	3.196	13.7	9.5	NO		NO	bb
5	5	200224P1-7	Standard	12.500	4.71	4527.179	20646.703	2.741	11.7	-6.1	NO		NO	bb
6	6	200224P1-8	Standard	12.500	4.71	4803.264	21012.029	2.857	12.2	-2.1	NO		NO	bb
7	7	200224P1-9	Standard	12.500	4.71	4828.938	19399.559	3.111	13.3	6.6	NO		NO	bb
8	8	200224P1-10	Standard	12.500	4.71	4631.820	20002.818	2.894	12.4	-0.8	NO		NO	bb
9	9	200224P1-11	Standard	12.500	4.71	4309.161	18473.898	2.916	12.5	-0.1	NO		NO	bb
10	10	200224P1-12	Standard	12.500	4.71	3860.943	17144.887	2.815	12.1	-3.5	NO		NO	bb

Compound name: 13C2-PFOA-EIS
Response Factor: 1468.72
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	200224P1-3	Standard	12.500	4.22	16852.594		16852.594	11.5	-8.2	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	4.21	17452.742		17452.742	11.9	-4.9	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	4.22	17850.266		17850.266	12.2	-2.8	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	4.22	28194.887		28194.887	19.2	53.6	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	4.21	19195.934		19195.934	13.1	4.6	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	4.21	18359.018		18359.018	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	4.21	17850.746		17850.746	12.2	-2.8	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	4.21	18652.064		18652.064	12.7	1.6	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	4.22	17649.271		17649.271	12.0	-3.9	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	4.21	15817.853		15817.853	10.8	-13.8	NO		NO	bbX

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Compound name: 13C2-PFOA-RSD
Response Factor: 0.898083
RRF SD: 0.0420929, Relative SD: 4.68697
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 200224P1-3	Standard	12.500	4.22	16852.594	19654.105	10.718	11.9	-4.5	NO		NO	bb
2	2 200224P1-4	Standard	12.500	4.21	17452.742	19976.805	10.921	12.2	-2.7	NO		NO	bb
3	3 200224P1-5	Standard	12.500	4.22	17850.266	18892.756	11.810	13.2	5.2	NO		NO	bb
4	4 200224P1-6	Standard	12.500	4.22	28194.887	32857.477	10.726	11.9	-4.5	NO		NO	bb
5	5 200224P1-7	Standard	12.500	4.21	19195.934	20307.451	11.816	13.2	5.3	NO		NO	bb
6	6 200224P1-8	Standard	12.500	4.21	18359.018	21982.541	10.440	11.6	-7.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.21	17850.746	19949.277	11.185	12.5	-0.4	NO		NO	bb
8	8 200224P1-10	Standard	12.500	4.21	18652.064	20066.098	11.619	12.9	3.5	NO		NO	bb
9	9 200224P1-11	Standard	12.500	4.22	17649.271	18578.346	11.875	13.2	5.8	NO		NO	bb
10	10 200224P1-12	Standard	12.500	4.21	15817.853	17732.145	11.151	12.4	-0.7	NO		NO	bb

Compound name: 13C8-PFOS-EIS
Response Factor: 286.356
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 200224P1-3	Standard	12.500	4.74	3529.190		3529.190	12.3	-1.4	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	4.74	3347.551		3347.551	11.7	-6.5	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	4.74	3297.781		3297.781	11.5	-7.9	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	4.74	5347.358		5347.358	18.7	49.4	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	4.74	3504.957		3504.957	12.2	-2.1	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	4.74	3579.456		3579.456	12.5	0.0	NO		NO	bd
7	7 200224P1-9	Standard	12.500	4.73	3726.055		3726.055	13.0	4.1	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	4.74	3653.259		3653.259	12.8	2.1	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	4.74	3586.146		3586.146	12.5	0.2	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	4.74	3395.956		3395.956	11.9	-5.1	NO		NO	bbX

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Compound name: 13C8-PFOS-RSD
Response Factor: 0.958124
RRF SD: 0.0393155, Relative SD: 4.10338
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	200224P1-3	Standard	12.500	4.74	3529.190	3509.510	12.570	13.1	5.0	NO		NO	bb
2	2	200224P1-4	Standard	12.500	4.74	3347.551	3429.658	12.201	12.7	1.9	NO		NO	bb
3	3	200224P1-5	Standard	12.500	4.74	3297.781	3562.231	11.572	12.1	-3.4	NO		NO	bb
4	4	200224P1-6	Standard	12.500	4.74	5347.358	5661.441	11.807	12.3	-1.4	NO		NO	bb
5	5	200224P1-7	Standard	12.500	4.74	3504.957	3847.620	11.387	11.9	-4.9	NO		NO	bb
6	6	200224P1-8	Standard	12.500	4.74	3579.456	3752.839	11.922	12.4	-0.5	NO		NO	bd
7	7	200224P1-9	Standard	12.500	4.73	3726.055	4162.643	11.189	11.7	-6.6	NO		NO	bb
8	8	200224P1-10	Standard	12.500	4.74	3653.259	3706.318	12.321	12.9	2.9	NO		NO	bb
9	9	200224P1-11	Standard	12.500	4.74	3586.146	3692.311	12.141	12.7	1.4	NO		NO	bb
10	10	200224P1-12	Standard	12.500	4.74	3395.956	3354.045	12.656	13.2	5.7	NO		NO	bb

Compound name: 13C2-PFDA-EIS
Response Factor: 1461.56
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	200224P1-3	Standard	12.500	5.03	16004.663		16004.663	11.0	-12.4	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	5.02	16320.475		16320.475	11.2	-10.7	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	5.02	16595.439		16595.439	11.4	-9.2	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	5.02	27533.326		27533.326	18.8	50.7	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	5.02	18359.920		18359.920	12.6	0.5	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	5.02	18269.482		18269.482	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	5.02	18571.713		18571.713	12.7	1.7	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	5.02	17073.396		17073.396	11.7	-6.5	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	5.03	18370.953		18370.953	12.6	0.6	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	5.02	16546.582		16546.582	11.3	-9.4	NO		NO	bbX

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Compound name: 13C2-PFDA-RSD
Response Factor: 0.942489
RRF SD: 0.0427535, Relative SD: 4.53623
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 200224P1-3	Standard	12.500	5.03	16004.663	17921.613	11.163	11.8	-5.2	NO		NO	bb
2	2 200224P1-4	Standard	12.500	5.02	16320.475	17712.084	11.518	12.2	-2.2	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.02	16595.439	18688.416	11.100	11.8	-5.8	NO		NO	bb
4	4 200224P1-6	Standard	12.500	5.02	27533.326	29576.410	11.637	12.3	-1.2	NO		NO	bb
5	5 200224P1-7	Standard	12.500	5.02	18359.920	19426.924	11.813	12.5	0.3	NO		NO	bb
6	6 200224P1-8	Standard	12.500	5.02	18269.482	19466.090	11.732	12.4	-0.4	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.02	18571.713	19774.150	11.740	12.5	-0.3	NO		NO	bb
8	8 200224P1-10	Standard	12.500	5.02	17073.396	18159.451	11.752	12.5	-0.2	NO		NO	bb
9	9 200224P1-11	Standard	12.500	5.03	18370.953	17974.496	12.776	13.6	8.4	NO		NO	bb
10	10 200224P1-12	Standard	12.500	5.02	16546.582	16440.645	12.581	13.3	6.8	NO		NO	bb

Compound name: 13C2-8:2 FTS-EIS
Response Factor: 94.6497
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 200224P1-3	Standard	12.500	4.99	1136.127		1136.127	12.0	-4.0	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	4.99	1127.481		1127.481	11.9	-4.7	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	5.00	1173.557		1173.557	12.4	-0.8	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	4.99	1622.534		1622.534	17.1	37.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	4.99	1252.813		1252.813	13.2	5.9	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	4.99	1183.121		1183.121	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.99	963.784		963.784	10.2	-18.5	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	4.99	1198.283		1198.283	12.7	1.3	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	4.99	1191.621		1191.621	12.6	0.7	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	4.99	1207.112		1207.112	12.8	2.0	NO		NO	bbX

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Compound name: 13C2-8:2 FTS-RSD
Response Factor: 0.314685
RRF SD: 0.0341626, Relative SD: 10.8561
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 200224P1-3	Standard	12.500	4.99	1136.127	3509.510	4.047	12.9	2.9	NO		NO	bb
2	2 200224P1-4	Standard	12.500	4.99	1127.481	3429.658	4.109	13.1	4.5	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.00	1173.557	3562.231	4.118	13.1	4.7	NO		NO	bb
4	4 200224P1-6	Standard	12.500	4.99	1622.534	5661.441	3.582	11.4	-8.9	NO		NO	bb
5	5 200224P1-7	Standard	12.500	4.99	1252.813	3847.620	4.070	12.9	3.5	NO		NO	bb
6	6 200224P1-8	Standard	12.500	4.99	1183.121	3752.839	3.941	12.5	0.2	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.99	963.784	4162.643	2.894	9.2	-26.4	NO		NO	bb
8	8 200224P1-10	Standard	12.500	4.99	1198.283	3706.318	4.041	12.8	2.7	NO		NO	bb
9	9 200224P1-11	Standard	12.500	4.99	1191.621	3692.311	4.034	12.8	2.6	NO		NO	bb
10	10 200224P1-12	Standard	12.500	4.99	1207.112	3354.045	4.499	14.3	14.4	NO		NO	bb

Compound name: d3-N-MeFOSAA-EIS
Response Factor: 287.523
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 200224P1-3	Standard	12.500	5.17	2933.353		2933.353	10.2	-18.4	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	5.17	3099.126		3099.126	10.8	-13.8	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	5.17	3466.312		3466.312	12.1	-3.6	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	5.17	5322.982		5322.982	18.5	48.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	5.17	3417.761		3417.761	11.9	-4.9	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	5.17	3594.041		3594.041	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.17	3786.723		3786.723	13.2	5.4	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	5.17	3300.564		3300.564	11.5	-8.2	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	5.17	3157.269		3157.269	11.0	-12.2	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	5.17	3530.722		3530.722	12.3	-1.8	NO		NO	bbX

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Compound name: d3-N-MeFOSAA-RSD
Response Factor: 0.176324
RRF SD: 0.0145866, Relative SD: 8.27264
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 200224P1-3	Standard	12.500	5.17	2933.353	18190.213	2.016	11.4	-8.5	NO		NO	bb
2	2 200224P1-4	Standard	12.500	5.17	3099.126	18450.373	2.100	11.9	-4.7	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.17	3466.312	19805.885	2.188	12.4	-0.7	NO		NO	bb
4	4 200224P1-6	Standard	12.500	5.17	5322.982	28715.367	2.317	13.1	5.1	NO		NO	bb
5	5 200224P1-7	Standard	12.500	5.17	3417.761	20646.703	2.069	11.7	-6.1	NO		NO	bb
6	6 200224P1-8	Standard	12.500	5.17	3594.041	21012.029	2.138	12.1	-3.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.17	3786.723	19399.559	2.440	13.8	10.7	NO		NO	bb
8	8 200224P1-10	Standard	12.500	5.17	3300.564	20002.818	2.063	11.7	-6.4	NO		NO	bb
9	9 200224P1-11	Standard	12.500	5.17	3157.269	18473.898	2.136	12.1	-3.1	NO		NO	bb
10	10 200224P1-12	Standard	12.500	5.17	3530.722	17144.887	2.574	14.6	16.8	NO		NO	bb

Compound name: 13C2-PFUdA-EIS
Response Factor: 1646.63
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 200224P1-3	Standard	12.500	5.34	17856.426		17856.426	10.8	-13.2	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	5.34	18910.217		18910.217	11.5	-8.1	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	5.34	20397.084		20397.084	12.4	-0.9	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	5.34	30308.746		30308.746	18.4	47.3	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	5.34	19374.834		19374.834	11.8	-5.9	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	5.34	20582.834		20582.834	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.34	19924.607		19924.607	12.1	-3.2	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	5.34	19004.904		19004.904	11.5	-7.7	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	5.34	19160.859		19160.859	11.6	-6.9	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	5.34	18757.855		18757.855	11.4	-8.9	NO		NO	bbX

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Compound name: 13C2-PFUdA-RSD
Response Factor: 1.01183
RRF SD: 0.048528, Relative SD: 4.79606
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 200224P1-3	Standard	12.500	5.34	17856.426	18190.213	12.271	12.1	-3.0	NO		NO	bb
2	2 200224P1-4	Standard	12.500	5.34	18910.217	18450.373	12.812	12.7	1.3	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.34	20397.084	19805.885	12.873	12.7	1.8	NO		NO	bb
4	4 200224P1-6	Standard	12.500	5.34	30308.746	28715.367	13.194	13.0	4.3	NO		NO	bb
5	5 200224P1-7	Standard	12.500	5.34	19374.834	20646.703	11.730	11.6	-7.3	NO		NO	bb
6	6 200224P1-8	Standard	12.500	5.34	20582.834	21012.029	12.245	12.1	-3.2	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.34	19924.607	19399.559	12.838	12.7	1.5	NO		NO	bb
8	8 200224P1-10	Standard	12.500	5.34	19004.904	20002.818	11.876	11.7	-6.1	NO		NO	bb
9	9 200224P1-11	Standard	12.500	5.34	19160.859	18473.898	12.965	12.8	2.5	NO		NO	bb
10	10 200224P1-12	Standard	12.500	5.34	18757.855	17144.887	13.676	13.5	8.1	NO		NO	bb

Compound name: d5-N-EtFOSAA-EIS
Response Factor: 355.877
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 200224P1-3	Standard	12.500	5.32	3949.541		3949.541	11.1	-11.2	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	5.33	3965.913		3965.913	11.1	-10.8	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	5.33	4471.408		4471.408	12.6	0.5	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	5.32	7209.571		7209.571	20.3	62.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	5.32	4584.042		4584.042	12.9	3.0	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	5.32	4448.461		4448.461	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.32	4456.500		4456.500	12.5	0.2	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	5.32	4708.313		4708.313	13.2	5.8	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	5.32	4342.176		4342.176	12.2	-2.4	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	5.32	4090.969		4090.969	11.5	-8.0	NO		NO	bbX

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Compound name: d5-N-EtFOSAA-RSD
Response Factor: 0.22814
RRF SD: 0.012231, Relative SD: 5.3612
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 200224P1-3	Standard	12.500	5.32	3949.541	18190.213	2.714	11.9	-4.8	NO		NO	bb
2	2 200224P1-4	Standard	12.500	5.33	3965.913	18450.373	2.687	11.8	-5.8	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.33	4471.408	19805.885	2.822	12.4	-1.0	NO		NO	bb
4	4 200224P1-6	Standard	12.500	5.32	7209.571	28715.367	3.138	13.8	10.1	NO		NO	bb
5	5 200224P1-7	Standard	12.500	5.32	4584.042	20646.703	2.775	12.2	-2.7	NO		NO	bb
6	6 200224P1-8	Standard	12.500	5.32	4448.461	21012.029	2.646	11.6	-7.2	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.32	4456.500	19399.559	2.872	12.6	0.7	NO		NO	bb
8	8 200224P1-10	Standard	12.500	5.32	4708.313	20002.818	2.942	12.9	3.2	NO		NO	bb
9	9 200224P1-11	Standard	12.500	5.32	4342.176	18473.898	2.938	12.9	3.0	NO		NO	bb
10	10 200224P1-12	Standard	12.500	5.32	4090.969	17144.887	2.983	13.1	4.6	NO		NO	bb

Compound name: 13C2-PFDoA-EIS
Response Factor: 1443.71
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 200224P1-3	Standard	12.500	5.62	18058.627		18058.627	12.5	0.1	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	5.62	18464.592		18464.592	12.8	2.3	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	5.62	19899.895		19899.895	13.8	10.3	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	5.62	29718.598		29718.598	20.6	64.7	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	5.62	19920.688		19920.688	13.8	10.4	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	5.62	18046.383		18046.383	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.62	17850.395		17850.395	12.4	-1.1	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	5.62	18359.934		18359.934	12.7	1.7	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	5.62	19286.211		19286.211	13.4	6.9	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	5.62	18797.547		18797.547	13.0	4.2	NO		NO	bbX

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Compound name: 13C2-PFDoA-RSD
Response Factor: 1.02023
RRF SD: 0.0694612, Relative SD: 6.80836
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	200224P1-3	Standard	12.500	5.62	18058.627	17921.613	12.596	12.3	-1.2	NO		NO	bb
2	2	200224P1-4	Standard	12.500	5.62	18464.592	17712.084	13.031	12.8	2.2	NO		NO	bb
3	3	200224P1-5	Standard	12.500	5.62	19899.895	18688.416	13.310	13.0	4.4	NO		NO	bb
4	4	200224P1-6	Standard	12.500	5.62	29718.598	29576.410	12.560	12.3	-1.5	NO		NO	bb
5	5	200224P1-7	Standard	12.500	5.62	19920.688	19426.924	12.818	12.6	0.5	NO		NO	bb
6	6	200224P1-8	Standard	12.500	5.62	18046.383	19466.090	11.588	11.4	-9.1	NO		NO	bb
7	7	200224P1-9	Standard	12.500	5.62	17850.395	19774.150	11.284	11.1	-11.5	NO		NO	bb
8	8	200224P1-10	Standard	12.500	5.62	18359.934	18159.451	12.638	12.4	-0.9	NO		NO	bb
9	9	200224P1-11	Standard	12.500	5.62	19286.211	17974.496	13.412	13.1	5.2	NO		NO	bb
10	10	200224P1-12	Standard	12.500	5.62	18797.547	16440.645	14.292	14.0	12.1	NO		NO	bb

Compound name: 13C2-10:2 FTS-EIS
Response Factor: 71.8517
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	200224P1-3	Standard	12.500	5.60	950.863		950.863	13.2	5.9	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	5.60	863.617		863.617	12.0	-3.8	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	5.60	900.557		900.557	12.5	0.3	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	5.60	1347.572		1347.572	18.8	50.0	YES		NO	bbX
5	5	200224P1-7	Standard	12.500	5.60	955.119		955.119	13.3	6.3	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	5.60	898.146		898.146	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	5.60	738.498		738.498	10.3	-17.8	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	5.60	894.849		894.849	12.5	-0.4	NO		NO	MMX
9	9	200224P1-11	Standard	12.500	5.60	927.840		927.840	12.9	3.3	NO		NO	MMX
10	10	200224P1-12	Standard	12.500	5.60	911.575		911.575	12.7	1.5	NO		NO	MMX

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Compound name: 13C2-10:2 FTS-RSD
Response Factor: 0.244483
RRF SD: 0.026344, Relative SD: 10.7754
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 200224P1-3	Standard	12.500	5.60	950.863	3509.510	3.387	13.9	10.8	NO		NO	bb
2	2 200224P1-4	Standard	12.500	5.60	863.617	3429.658	3.148	12.9	3.0	NO		NO	bb
3	3 200224P1-5	Standard	12.500	5.60	900.557	3562.231	3.160	12.9	3.4	NO		NO	bb
4	4 200224P1-6	Standard	12.500	5.60	1347.572	5661.441	2.975	12.2	-2.6	NO		NO	bb
5	5 200224P1-7	Standard	12.500	5.60	955.119	3847.620	3.103	12.7	1.5	NO		NO	bb
6	6 200224P1-8	Standard	12.500	5.60	898.146	3752.839	2.992	12.2	-2.1	NO		NO	bb
7	7 200224P1-9	Standard	12.500	5.60	738.498	4162.643	2.218	9.1	-27.4	NO		NO	bb
8	8 200224P1-10	Standard	12.500	5.60	898.089	3706.318	3.029	12.4	-0.9	NO		NO	MM
9	9 200224P1-11	Standard	12.500	5.60	928.146	3692.311	3.142	12.9	2.8	NO		NO	MM
10	10 200224P1-12	Standard	12.500	5.60	914.276	3354.045	3.407	13.9	11.5	NO		NO	MM

Compound name: d3-N-MeFOSA-EIS
Response Factor: 134.01
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 200224P1-3	Standard	149.200	5.74	19135.012		19135.012	142.8	-4.3	NO		NO	bbX
2	2 200224P1-4	Standard	149.200	5.74	19595.973		19595.973	146.2	-2.0	NO		NO	bbX
3	3 200224P1-5	Standard	149.200	5.74	19634.850		19634.850	146.5	-1.8	NO		NO	bbX
4	4 200224P1-6	Standard	149.200	5.74	30720.959		30720.959	229.2	53.6	NO		NO	bbX
5	5 200224P1-7	Standard	149.200	5.74	20224.887		20224.887	150.9	1.2	NO		NO	bbX
6	6 200224P1-8	Standard	149.200	5.74	19994.334		19994.334	149.2	0.0	NO		NO	bb
7	7 200224P1-9	Standard	149.200	5.74	20771.154		20771.154	155.0	3.9	NO		NO	bbX
8	8 200224P1-10	Standard	149.200	5.74	20632.793		20632.793	154.0	3.2	NO		NO	bbX
9	9 200224P1-11	Standard	149.200	5.74	21211.605		21211.605	158.3	6.1	NO		NO	bbX
10	10 200224P1-12	Standard	149.200	5.74	19457.396		19457.396	145.2	-2.7	NO		NO	bbX

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Compound name: d3-N-MeFOSA-RSD
Response Factor: 0.0878992
RRF SD: 0.00531652, Relative SD: 6.04842
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 200224P1-3	Standard	149.200	5.74	19135.012	18190.213	13.149	149.6	0.3	NO		NO	bb
2	2 200224P1-4	Standard	149.200	5.74	19595.973	18450.373	13.276	151.0	1.2	NO		NO	bb
3	3 200224P1-5	Standard	149.200	5.74	19634.850	19805.885	12.392	141.0	-5.5	NO		NO	bb
4	4 200224P1-6	Standard	149.200	5.74	30720.959	28715.367	13.373	152.1	2.0	NO		NO	bb
5	5 200224P1-7	Standard	149.200	5.74	20224.887	20646.703	12.245	139.3	-6.6	NO		NO	bb
6	6 200224P1-8	Standard	149.200	5.74	19994.334	21012.029	11.895	135.3	-9.3	NO		NO	bb
7	7 200224P1-9	Standard	149.200	5.74	20771.154	19399.559	13.384	152.3	2.1	NO		NO	bb
8	8 200224P1-10	Standard	149.200	5.74	20632.793	20002.818	12.894	146.7	-1.7	NO		NO	bb
9	9 200224P1-11	Standard	149.200	5.74	21211.605	18473.898	14.352	163.3	9.4	NO		NO	bb
10	10 200224P1-12	Standard	149.200	5.74	19457.396	17144.887	14.186	161.4	8.2	NO		NO	bb

Compound name: 13C2-PFTeDA-EIS
Response Factor: 1671.86
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 200224P1-3	Standard	12.500	6.07	22775.025		22775.025	13.6	9.0	NO		NO	bbX
2	2 200224P1-4	Standard	12.500	6.07	21882.232		21882.232	13.1	4.7	NO		NO	bbX
3	3 200224P1-5	Standard	12.500	6.07	21555.465		21555.465	12.9	3.1	NO		NO	bbX
4	4 200224P1-6	Standard	12.500	6.07	34093.008		34093.008	20.4	63.1	NO		NO	bbX
5	5 200224P1-7	Standard	12.500	6.07	21568.131		21568.131	12.9	3.2	NO		NO	bbX
6	6 200224P1-8	Standard	12.500	6.07	20898.189		20898.189	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	6.07	20978.863		20978.863	12.5	0.4	NO		NO	bbX
8	8 200224P1-10	Standard	12.500	6.07	20056.393		20056.393	12.0	-4.0	NO		NO	bbX
9	9 200224P1-11	Standard	12.500	6.07	21002.322		21002.322	12.6	0.5	NO		NO	bbX
10	10 200224P1-12	Standard	12.500	6.07	18155.297		18155.297	10.9	-13.1	NO		NO	bbX

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Compound name: 13C2-PFTeDA-RSD
Response Factor: 1.10328
RRF SD: 0.0851159, Relative SD: 7.71484
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 200224P1-3	Standard	12.500	6.07	22775.025	18190.213	15.651	14.2	13.5	NO		NO	bb
2	2 200224P1-4	Standard	12.500	6.07	21882.232	18450.373	14.825	13.4	7.5	NO		NO	bb
3	3 200224P1-5	Standard	12.500	6.07	21555.465	19805.885	13.604	12.3	-1.4	NO		NO	bb
4	4 200224P1-6	Standard	12.500	6.07	34093.008	28715.367	14.841	13.5	7.6	NO		NO	bb
5	5 200224P1-7	Standard	12.500	6.07	21568.131	20646.703	13.058	11.8	-5.3	NO		NO	bb
6	6 200224P1-8	Standard	12.500	6.07	20898.189	21012.029	12.432	11.3	-9.9	NO		NO	bb
7	7 200224P1-9	Standard	12.500	6.07	20978.863	19399.559	13.518	12.3	-2.0	NO		NO	bb
8	8 200224P1-10	Standard	12.500	6.07	20056.393	20002.818	12.533	11.4	-9.1	NO		NO	bb
9	9 200224P1-11	Standard	12.500	6.07	21002.322	18473.898	14.211	12.9	3.0	NO		NO	bb
10	10 200224P1-12	Standard	12.500	6.07	18155.297	17144.887	13.237	12.0	-4.0	NO		NO	bb

Compound name: d5-N-ETFOSA-EIS
Response Factor: 172.778
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 200224P1-3	Standard	149.200	6.14	23126.414		23126.414	133.9	-10.3	NO		NO	bbX
2	2 200224P1-4	Standard	149.200	6.14	25167.715		25167.715	145.7	-2.4	NO		NO	bbX
3	3 200224P1-5	Standard	149.200	6.14	25694.840		25694.840	148.7	-0.3	NO		NO	bbX
4	4 200224P1-6	Standard	149.200	6.14	39082.672		39082.672	226.2	51.6	NO		NO	bbX
5	5 200224P1-7	Standard	149.200	6.14	26045.955		26045.955	150.7	1.0	NO		NO	bbX
6	6 200224P1-8	Standard	149.200	6.14	25778.506		25778.506	149.2	0.0	NO		NO	bb
7	7 200224P1-9	Standard	149.200	6.14	26176.828		26176.828	151.5	1.5	NO		NO	bbX
8	8 200224P1-10	Standard	149.200	6.14	24506.379		24506.379	141.8	-4.9	NO		NO	bbX
9	9 200224P1-11	Standard	149.200	6.14	24847.535		24847.535	143.8	-3.6	NO		NO	bbX
10	10 200224P1-12	Standard	149.200	6.14	21826.023		21826.023	126.3	-15.3	NO		NO	bbX

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Compound name: d5-N-ETFOSA-RSD
Response Factor: 0.108702
RRF SD: 0.00452199, Relative SD: 4.15998
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	200224P1-3	Standard	149.200	6.14	23126.414	18190.213	15.892	146.2	-2.0	NO		NO	bb
2	2	200224P1-4	Standard	149.200	6.14	25167.715	18450.373	17.051	156.9	5.1	NO		NO	bb
3	3	200224P1-5	Standard	149.200	6.14	25694.840	19805.885	16.217	149.2	-0.0	NO		NO	bb
4	4	200224P1-6	Standard	149.200	6.14	39082.672	28715.367	17.013	156.5	4.9	NO		NO	bb
5	5	200224P1-7	Standard	149.200	6.14	26045.955	20646.703	15.769	145.1	-2.8	NO		NO	bb
6	6	200224P1-8	Standard	149.200	6.14	25778.506	21012.029	15.336	141.1	-5.4	NO		NO	bb
7	7	200224P1-9	Standard	149.200	6.14	26176.828	19399.559	16.867	155.2	4.0	NO		NO	bb
8	8	200224P1-10	Standard	149.200	6.14	24506.379	20002.818	15.314	140.9	-5.6	NO		NO	bb
9	9	200224P1-11	Standard	149.200	6.14	24847.535	18473.898	16.813	154.7	3.7	NO		NO	bb
10	10	200224P1-12	Standard	149.200	6.14	21826.023	17144.887	15.913	146.4	-1.9	NO		NO	bb

Compound name: 13C2-PFHxDA-EIS
Response Factor: 2341.49
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	200224P1-3	Standard	12.500	6.40	28365.557		28365.557	12.1	-3.1	NO		NO	bbX
2	2	200224P1-4	Standard	12.500	6.40	28569.834		28569.834	12.2	-2.4	NO		NO	bbX
3	3	200224P1-5	Standard	12.500	6.40	29348.578		29348.578	12.5	0.3	NO		NO	bbX
4	4	200224P1-6	Standard	12.500	6.40	45340.902		45340.902	19.4	54.9	NO		NO	bbX
5	5	200224P1-7	Standard	12.500	6.40	29770.211		29770.211	12.7	1.7	NO		NO	bbX
6	6	200224P1-8	Standard	12.500	6.40	29268.613		29268.613	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	6.40	30209.182		30209.182	12.9	3.2	NO		NO	bbX
8	8	200224P1-10	Standard	12.500	6.40	30589.645		30589.645	13.1	4.5	NO		NO	bbX
9	9	200224P1-11	Standard	12.500	6.40	30050.643		30050.643	12.8	2.7	NO		NO	bbX
10	10	200224P1-12	Standard	12.500	6.40	27532.283		27532.283	11.8	-5.9	NO		NO	bbX

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Compound name: 13C2-PFHxDA-RSD
Response Factor: 1.53225
RRF SD: 0.0732276, Relative SD: 4.7791
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 200224P1-3	Standard	12.500	6.40	28365.557	18190.213	19.492	12.7	1.8	NO		NO	bb
2	2 200224P1-4	Standard	12.500	6.40	28569.834	18450.373	19.356	12.6	1.1	NO		NO	bb
3	3 200224P1-5	Standard	12.500	6.40	29348.578	19805.885	18.523	12.1	-3.3	NO		NO	bb
4	4 200224P1-6	Standard	12.500	6.40	45340.902	28715.367	19.737	12.9	3.0	NO		NO	bb
5	5 200224P1-7	Standard	12.500	6.40	29770.211	20646.703	18.024	11.8	-5.9	NO		NO	bb
6	6 200224P1-8	Standard	12.500	6.40	29268.613	21012.029	17.412	11.4	-9.1	NO		NO	bb
7	7 200224P1-9	Standard	12.500	6.40	30209.182	19399.559	19.465	12.7	1.6	NO		NO	bb
8	8 200224P1-10	Standard	12.500	6.40	30589.645	20002.818	19.116	12.5	-0.2	NO		NO	bb
9	9 200224P1-11	Standard	12.500	6.40	30050.643	18473.898	20.333	13.3	6.2	NO		NO	bb
10	10 200224P1-12	Standard	12.500	6.40	27532.283	17144.887	20.073	13.1	4.8	NO		NO	bb

Compound name: d7-N-MeFOSE-EIS
Response Factor: 132.705
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 200224P1-3	Standard	149.200	6.29	18140.182		18140.182	136.7	-8.4	NO		NO	bbX
2	2 200224P1-4	Standard	149.200	6.29	19312.184		19312.184	145.5	-2.5	NO		NO	bbX
3	3 200224P1-5	Standard	149.200	6.28	19214.861		19214.861	144.8	-3.0	NO		NO	bbX
4	4 200224P1-6	Standard	149.200	6.29	31244.594		31244.594	235.4	57.8	NO		NO	bbX
5	5 200224P1-7	Standard	149.200	6.28	19091.467		19091.467	143.9	-3.6	NO		NO	bbX
6	6 200224P1-8	Standard	149.200	6.29	19799.531		19799.531	149.2	0.0	NO		NO	bb
7	7 200224P1-9	Standard	149.200	6.28	19704.221		19704.221	148.5	-0.5	NO		NO	bbX
8	8 200224P1-10	Standard	149.200	6.28	20018.727		20018.727	150.9	1.1	NO		NO	bbX
9	9 200224P1-11	Standard	149.200	6.29	19482.320		19482.320	146.8	-1.6	NO		NO	bbX
10	10 200224P1-12	Standard	149.200	6.28	18547.436		18547.436	139.8	-6.3	NO		NO	bbX

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Compound name: d7-N-MeFOSE-RSD
Response Factor: 0.0848028
RRF SD: 0.00469559, Relative SD: 5.53707
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 200224P1-3	Standard	149.200	6.29	18140.182	18190.213	12.466	147.0	-1.5	NO		NO	bb
2	2 200224P1-4	Standard	149.200	6.29	19312.184	18450.373	13.084	154.3	3.4	NO		NO	bb
3	3 200224P1-5	Standard	149.200	6.28	19214.861	19805.885	12.127	143.0	-4.2	NO		NO	bb
4	4 200224P1-6	Standard	149.200	6.29	31244.594	28715.367	13.601	160.4	7.5	NO		NO	bb
5	5 200224P1-7	Standard	149.200	6.28	19091.467	20646.703	11.558	136.3	-8.6	NO		NO	bb
6	6 200224P1-8	Standard	149.200	6.29	19799.531	21012.029	11.779	138.9	-6.9	NO		NO	bb
7	7 200224P1-9	Standard	149.200	6.28	19704.221	19399.559	12.696	149.7	0.3	NO		NO	bb
8	8 200224P1-10	Standard	149.200	6.28	20018.727	20002.818	12.510	147.5	-1.1	NO		NO	bb
9	9 200224P1-11	Standard	149.200	6.29	19482.320	18473.898	13.182	155.4	4.2	NO		NO	bb
10	10 200224P1-12	Standard	149.200	6.28	18547.436	17144.887	13.523	159.5	6.9	NO		NO	bb

Compound name: d9-N-EtFOSE-EIS
Response Factor: 153.942
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 200224P1-3	Standard	149.200	6.43	21915.723		21915.723	142.4	-4.6	NO		NO	bbX
2	2 200224P1-4	Standard	149.200	6.43	21994.529		21994.529	142.9	-4.2	NO		NO	bbX
3	3 200224P1-5	Standard	149.200	6.43	22203.223		22203.223	144.2	-3.3	NO		NO	bbX
4	4 200224P1-6	Standard	149.200	6.43	34589.184		34589.184	224.7	50.6	NO		NO	bbX
5	5 200224P1-7	Standard	149.200	6.43	24121.846		24121.846	156.7	5.0	NO		NO	bbX
6	6 200224P1-8	Standard	149.200	6.43	22968.217		22968.217	149.2	0.0	NO		NO	bb
7	7 200224P1-9	Standard	149.200	6.43	22913.018		22913.018	148.8	-0.2	NO		NO	bbX
8	8 200224P1-10	Standard	149.200	6.43	23006.582		23006.582	149.4	0.2	NO		NO	bbX
9	9 200224P1-11	Standard	149.200	6.43	24339.252		24339.252	158.1	6.0	NO		NO	bbX
10	10 200224P1-12	Standard	149.200	6.43	22028.686		22028.686	143.1	-4.1	NO		NO	bbX

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Compound name: d9-N-EtFOSE-RSD
Response Factor: 0.0998453
RRF SD: 0.00571905, Relative SD: 5.72791
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=exciuded
1	1 200224P1-3	Standard	149.200	6.43	21915.723	18190.213	15.060	150.8	1.1	NO		NO	bb
2	2 200224P1-4	Standard	149.200	6.43	21994.529	18450.373	14.901	149.2	0.0	NO		NO	bb
3	3 200224P1-5	Standard	149.200	6.43	22203.223	19805.885	14.013	140.3	-5.9	NO		NO	bb
4	4 200224P1-6	Standard	149.200	6.43	34589.184	28715.367	15.057	150.8	1.1	NO		NO	bb
5	5 200224P1-7	Standard	149.200	6.43	24121.846	20646.703	14.604	146.3	-2.0	NO		NO	bb
6	6 200224P1-8	Standard	149.200	6.43	22968.217	21012.029	13.664	136.8	-8.3	NO		NO	bb
7	7 200224P1-9	Standard	149.200	6.43	22913.018	19399.559	14.764	147.9	-0.9	NO		NO	bb
8	8 200224P1-10	Standard	149.200	6.43	23006.582	20002.818	14.377	144.0	-3.5	NO		NO	bb
9	9 200224P1-11	Standard	149.200	6.43	24339.252	18473.898	16.469	164.9	10.6	NO		NO	bb
10	10 200224P1-12	Standard	149.200	6.43	22028.686	17144.887	16.061	160.9	7.8	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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 200224P1-3	Standard	12.500	1.40	8935.012	8935.012	12.500	12.5	0.0	NO		NO	MM
2	2 200224P1-4	Standard	12.500	1.40	9221.452	9221.452	12.500	12.5	0.0	NO		NO	MM
3	3 200224P1-5	Standard	12.500	1.40	9836.372	9836.372	12.500	12.5	0.0	NO		NO	MM
4	4 200224P1-6	Standard	12.500	1.40	21017.055	21017.055	12.500	12.5	0.0	NO		NO	bb
5	5 200224P1-7	Standard	12.500	1.40	10147.369	10147.369	12.500	12.5	0.0	NO		NO	MM
6	6 200224P1-8	Standard	12.500	1.40	10119.501	10119.501	12.500	12.5	0.0	NO		NO	MM
7	7 200224P1-9	Standard	12.500	1.40	10796.234	10796.234	12.500	12.5	0.0	NO		NO	MM
8	8 200224P1-10	Standard	12.500	1.40	10237.711	10237.711	12.500	12.5	0.0	NO		NO	MM
9	9 200224P1-11	Standard	12.500	1.40	11165.936	11165.936	12.500	12.5	0.0	NO		NO	MM
10	10 200224P1-12	Standard	12.500	1.40	10067.188	10067.188	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	200224P1-3	Standard	12.500	3.11	21189.260	21189.260	12.500	12.5	0.0	NO		NO	bb
2	2	200224P1-4	Standard	12.500	3.11	21604.697	21604.697	12.500	12.5	0.0	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.11	21521.652	21521.652	12.500	12.5	0.0	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.11	34103.773	34103.773	12.500	12.5	0.0	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.11	22452.619	22452.619	12.500	12.5	0.0	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.11	22413.924	22413.924	12.500	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.11	23119.367	23119.367	12.500	12.5	0.0	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.11	23035.342	23035.342	12.500	12.5	0.0	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.11	22619.594	22619.594	12.500	12.5	0.0	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.11	20756.783	20756.783	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	200224P1-3	Standard	12.500	3.85	1270.900	1270.900	12.500	12.5	0.0	NO		NO	bb
2	2	200224P1-4	Standard	12.500	3.84	1292.412	1292.412	12.500	12.5	0.0	NO		NO	bb
3	3	200224P1-5	Standard	12.500	3.85	1373.994	1373.994	12.500	12.5	0.0	NO		NO	bb
4	4	200224P1-6	Standard	12.500	3.85	2157.271	2157.271	12.500	12.5	0.0	NO		NO	bb
5	5	200224P1-7	Standard	12.500	3.84	1323.920	1323.920	12.500	12.5	0.0	NO		NO	bb
6	6	200224P1-8	Standard	12.500	3.85	1415.144	1415.144	12.500	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	3.85	1406.714	1406.714	12.500	12.5	0.0	NO		NO	bb
8	8	200224P1-10	Standard	12.500	3.85	1307.147	1307.147	12.500	12.5	0.0	NO		NO	bb
9	9	200224P1-11	Standard	12.500	3.85	1282.198	1282.198	12.500	12.5	0.0	NO		NO	bb
10	10	200224P1-12	Standard	12.500	3.85	1156.923	1156.923	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	200224P1-3	Standard	12.500	4.21	19654.105	19654.105	12.500	12.5	0.0	NO		NO	bb
2	2	200224P1-4	Standard	12.500	4.21	19976.805	19976.805	12.500	12.5	0.0	NO		NO	bb
3	3	200224P1-5	Standard	12.500	4.21	18892.756	18892.756	12.500	12.5	0.0	NO		NO	bb
4	4	200224P1-6	Standard	12.500	4.21	32857.477	32857.477	12.500	12.5	0.0	NO		NO	bb
5	5	200224P1-7	Standard	12.500	4.21	20307.451	20307.451	12.500	12.5	0.0	NO		NO	bb
6	6	200224P1-8	Standard	12.500	4.21	21982.541	21982.541	12.500	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	4.21	19949.277	19949.277	12.500	12.5	0.0	NO		NO	bb
8	8	200224P1-10	Standard	12.500	4.21	20066.098	20066.098	12.500	12.5	0.0	NO		NO	bb
9	9	200224P1-11	Standard	12.500	4.21	18578.346	18578.346	12.500	12.5	0.0	NO		NO	bb
10	10	200224P1-12	Standard	12.500	4.21	17732.145	17732.145	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 8.27511e-017, Relative SD: 8.27511e-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	200224P1-3	Standard	12.500	4.65	13653.749	13653.749	12.500	12.5	0.0	NO		NO	bb
2	2	200224P1-4	Standard	12.500	4.65	17194.314	17194.314	12.500	12.5	0.0	NO		NO	bb
3	3	200224P1-5	Standard	12.500	4.65	16303.628	16303.628	12.500	12.5	0.0	NO		NO	bb
4	4	200224P1-6	Standard	12.500	4.65	27074.707	27074.707	12.500	12.5	0.0	NO		NO	bb
5	5	200224P1-7	Standard	12.500	4.65	18110.285	18110.285	12.500	12.5	0.0	NO		NO	bb
6	6	200224P1-8	Standard	12.500	4.65	17380.516	17380.516	12.500	12.5	0.0	NO		NO	bb
7	7	200224P1-9	Standard	12.500	4.65	16979.621	16979.621	12.500	12.5	0.0	NO		NO	bb
8	8	200224P1-10	Standard	12.500	4.65	17745.928	17745.928	12.500	12.5	0.0	NO		NO	bb
9	9	200224P1-11	Standard	12.500	4.65	16415.125	16415.125	12.500	12.5	0.0	NO		NO	bb
10	10	200224P1-12	Standard	12.500	4.65	15732.798	15732.798	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 7.40149e-017, Relative SD: 7.40149e-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 200224P1-3	Standard	12.500	4.74	3509.510	3509.510	12.500	12.5	0.0	NO		NO	bb
2	2 200224P1-4	Standard	12.500	4.74	3429.658	3429.658	12.500	12.5	0.0	NO		NO	bb
3	3 200224P1-5	Standard	12.500	4.74	3562.231	3562.231	12.500	12.5	0.0	NO		NO	bb
4	4 200224P1-6	Standard	12.500	4.74	5661.441	5661.441	12.500	12.5	0.0	NO		NO	bb
5	5 200224P1-7	Standard	12.500	4.74	3847.620	3847.620	12.500	12.5	0.0	NO		NO	bb
6	6 200224P1-8	Standard	12.500	4.74	3752.839	3752.839	12.500	12.5	0.0	NO		NO	bb
7	7 200224P1-9	Standard	12.500	4.74	4162.643	4162.643	12.500	12.5	0.0	NO		NO	bb
8	8 200224P1-10	Standard	12.500	4.74	3706.318	3706.318	12.500	12.5	0.0	NO		NO	bb
9	9 200224P1-11	Standard	12.500	4.74	3692.311	3692.311	12.500	12.5	0.0	NO		NO	bb
10	10 200224P1-12	Standard	12.500	4.74	3354.045	3354.045	12.500	12.5	0.0	NO		NO	bb

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 12:12:14

Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9991	NO	
2	2	PFPrS	51	0.9996	NO	
3	3	3:3 FTCA	49	0.9996	NO	
4	4	PFPeA	49	0.9999	NO	
5	5	PFBS	51	0.9997	NO	
6	6	4:2 FTS	55	0.9986	NO	
7	7	PFHxA	57	0.9997	NO	
8	8	PFPeS	51	0.9967	NO	
9	9	HFPO-DA	53	0.9999	NO	
10	10	5:3 FTCA	59	0.9999	NO	
11	11	PFHpA	59	0.9996	NO	
12	12	ADONA	59	0.9997	NO	
13	13	L-PFHxS	61	0.9995	NO	
14	15	6:2 FTS	63	0.9992	NO	
15	16	L-PFOA	69	0.9996	NO	
16	18	PFecHS	69	0.9994	NO	
17	19	PFHpS	71	0.9989	NO	
18	20	7:3 FTCA	65	0.9990	NO	
19	21	PFNA	65	0.9992	NO	
20	22	PFOSA	67	0.9996	NO	
21	23	L-PFOS	71	0.9996	NO	
22	25	9Cl-PF30NS	71	0.9981	NO	
23	26	PFDA	73	0.9993	NO	
24	27	8:2 FTS	75	0.9984	NO	
25	28	PFNS	71	0.9998	NO	
26	29	L-MeFOSAA	77	0.9986	NO	

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 12:12:14

Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	81	0.9988	NO	
2	33	PFUdA	79	0.9997	NO	
3	34	PFDS	71	0.9996	NO	
4	35	11Cl-PF30UdS	83	0.9993	NO	
5	36	10:2 FTS	85	0.9984	NO	
6	37	PFDoA	83	0.9999	NO	
7	38	N-MeFOSA	87	0.9988	NO	
8	39	PFTrDA	83	0.9979	NO	
9	40	PFDoS	89	0.9985	NO	
10	41	PFTeDA	89	0.9982	NO	
11	42	N-EtFOSA	91	0.9991	NO	
12	43	PFHxDA	93	0.9999	NO	
13	44	PFODA	93	0.9999	NO	
14	45	N-MeFOSE	95	0.9998	NO	
15	46	N-EtFOSE	97	0.9982	NO	
16	47	13C3-PFBA-EIS			NO	0.000
17	48	13C3-PFBA-RSD	99		NO	4.490
18	49	13C3-PFPeA-EIS			NO	0.000
19	50	13C3-PFPeA-RSD	100		NO	2.762
20	51	13C3-PFBS-EIS			NO	0.000
21	52	13C3-PFBS-RSD	101		NO	2.455
22	53	13C3-HFPO-DA-EIS			NO	0.000
23	54	13C3-HFPO-DA-RSD	100		NO	2.847
24	55	13C2-4:2 FTS-EIS			NO	0.000
25	56	13C2-4:2 FTS-RSD	101		NO	7.405
26	57	13C2-PFHxA-EIS			NO	0.000
27	58	13C2-PFHxA-RSD	100		NO	1.942
28	59	13C4-PFHpA-EIS			NO	0.000
29	60	13C4-PFHpA-RSD	100		NO	3.473
30	61	13C3-PFHxS-EIS			NO	0.000
31	62	13C3-PFHxS-RSD	101		NO	5.429
32	63	13C2-6:2 FTS-EIS			NO	0.000

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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, 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	7.420
34	65	13C5-PFNA-EIS			NO	0.000
35	66	13C5-PFNA-RSD	103		NO	4.796
36	67	13C8-PFOSA-EIS			NO	0.000
37	68	13C8-PFOSA-RSD	106		NO	5.453
38	69	13C2-PFOA-EIS			NO	0.000
39	70	13C2-PFOA-RSD	102		NO	4.687
40	71	13C8-PFOS-EIS			NO	0.000
41	72	13C8-PFOS-RSD	104		NO	4.103
42	73	13C2-PFDA-EIS			NO	0.000
43	74	13C2-PFDA-RSD	105		NO	4.536
44	75	13C2-8:2 FTS-EIS			NO	0.000
45	76	13C2-8:2 FTS-RSD	104		NO	10.856
46	77	d3-N-MeFOSAA-EIS			NO	0.000
47	78	d3-N-MeFOSAA-RSD	106		NO	8.273
48	79	13C2-PFUdA-EIS			NO	0.000
49	80	13C2-PFUdA-RSD	106		NO	4.796
50	81	d5-N-EtFOSAA-EIS			NO	0.000
51	82	d5-N-EtFOSAA-RSD	106		NO	5.361
52	83	13C2-PFDoA-EIS			NO	0.000
53	84	13C2-PFDoA-RSD	105		NO	6.808
54	85	13C2-10:2 FTS-EIS			NO	0.000
55	86	13C2-10:2 FTS-RSD	104		NO	10.775
56	87	d3-N-MeFOSA-EIS			NO	0.000
57	88	d3-N-MeFOSA-RSD	106		NO	6.048
58	89	13C2-PFTeDA-EIS			NO	0.000
59	90	13C2-PFTeDA-RSD	106		NO	7.715
60	91	d5-N-ETFOSA-EIS			NO	0.000
61	92	d5-N-ETFOSA-RSD	106		NO	4.160
62	93	13C2-PFHxDA-EIS			NO	0.000
63	94	13C2-PFHxDA-RSD	106		NO	4.779
64	95	d7-N-MeFOSE-EIS			NO	0.000
65	96	d7-N-MeFOSE-RSD	106		NO	5.537
66	97	d9-N-EtFOSE-EIS			NO	0.000
67	98	d9-N-EtFOSE-RSD	106		NO	5.728
68	99	13C4-PFBA	99		NO	0.000

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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, 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

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 10:34:33

Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.40	1.40			
2	PFPrS	1.74	1.73	2.597	2.597	NO
3	3:3 FTCA	2.18	2.18	3.701	3.701	NO
4	PFPeA	2.32	2.32			
5	PFBS	2.60	2.60	3.132	3.132	NO
6	4:2 FTS	3.03	3.02	1.029	1.029	NO
7	PFHxA	3.11	3.11	16.508	16.508	NO
8	PFPeS	3.28	3.31	2.378	2.378	NO
9	HFPO-DA	3.32	3.32	2.663	2.663	NO
10	5:3 FTCA	3.65	3.65	1.768	1.768	NO
11	PFHpA	3.71	3.71	26.853	26.853	NO
12	ADONA	3.80	3.81	3.817	3.817	NO
13	L-PFHxS	3.84	3.85	2.302	2.302	NO
14	6:2 FTS	4.16	4.16	1.350	1.350	NO
15	L-PFOA	4.21	4.21	3.184	3.184	NO
16	PFecHS	4.23	4.22	0.498	0.498	NO
17	PFHpS	4.34	4.33	2.164	2.164	NO
18	7:3 FTCA	4.64	4.64	1.594	1.594	NO
19	PFNA	4.65	4.65	7.466	7.466	NO
20	PFOSA	4.71	4.71	27.376	27.376	NO
21	L-PFOS	4.74	4.74	2.280	2.280	NO
22	9Cl-PF30NS	4.94	4.95	14.600	14.600	NO
23	PFDA	5.02	5.02	9.658	9.658	NO
24	8:2 FTS	4.99	4.99	2.491	2.491	NO
25	PFNS	5.08	5.09	2.182	2.182	NO
26	L-MeFOSAA	5.17	5.17	1.847	1.847	NO

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Printed: Tuesday, February 25, 2020 11:12:15 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 10:34:33

Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.32	5.33	1.300	1.300	NO
2	PFUdA	5.34	5.34	21.511	21.511	NO
3	PFDS	5.37	5.38	1.872	1.872	NO
4	11Cl-PF30UdS	5.55	5.55	20.823	20.823	NO
5	10:2 FTS	5.60	5.60	1.025	1.025	NO
6	PFDoA	5.62	5.62	9.734	9.734	NO
7	N-MeFOSA	5.73	5.71	1.743	1.743	NO
8	PFTrDA	5.87	5.86	49.312	49.312	NO
9	PFDoS	5.87	5.88	2.918	2.918	NO
10	PFTeDA	6.07	6.07	18.028	18.028	NO
11	N-EtFOSA	6.12	6.12	1.690	1.690	NO
12	PFHxDA	6.40	6.40	130.636	130.636	NO
13	PFODA	6.61	6.63			
14	N-MeFOSE	6.29	6.29			
15	N-EtFOSE	6.43	6.44			

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, February 25, 2020 15:12:08 Pacific Standard Time
Printed: Tuesday, February 25, 2020 15:12:27 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 12:12:14

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200224P1-1	IPA	24-Feb-20	17:10:52
2	2	200224P1-2	IPA	24-Feb-20	17:21:28
3	3	200224P1-3	ST200224P1-1 PFC CS-2 20B1102	24-Feb-20	17:32:01
4	4	200224P1-4	ST200224P1-2 PFC CS-1 20B1103	24-Feb-20	17:42:30
5	5	200224P1-5	ST200224P1-3 PFC CS0 20B1104	24-Feb-20	17:53:02
6	6	200224P1-6	ST200224P1-4 PFC CS1 20B1105	24-Feb-20	18:03:31
7	7	200224P1-7	ST200224P1-5 PFC CS2 20B1106	24-Feb-20	18:14:02
8	8	200224P1-8	ST200224P1-6 PFC CS3 20B1107	24-Feb-20	18:24:31
9	9	200224P1-9	ST200224P1-7 PFC CS4 20B1108	24-Feb-20	18:35:02
10	10	200224P1-10	ST200224P1-8 PFC CS5 20B1109	24-Feb-20	18:45:33
11	11	200224P1-11	ST200224P1-9 PFC CS6 20B1110	24-Feb-20	18:56:04
12	12	200224P1-12	ST200224P1-10 PFC CS7 20B1111	24-Feb-20	19:06:33
13	13	200224P1-13	IB	24-Feb-20	19:17:04
14	14	200224P1-14	ICV200224P1-1 PFC ICV 20B1112	24-Feb-20	19:27:32
15	15	200224P1-15	IB	24-Feb-20	19:38:05

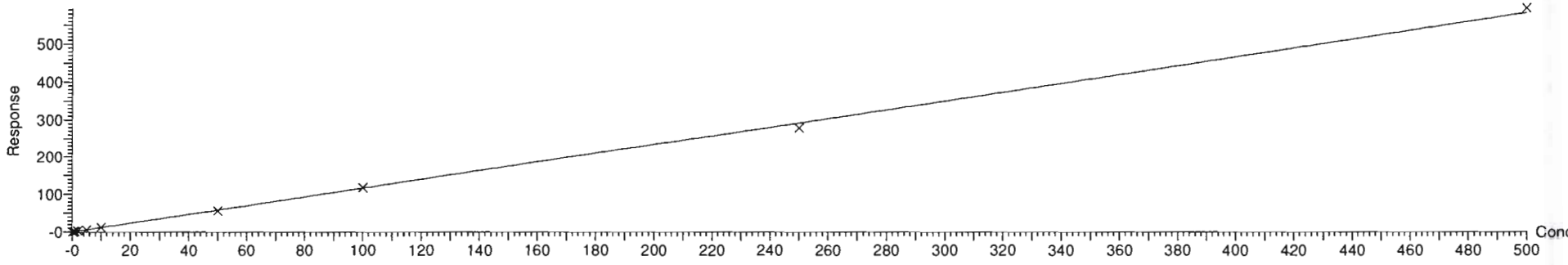
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

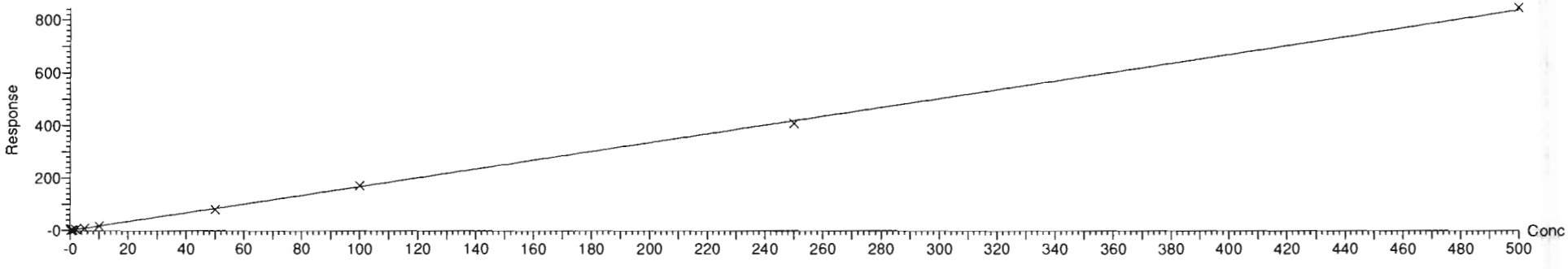
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Printed: Tuesday, February 25, 2020 12:07:55 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 25 Feb 2020 11:10:09
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 12:06:07

Compound name: PFBA
Correlation coefficient: r = 0.999553, r^2 = 0.999106
Calibration curve: 1.16537 * x + -0.0554753
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



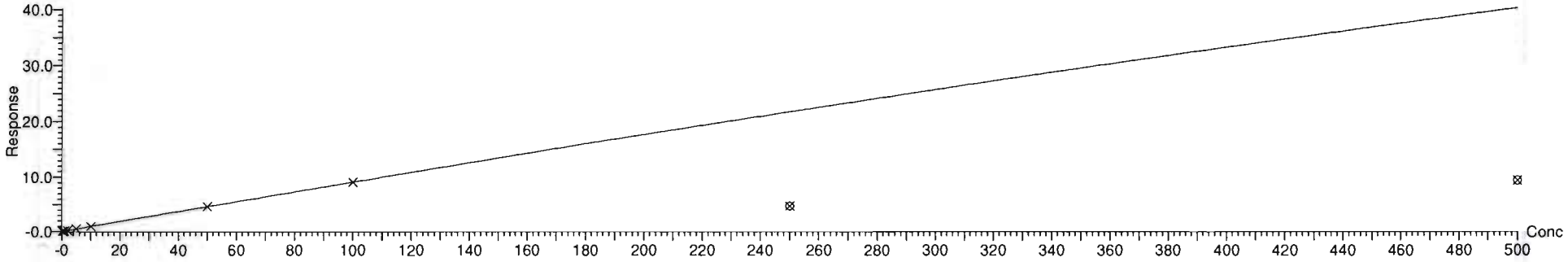
Compound name: PFPrS
Correlation coefficient: r = 0.999809, r^2 = 0.999618
Calibration curve: 1.6727 * x + -0.0506783
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



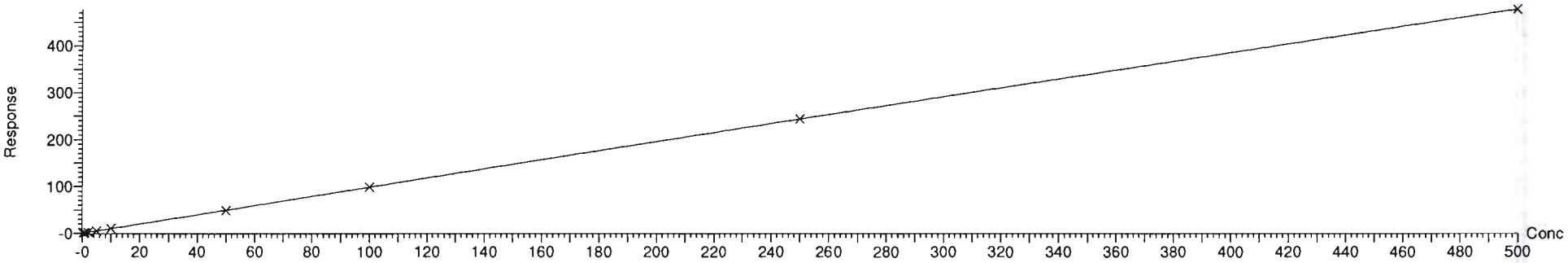
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Last Altered: Tuesday, February 25, 2020 12:06:07 Pacific Standard Time
Printed: Tuesday, February 25, 2020 12:07:55 Pacific Standard Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999580
Calibration curve: -2.59383e-005 * x^2 + 0.0934904 * x + -0.00212579
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 = 0.999949
Calibration curve: -8.16235e-005 * x^2 + 0.995801 * x + 0.0429123
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

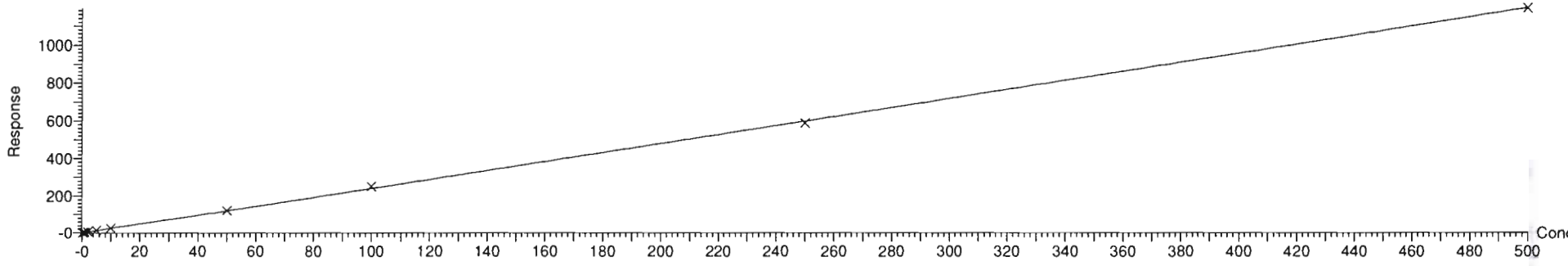


Vista Analytical Laboratory Q1

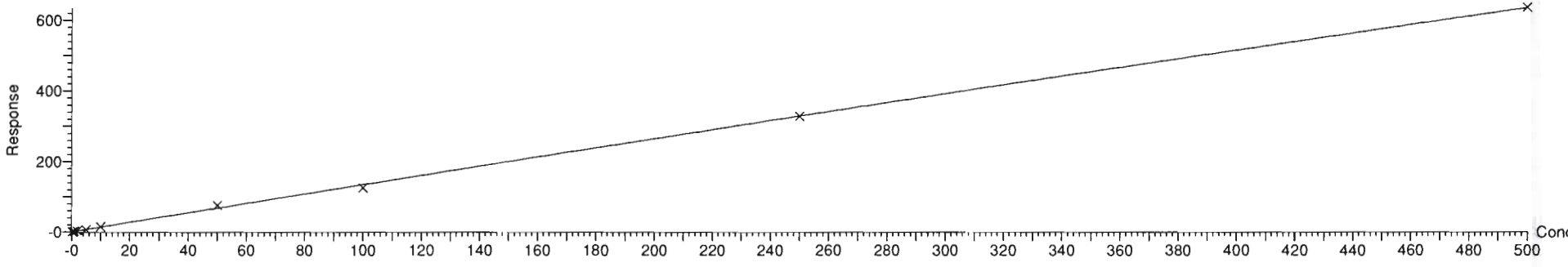
Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: PFBS
Correlation coefficient: r = 0.999839, r^2 = 0.999677
Calibration curve: 2.3892 * x + 0.0222262
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



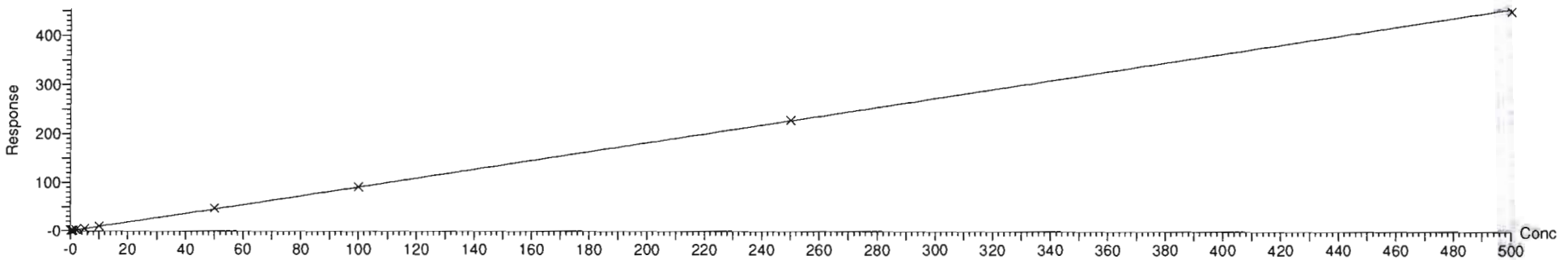
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.998563
Calibration curve: -0.000173905 * x^2 + 1.35738 * x + -0.154108
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



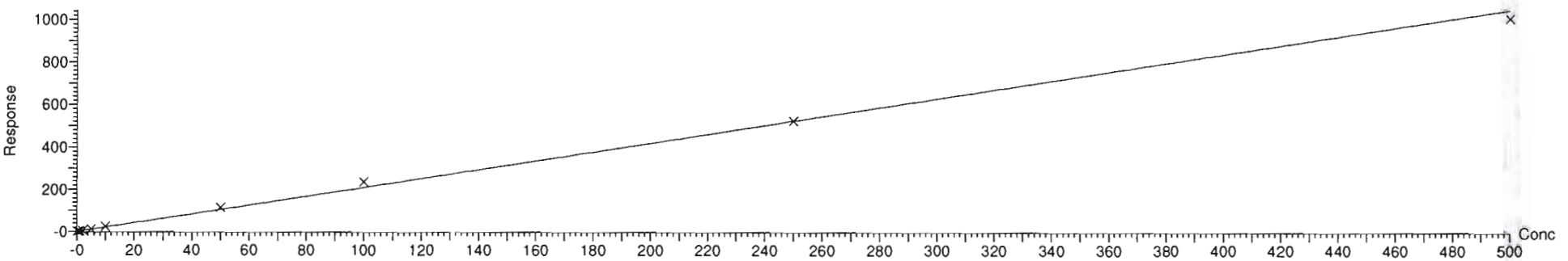
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: PFHxA
Correlation coefficient: r = 0.999829, r^2 = 0.999659
Calibration curve: 0.910113 * x + 0.0756208
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



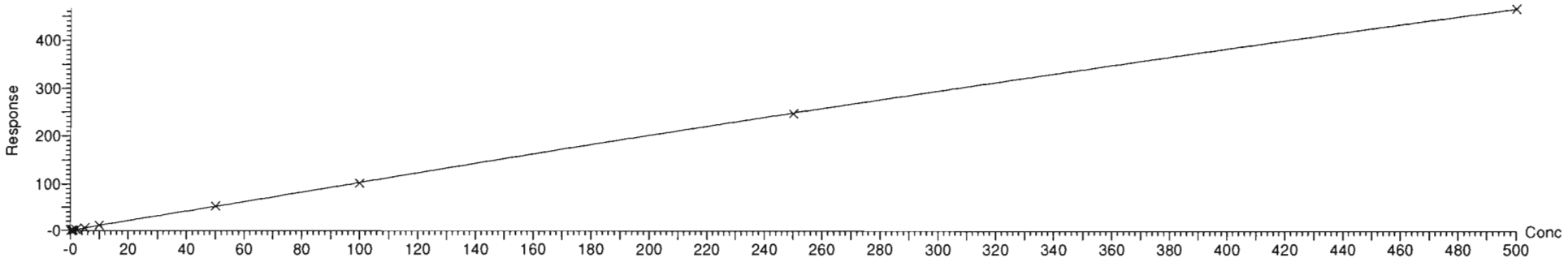
Compound name: PFPeS
Correlation coefficient: r = 0.998368, r^2 = 0.996738
Calibration curve: 2.0955 * x + 0.166232
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



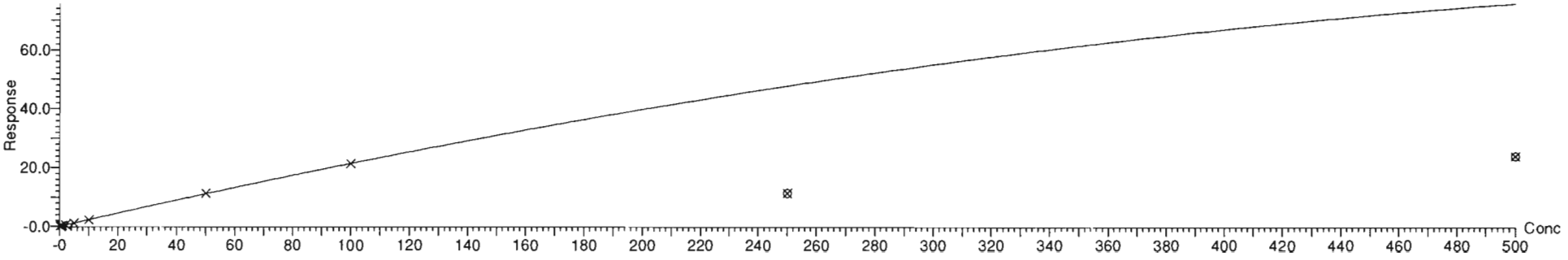
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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999876
Calibration curve: -0.000249903 * x^2 + 1.05727 * x + 0.00892307
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



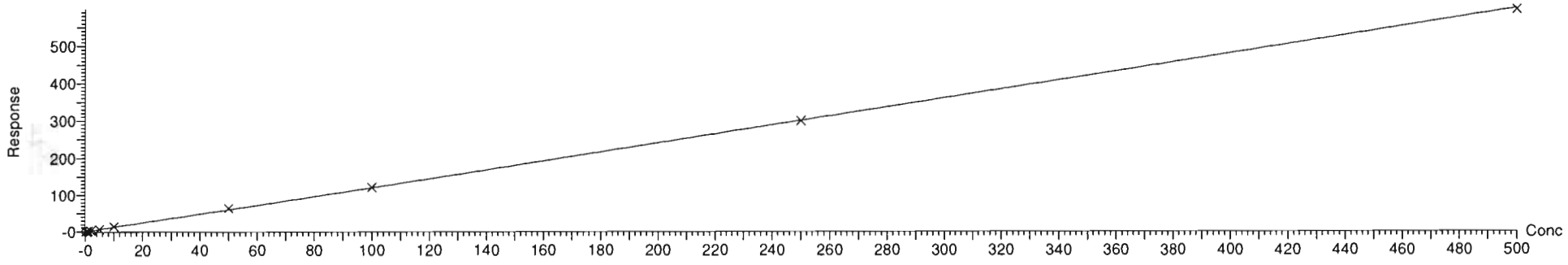
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999862
Calibration curve: -0.000158789 * x^2 + 0.230947 * x + 0.00275595
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



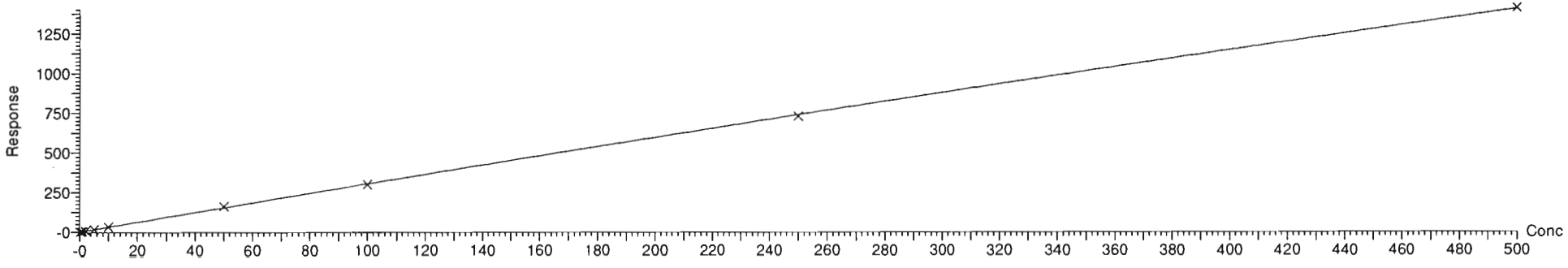
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Compound name: PFHpA
Correlation coefficient: r = 0.999793, r^2 = 0.999586
Calibration curve: 1.19852 * x + 0.230417
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



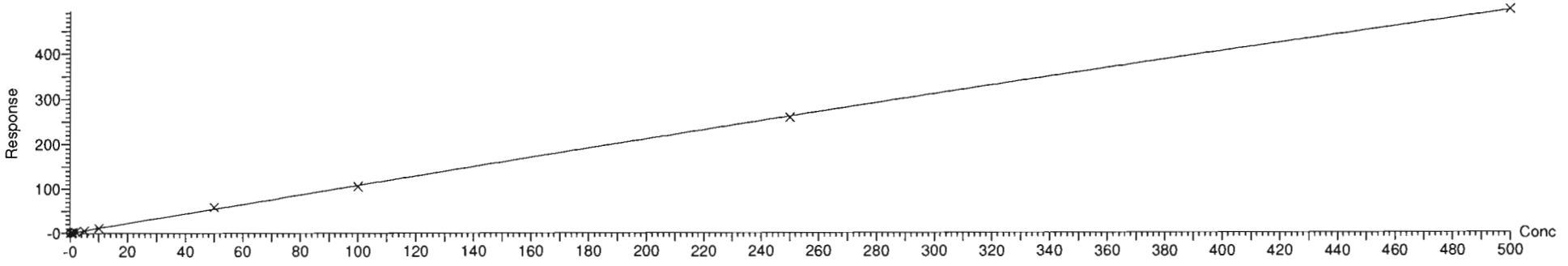
Compound name: ADONA
Coefficient of Determination: R^2 = 0.999711
Calibration curve: -0.000580124 * x^2 + 3.09298 * x + 0.0913703
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



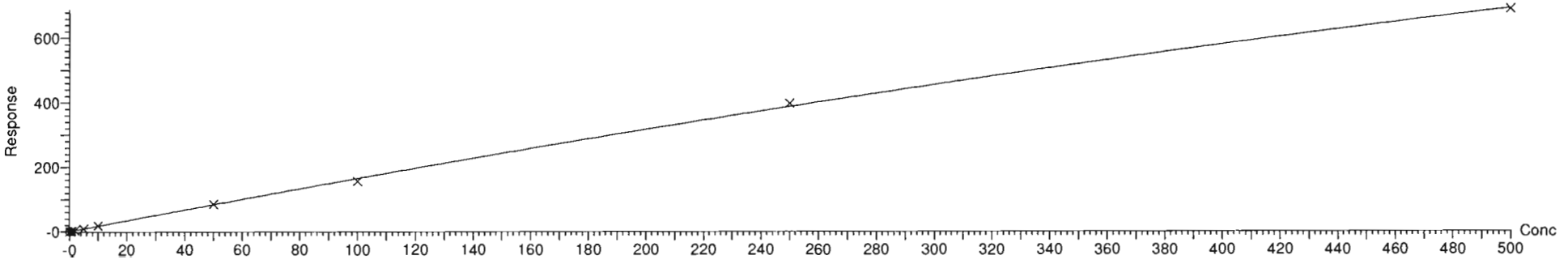
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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999496
Calibration curve: -0.000217812 * x^2 + 1.09724 * x + -0.0921085
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



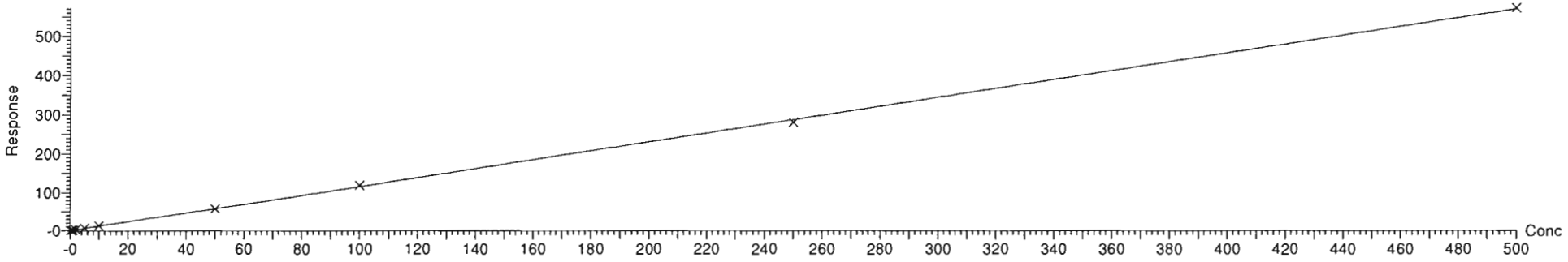
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999220
Calibration curve: -0.000663398 * x^2 + 1.71333 * x + -0.0167933
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



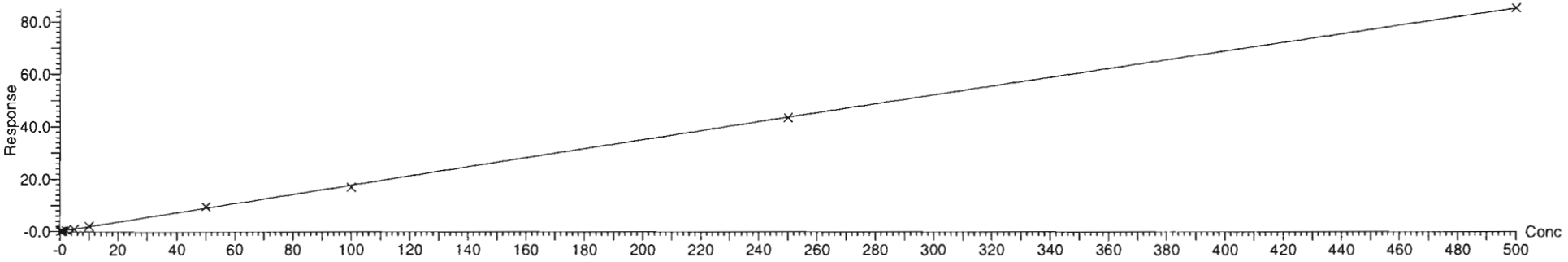
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999613
Calibration curve: -4.19407e-005 * x^2 + 1.15819 * x + 0.187509
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
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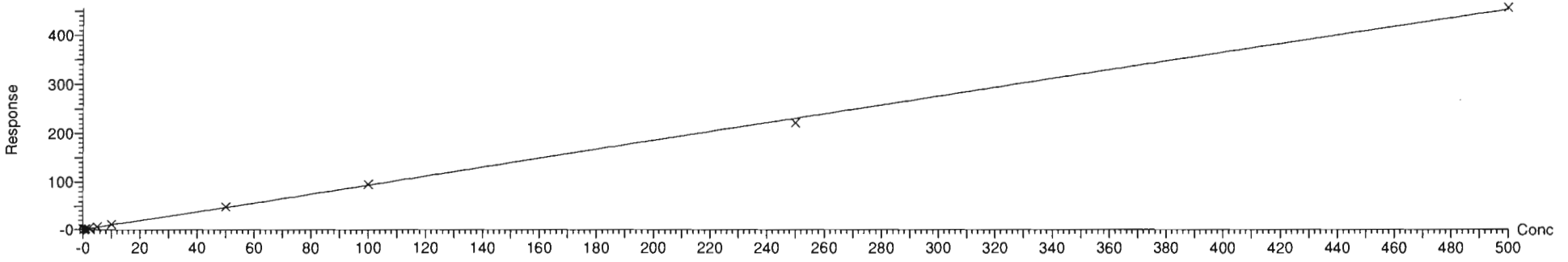
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999448
Calibration curve: -1.73721e-005 * x^2 + 0.1789 * x + 0.00291759
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



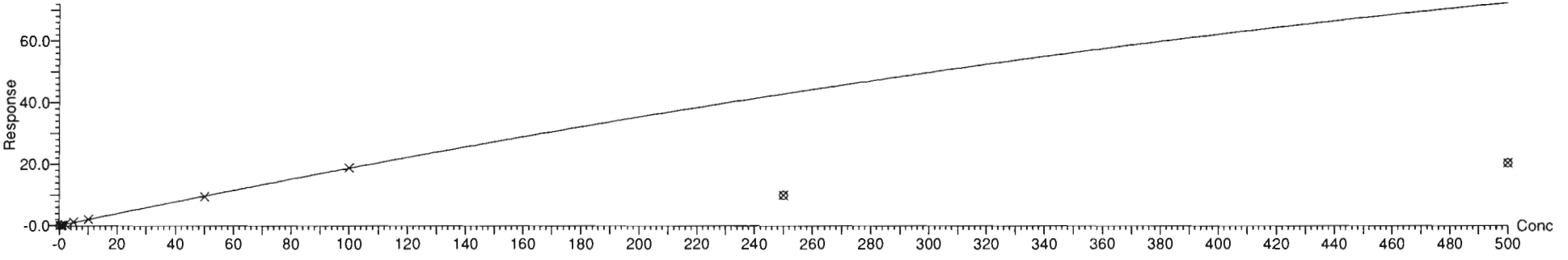
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.998890
Calibration curve: -6.74582e-005 * x^2 + 0.938221 * x + 0.202734
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
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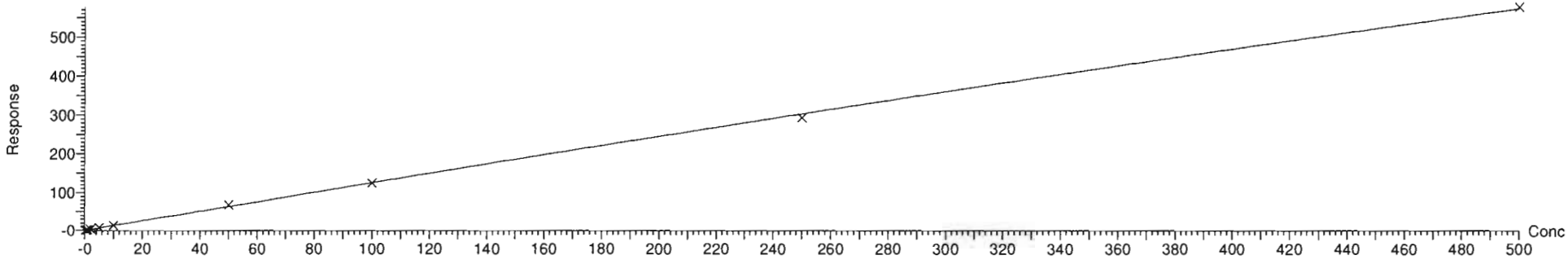
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998973
Calibration curve: -0.000105376 * x^2 + 0.197356 * x + 0.00169411
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Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



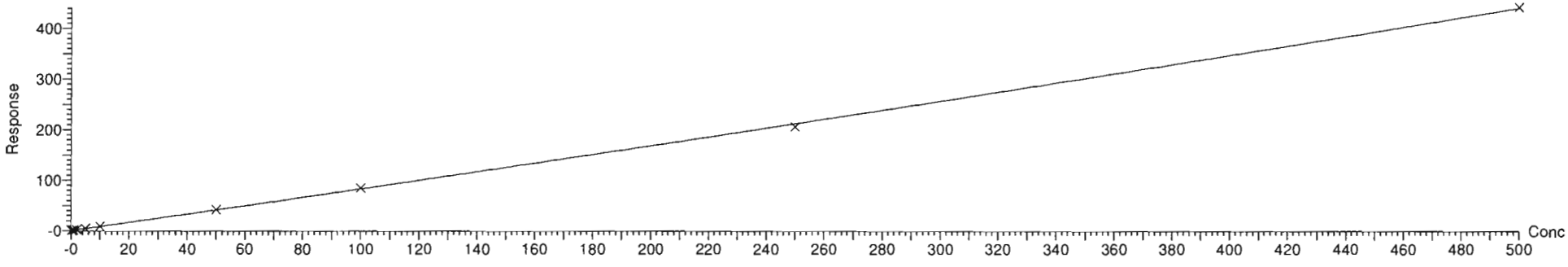
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: PFNA
Coefficient of Determination: R^2 = 0.999166
Calibration curve: -0.000268646 * x^2 + 1.28148 * x + 0.0396902
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



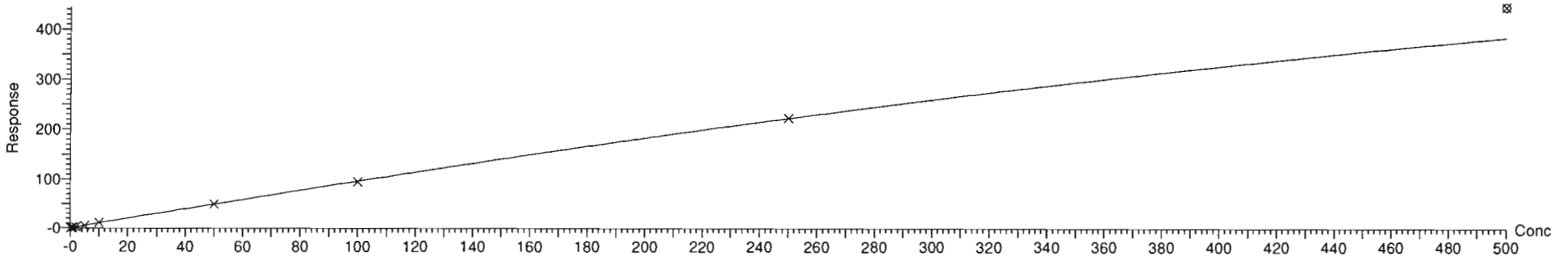
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999552
Calibration curve: 0.00013095 * x^2 + 0.814789 * x + 0.0292228
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



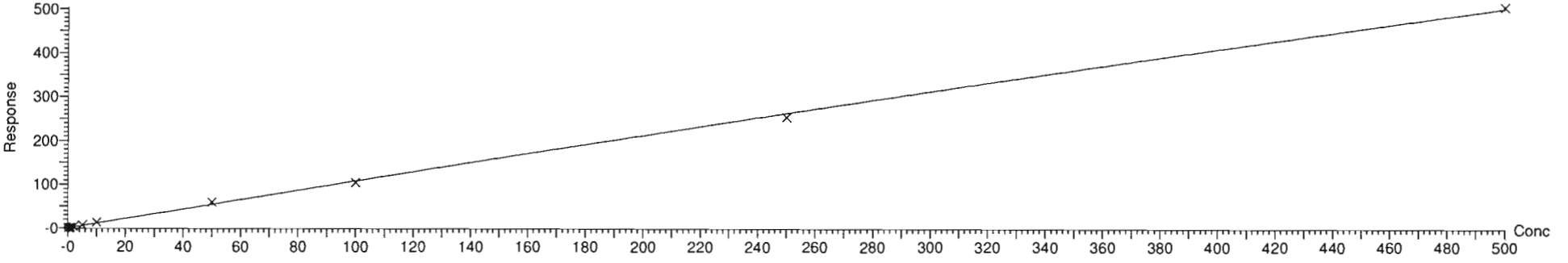
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999598
Calibration curve: -0.000489933 * x^2 + 1.01299 * x + -0.0852149
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



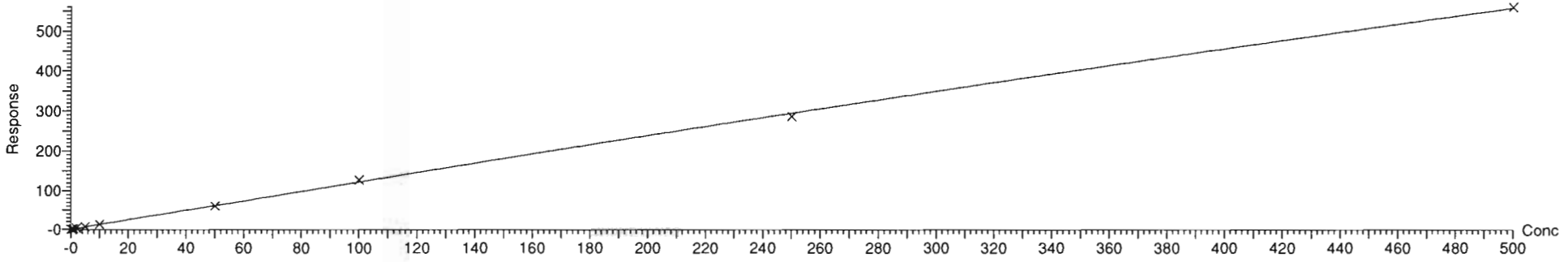
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.998130
Calibration curve: -0.000196834 * x^2 + 1.10022 * x + 0.142463
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



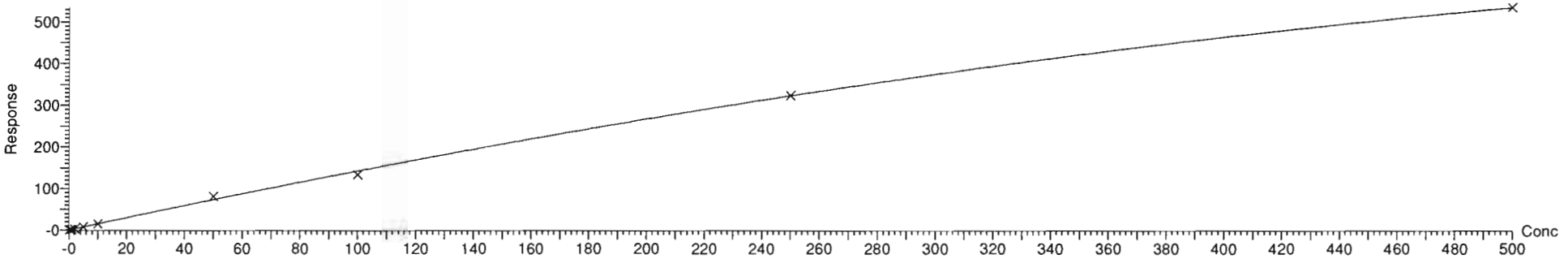
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999336
Calibration curve: -0.000254486 * x^2 + 1.24117 * x + 0.0564918
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



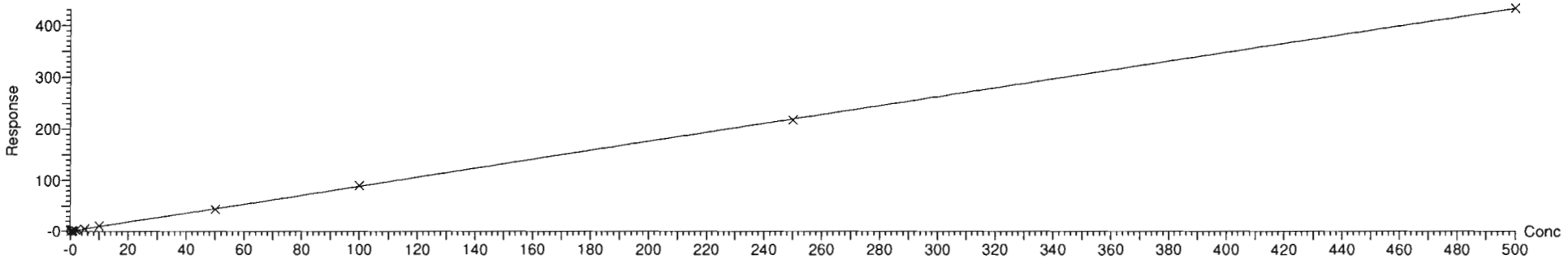
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998357
Calibration curve: -0.000892314 * x^2 + 1.51653 * x + -0.242142
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



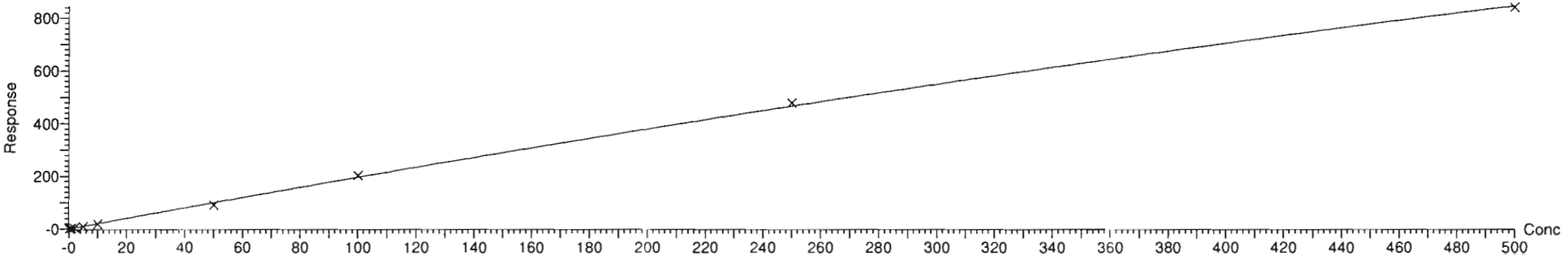
Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:01:26 Pacific Standard Time

Compound name: PFNS
Coefficient of Determination: R^2 = 0.999766
Calibration curve: -5.28546e-005 * x^2 + 0.890419 * x + 0.13443
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 = 0.998601
Calibration curve: -0.000689253 * x^2 + 2.03896 * x + -0.0868417
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



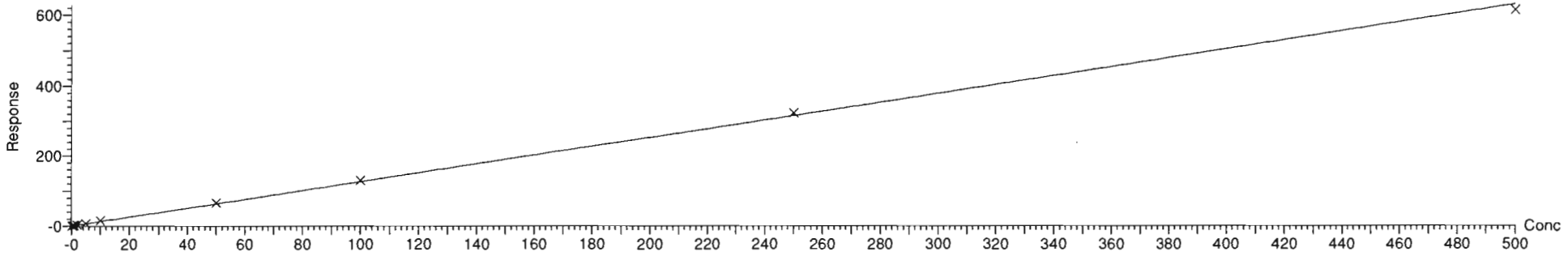
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

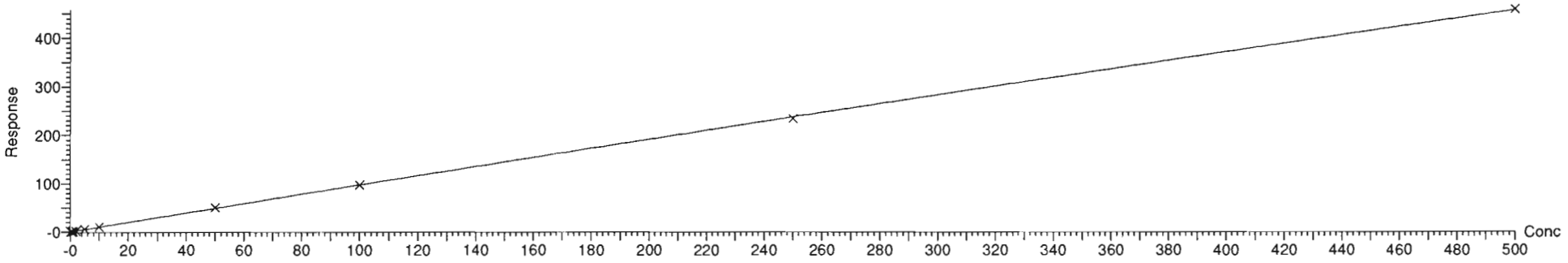
Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022420.mdb 21 Feb 2020 08:56:55
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-24-20.cdb 25 Feb 2020 10:34:33

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999396, r^2 = 0.998791
Calibration curve: 1.25799 * x + 0.0651757
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



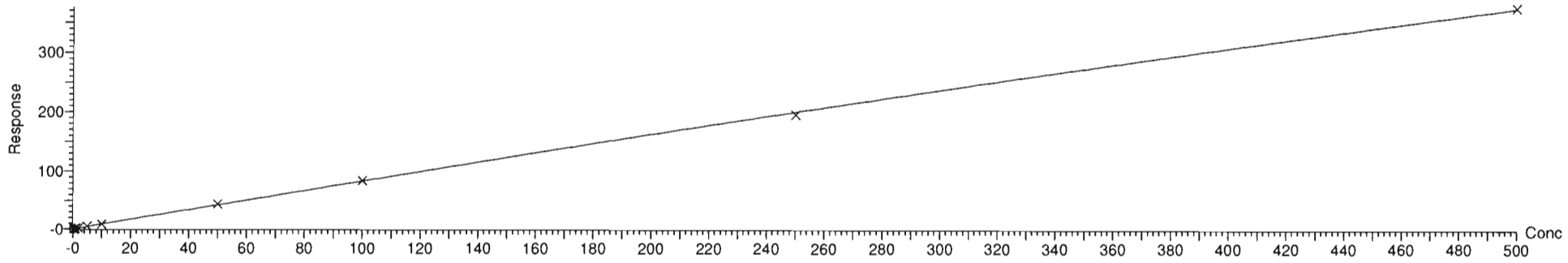
Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999717
Calibration curve: -0.000141737 * x^2 + 0.984121 * x + 0.107182
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



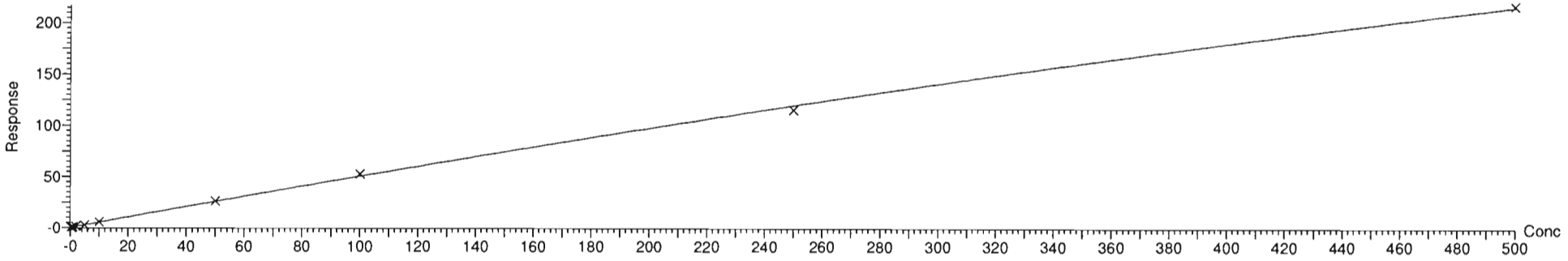
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: PFDS
Coefficient of Determination: R^2 = 0.999565
Calibration curve: -0.000216684 * x^2 + 0.855752 * x + 0.256312
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



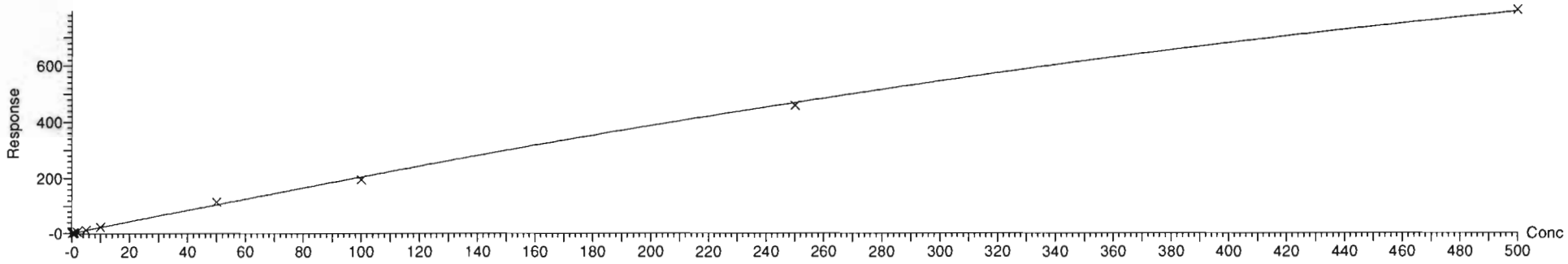
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.999284
Calibration curve: -0.000190975 * x^2 + 0.526751 * x + 0.00305913
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



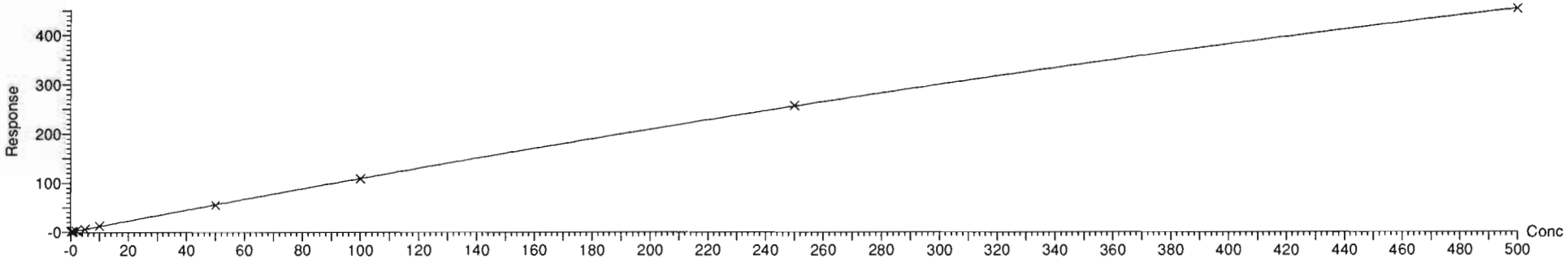
Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998442
Calibration curve: -0.00115884 * x^2 + 2.15968 * x + 0.0595807
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



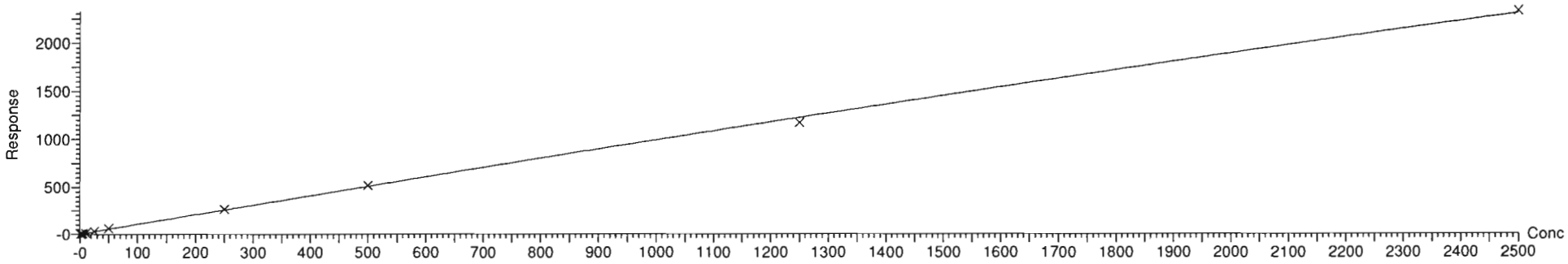
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999865
Calibration curve: -0.000456707 * x^2 + 1.13484 * x + 0.0460625
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



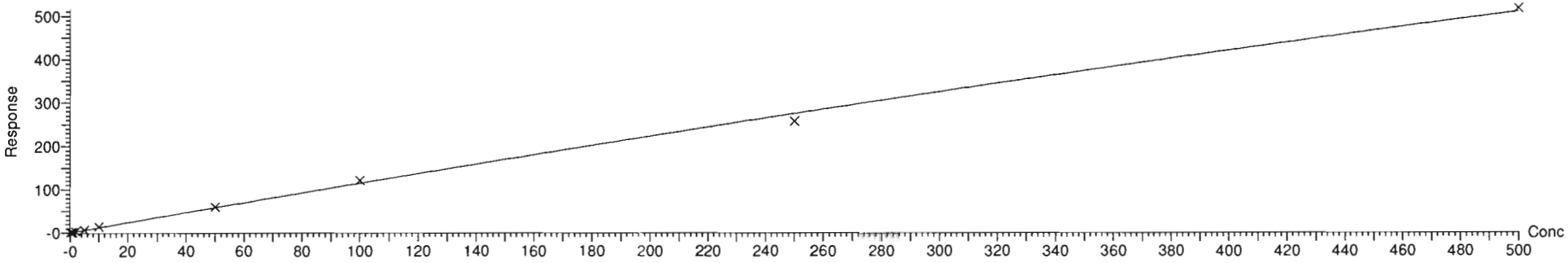
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.998832
Calibration curve: -4.55015e-005 * x^2 + 1.03454 * x + 0.263969
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



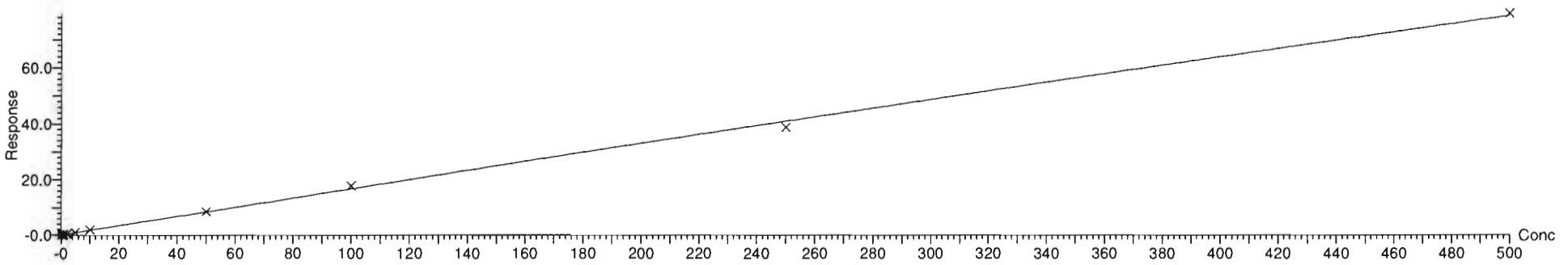
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.997851
Calibration curve: -0.000311303 * x^2 + 1.17491 * x + 0.125522
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



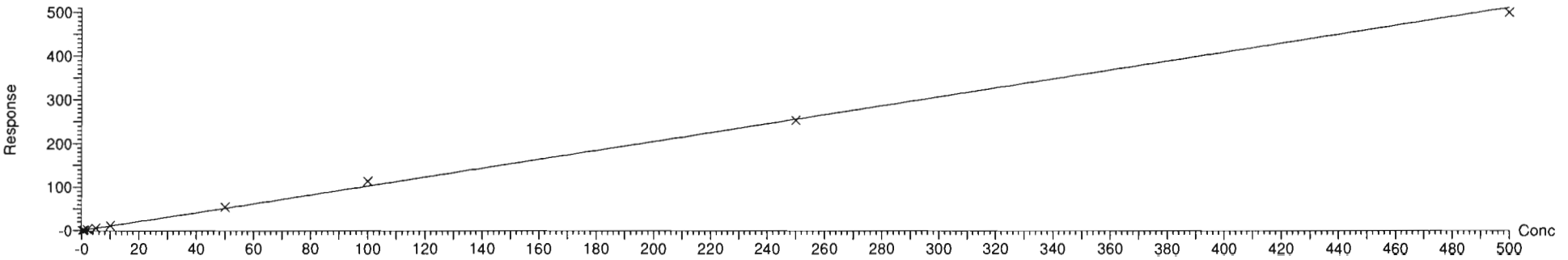
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.998514
Calibration curve: -2.58614e-005 * x^2 + 0.169877 * x + 0.0265444
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



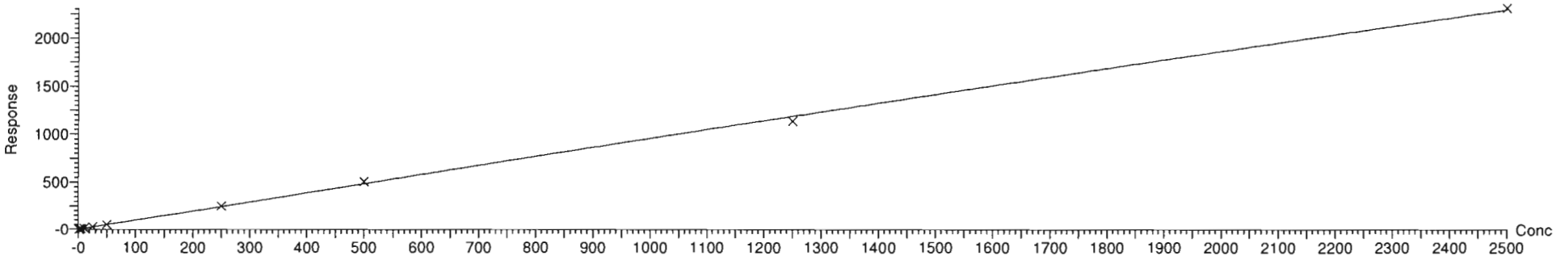
Compound name: PFTeDA
Correlation coefficient: r = 0.999103, r^2 = 0.998207
Calibration curve: 1.02091 * x + 0.120931
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



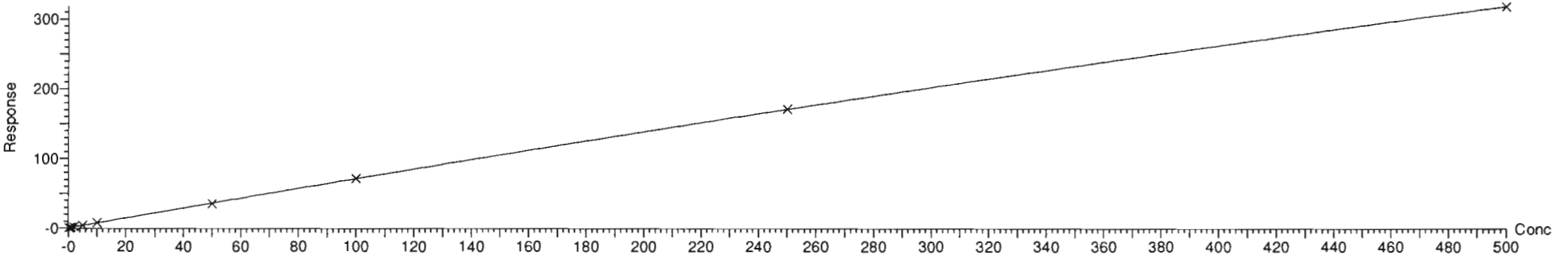
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999080
Calibration curve: -2.62185e-005 * x^2 + 0.983637 * x + -0.133463
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



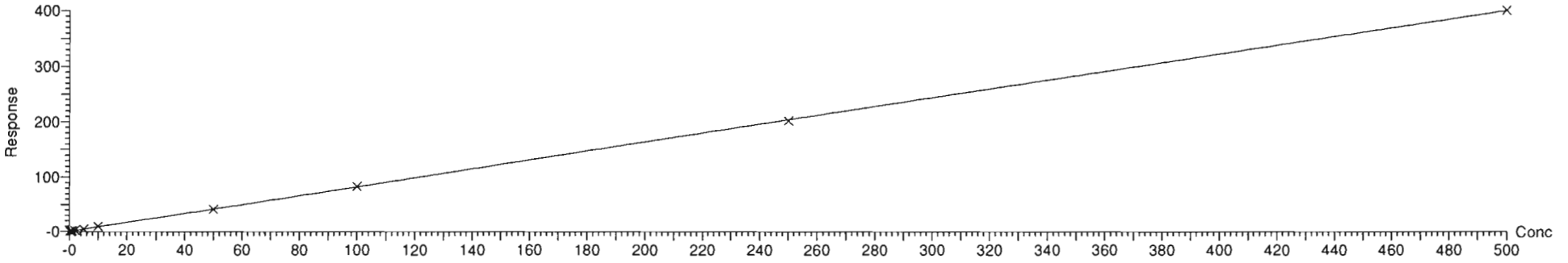
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999882
Calibration curve: -0.000184036 * x^2 + 0.728837 * x + 0.122772
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



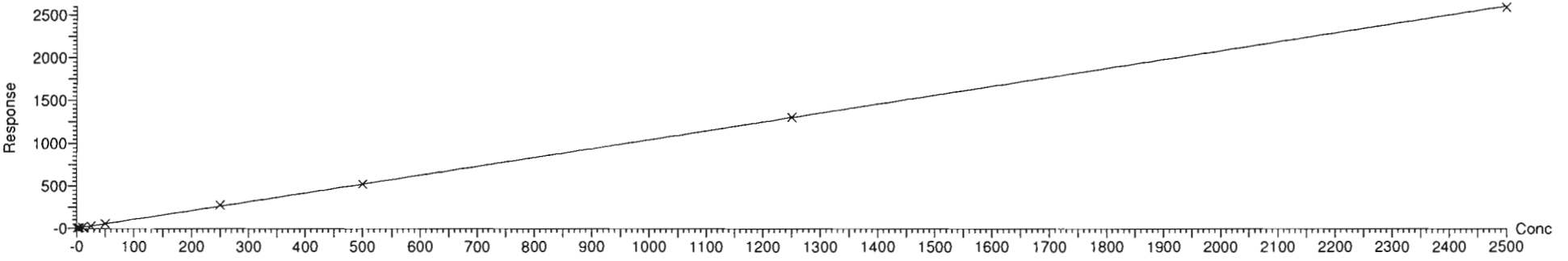
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Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: PFODA
Coefficient of Determination: R^2 = 0.999890
Calibration curve: -6.13069e-005 * x^2 + 0.829601 * x + 0.0231405
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
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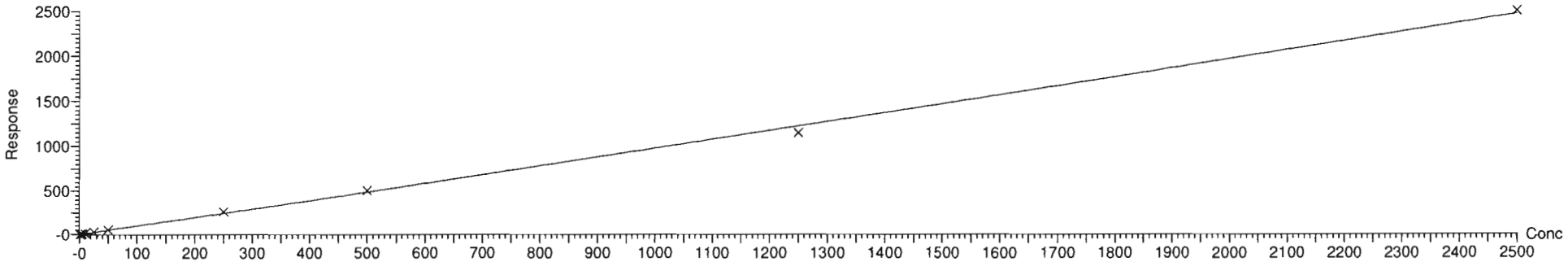
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999899, r^2 = 0.999799
Calibration curve: 1.04207 * x + 0.106927
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

Last Altered: Tuesday, February 25, 2020 10:34:33 Pacific Standard Time
Printed: Tuesday, February 25, 2020 11:02:04 Pacific Standard Time

Compound name: N-EtFOSE
Coefficient of Determination: R^2 = 0.998207
Calibration curve: 9.1222e-006 * x^2 + 0.964862 * x + 0.221803
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: D:\PFAS5.PRO\RESULTS\200224P1\200224P1-CRV.qld

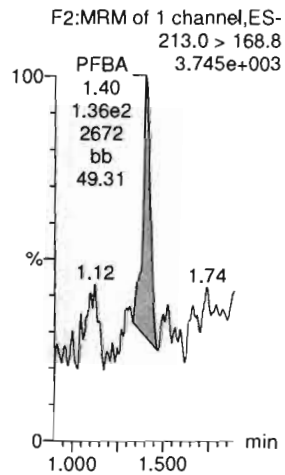
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Printed: Tuesday, February 25, 2020 11:56:57 Pacific Standard Time

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Calibration: 25 Feb 2020 11:55:37

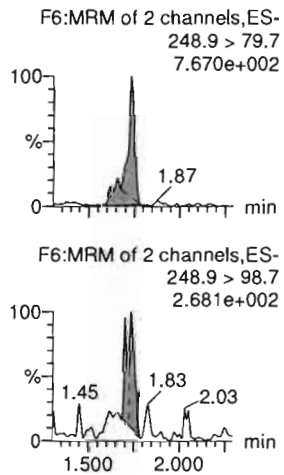
4 am 2/25/2020

Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200224P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

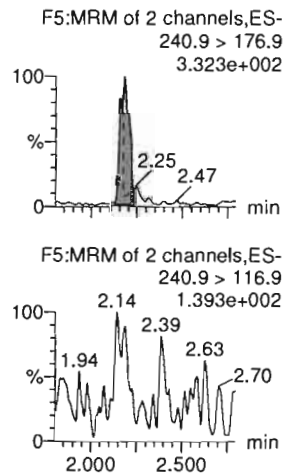
PFBA



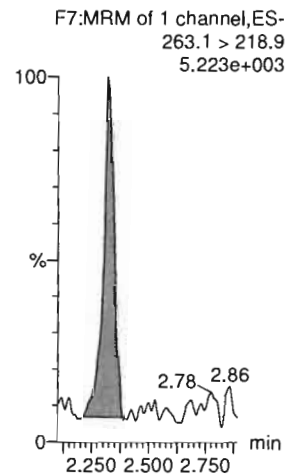
PFPrS



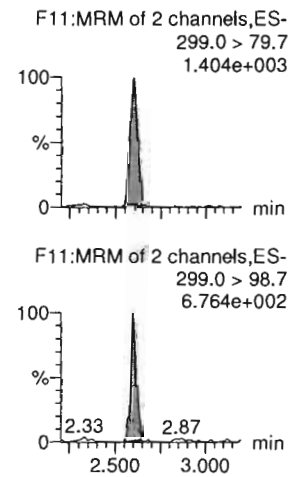
3:3 FTCA



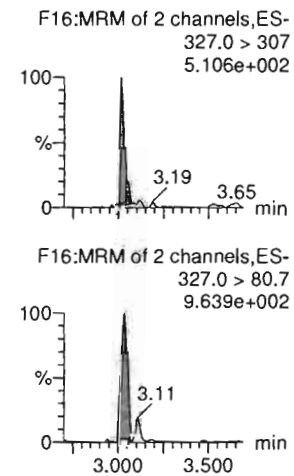
PFPeA



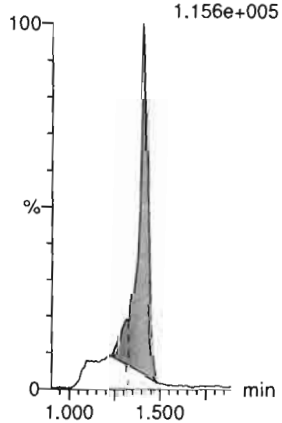
PFBS



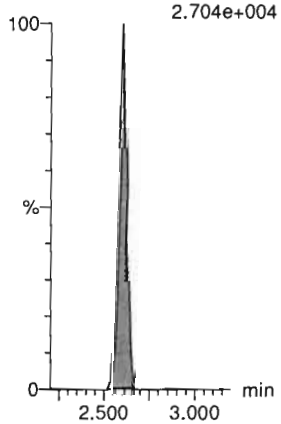
4:2 FTS



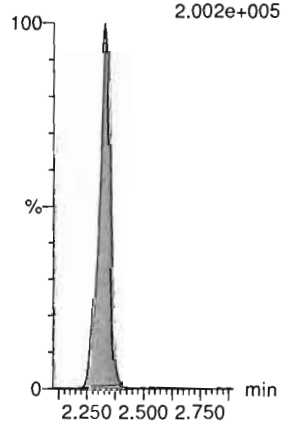
13C3-PFBA-EIS



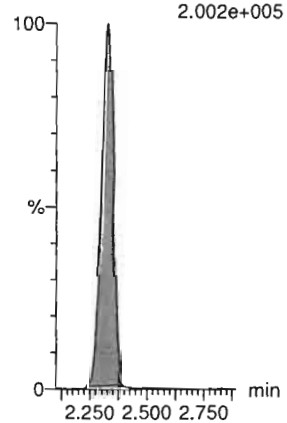
13C3-PFBS-EIS



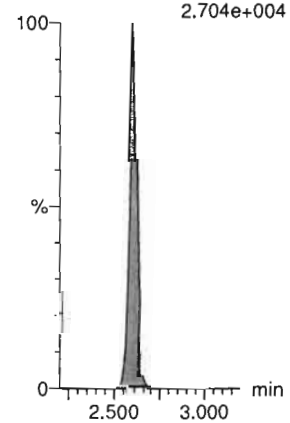
13C3-PFPeA-EIS



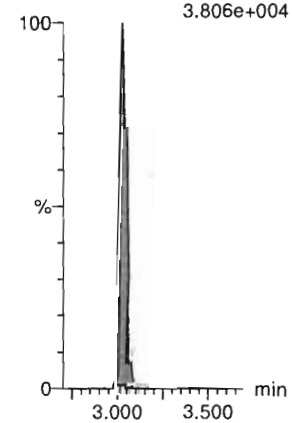
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

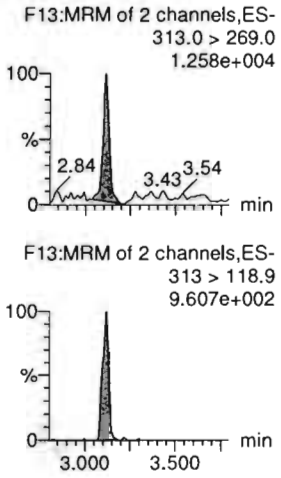


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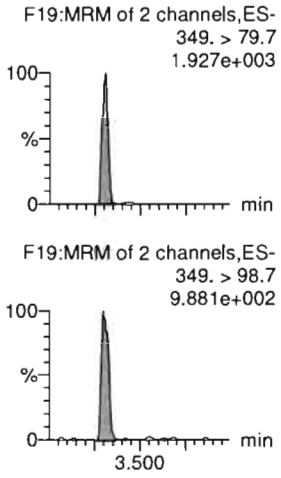
Last Altered: Tuesday, February 25, 2020 09:46:53 Pacific Standard Time
Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

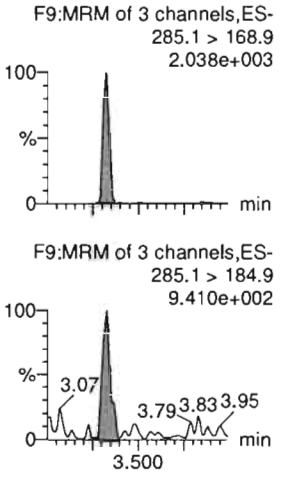
PFHxA



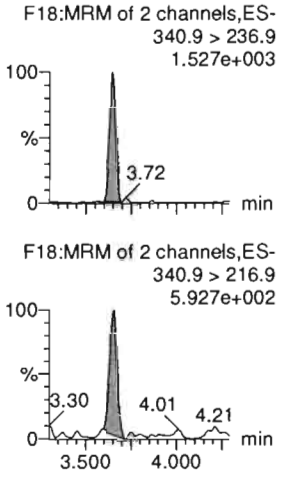
PFPeS



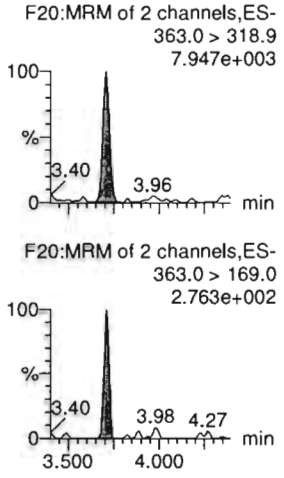
HFPO-DA



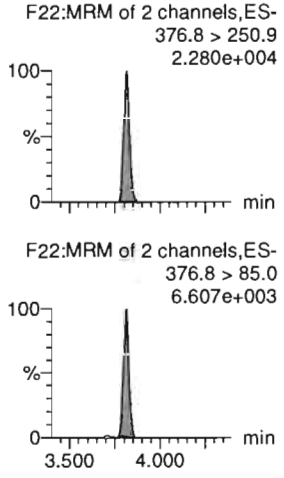
5:3 FTCA



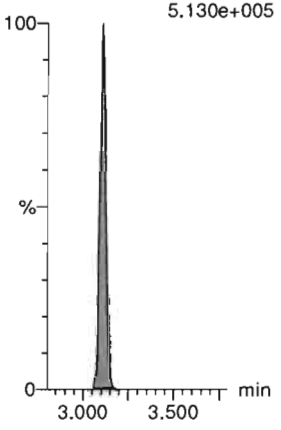
PFHpA



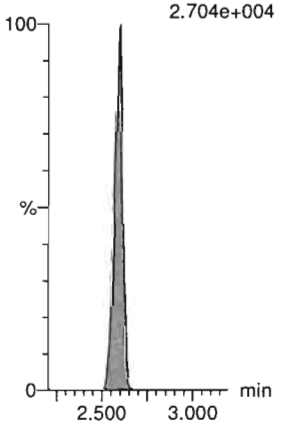
ADONA



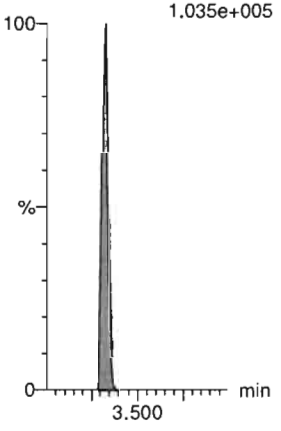
13C2-PFHxA-EIS



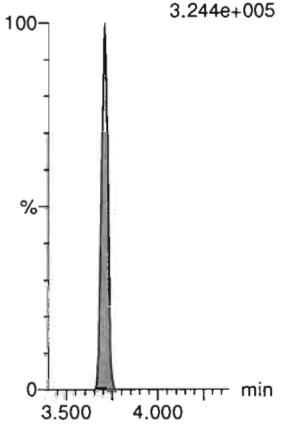
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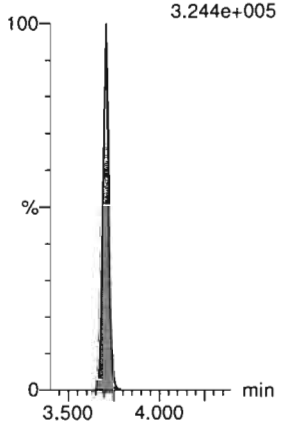
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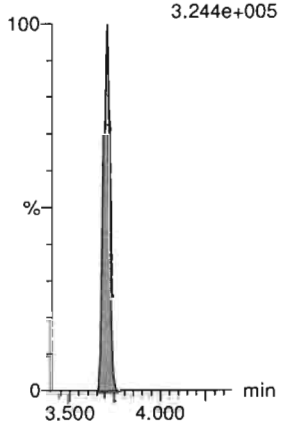
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13C4-PFHpA-EIS



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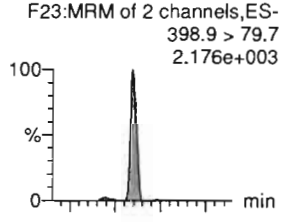


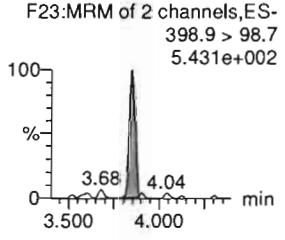
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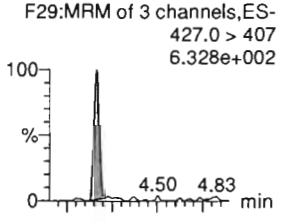
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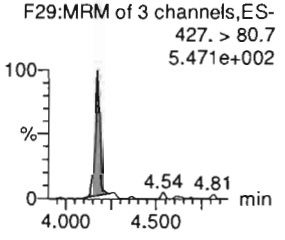
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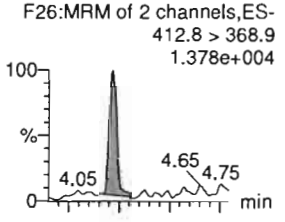


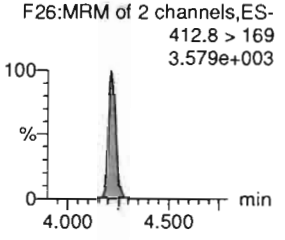
6:2 FTS



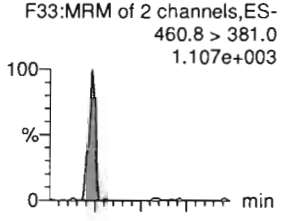


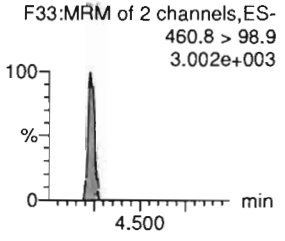
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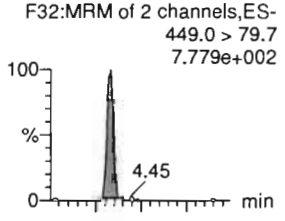


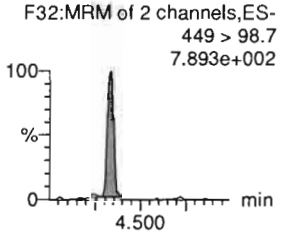
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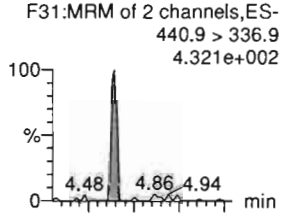


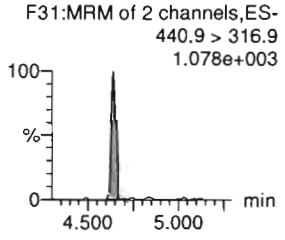
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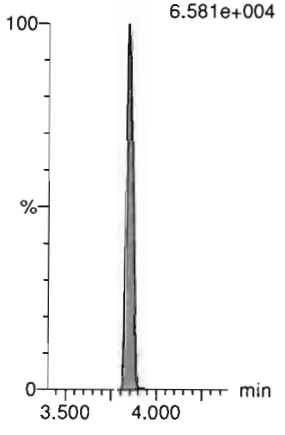


7:3 FTCA

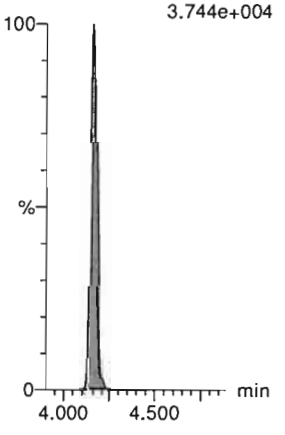




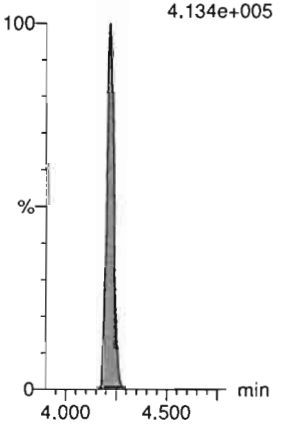
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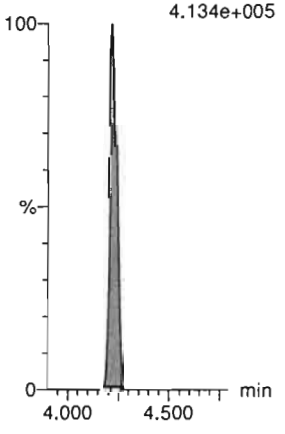
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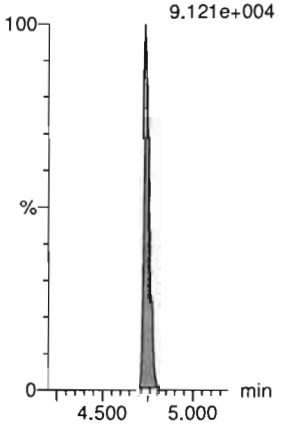
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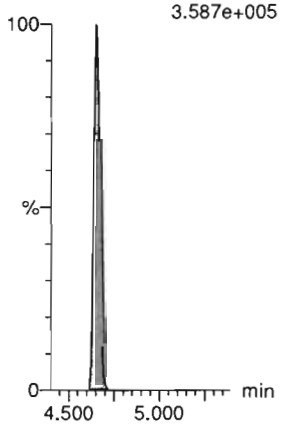
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

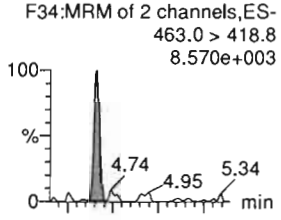


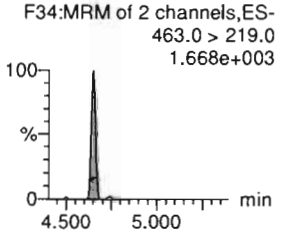
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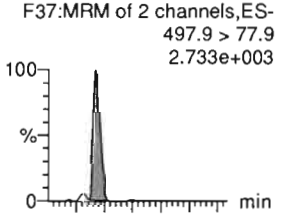
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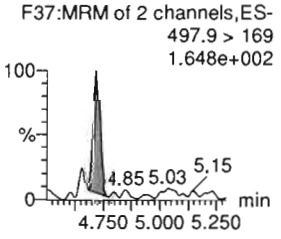
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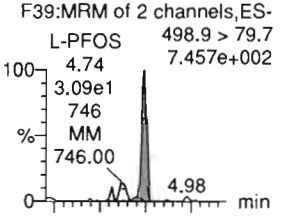


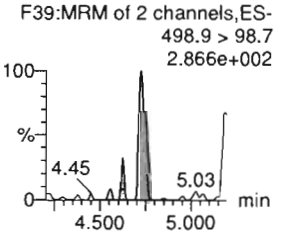
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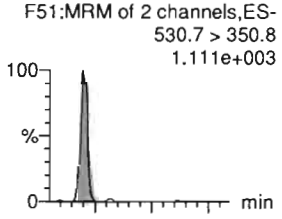


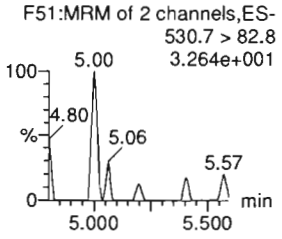
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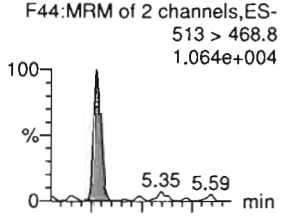


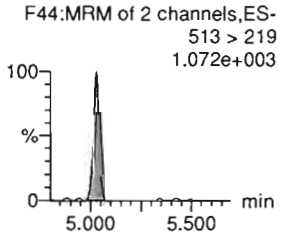
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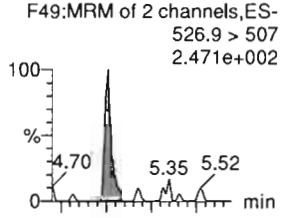


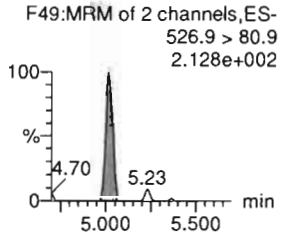
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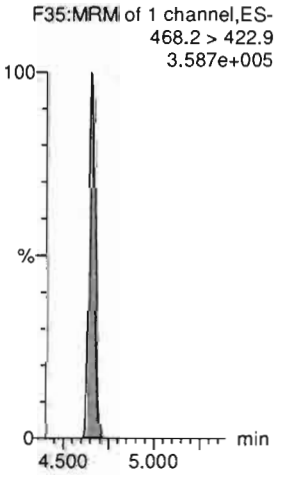


8:2 FTS

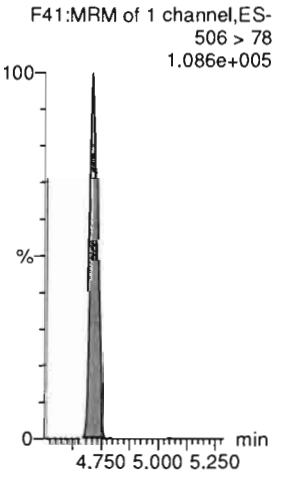




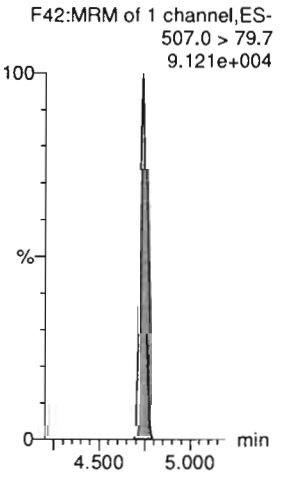
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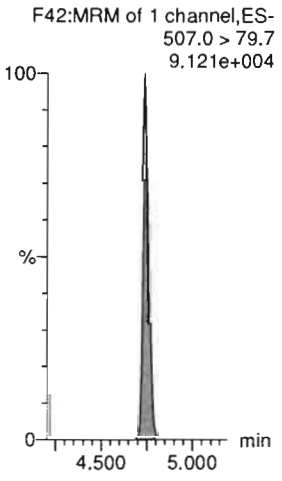
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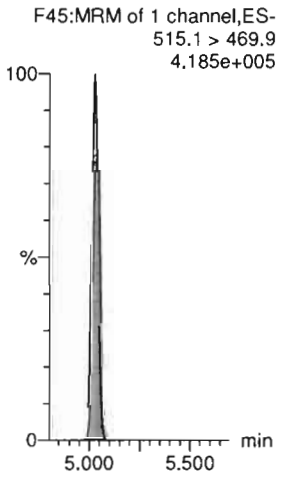
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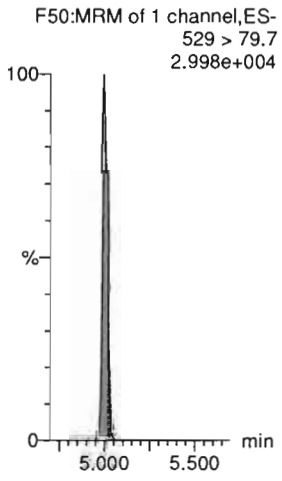
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

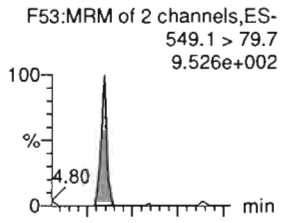


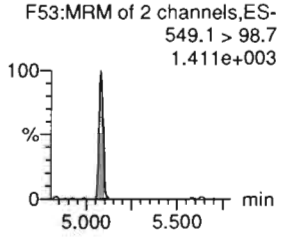
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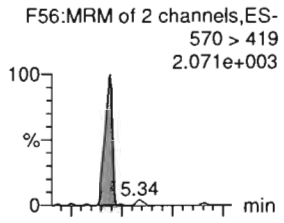
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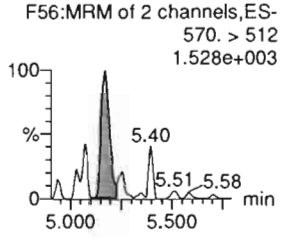
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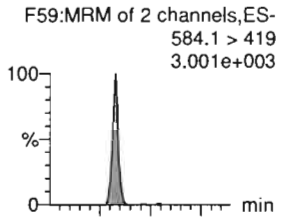


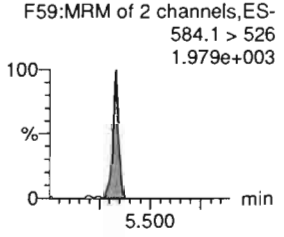
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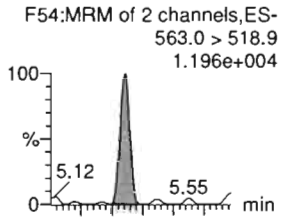


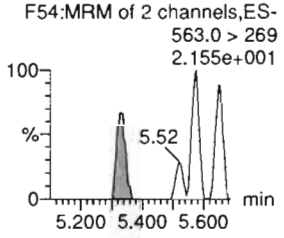
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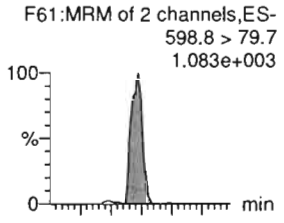


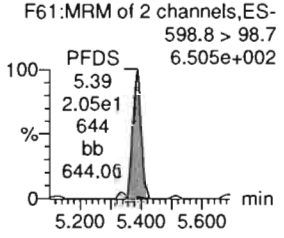
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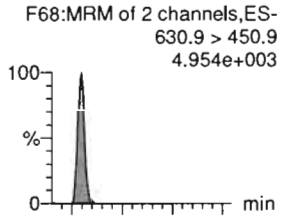


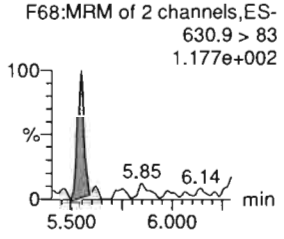
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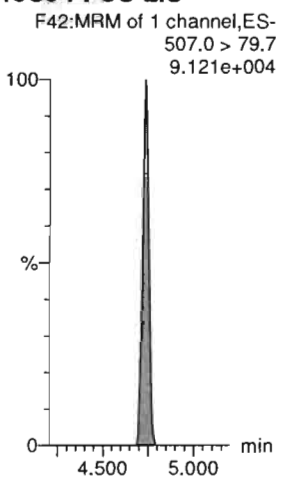


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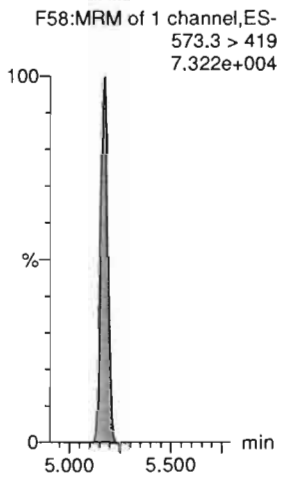




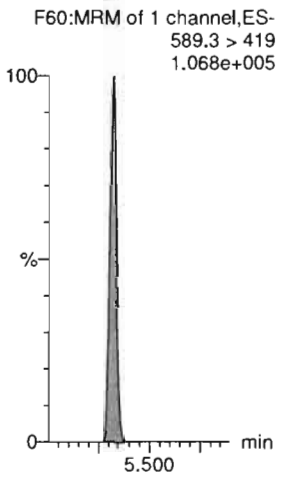
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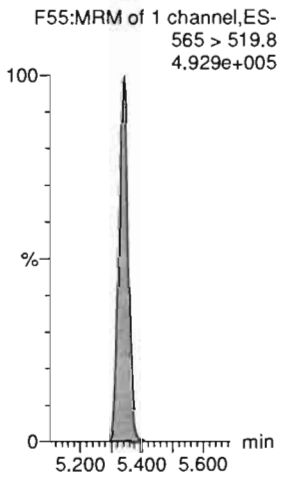
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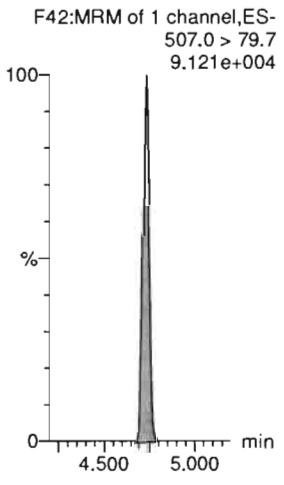
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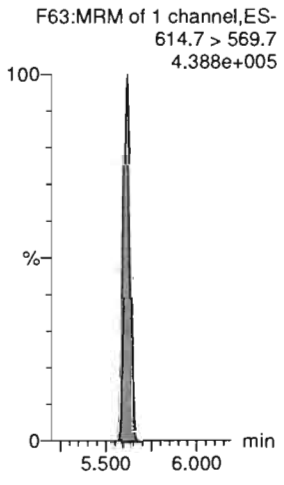
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

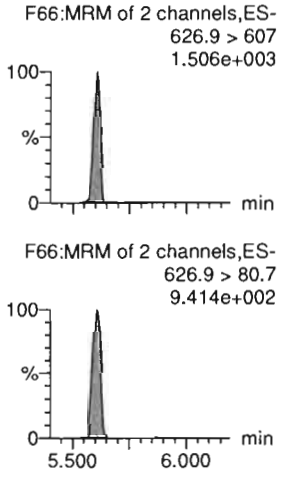


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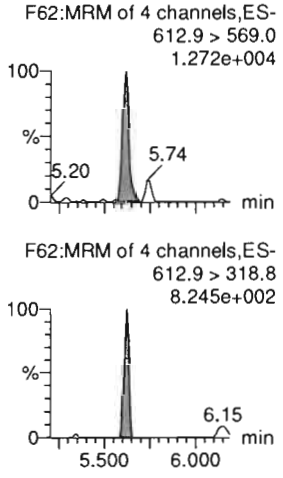
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

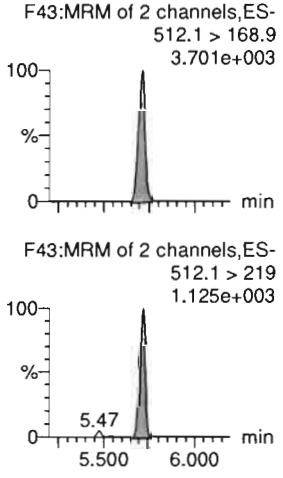
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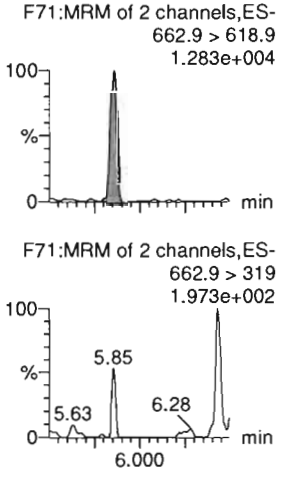
PFDoA



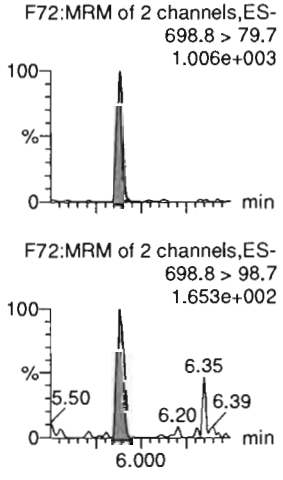
N-MeFOSA



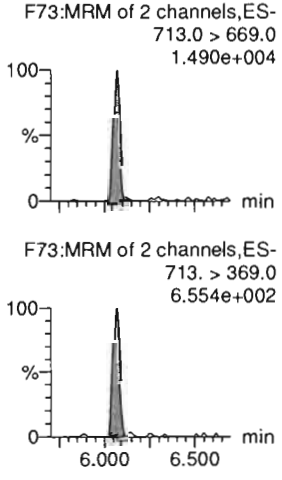
PFTrDA



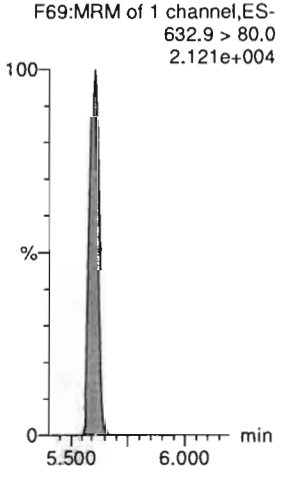
PFDoS



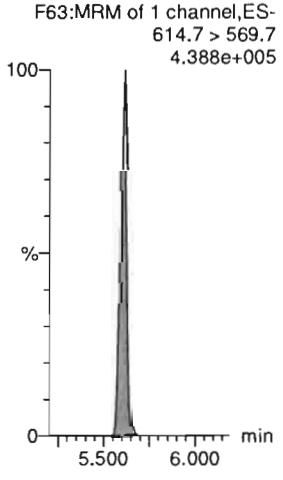
PFTeDA



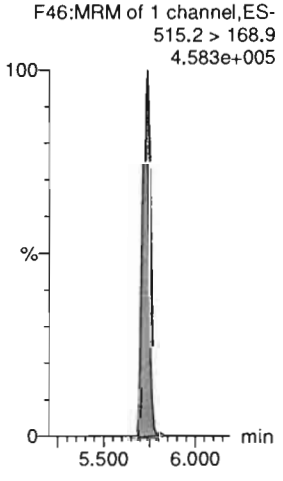
13C2-10:2 FTS-EIS



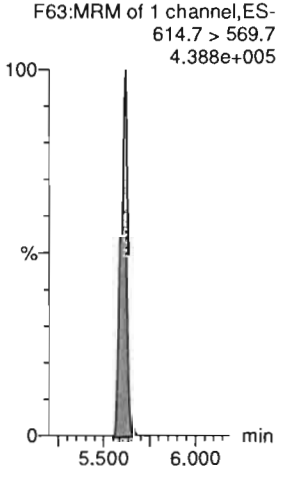
13C2-PFDoA-EIS



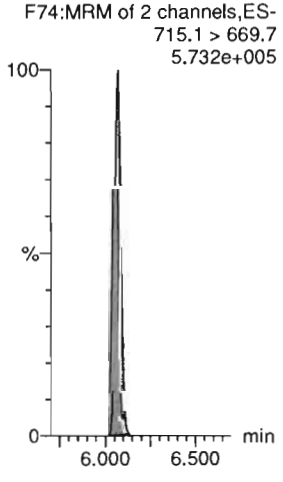
d3-N-MeFOSA-EIS



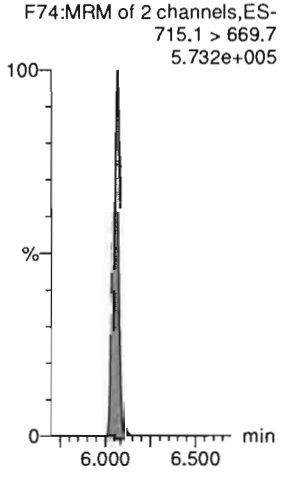
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

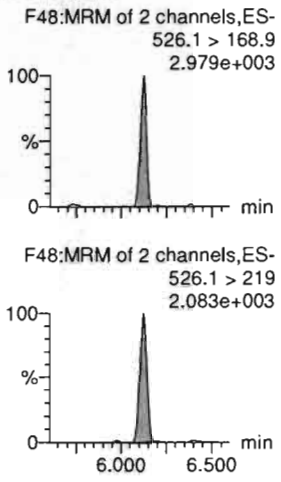


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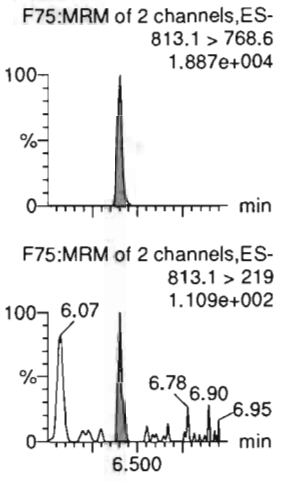
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Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

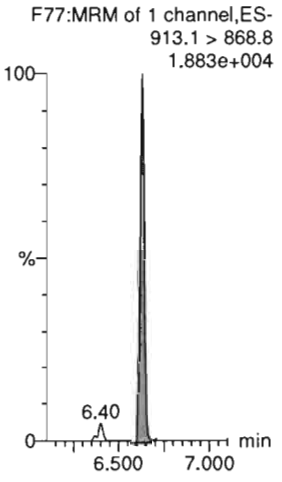
N-EtFOSA



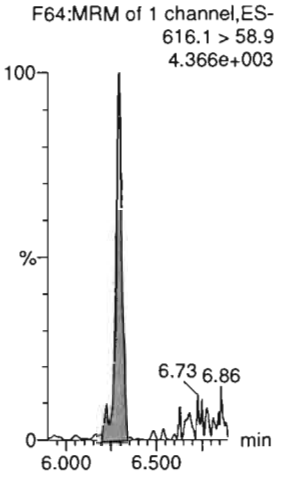
PFHxDA



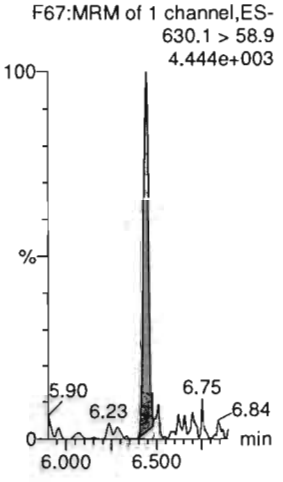
PFODA



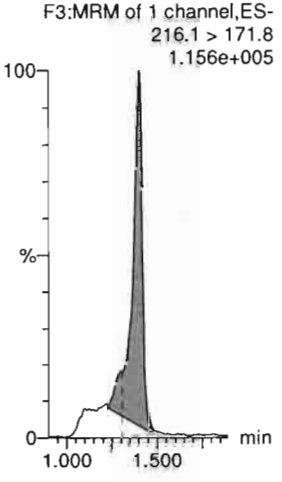
N-MeFOSE



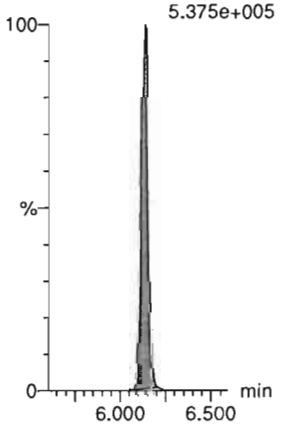
N-EtFOSE



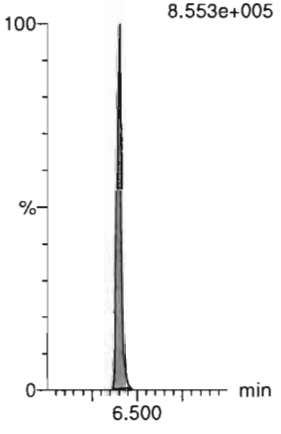
13C3-PFBA-RSD



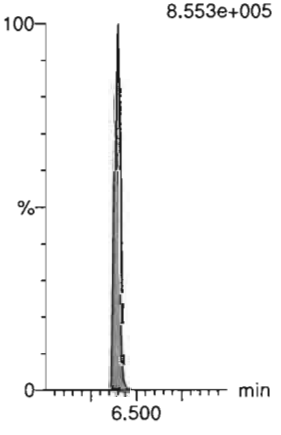
d5-N-ETFOSA-EIS



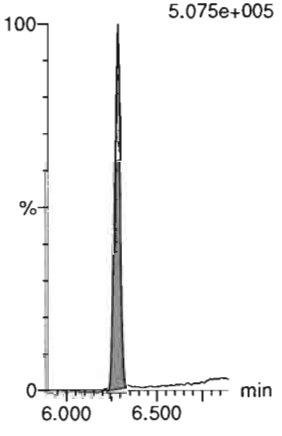
13C2-PFHxDA-EIS



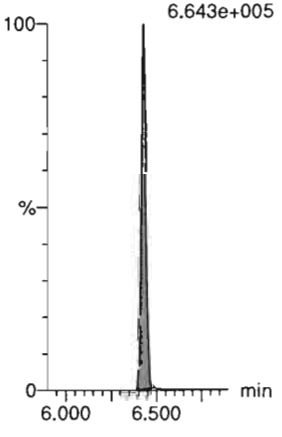
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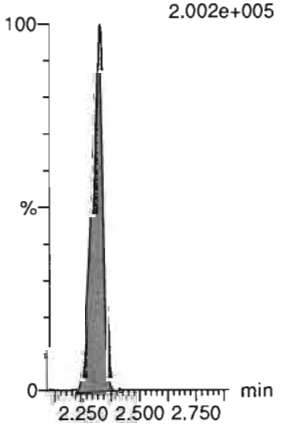
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

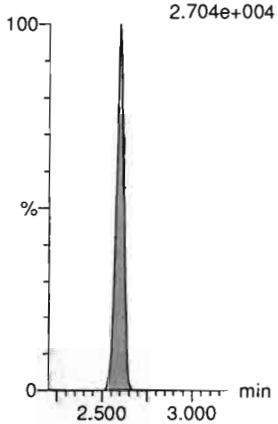


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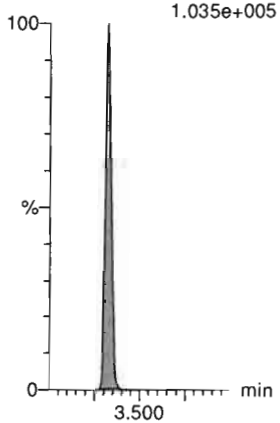
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Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

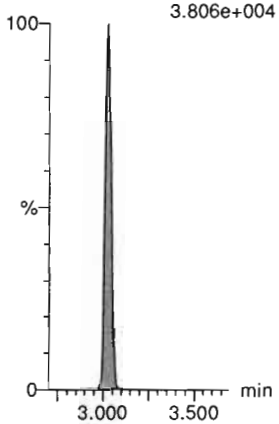
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.704e+004



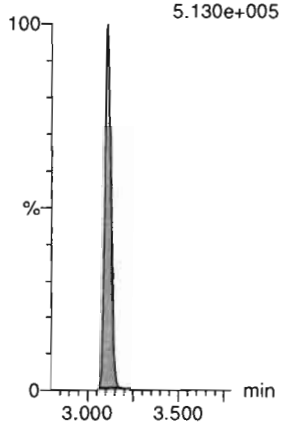
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.035e+005



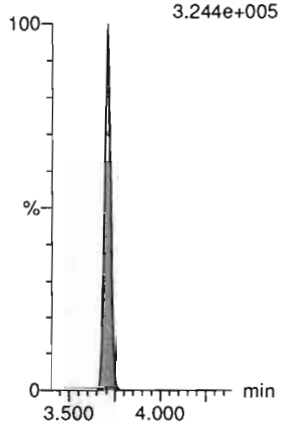
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.806e+004



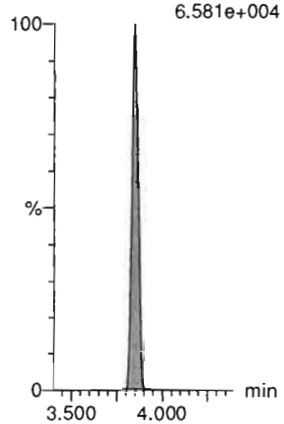
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.130e+005



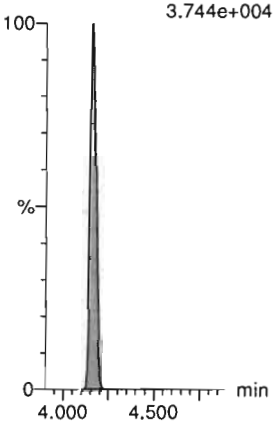
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.244e+005



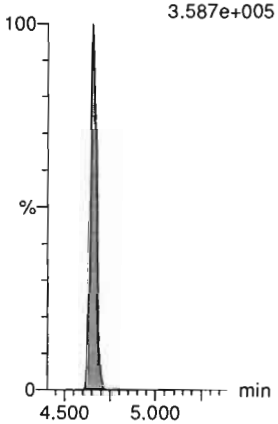
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.581e+004



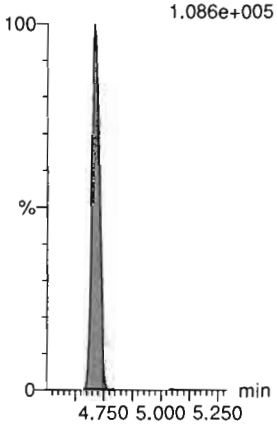
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.744e+004



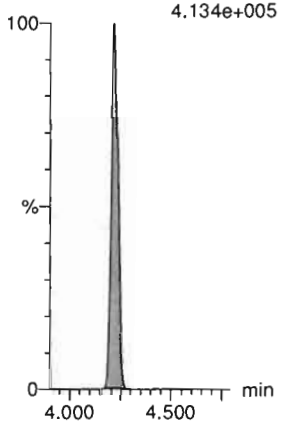
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.587e+005



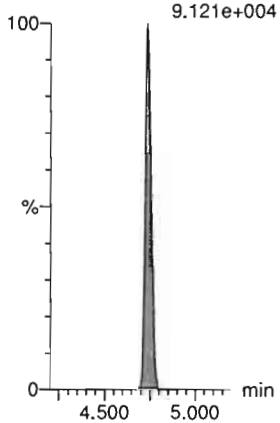
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.086e+005



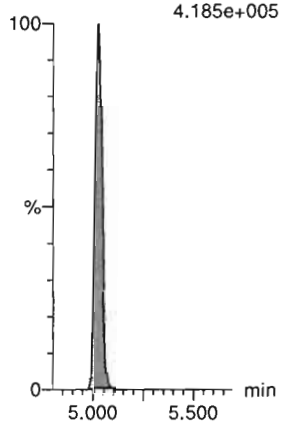
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.134e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.121e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.185e+005

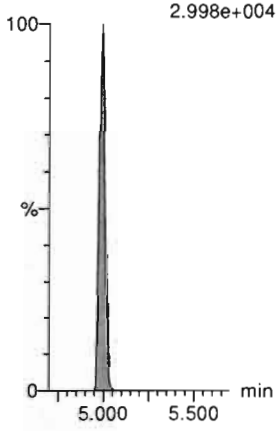


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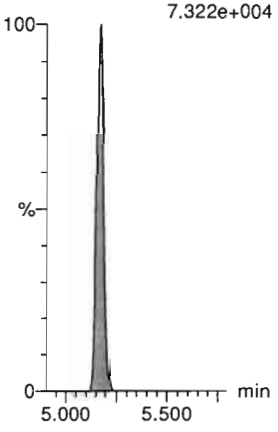
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

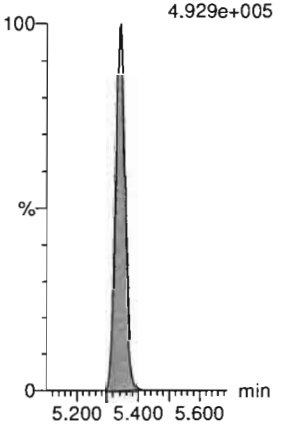
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.998e+004



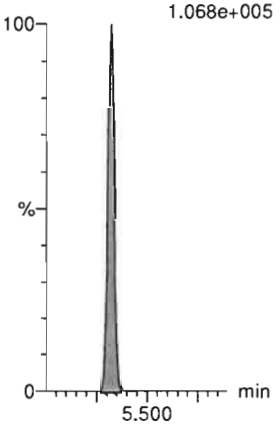
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.322e+004



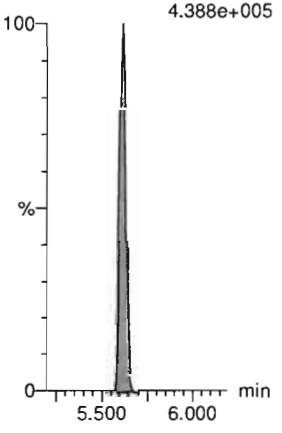
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
4.929e+005



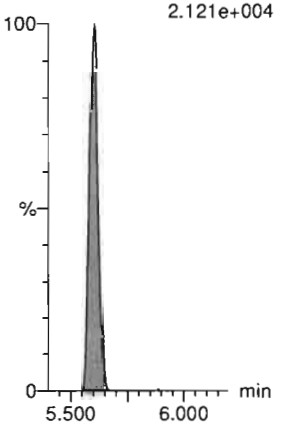
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.068e+005



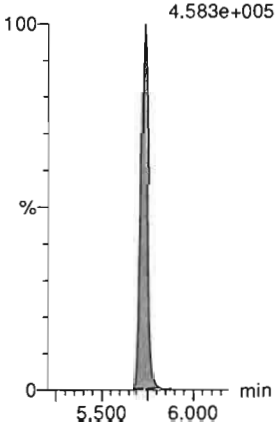
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.388e+005



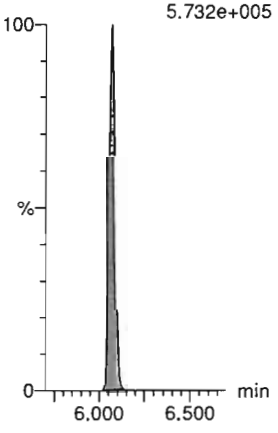
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.121e+004



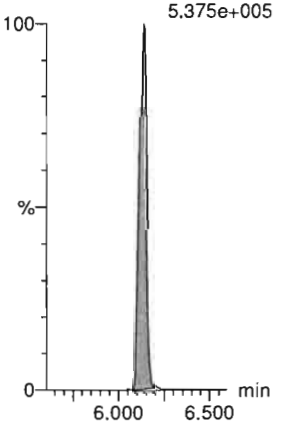
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.583e+005



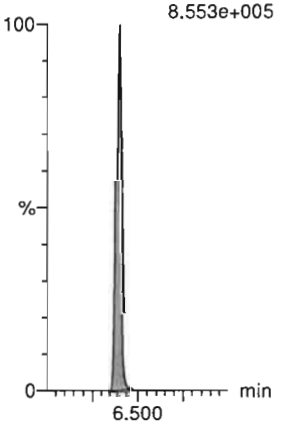
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.732e+005



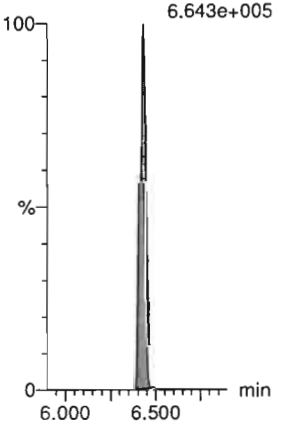
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.375e+005



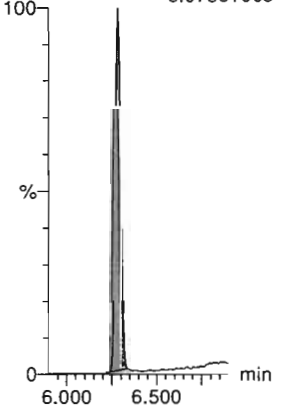
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.553e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.643e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.075e+005

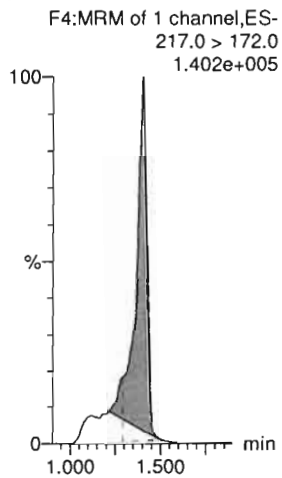


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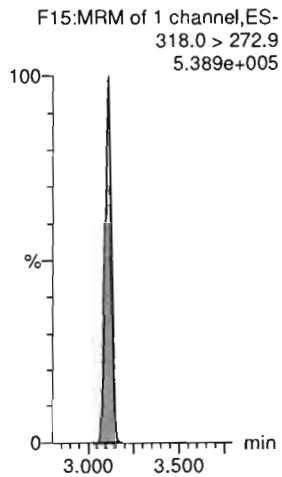
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Name: 200224P1-3, Date: 24-Feb-2020, Time: 17:32:01, ID: ST200220P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

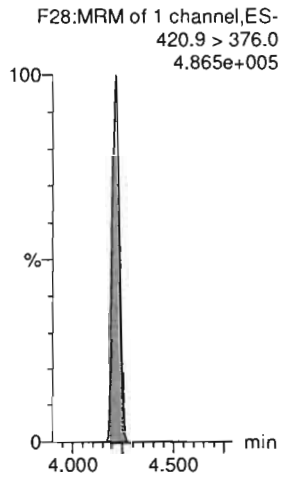
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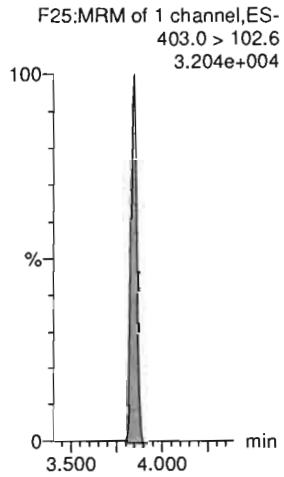
13C5-PFHxA



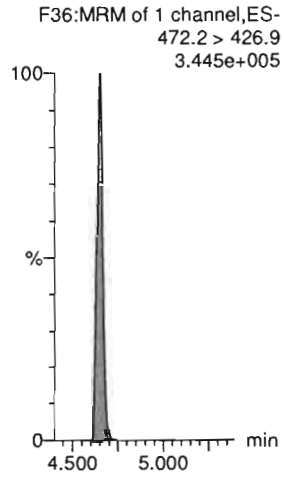
13C8-PFOA



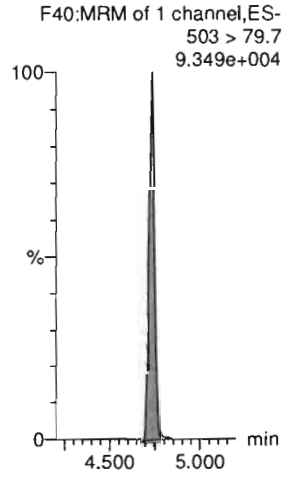
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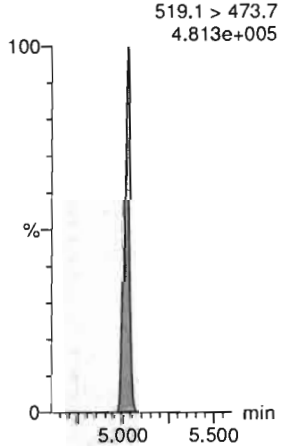
13C9-PFNA



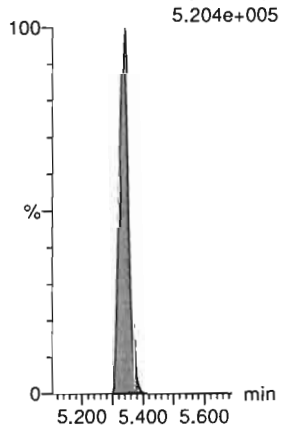
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13C6-PFDA



13C7-PFUdA



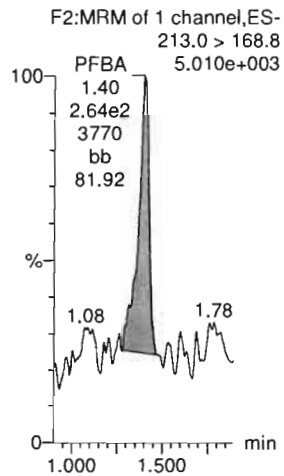
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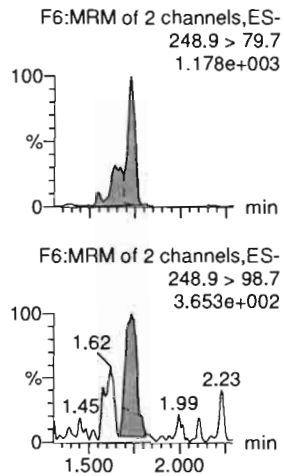
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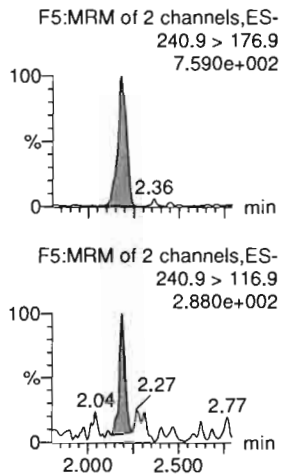
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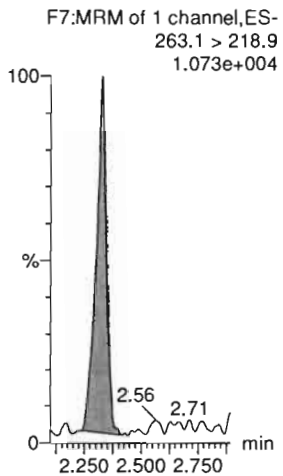
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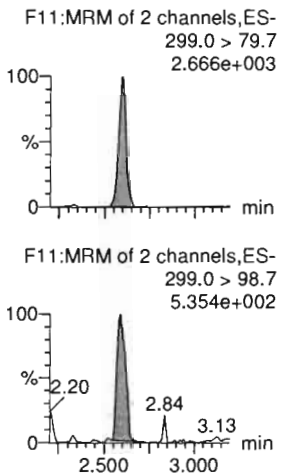
3:3 FTCA



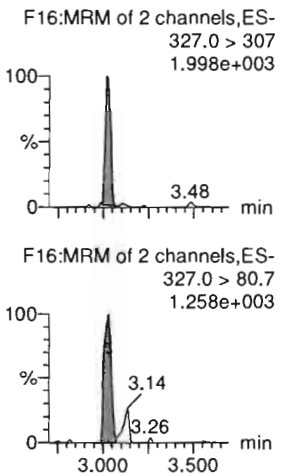
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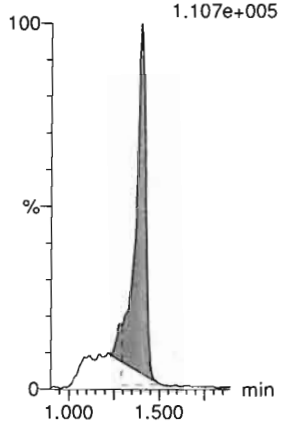
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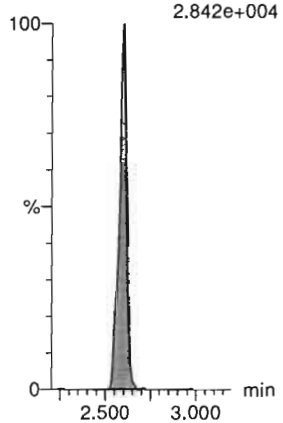
4:2 FTS



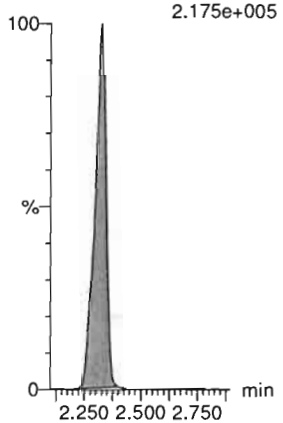
13C3-PFBA-EIS



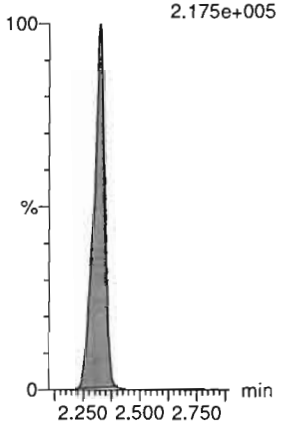
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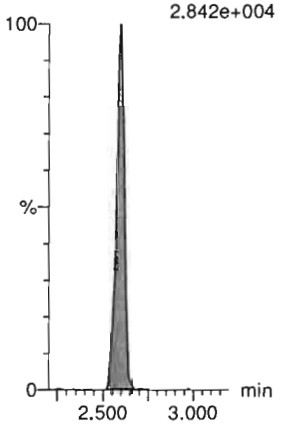
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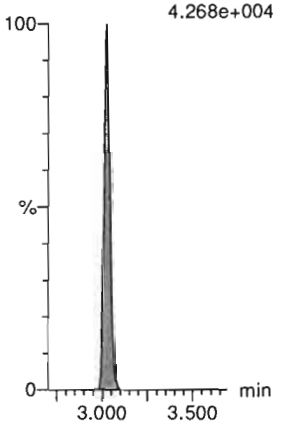
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

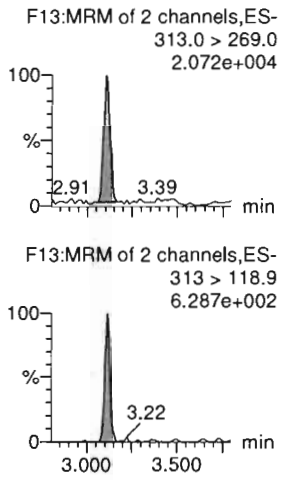


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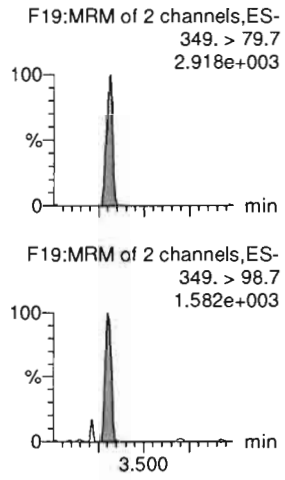
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Name: 200224P1-4, Date: 24-Feb-2020, Time: 17:42:30, ID: ST200220P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

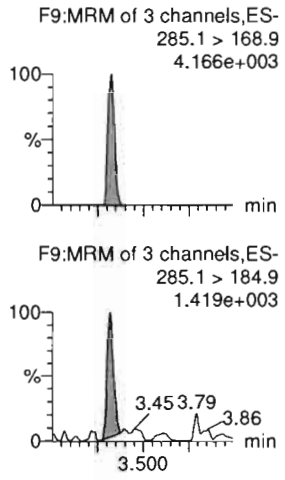
PFHxA



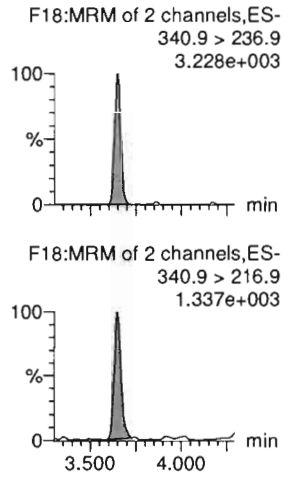
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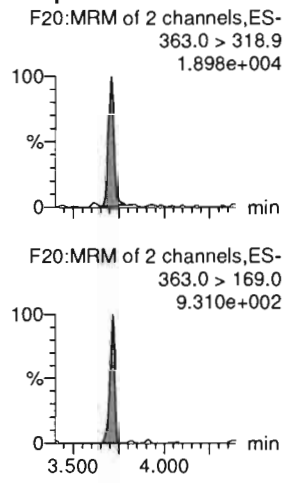
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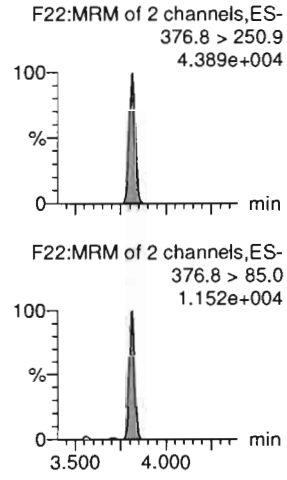
5:3 FTCA



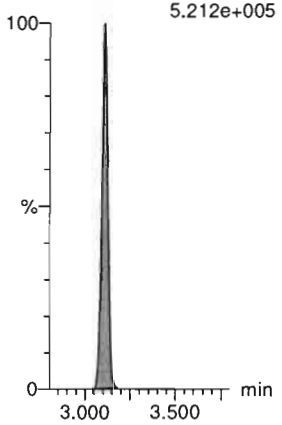
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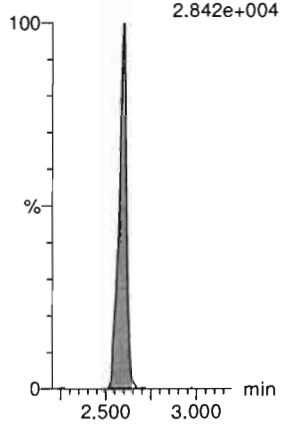
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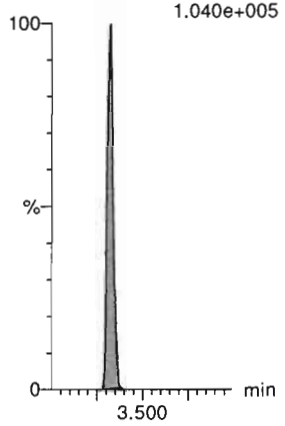
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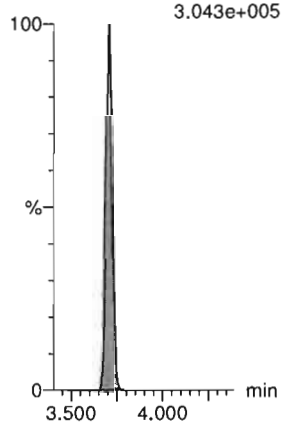
13C3-PFBS-EIS



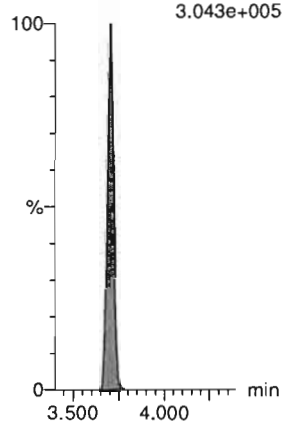
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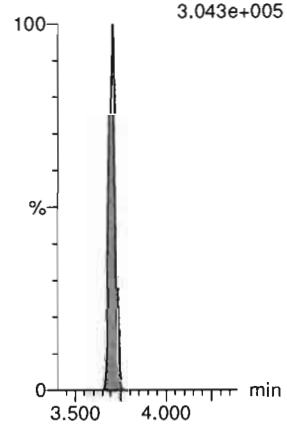
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

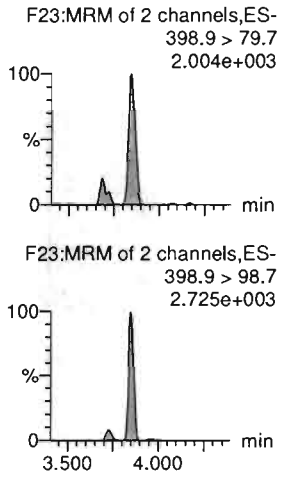


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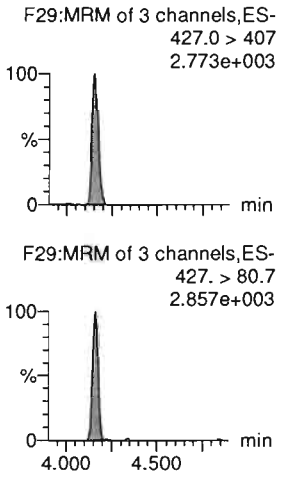
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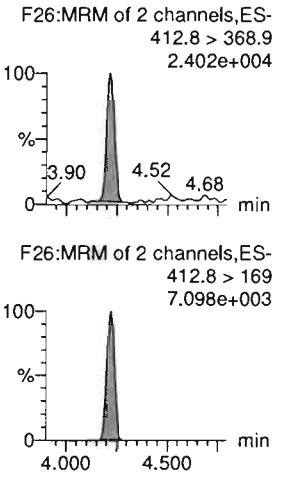
L-PFHxS



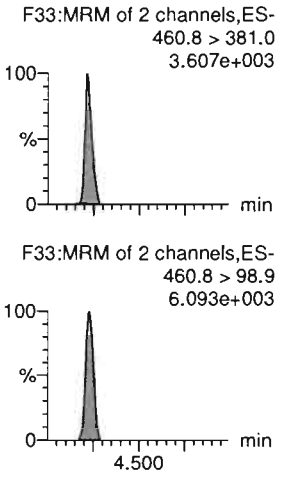
6:2 FTS



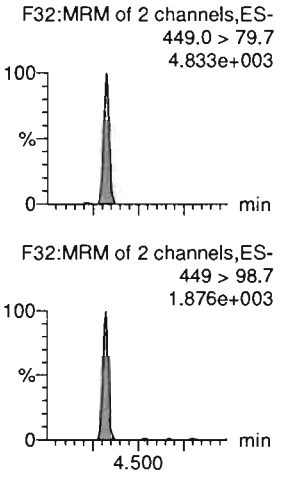
L-PFOA



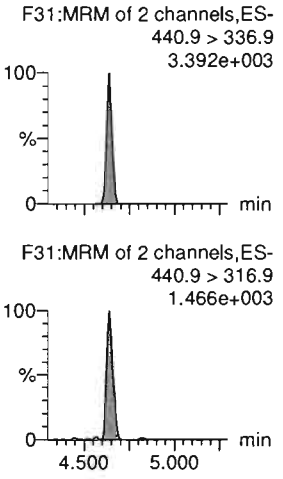
PFEChS



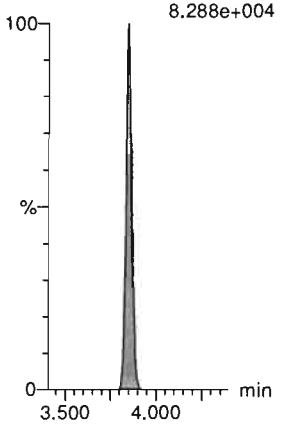
PFHpS



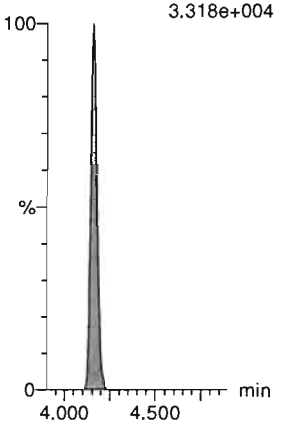
7:3 FTCA



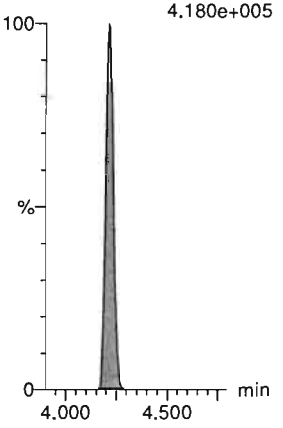
13C3-PFHxS-EIS



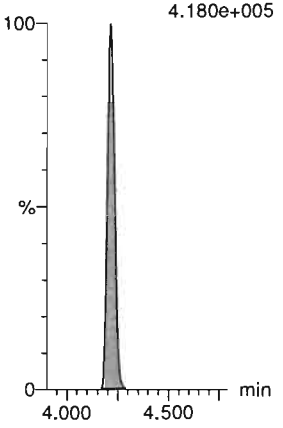
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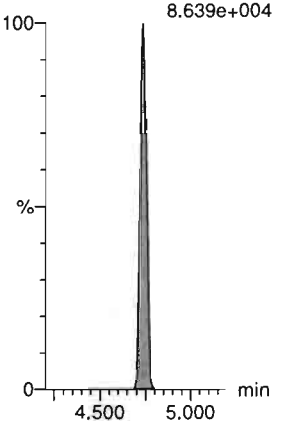
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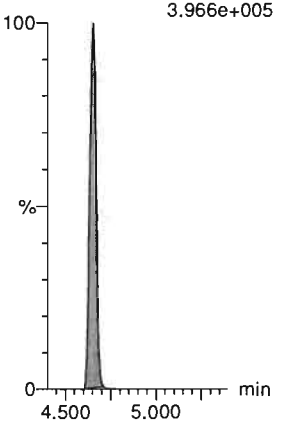
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13C8-PFOS-EIS



13C5-PFNA-EIS

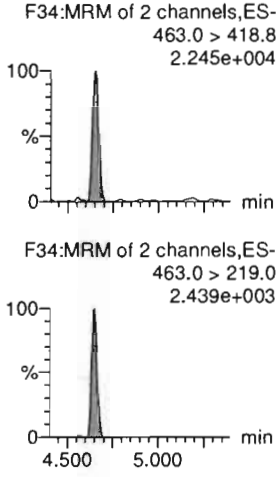


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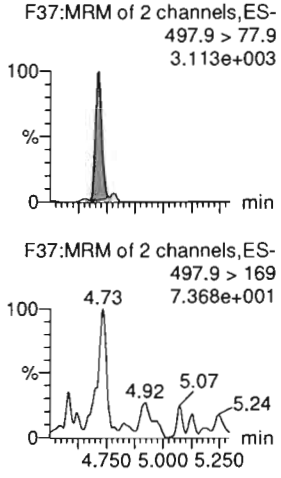
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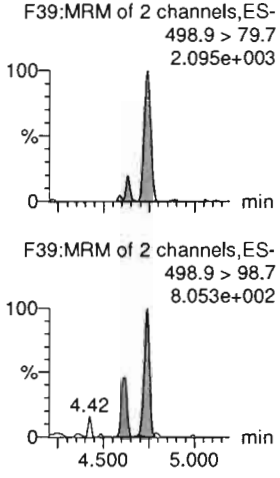
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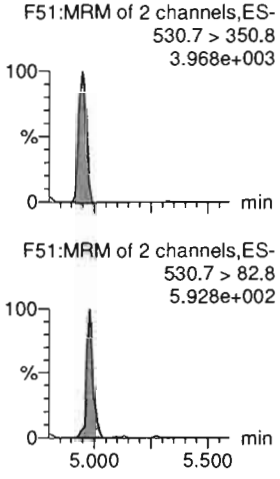
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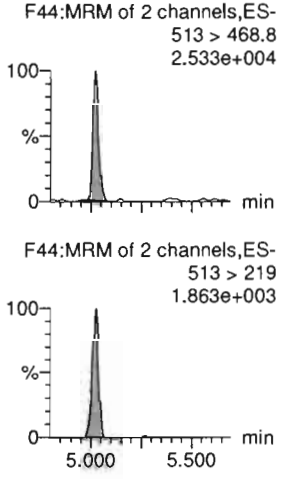
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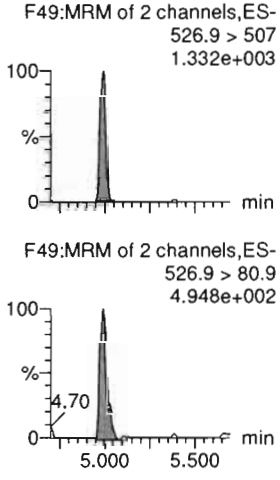
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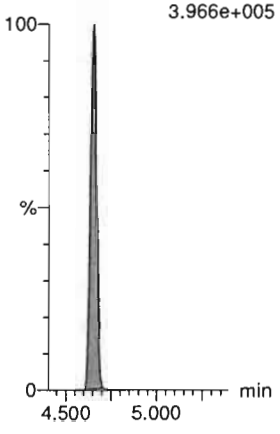
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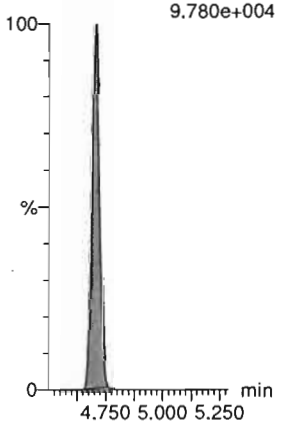
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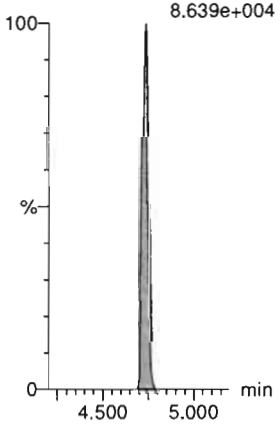
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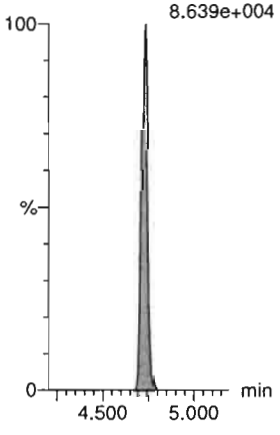
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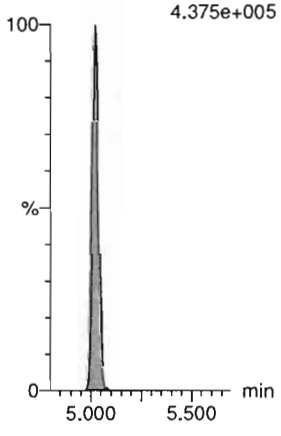
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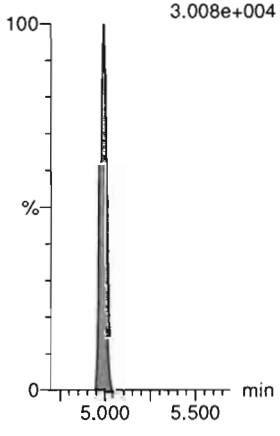
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13C2-PFDA-EIS



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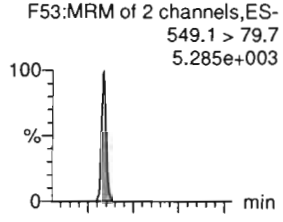


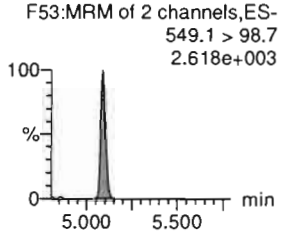
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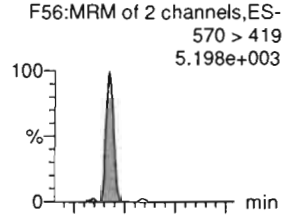
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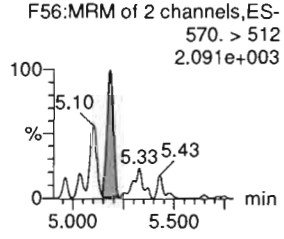
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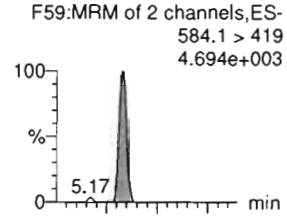


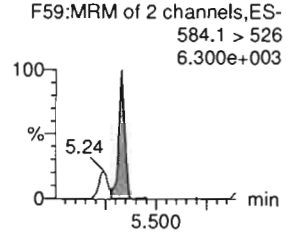
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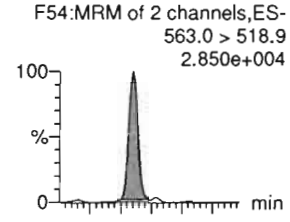


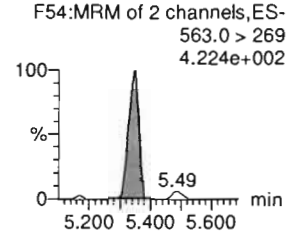
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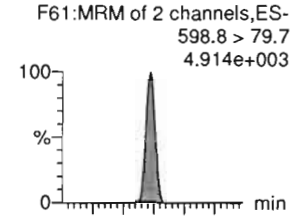


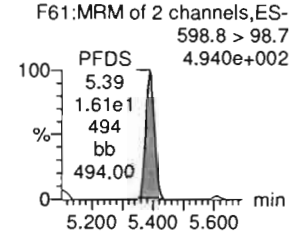
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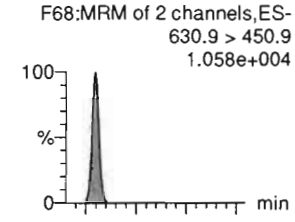


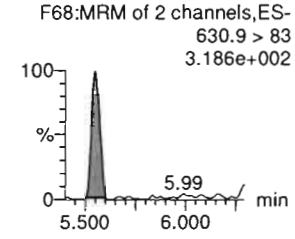
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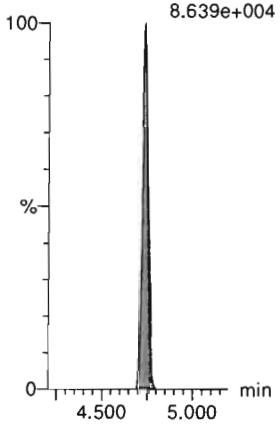


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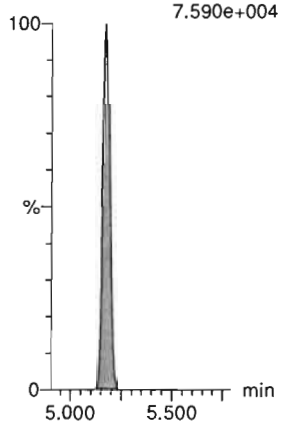




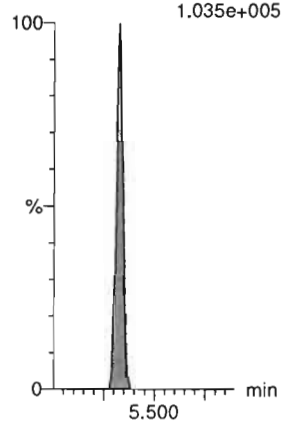
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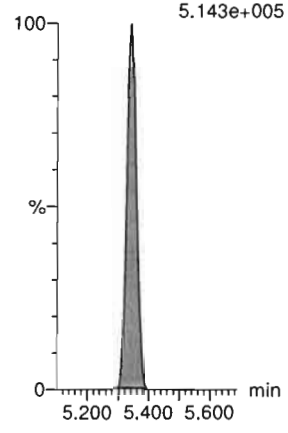
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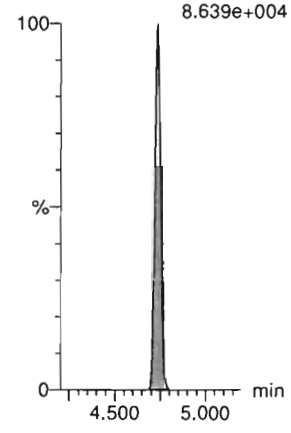
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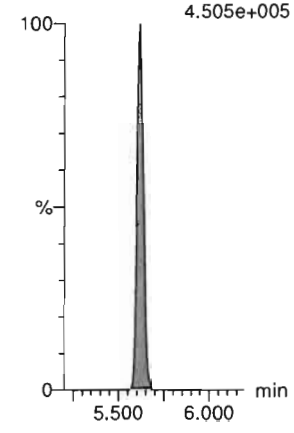
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13C8-PFOS-EIS



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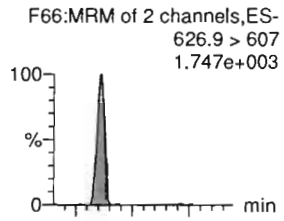


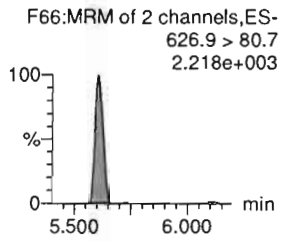
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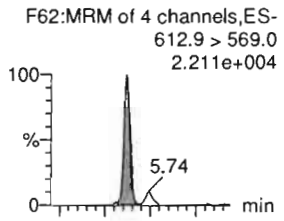
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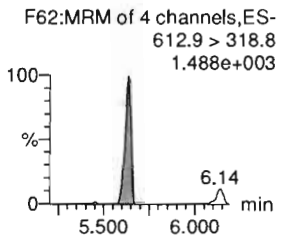
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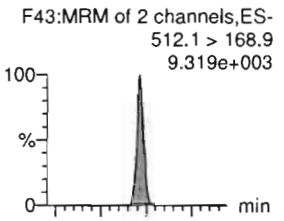


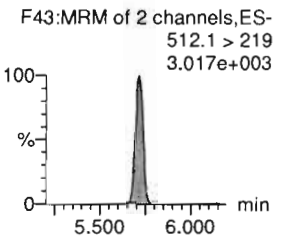
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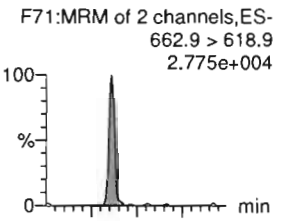


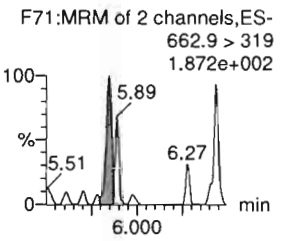
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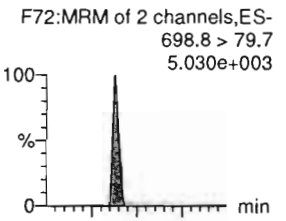


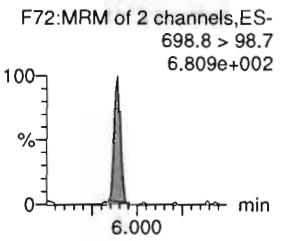
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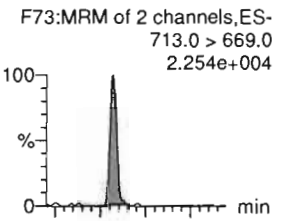


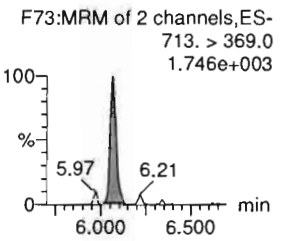
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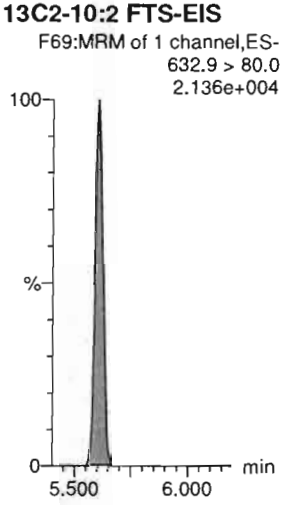


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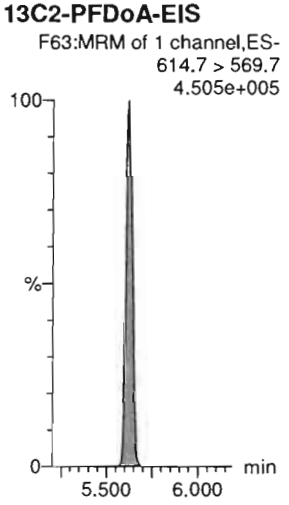




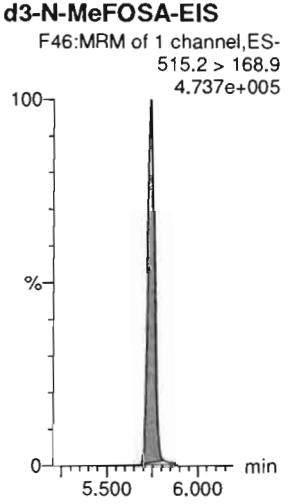
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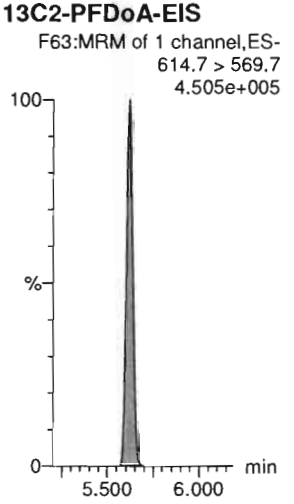
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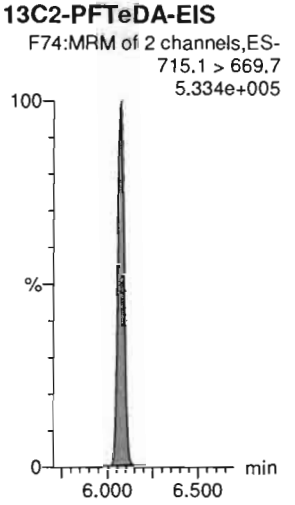
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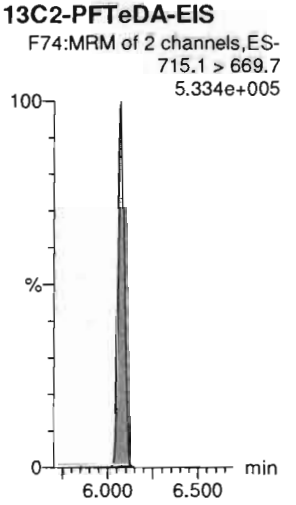
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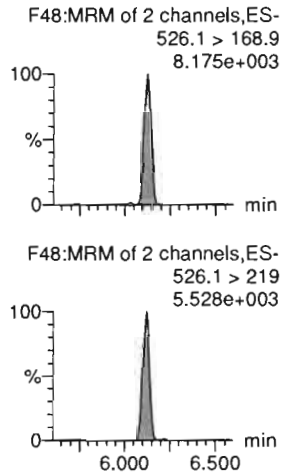


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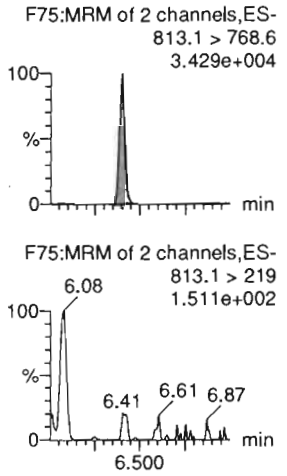
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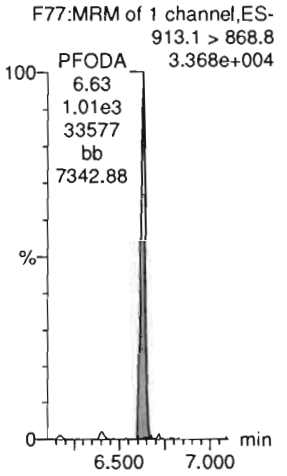
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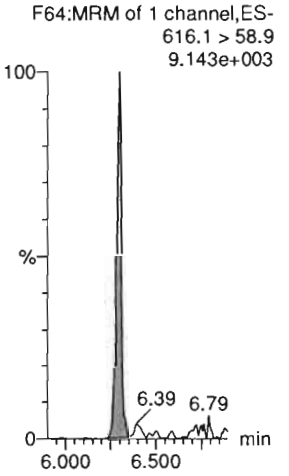
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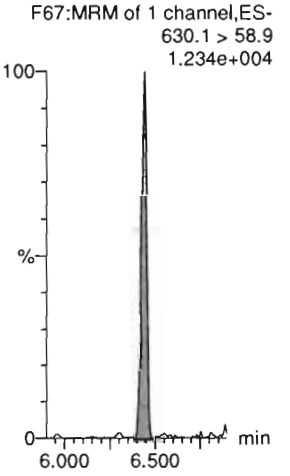
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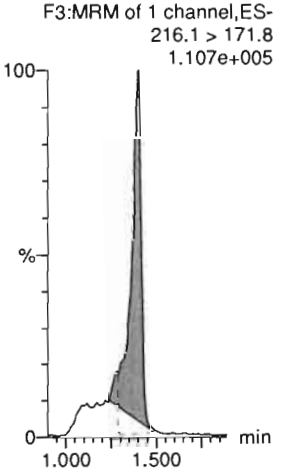
N-MeFOSE



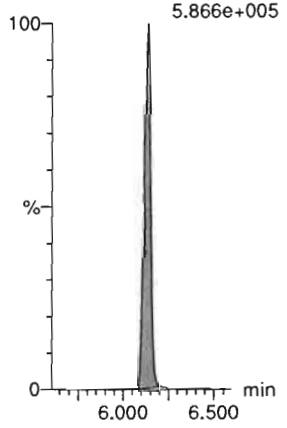
N-EtFOSE



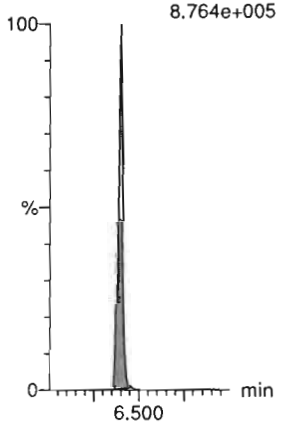
13C3-PFBA-RSD



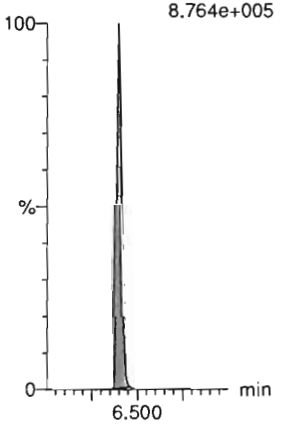
d5-N-ETFOSA-EIS



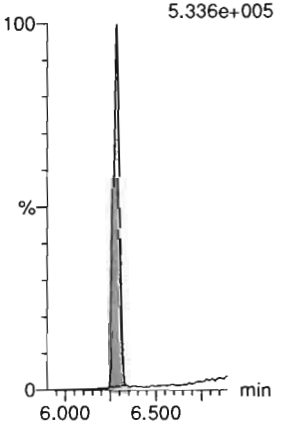
13C2-PFHxDA-EIS



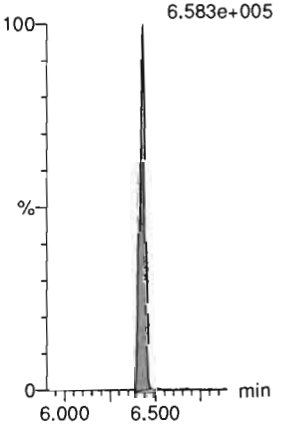
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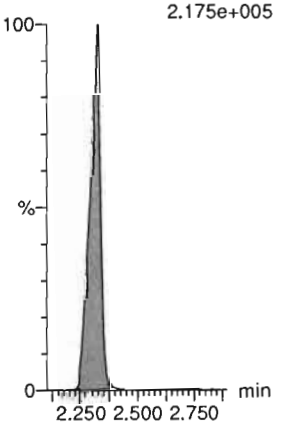
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

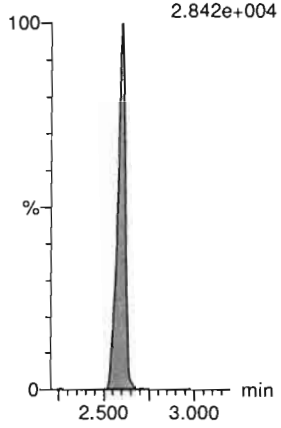


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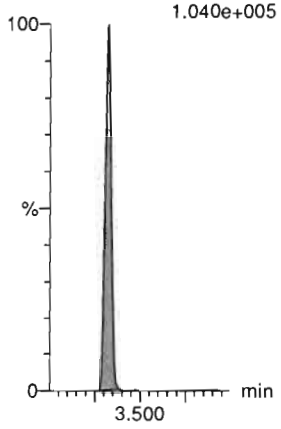
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Name: 200224P1-4, Date: 24-Feb-2020, Time: 17:42:30, ID: ST200220P1-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

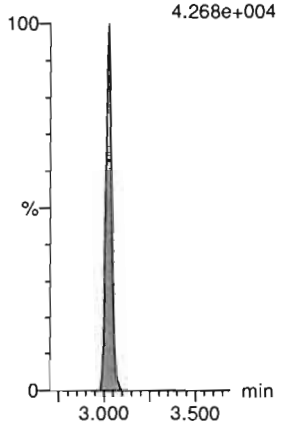
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.842e+004



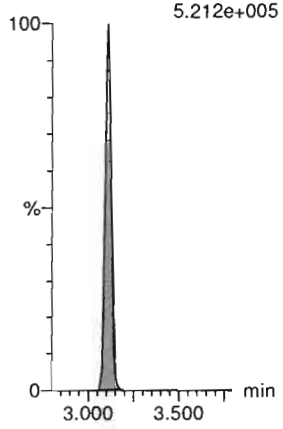
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.040e+005



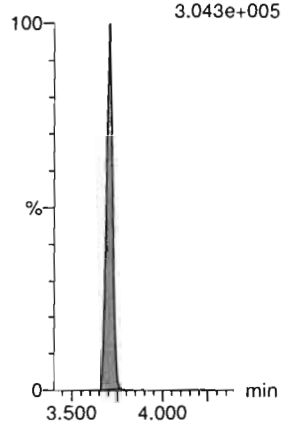
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.268e+004



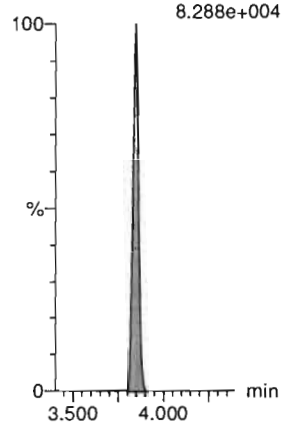
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.212e+005



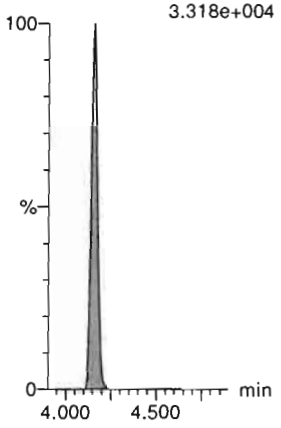
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.043e+005



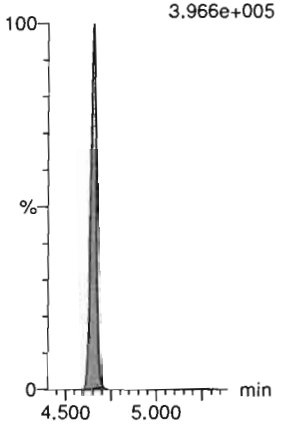
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.288e+004



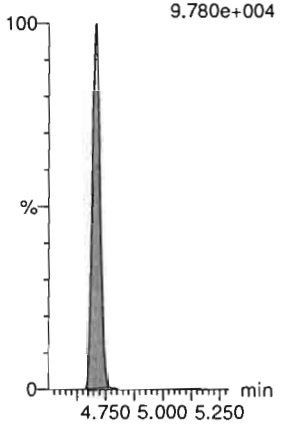
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.318e+004



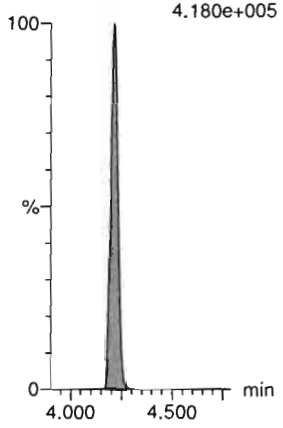
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.966e+005



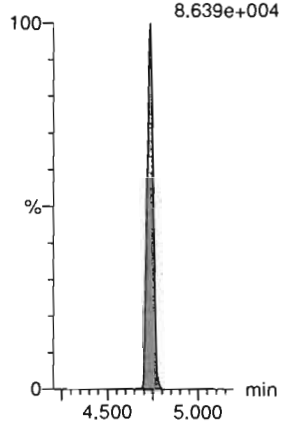
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.780e+004



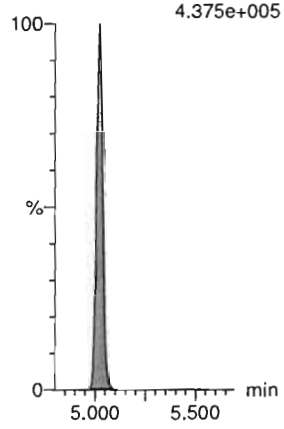
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.180e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.639e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.375e+005

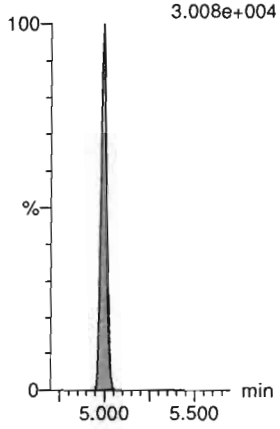


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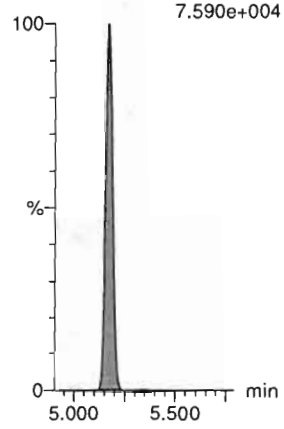
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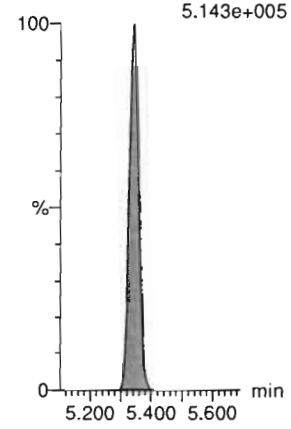
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.008e+004



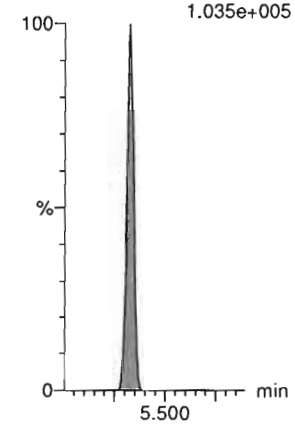
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F58:MRM of 1 channel,ES-
573.3 > 419
7.590e+004



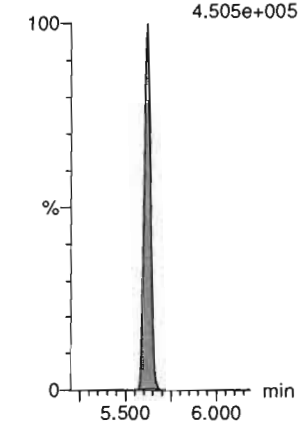
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.143e+005



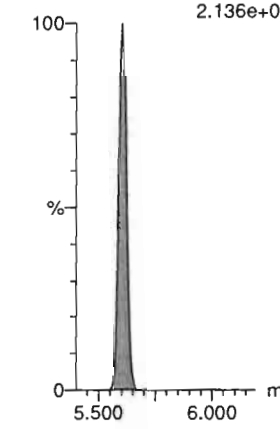
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.035e+005



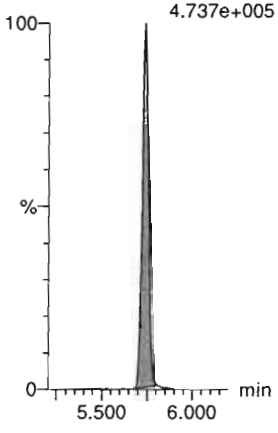
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.505e+005



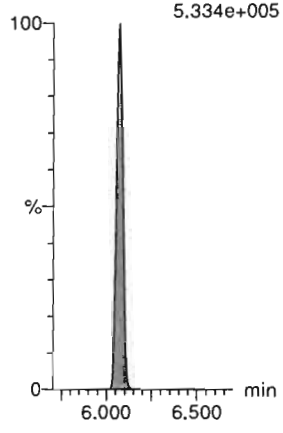
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.136e+004



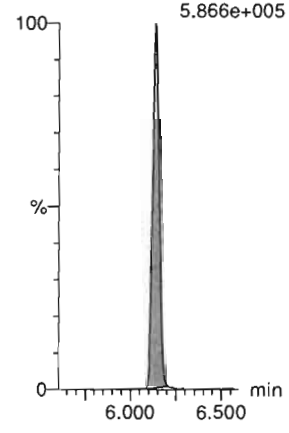
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.737e+005



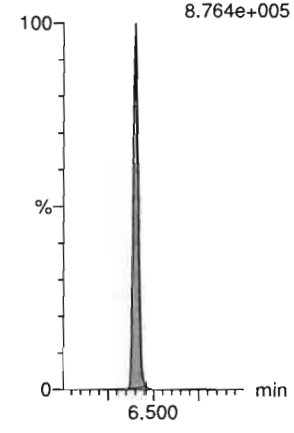
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F74:MRM of 2 channels,ES-
715.1 > 669.7
5.334e+005



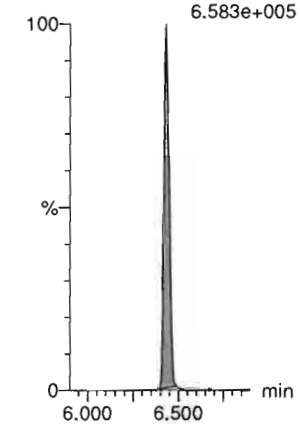
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.866e+005



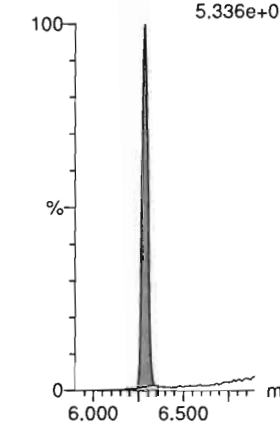
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.764e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.583e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.336e+005

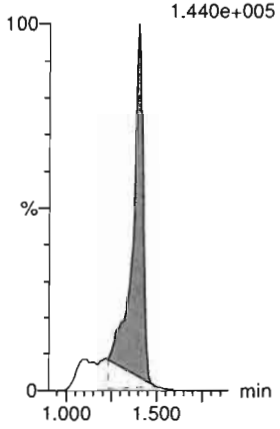


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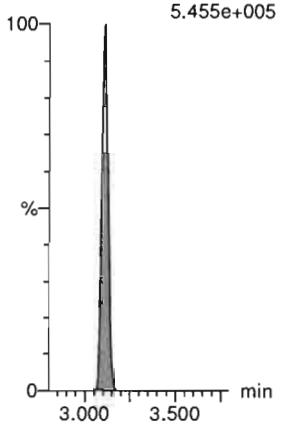
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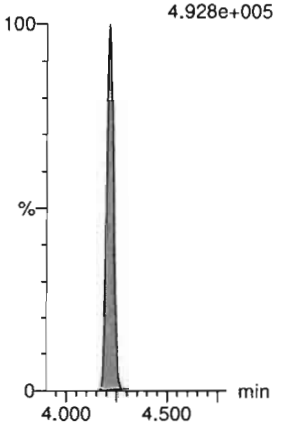
13C4-PFBA



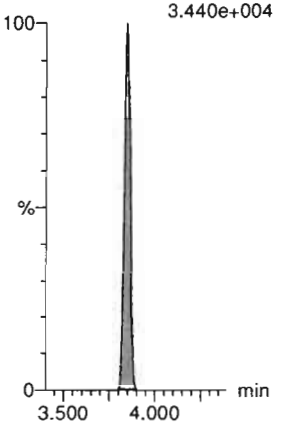
13C5-PFHxA



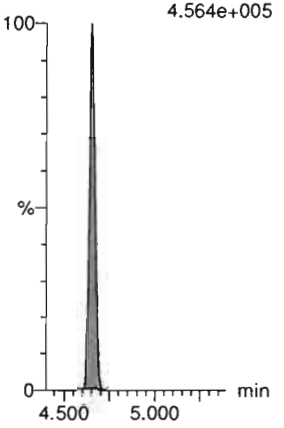
13C8-PFOA



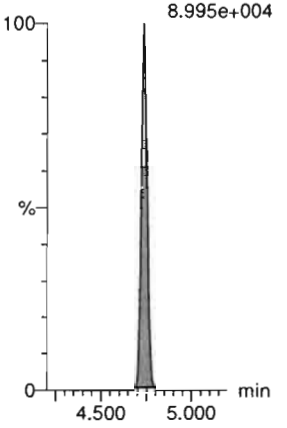
18O2-PFHxS



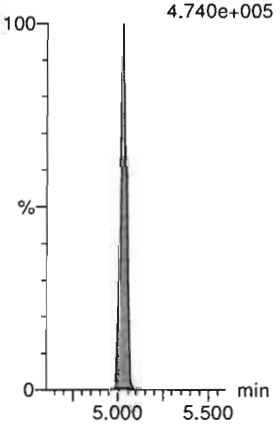
13C9-PFNA



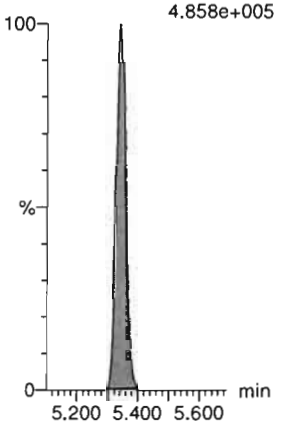
13C4-PFOS



13C6-PFDA



13C7-PFUdA



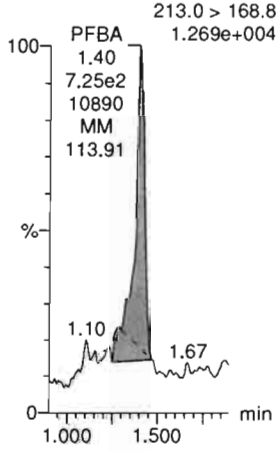
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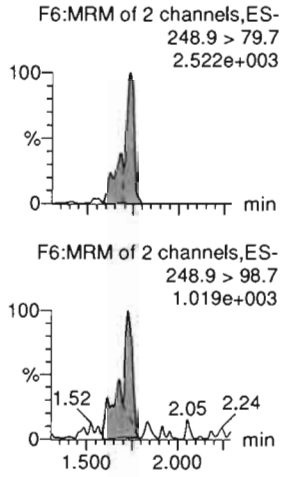
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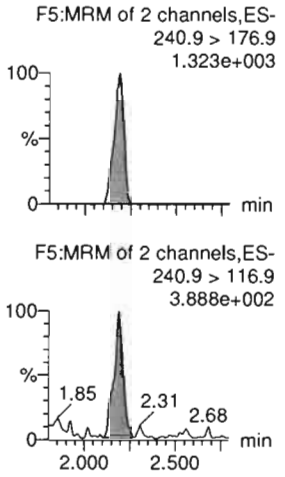
PFBA



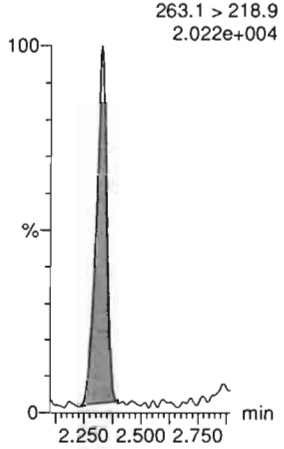
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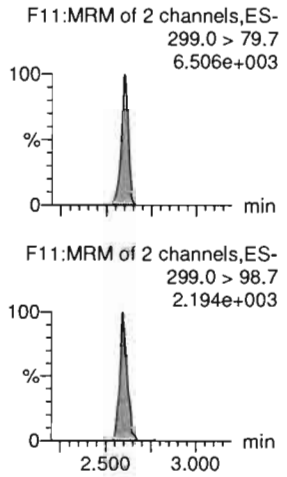
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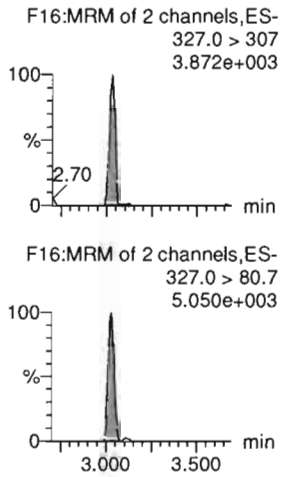
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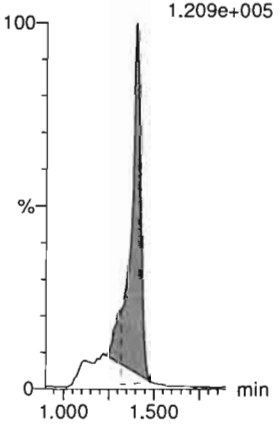
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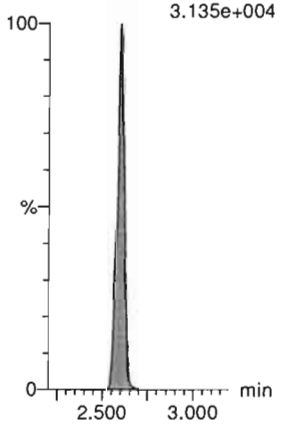
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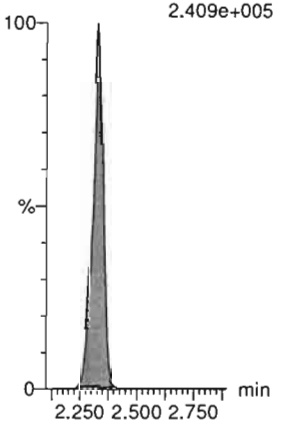
13C3-PFBA-EIS



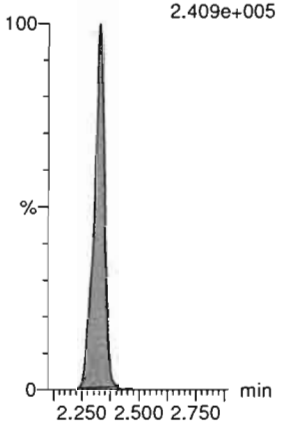
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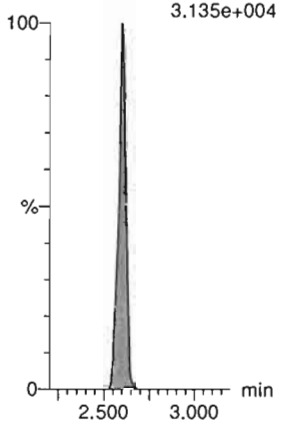
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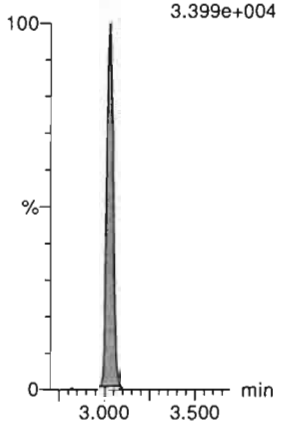
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

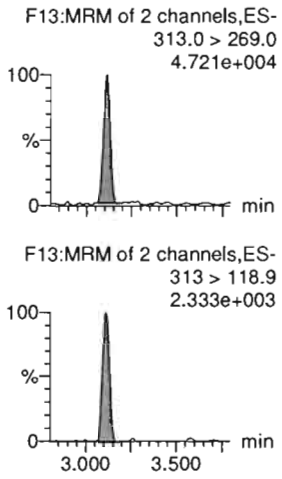


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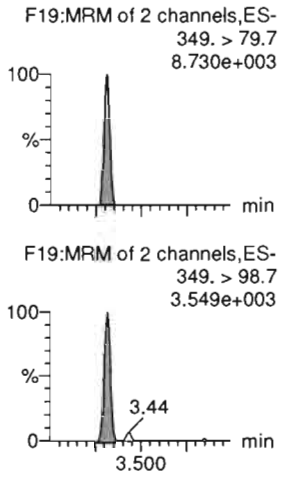
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Name: 200224P1-5, Date: 24-Feb-2020, Time: 17:53:02, ID: ST200220P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

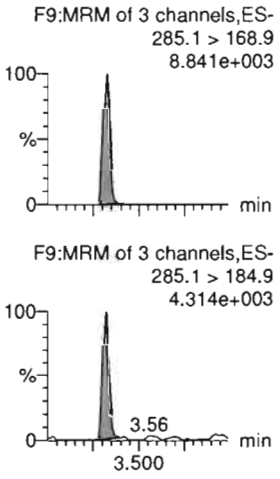
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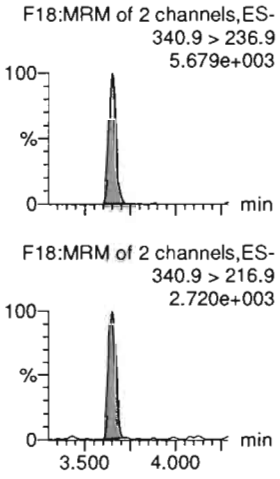
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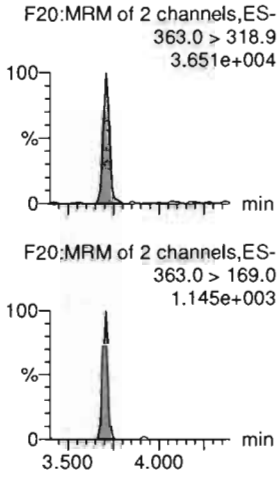
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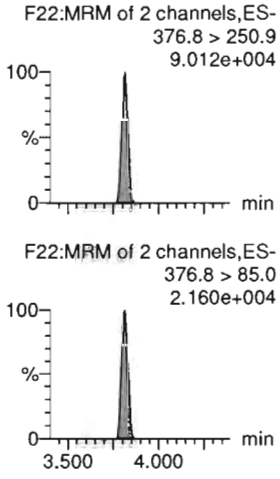
5:3 FTCA



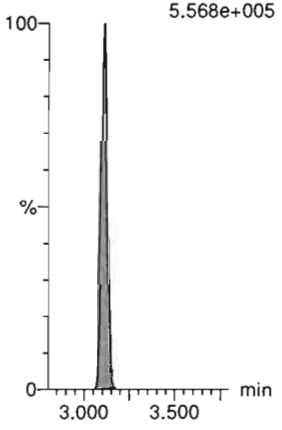
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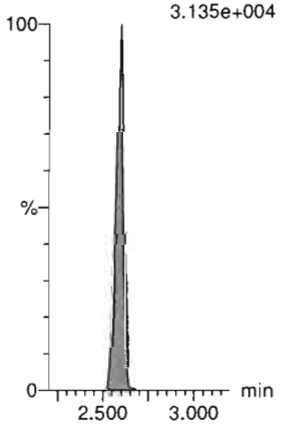
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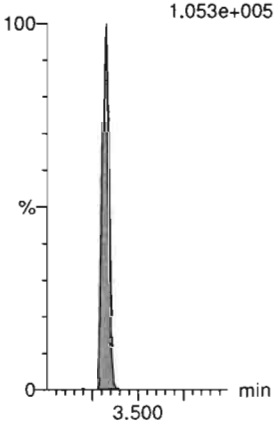
13C2-PFHxA-EIS



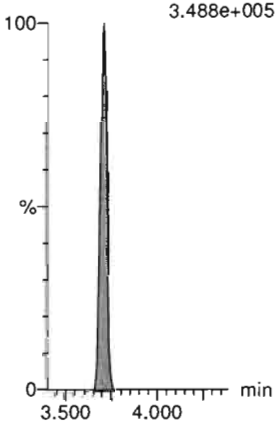
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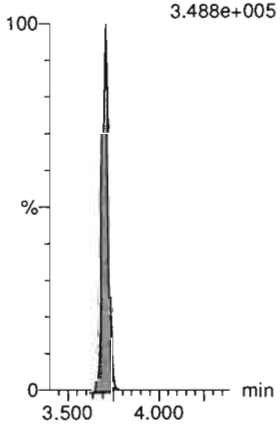
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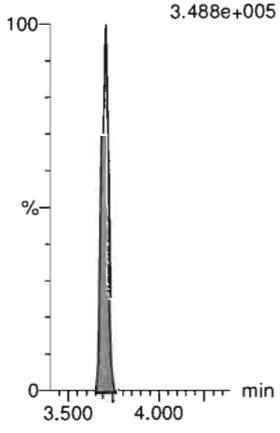
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13C4-PFHpA-EIS



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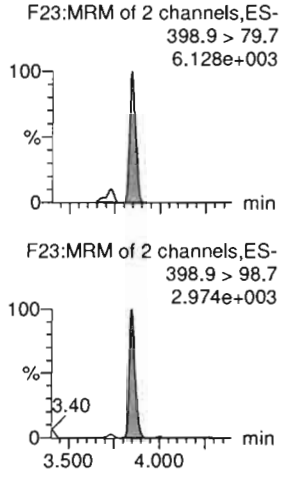


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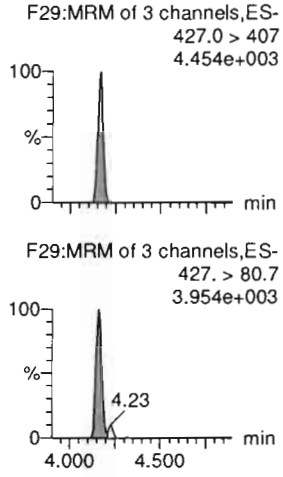
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Name: 200224P1-5, Date: 24-Feb-2020, Time: 17:53:02, ID: ST200220P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

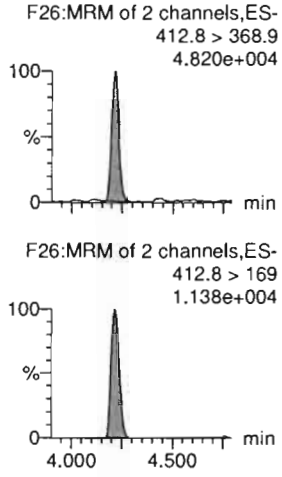
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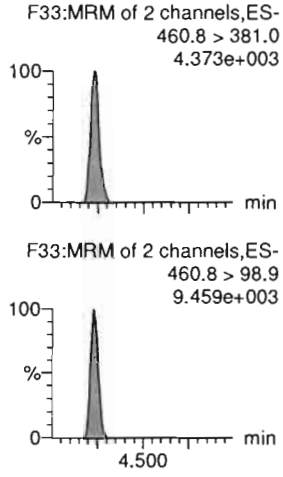
6:2 FTS



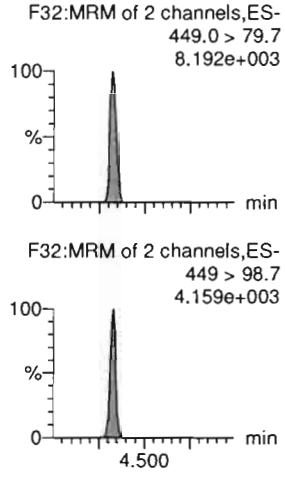
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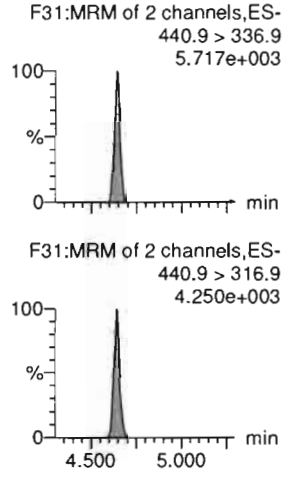
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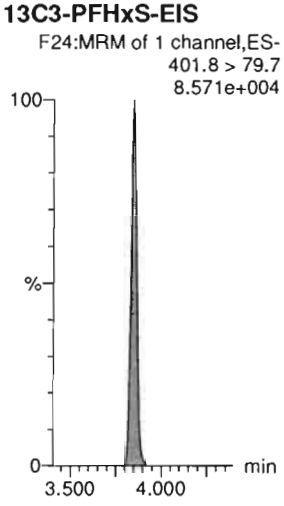
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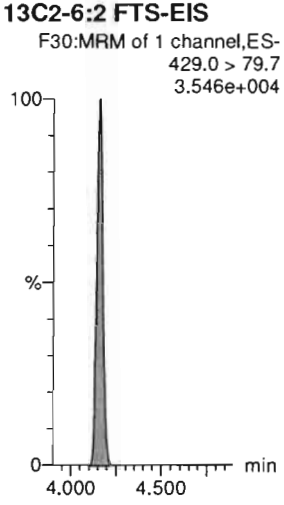
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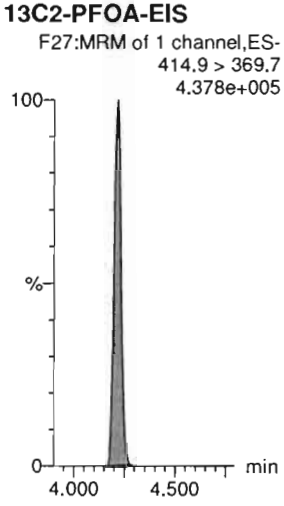
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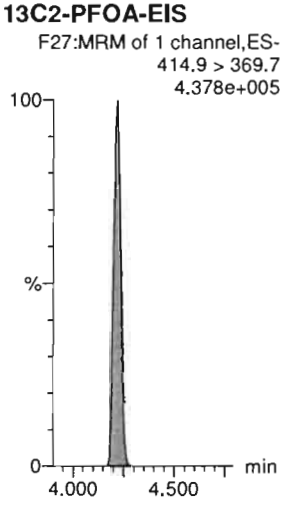
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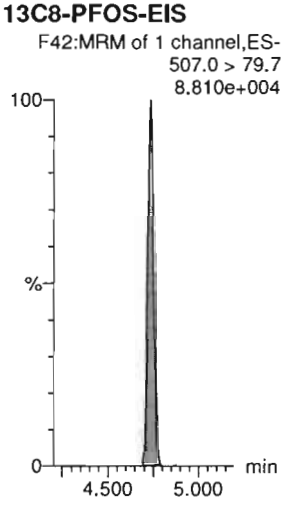
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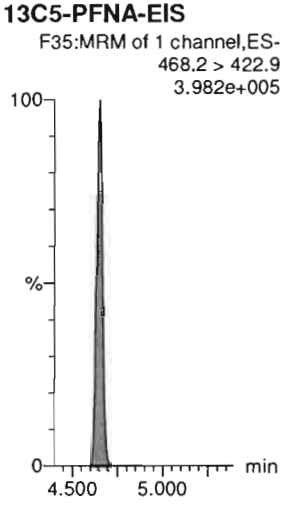
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

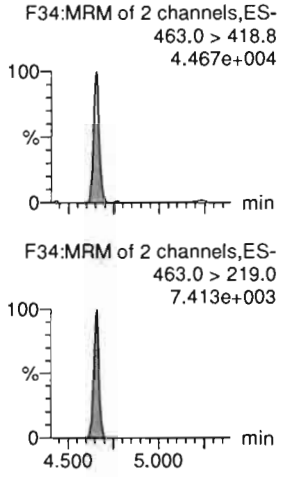


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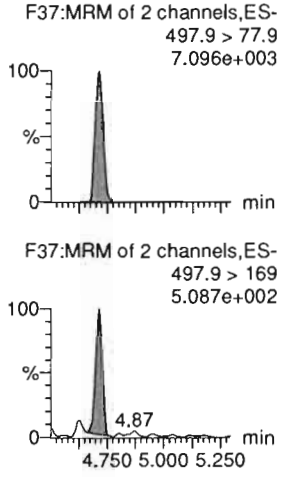
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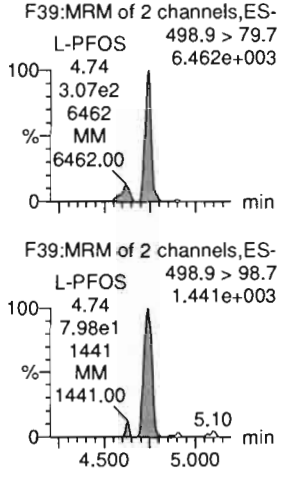
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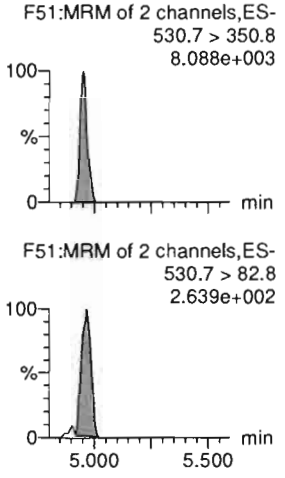
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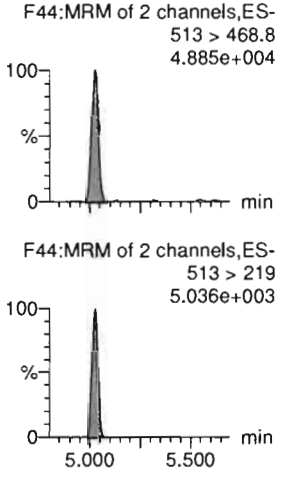
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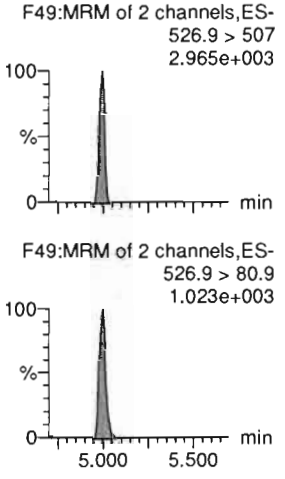
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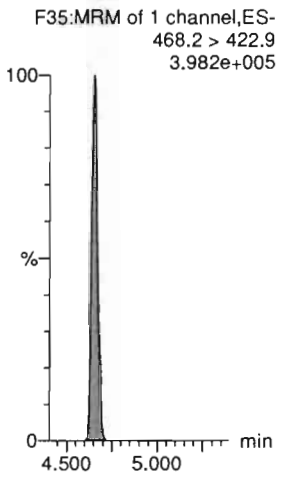
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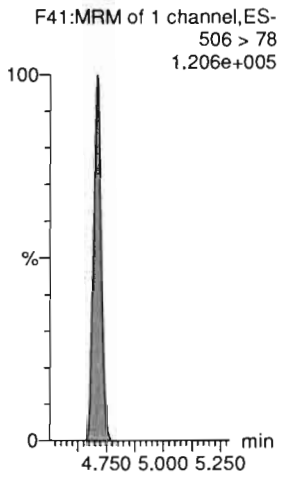
8:2 FTS



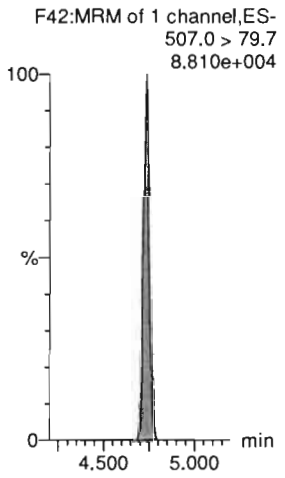
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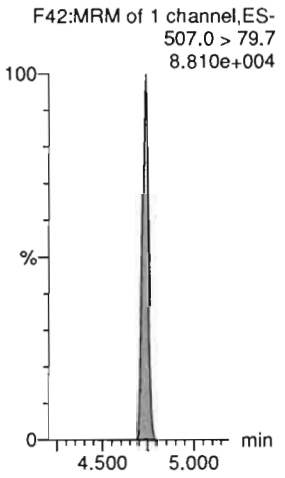
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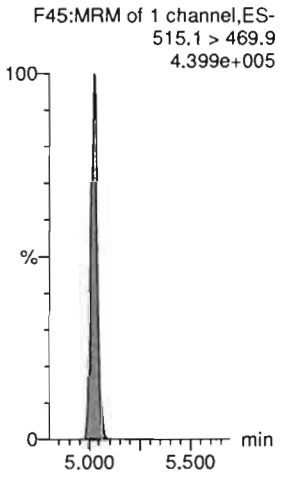
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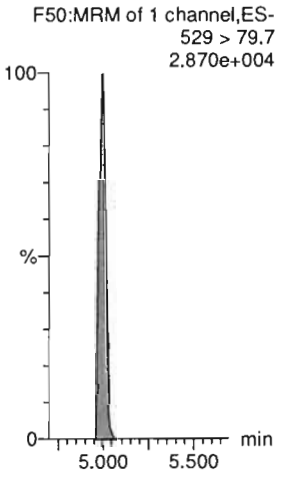
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

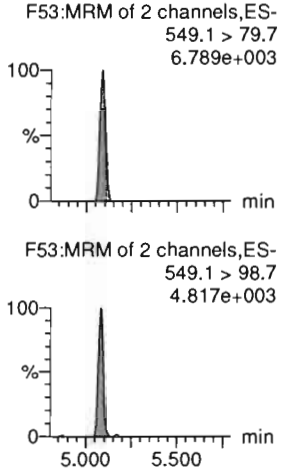


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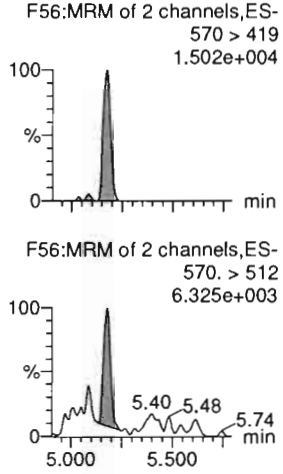
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Name: 200224P1-5, Date: 24-Feb-2020, Time: 17:53:02, ID: ST200220P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

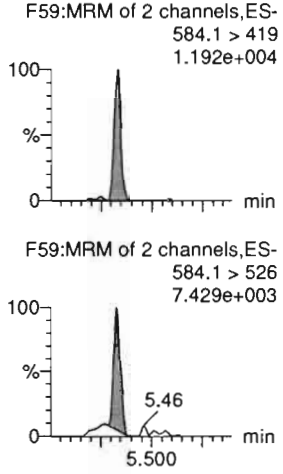
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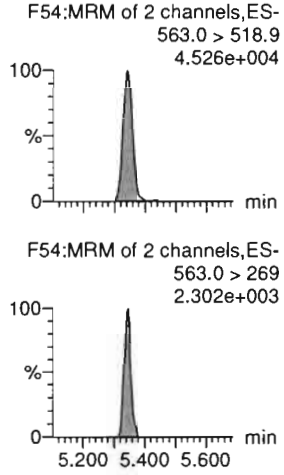
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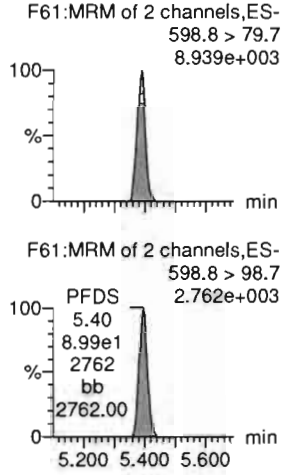
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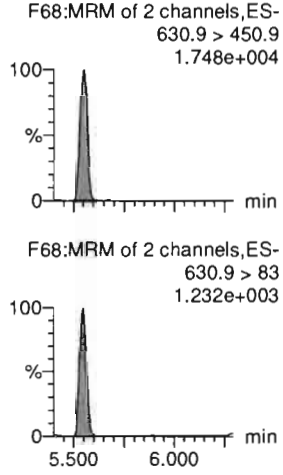
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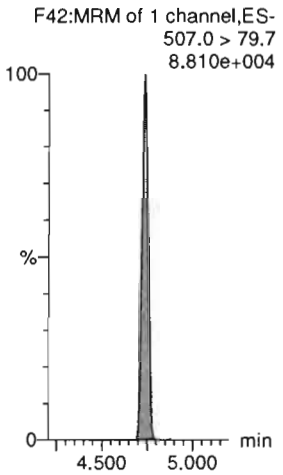
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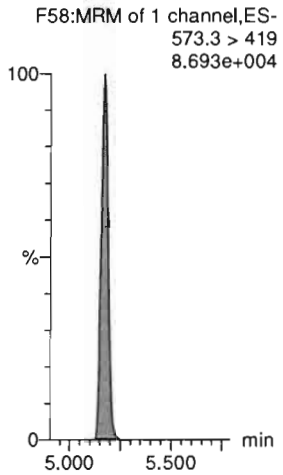
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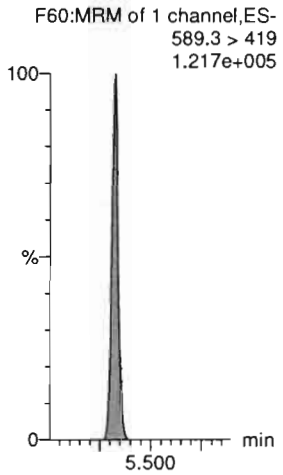
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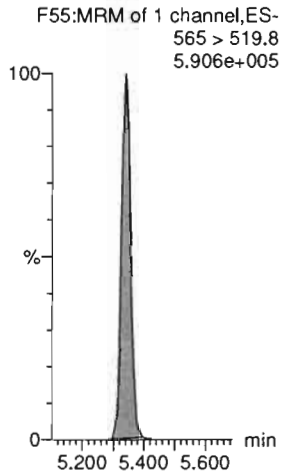
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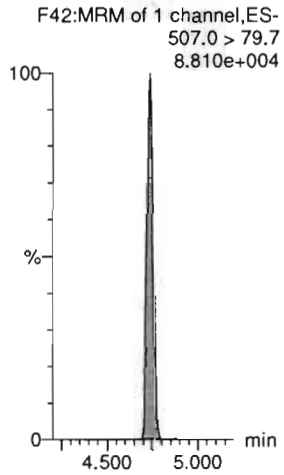
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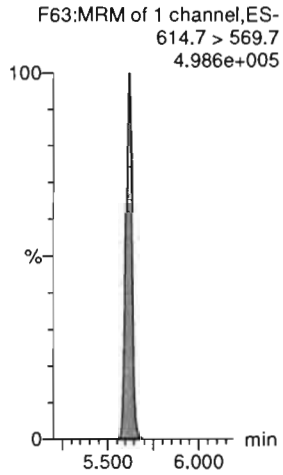
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13C8-PFOS-EIS



13C2-PFDoA-EIS

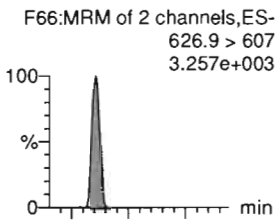


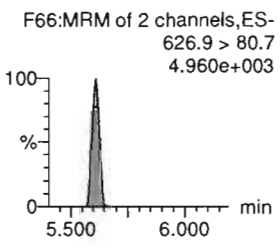
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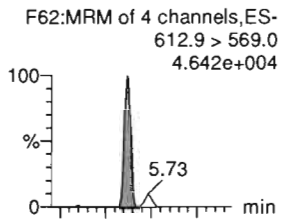
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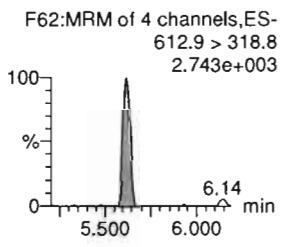
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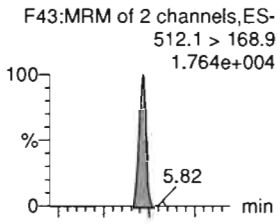


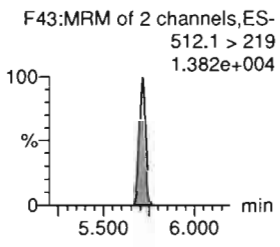
PFDoA



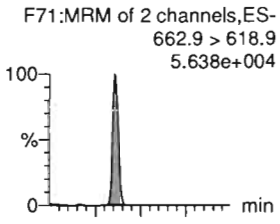


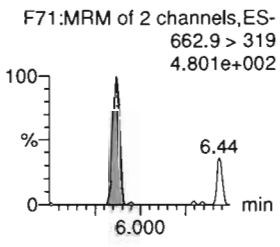
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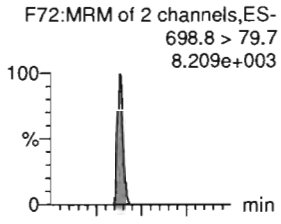


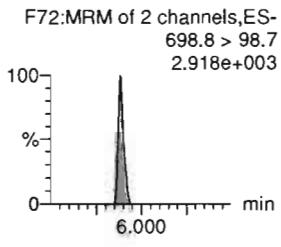
PFTrDA



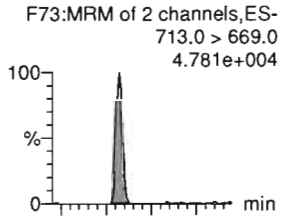


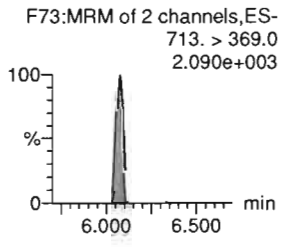
PFDoS



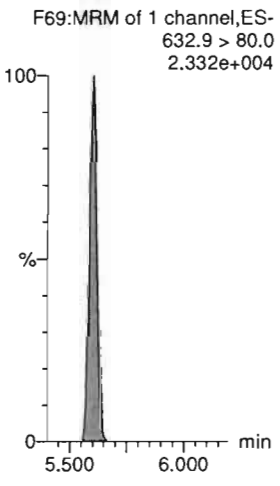


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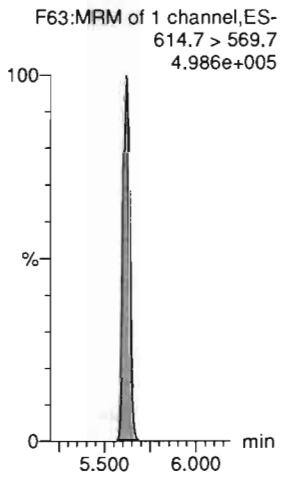




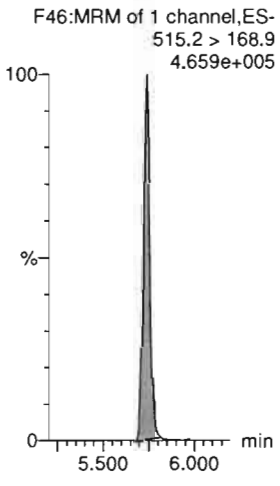
13C2-10:2 FTS-EIS



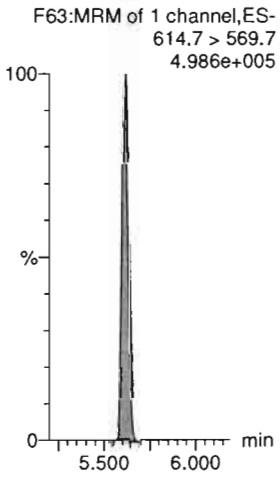
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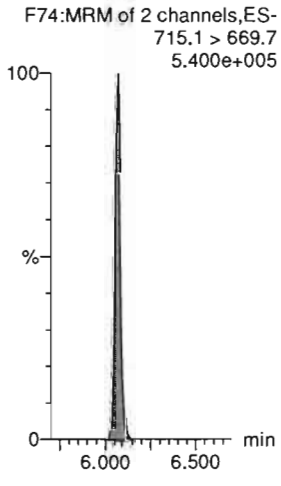
d3-N-MeFOSA-EIS



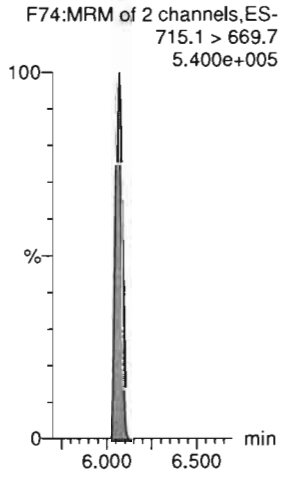
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

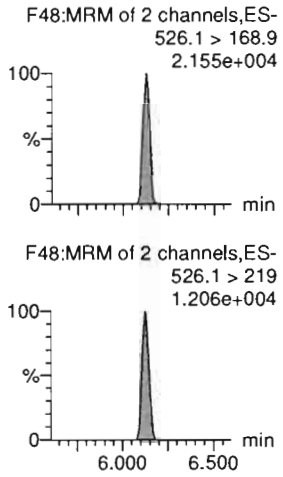


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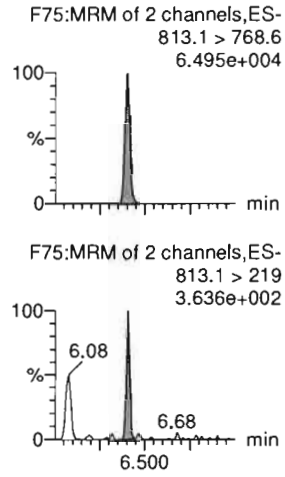
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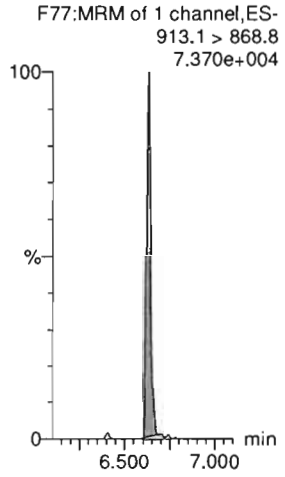
N-EtFOSA



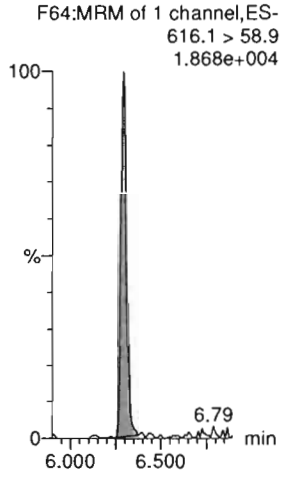
PFHxDA



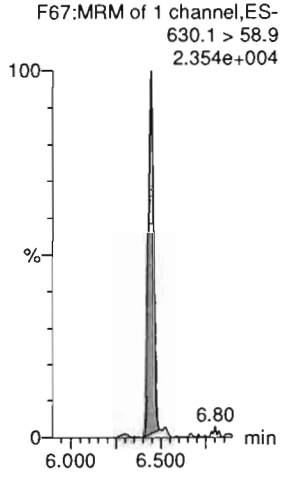
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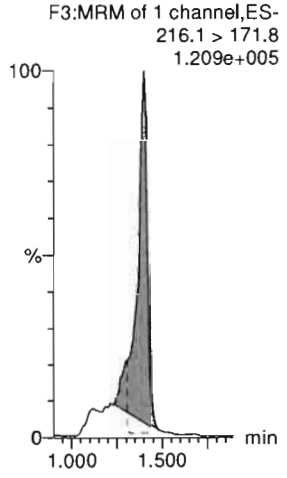
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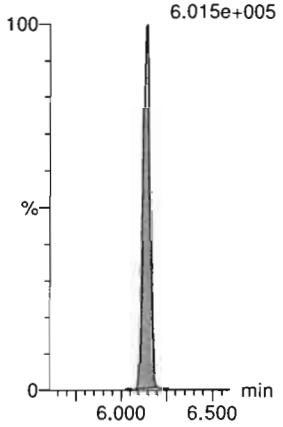
N-EtFOSE



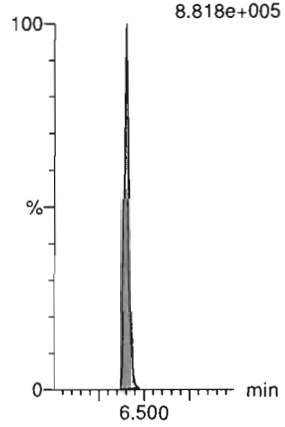
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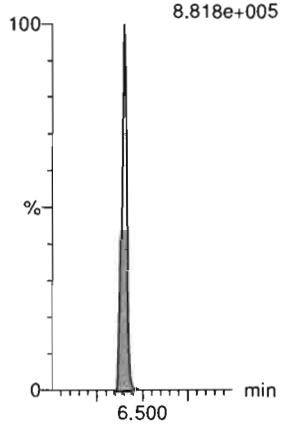
d5-N-ETFOSA-EIS



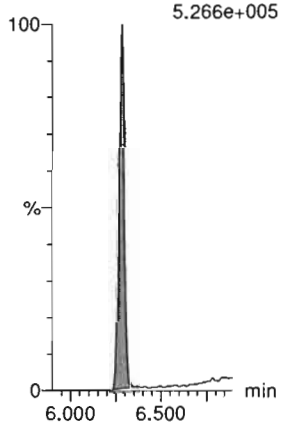
13C2-PFHxDA-EIS



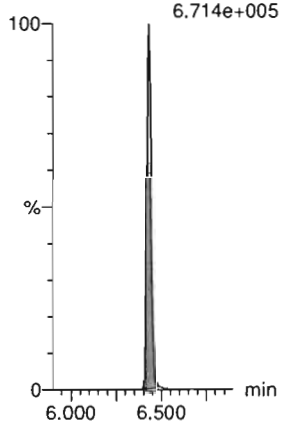
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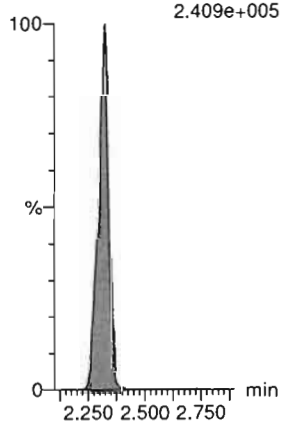
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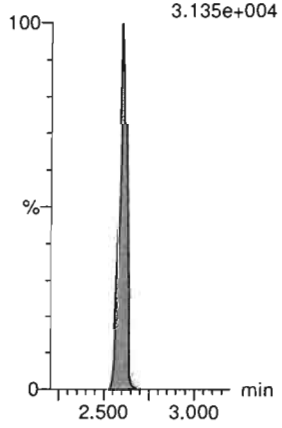


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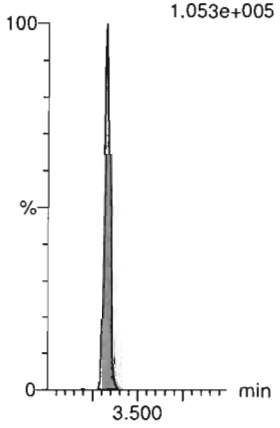
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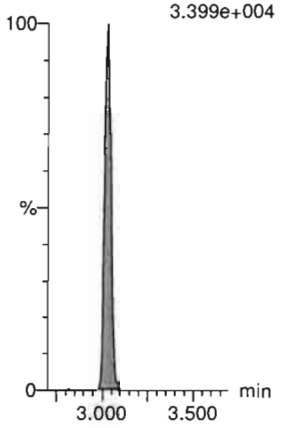
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.135e+004



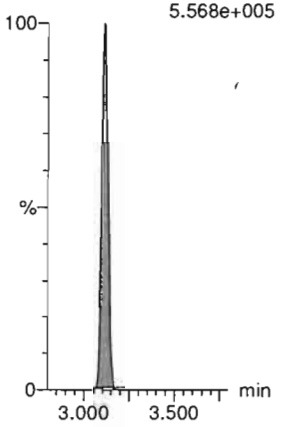
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.053e+005



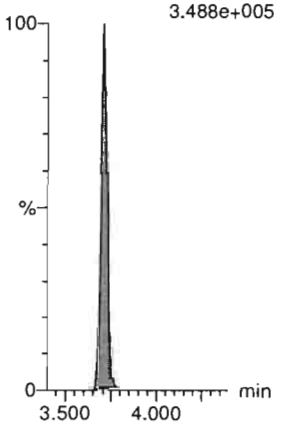
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.399e+004



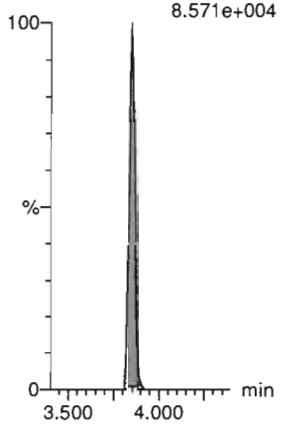
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.568e+005



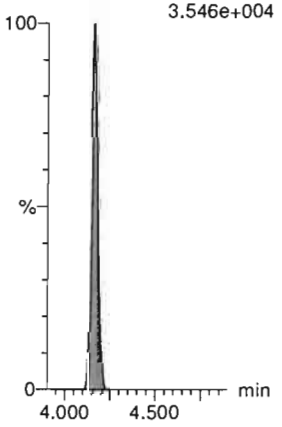
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.488e+005



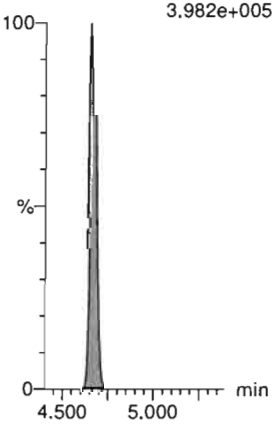
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.571e+004



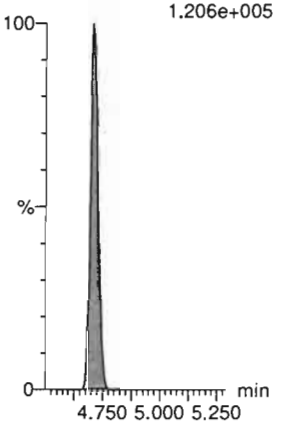
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.546e+004



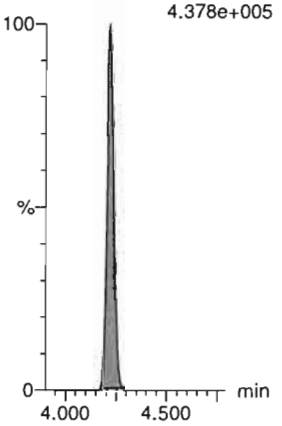
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.982e+005



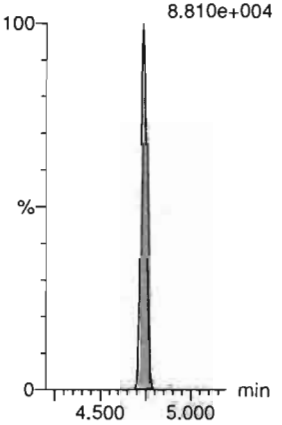
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.206e+005



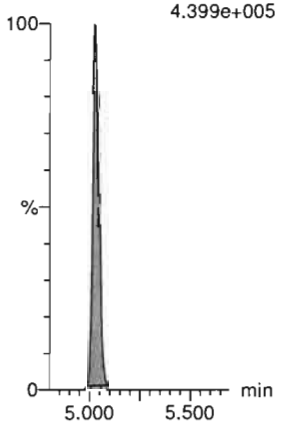
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.378e+005



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
4.399e+005

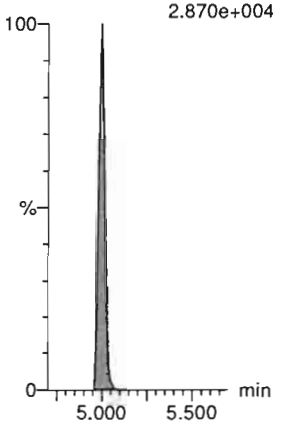


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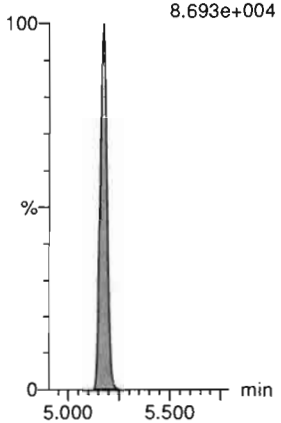
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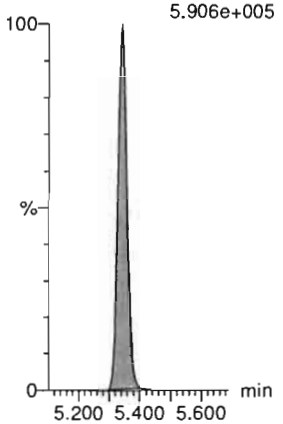
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.870e+004



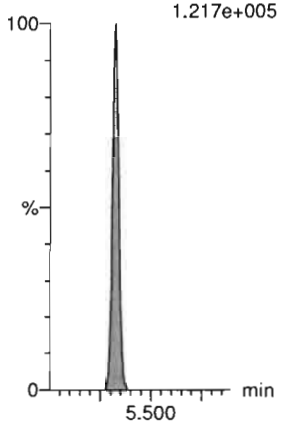
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F58:MRM of 1 channel,ES-
573.3 > 419
8.693e+004



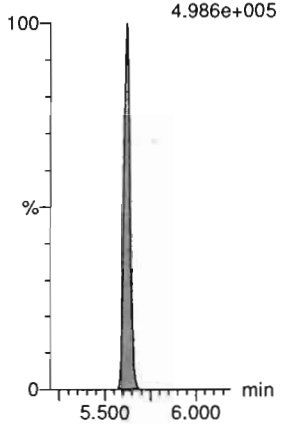
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F55:MRM of 1 channel,ES-
565 > 519.8
5.906e+005



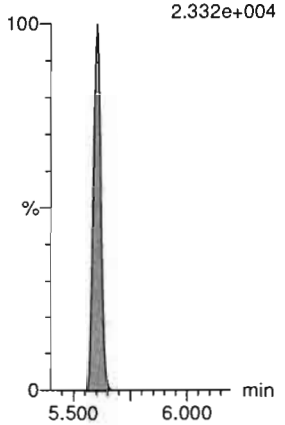
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F60:MRM of 1 channel,ES-
589.3 > 419
1.217e+005



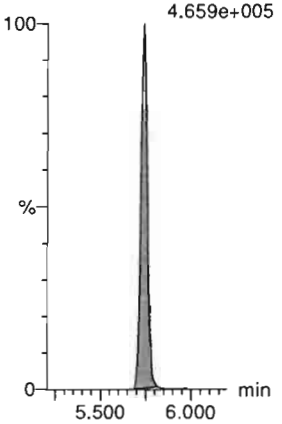
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.986e+005



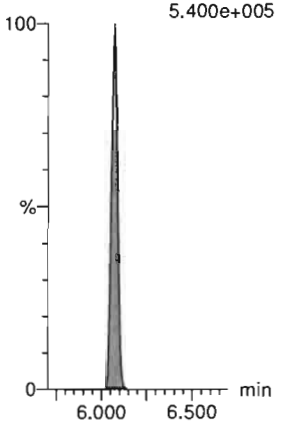
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.332e+004



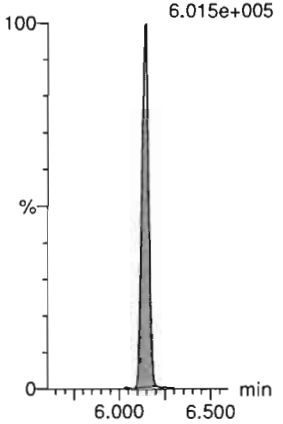
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.659e+005



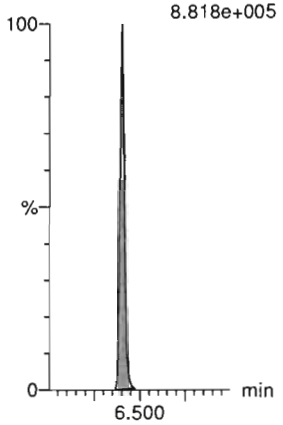
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F74:MRM of 2 channels,ES-
715.1 > 669.7
5.400e+005



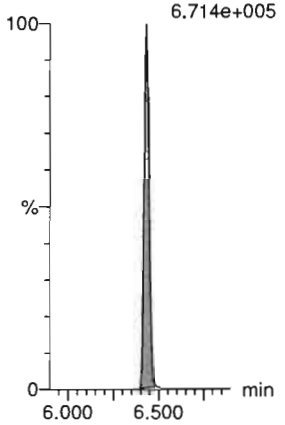
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.015e+005



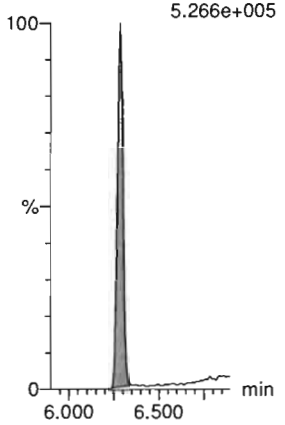
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.818e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.714e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.266e+005

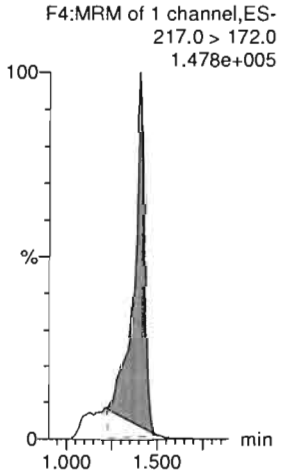


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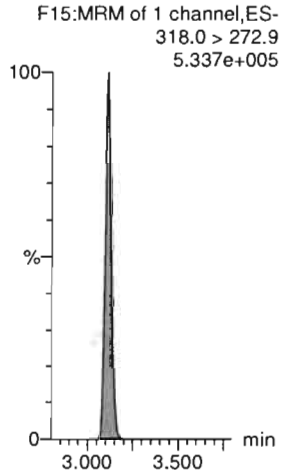
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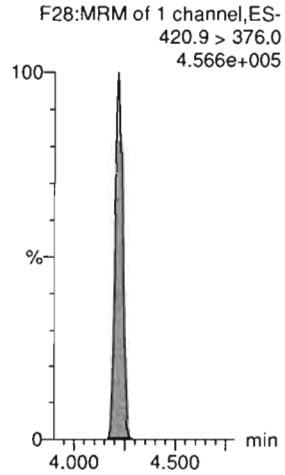
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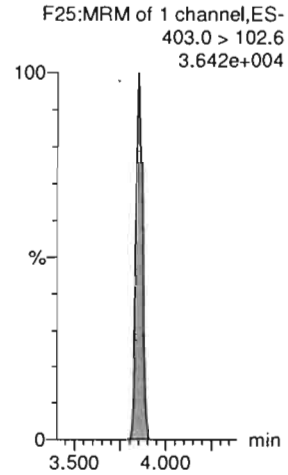
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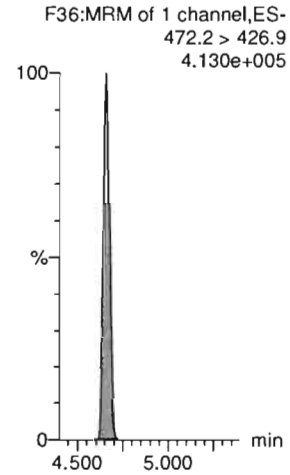
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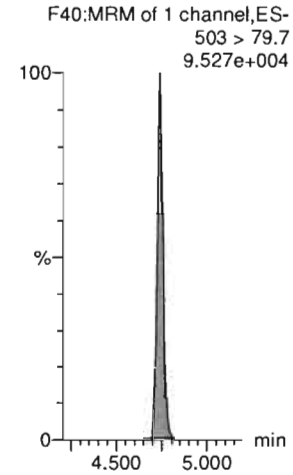
18O2-PFHxS



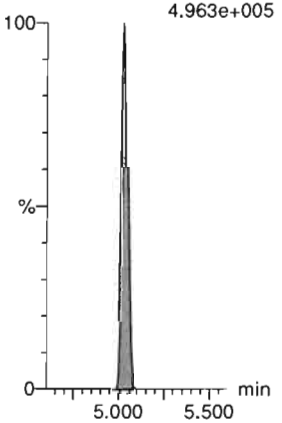
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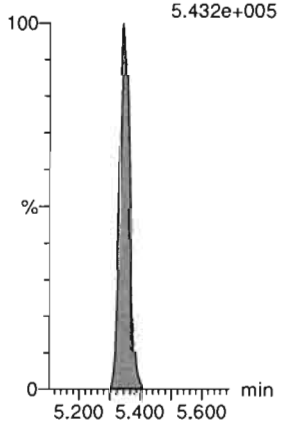
13C4-PFOS



13C6-PFDA



13C7-PFUdA



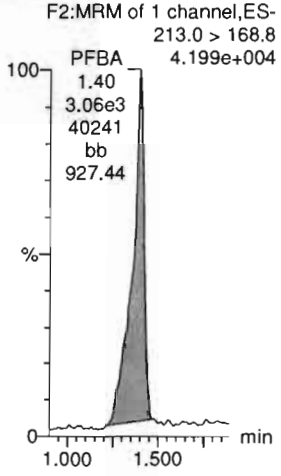
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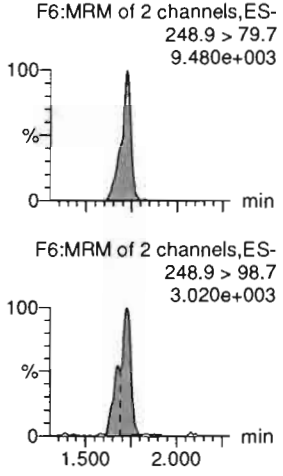
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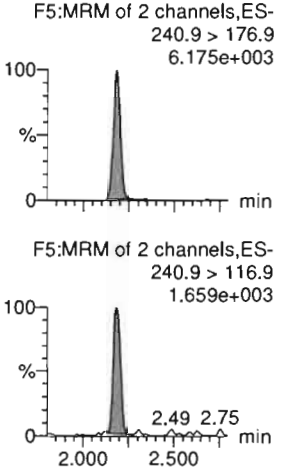
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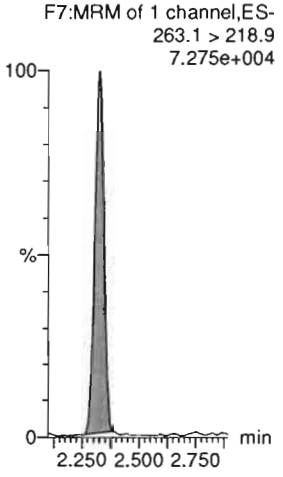
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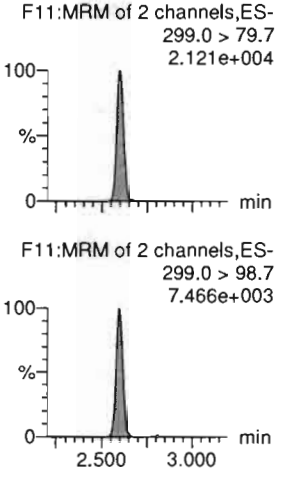
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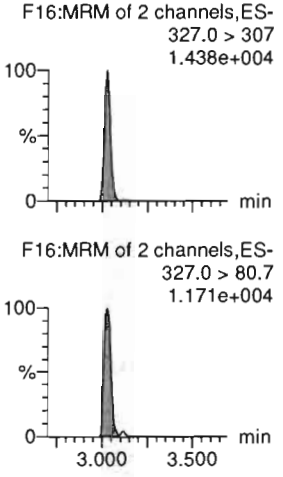
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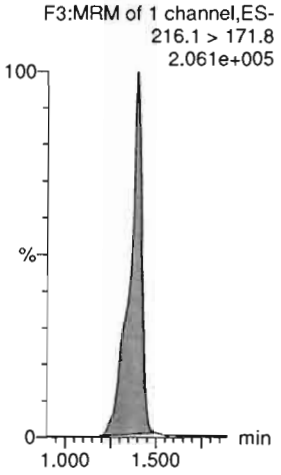
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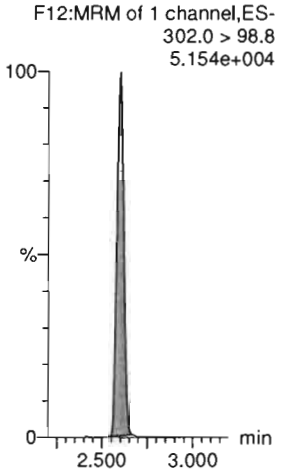
4:2 FTS



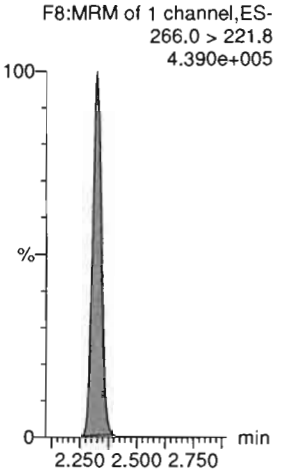
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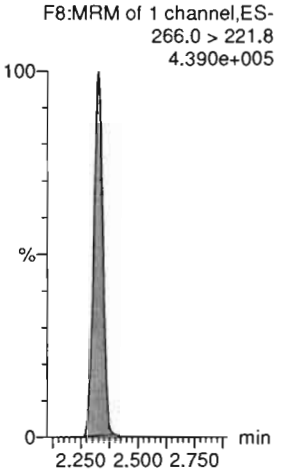
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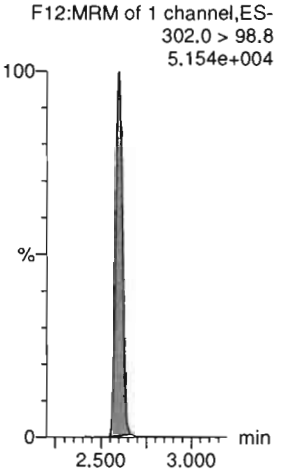
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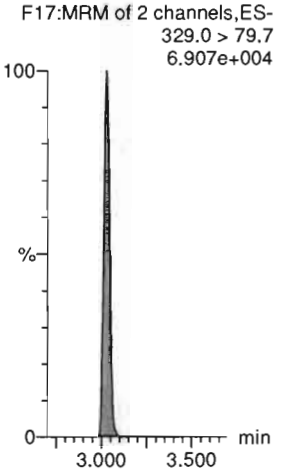
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13C3-PFBS-EIS



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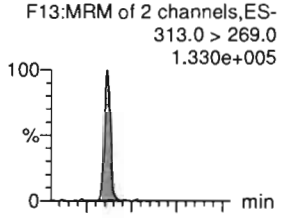


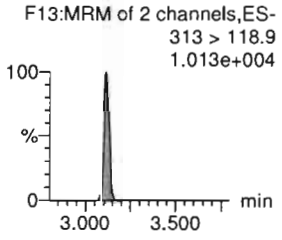
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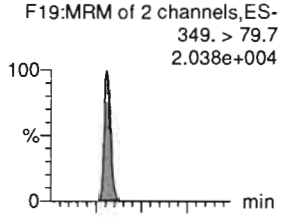
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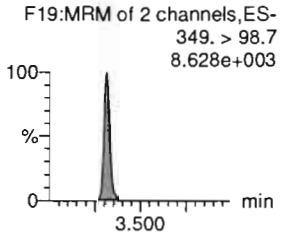
PFHxA



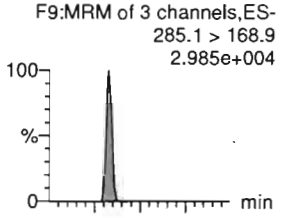


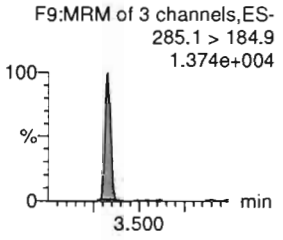
PFPeS



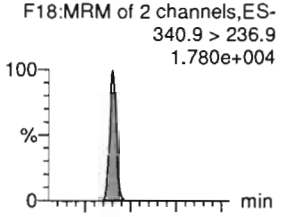


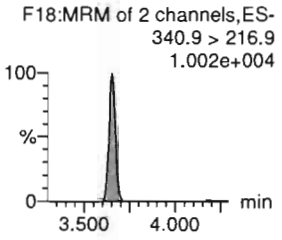
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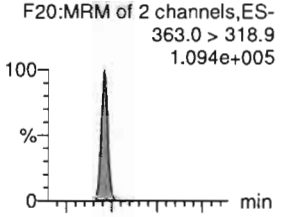


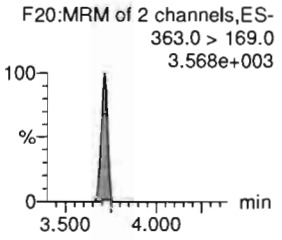
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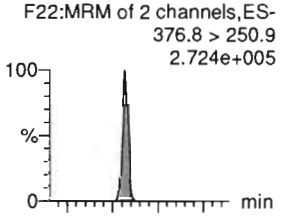


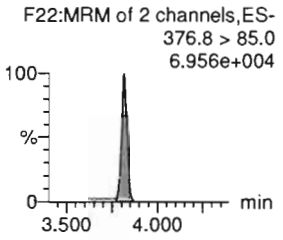
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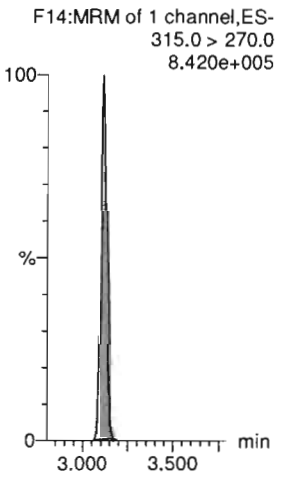


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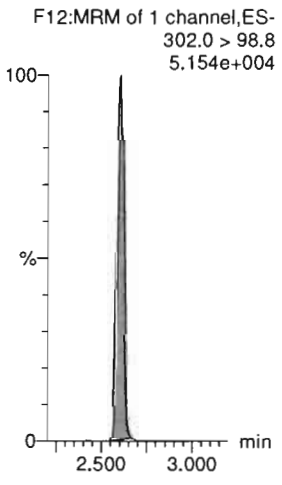




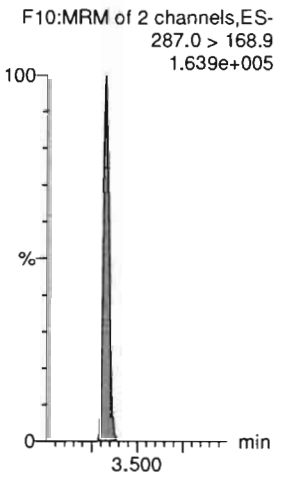
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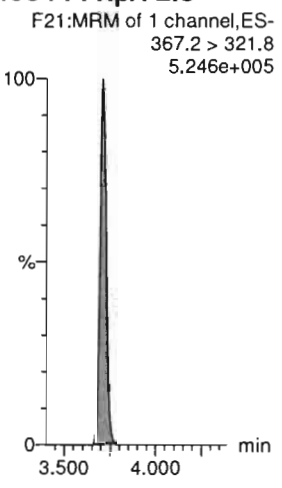
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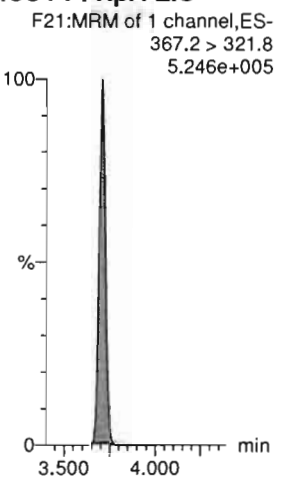
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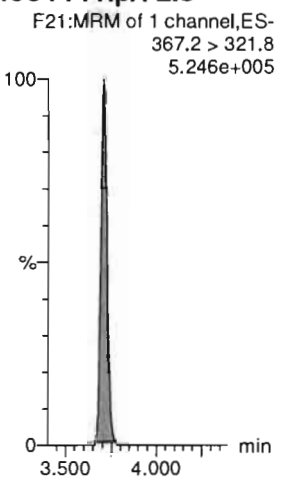
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

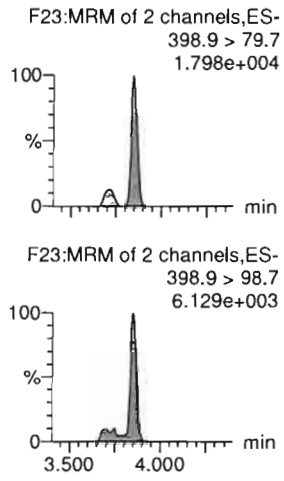


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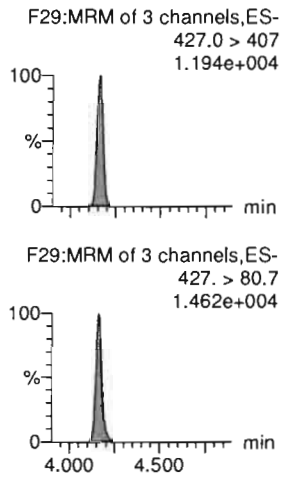
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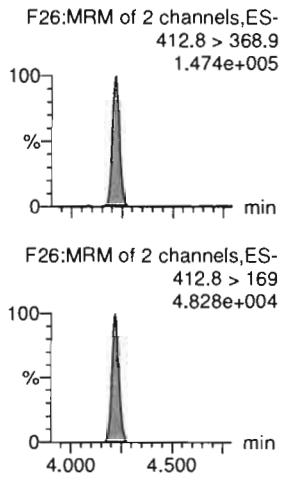
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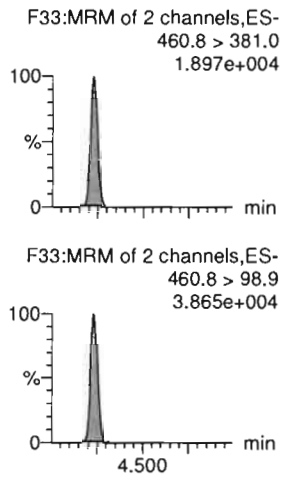
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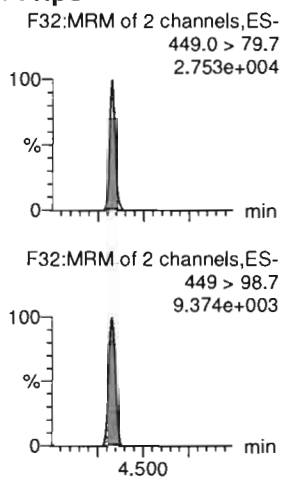
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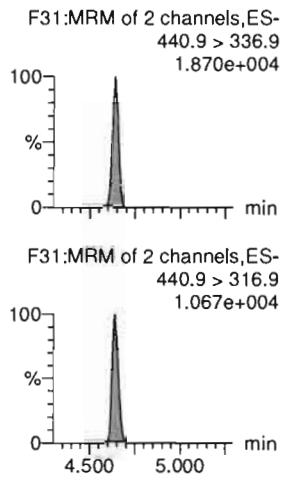
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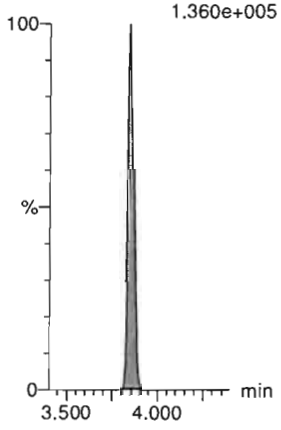
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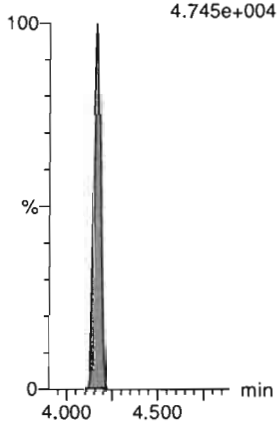
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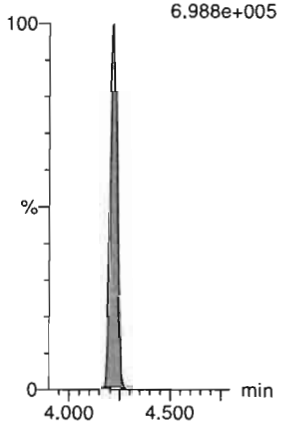
13C3-PFHxS-EIS



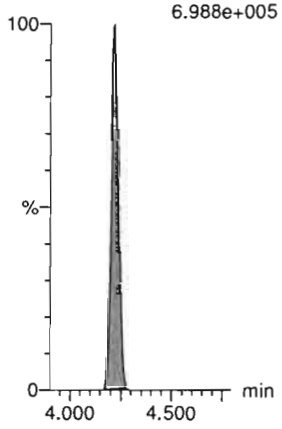
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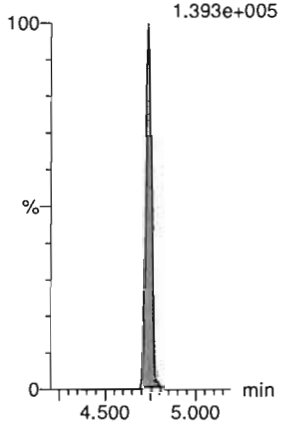
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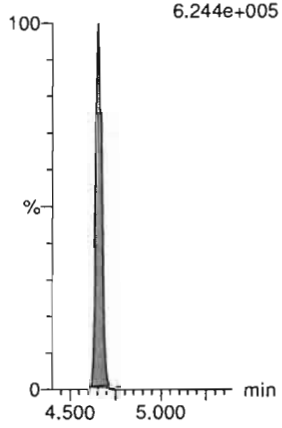
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13C8-PFOS-EIS



13C5-PFNA-EIS

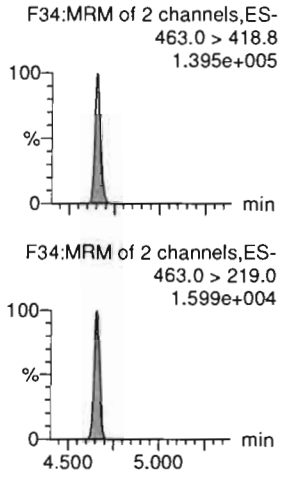


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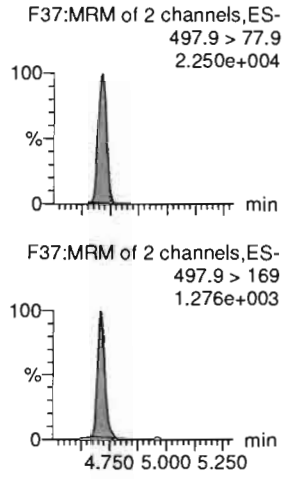
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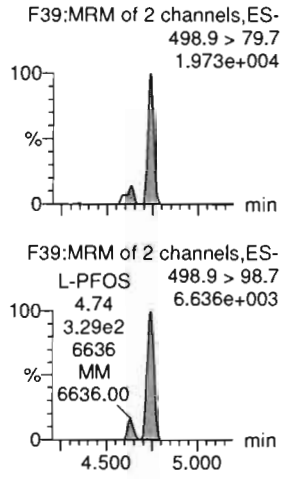
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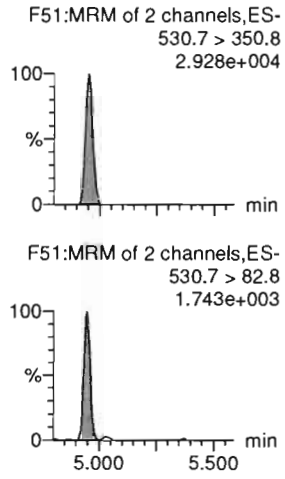
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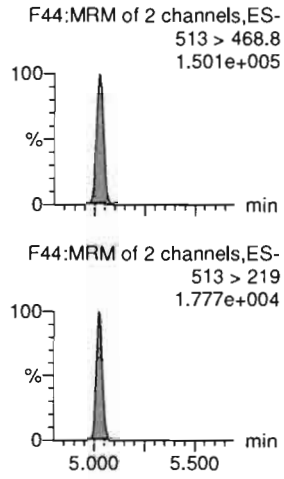
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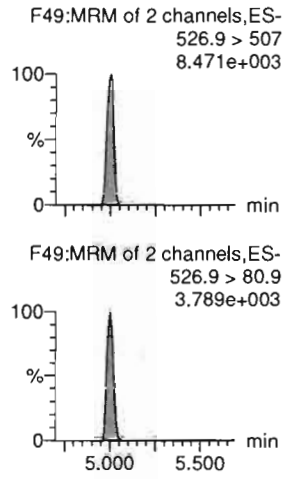
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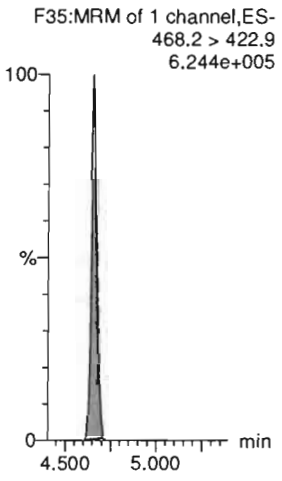
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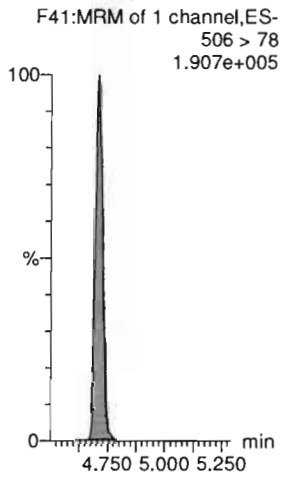
8:2 FTS



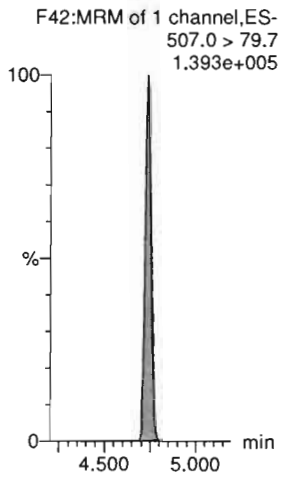
13C5-PFNA-EIS



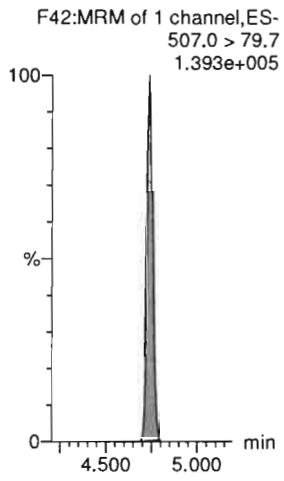
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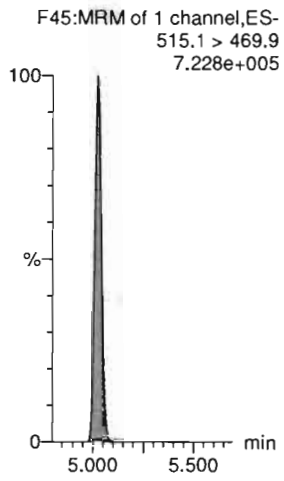
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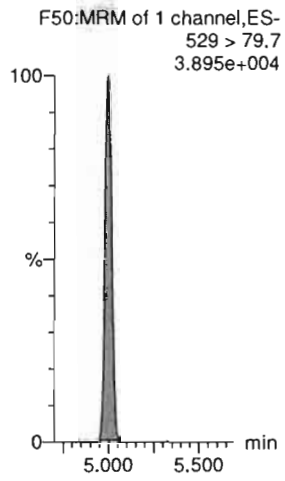
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

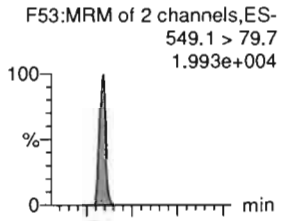


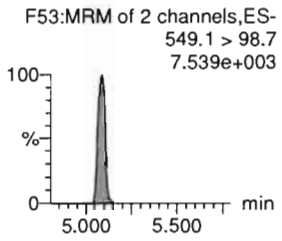
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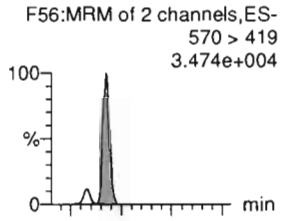
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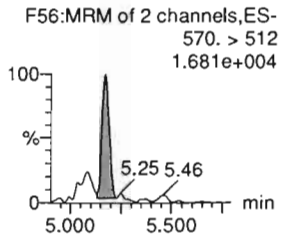
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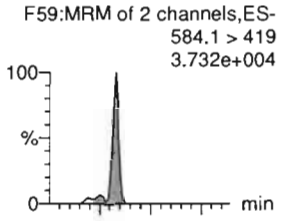


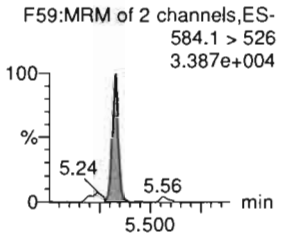
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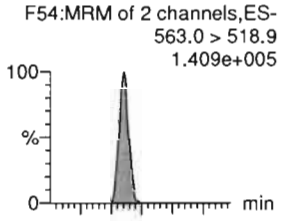


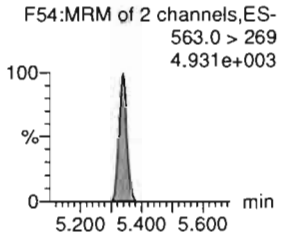
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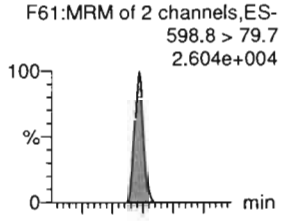


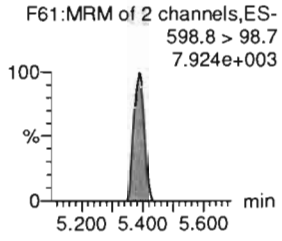
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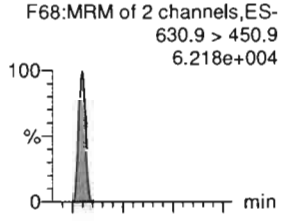


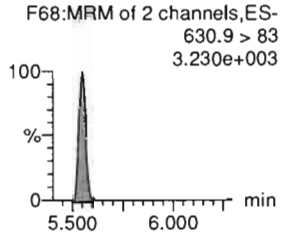
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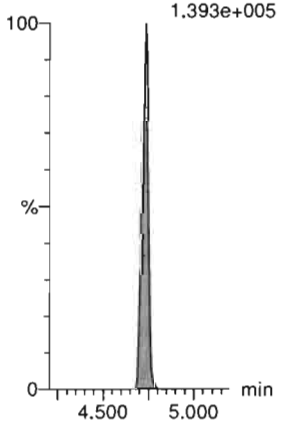


11Cl-PF30UdS

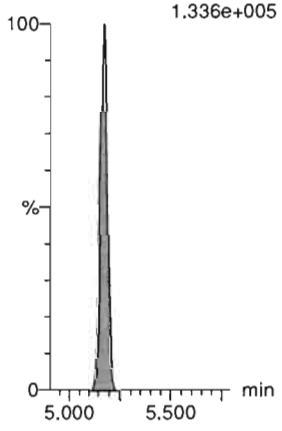




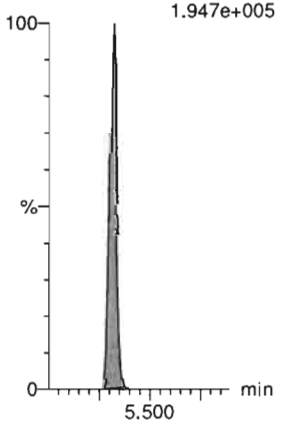
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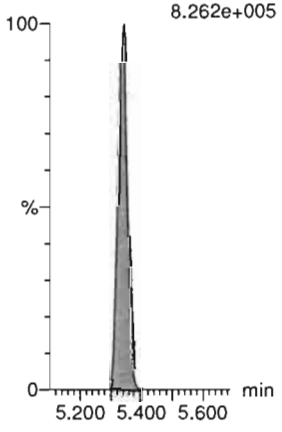
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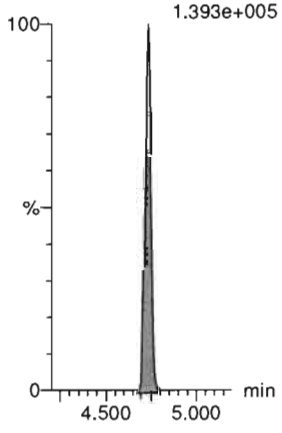
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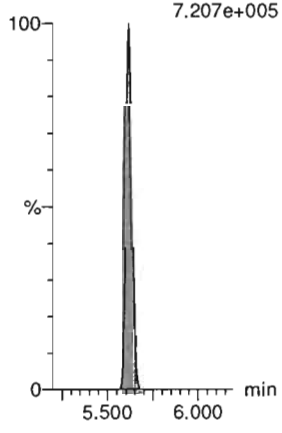
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13C8-PFOS-EIS



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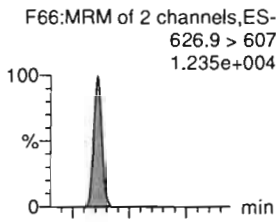


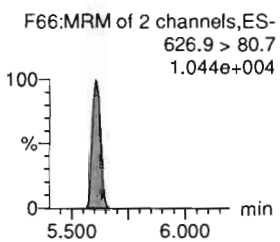
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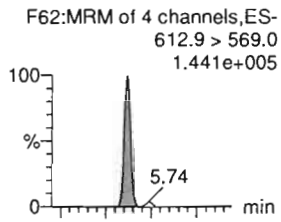
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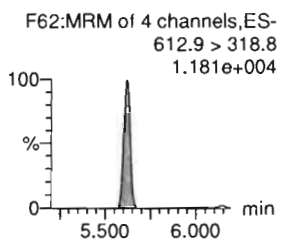
10:2 FTS



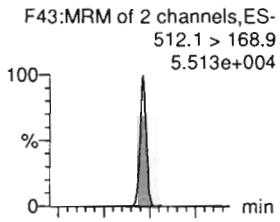


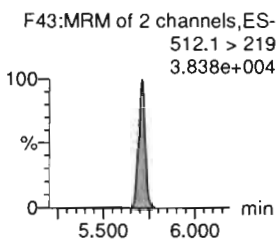
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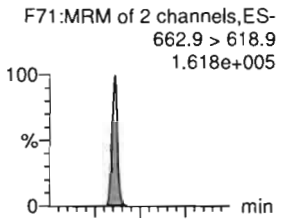


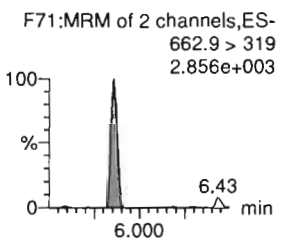
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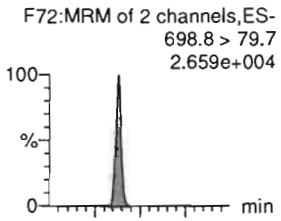


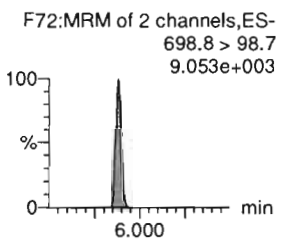
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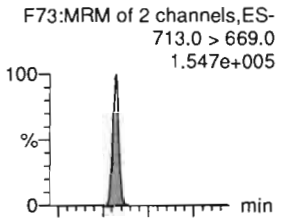


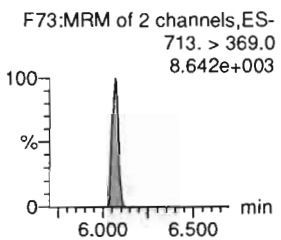
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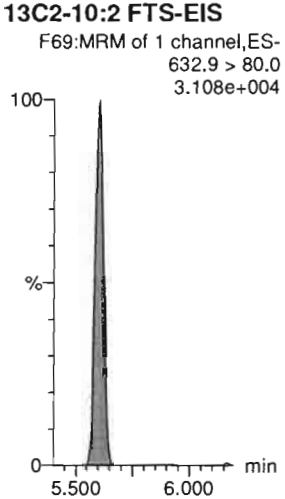


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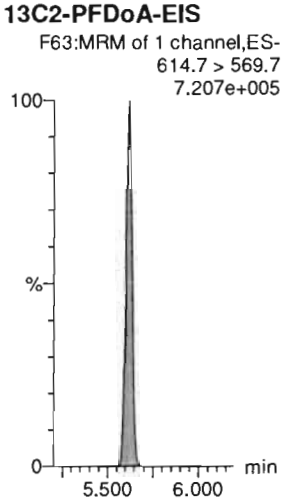




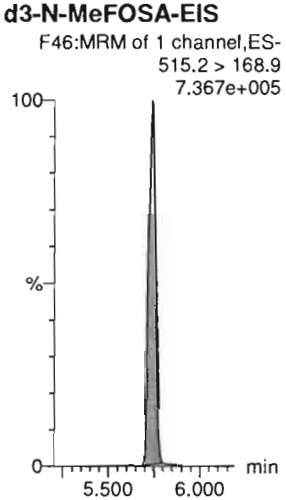
13C2-10:2 FTS-EIS



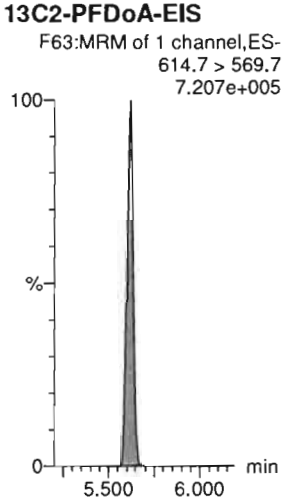
13C2-PFDoA-EIS



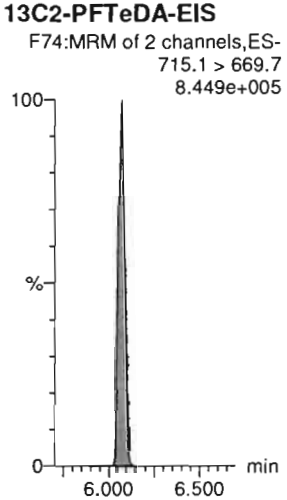
d3-N-MeFOSA-EIS



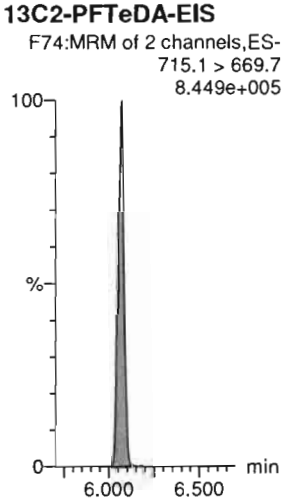
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

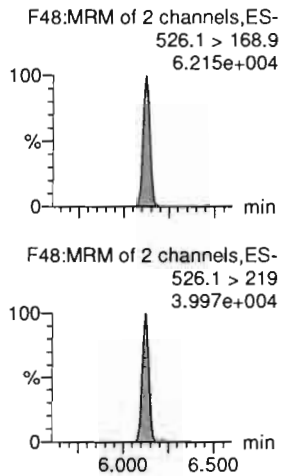


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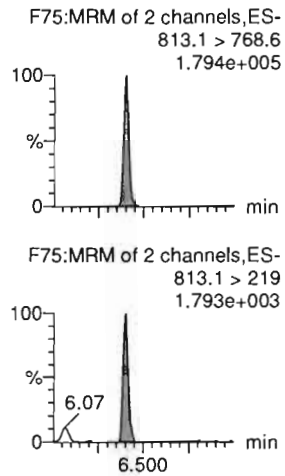
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Name: 200224P1-6, Date: 24-Feb-2020, Time: 18:03:31, ID: ST200220P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

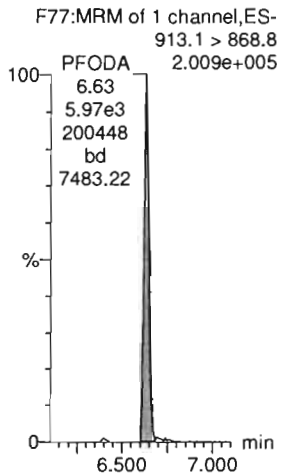
N-EtFOSA



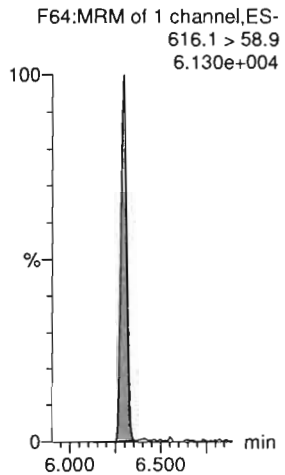
PFHxDA



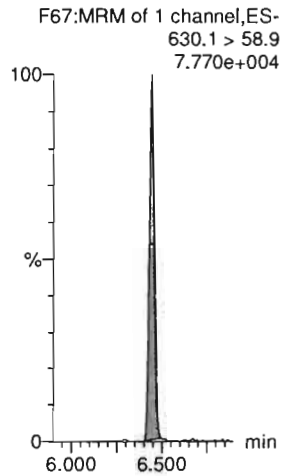
PFODA



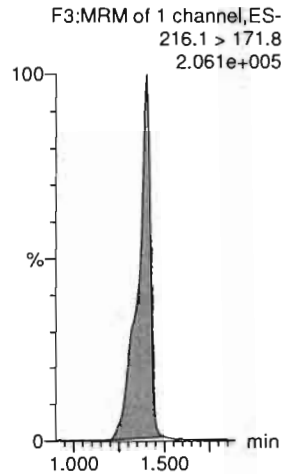
N-MeFOSE



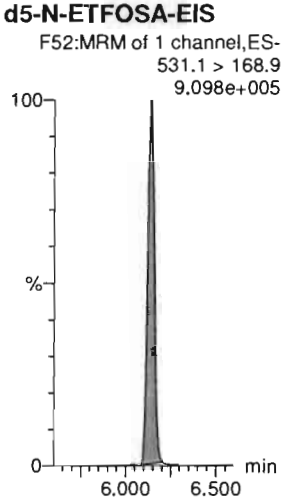
N-EtFOSE



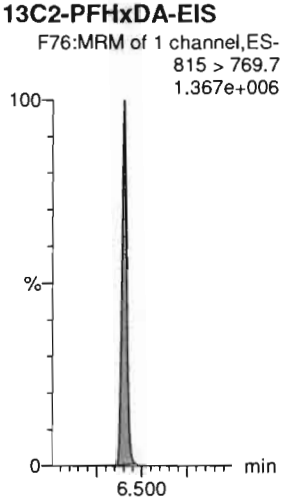
13C3-PFBA-RSD



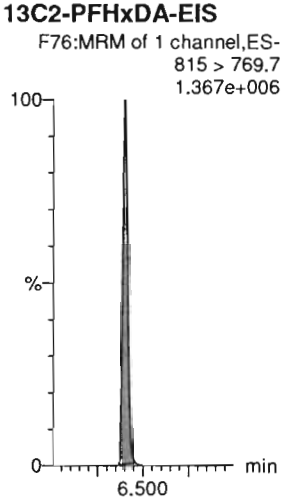
d5-N-ETFOSA-EIS



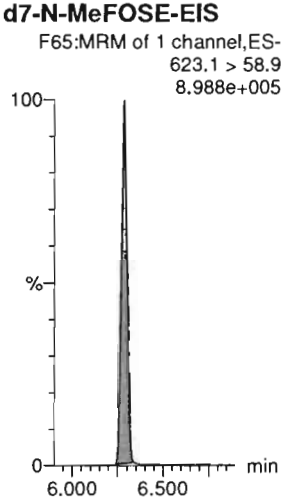
13C2-PFHxDA-EIS



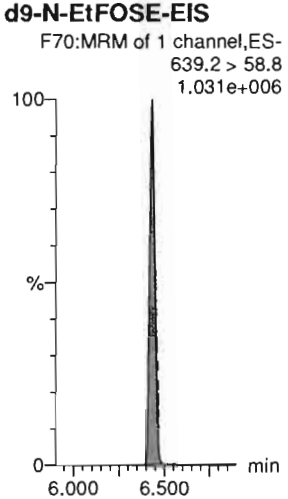
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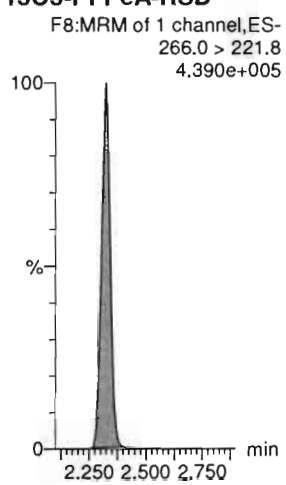
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

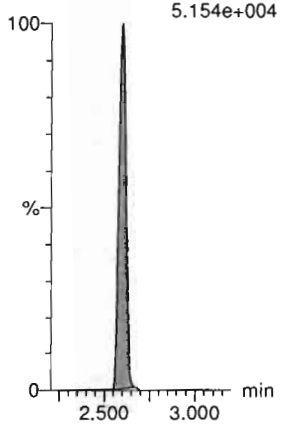


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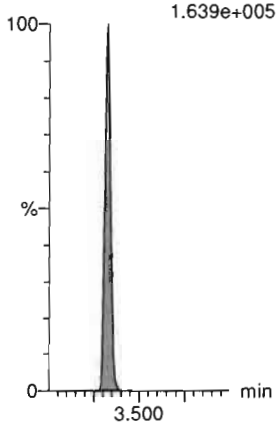
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Name: 200224P1-6, Date: 24-Feb-2020, Time: 18:03:31, ID: ST200220P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

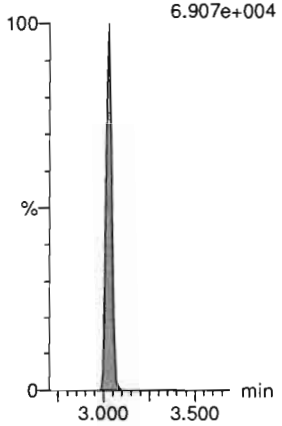
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
5.154e+004



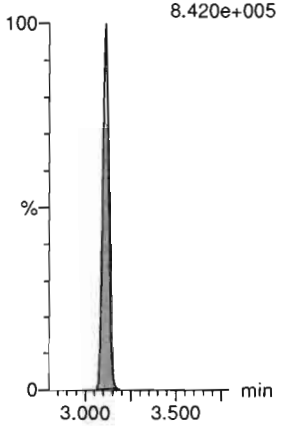
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.639e+005



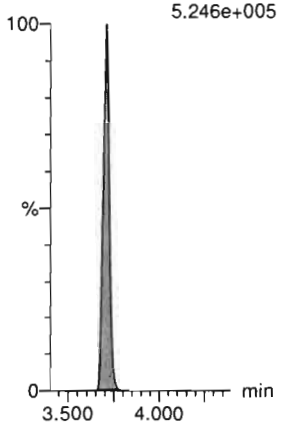
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
6.907e+004



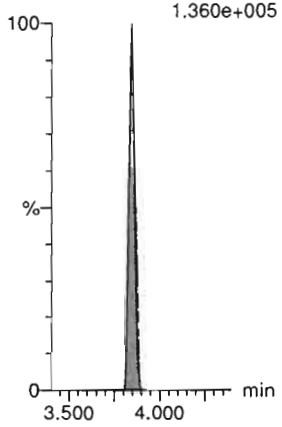
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
8.420e+005



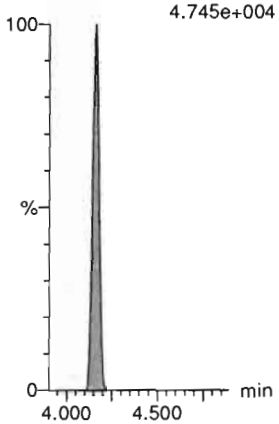
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
5.246e+005



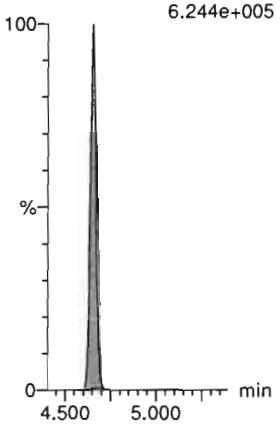
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
1.360e+005



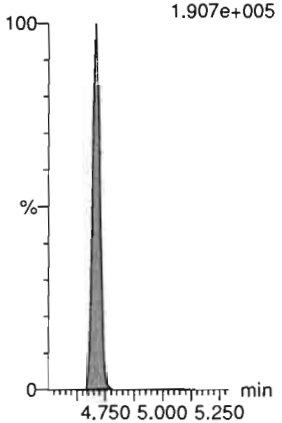
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.745e+004



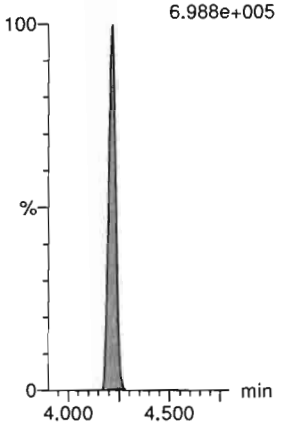
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
6.244e+005



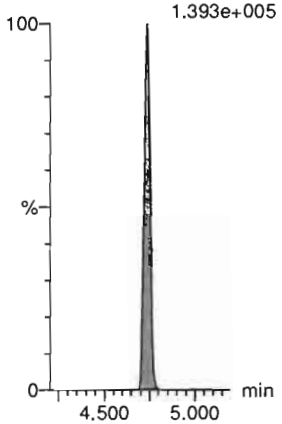
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.907e+005



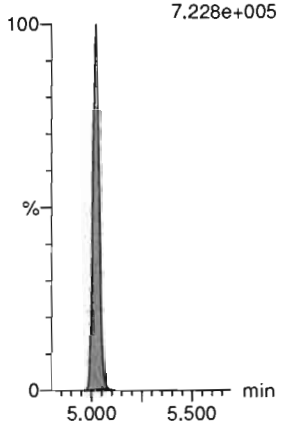
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
6.988e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.393e+005



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
7.228e+005

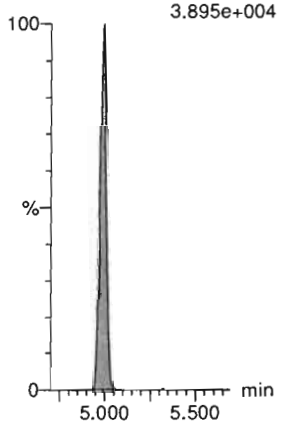


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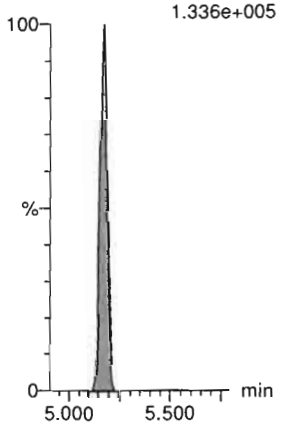
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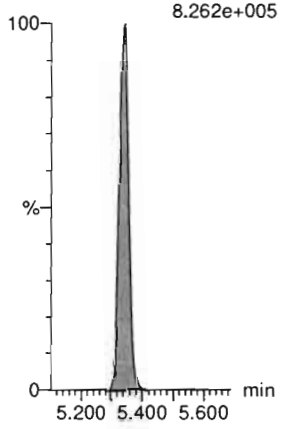
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.895e+004



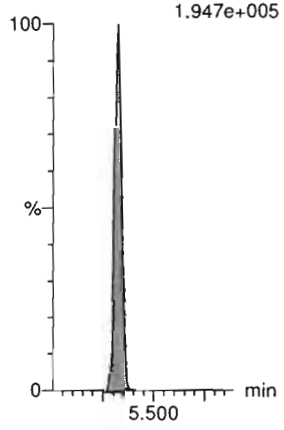
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.336e+005



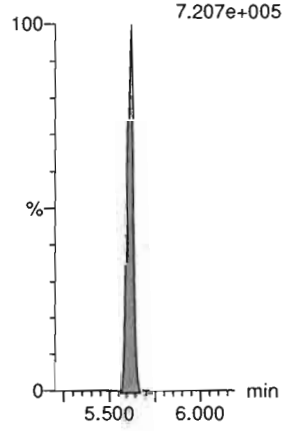
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
8.262e+005



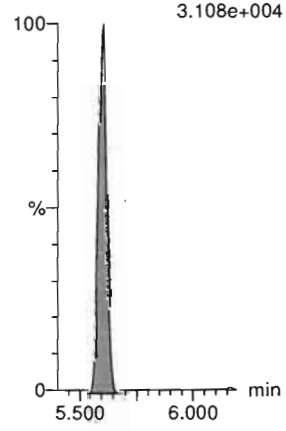
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F60:MRM of 1 channel,ES-
589.3 > 419
1.947e+005



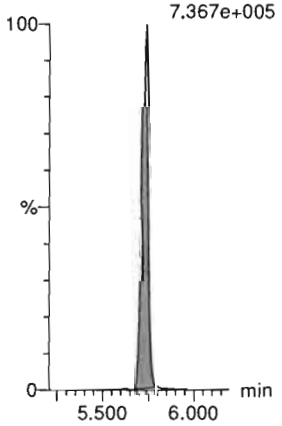
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.207e+005



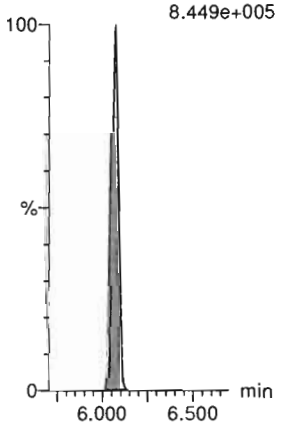
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.108e+004



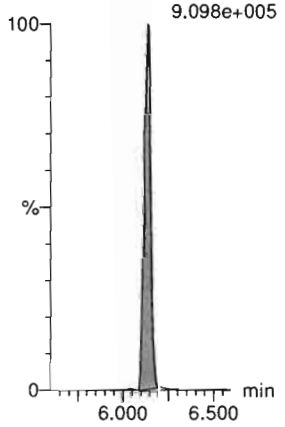
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
7.367e+005



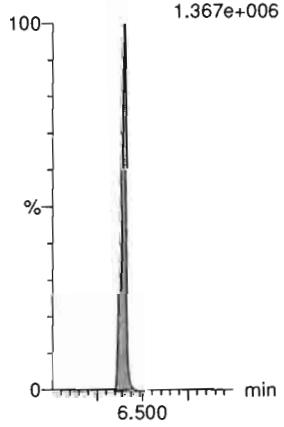
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
8.449e+005



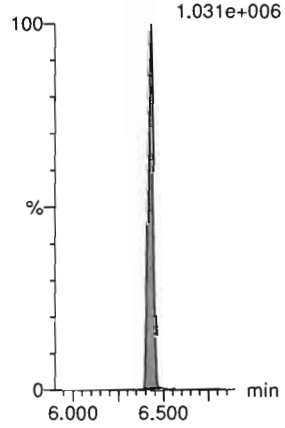
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
9.098e+005



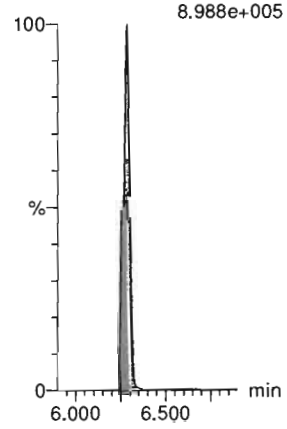
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.367e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
1.031e+006



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
8.988e+005

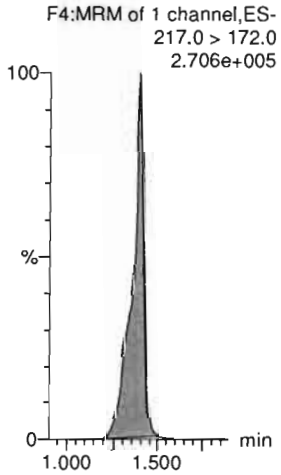


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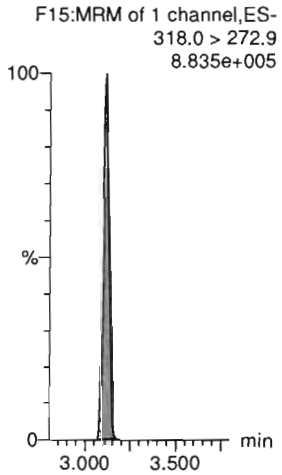
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Name: 200224P1-6, Date: 24-Feb-2020, Time: 18:03:31, ID: ST200220P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

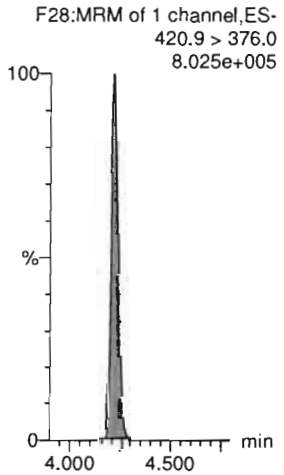
13C4-PFBA



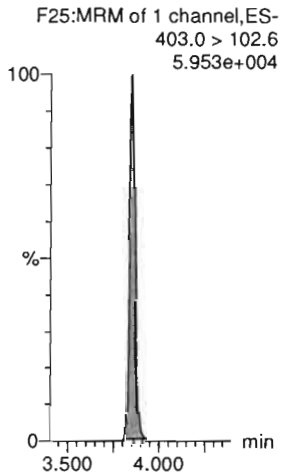
13C5-PFHxA



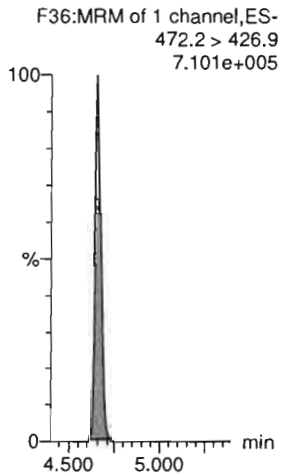
13C8-PFOA



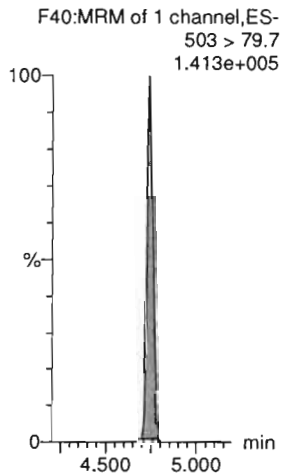
18O2-PFHxS



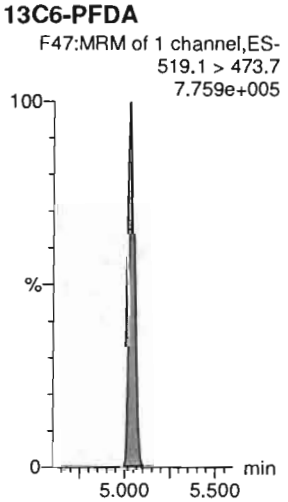
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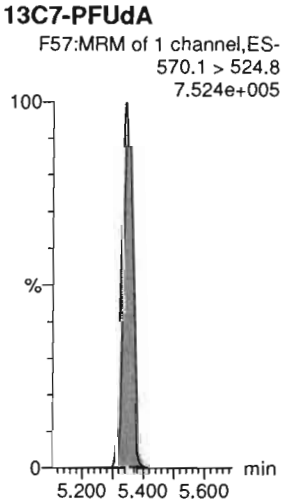
13C4-PFOS



13C6-PFDA



13C7-PFUdA



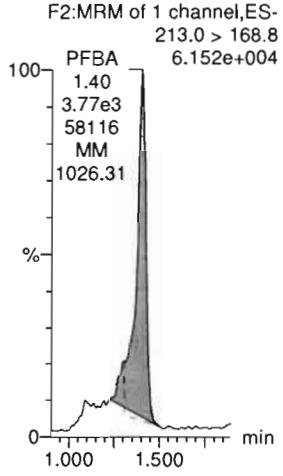
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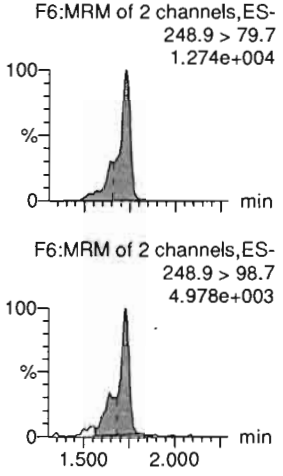
4 ems mistake

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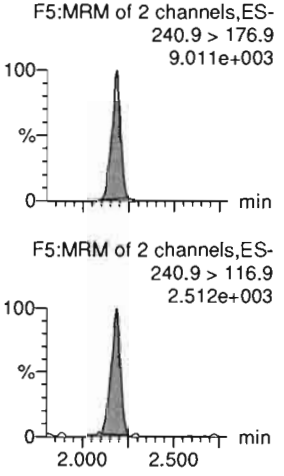
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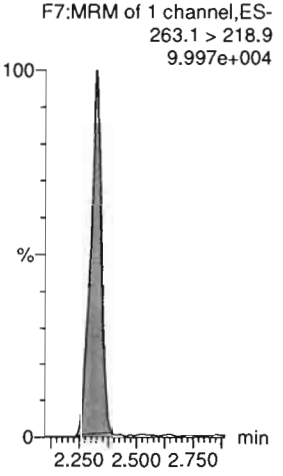
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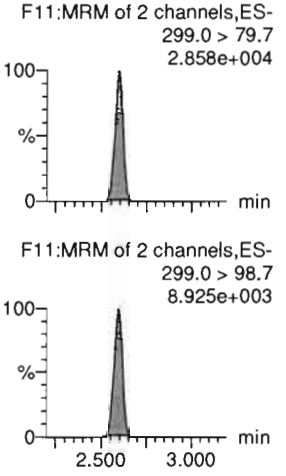
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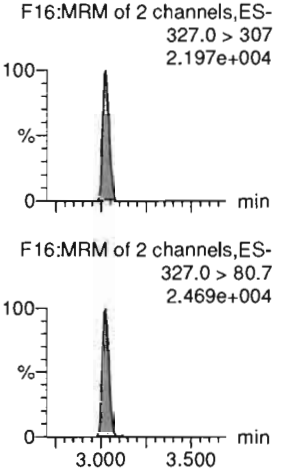
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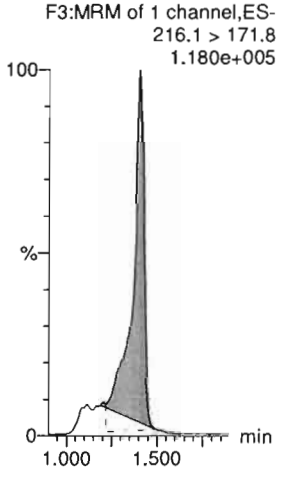
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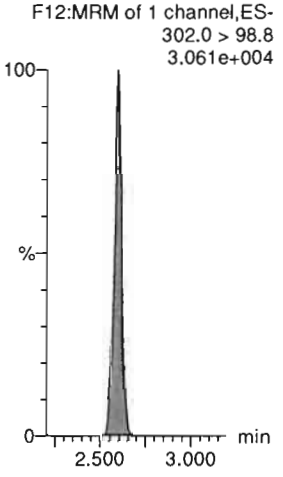
4:2 FTS



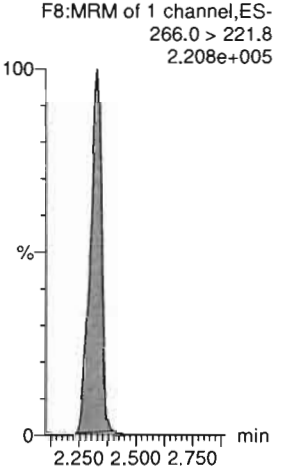
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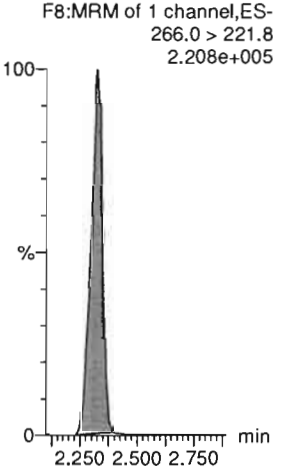
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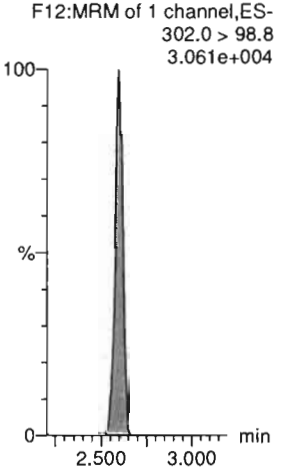
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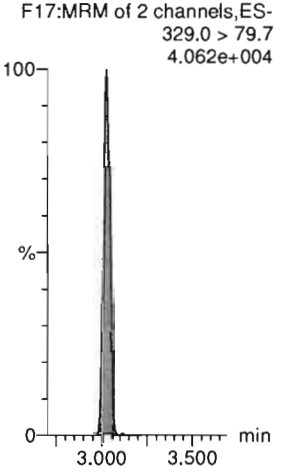
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

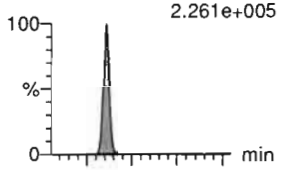


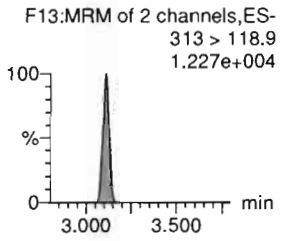
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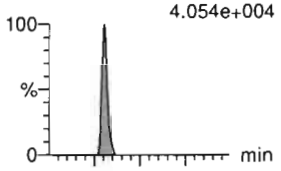
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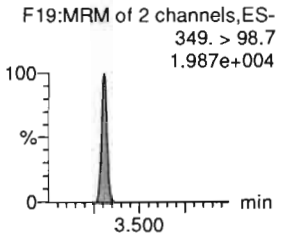
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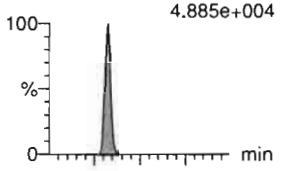


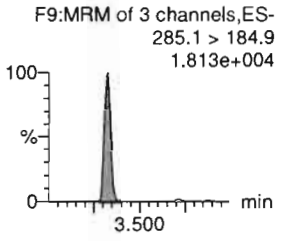
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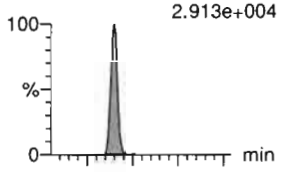


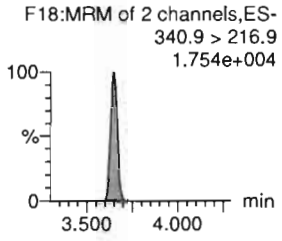
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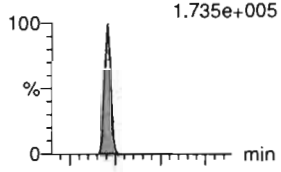


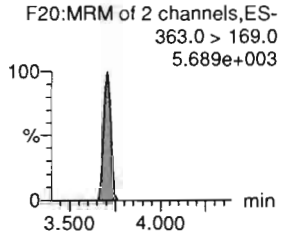
5:3 FTCA



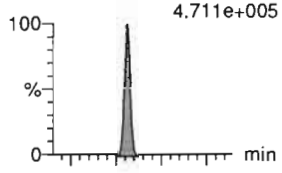


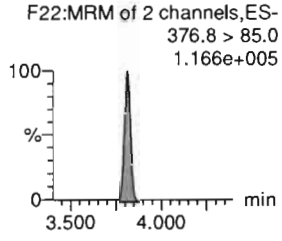
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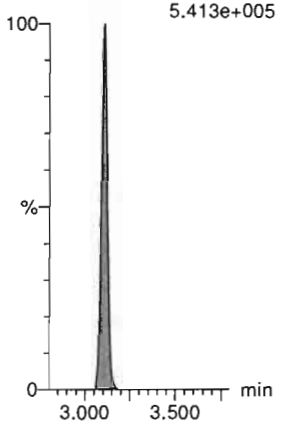


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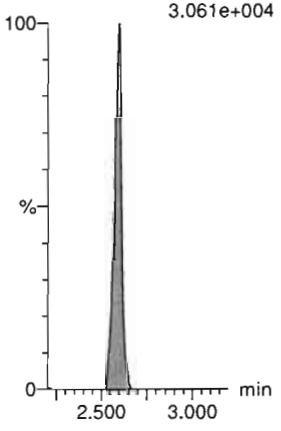




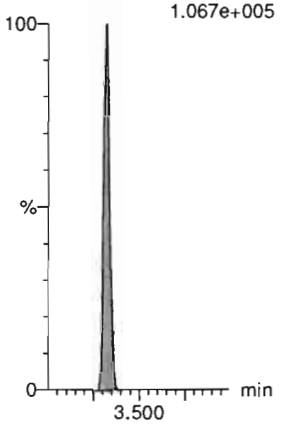
13C2-PFHxA-EIS



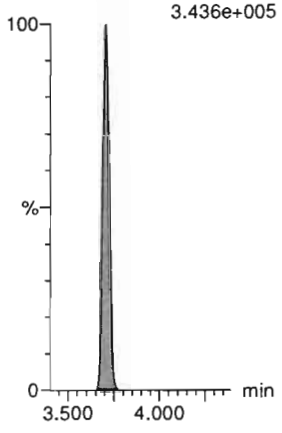
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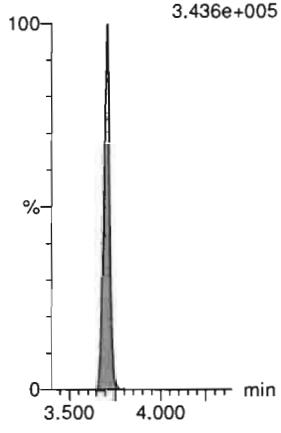
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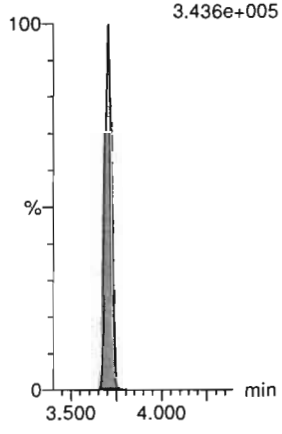
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

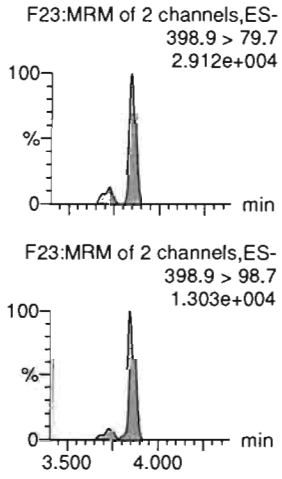


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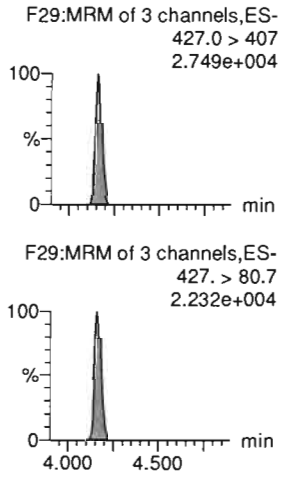
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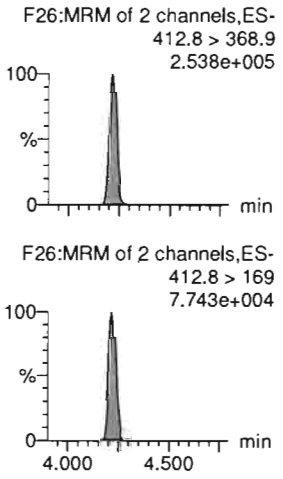
L-PFHxS



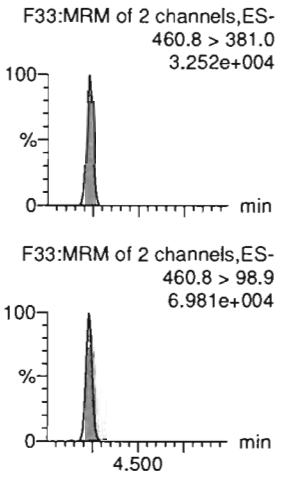
6:2 FTS



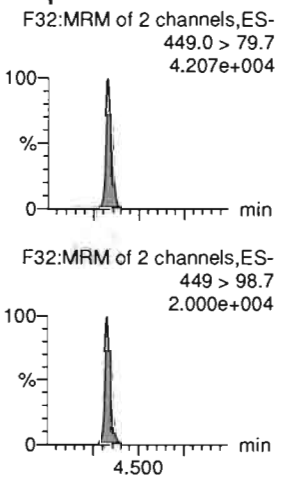
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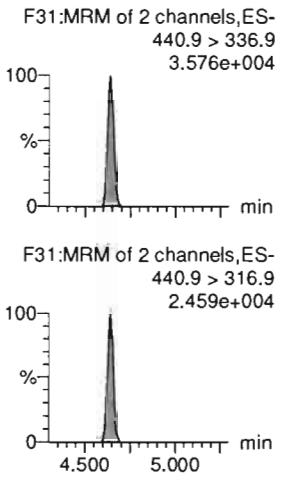
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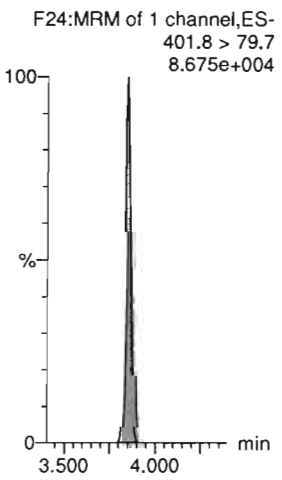
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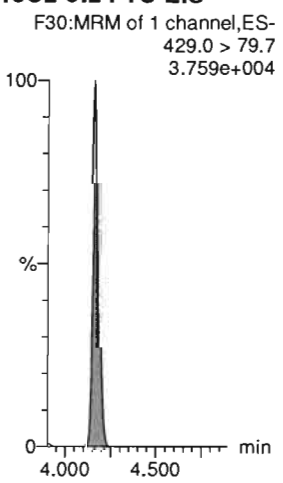
7:3 FTCA



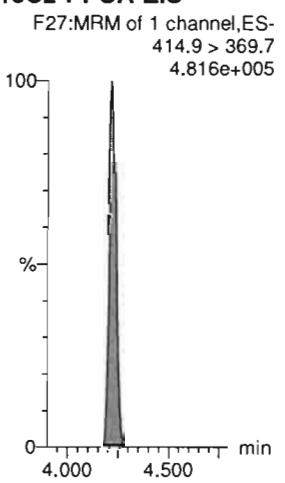
13C3-PFHxS-EIS



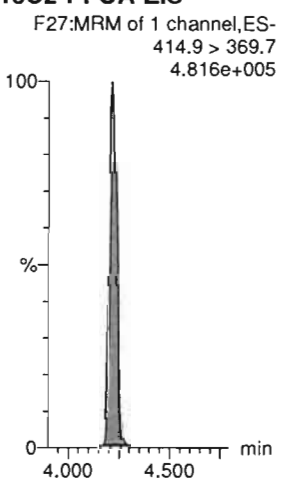
13C2-6:2 FTS-EIS



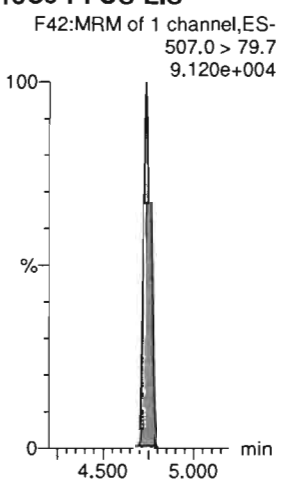
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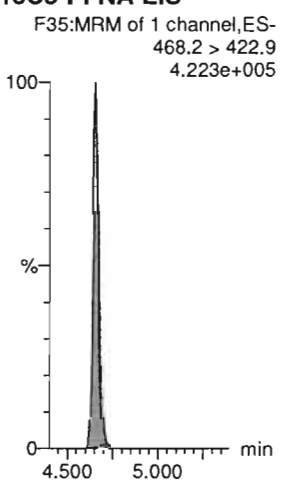
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13C8-PFOS-EIS



13C5-PFNA-EIS

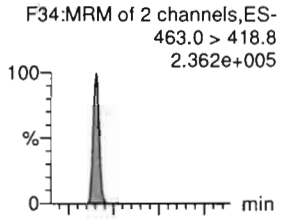


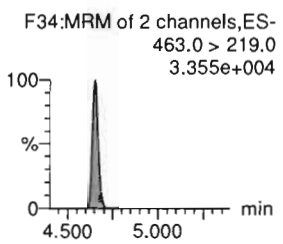
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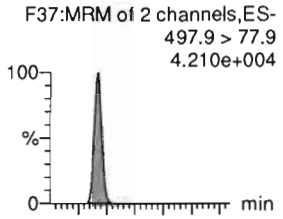
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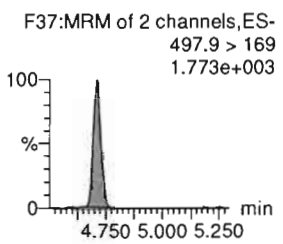
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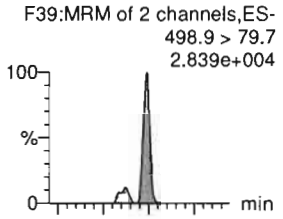


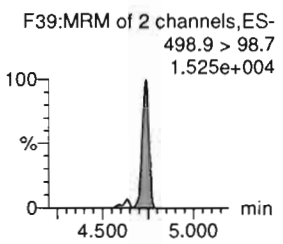
PFOSA



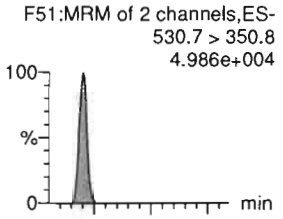


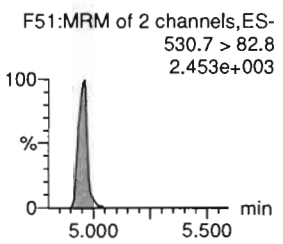
L-PFOS



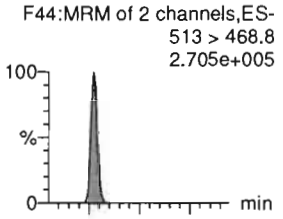


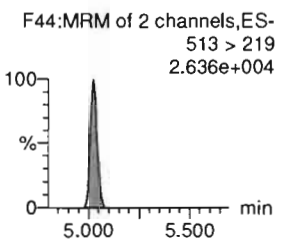
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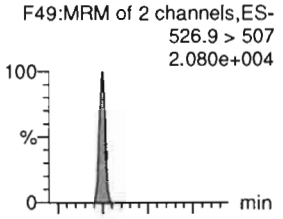


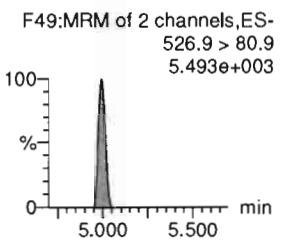
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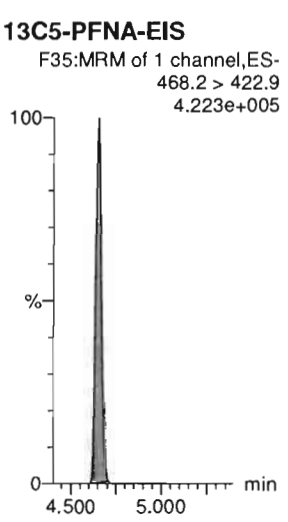


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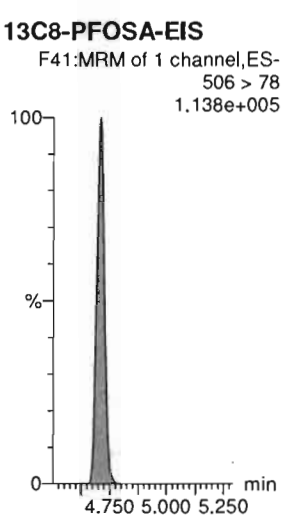




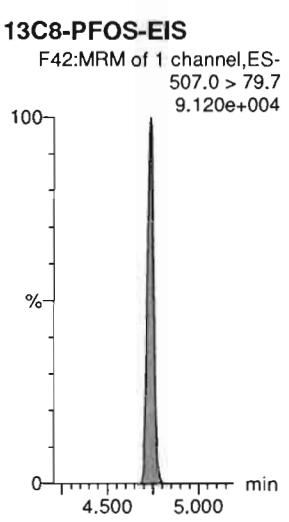
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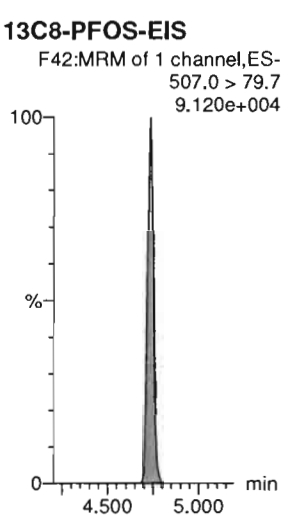
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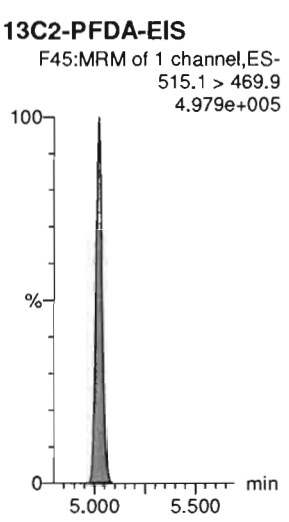
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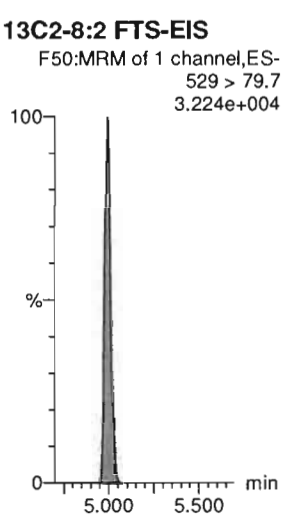
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

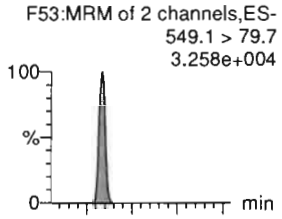


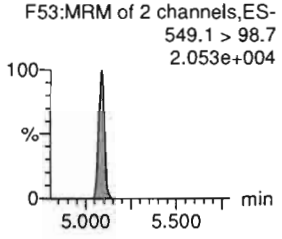
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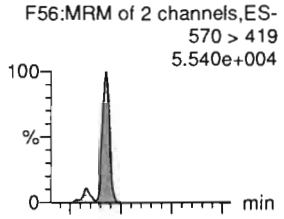
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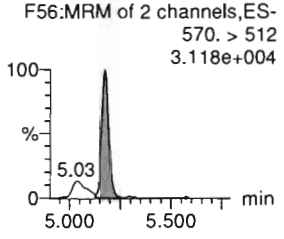
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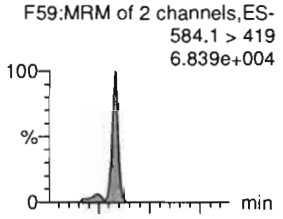


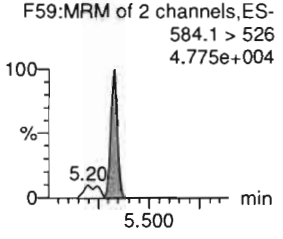
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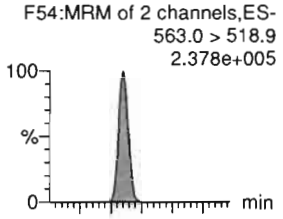


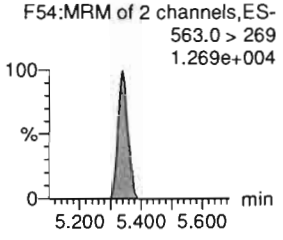
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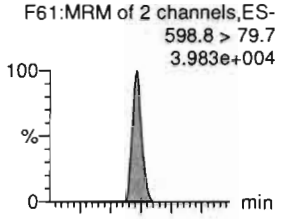


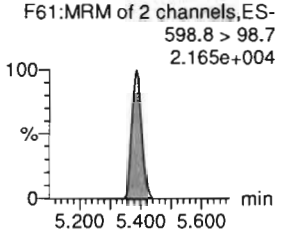
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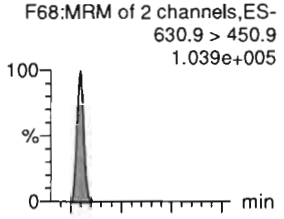


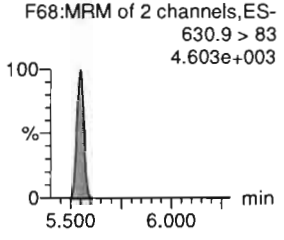
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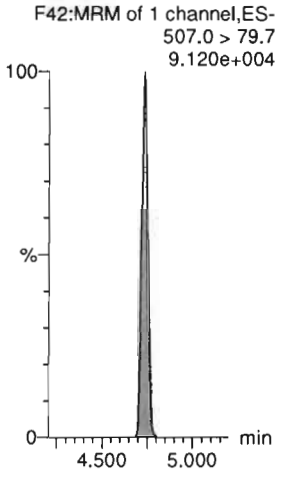


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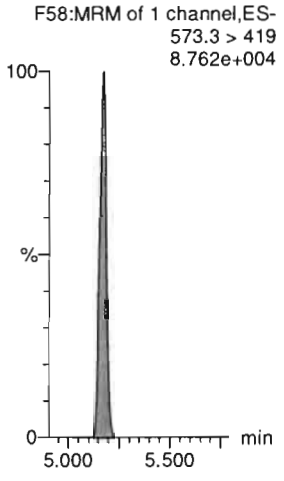




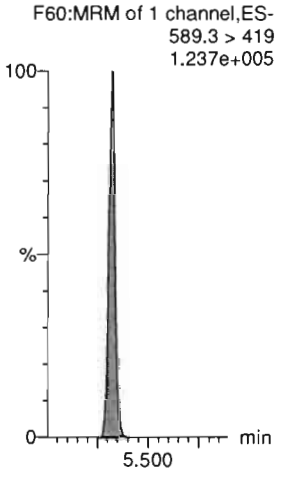
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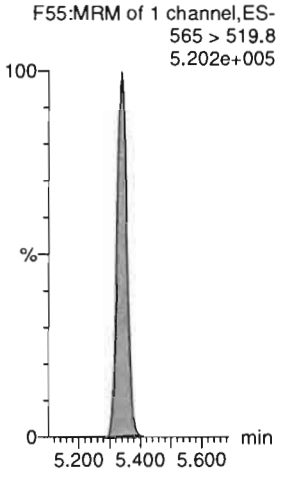
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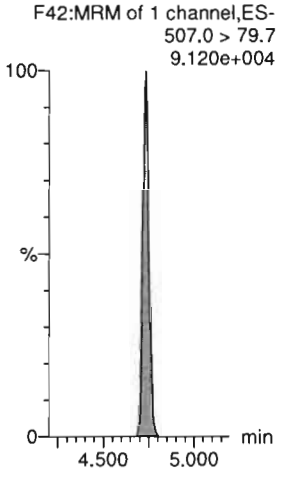
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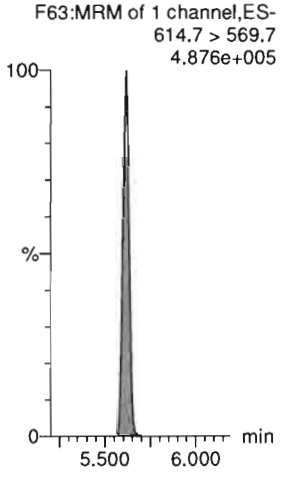
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13C8-PFOS-EIS



13C2-PFDoA-EIS

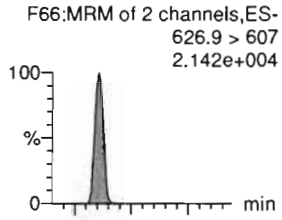


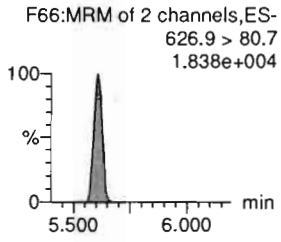
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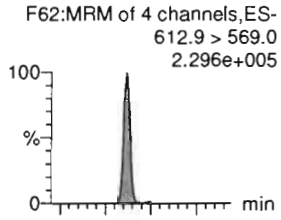
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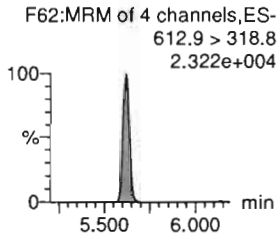
10:2 FTS



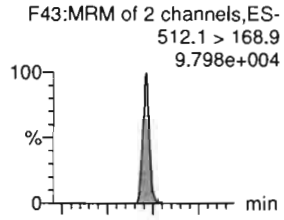


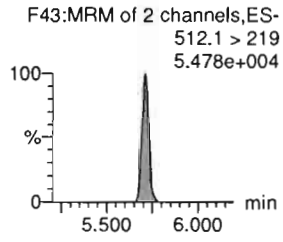
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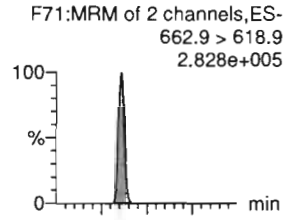


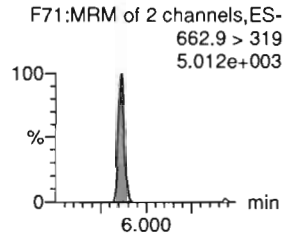
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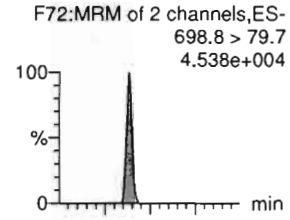


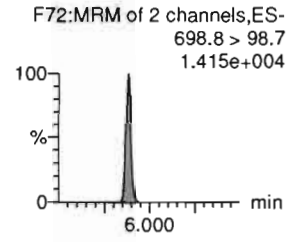
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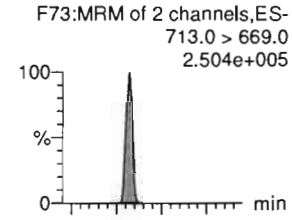


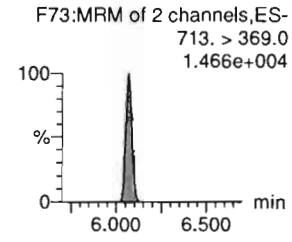
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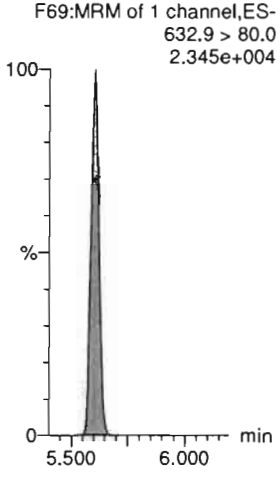


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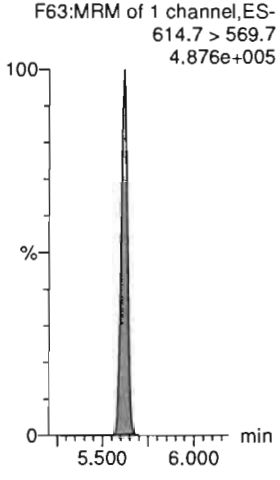




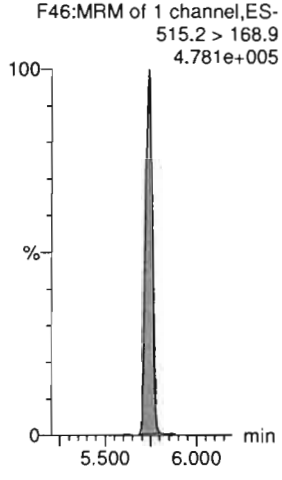
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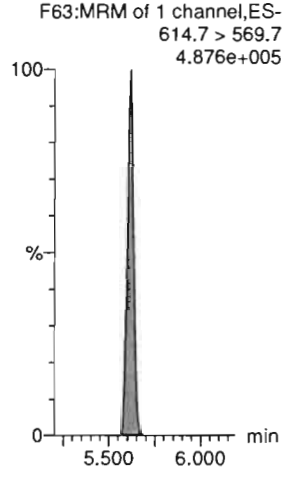
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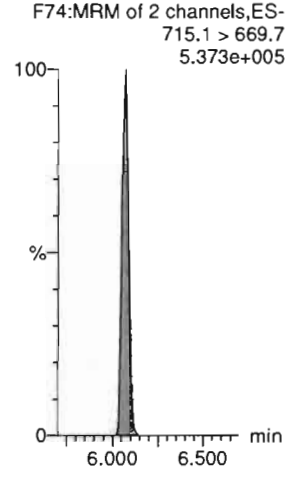
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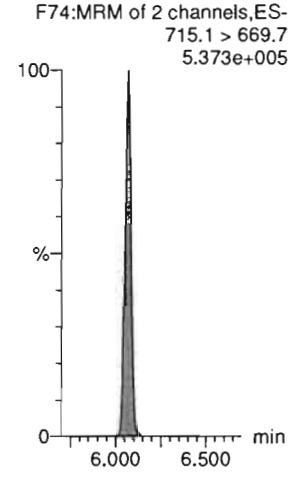
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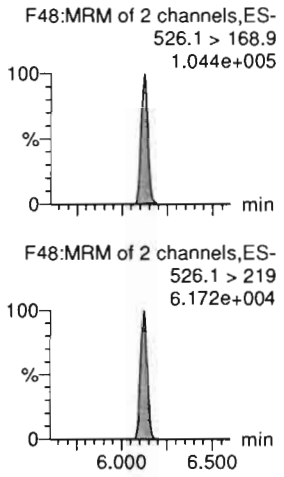


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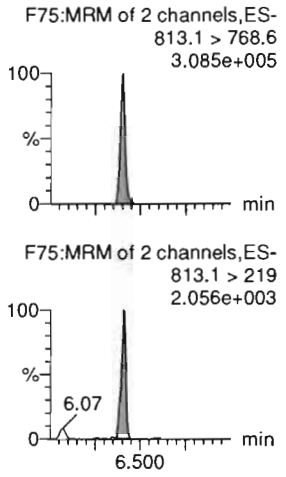
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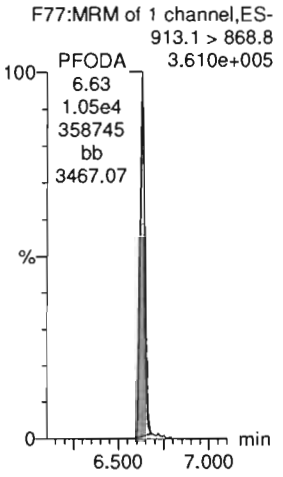
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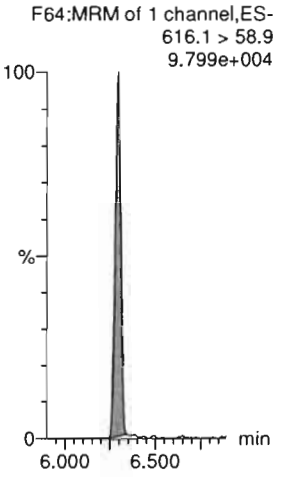
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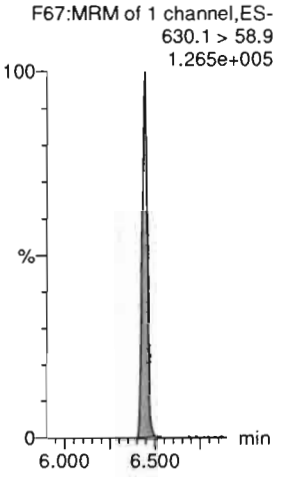
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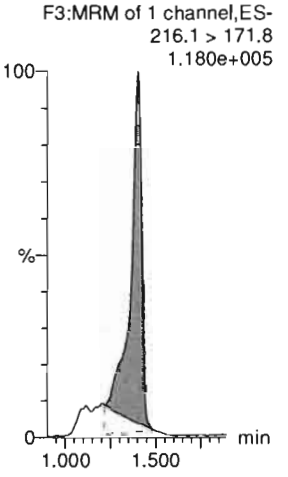
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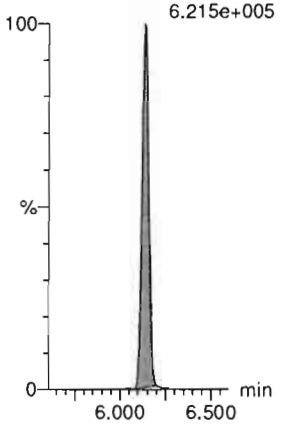
N-EtFOSE



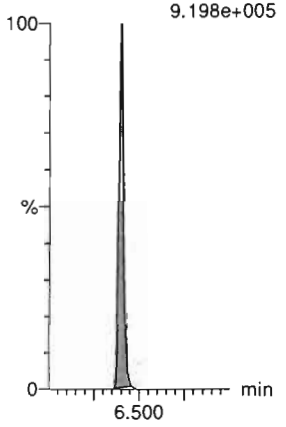
13C3-PFBA-RSD



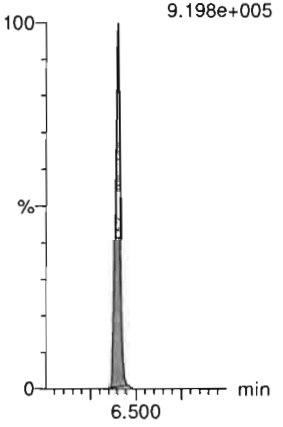
d5-N-ETFOSA-EIS



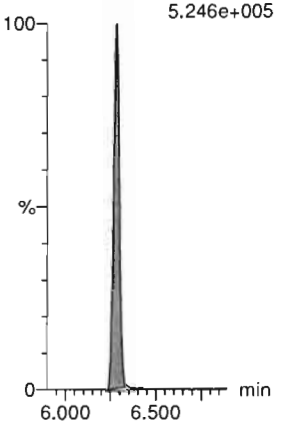
13C2-PFHxDA-EIS



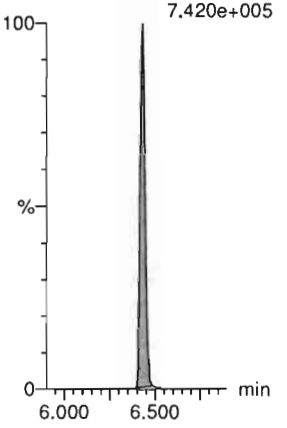
13C2-PFHxDA-EIS



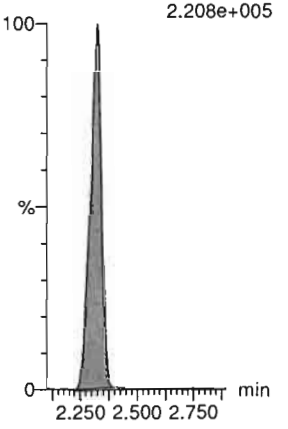
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

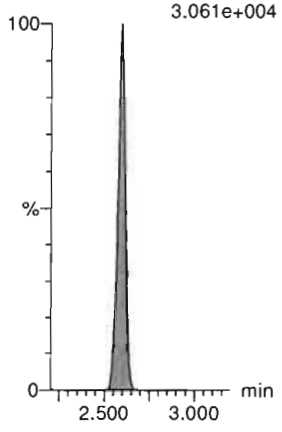


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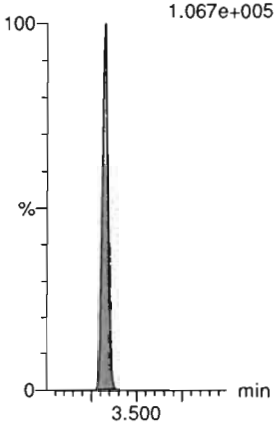
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Name: 200224P1-7, Date: 24-Feb-2020, Time: 18:14:02, ID: ST200220P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

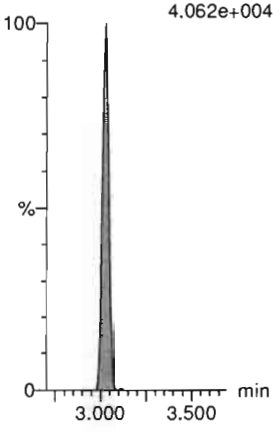
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.061e+004



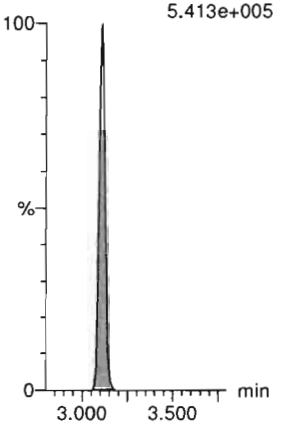
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.067e+005



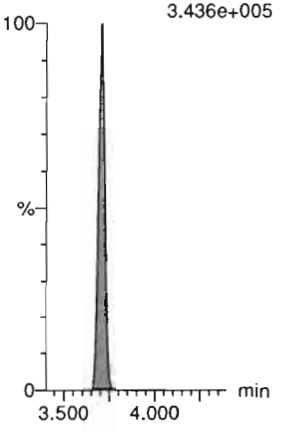
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.062e+004



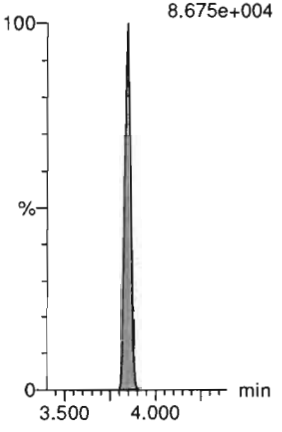
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.413e+005



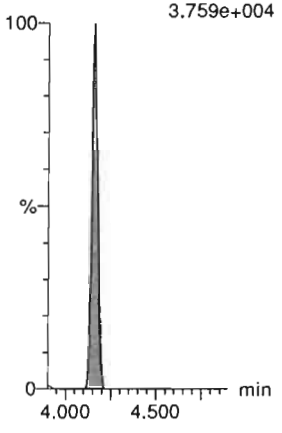
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.436e+005



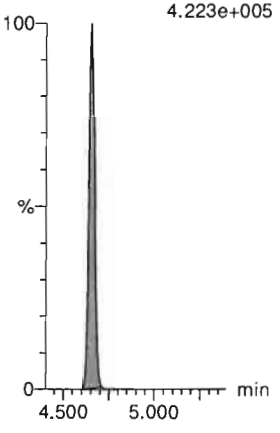
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.675e+004



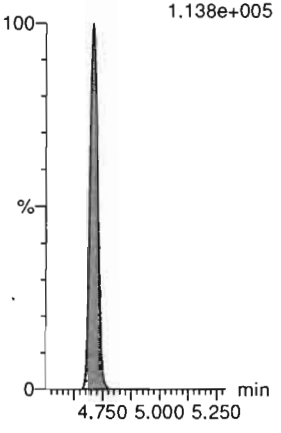
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.759e+004



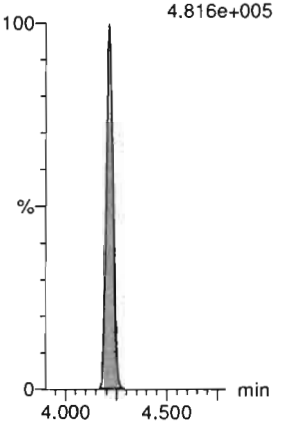
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.223e+005



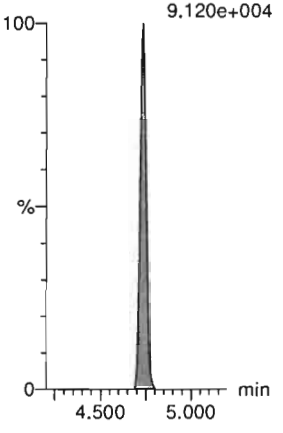
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.138e+005



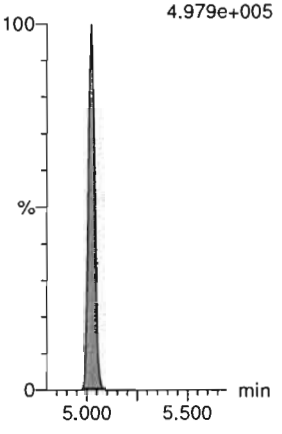
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.816e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.120e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.979e+005

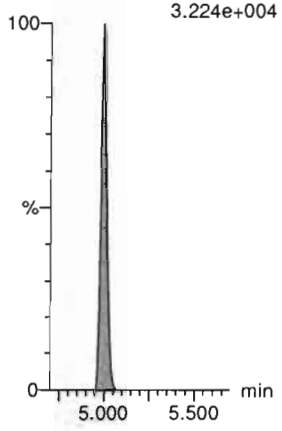


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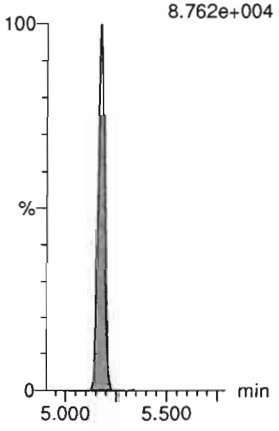
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-7, Date: 24-Feb-2020, Time: 18:14:02, ID: ST200220P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

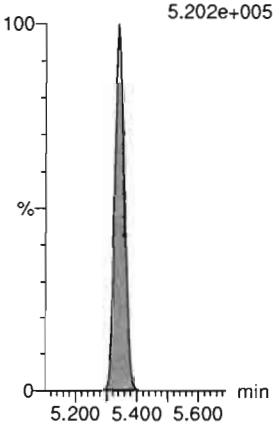
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.224e+004



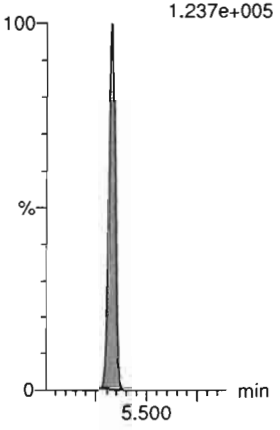
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.762e+004



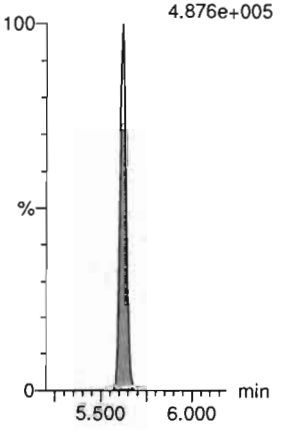
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.202e+005



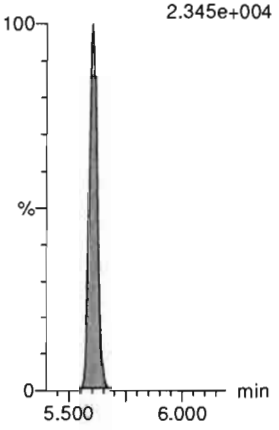
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.237e+005



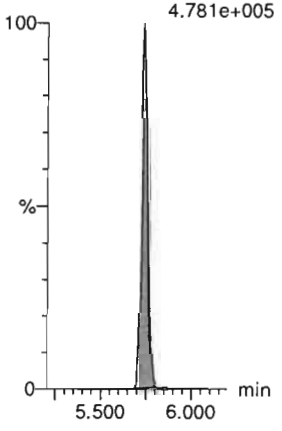
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.876e+005



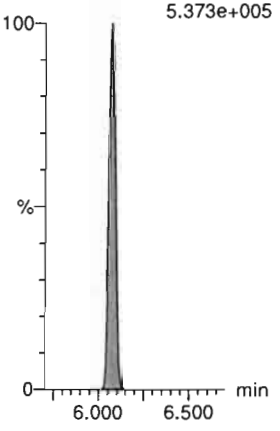
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.345e+004



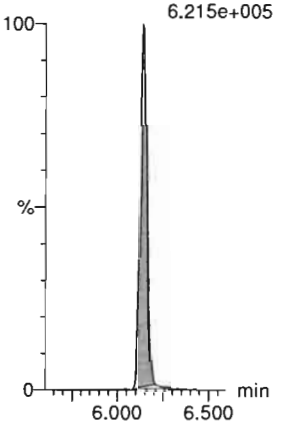
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.781e+005



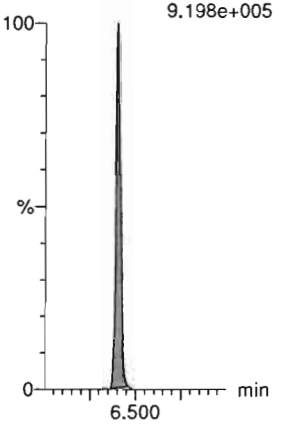
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.373e+005



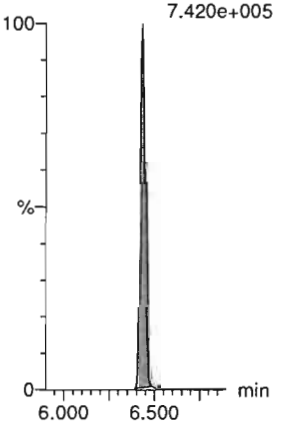
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.215e+005



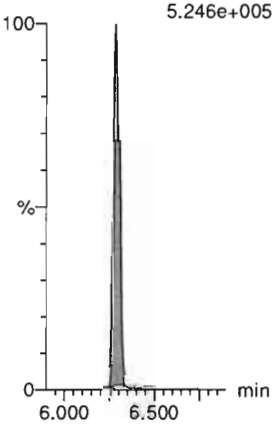
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.198e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.420e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.246e+005

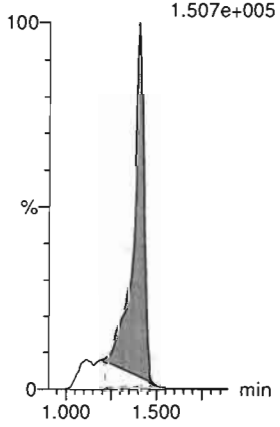


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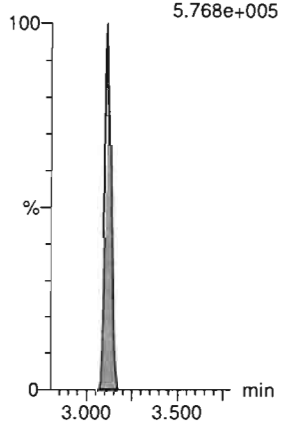
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Name: 200224P1-7, Date: 24-Feb-2020, Time: 18:14:02, ID: ST200220P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

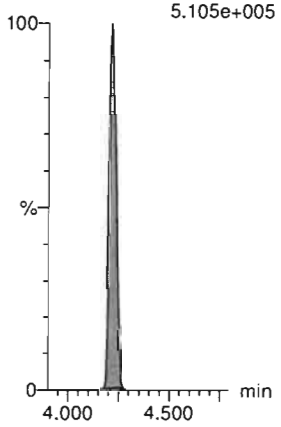
13C4-PFBA



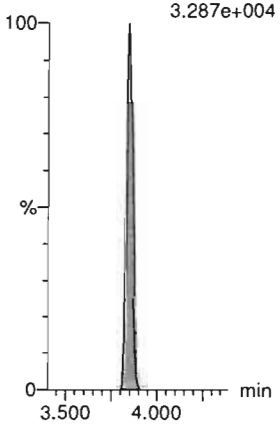
13C5-PFHxA



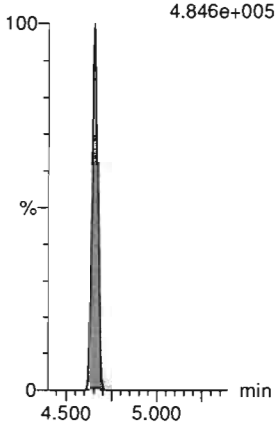
13C8-PFOA



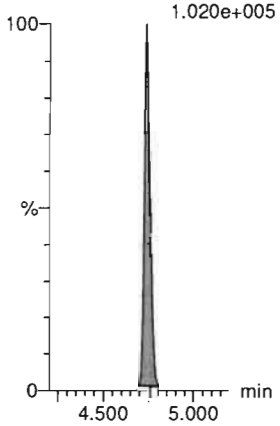
18O2-PFHxS



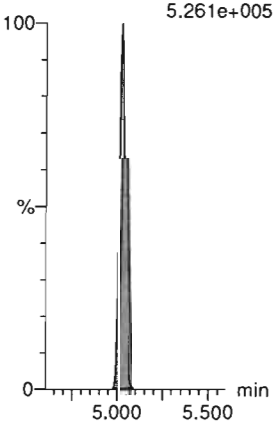
13C9-PFNA



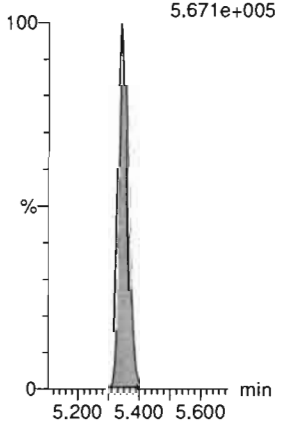
13C4-PFOS



13C6-PFDA



13C7-PFUdA



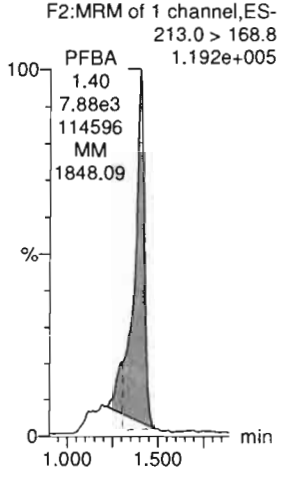
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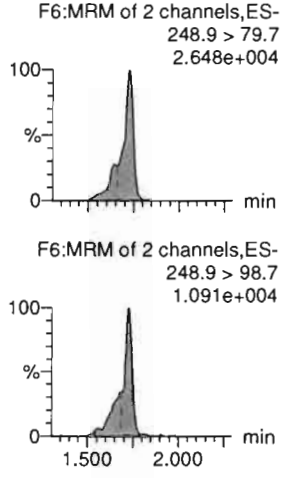
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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

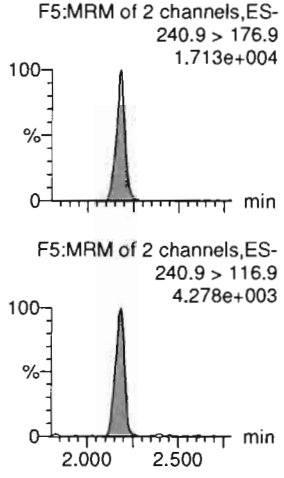
PFBA



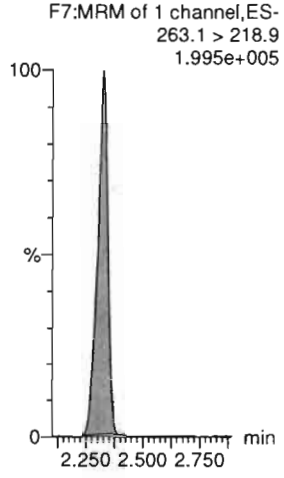
PFPrS



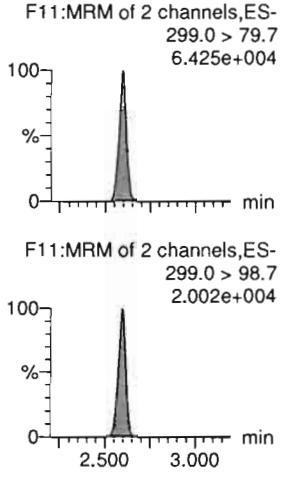
3:3 FTCA



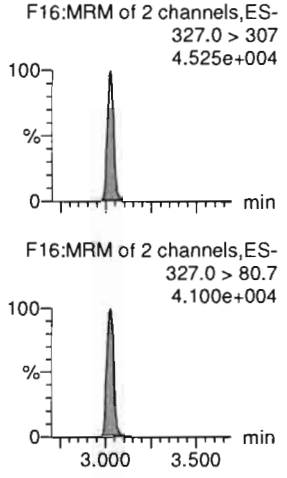
PFPeA



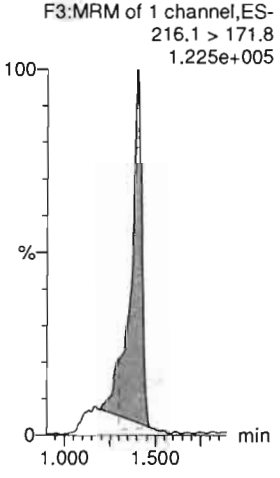
PFBS



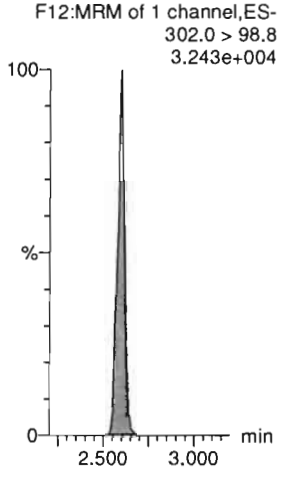
4:2 FTS



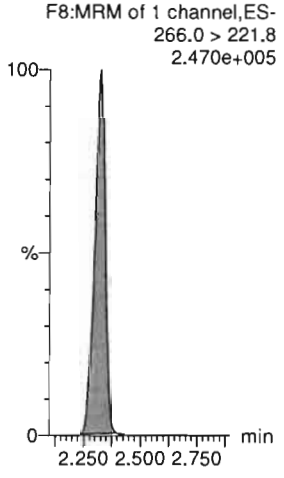
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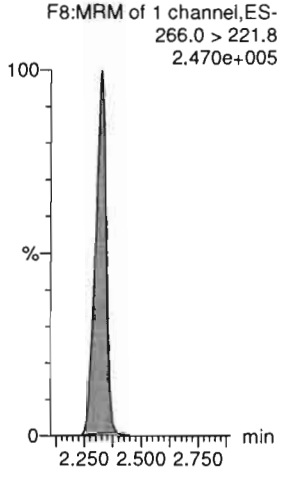
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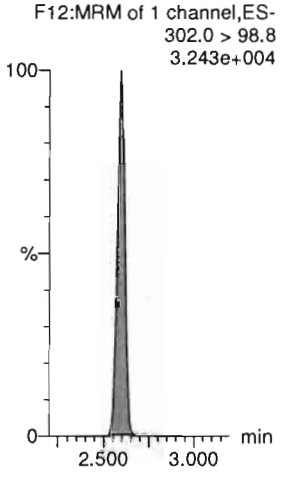
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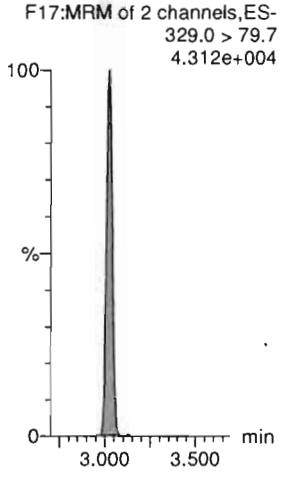
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

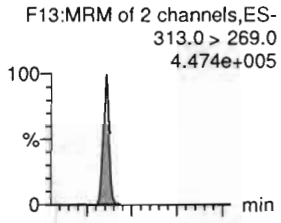


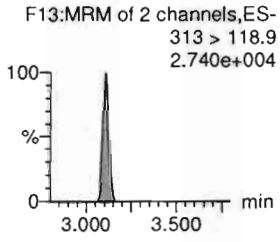
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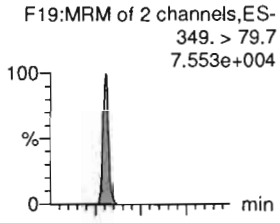
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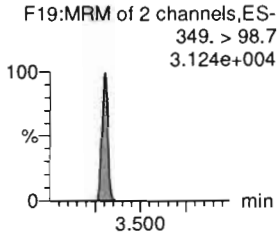
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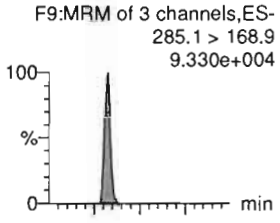


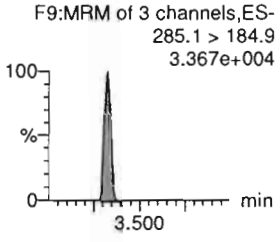
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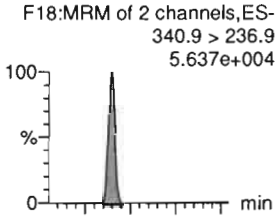


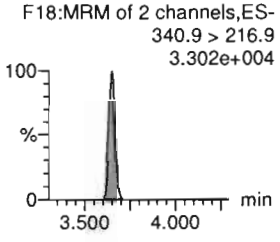
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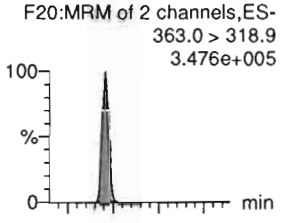


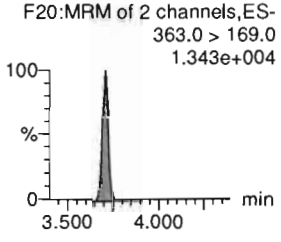
5:3 FTCA



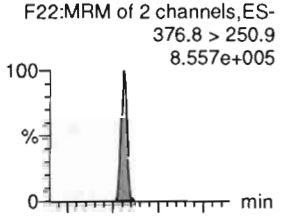


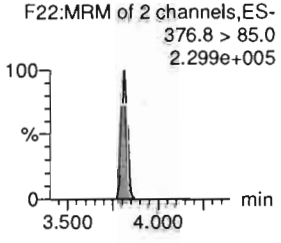
PFHpA



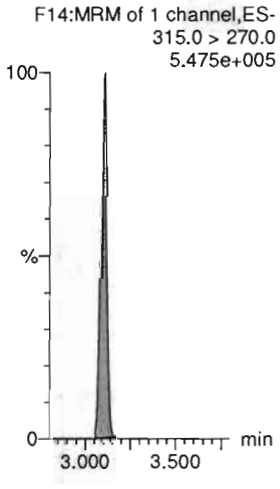


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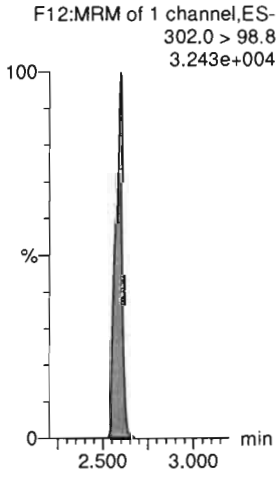




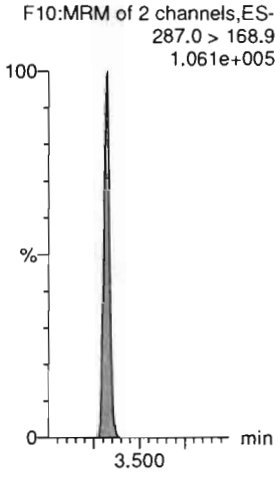
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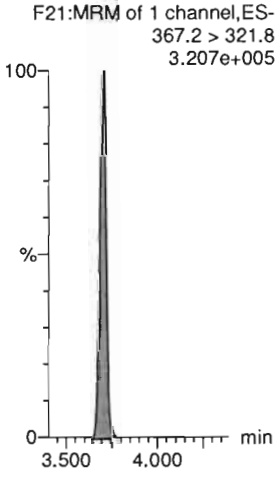
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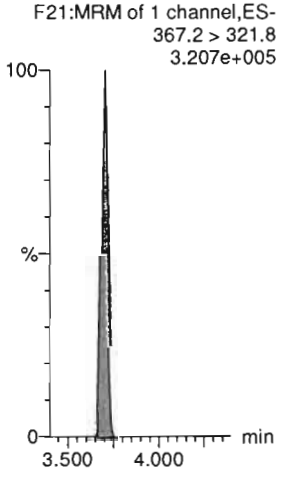
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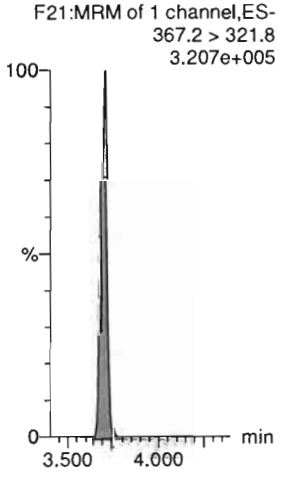
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

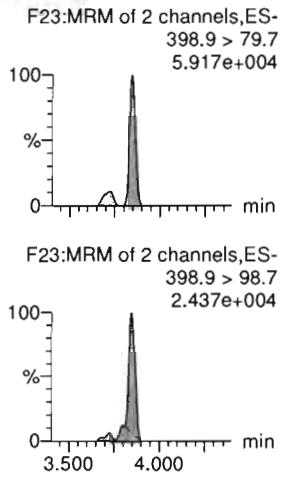


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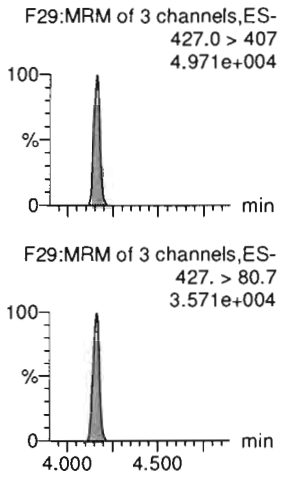
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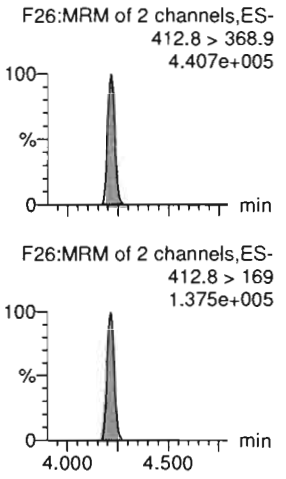
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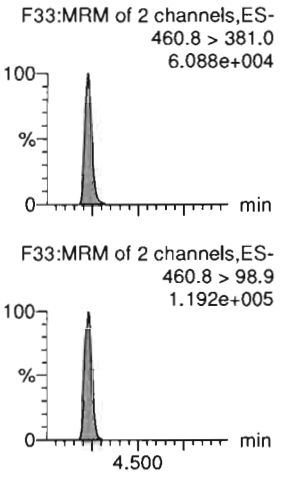
6:2 FTS



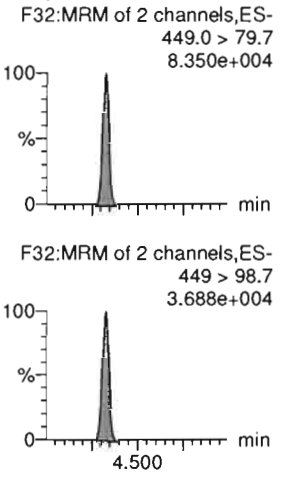
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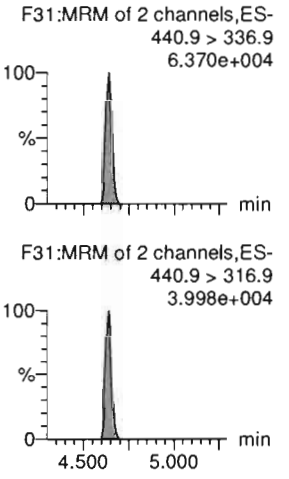
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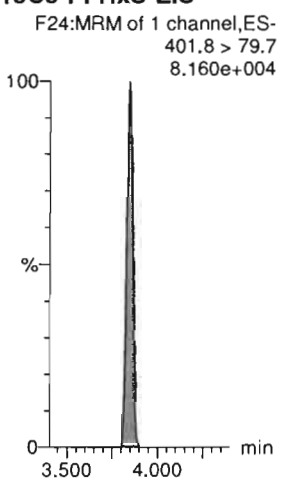
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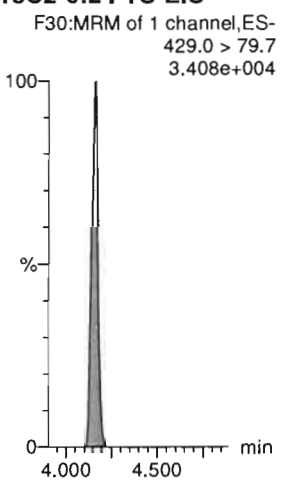
7:3 FTCA



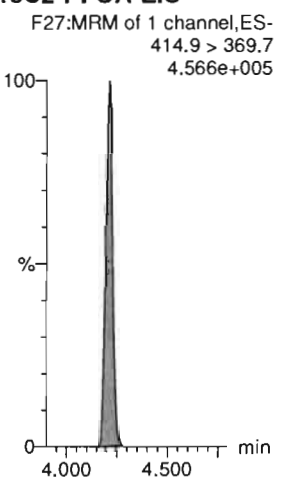
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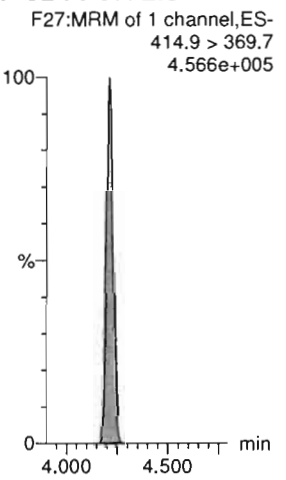
13C2-6:2 FTS-EIS



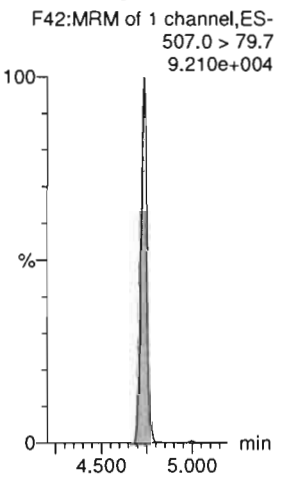
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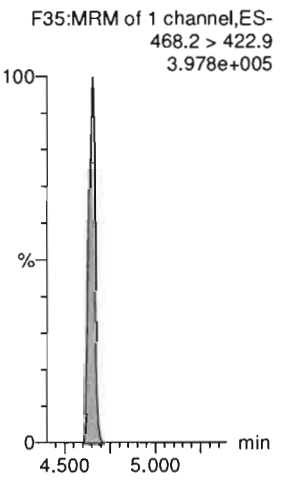
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13C8-PFOS-EIS



13C5-PFNA-EIS

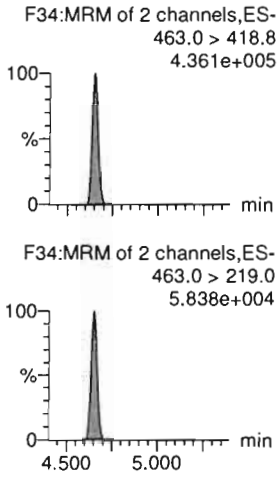


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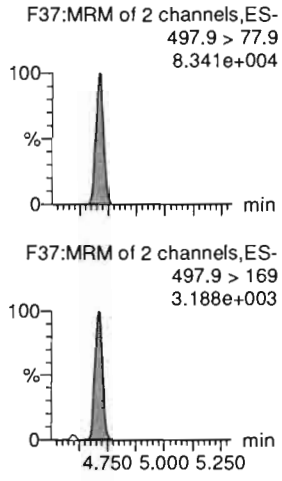
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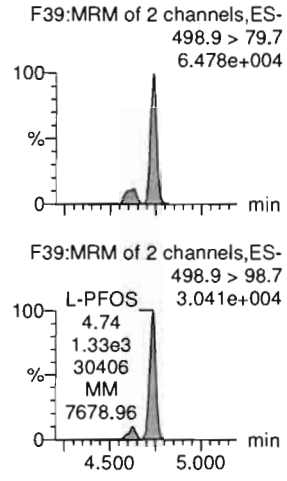
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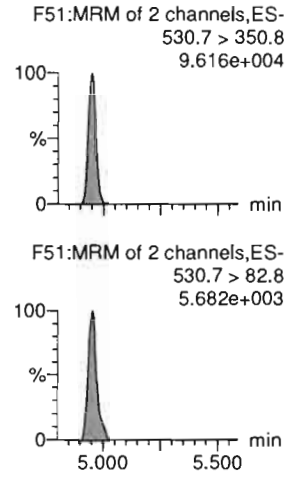
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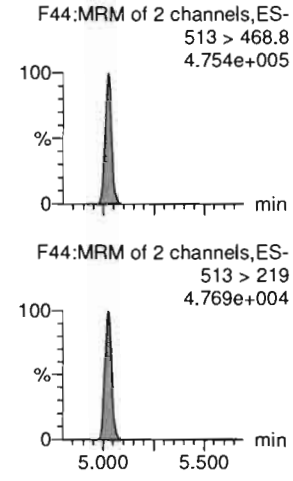
L-PFOS



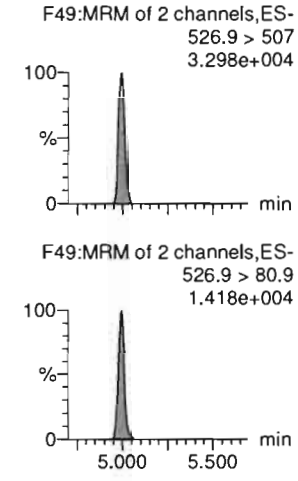
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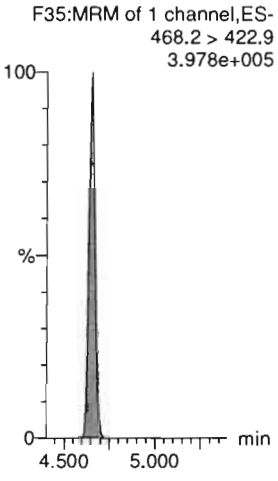
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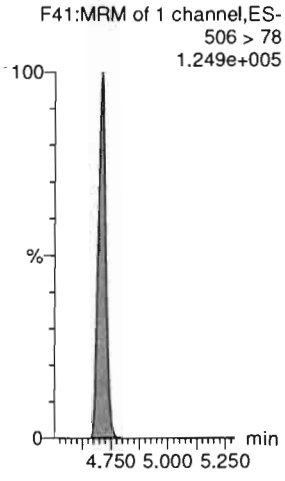
8:2 FTS



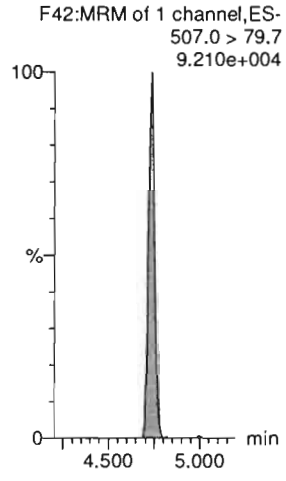
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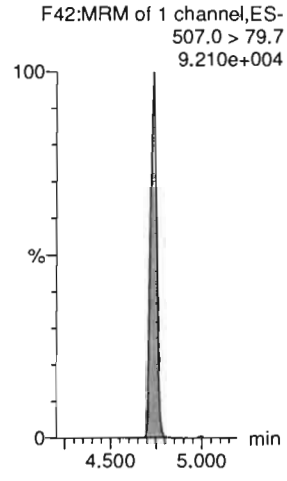
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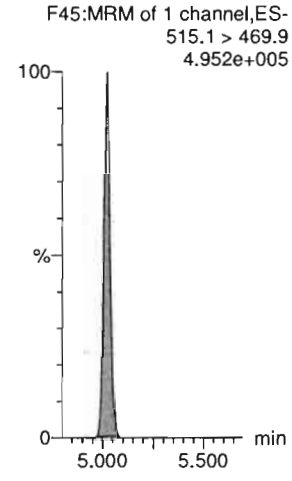
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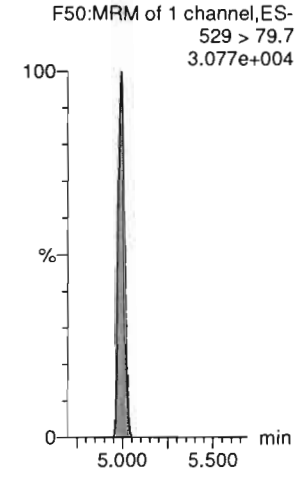
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

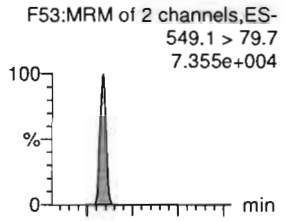


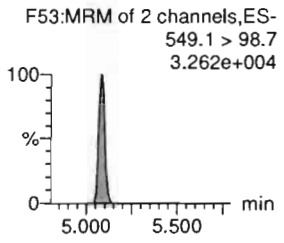
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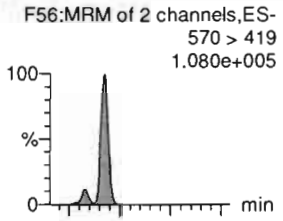
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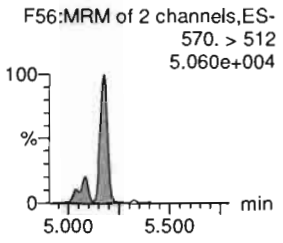
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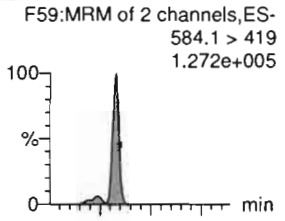


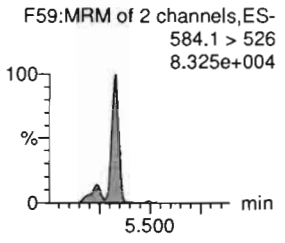
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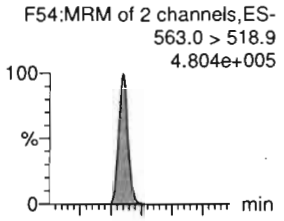


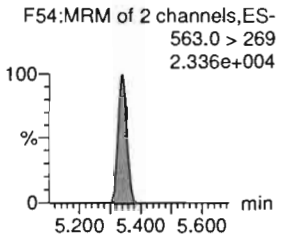
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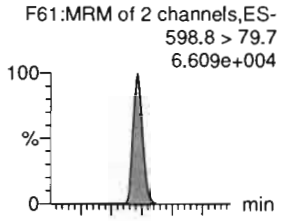


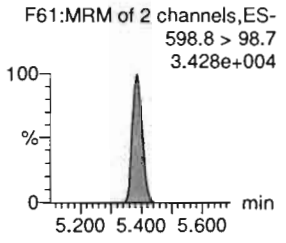
PFUdA



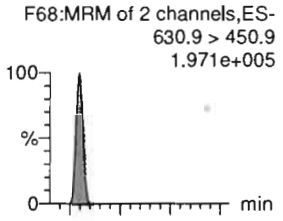


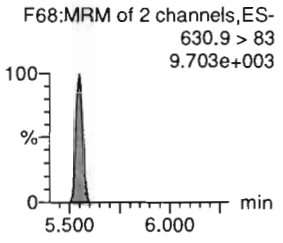
PFDS



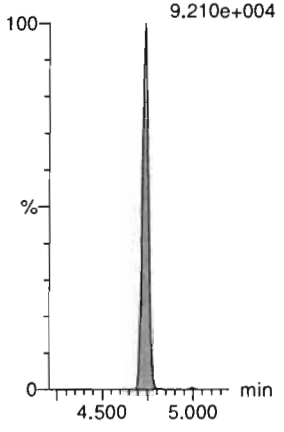


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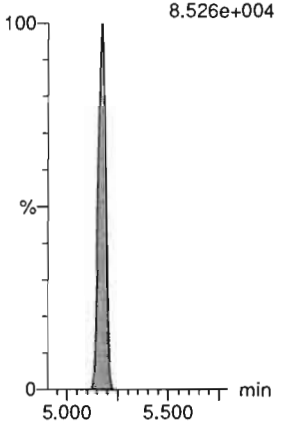




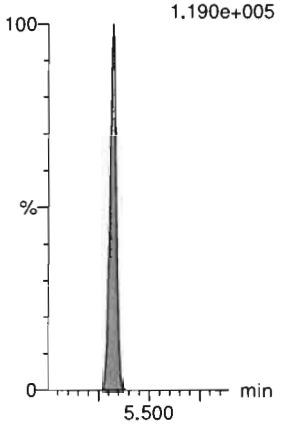
13C8-PFOS-EIS



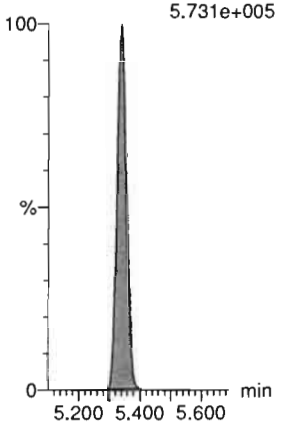
d3-N-MeFOSAA-EIS



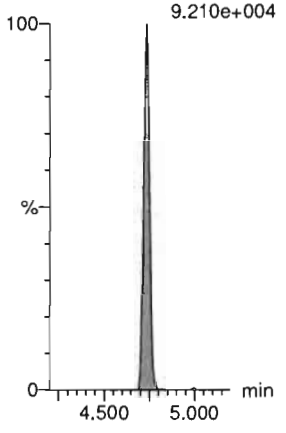
d5-N-EtFOSAA-EIS



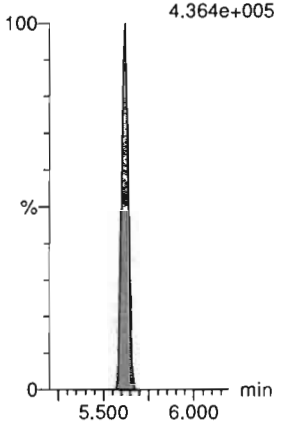
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

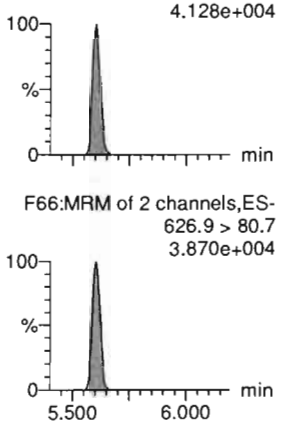


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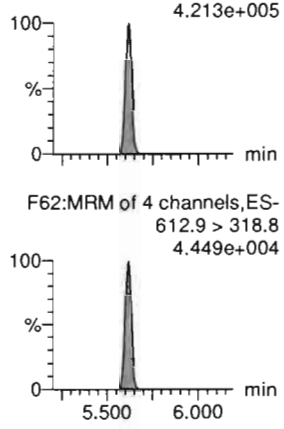
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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

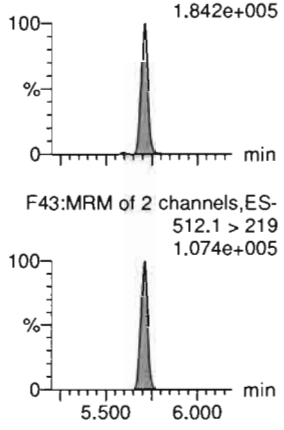
10:2 FTS



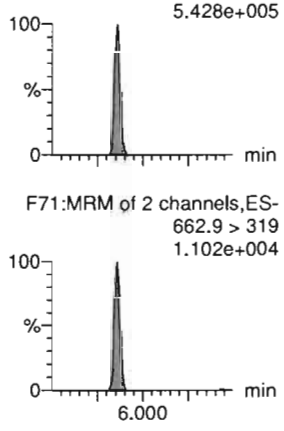
PFDoA



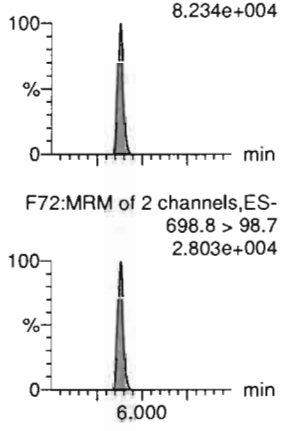
N-MeFOSA



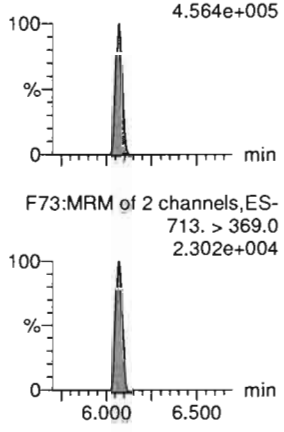
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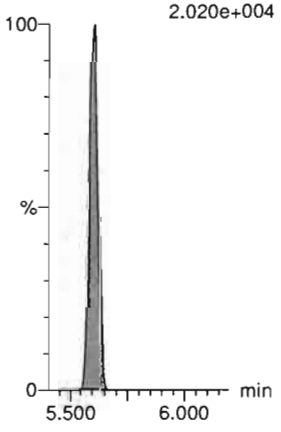
PFDoS



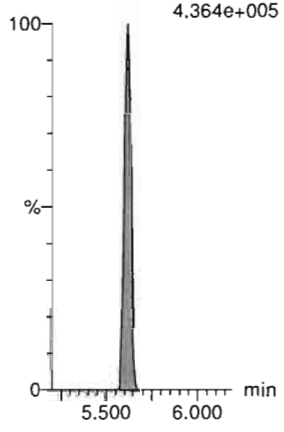
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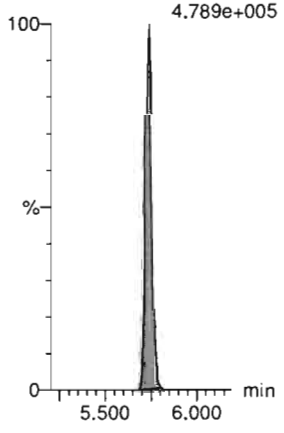
13C2-10:2 FTS-EIS



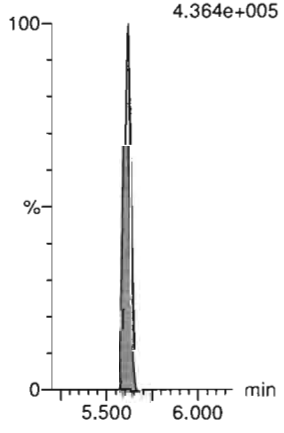
13C2-PFDoA-EIS



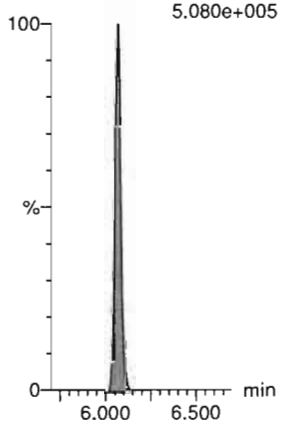
d3-N-MeFOSA-EIS



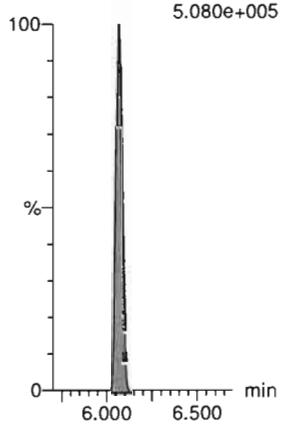
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

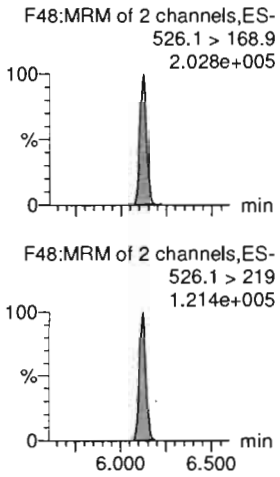


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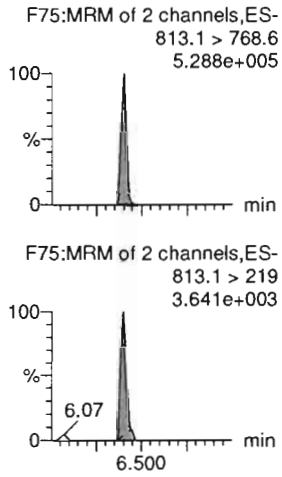
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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

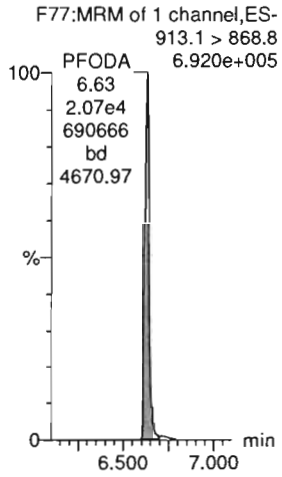
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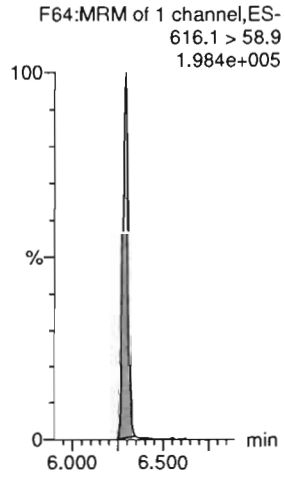
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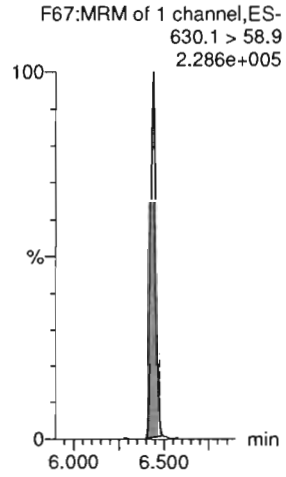
PFODA



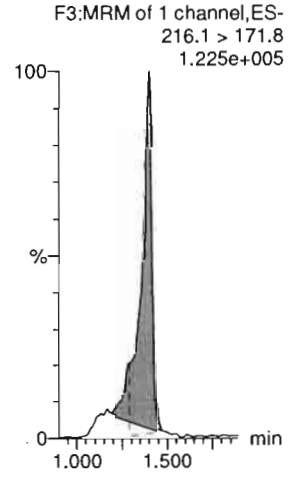
N-MeFOSE



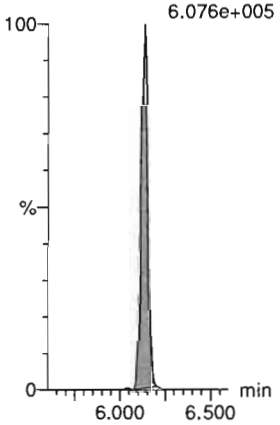
N-EtFOSE



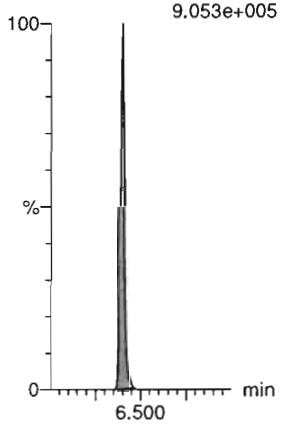
13C3-PFBA-RSD



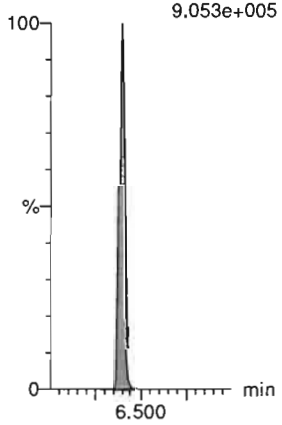
d5-N-ETFOSA-EIS



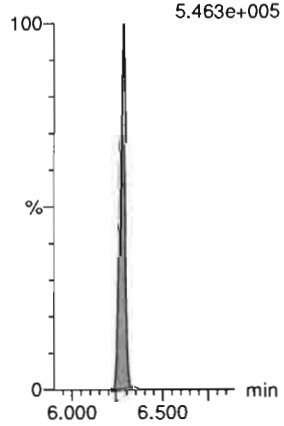
13C2-PFHxDA-EIS



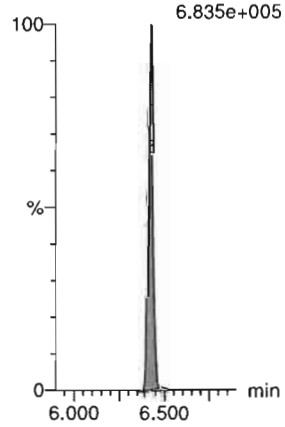
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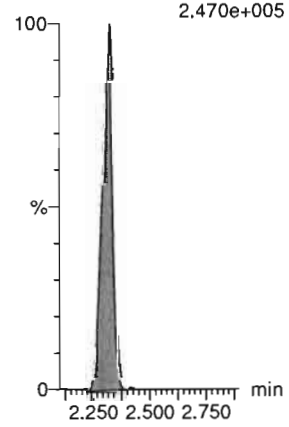
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

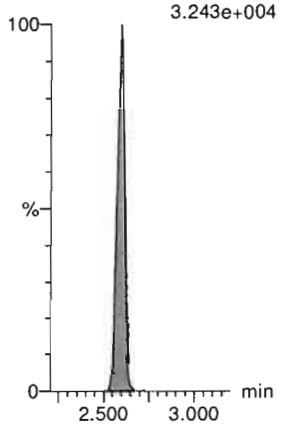


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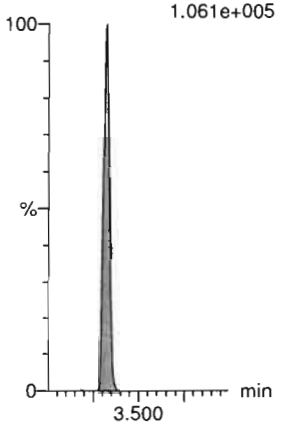
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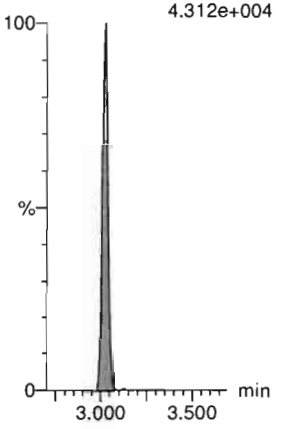
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.243e+004



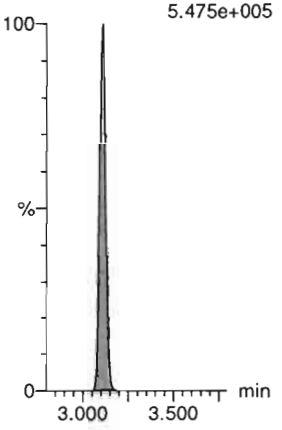
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.061e+005



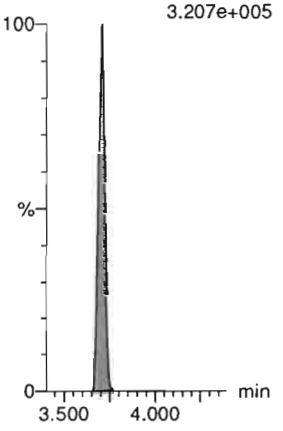
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.312e+004



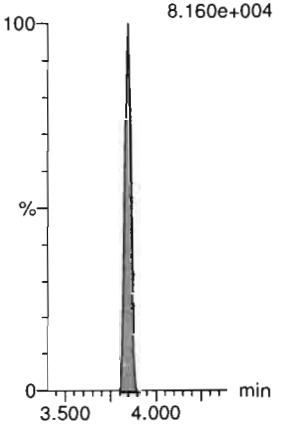
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.475e+005



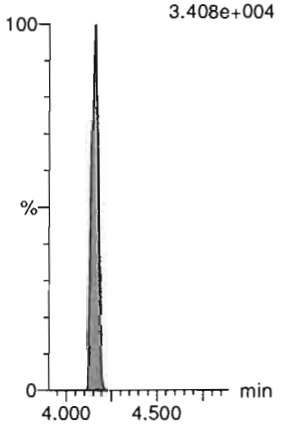
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.207e+005



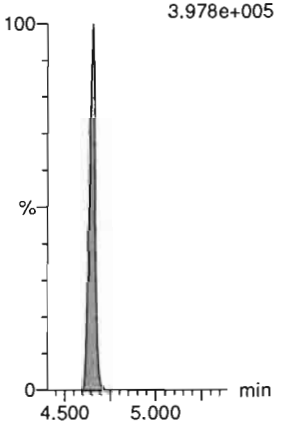
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.160e+004



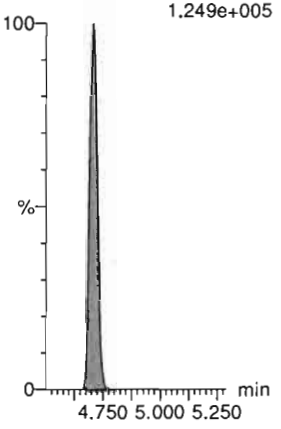
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.408e+004



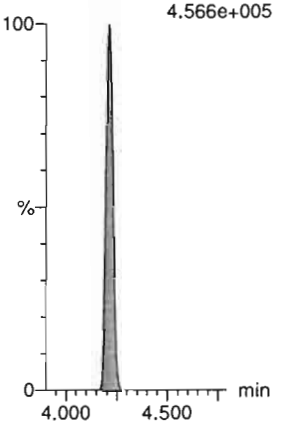
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.978e+005



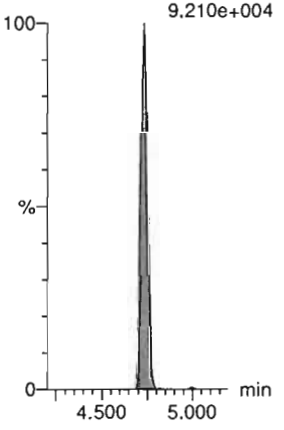
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.249e+005



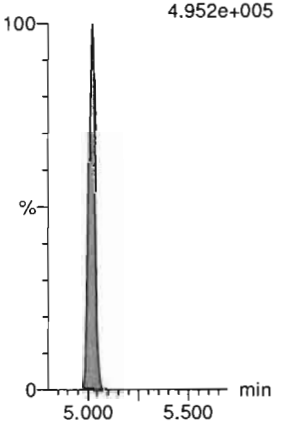
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.566e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.210e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.952e+005

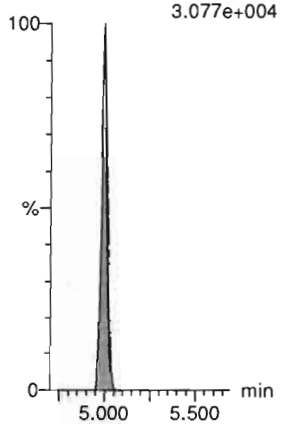


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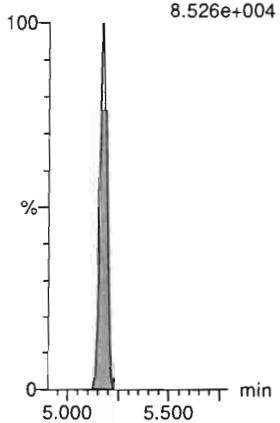
Last Altered: Tuesday, February 25, 2020 09:46:53 Pacific Standard Time
Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

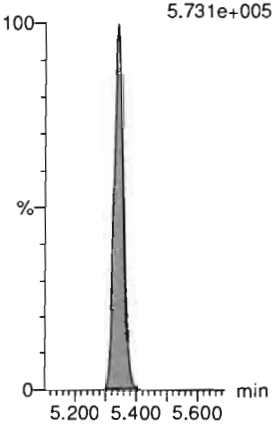
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.077e+004



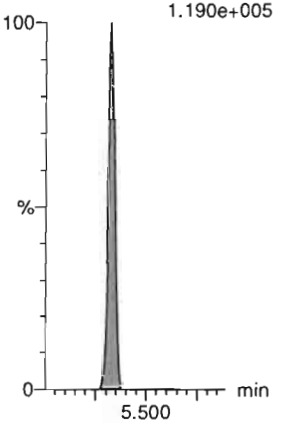
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.526e+004



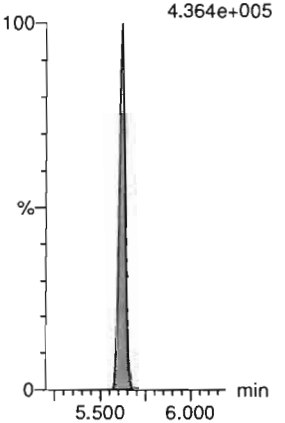
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.731e+005



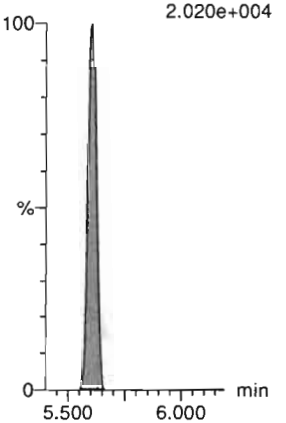
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.190e+005



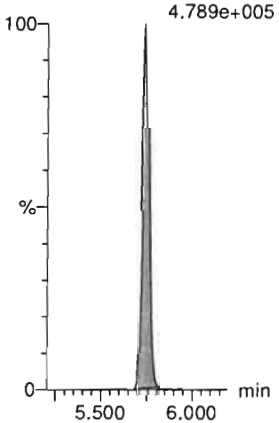
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F63:MRM of 1 channel,ES-
614.7 > 569.7
4.364e+005



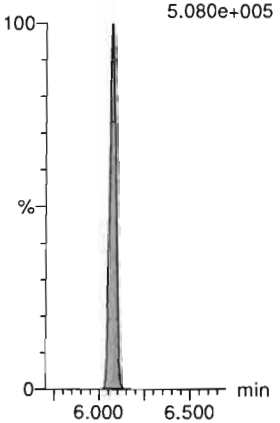
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.020e+004



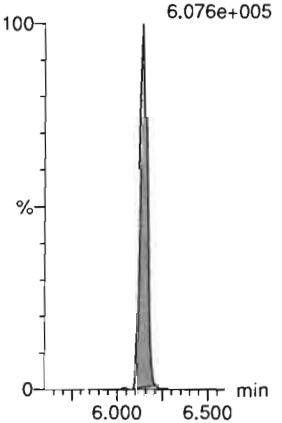
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.789e+005



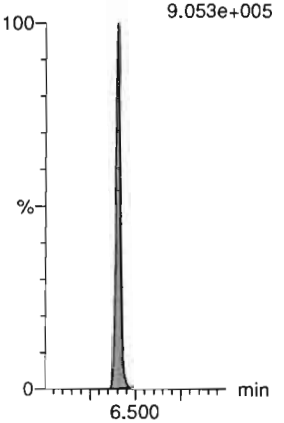
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.080e+005



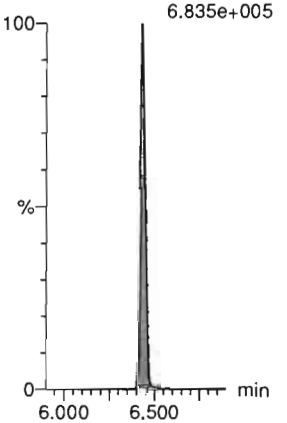
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F52:MRM of 1 channel,ES-
531.1 > 168.9
6.076e+005



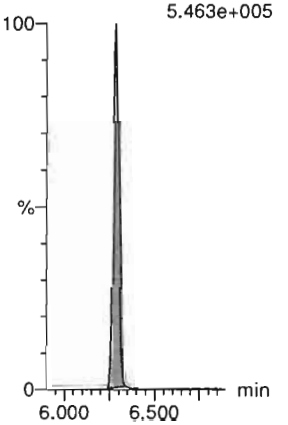
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.053e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.835e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.463e+005

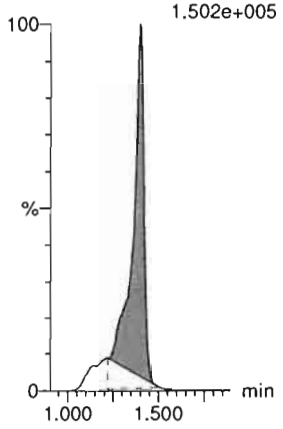


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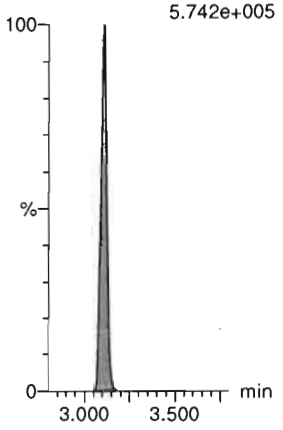
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Name: 200224P1-8, Date: 24-Feb-2020, Time: 18:24:31, ID: ST200220P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

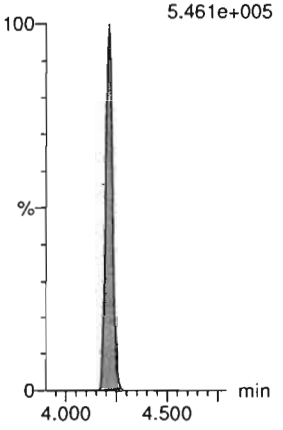
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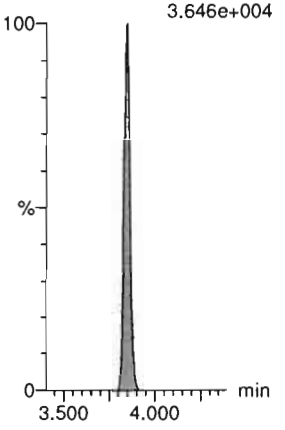
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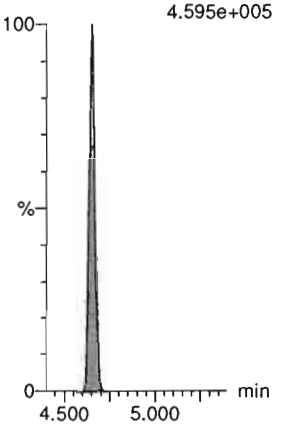
13C8-PFOA



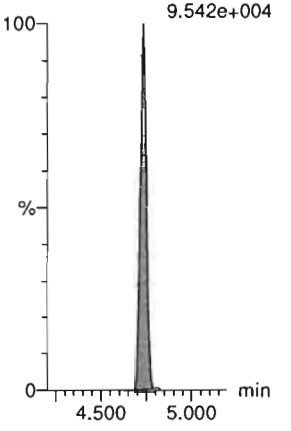
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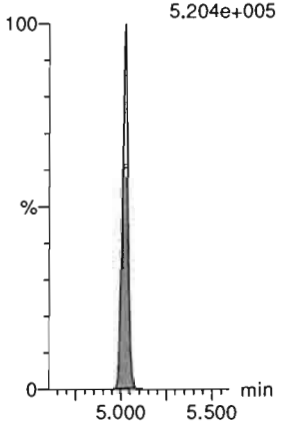
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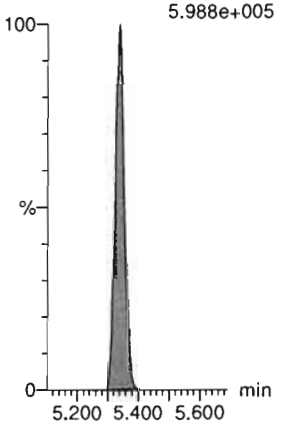
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13C6-PFDA



13C7-PFUdA

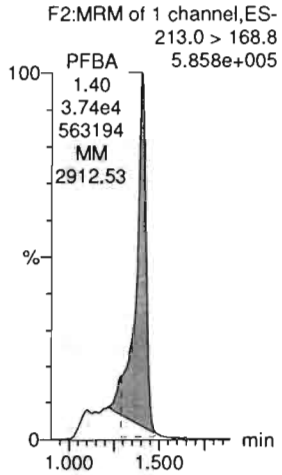


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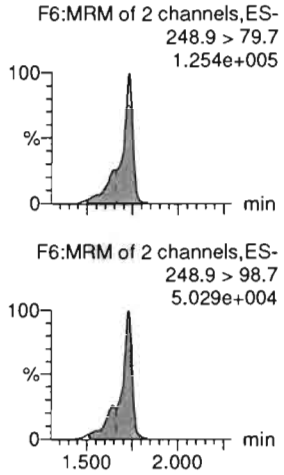
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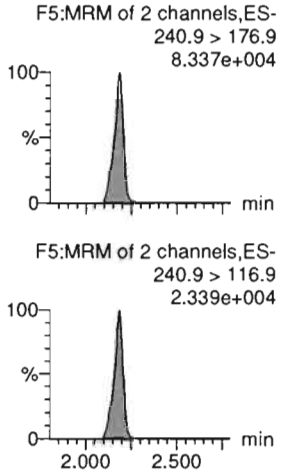
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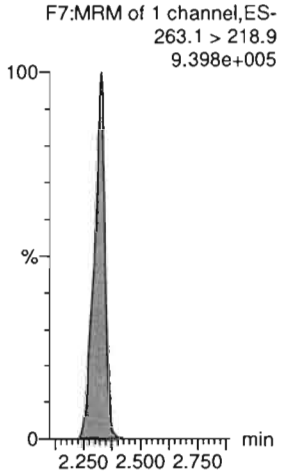
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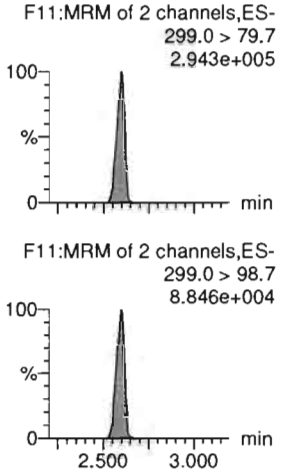
3:3 FTCA



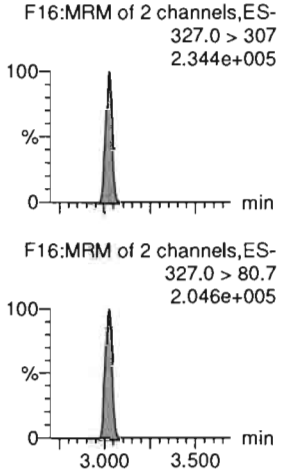
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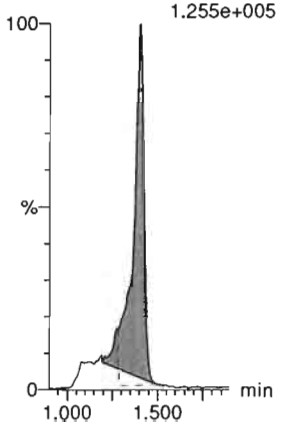
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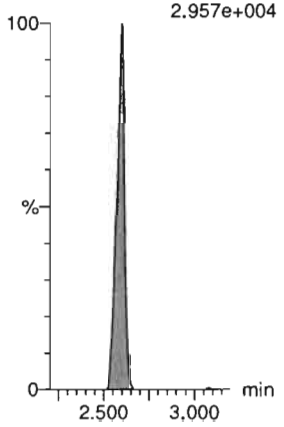
4:2 FTS



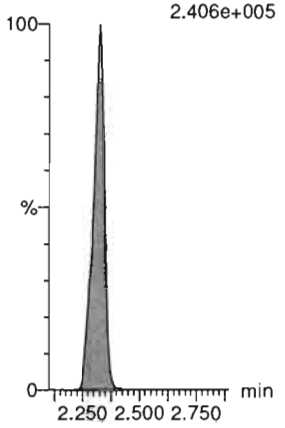
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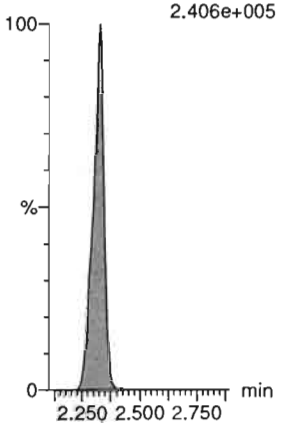
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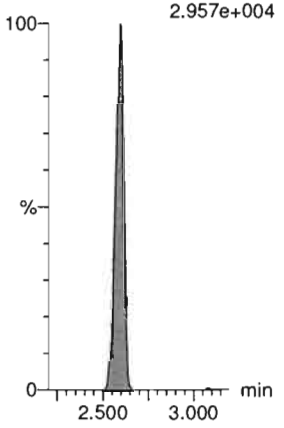
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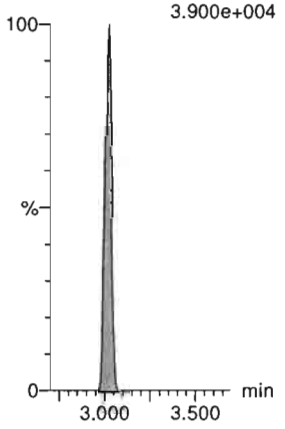
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13C3-PFBS-EIS



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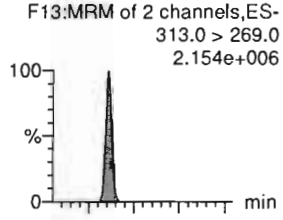


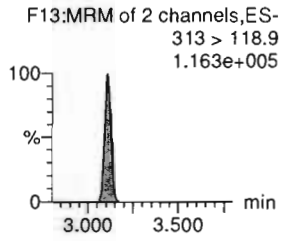
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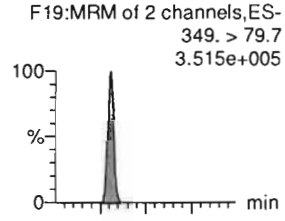
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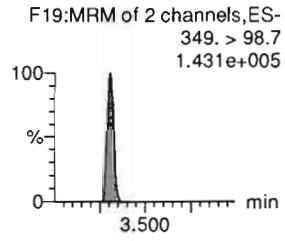
PFHxA



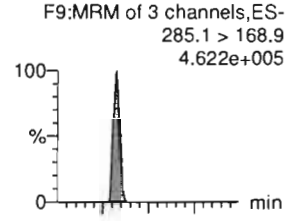


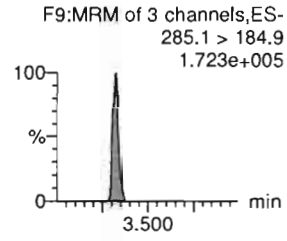
PFPeS



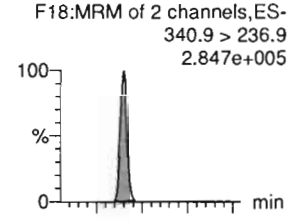


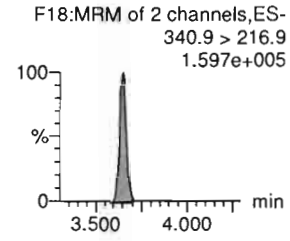
HFPO-DA



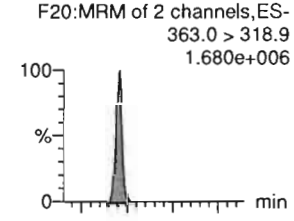


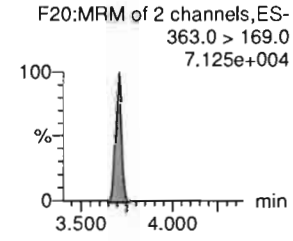
5:3 FTCA



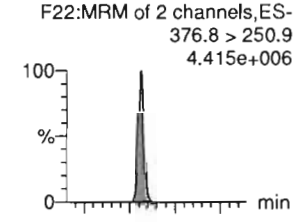


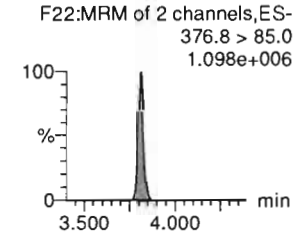
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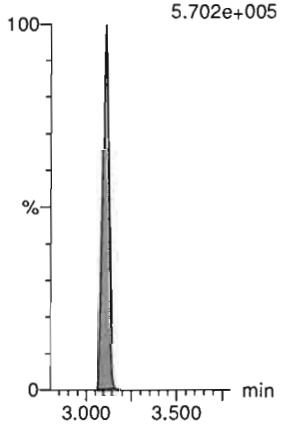


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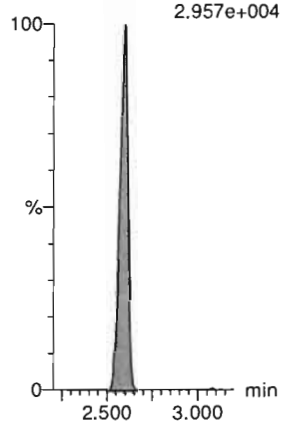




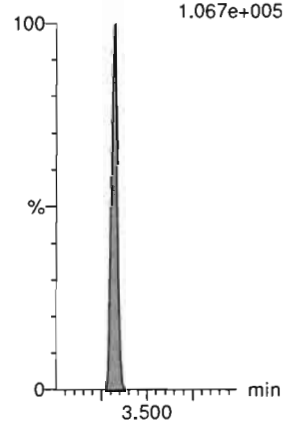
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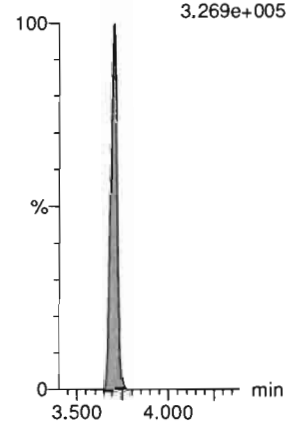
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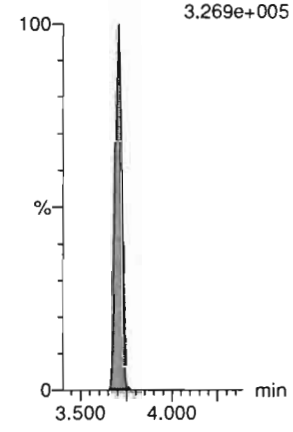
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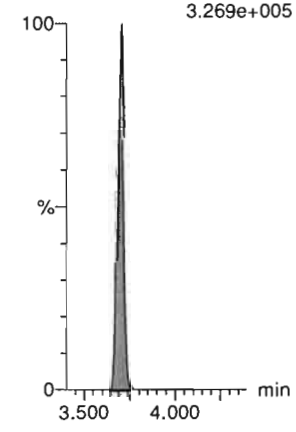
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

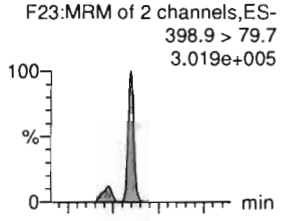


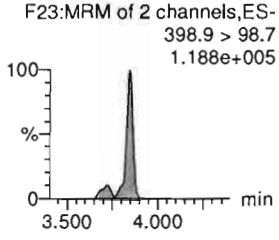
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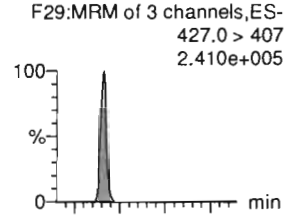
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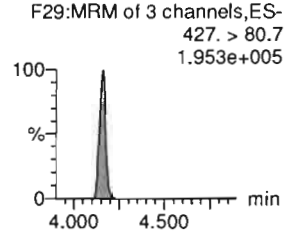
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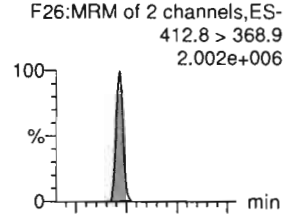


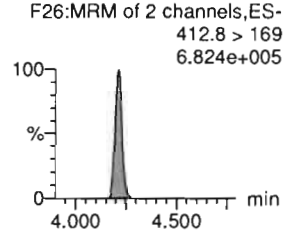
6:2 FTS



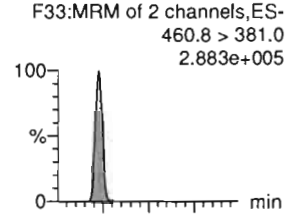


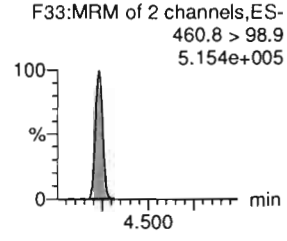
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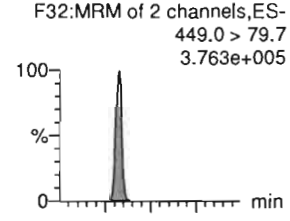


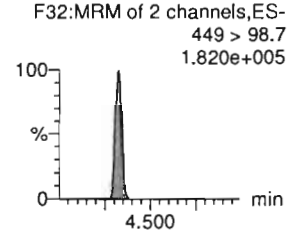
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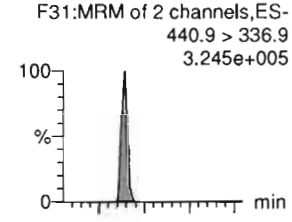


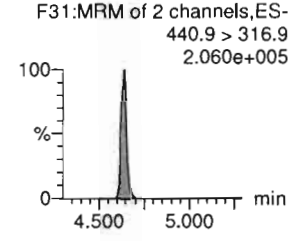
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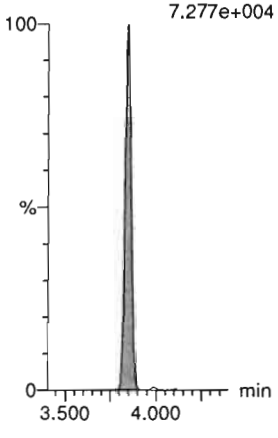


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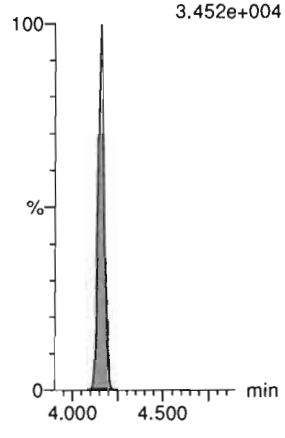




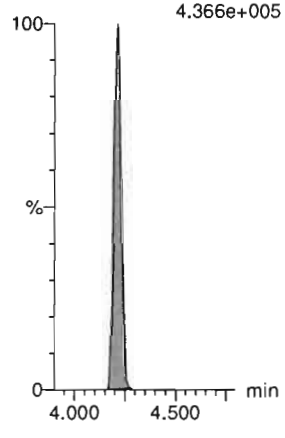
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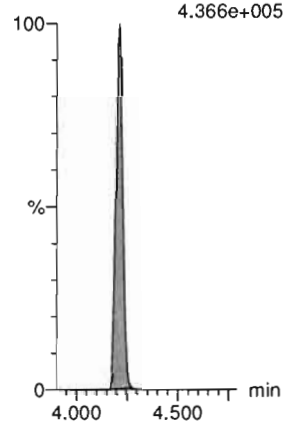
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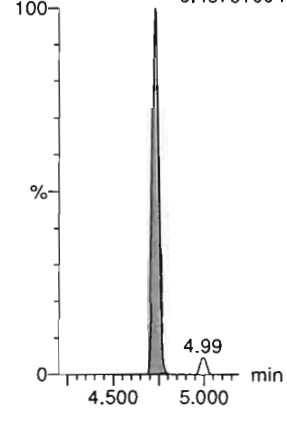
13C2-PFOA-EIS



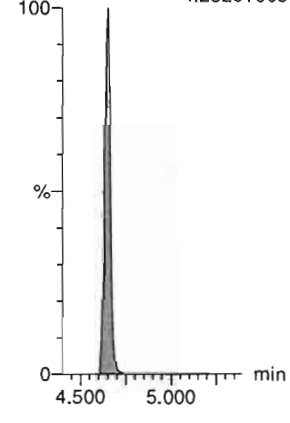
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13C8-PFOS-EIS



13C5-PFNA-EIS

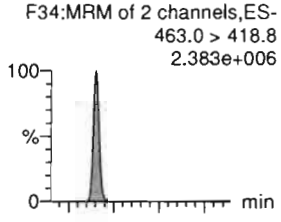


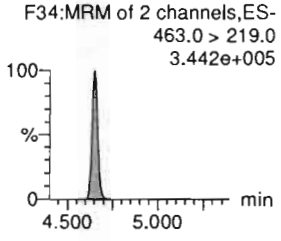
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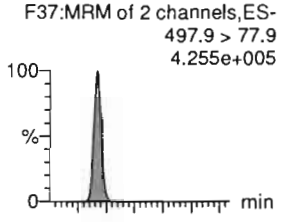
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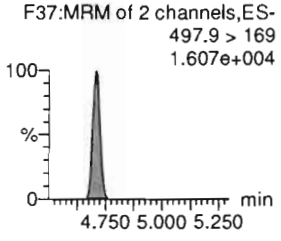
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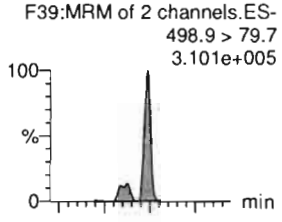


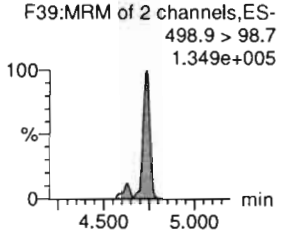
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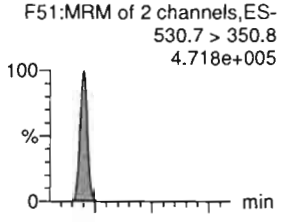


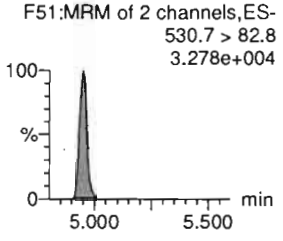
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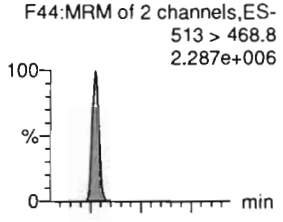


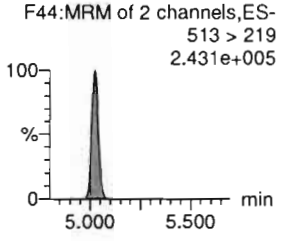
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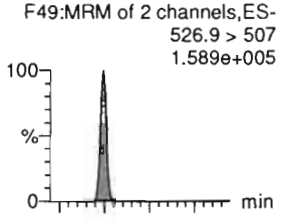


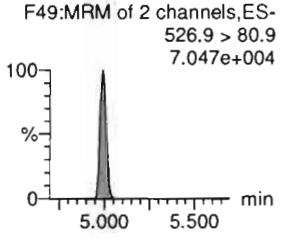
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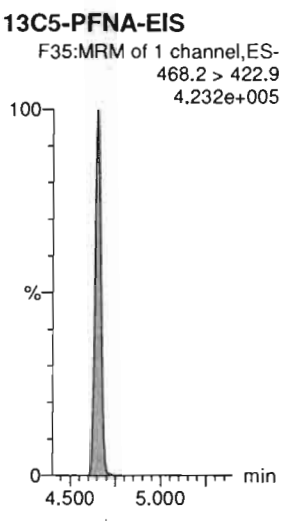


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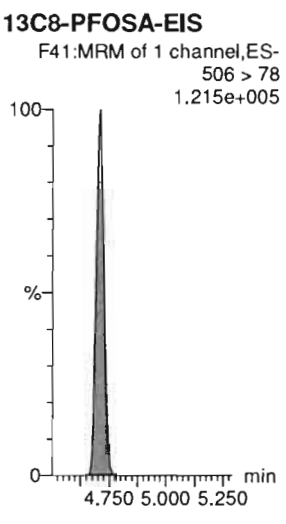




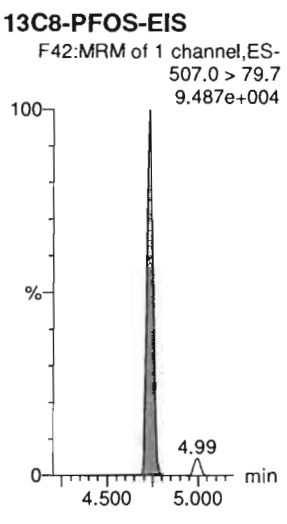
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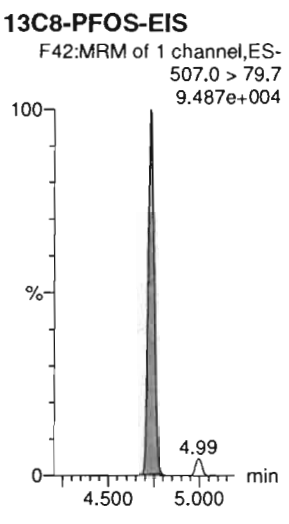
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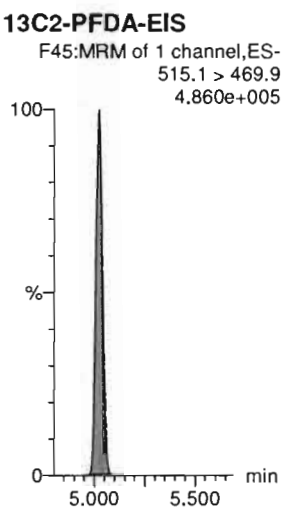
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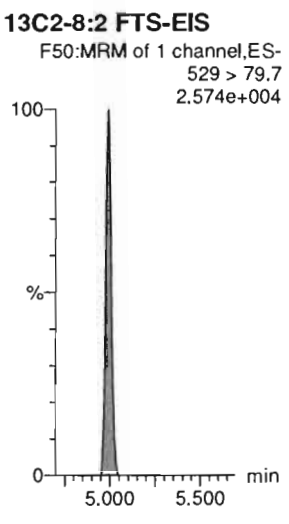
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

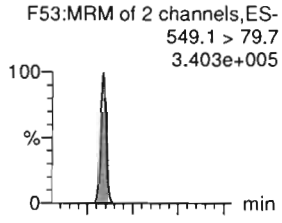


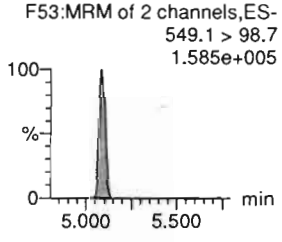
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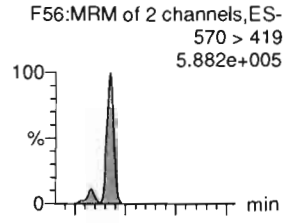
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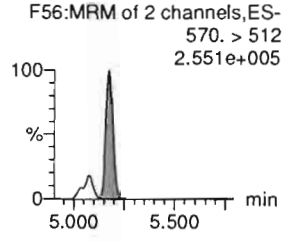
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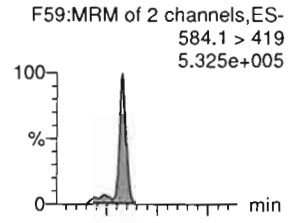


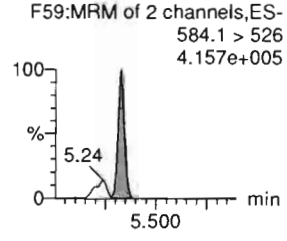
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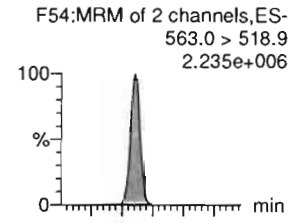


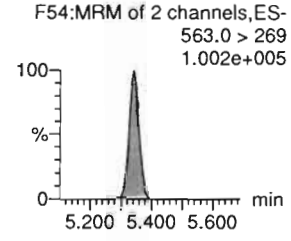
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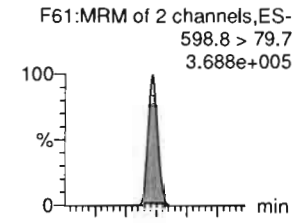


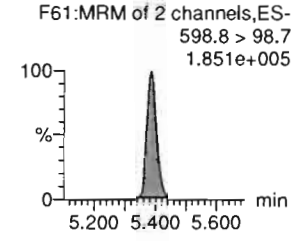
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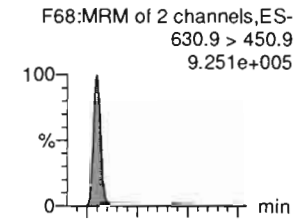


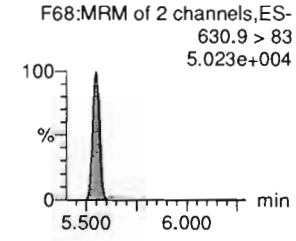
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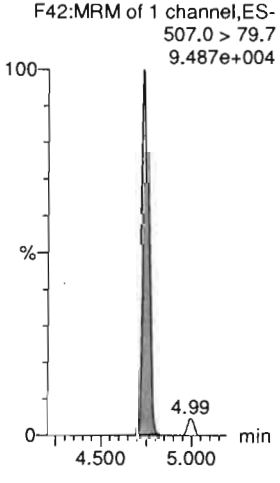


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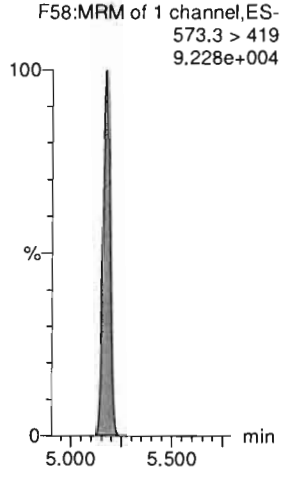




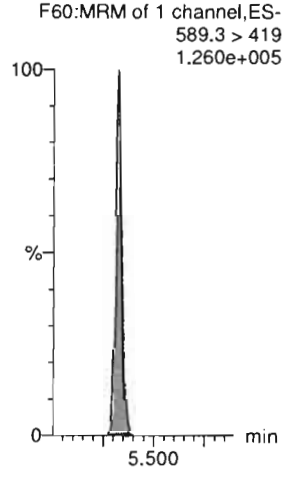
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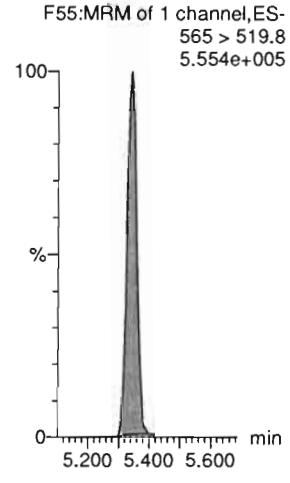
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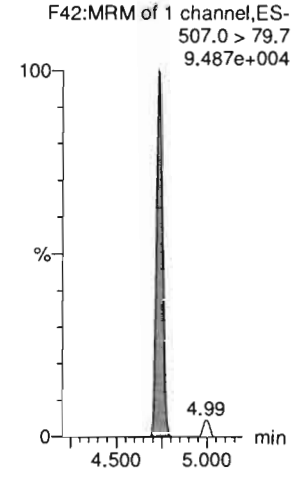
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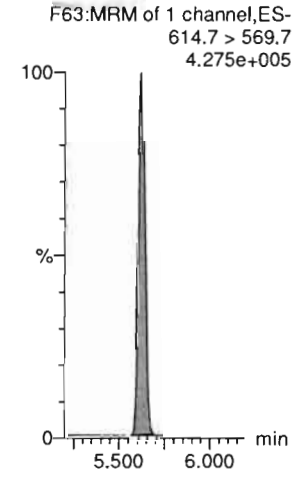
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13C8-PFOS-EIS



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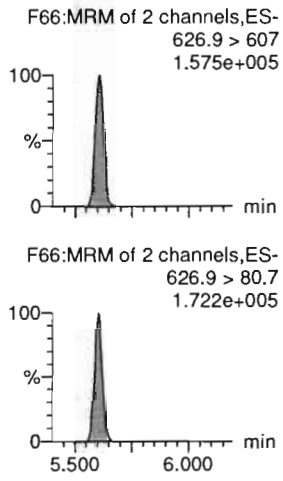


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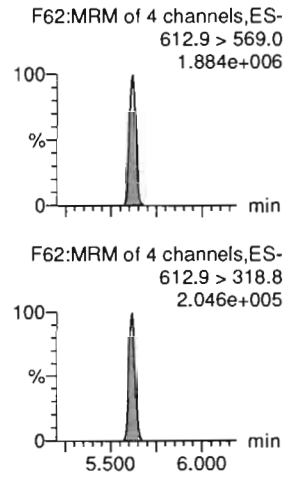
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Name: 200224P1-9, Date: 24-Feb-2020, Time: 18:35:02, ID: ST200220P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

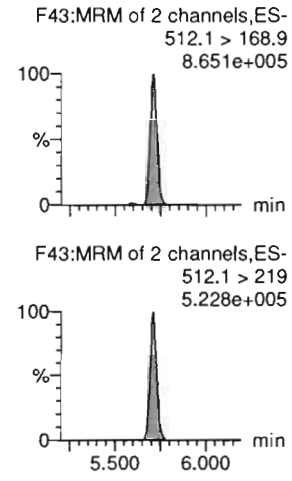
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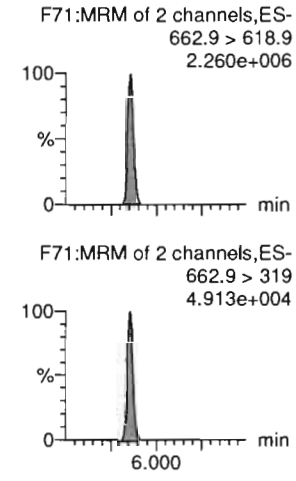
PFDoA



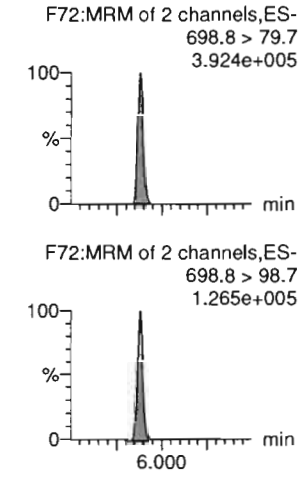
N-MeFOSA



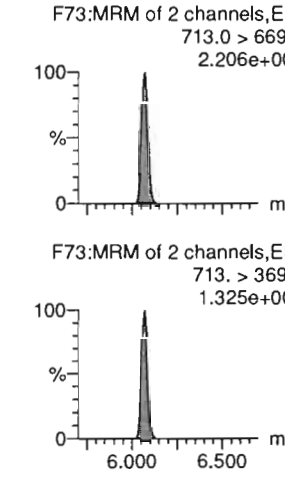
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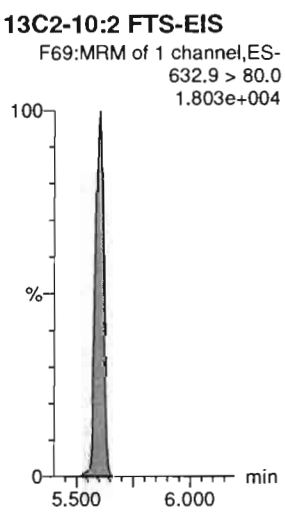
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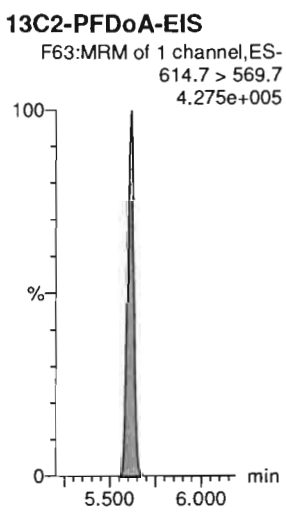
PFTeDA



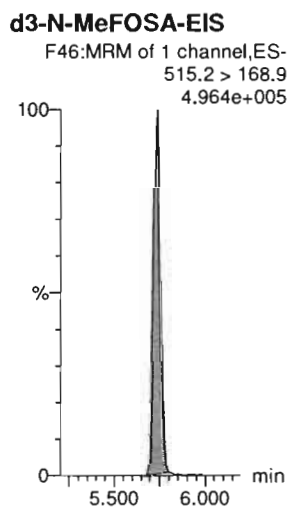
13C2-10:2 FTS-EIS



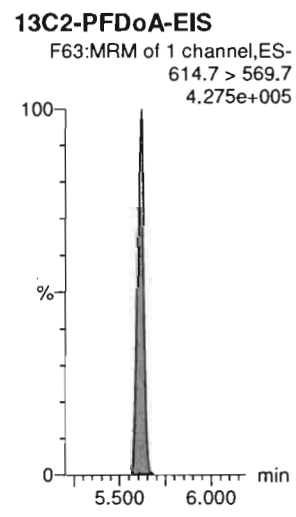
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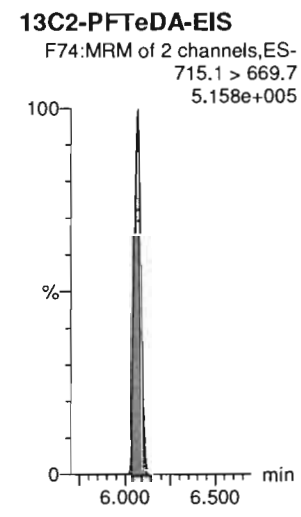
d3-N-MeFOSA-EIS



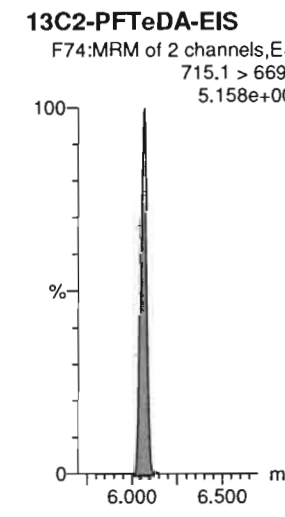
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

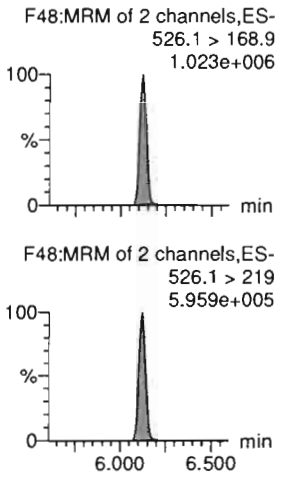


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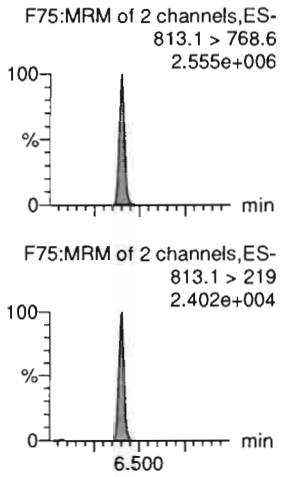
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Name: 200224P1-9, Date: 24-Feb-2020, Time: 18:35:02, ID: ST200220P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

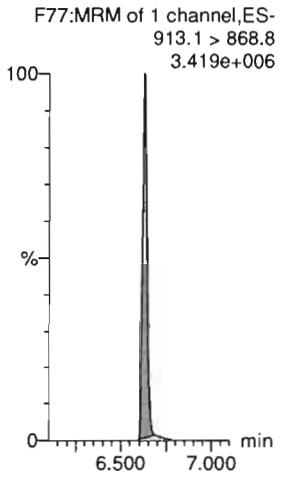
N-EtFOSA



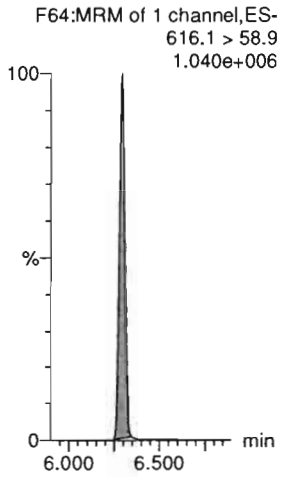
PFHxDA



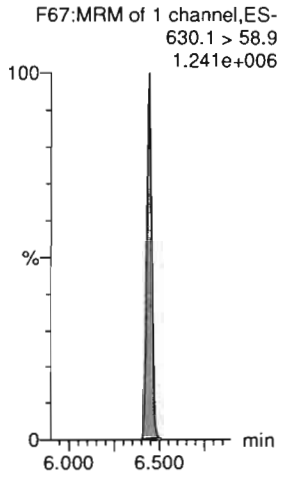
PFODA



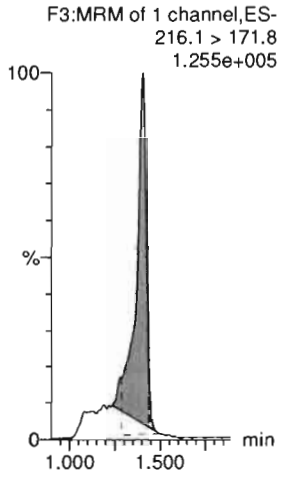
N-MeFOSE



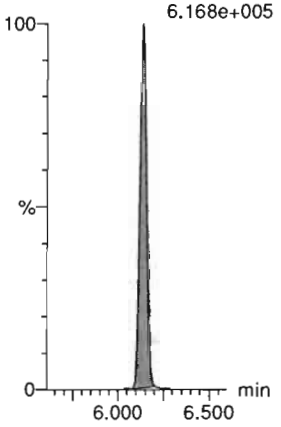
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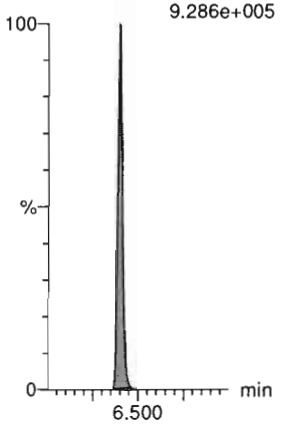
13C3-PFBA-RSD



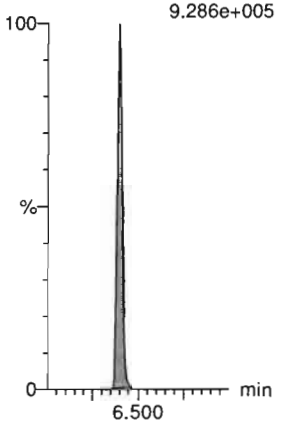
d5-N-ETFOSA-EIS



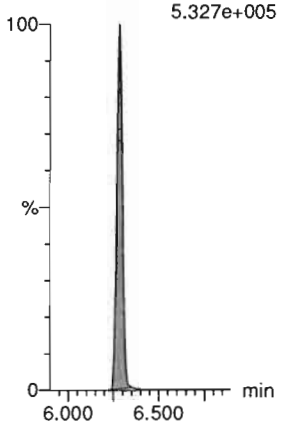
13C2-PFHxDA-EIS



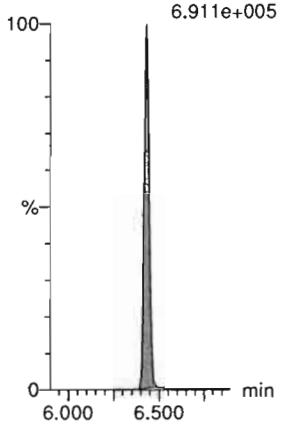
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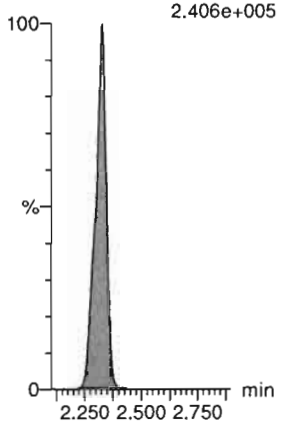
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

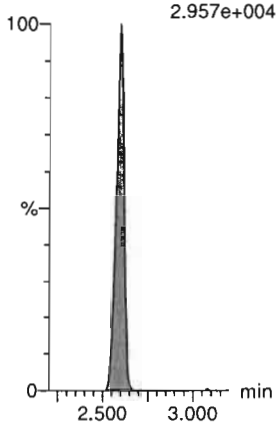


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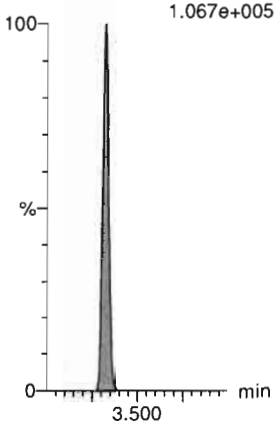
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Name: 200224P1-9, Date: 24-Feb-2020, Time: 18:35:02, ID: ST200220P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

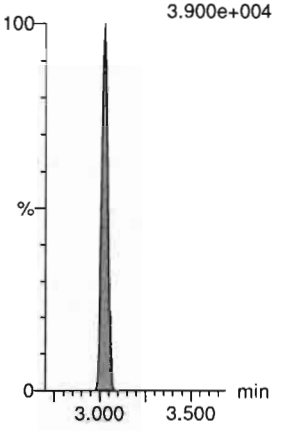
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.957e+004



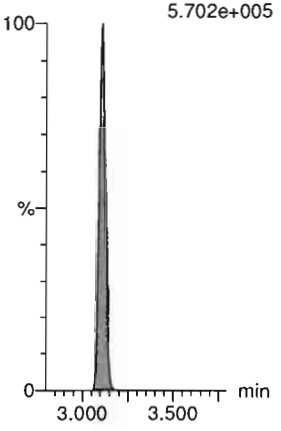
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.067e+005



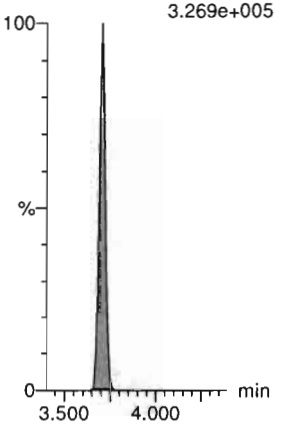
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.900e+004



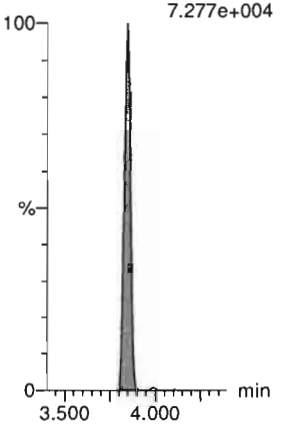
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.702e+005



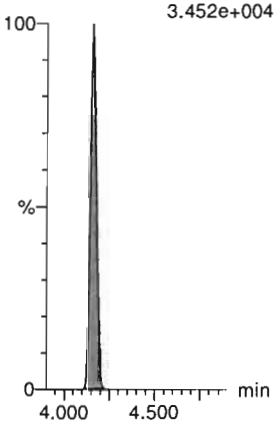
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.269e+005



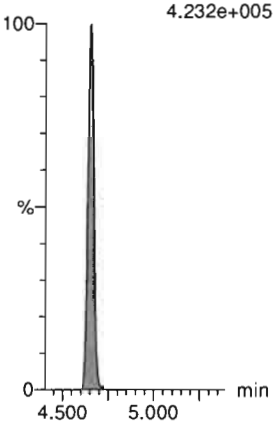
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.277e+004



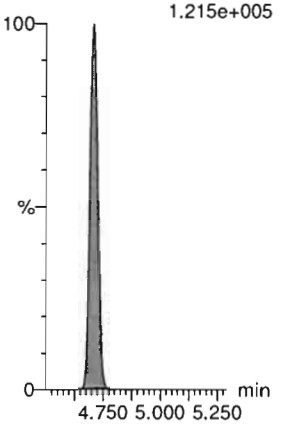
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.452e+004



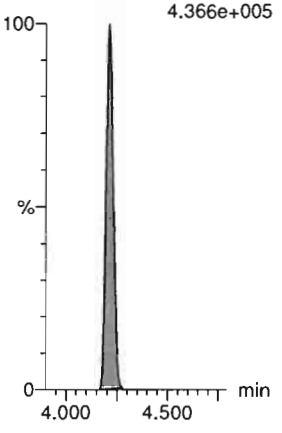
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.232e+005



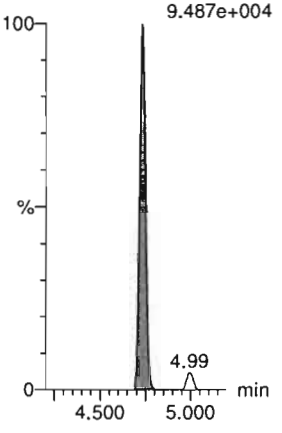
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.215e+005



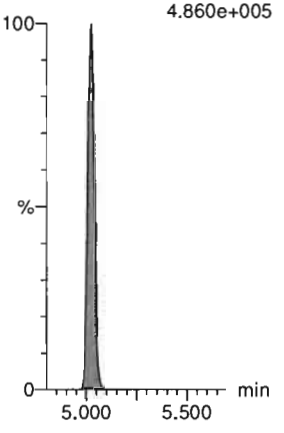
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.366e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.487e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.860e+005

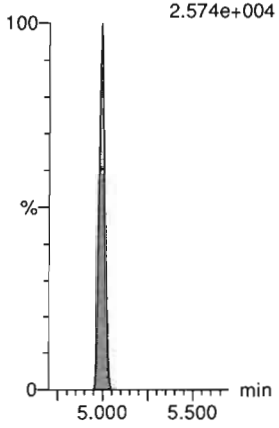


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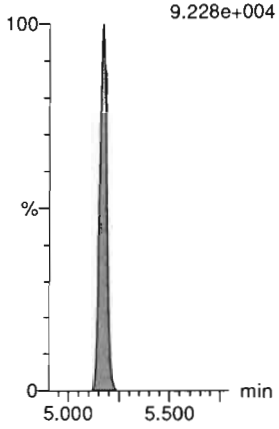
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Name: 200224P1-9, Date: 24-Feb-2020, Time: 18:35:02, ID: ST200220P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

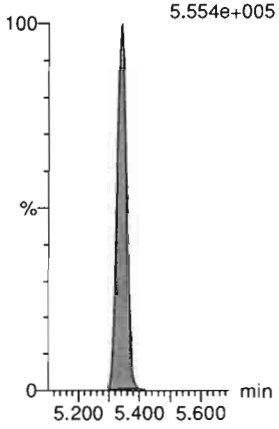
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.574e+004



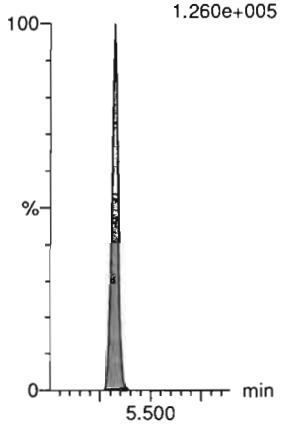
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
9.228e+004



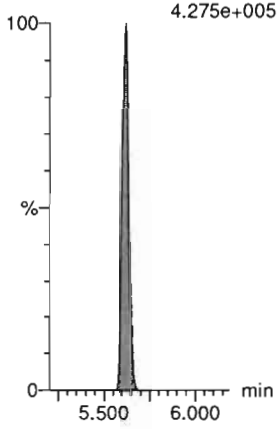
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.554e+005



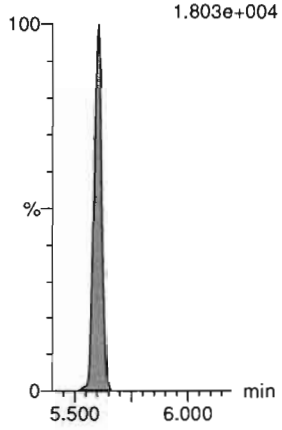
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F60:MRM of 1 channel,ES-
589.3 > 419
1.260e+005



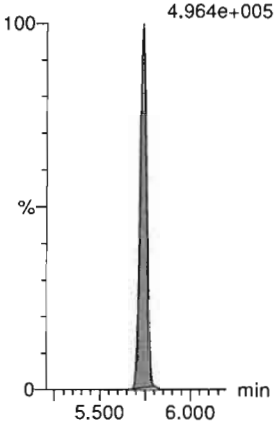
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.275e+005



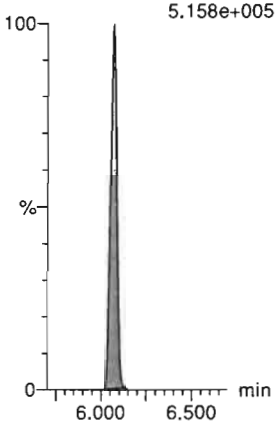
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.803e+004



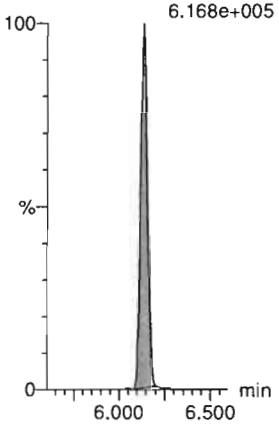
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.964e+005



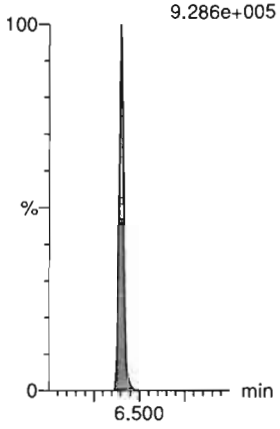
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.158e+005



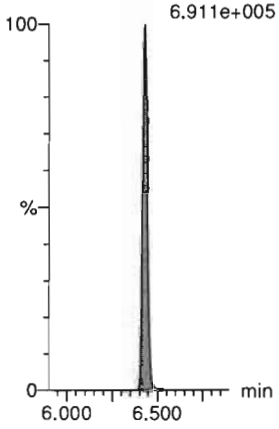
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.168e+005



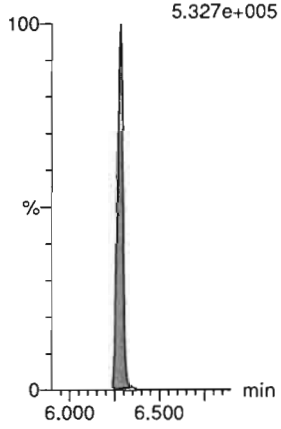
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F76:MRM of 1 channel,ES-
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9.286e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
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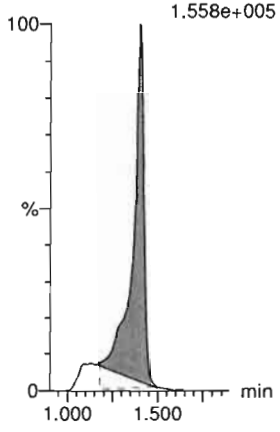


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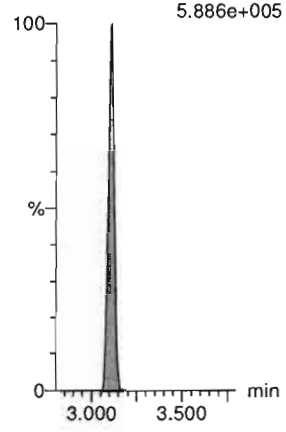
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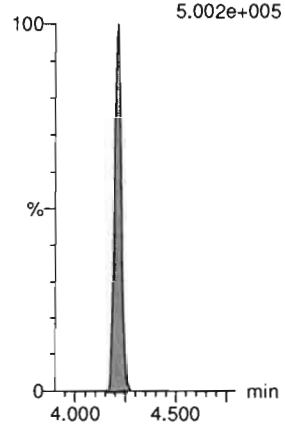
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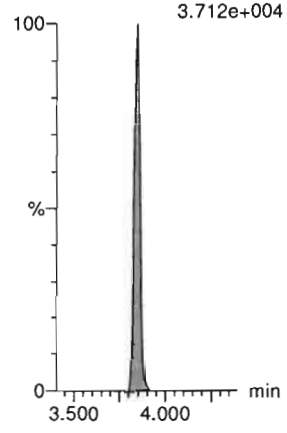
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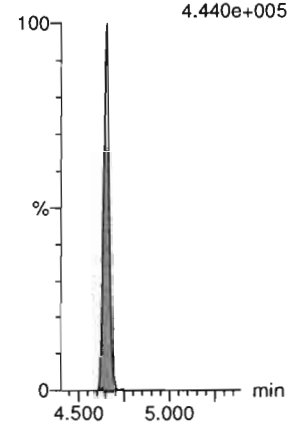
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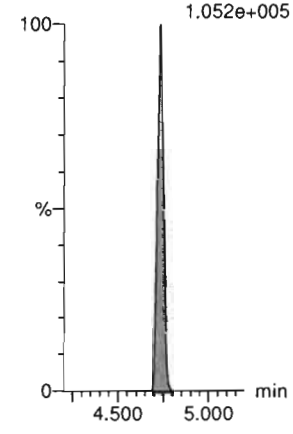
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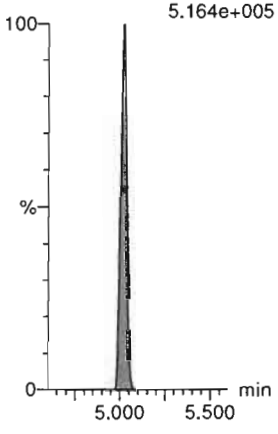
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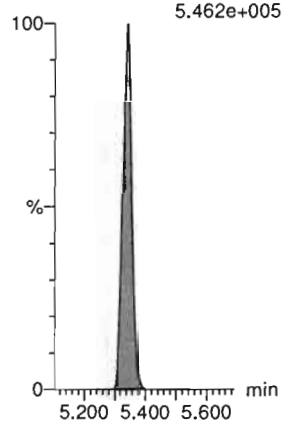
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13C6-PFDA



13C7-PFUdA



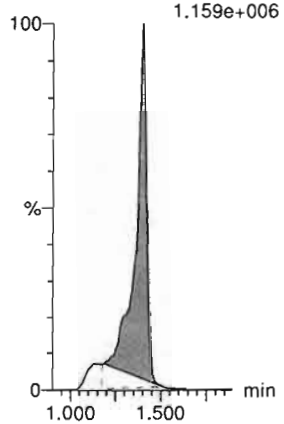
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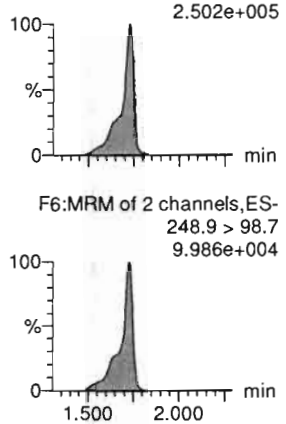
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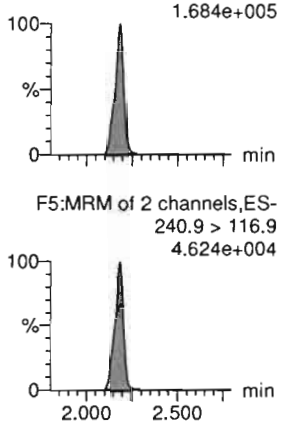
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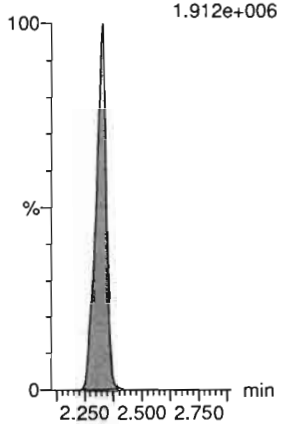
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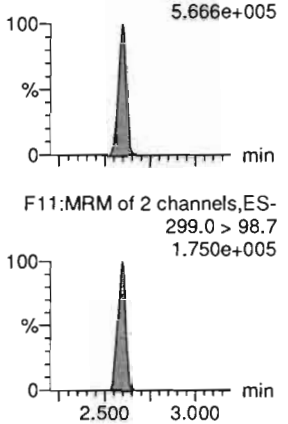
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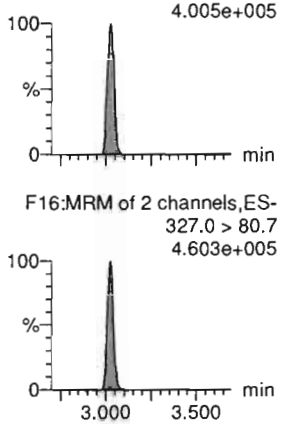
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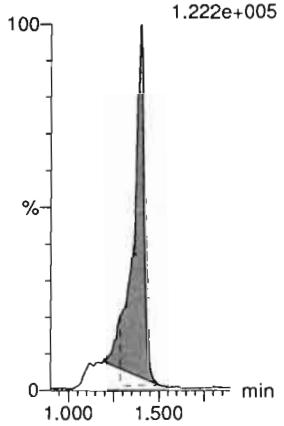
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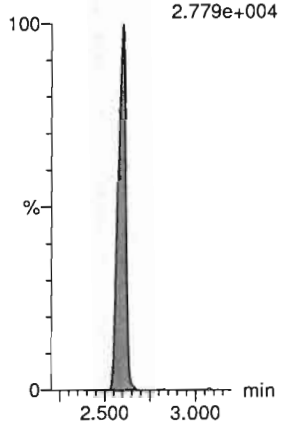
4:2 FTS



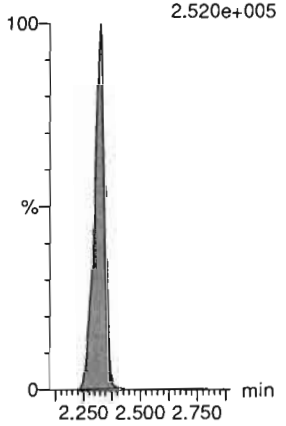
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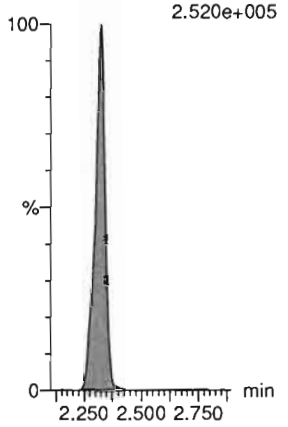
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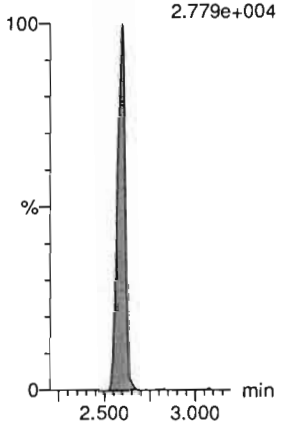
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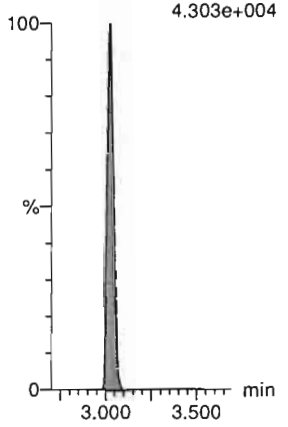
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13C3-PFBS-EIS



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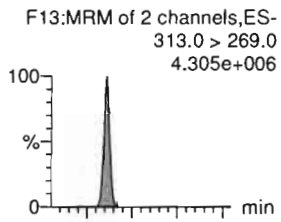


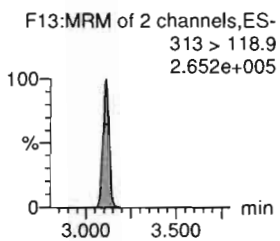
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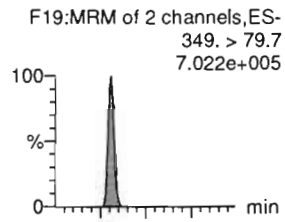
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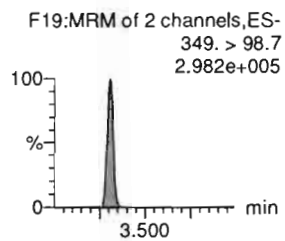
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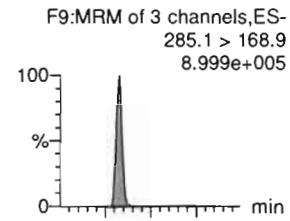


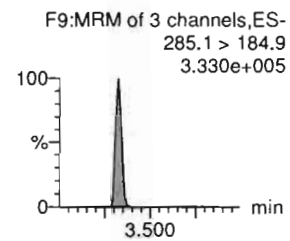
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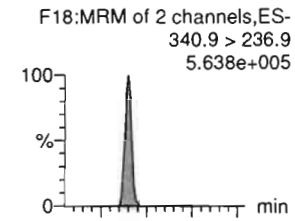


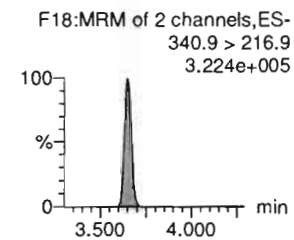
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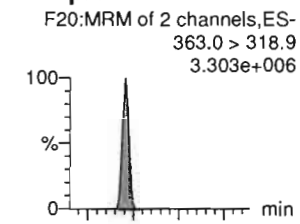


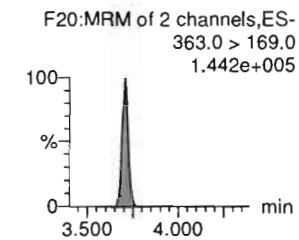
5:3 FTCA



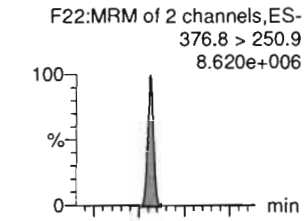


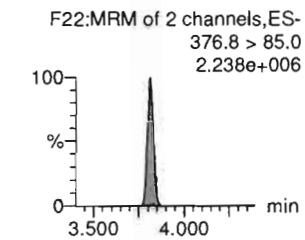
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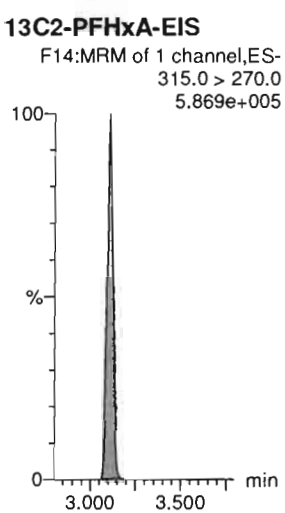


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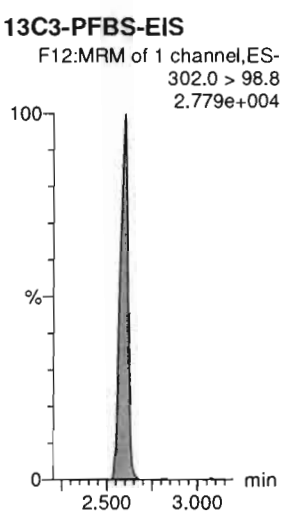




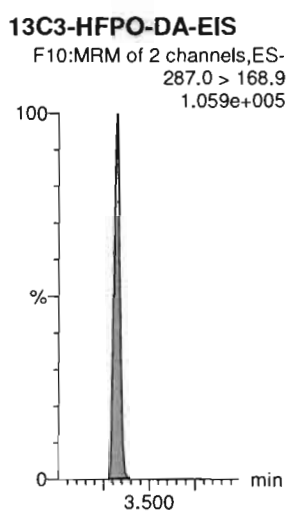
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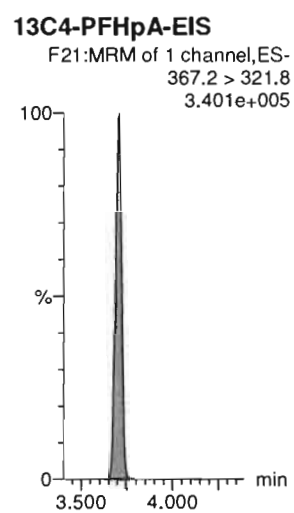
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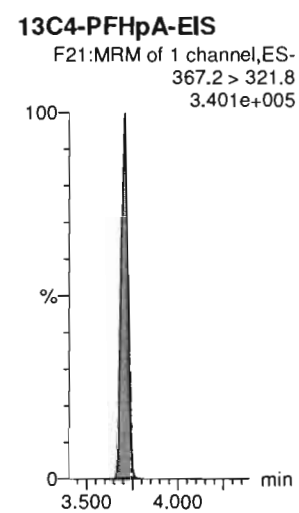
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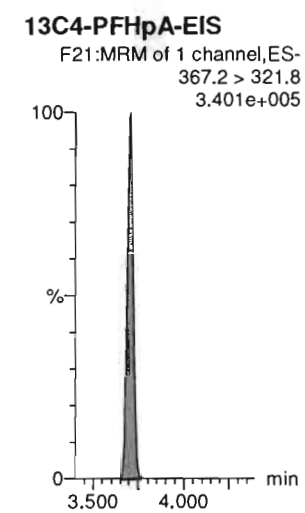
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

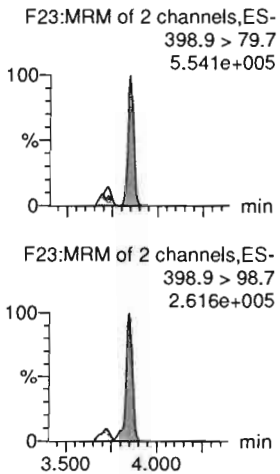


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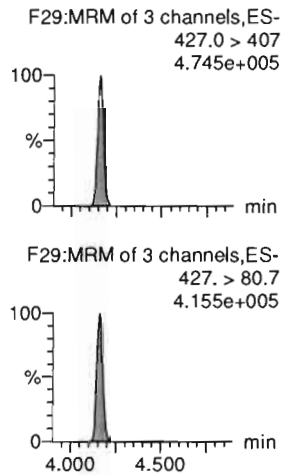
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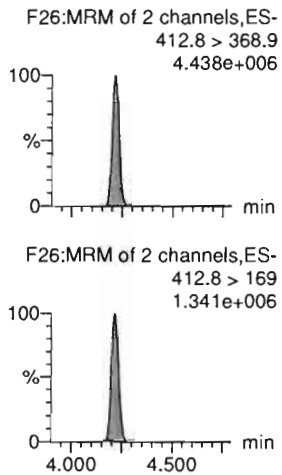
L-PFHxS



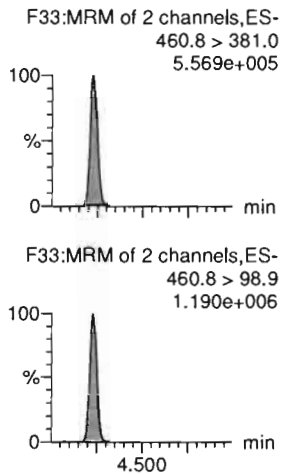
6:2 FTS



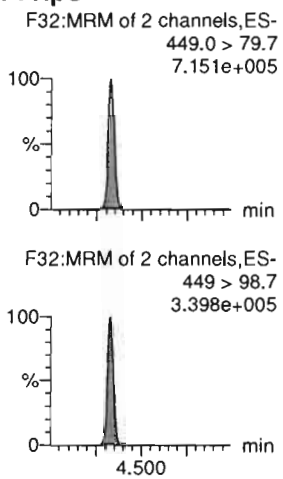
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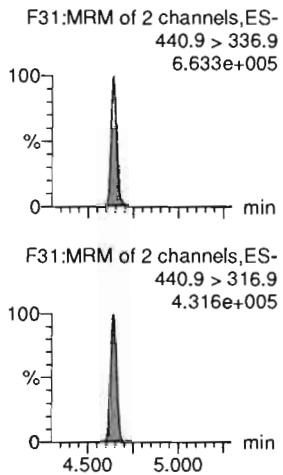
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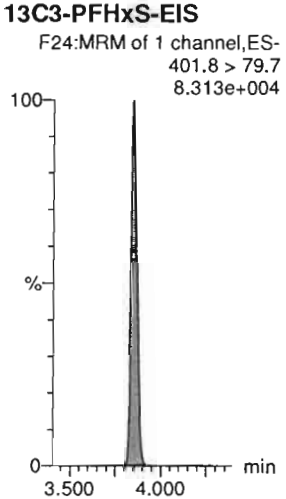
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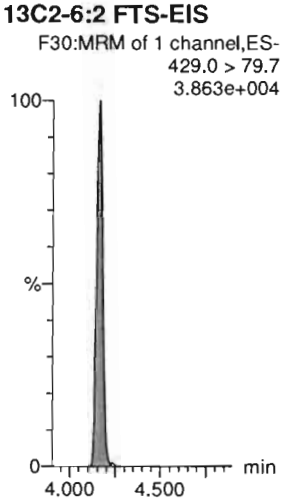
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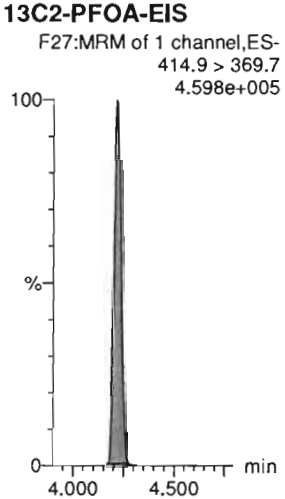
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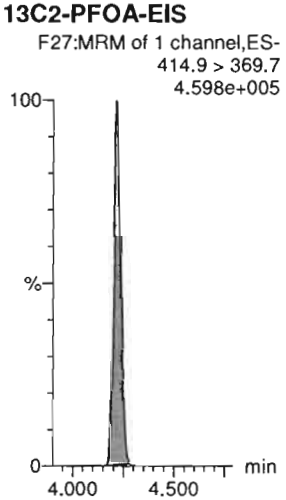
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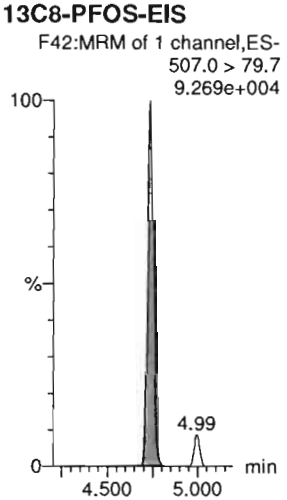
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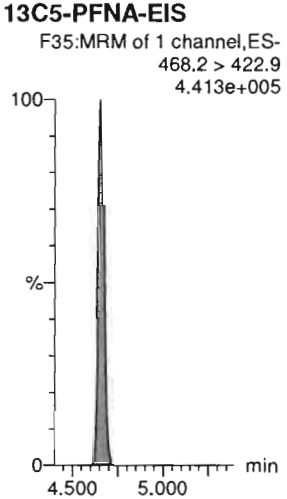
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13C8-PFOS-EIS



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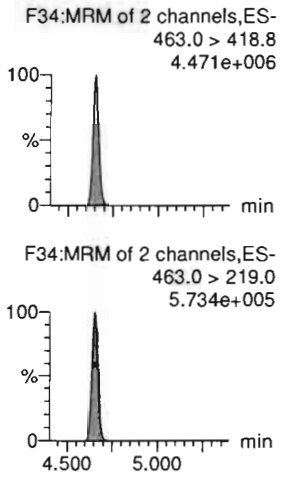


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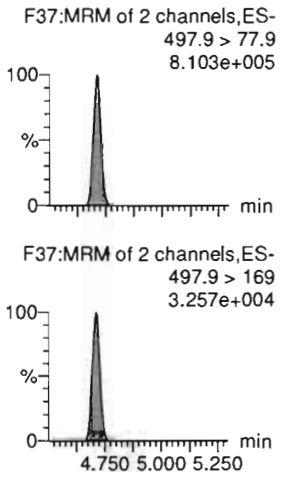
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Name: 200224P1-10, Date: 24-Feb-2020, Time: 18:45:33, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

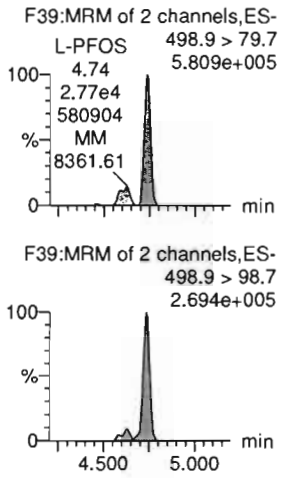
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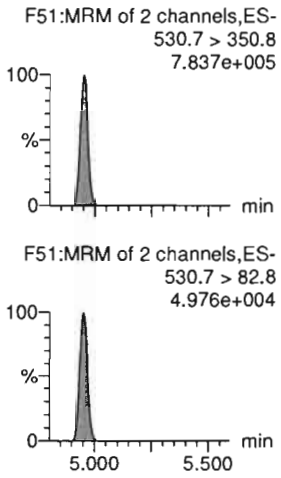
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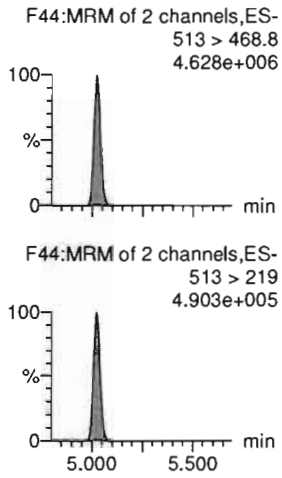
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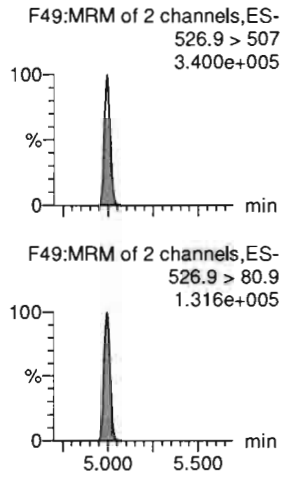
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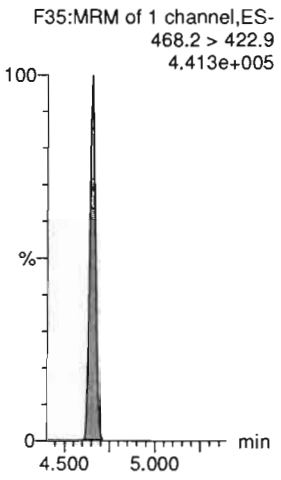
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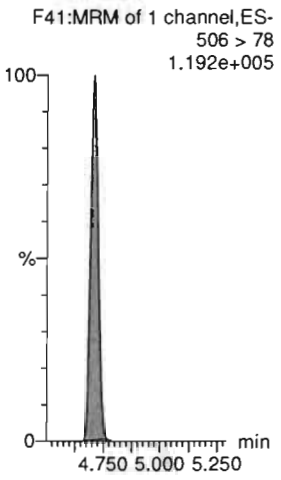
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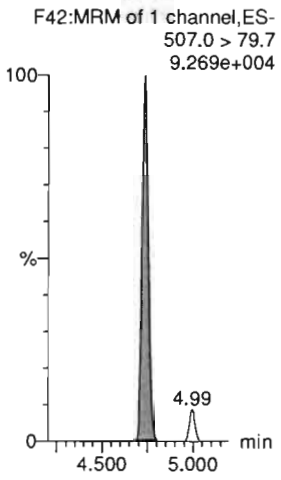
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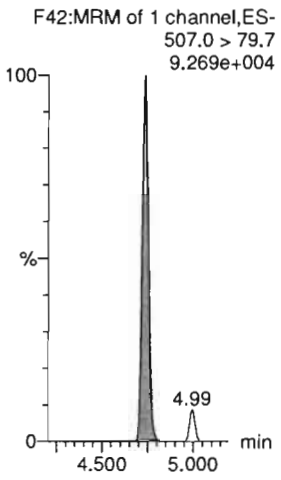
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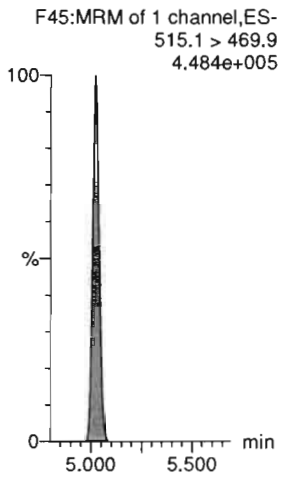
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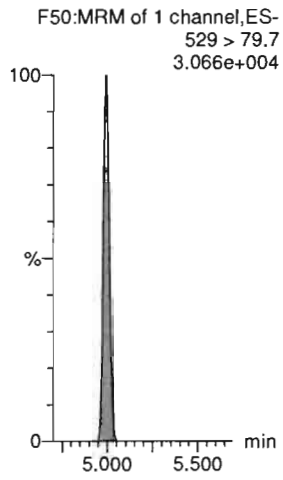
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13C2-8:2 FTS-EIS

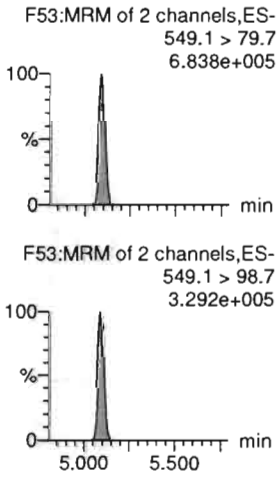


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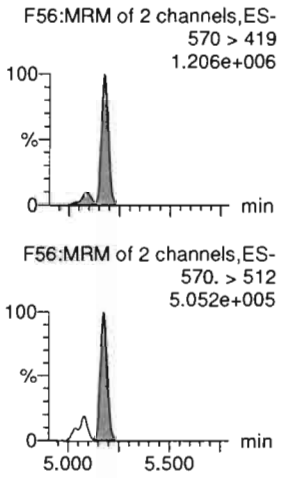
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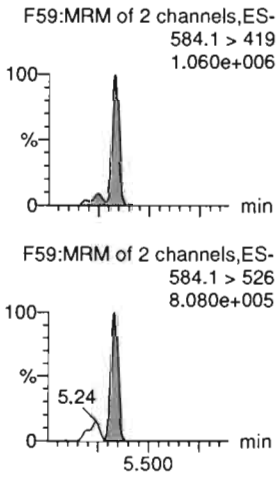
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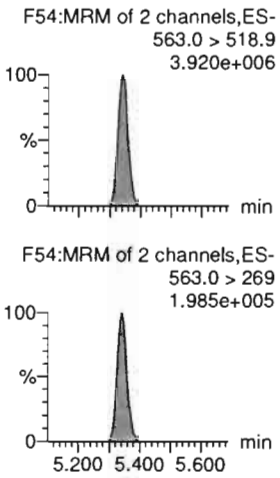
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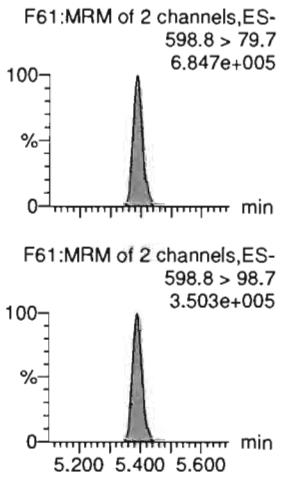
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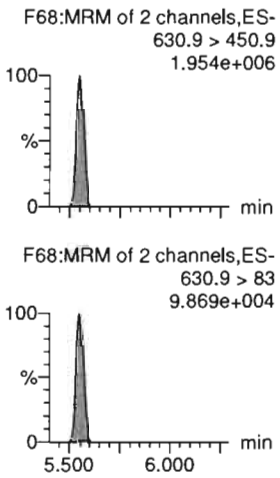
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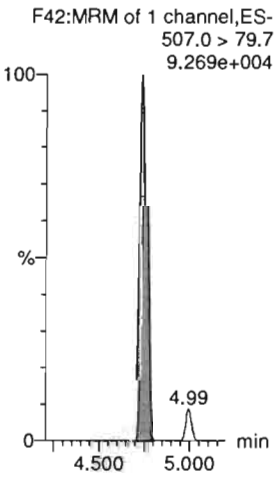
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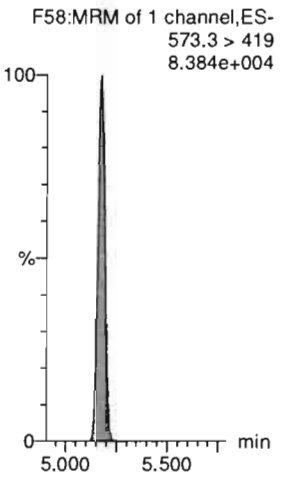
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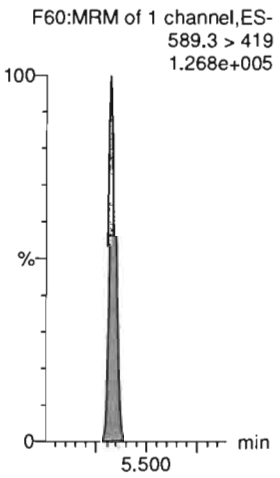
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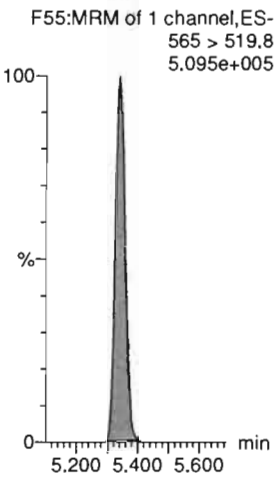
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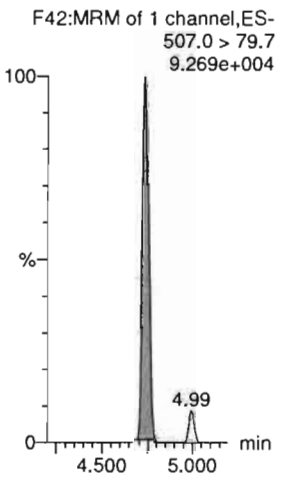
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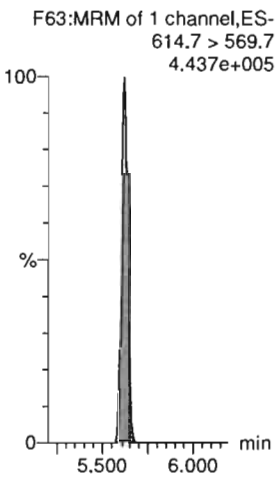
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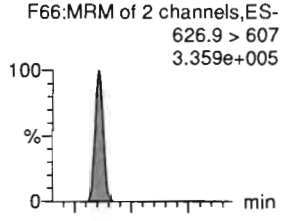


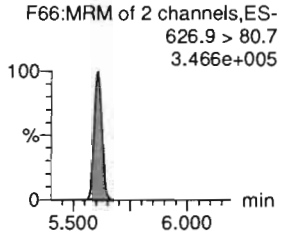
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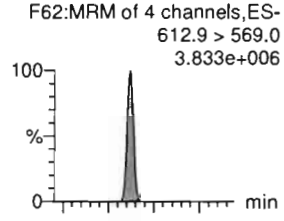
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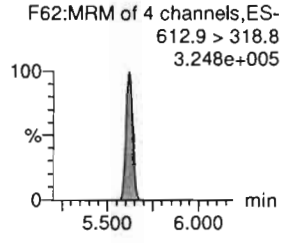
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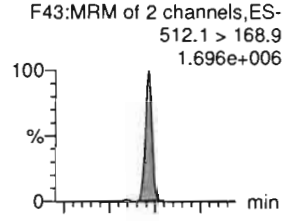


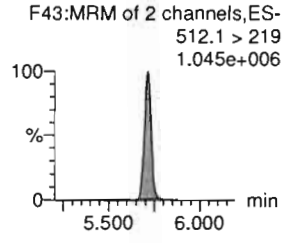
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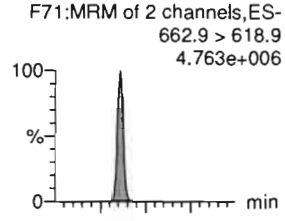


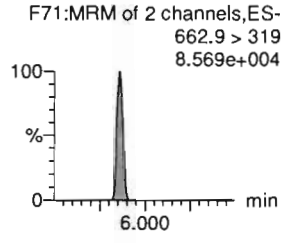
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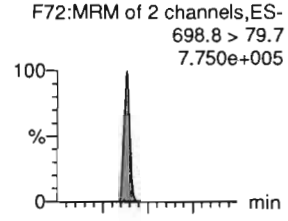


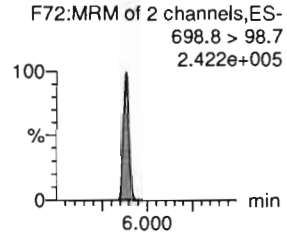
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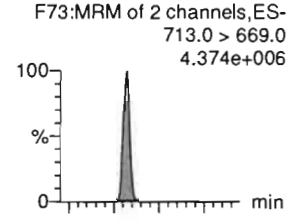


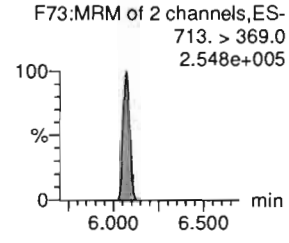
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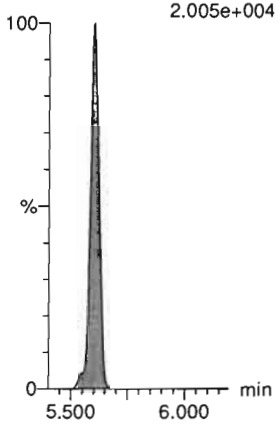


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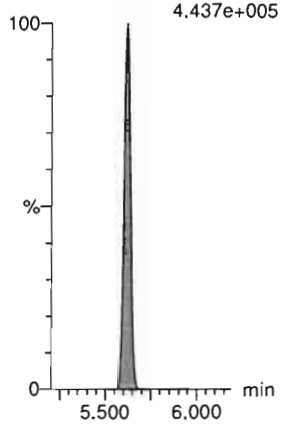




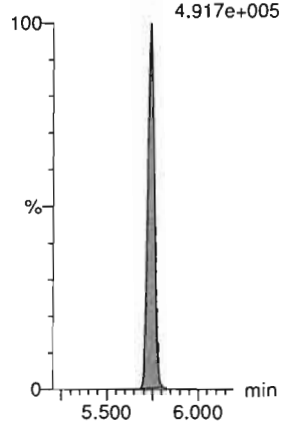
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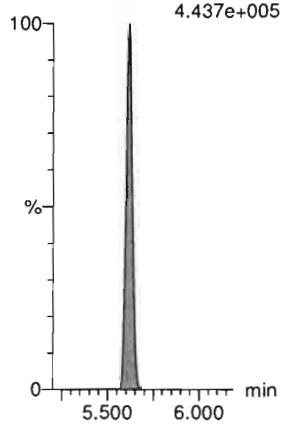
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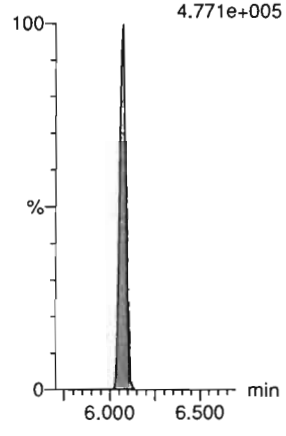
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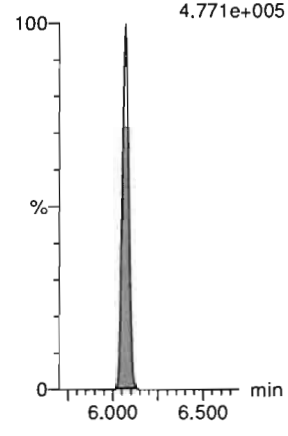
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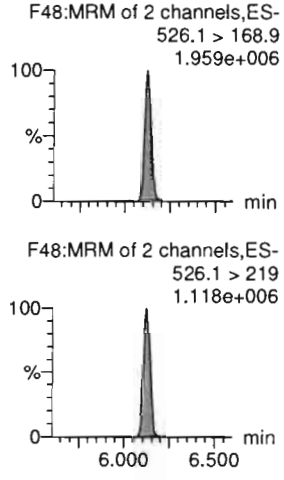


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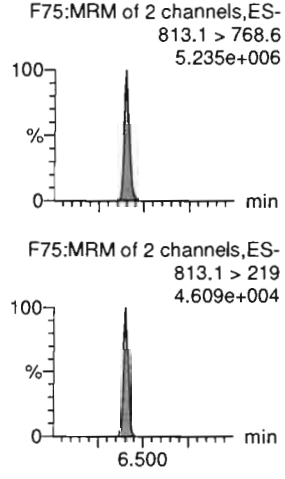
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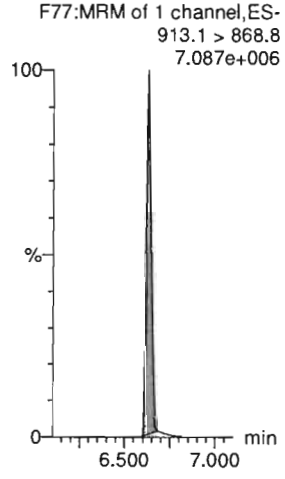
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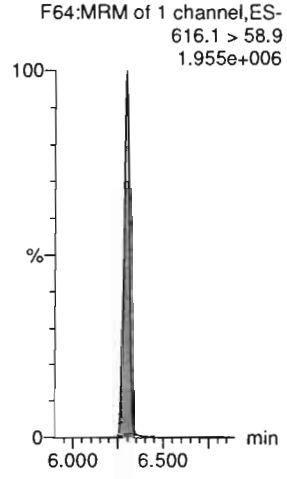
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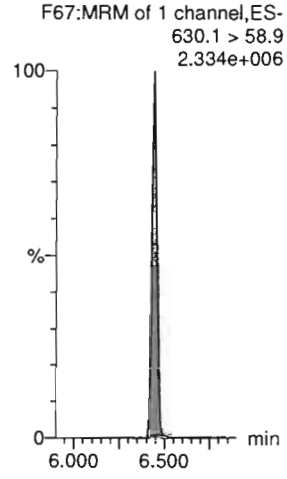
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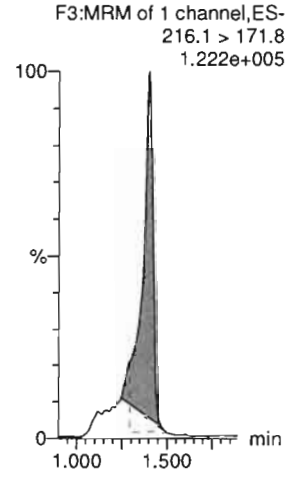
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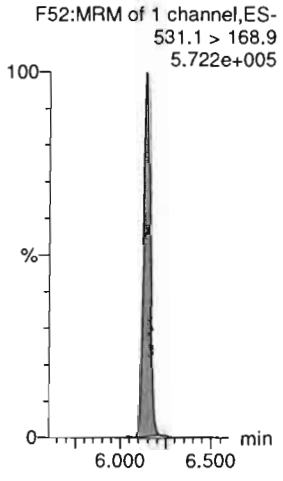
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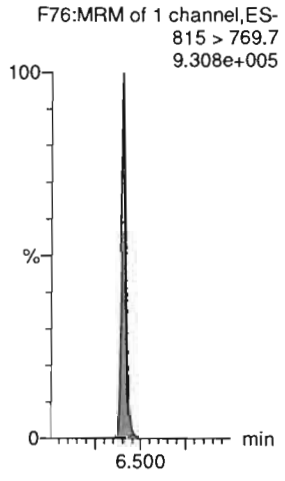
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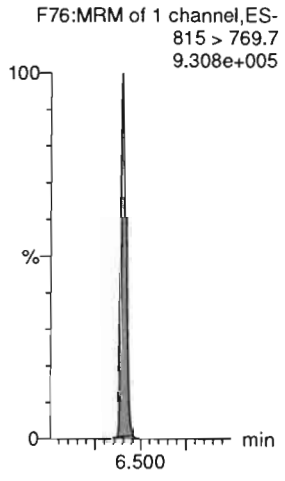
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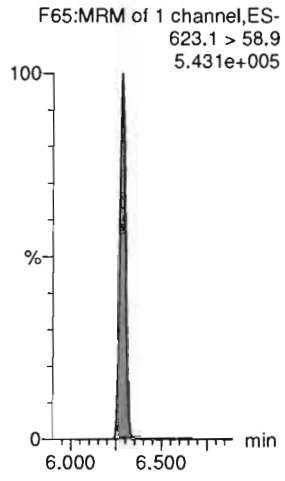
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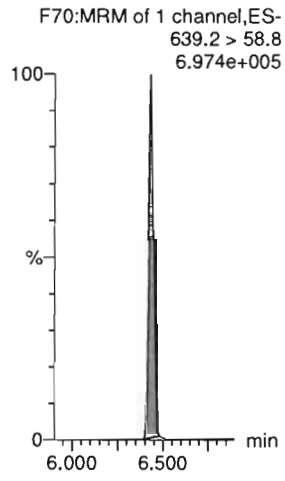
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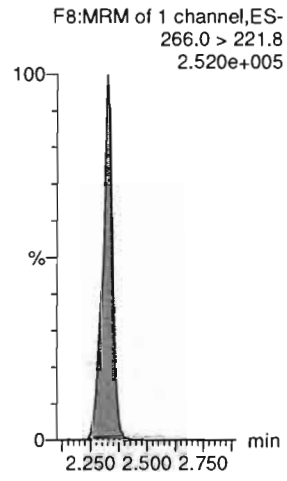
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

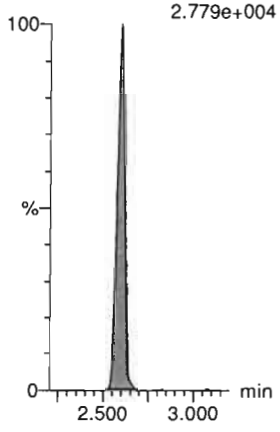


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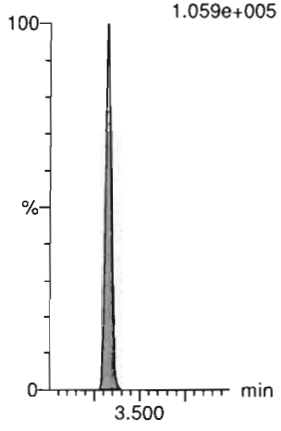
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-10, Date: 24-Feb-2020, Time: 18:45:33, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

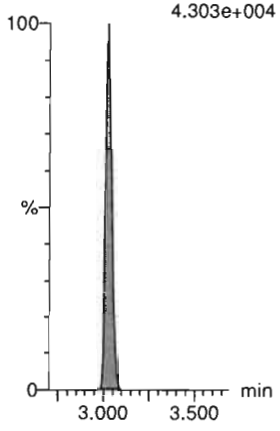
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.779e+004



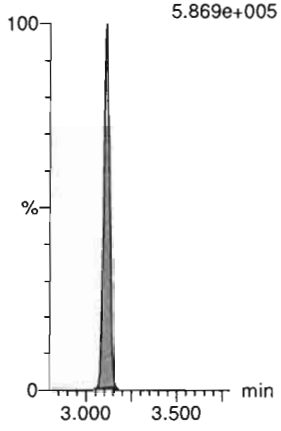
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.059e+005



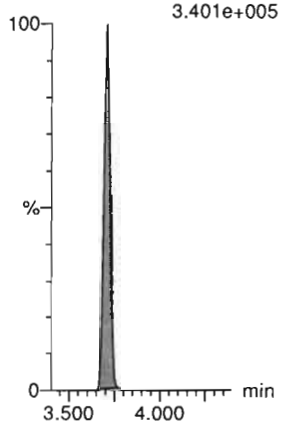
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.303e+004



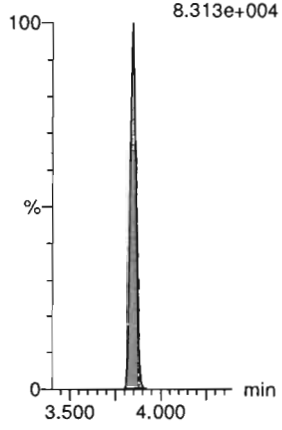
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.869e+005



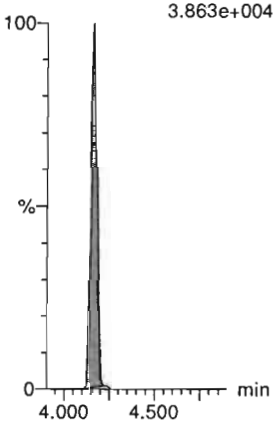
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.401e+005



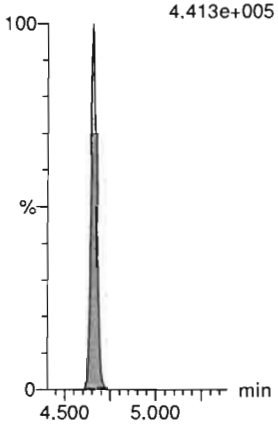
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.313e+004



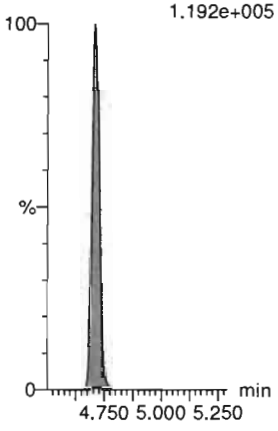
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.863e+004



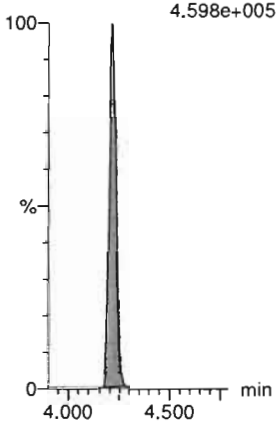
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.413e+005



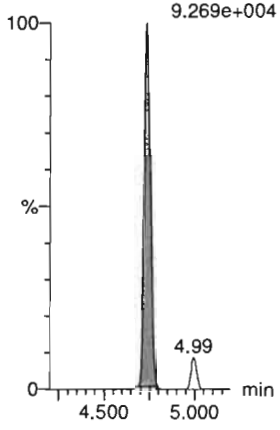
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.192e+005



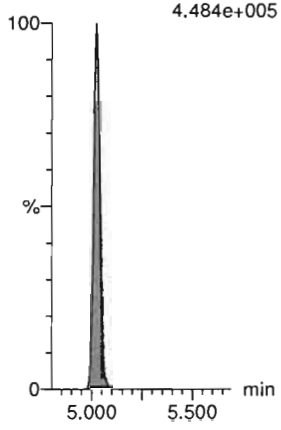
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.598e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.269e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.484e+005

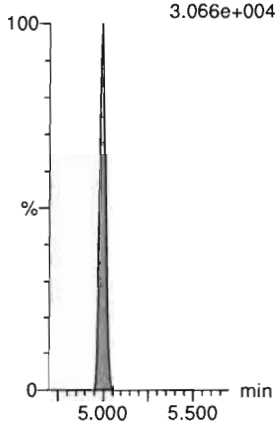


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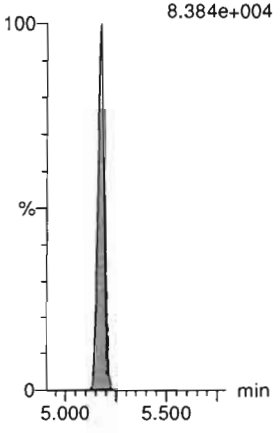
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Name: 200224P1-10, Date: 24-Feb-2020, Time: 18:45:33, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

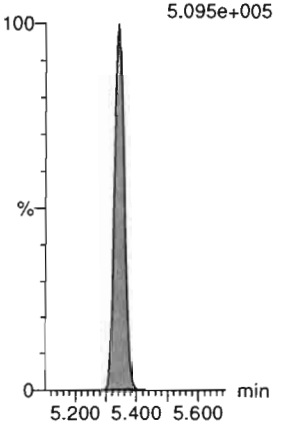
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.066e+004



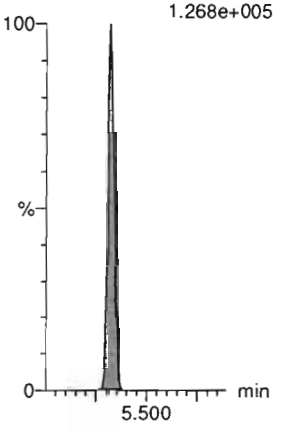
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.384e+004



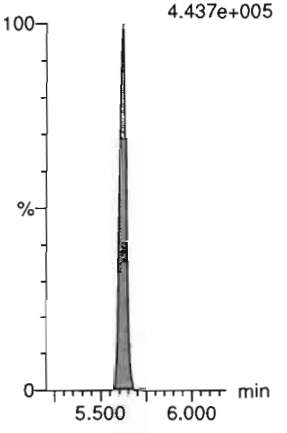
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.095e+005



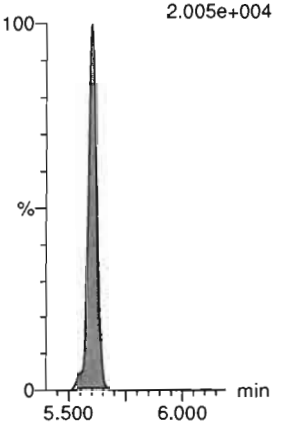
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.268e+005



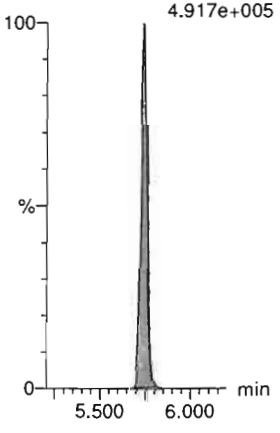
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.437e+005



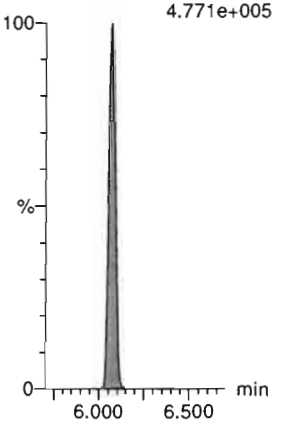
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.005e+004



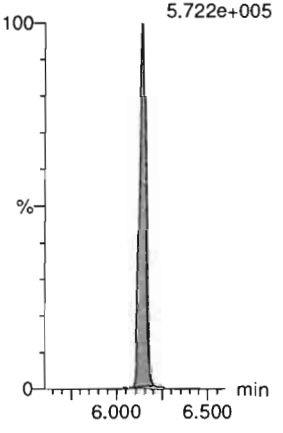
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.917e+005



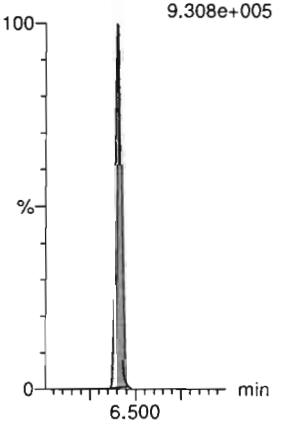
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.771e+005



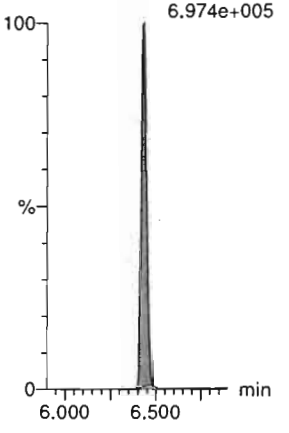
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.722e+005



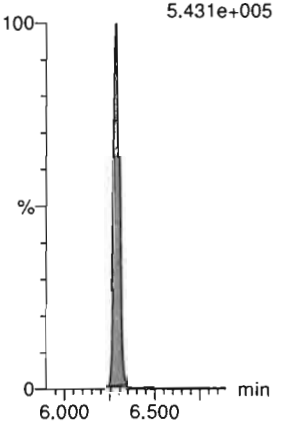
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.308e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.974e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.431e+005

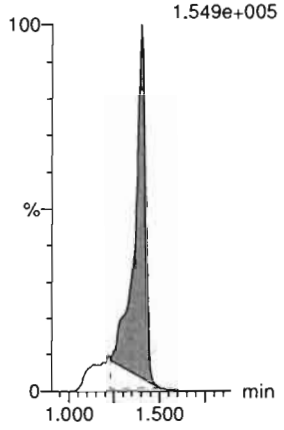


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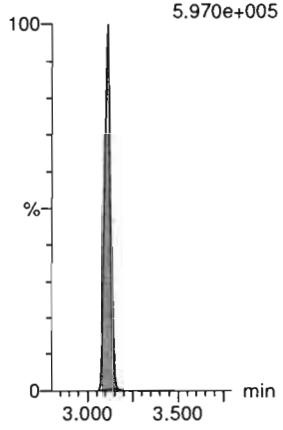
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Name: 200224P1-10, Date: 24-Feb-2020, Time: 18:45:33, ID: ST200220P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

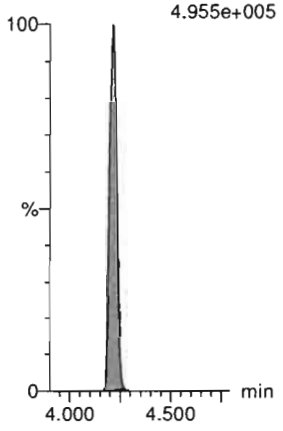
13C4-PFBA



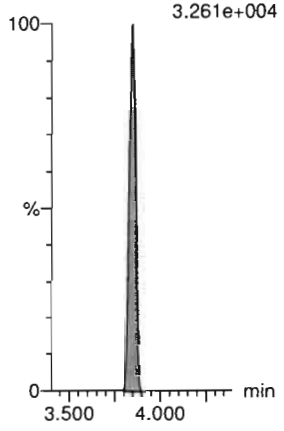
13C5-PFHxA



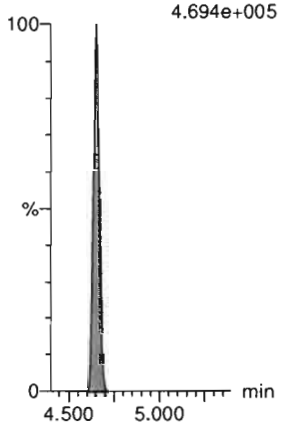
13C8-PFOA



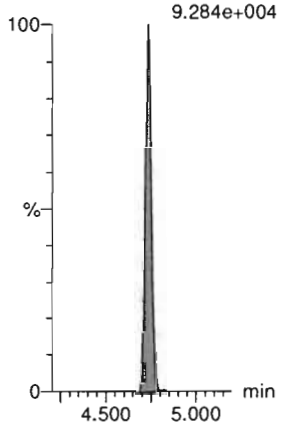
18O2-PFHxS



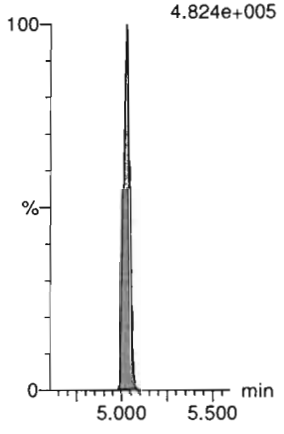
13C9-PFNA



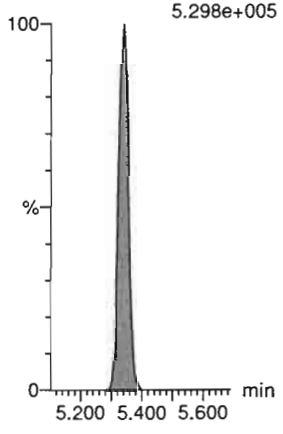
13C4-PFOS



13C6-PFDA



13C7-PFUdA



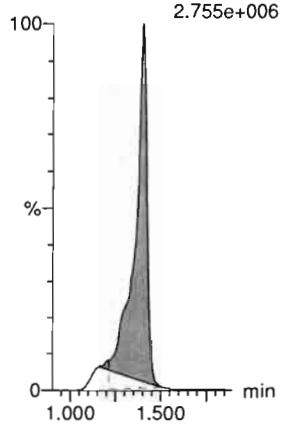
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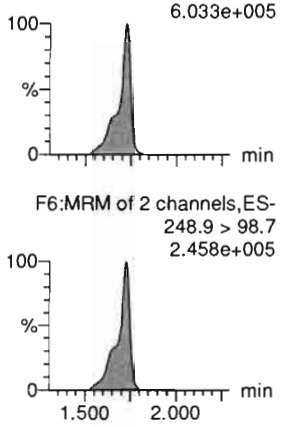
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Name: 200224P1-11, Date: 24-Feb-2020, Time: 18:56:04, ID: ST200220P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

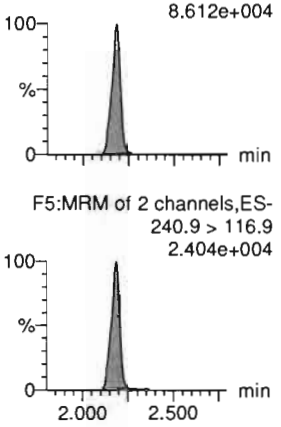
PFBA



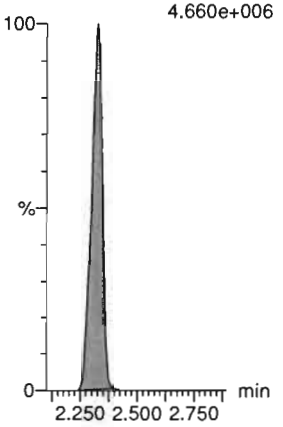
PFPrS



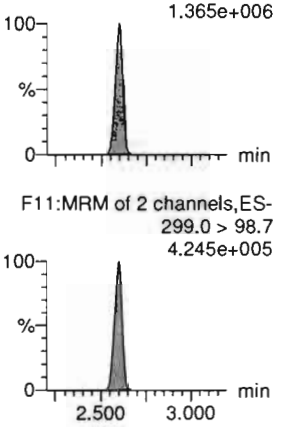
3:3 FTCA



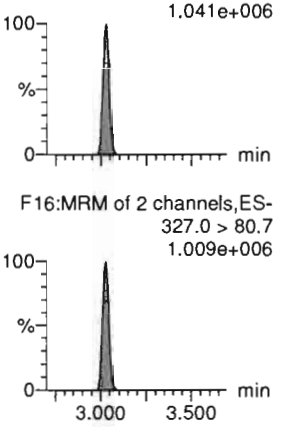
PFPeA



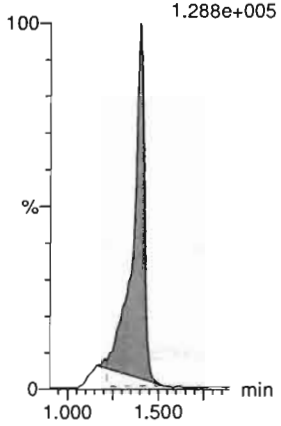
PFBS



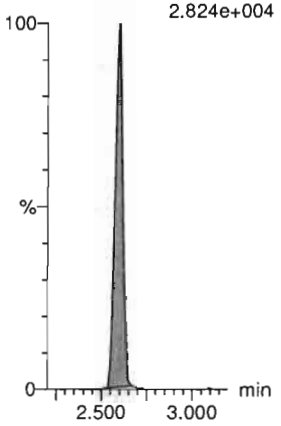
4:2 FTS



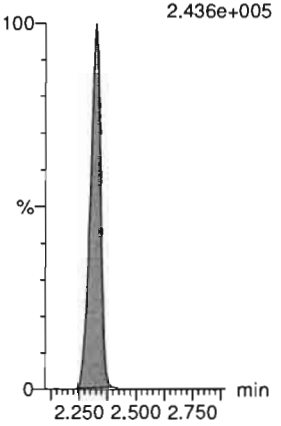
13C3-PFBA-EIS



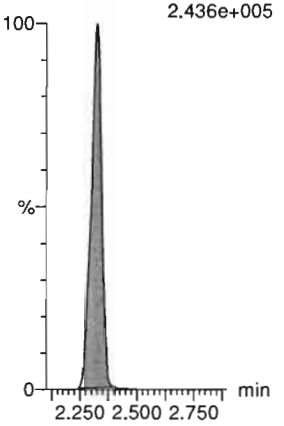
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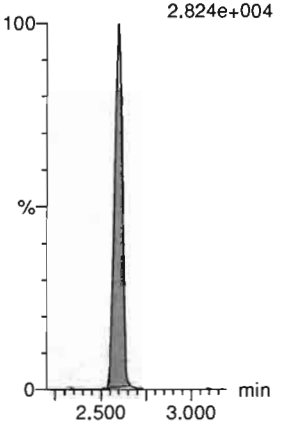
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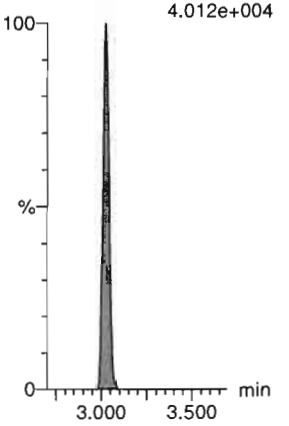
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

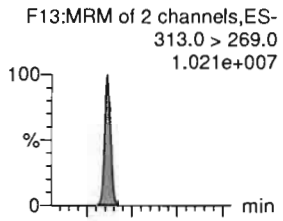


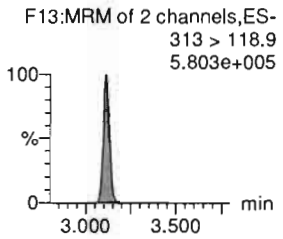
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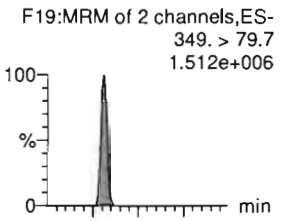
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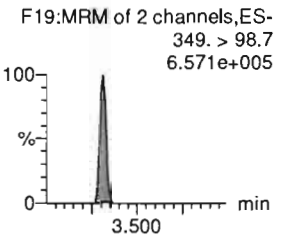
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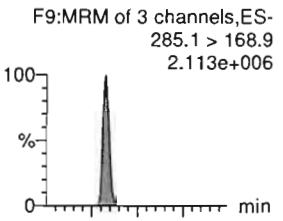


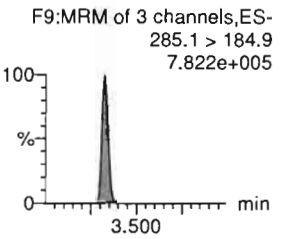
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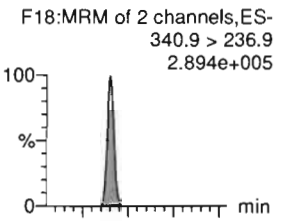


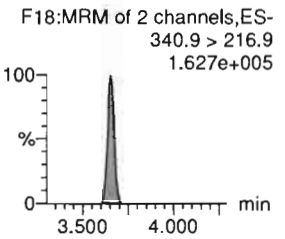
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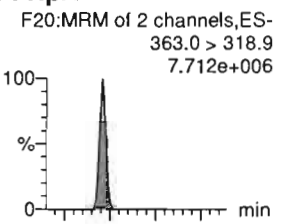


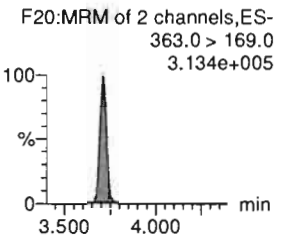
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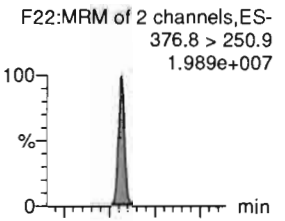


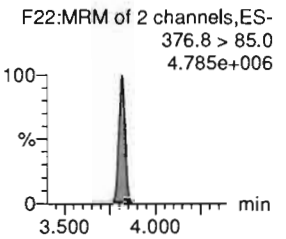
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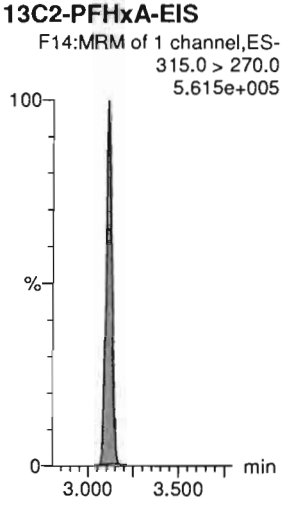


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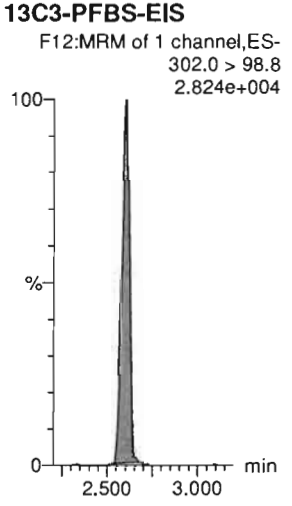




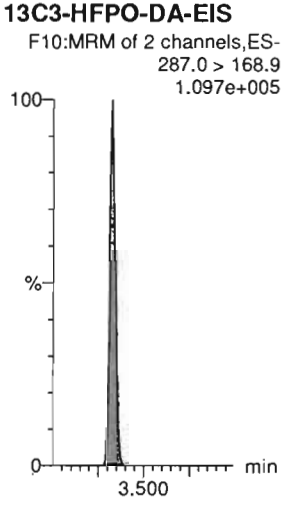
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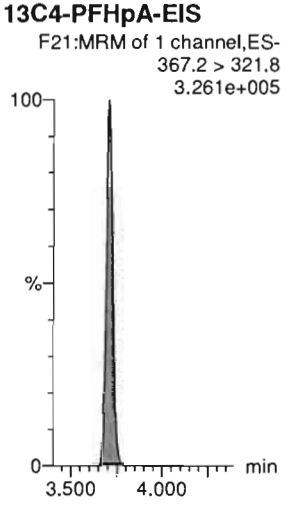
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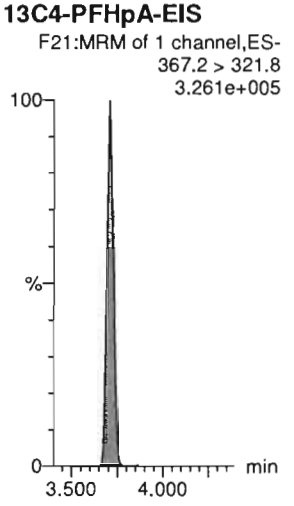
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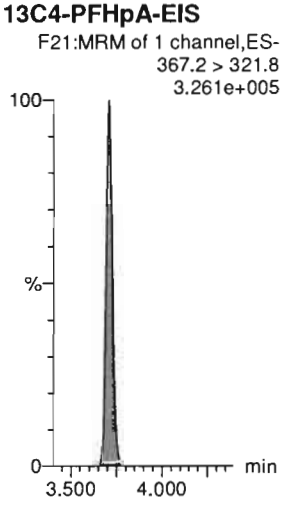
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13C4-PFHpA-EIS



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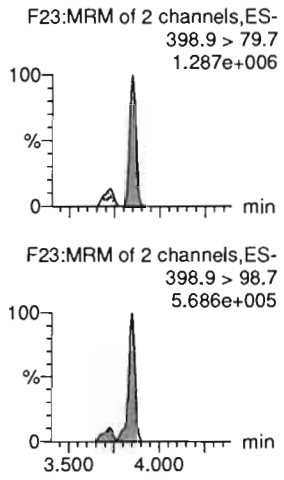


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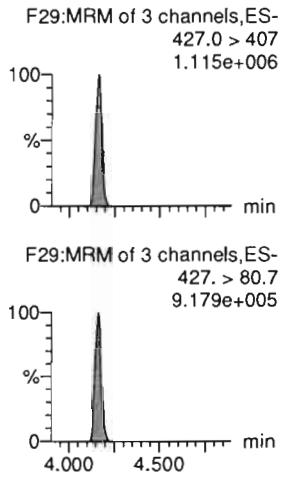
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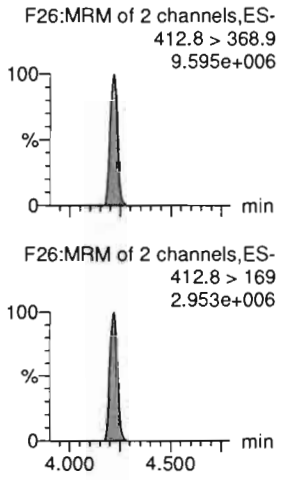
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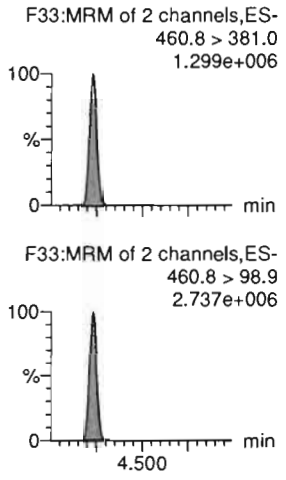
6:2 FTS



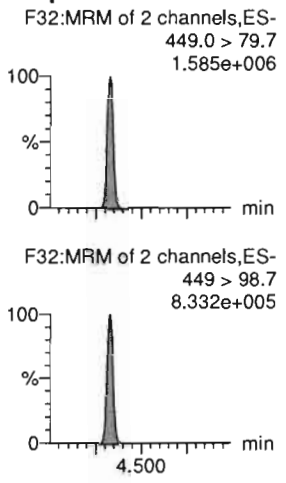
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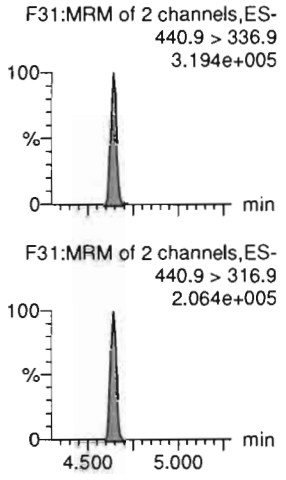
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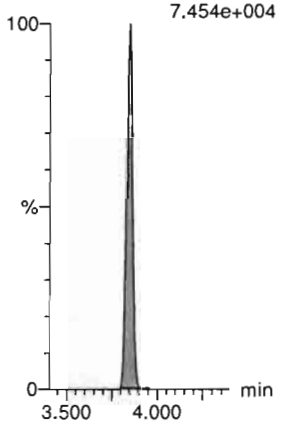
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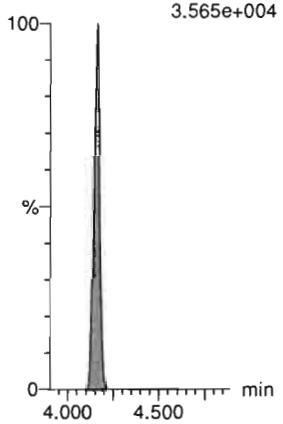
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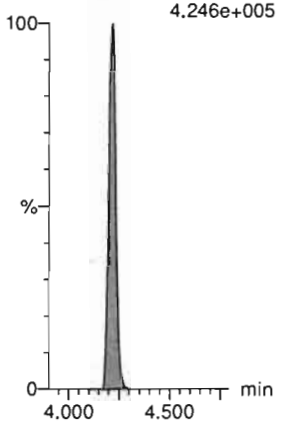
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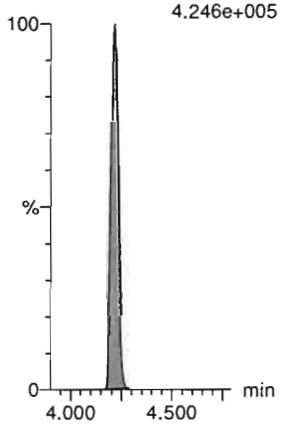
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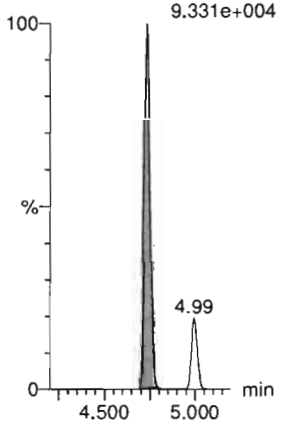
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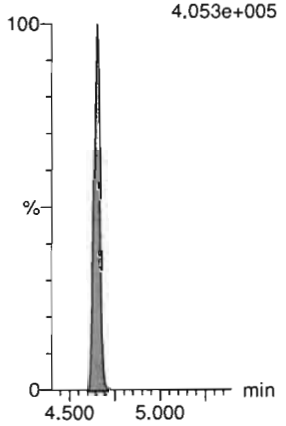
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13C8-PFOS-EIS



13C5-PFNA-EIS

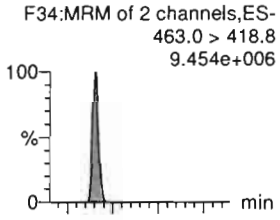


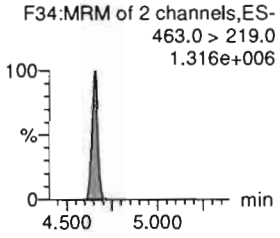
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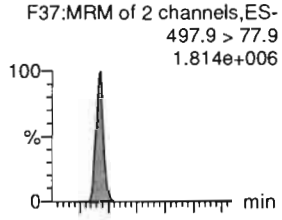
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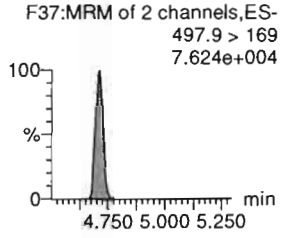
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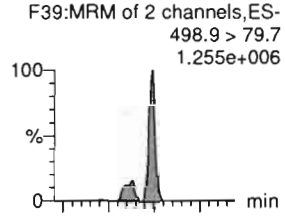


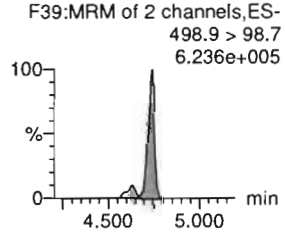
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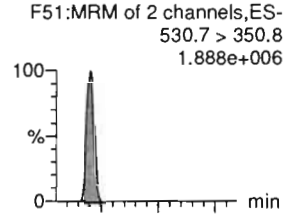


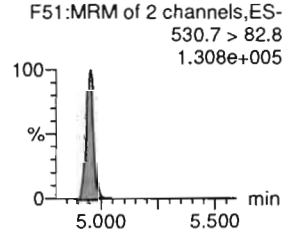
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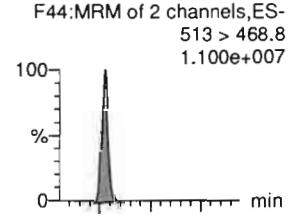


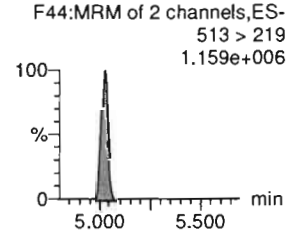
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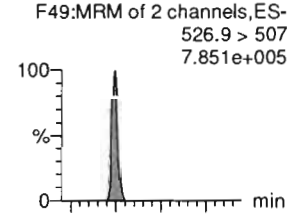


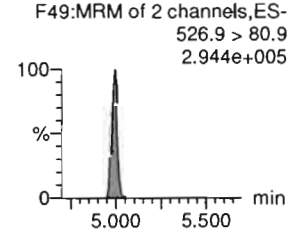
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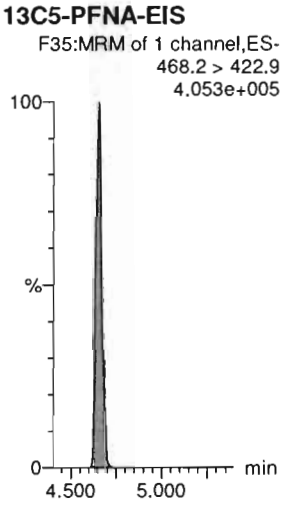


8:2 FTS

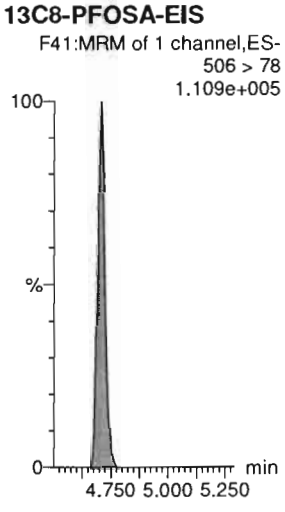




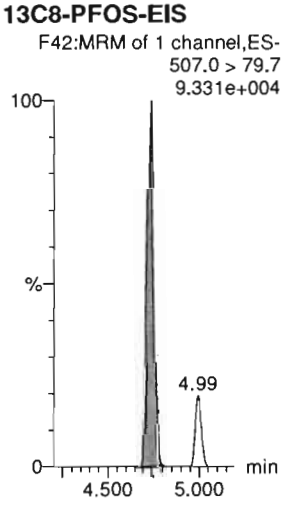
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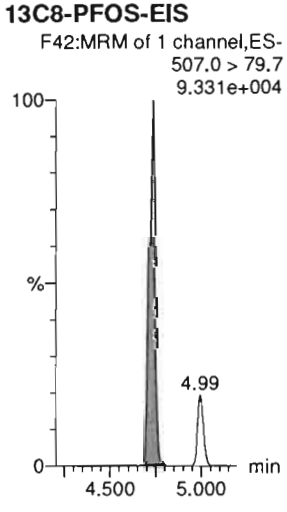
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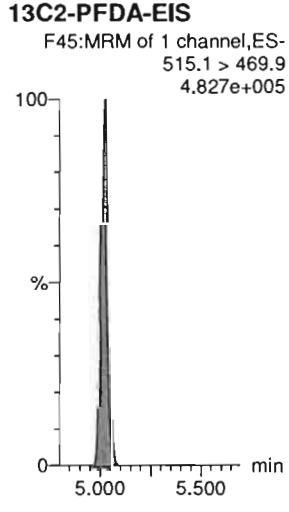
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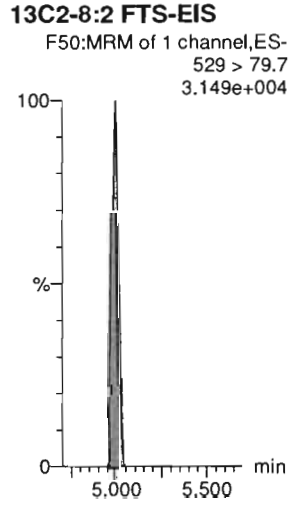
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

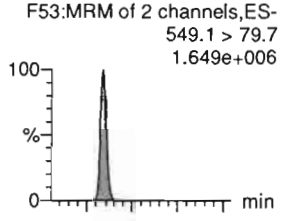


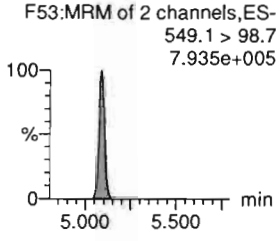
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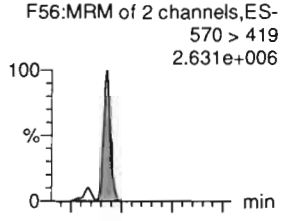
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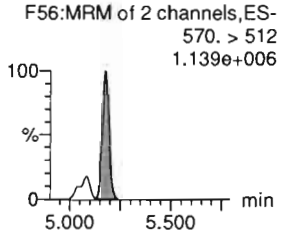
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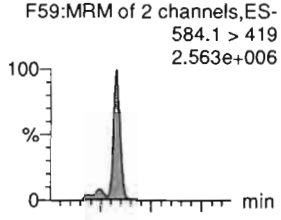


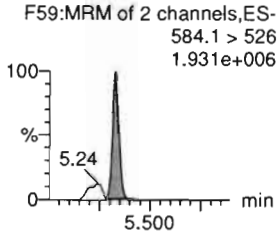
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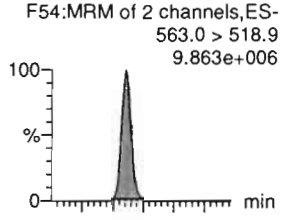


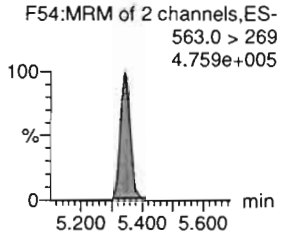
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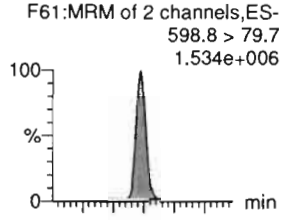


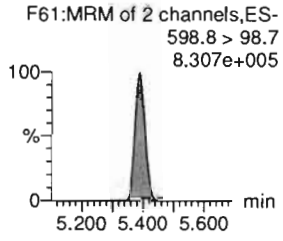
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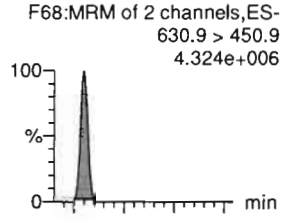


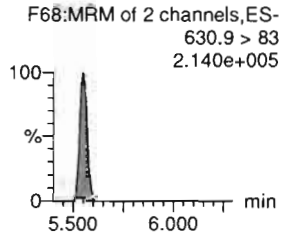
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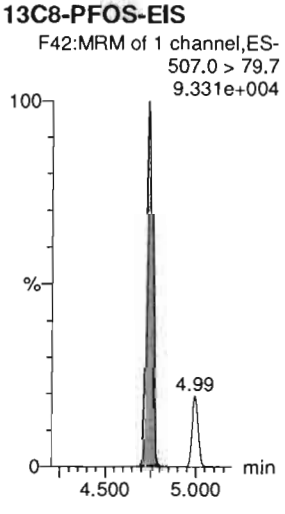


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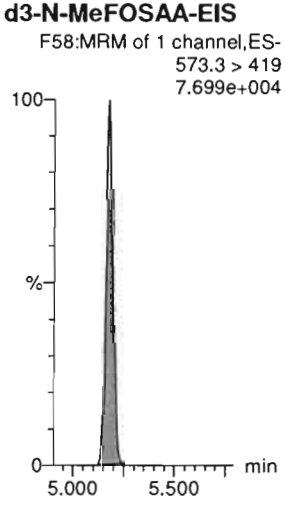




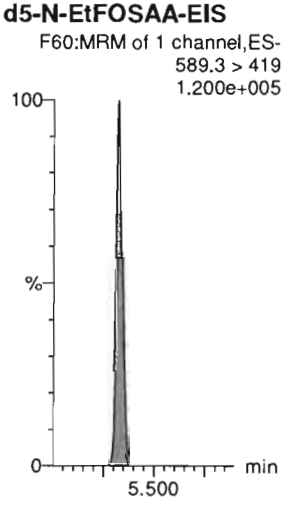
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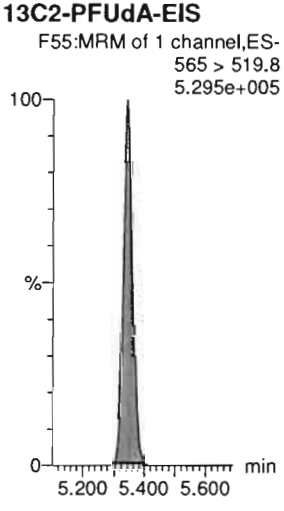
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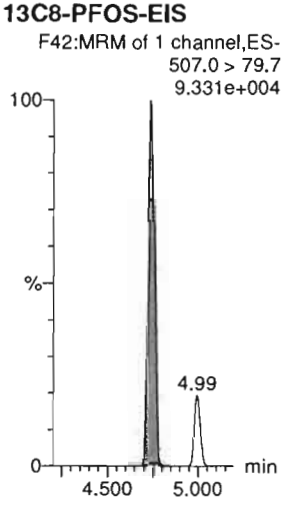
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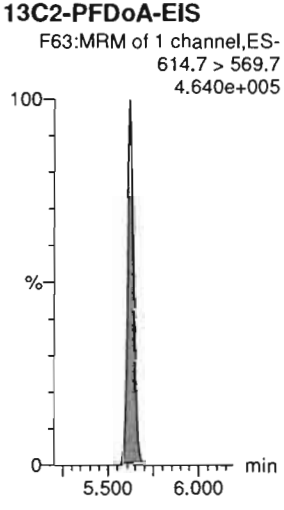
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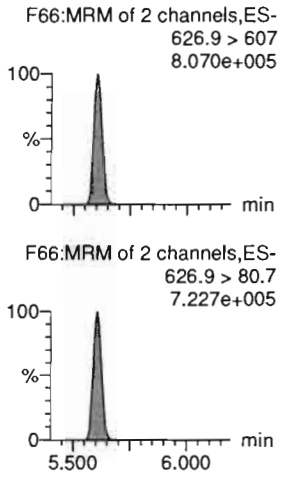


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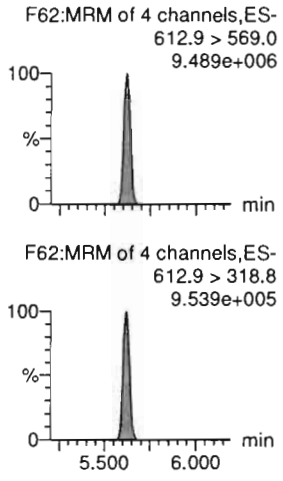
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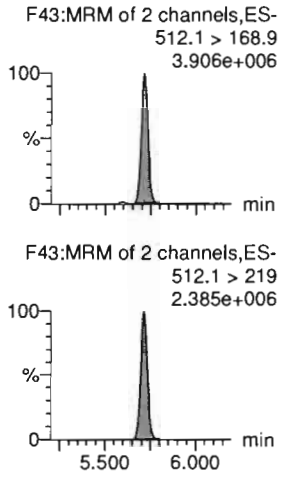
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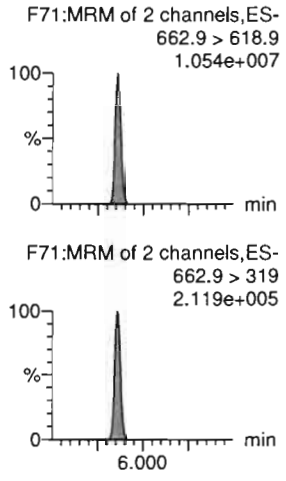
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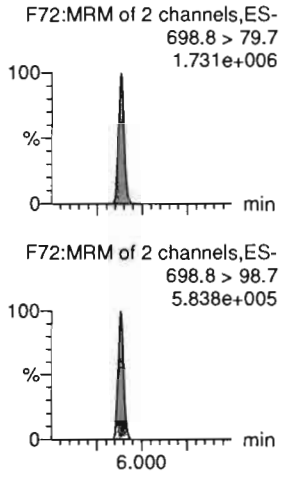
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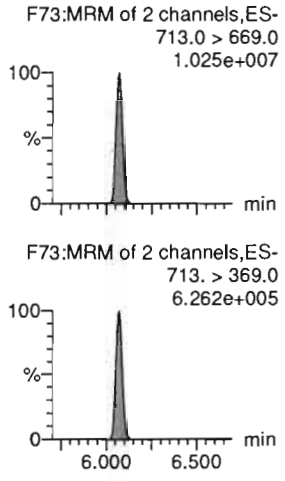
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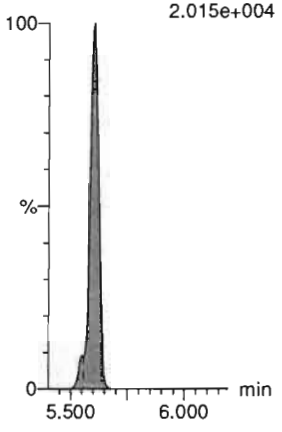
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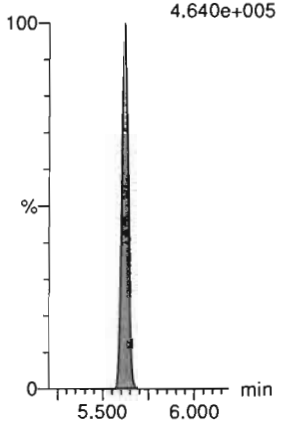
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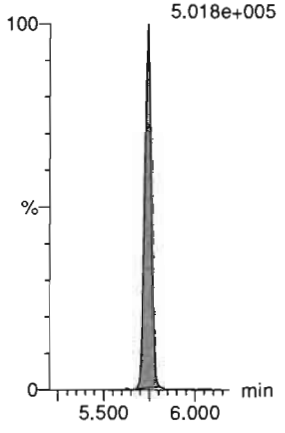
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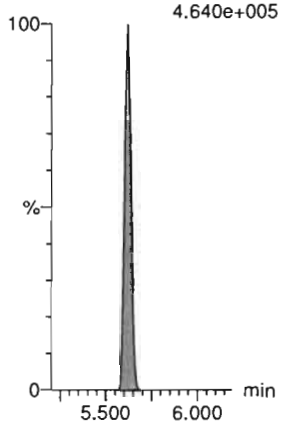
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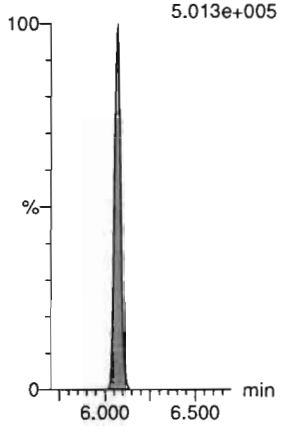
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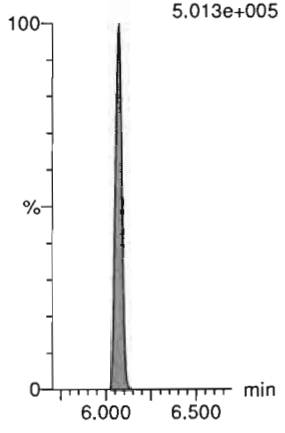
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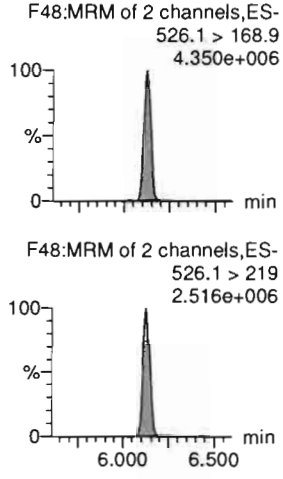


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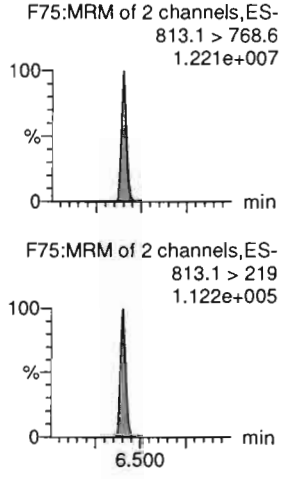
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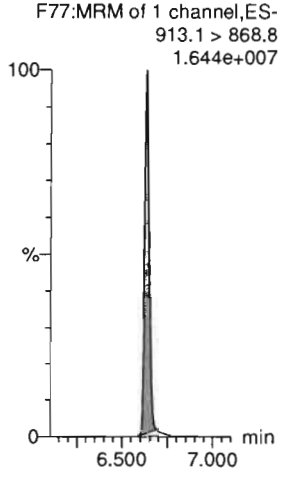
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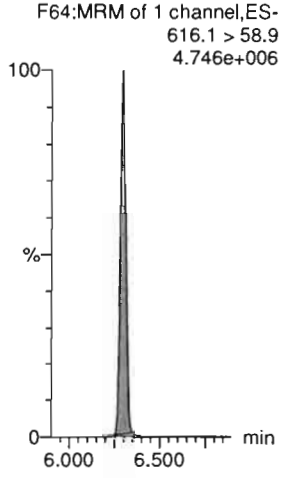
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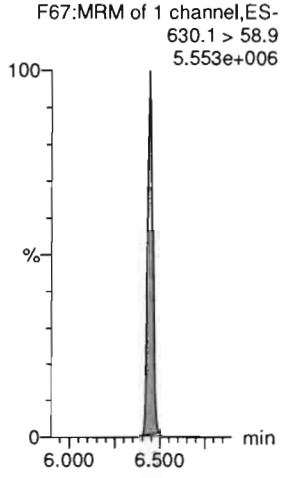
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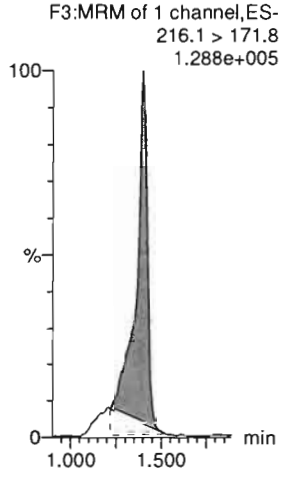
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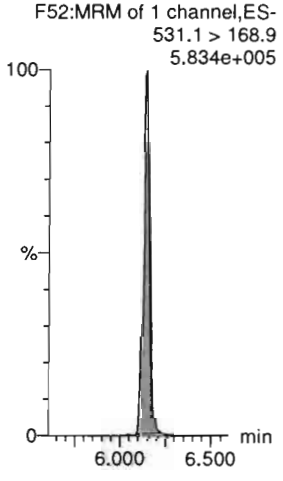
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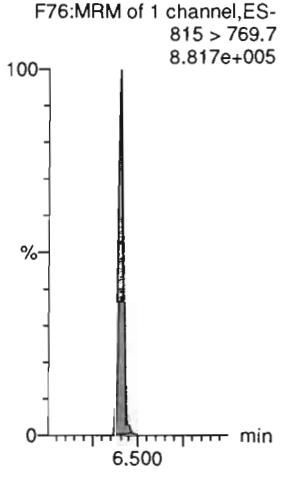
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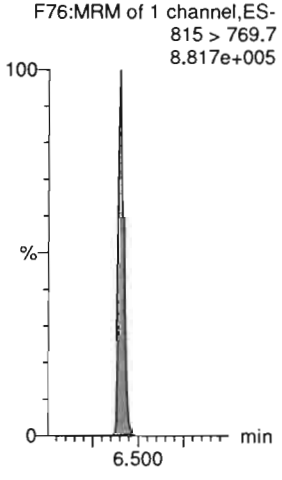
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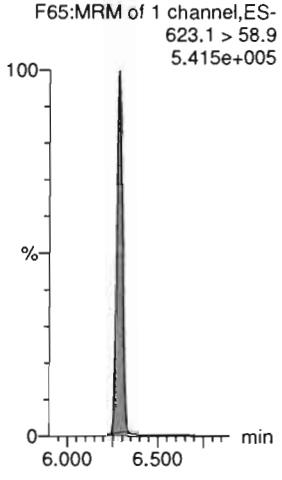
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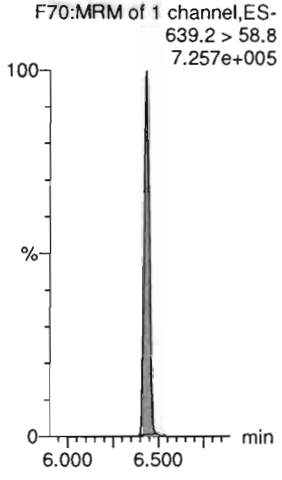
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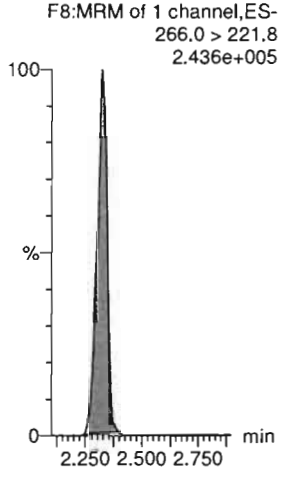
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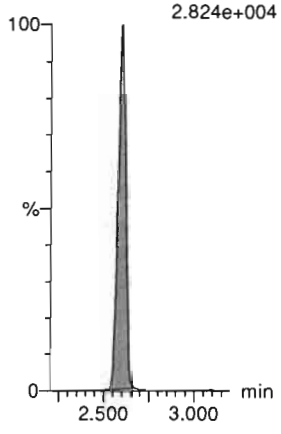


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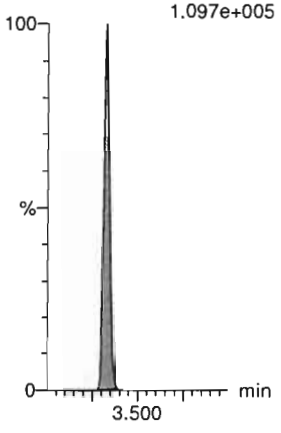
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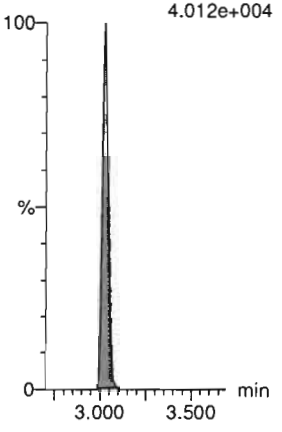
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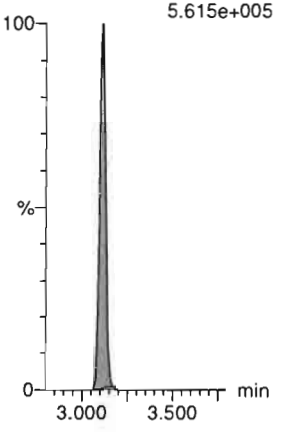
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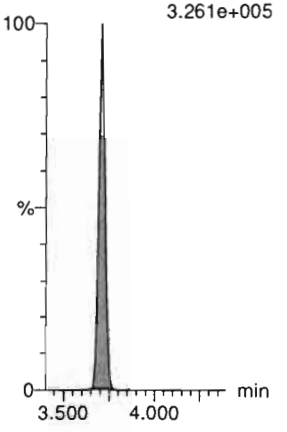
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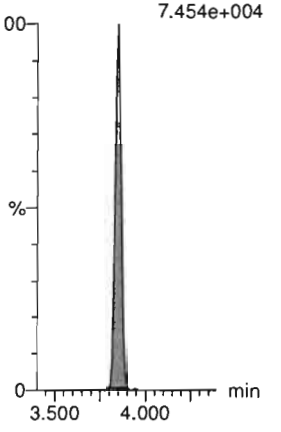
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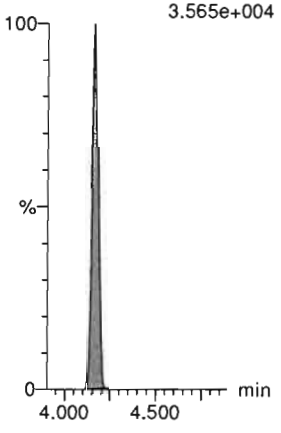
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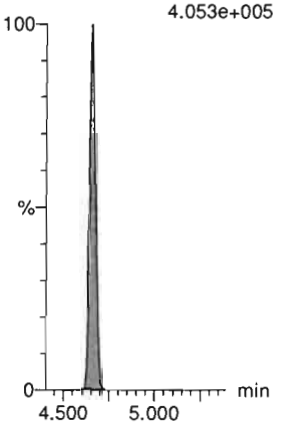
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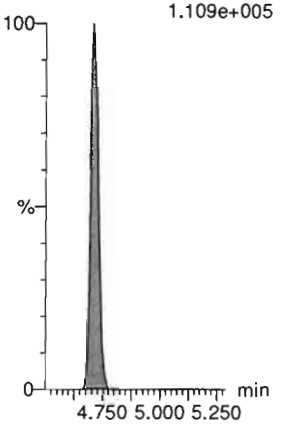
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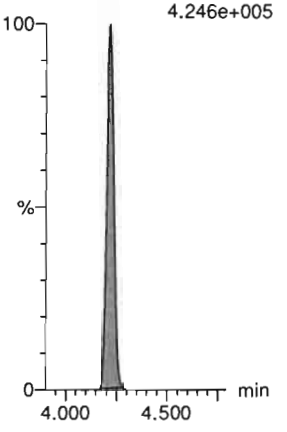
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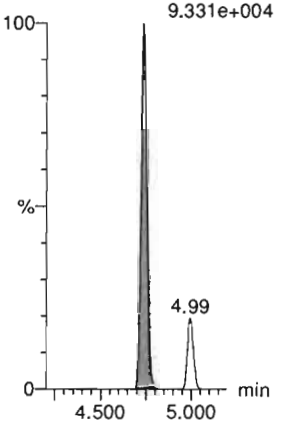
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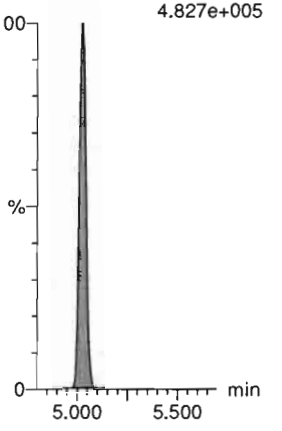
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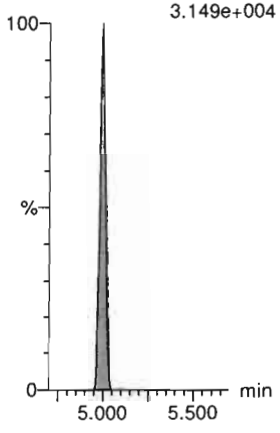


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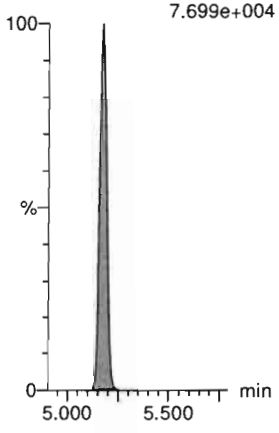
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Name: 200224P1-11, Date: 24-Feb-2020, Time: 18:56:04, ID: ST200220P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

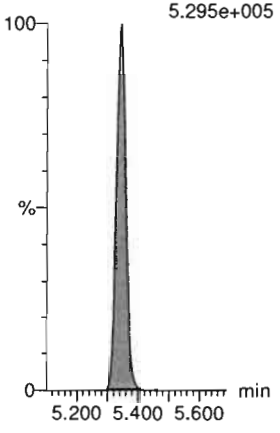
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.149e+004



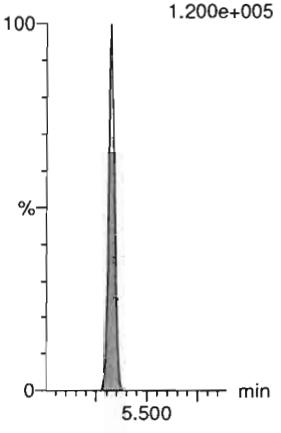
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
7.699e+004



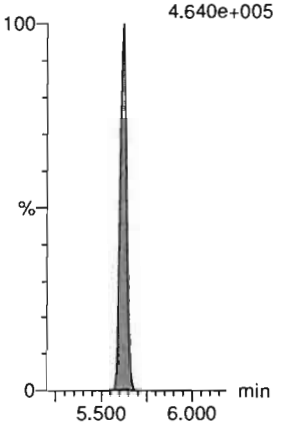
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.295e+005



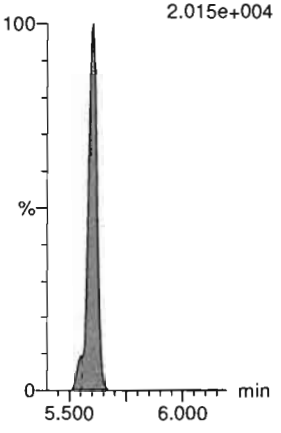
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.200e+005



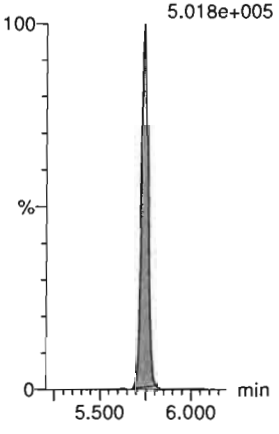
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.640e+005



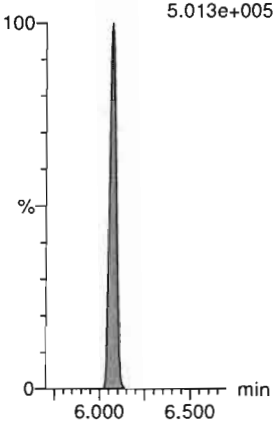
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.015e+004



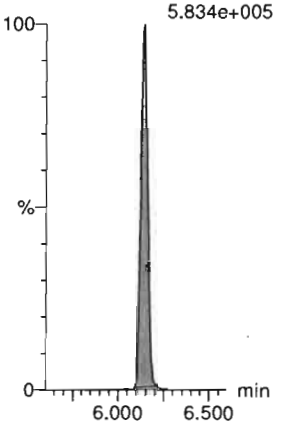
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.018e+005



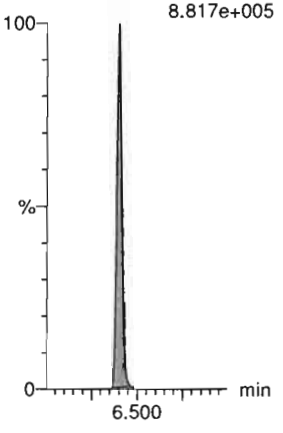
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.013e+005



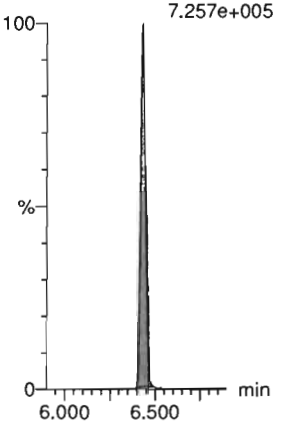
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.834e+005



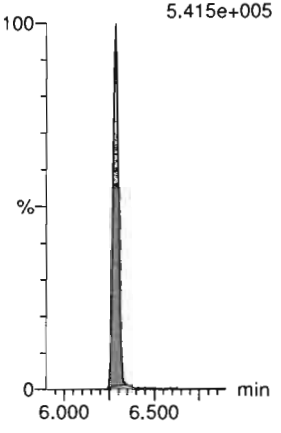
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.817e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.257e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.415e+005

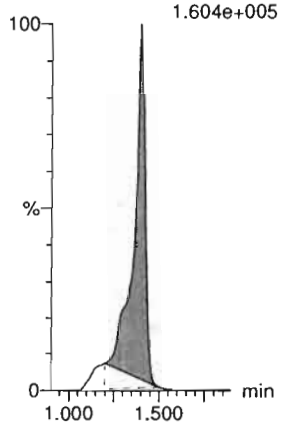


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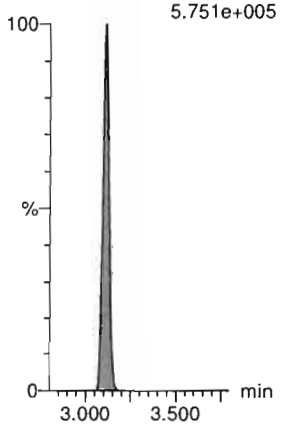
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-11, Date: 24-Feb-2020, Time: 18:56:04, ID: ST200220P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

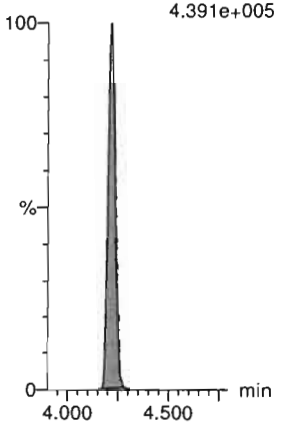
13C4-PFBA



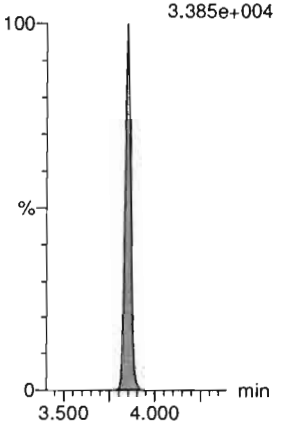
13C5-PFHxA



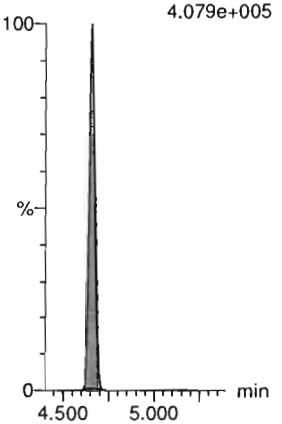
13C8-PFOA



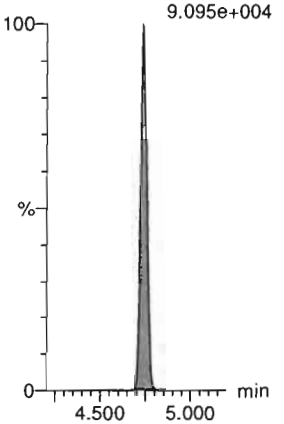
18O2-PFHxS



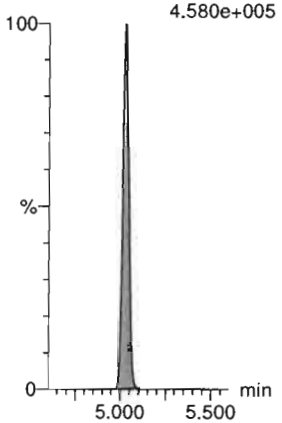
13C9-PFNA



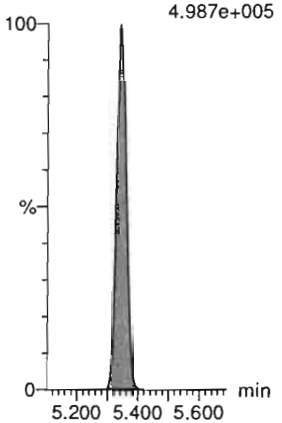
13C4-PFOS



13C6-PFDA



13C7-PFUdA

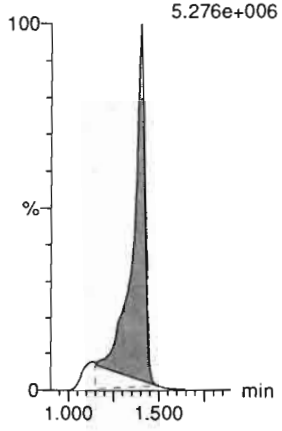


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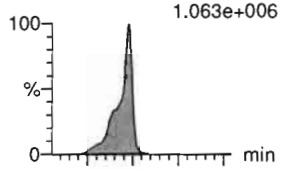
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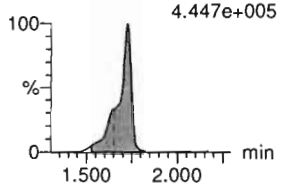
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
5.276e+006



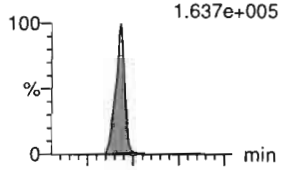
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.7
1.063e+006



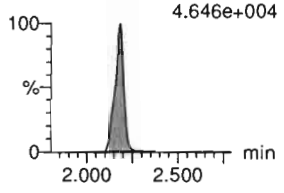
F6:MRM of 2 channels,ES-
248.9 > 98.7
4.447e+005



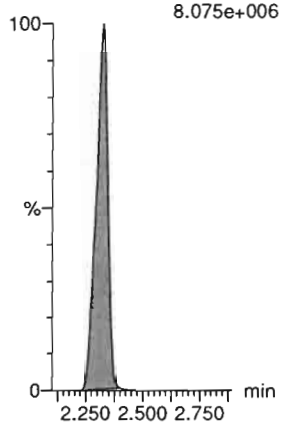
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
1.637e+005



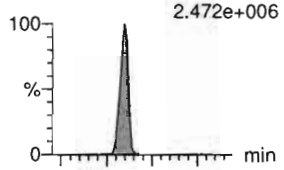
F5:MRM of 2 channels,ES-
240.9 > 116.9
4.646e+004



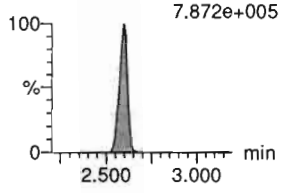
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
8.075e+006



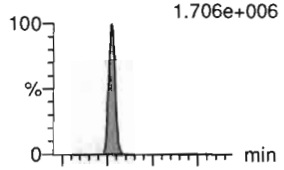
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
2.472e+006



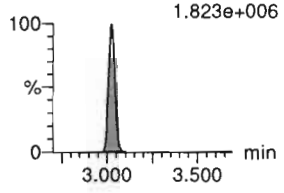
F11:MRM of 2 channels,ES-
299.0 > 98.7
7.872e+005



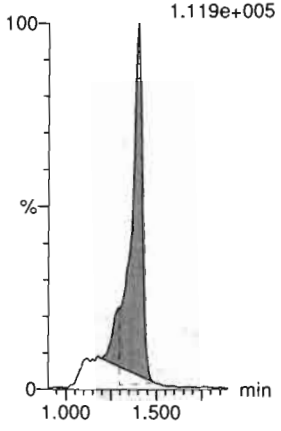
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 307
1.706e+006



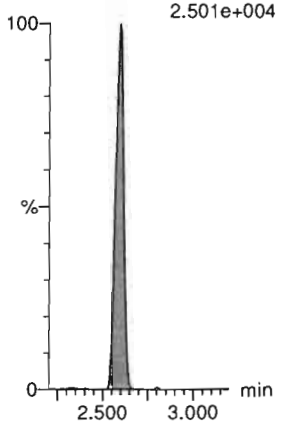
F16:MRM of 2 channels,ES-
327.0 > 80.7
1.823e+006



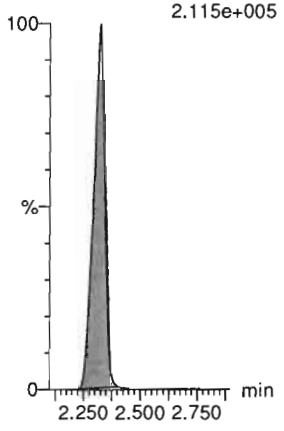
13C3-PFBA-EIS
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.119e+005



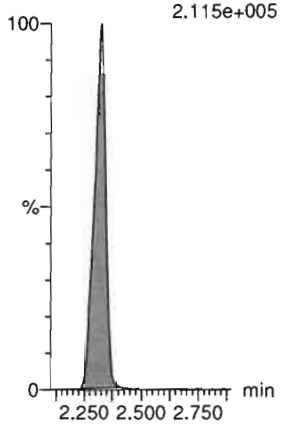
13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.501e+004



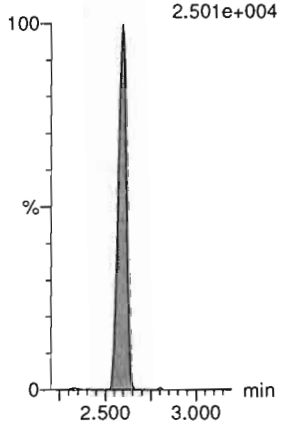
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.115e+005



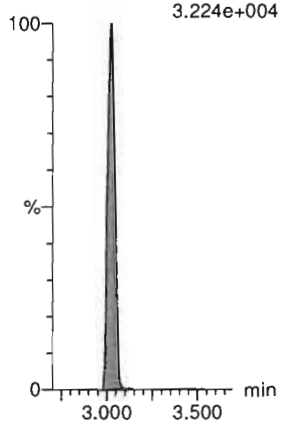
13C3-PFPeA-EIS
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.115e+005



13C3-PFBS-EIS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.501e+004



13C2-4:2 FTS-EIS
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.224e+004

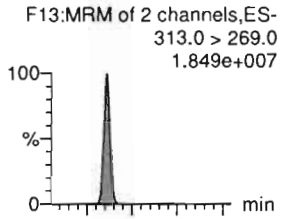


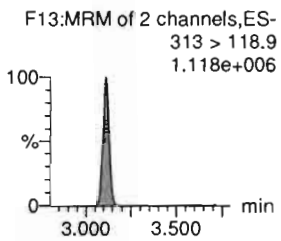
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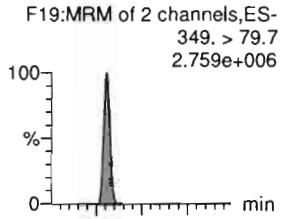
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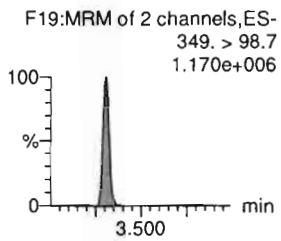
PFHxA



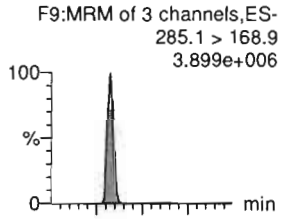


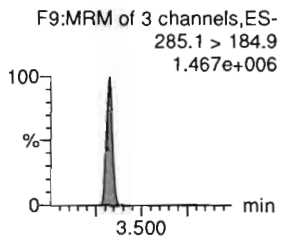
PFPeS



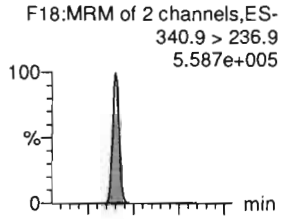


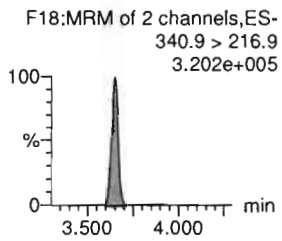
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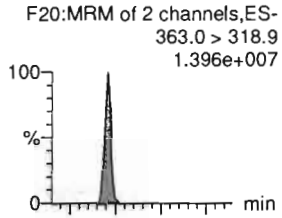


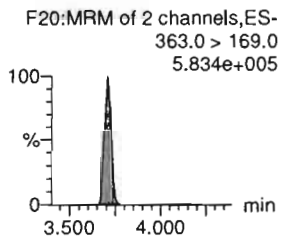
5:3 FTCA



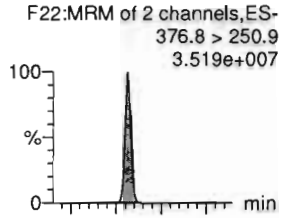


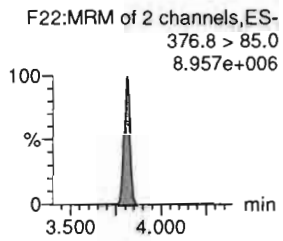
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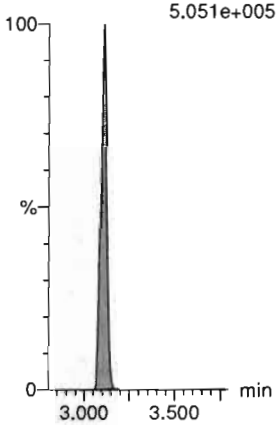


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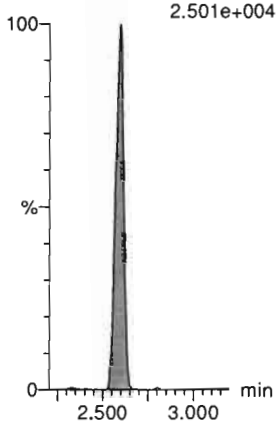




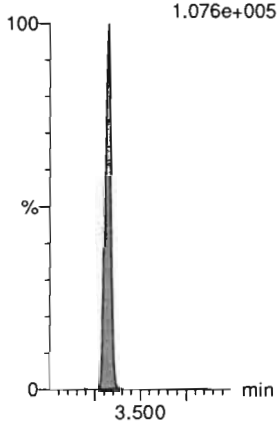
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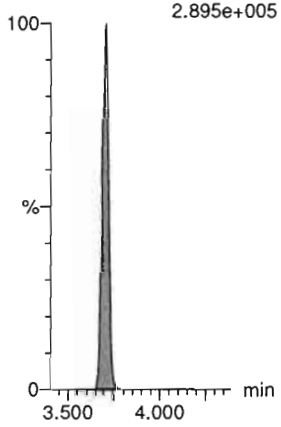
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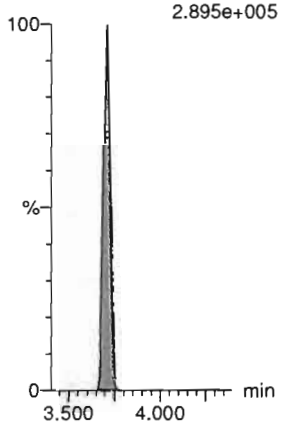
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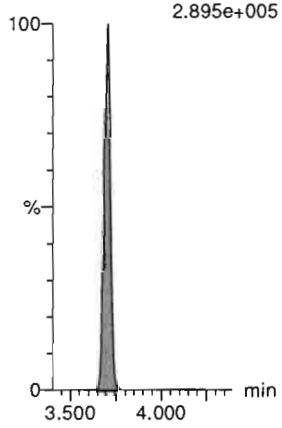
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13C4-PFHpA-EIS



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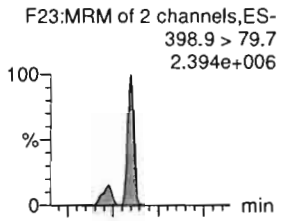


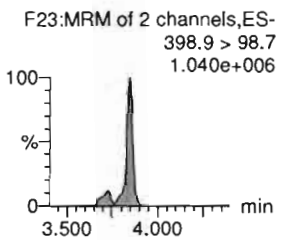
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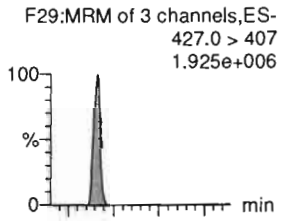
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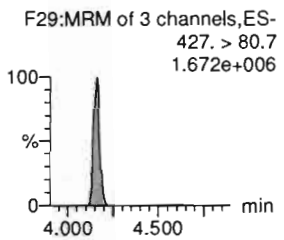
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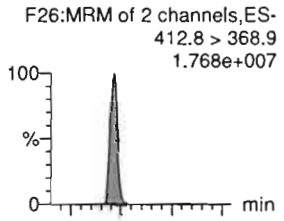


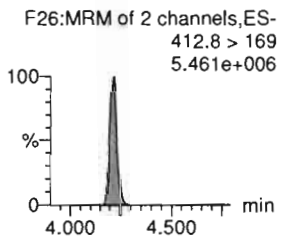
6:2 FTS



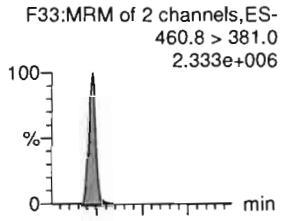


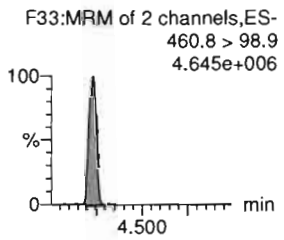
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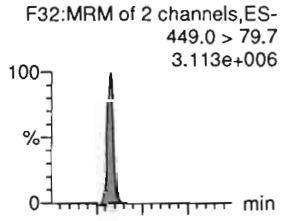


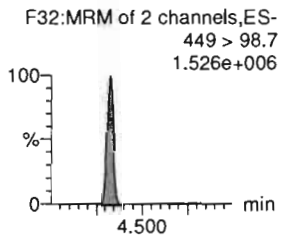
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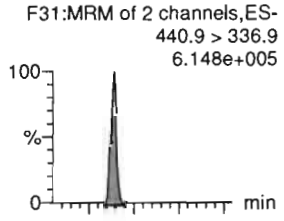


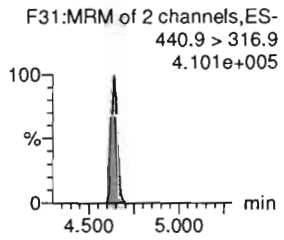
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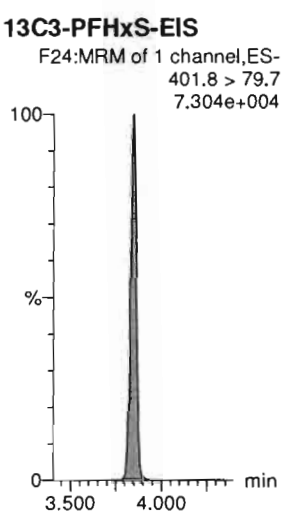


7:3 FTCA

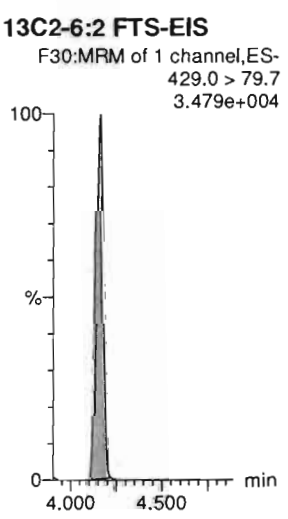




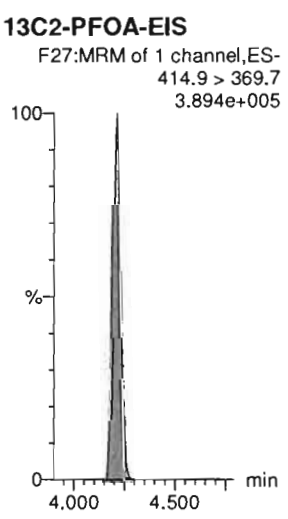
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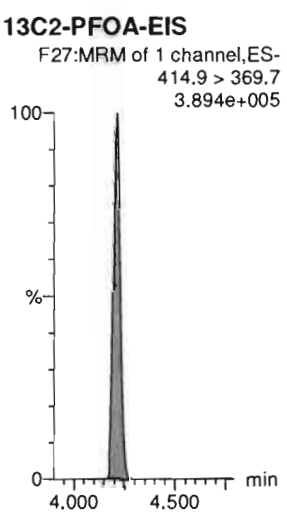
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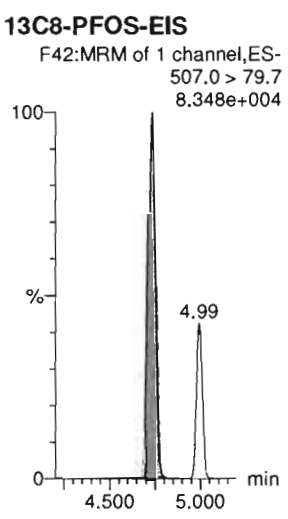
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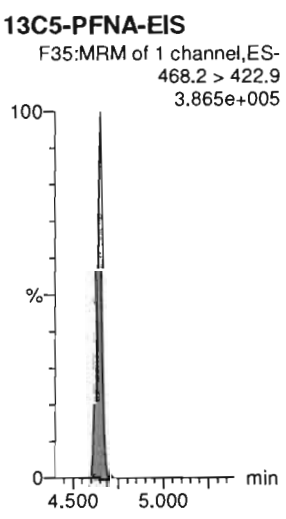
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13C8-PFOS-EIS



13C5-PFNA-EIS

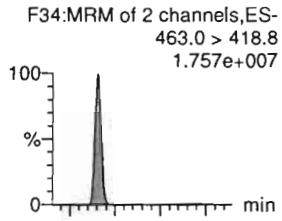


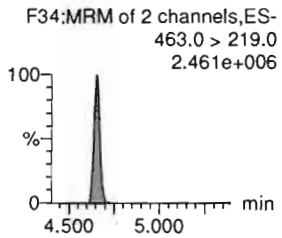
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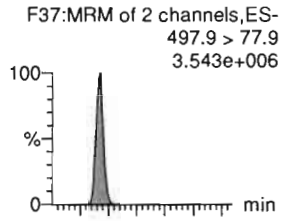
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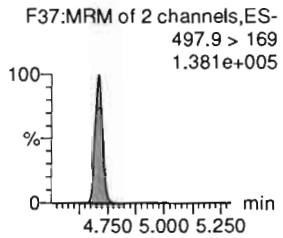
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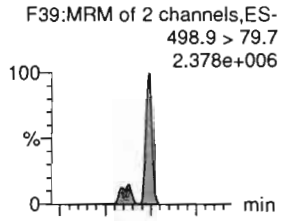


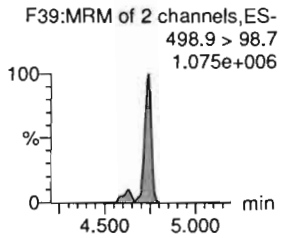
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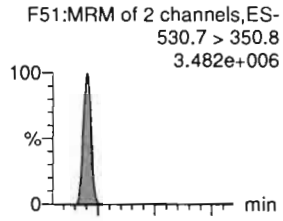


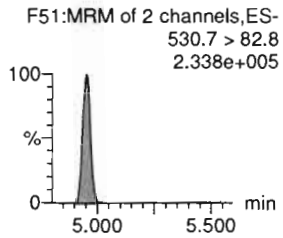
L-PFOS



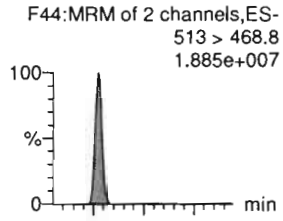


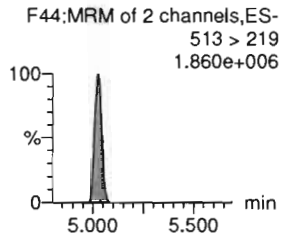
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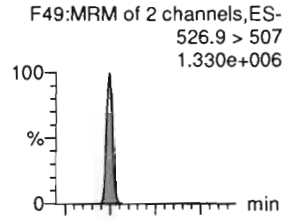


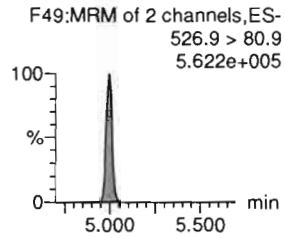
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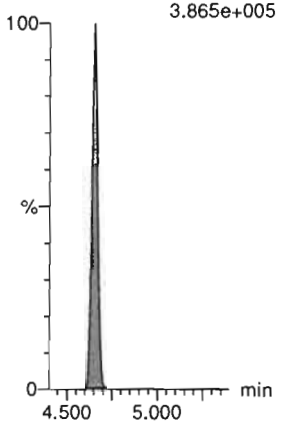


8:2 FTS

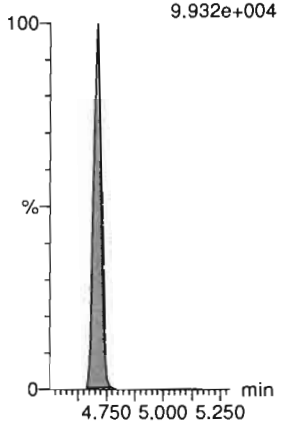




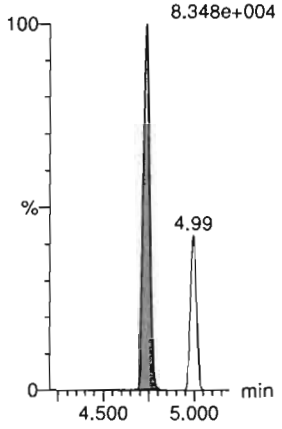
13C5-PFNA-EIS



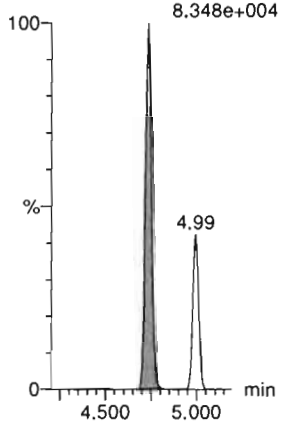
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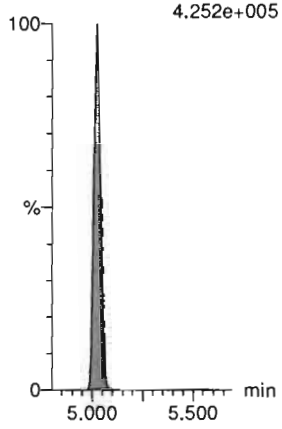
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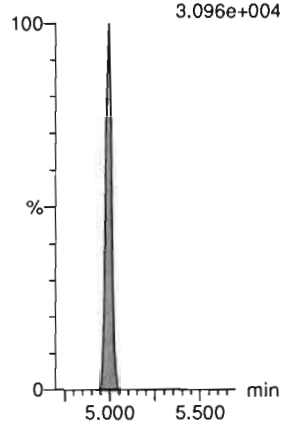
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

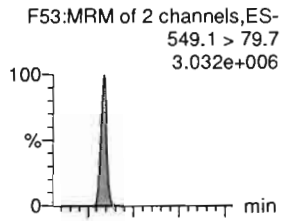


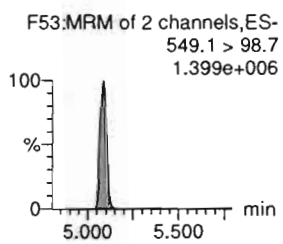
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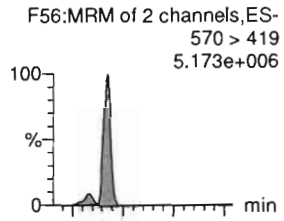
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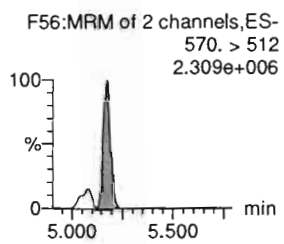
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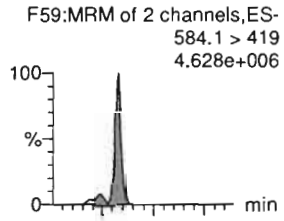


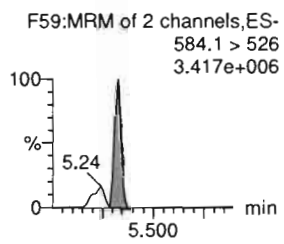
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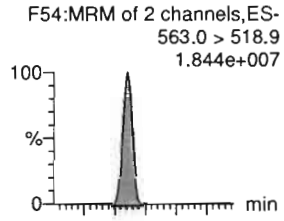


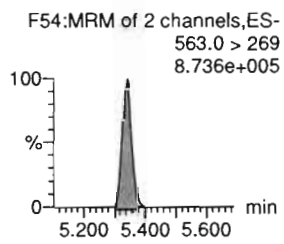
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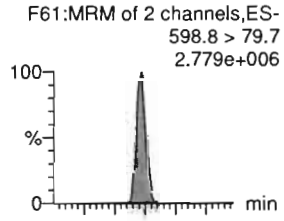


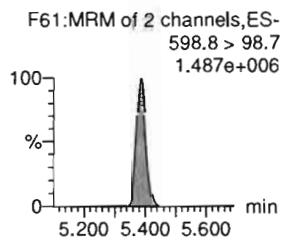
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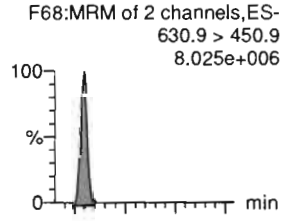


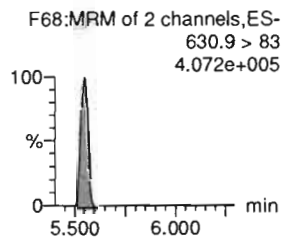
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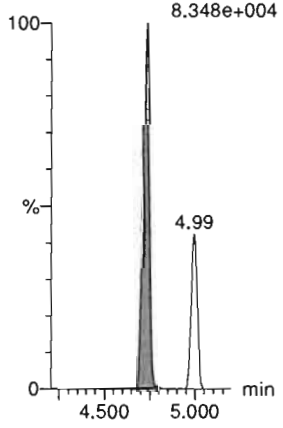


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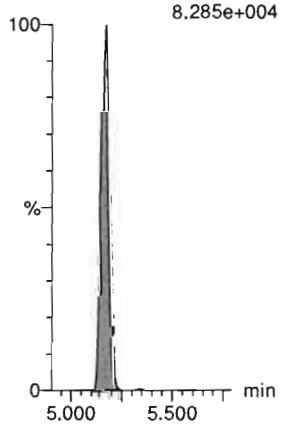




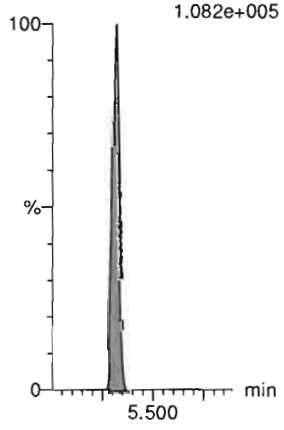
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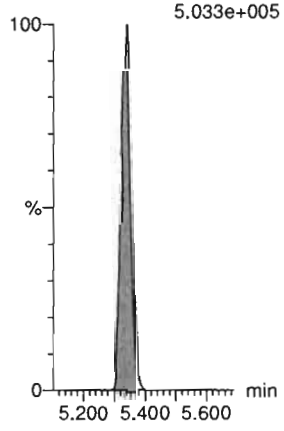
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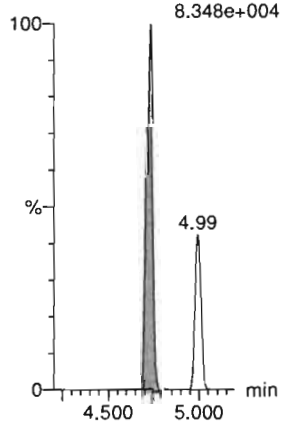
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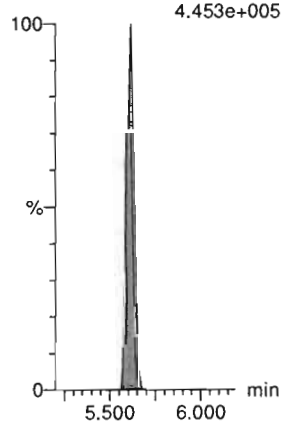
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13C8-PFOS-EIS



13C2-PFDoA-EIS

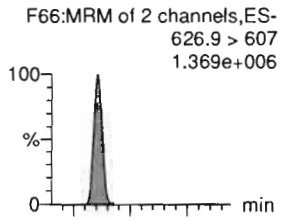


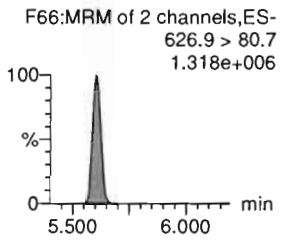
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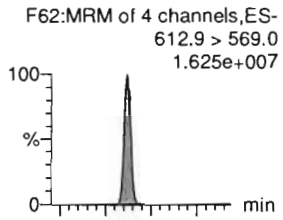
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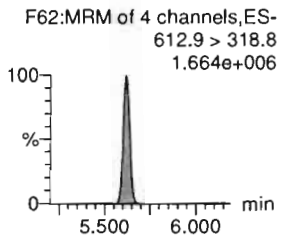
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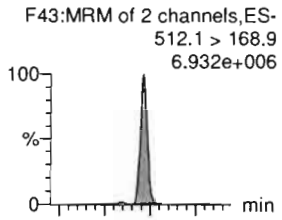


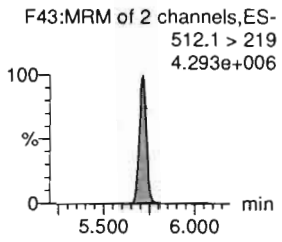
PFDoA



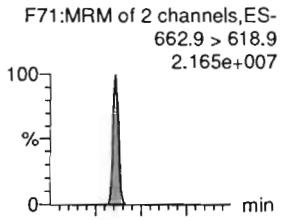


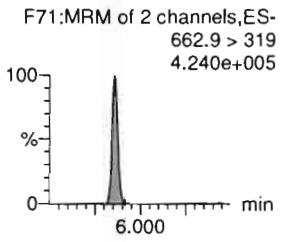
N-MeFOSA



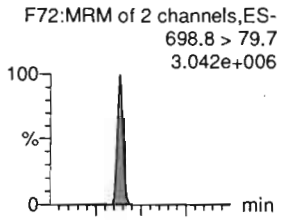


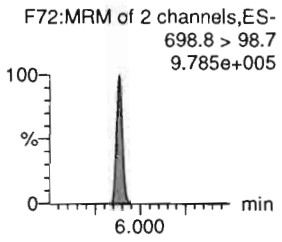
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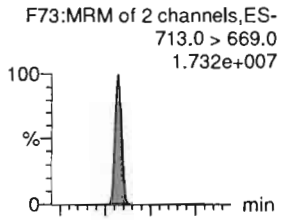


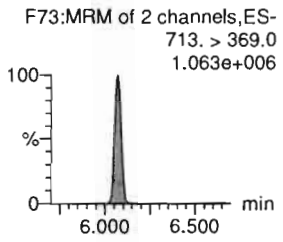
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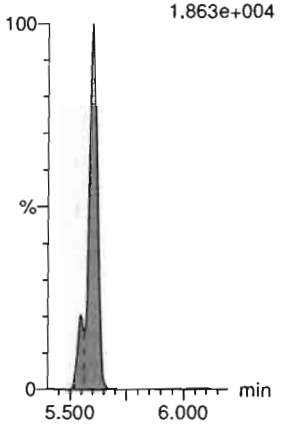


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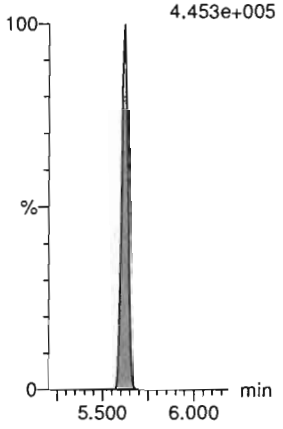




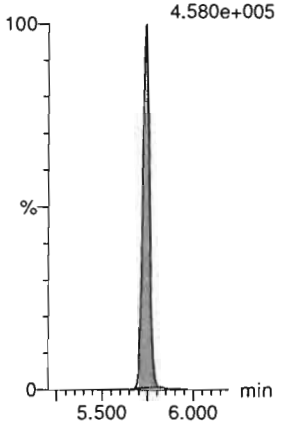
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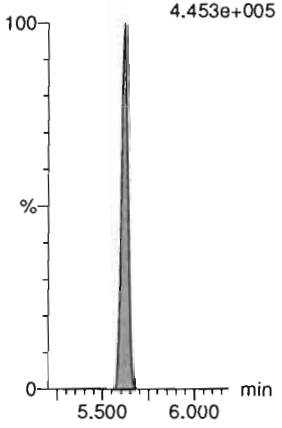
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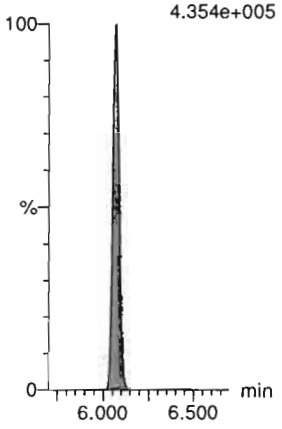
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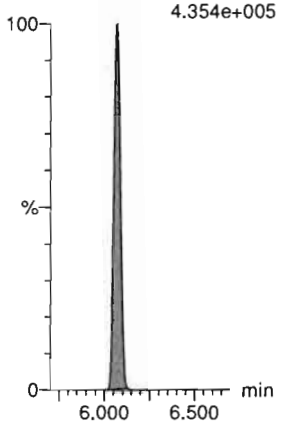
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

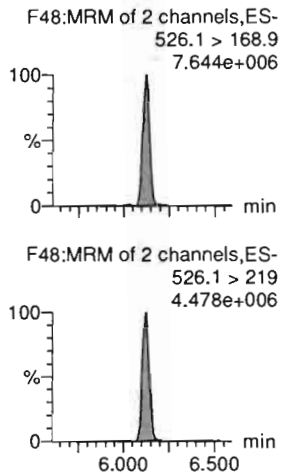


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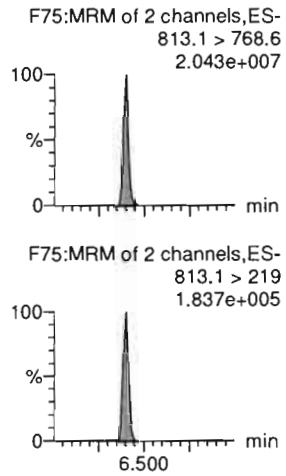
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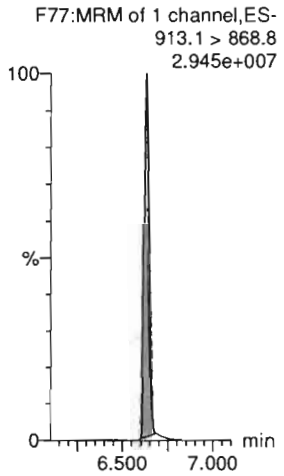
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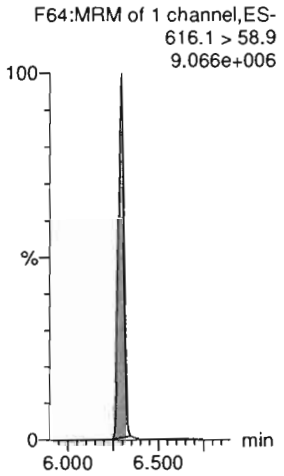
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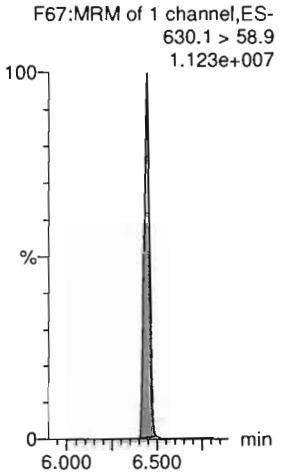
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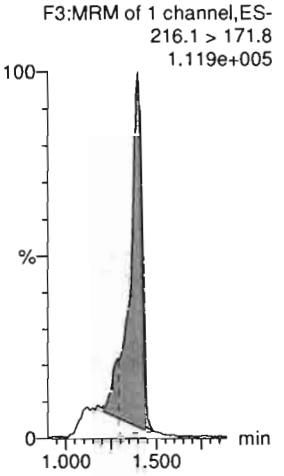
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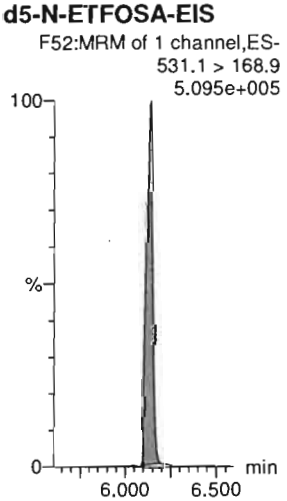
N-EtFOSE



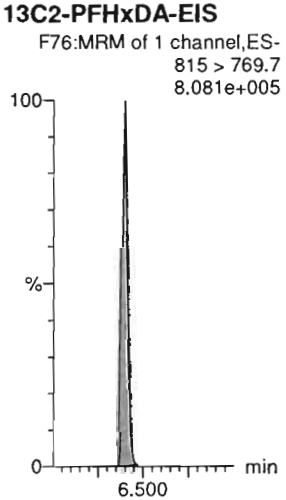
13C3-PFBA-RSD



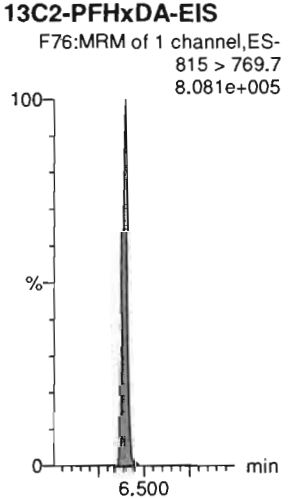
d5-N-ETFOSA-EIS



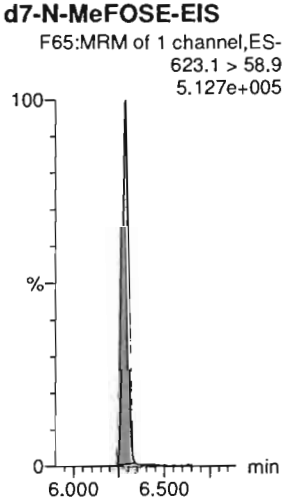
13C2-PFHxDA-EIS



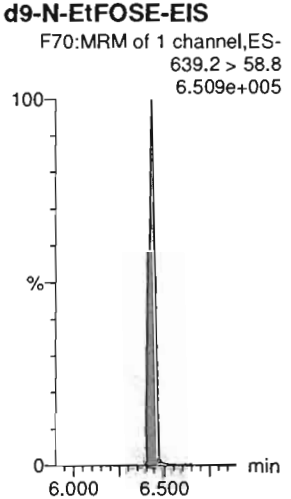
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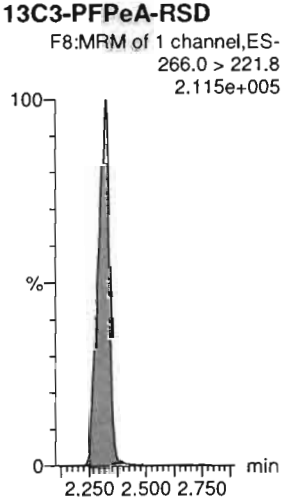
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d9-N-EtFOSE-EIS



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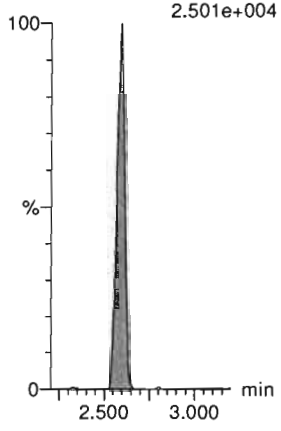


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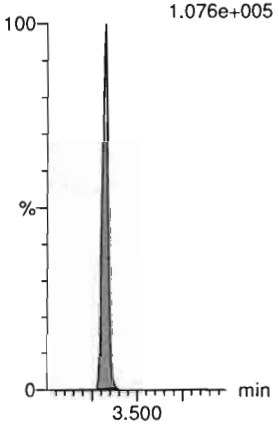
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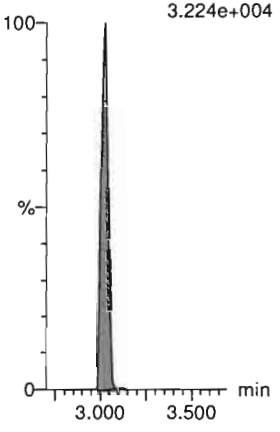
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F12:MRM of 1 channel,ES-
302.0 > 98.8
2.501e+004



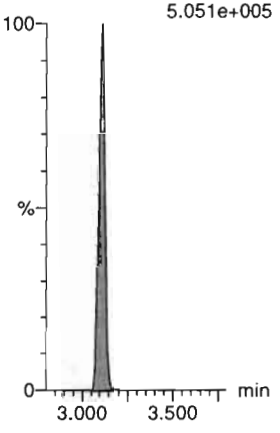
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.076e+005



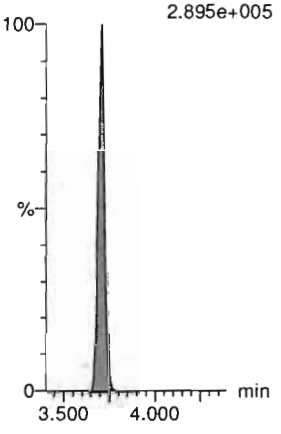
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.224e+004



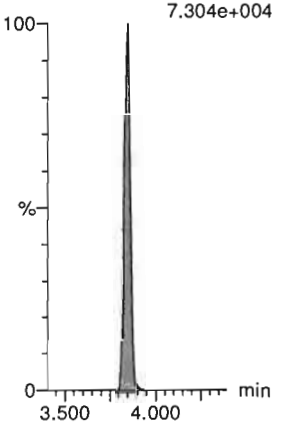
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.051e+005



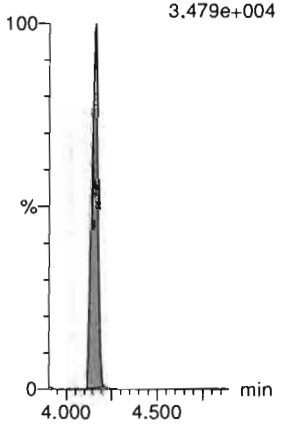
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F21:MRM of 1 channel,ES-
367.2 > 321.8
2.895e+005



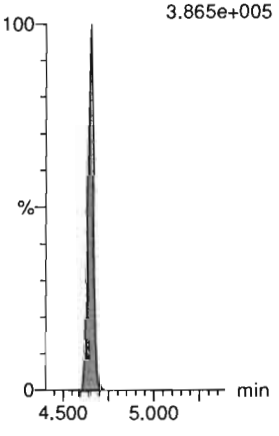
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.304e+004



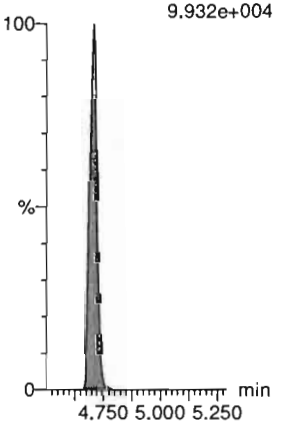
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.479e+004



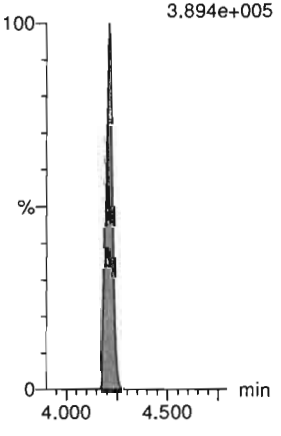
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.865e+005



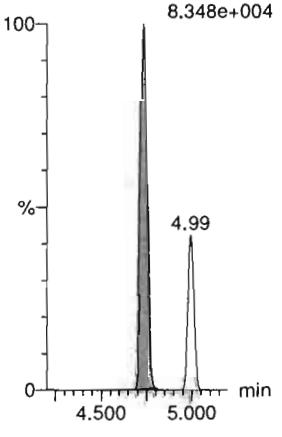
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.932e+004



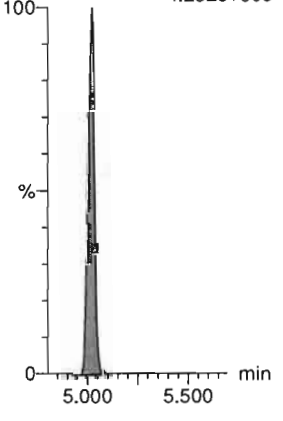
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
3.894e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.348e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.252e+005

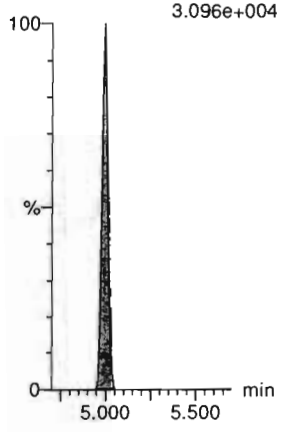


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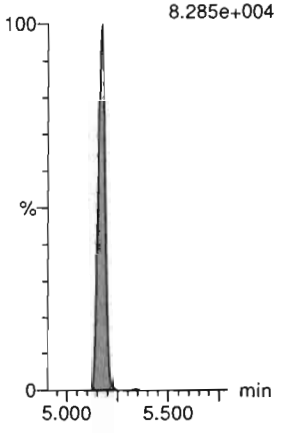
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Printed: Tuesday, February 25, 2020 09:55:13 Pacific Standard Time

Name: 200224P1-12, Date: 24-Feb-2020, Time: 19:06:33, ID: ST200220P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

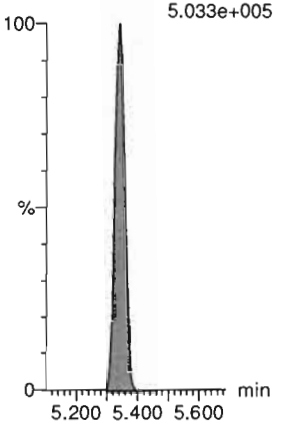
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.096e+004



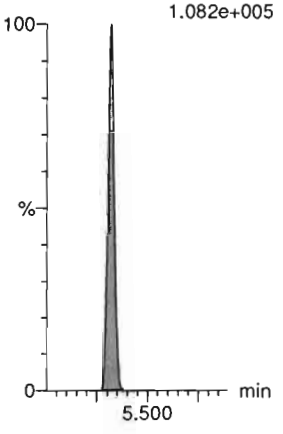
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.285e+004



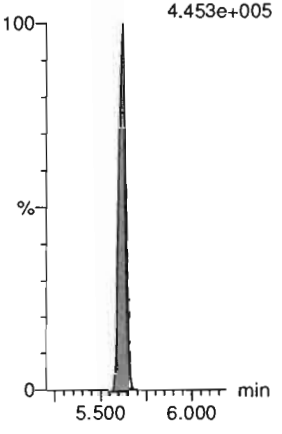
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.033e+005



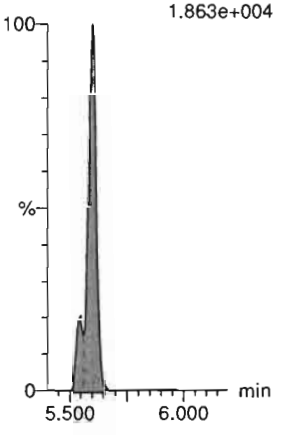
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.082e+005



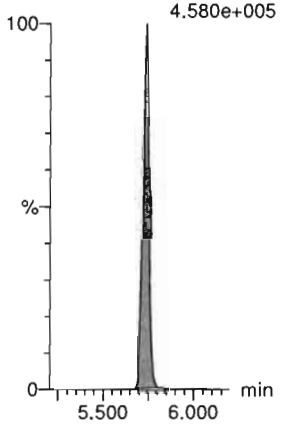
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.453e+005



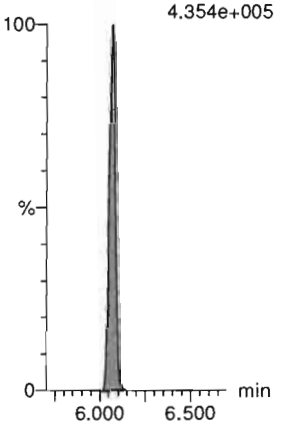
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.863e+004



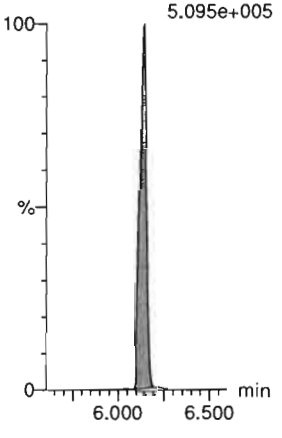
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.580e+005



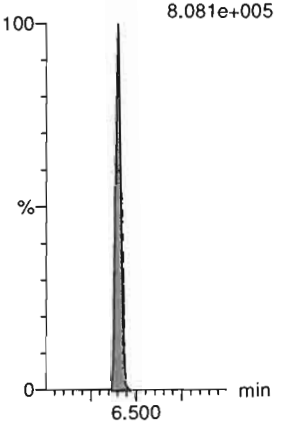
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.354e+005



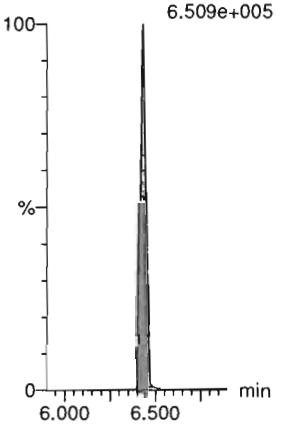
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.095e+005



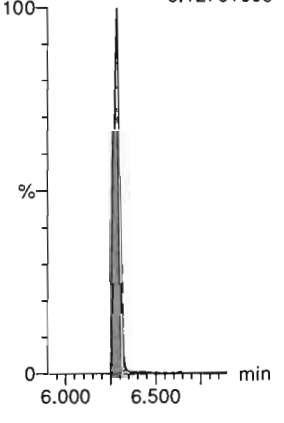
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.081e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.509e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.127e+005

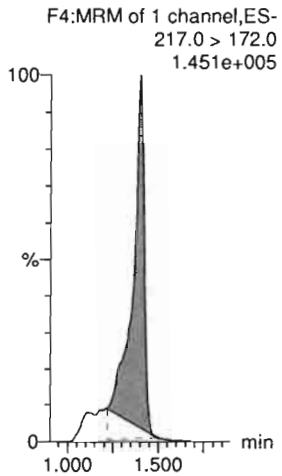


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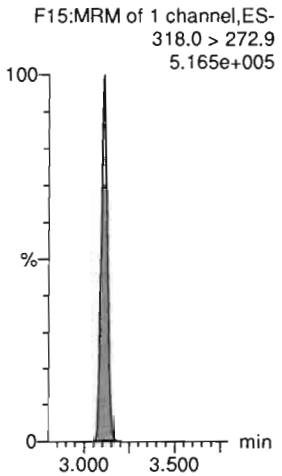
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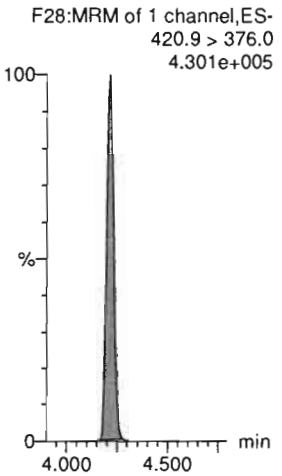
13C4-PFBA



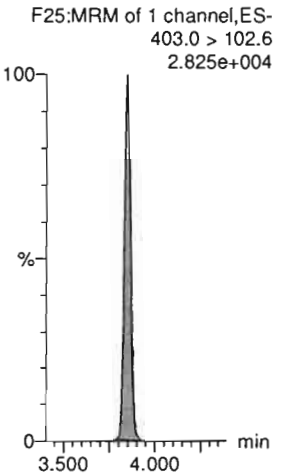
13C5-PFHxA



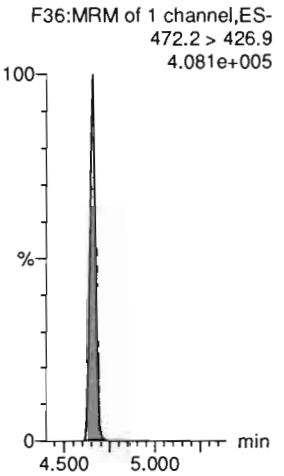
13C8-PFOA



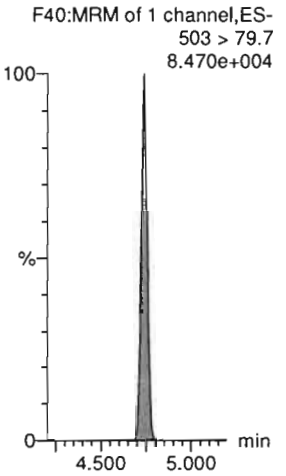
18O2-PFHxS



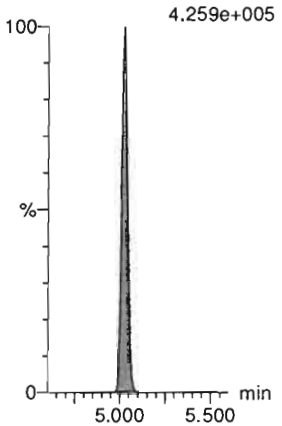
13C9-PFNA



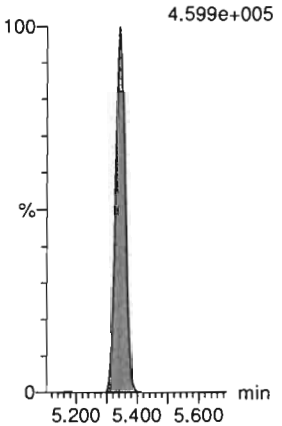
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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(A) not in ICV

Name: 200224P1-14, Date: 24-Feb-2020, Time: 19:27:32, ID: ICV200224P1-1 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	7489.154	8260.494	1.00	1.40	11.333	10.000	9.77	97.7	NO		
2	2	PFPrS	248.9 > 79.7		1595.108	1.00			10.000		(A)	NO		YES
3	3	3:3 FTCA	240.9 > 176.9		13275.771	1.00			10.000		↓	NO		YES
4	4	PFPeA	263.1 > 218.9	10881.773	13275.771	1.00	2.33	10.246	10.000	10.3	102.5	NO		
5	5	PFBS	299.0 > 79.7	2556.540	1595.108	1.00	2.60	20.034	8.840	8.38	94.8	NO	3.213	NO
6	6	4:2 FTS	327.0 > 307	1690.588	1641.750	1.00	3.03	12.872	9.360	9.61	102.7	NO	0.912	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	8260.494		1.00	1.40	8260.494	12.500	12.3	98.4	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1595.108		1.00	2.60	1595.108	12.500	13.1	105.0	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	13275.771		1.00	2.33	13275.771	12.500	12.7	101.4	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	13275.771		1.00	2.33	13275.771	12.500	12.7	101.4	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1595.108		1.00	2.60	1595.108	12.500	13.1	105.0	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1641.750		1.00	3.03	1641.750	12.500	12.6	100.5	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	18309.787	23417.998	1.00	3.11	9.773	10.000	10.7	106.6	NO	18.151	NO
15	8	PFPeS	349.>79.7	2808.272	1595.108	1.00	3.31	22.007	9.360	10.4	111.4	NO	2.401	NO
16	9	HFPO-DA	285.1 > 168.9	3364.669	4006.201	1.00	3.33	10.498	10.000	9.94	99.4	NO	2.651	NO
17	10	5:3 FTCA	340.9 > 236.9		14554.679	1.00			10.000			NO		YES
18	11	PFHpA	363.0 > 318.9	14756.180	14554.679	1.00	3.71	12.673	10.000	10.4	103.8	NO	26.249	NO
19	12	ADONA	376.8 > 250.9	33939.832	14554.679	1.00	3.81	29.149	10.000	9.41	94.1	NO	3.839	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	23417.998		1.00	3.11	23417.998	12.500	13.4	107.4	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1595.108		1.00	2.60	1595.108	12.500	13.1	105.0	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	4006.201		1.00	3.32	4006.201	12.500	12.2	97.6	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	14554.679		1.00	3.71	14554.679	12.500	13.7	109.5	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	14554.679		1.00	3.71	14554.679	12.500	13.7	109.5	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	14554.679		1.00	3.71	14554.679	12.500	13.7	109.5	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2604.436	3338.443	1.00	3.85	9.752	9.120	8.99	98.5	NO	2.401	NO
28	15	6:2 FTS	427.0 > 407	1937.327	1510.149	1.00	4.16	16.036	9.480	9.40	99.2	NO	1.204	NO
29	16	L-PFOA	412.8 > 368.9	19643.861	19200.035	1.00	4.22	12.789	10.000	10.9	108.8	NO	3.149	NO
30	18	PFecHS	460.8 > 381.0		19200.035	1.00			10.000			NO		YES
31	19	PFHpS	449.0 > 79.7	2638.484	3483.781	1.00	4.33	9.467	9.480	9.88	104.2	NO	1.832	NO
32	20	7:3 FTCA	440.9 > 336.9		16343.161	1.00			10.000			NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3338.443		1.00	3.85	3338.443	12.500	13.2	105.6	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1510.149		1.00	4.16	1510.149	12.500	13.7	109.5	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	19200.035		1.00	4.22	19200.035	12.500	13.1	104.6	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	19200.035		1.00	4.22	19200.035	12.500	13.1	104.6	NO		

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Name: 200224P1-14, Date: 24-Feb-2020, Time: 19:27:32, ID: ICV200224P1-1 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	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16343.161		1.00	4.66	16343.161	12.500	12.8	102.3	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	17369.615	16343.161	1.00	4.66	13.285	10.000	10.4	103.6	NO	7.123	NO
41	22	PFOSA	497.9 > 77.9	3389.322	4672.677	1.00	4.71	9.067	10.000	11.1	110.7	NO	31.952	NO
42	23	L-PFOS	498.9 > 79.7	2710.311	3483.781	1.00	4.74	9.725	9.280	9.73	104.8	NO	2.573	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3420.067	3483.781	1.00	4.95	12.271	9.280	11.0	119.0	NO	14.223	NO
44	26	PFDA	513 > 468.8	19879.133	19336.174	1.00	5.02	12.851	10.000	10.3	103.3	NO	9.771	NO
45	27	8:2 FTS	526.9 > 507	1339.192	1025.895	1.00	5.00	16.317	9.600	11.0	114.5	NO	2.186	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	16343.161		1.00	4.66	16343.161	12.500	12.8	102.3	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4672.677		1.00	4.71	4672.677	12.500	12.2	97.3	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	19336.174		1.00	5.02	19336.174	12.500	13.2	105.8	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1025.895		1.00	4.99	1025.895	12.500	10.8	86.7	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2951.598	3483.781	1.00	5.09	10.590	9.600	11.8	122.4	NO	2.266	NO
54	29	L-MeFOSAA	570 > 419	5669.047	3507.902	1.00	5.18	20.201	10.000	9.98	99.8	NO	2.040	NO
55	31	L-EtFOSAA	584.1 > 419	5074.783	4630.780	1.00	5.33	13.699	10.000	10.8	108.4	NO	1.298	NO
56	33	PFUdA	563.0 > 518.9	16447.908	18959.686	1.00	5.34	10.844	10.000	10.9	109.3	NO	19.400	NO
57	34	PFDS	598.8 > 79.7	2567.019	3483.781	1.00	5.39	9.211	9.600	10.5	109.3	NO	1.907	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	7617.189	18777.955	1.00	5.55	5.071	9.440	9.65	102.3	NO	19.174	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3507.902		1.00	5.17	3507.902	12.500	12.2	97.6	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4630.780		1.00	5.32	4630.780	12.500	13.0	104.1	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	18959.686		1.00	5.34	18959.686	12.500	11.5	92.1	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18777.955		1.00	5.62	18777.955	12.500	13.0	104.1	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		904.090	1.00			10.000			NO		YES
67	37	PFDoA	612.9 > 569.0	16262.496	18777.955	1.00	5.62	10.826	10.000	9.54	95.4	NO	9.681	NO
68	38	N-MeFOSA	512.1 > 168.9		20215.709	1.00			9.600			NO		YES
69	39	PFTrDA	662.9 > 618.9	19582.877	18777.955	1.00	5.86	13.036	10.000	11.0	110.2	NO	53.677	NO
70	40	PFDoS	698.8 > 79.7		20944.303	1.00			10.000			NO		YES
71	41	PFTeDA	713.0 > 669.0	19014.881	20944.303	1.00	6.07	11.348	10.000	11.0	110.0	NO	15.239	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	904.090		1.00	5.60	904.090	10.000	12.6	125.8	NO		

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Name: 200224P1-14, Date: 24-Feb-2020, Time: 19:27:32, ID: ICV200224P1-1 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	18777.955		1.00	5.62	18777.955	12.500	13.0	104.1	NO		
74	87 d3-N-MeFOSA-EIS	515.2 > 168.9	20215.709		1.00	5.74	20215.709	149.200	151	101.1	NO		
75	83 13C2-PFDoA-EIS	614.7 > 569.7	18777.955		1.00	5.62	18777.955	12.500	13.0	104.1	NO		
76	89 13C2-PFTeDA-EIS	715.1 > 669.7	20944.303		1.00	6.07	20944.303	12.500	12.5	100.2	NO		
77	89 13C2-PFTeDA-EIS	715.1 > 669.7	20944.303		1.00	6.07	20944.303	12.500	12.5	100.2	NO		
78	-1												
79	42 N-EtFOSA	526.1 > 168.9		26355.396	1.00			9.600			NO		YES
80	43 PFHxDA	813.1 > 768.6		31860.625	1.00			10.000			NO		YES
81	44 PFODA	913.1 > 868.8		31860.625	1.00			10.000			NO		
82	45 N-MeFOSE	616.1 > 58.9		19676.109	1.00			9.600			NO		
83	46 N-EtFOSE	630.1 > 58.9		23156.641	1.00			9.600			NO		
84	91 d5-N-ETFOSA-EIS	531.1 > 168.9	26355.396		1.00	6.14	26355.396	149.200	153	102.2	NO		
85	93 13C2-PFHxDA-EIS	815 > 769.7	31860.625		1.00	6.40	31860.625	12.500	13.6	108.9	NO		
86	93 13C2-PFHxDA-EIS	815 > 769.7	31860.625		1.00	6.40	31860.625	12.500	13.6	108.9	NO		
87	95 d7-N-MeFOSE-EIS	623.1 > 58.9	19676.109		1.00	6.28	19676.109	149.200	148	99.4	NO		
88	97 d9-N-EtFOSE-EIS	639.2 > 58.8	23156.641		1.00	6.43	23156.641	149.200	150	100.8	NO		
89	71 13C8-PFOS-EIS	507.0 > 79.7	3483.781		1.00	4.74	3483.781	12.500	12.2	97.3	NO		
90	-1												
91	48 13C3-PFBA-RSD	216.1 > 171.8	8219.705	10475.556	1.00	1.40	9.808	12.500	12.6	101.1	NO		
92	50 13C3-PFPeA-RSD	266.0 > 221.8	13363.288	23351.406	1.00	2.33	7.153	12.500	12.5	100.0	NO		
93	52 13C3-PFBS-RSD	302.0 > 98.8	1595.108	1344.573	1.00	2.60	14.829	12.500	13.6	108.8	NO		
94	54 13C3-HFPO-DA-RSD	287.0 > 168.9	4006.201	23351.406	1.00	3.32	2.145	12.500	11.5	92.2	NO		
95	56 13C2-4:2 FTS-RSD	329.0 >79.7	1641.750	1344.573	1.00	3.03	15.263	12.500	12.7	101.4	NO		
96	58 13C2-PFHxA-RSD	315.0 > 270.0	23417.998	23351.406	1.00	3.11	12.536	12.500	12.9	103.2	NO		
97	60 13C4-PFHpA-RSD	367.2 > 321.8	14554.679	23351.406	1.00	3.71	7.791	12.500	12.9	103.3	NO		
98	62 13C3-PFHxS-RSD	401.8 > 79.7	3338.443	1344.573	1.00	3.85	31.036	12.500	13.4	106.8	NO		
99	64 13C2-6:2 FTS-RSD	429.0 >79.7	1510.149	4007.553	1.00	4.16	4.710	12.500	12.2	97.9	NO		
100	66 13C5-PFNA-RSD	468.2 > 422.9	16343.161	18260.395	1.00	4.66	11.188	12.500	12.0	95.9	NO		
101	68 13C8-PFOSA-RSD	506 > 78	4672.677	19094.162	1.00	4.71	3.059	12.500	13.1	104.8	NO		
102	70 13C2-PFOA-RSD	414.9 > 369.7	19200.035	22309.092	1.00	4.22	10.758	12.500	12.0	95.8	NO		
103	-1												
104	72 13C8-PFOS-RSD	507.0 > 79.7	3493.858	4007.553	1.00	4.74	10.898	12.500	11.4	91.0	NO		
105	74 13C2-PFDA-RSD	515.1 > 469.9	19336.174	19776.199	1.00	5.02	12.222	12.500	13.0	103.7	NO		
106	76 13C2-8:2 FTS-RSD	529 > 79.7	1025.895	4007.553	1.00	4.99	3.200	12.500	10.2	81.3	NO		
107	78 d3-N-MeFOSAA-RSD	573.3 > 419	3507.902	19094.162	1.00	5.17	2.296	12.500	13.0	104.2	NO		
108	80 13C2-PFUdA-RSD	565 > 519.8	18959.686	19094.162	1.00	5.34	12.412	12.500	12.3	98.1	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	4630.780	19094.162	1.00	5.32	3.032	12.500	13.3	106.3	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18777.955	19776.199	1.00	5.62	11.869	12.500	11.6	93.1	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	904.090	4007.553	1.00	5.60	2.820	10.000	11.5	115.3	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	20215.709	19094.162	1.00	5.74	13.234	149.200	151	100.9	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20944.303	19094.162	1.00	6.07	13.711	12.500	12.4	99.4	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	26355.396	19094.162	1.00	6.14	17.254	149.200	159	106.4	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	31860.625	19094.162	1.00	6.40	20.858	12.500	13.6	108.9	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	19676.109	19094.162	1.00	6.28	12.881	149.200	152	101.8	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	23156.641	19094.162	1.00	6.43	15.160	149.200	152	101.8	NO		
119	99	13C4-PFBA	217.0 > 172.0	10475.556	10475.556	1.00	1.40	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	23351.406	23351.406	1.00	3.11	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	22309.092	22309.092	1.00	4.22	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1344.573	1344.573	1.00	3.85	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	18260.395	18260.395	1.00	4.65	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	4007.553	4007.553	1.00	4.74	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19776.199	19776.199	1.00	5.02	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	19094.162	19094.162	1.00	5.34	12.500	12.500	12.5	100.0	NO		

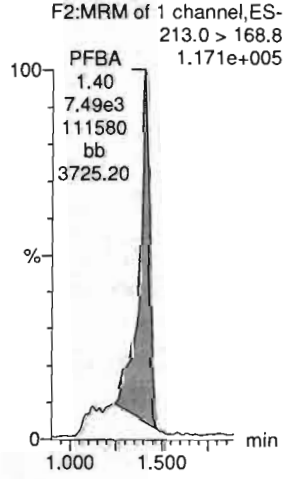
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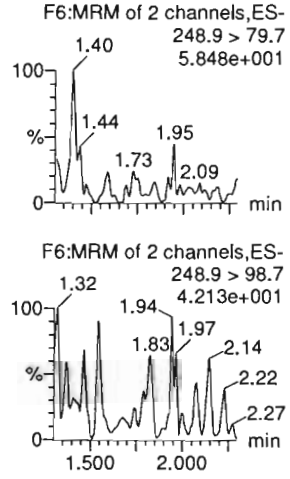
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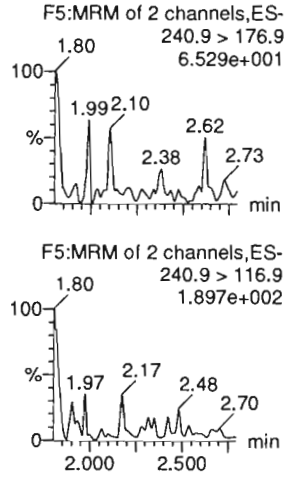
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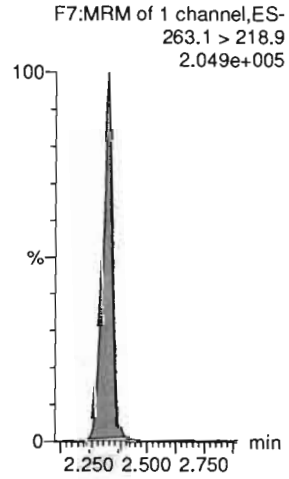
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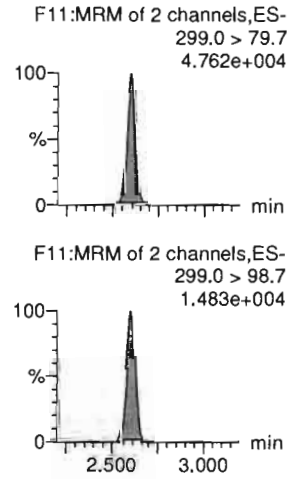
3:3 FTCA



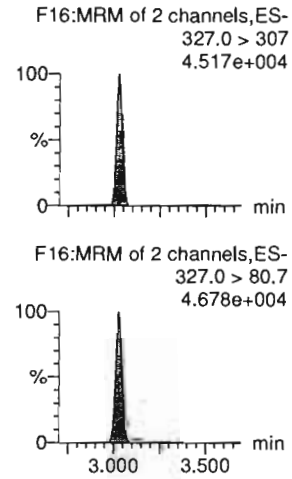
PFPeA



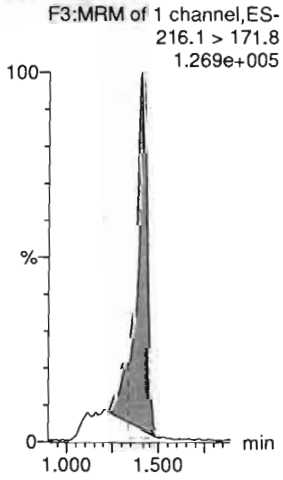
PFBS



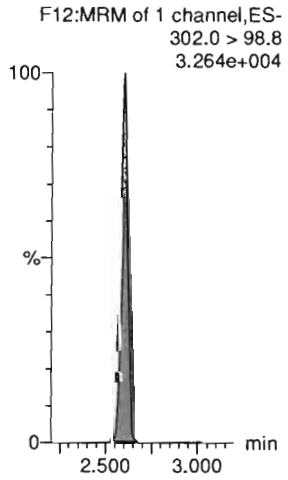
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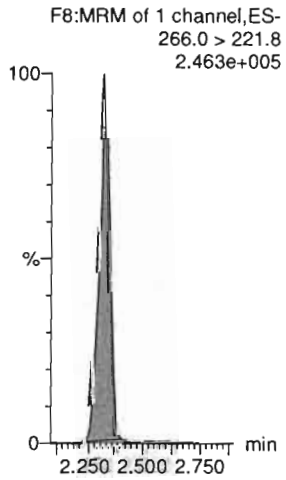
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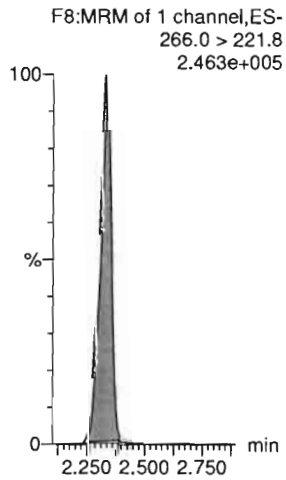
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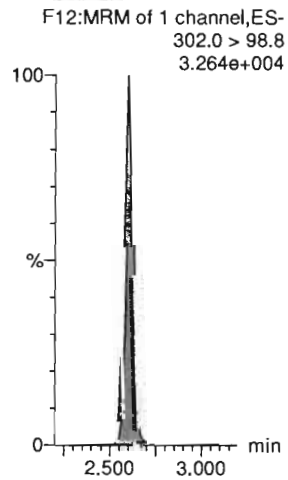
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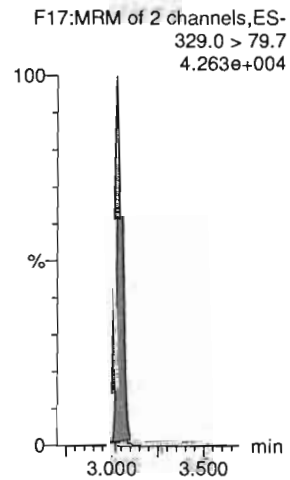
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

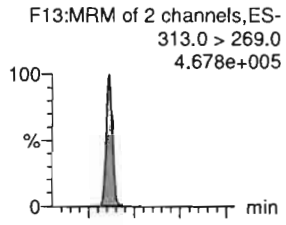


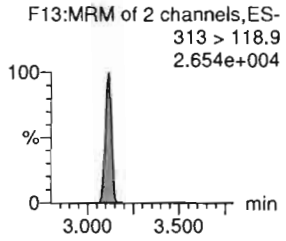
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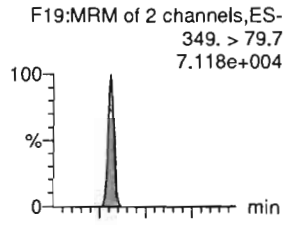
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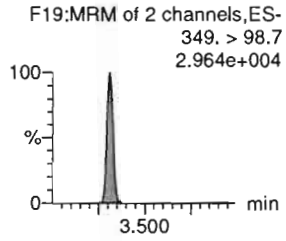
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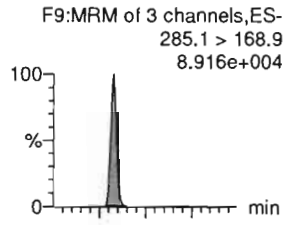


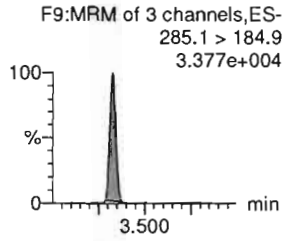
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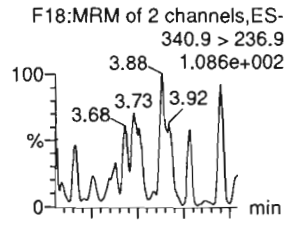


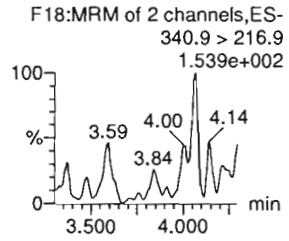
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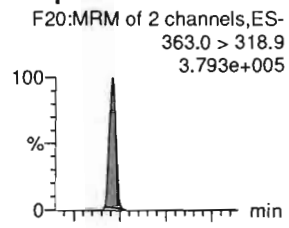


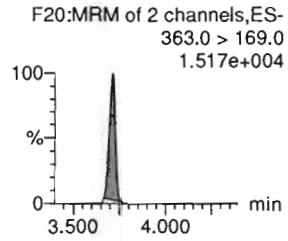
5:3 FTCA



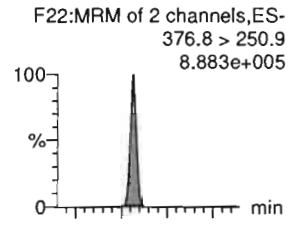


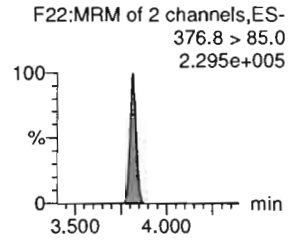
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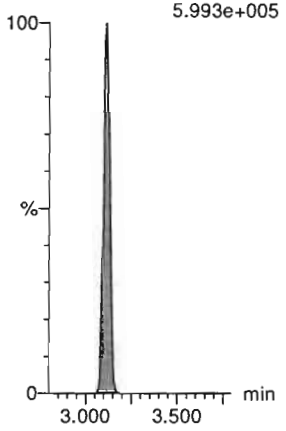


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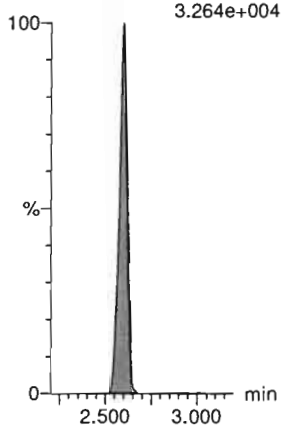




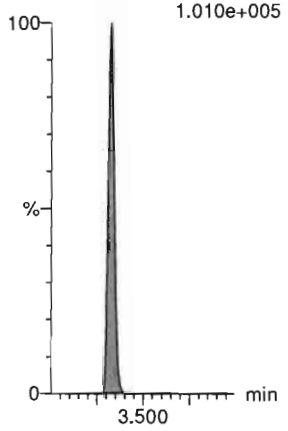
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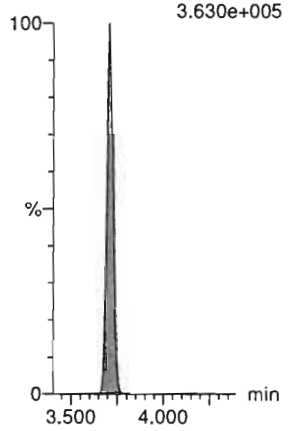
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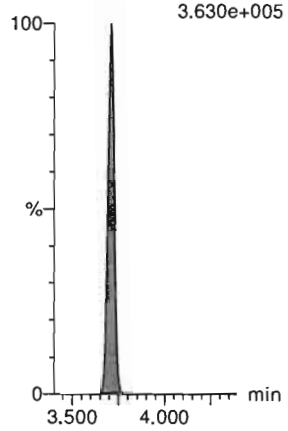
13C3-HFPO-DA-EIS



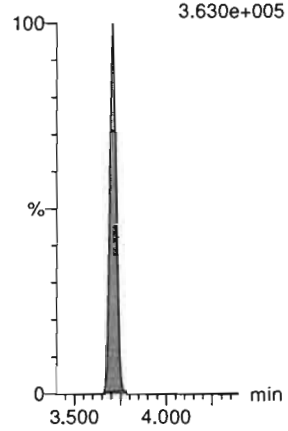
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

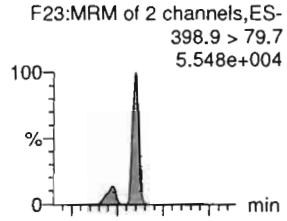


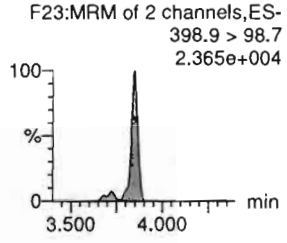
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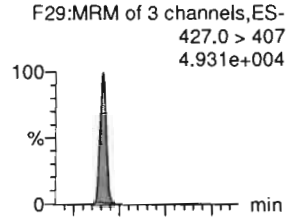
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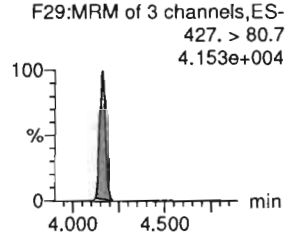
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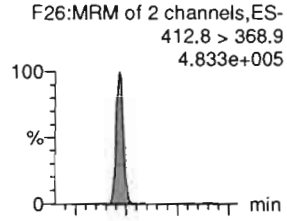


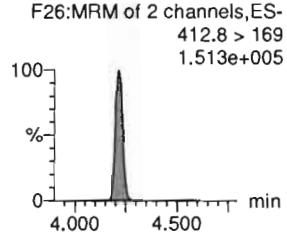
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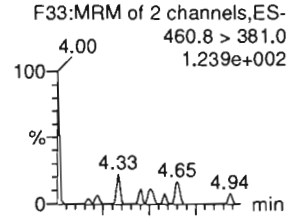


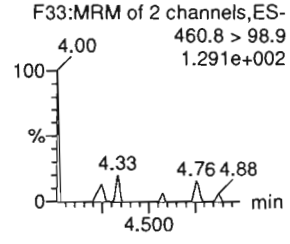
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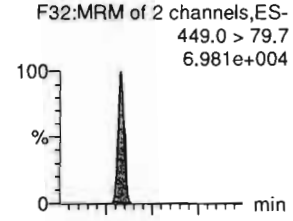


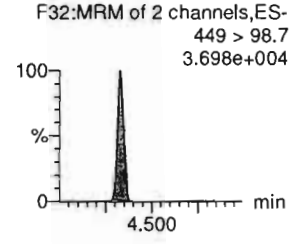
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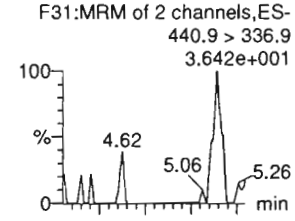


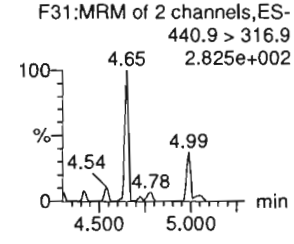
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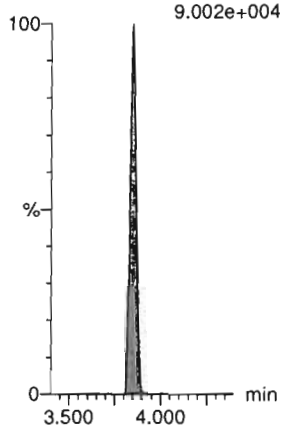


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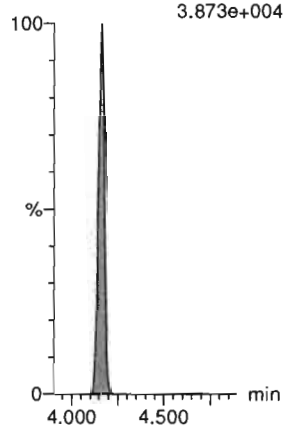




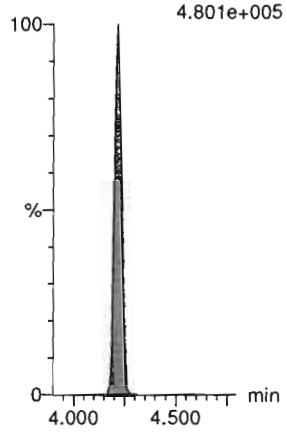
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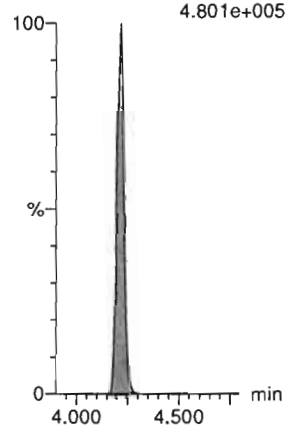
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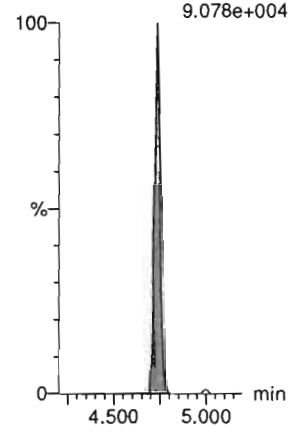
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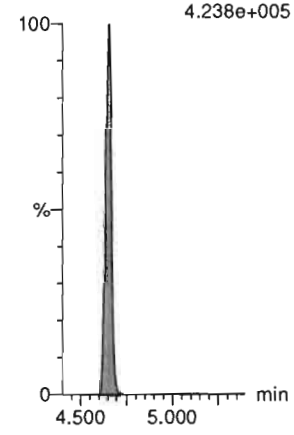
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13C8-PFOS-EIS



13C5-PFNA-EIS

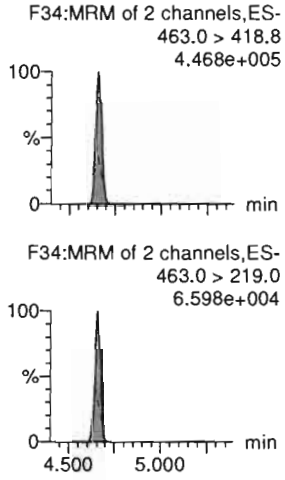


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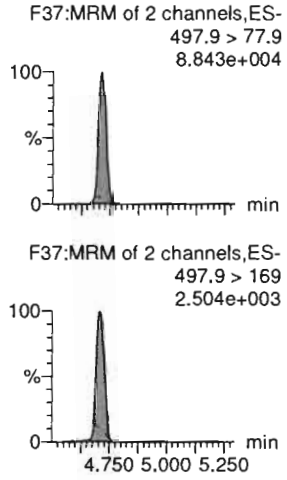
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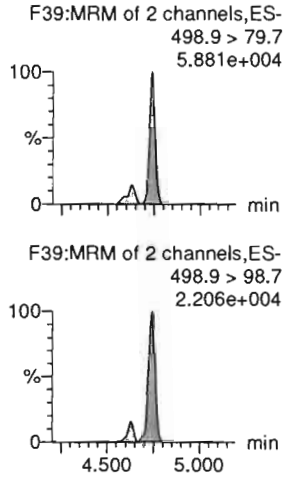
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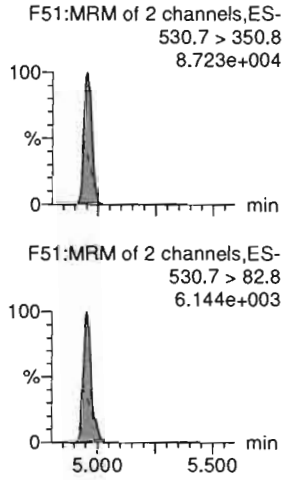
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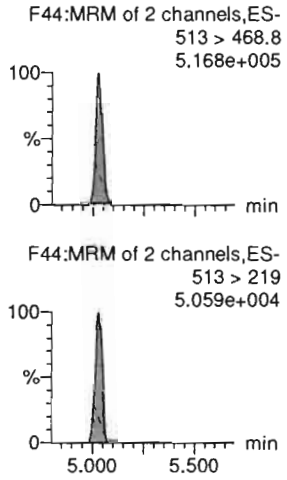
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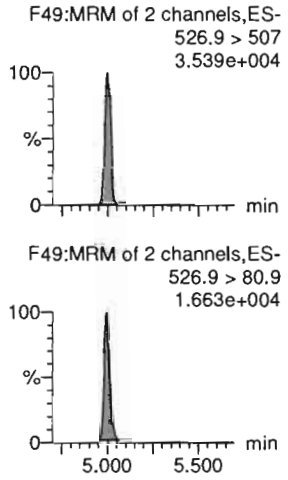
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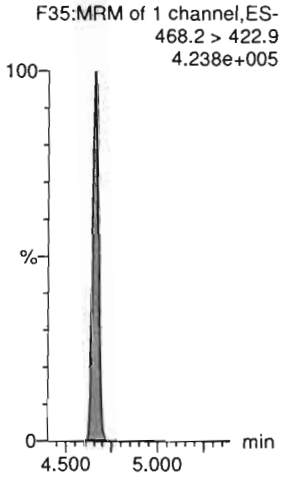
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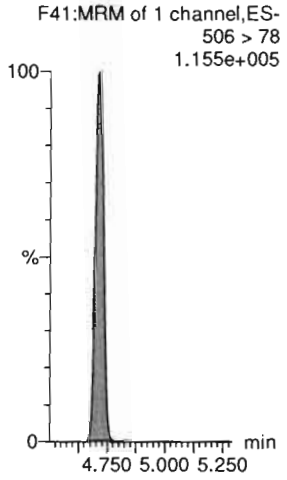
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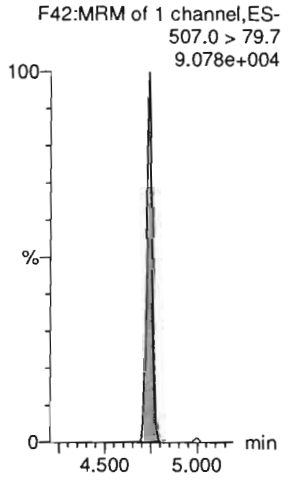
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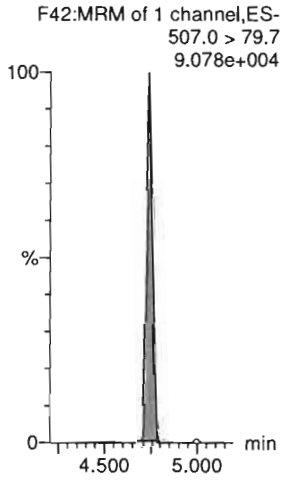
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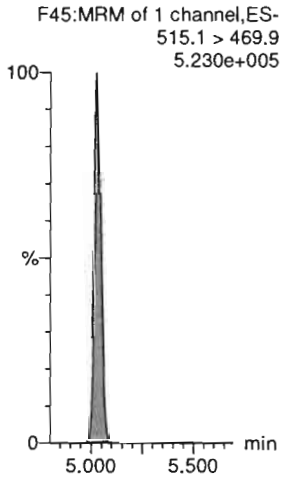
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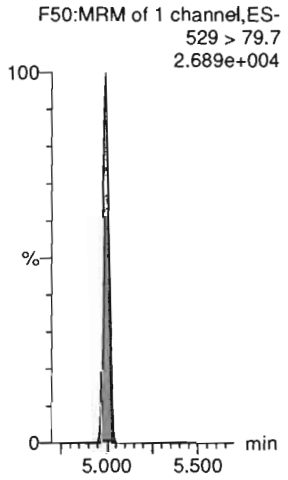
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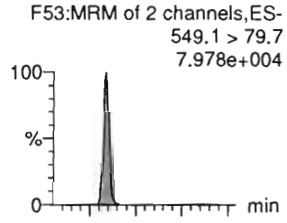


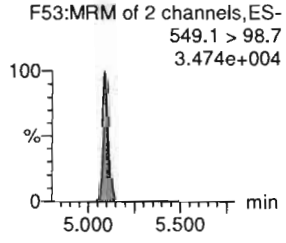
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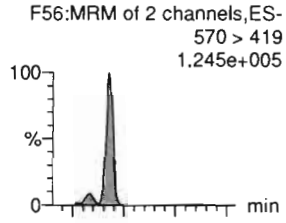
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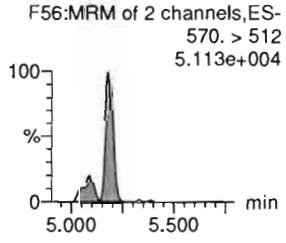
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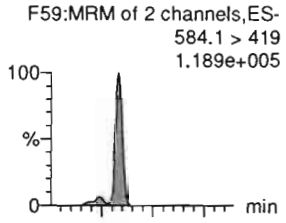


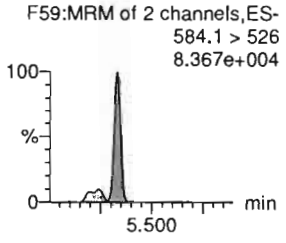
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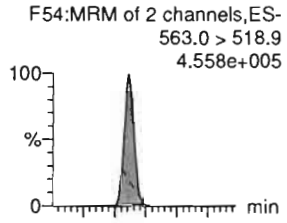


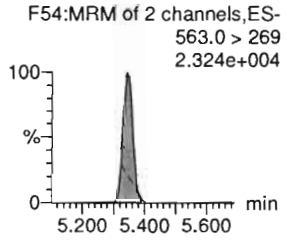
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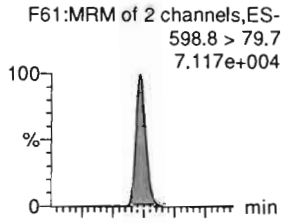


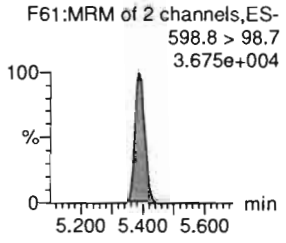
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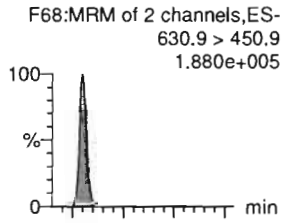


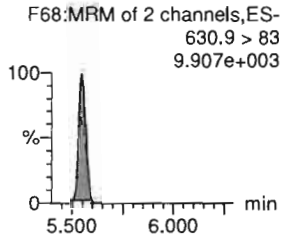
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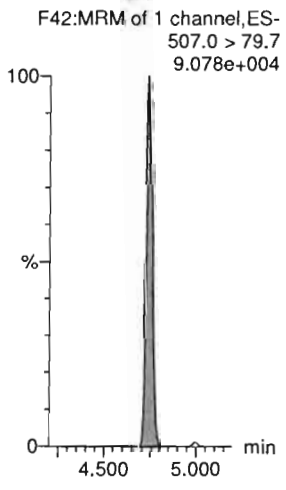


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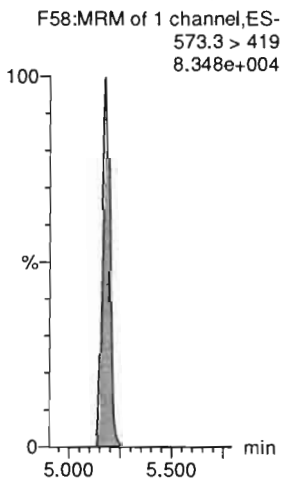




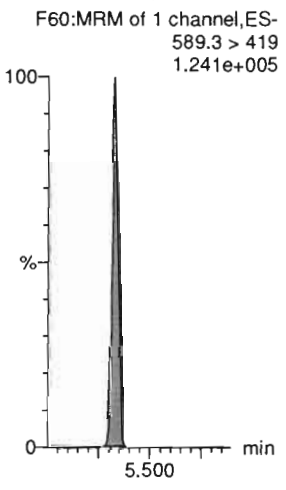
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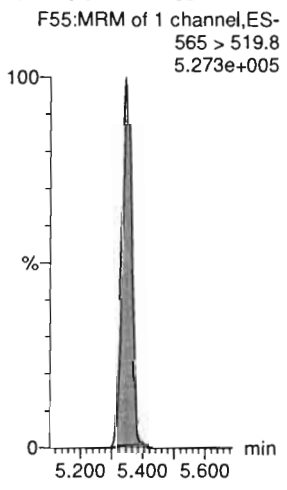
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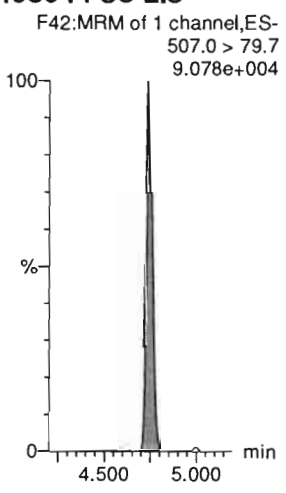
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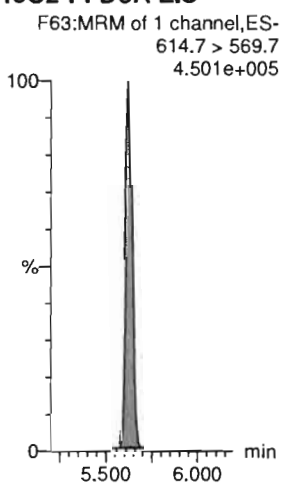
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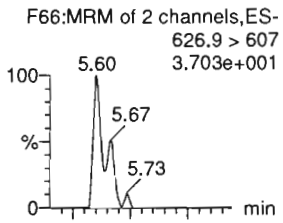


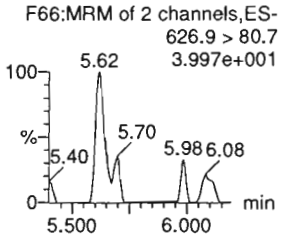
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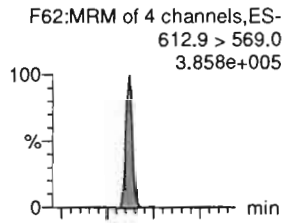
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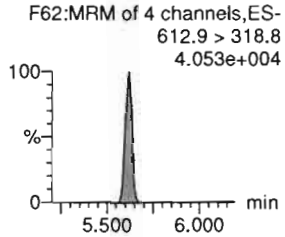
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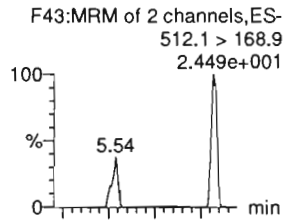


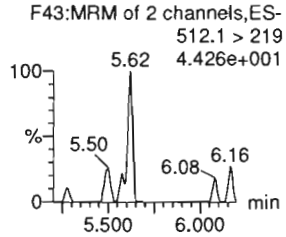
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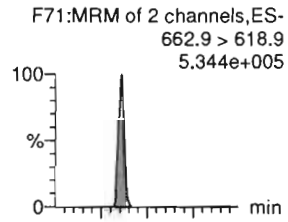


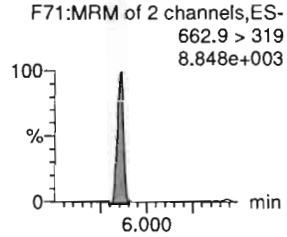
N-MeFOSA



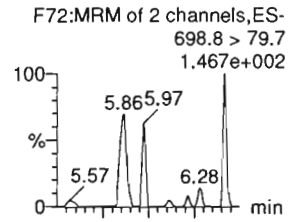


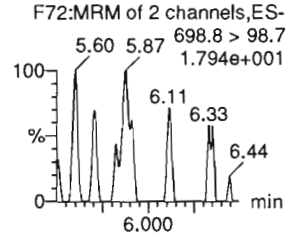
PFTrDA



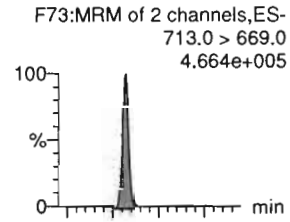


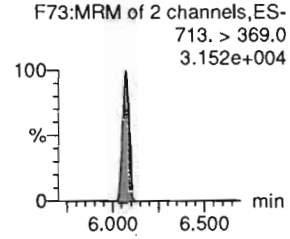
PFDoS



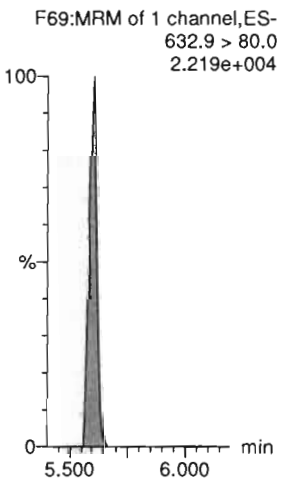


PFTeDA

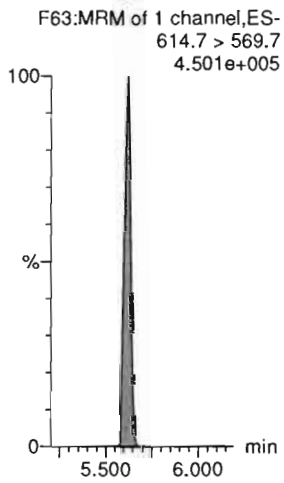




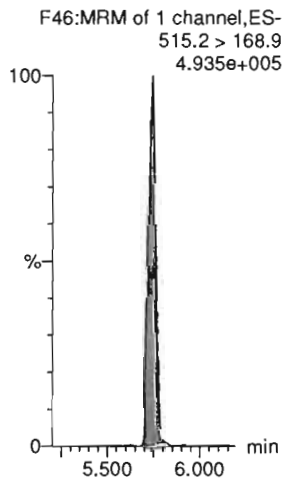
13C2-10:2 FTS-EIS



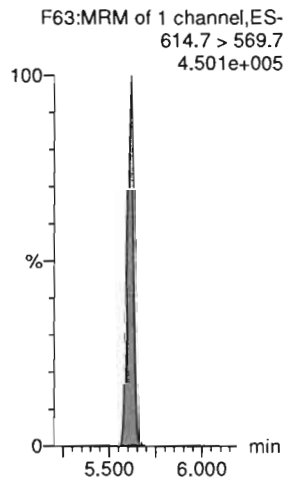
13C2-PFDoA-EIS



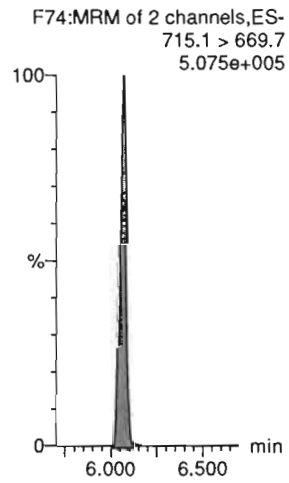
d3-N-MeFOSA-EIS



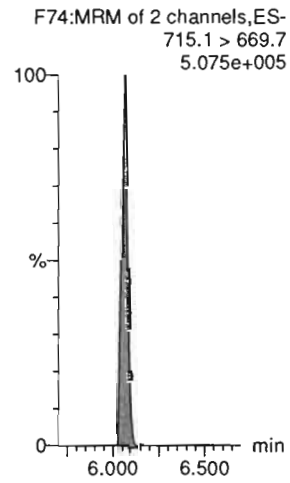
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

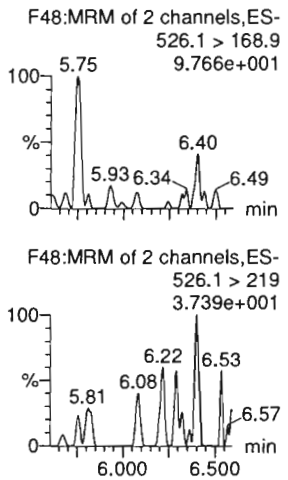


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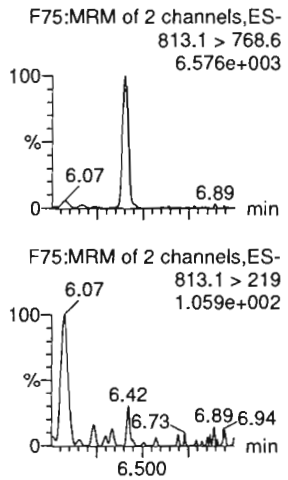
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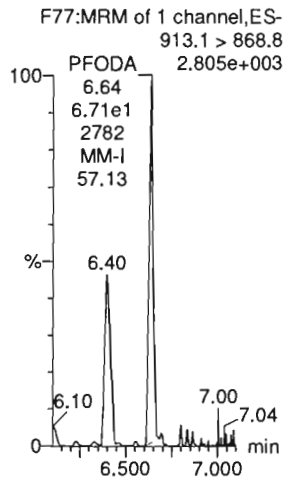
N-EtFOSA



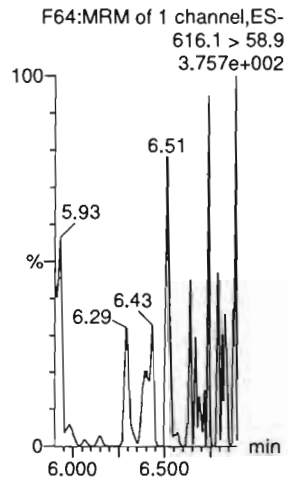
PFHxDA



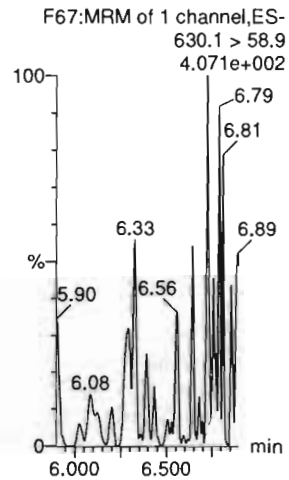
PFODA



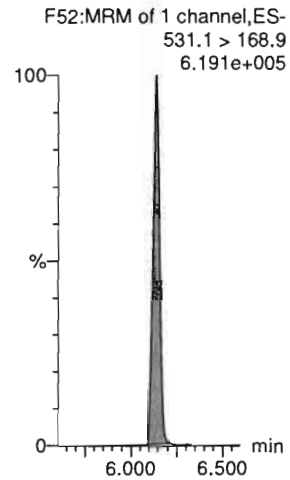
N-MeFOSE



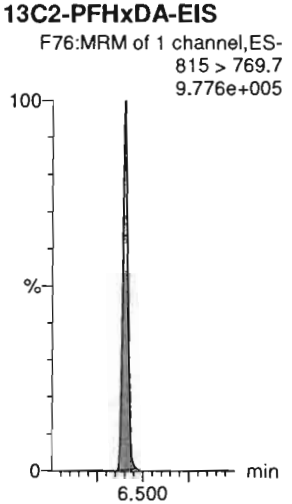
N-EtFOSE



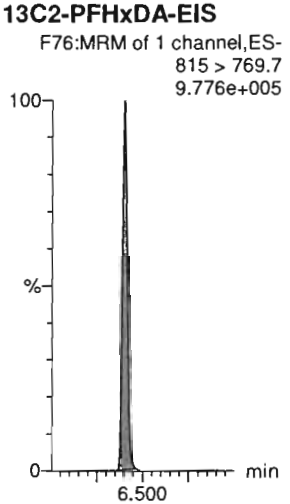
d5-N-ETFOSA-EIS



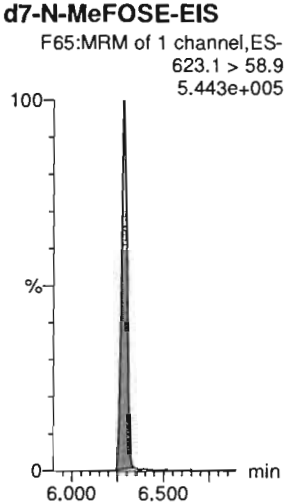
13C2-PFHxDA-EIS



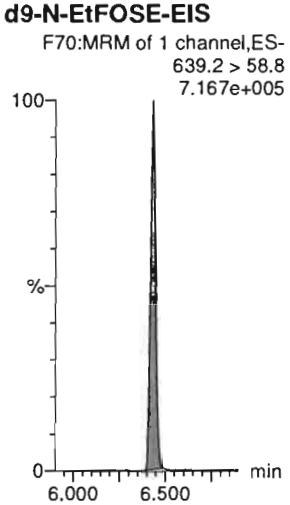
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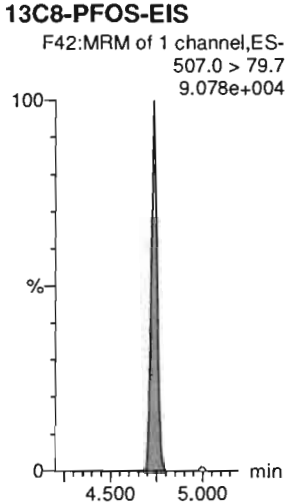
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

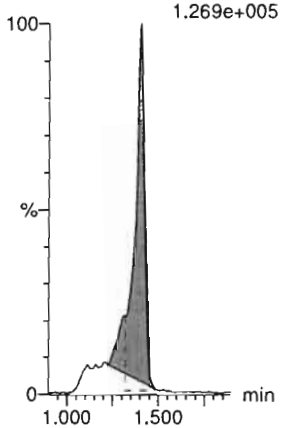


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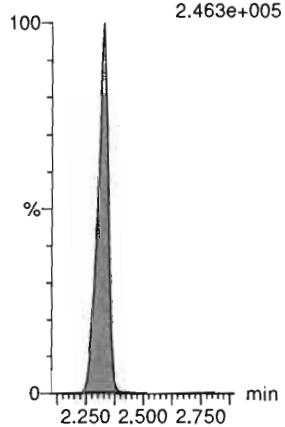
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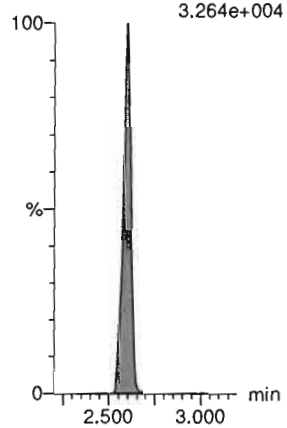
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.269e+005



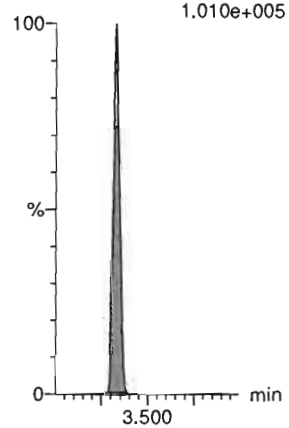
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.463e+005



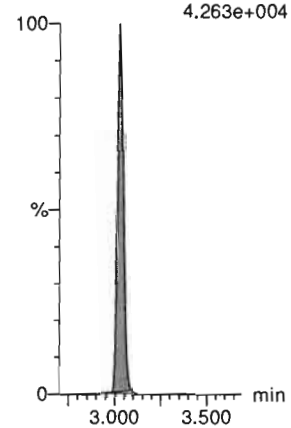
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.264e+004



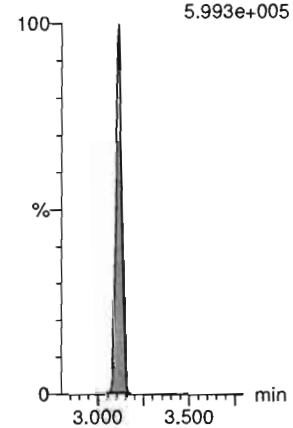
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.010e+005



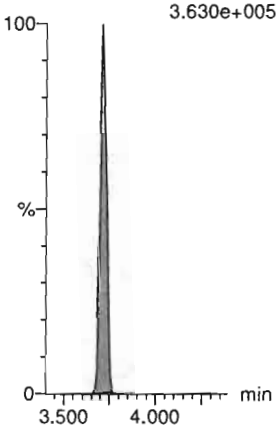
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.263e+004



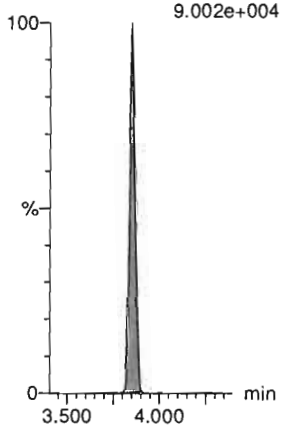
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.993e+005



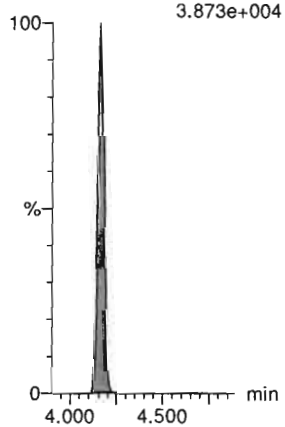
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.630e+005



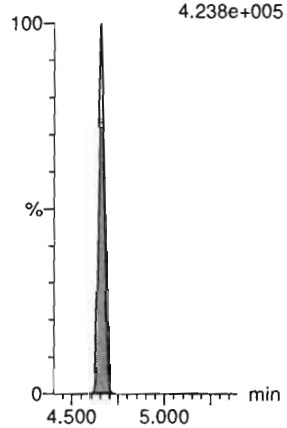
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.002e+004



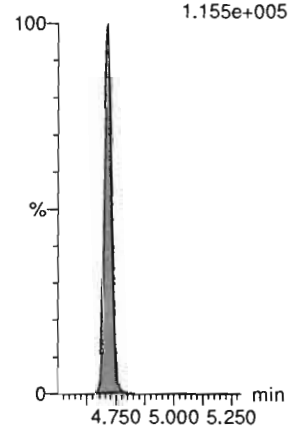
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.873e+004



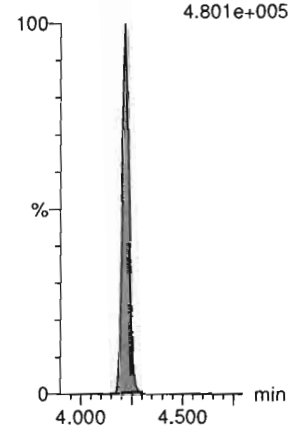
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.238e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.155e+005



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.801e+005

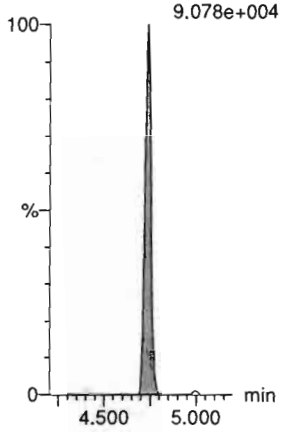


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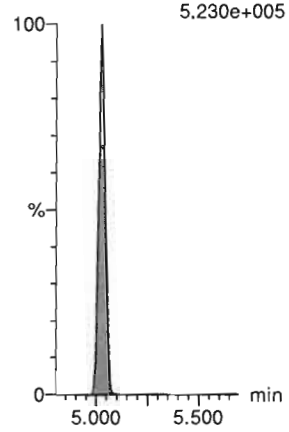
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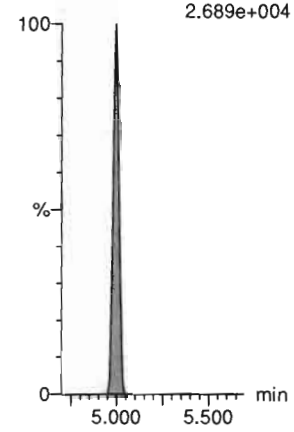
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
9.078e+004



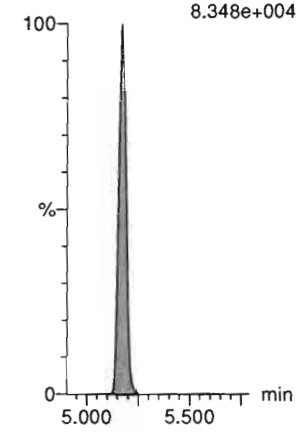
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.230e+005



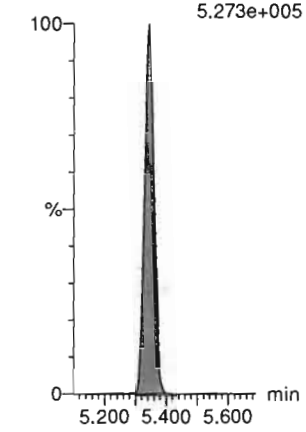
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.689e+004



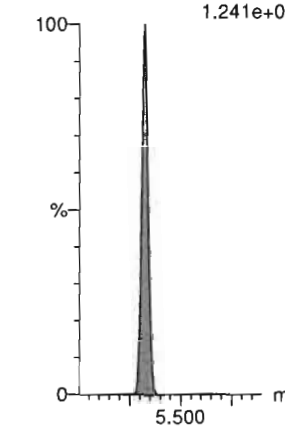
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.348e+004



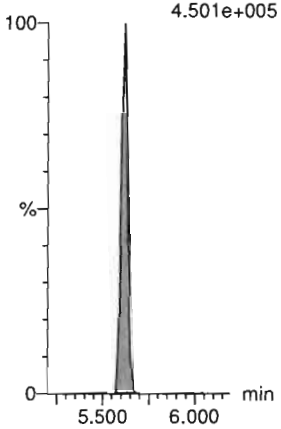
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.273e+005



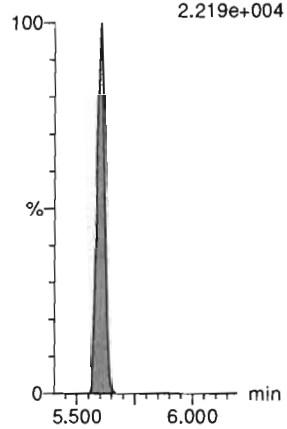
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.241e+005



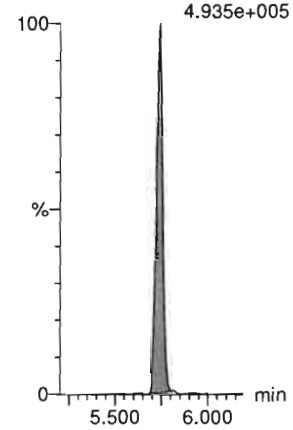
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.501e+005



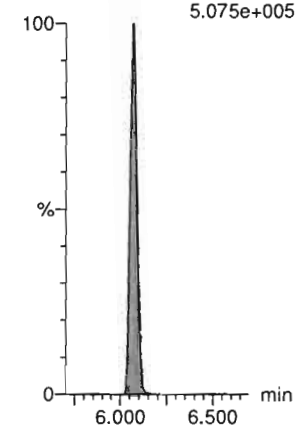
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.219e+004



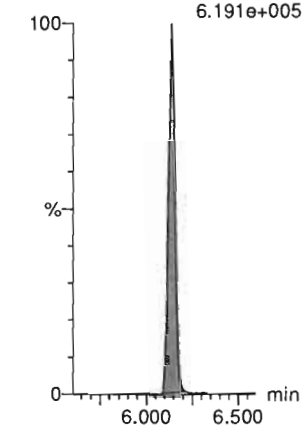
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.935e+005



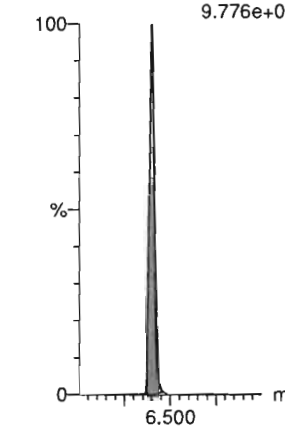
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.075e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.191e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.776e+005

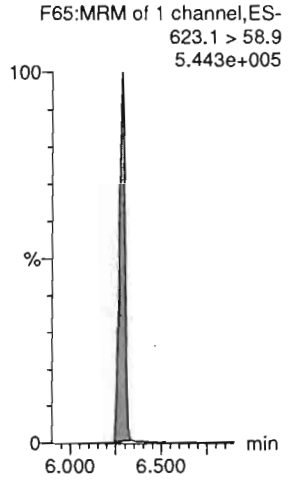


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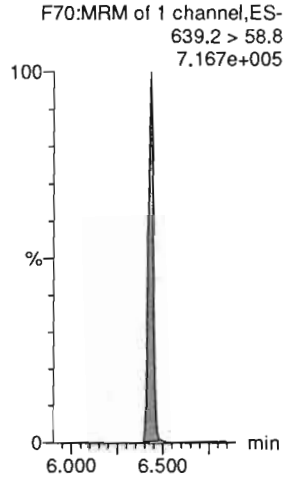
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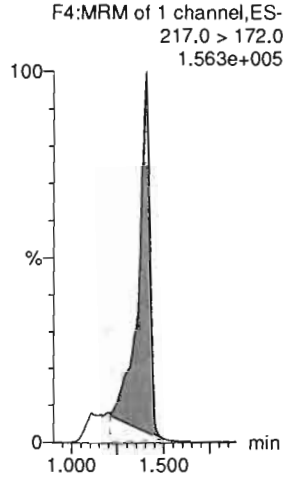
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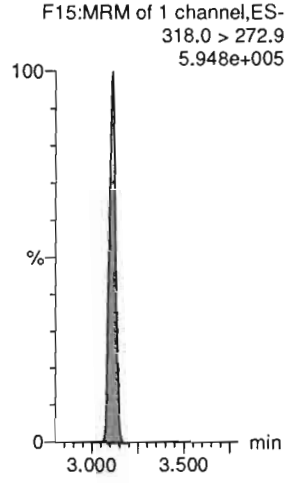
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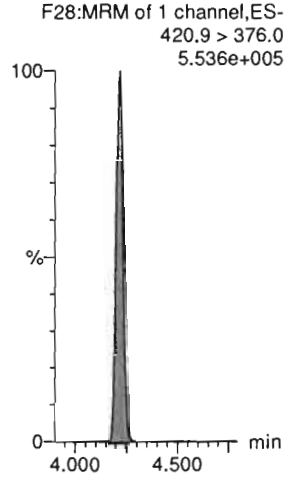
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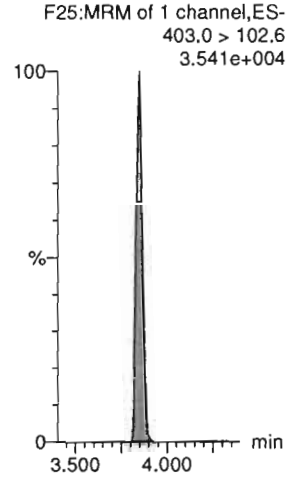
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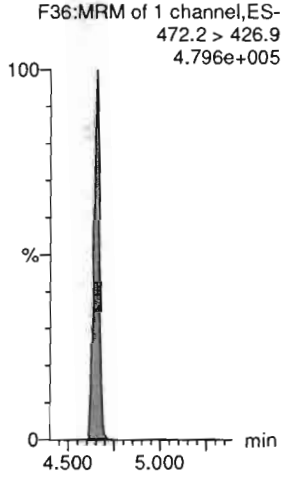
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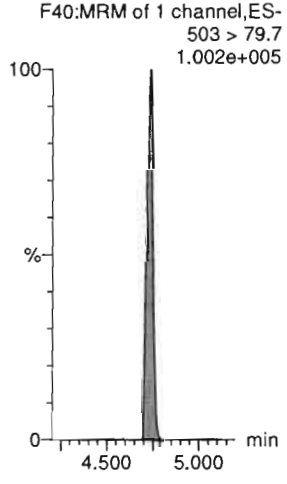
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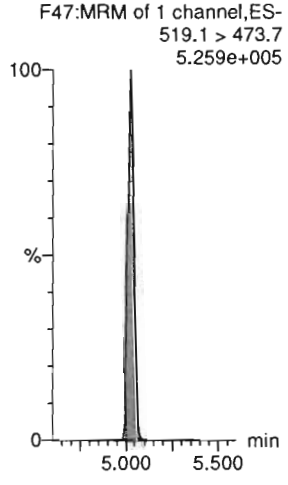
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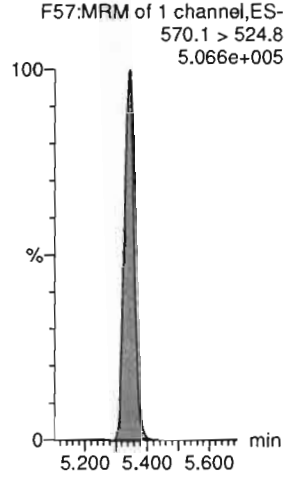
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Vista Analytical Laboratory

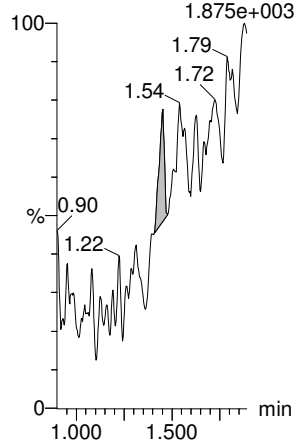
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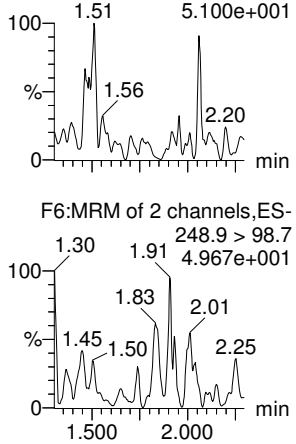
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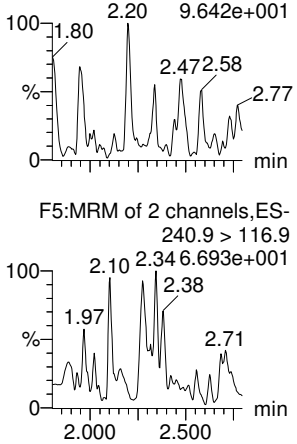
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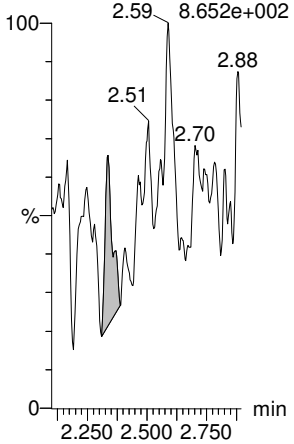
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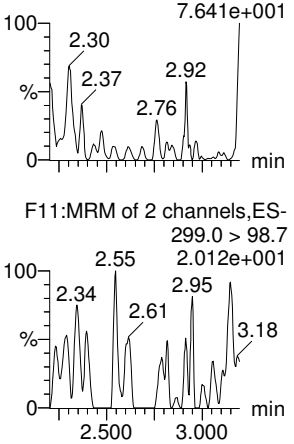
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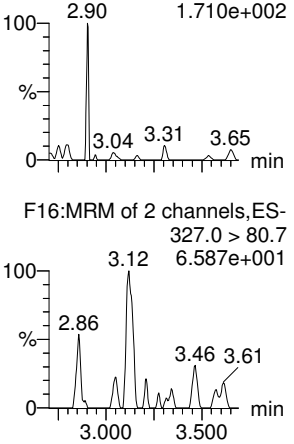
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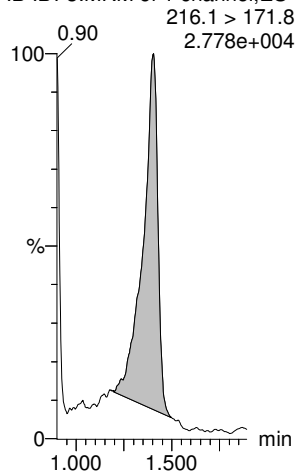
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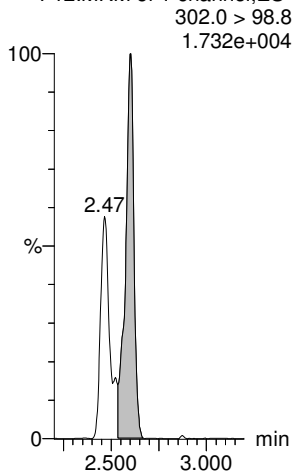
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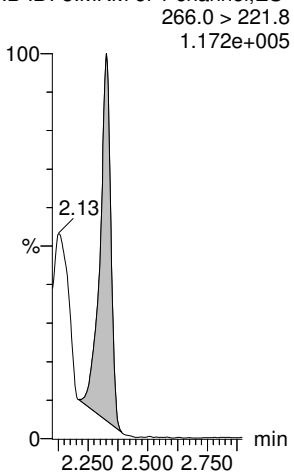
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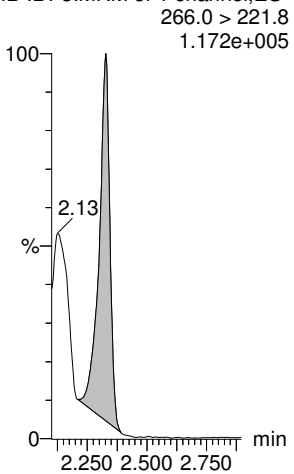
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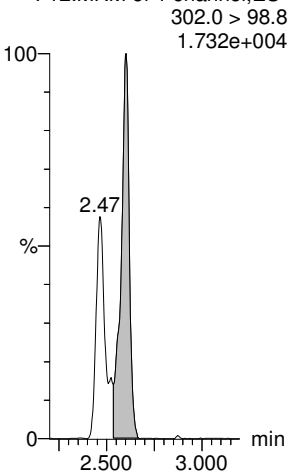
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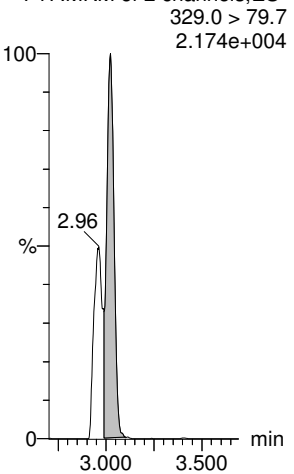
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13C3-PFBS-EIS



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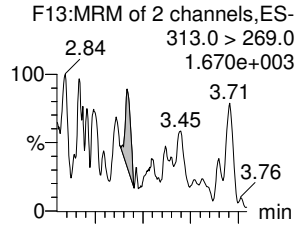


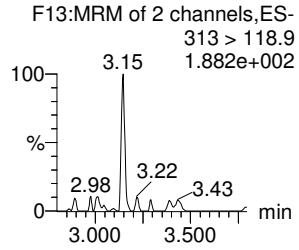
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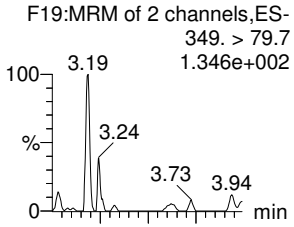
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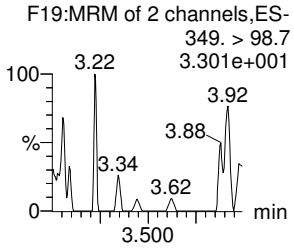
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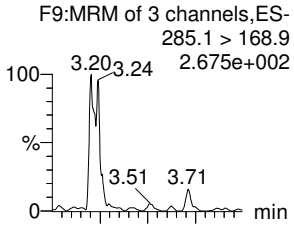


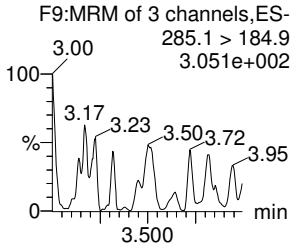
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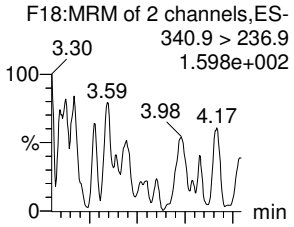


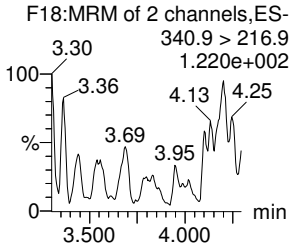
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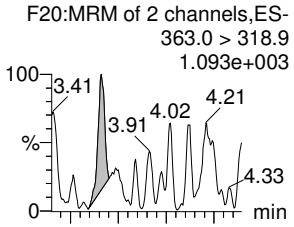


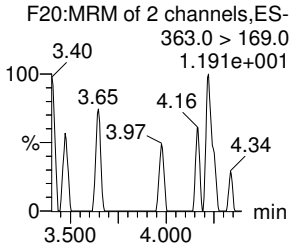
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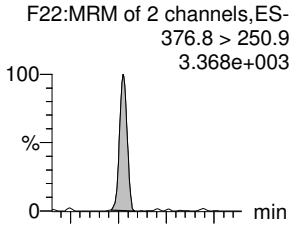


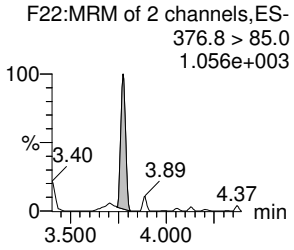
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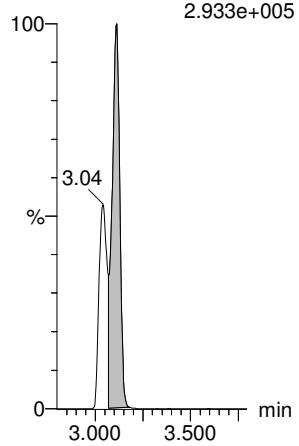


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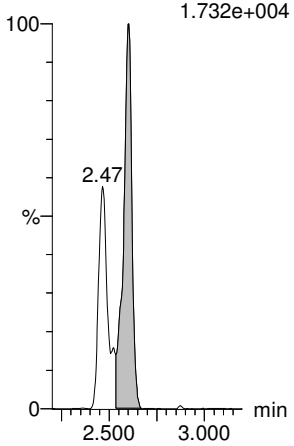




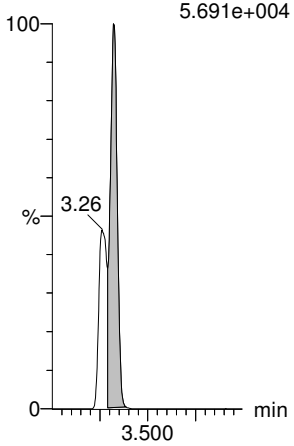
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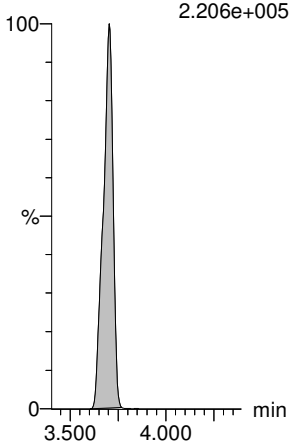
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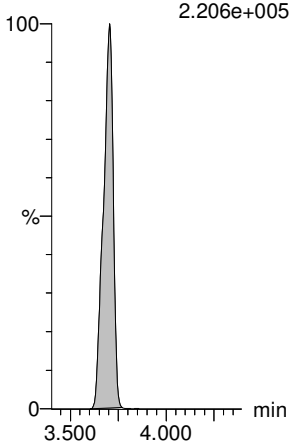
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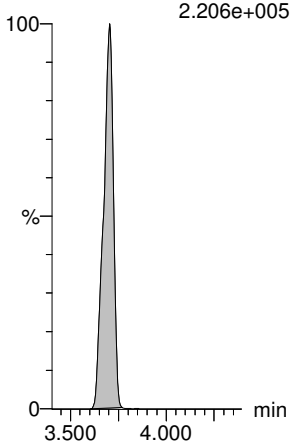
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13C4-PFHpA-EIS



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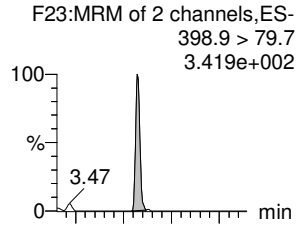


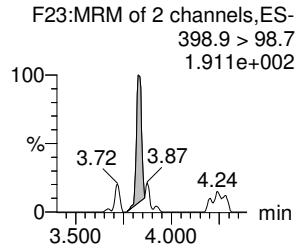
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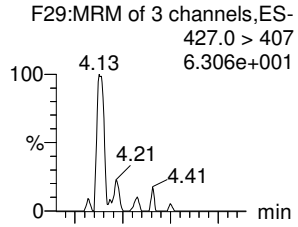
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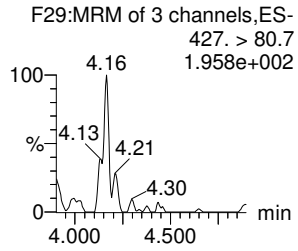
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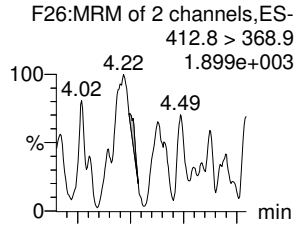


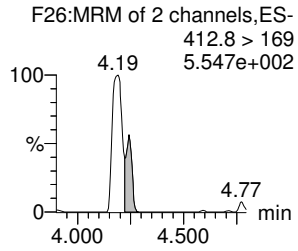
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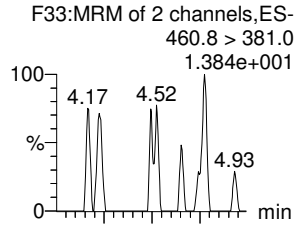


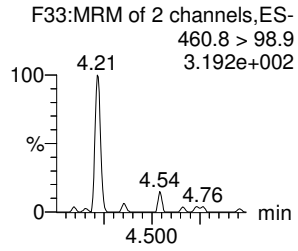
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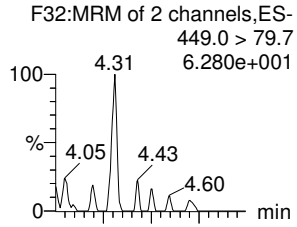


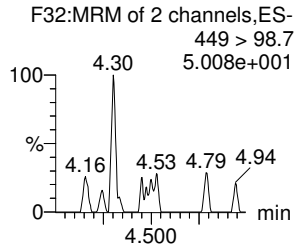
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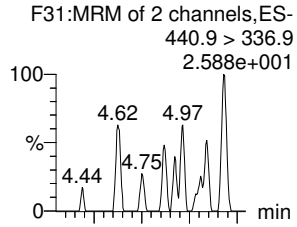


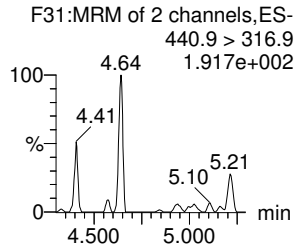
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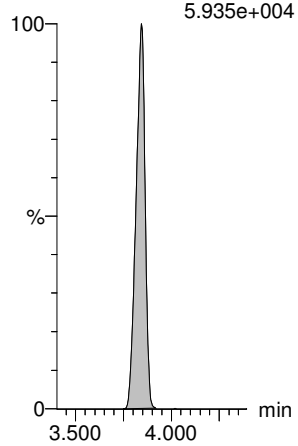


7:3 FTCA

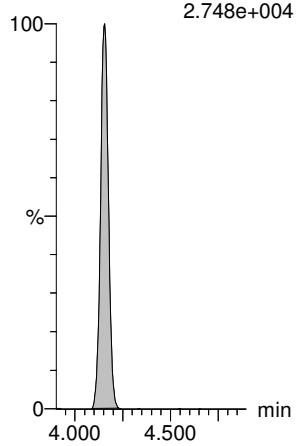




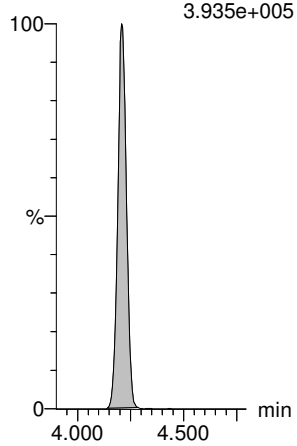
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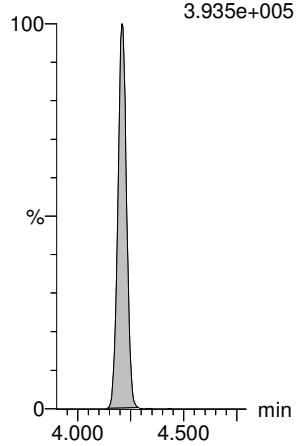
13C2-6:2 FTS-EIS



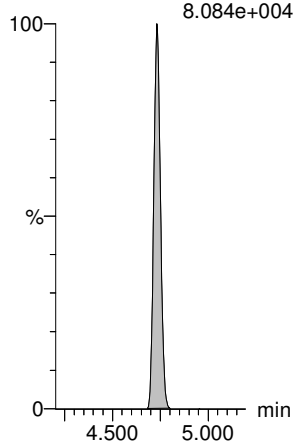
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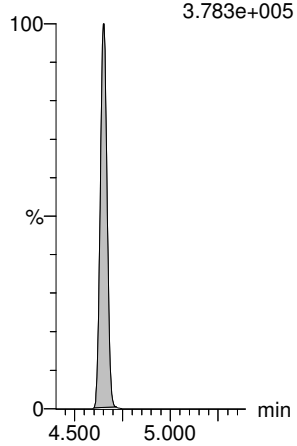
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13C8-PFOS-EIS



13C5-PFNA-EIS

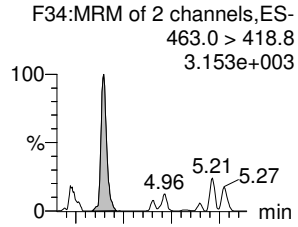


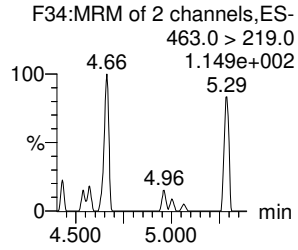
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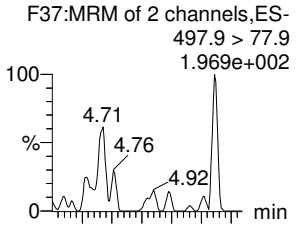
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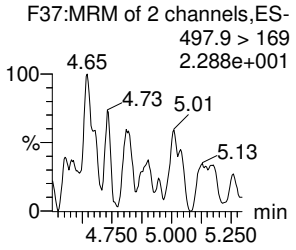
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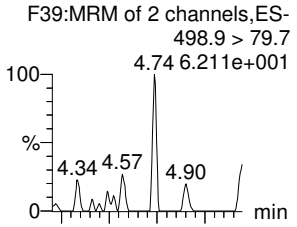


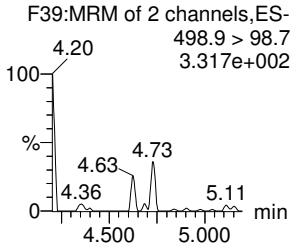
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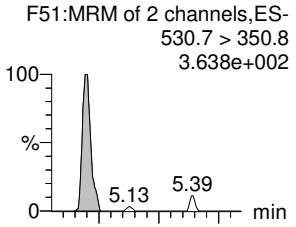


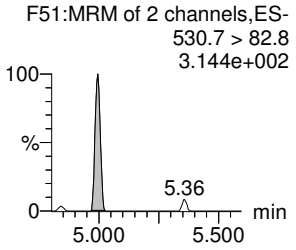
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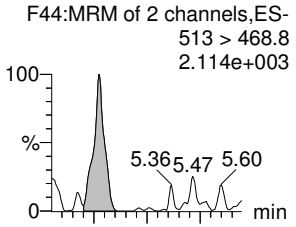


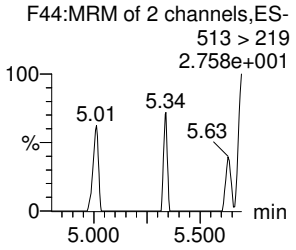
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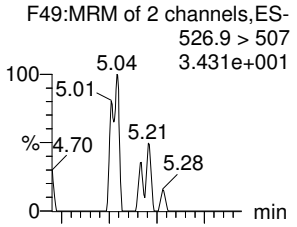


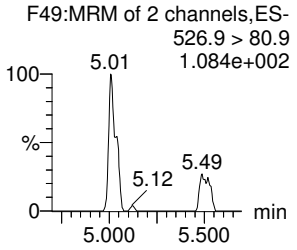
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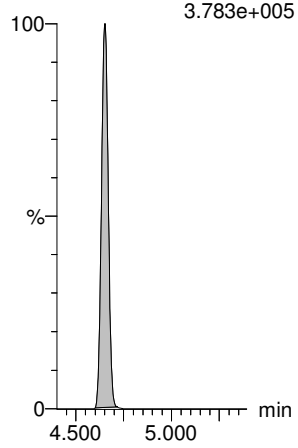


8:2 FTS

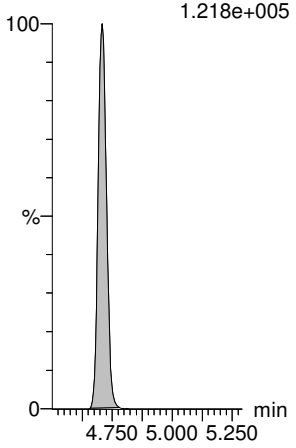




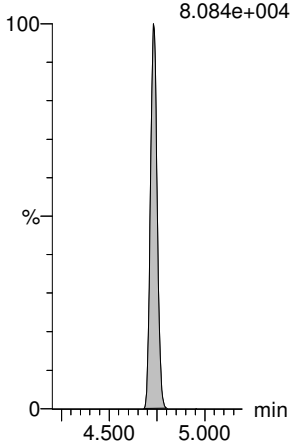
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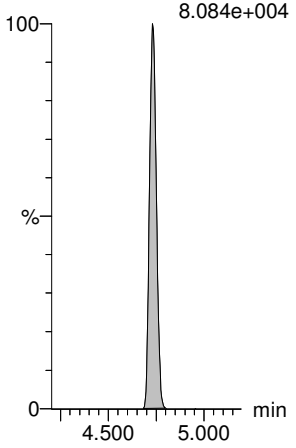
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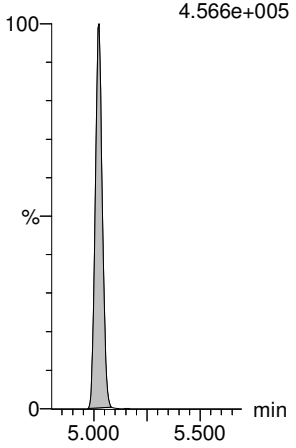
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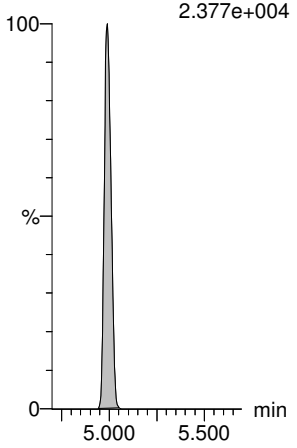
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

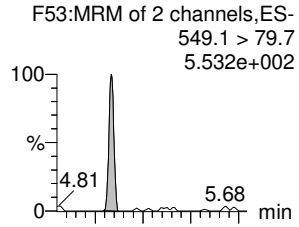


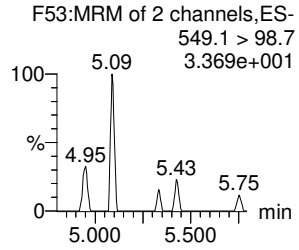
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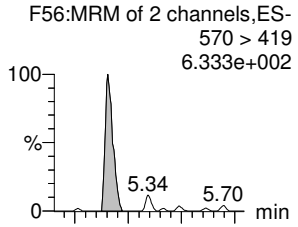
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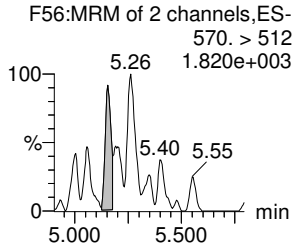
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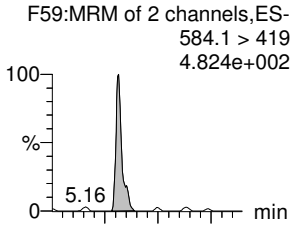


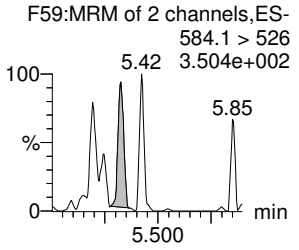
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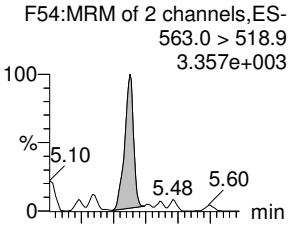


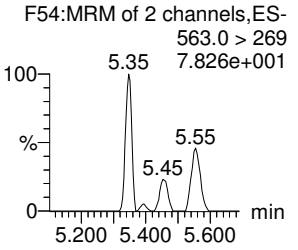
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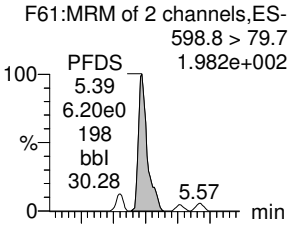


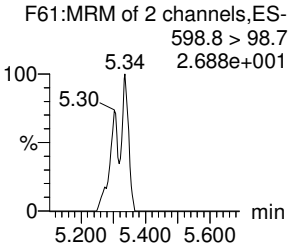
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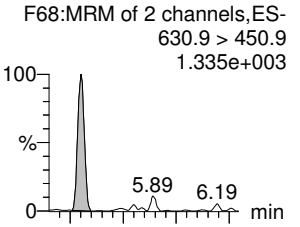


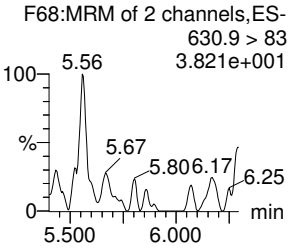
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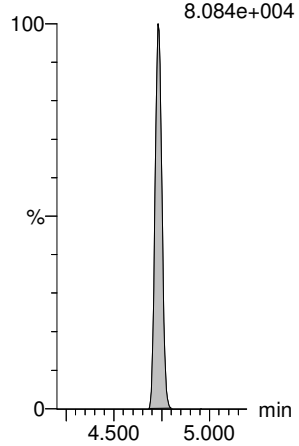


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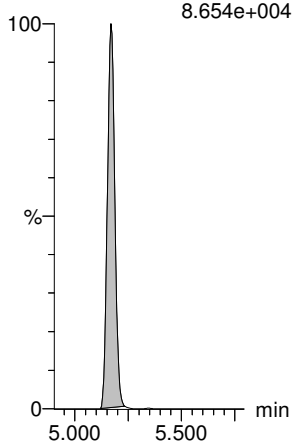




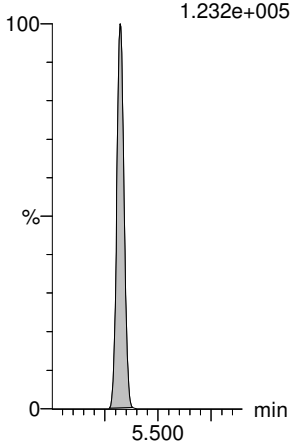
13C8-PFOS-EIS



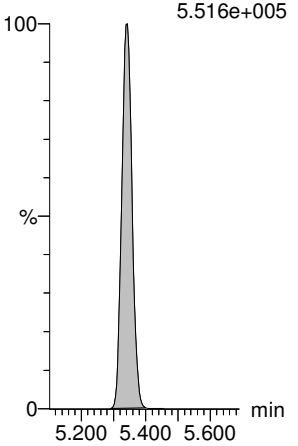
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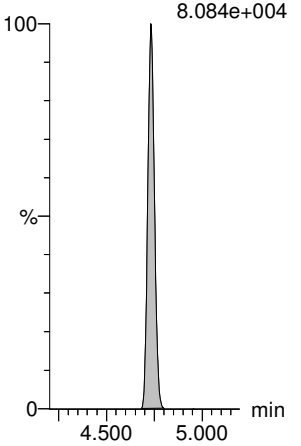
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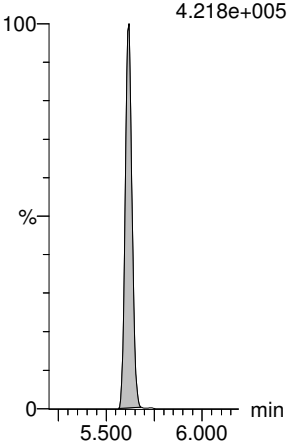
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13C8-PFOS-EIS



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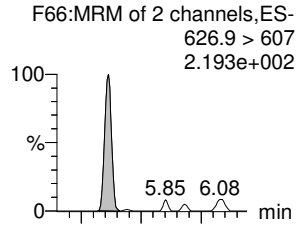


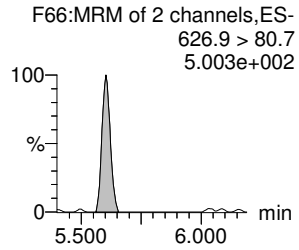
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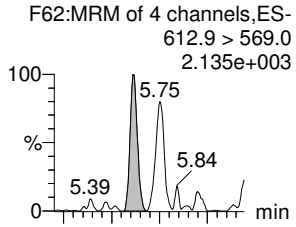
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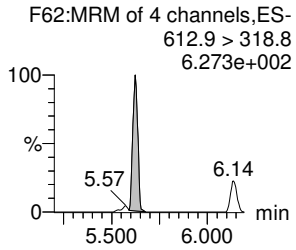
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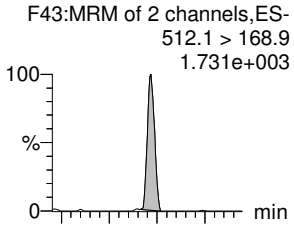


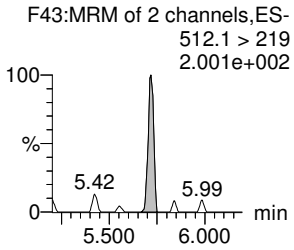
PFDoA



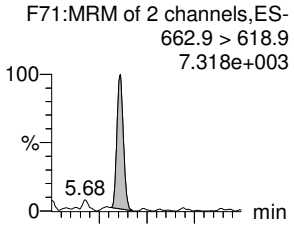


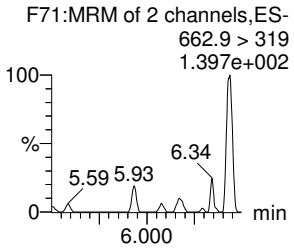
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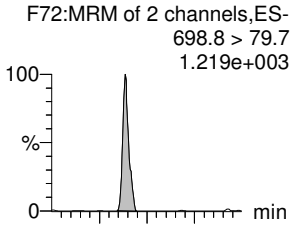


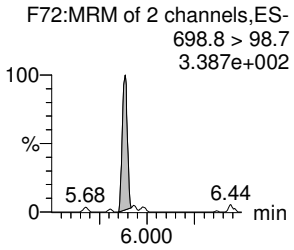
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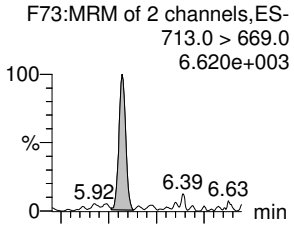


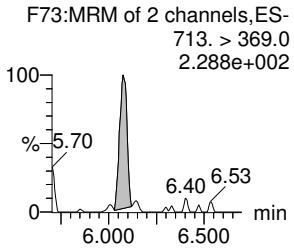
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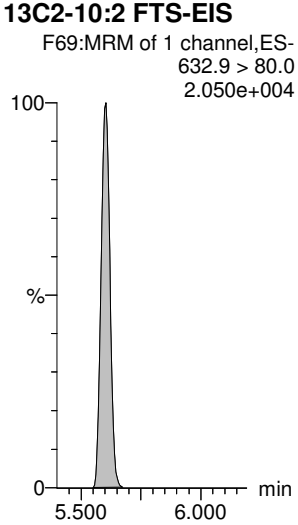


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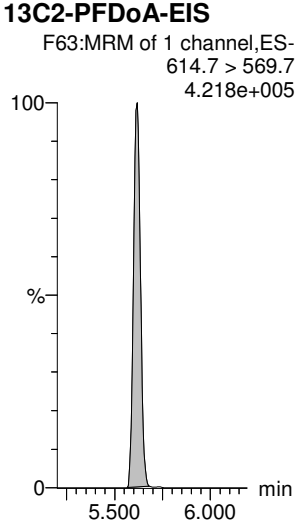




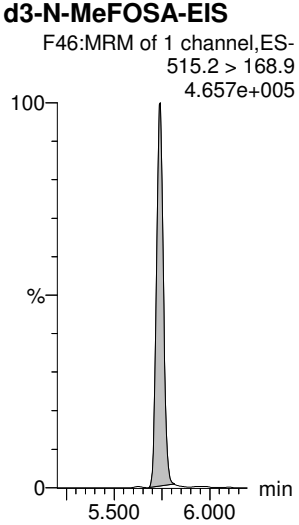
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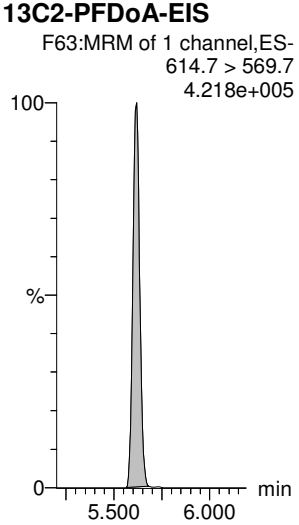
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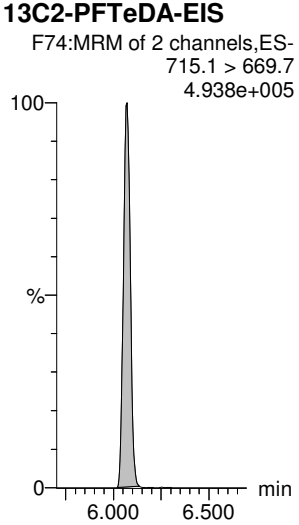
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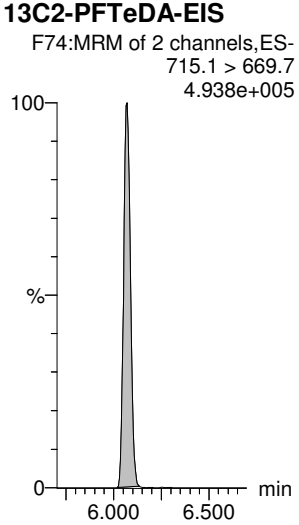
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

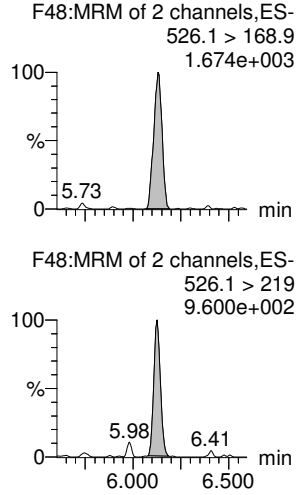


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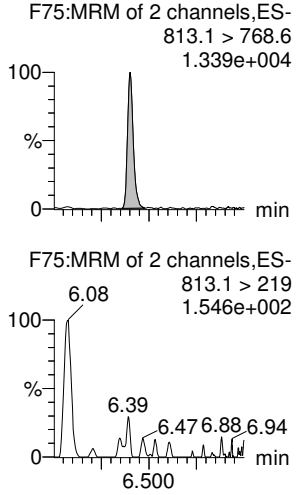
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Name: 200224P1-13, Date: 24-Feb-2020, Time: 19:17:04, ID: IB, Description: IB

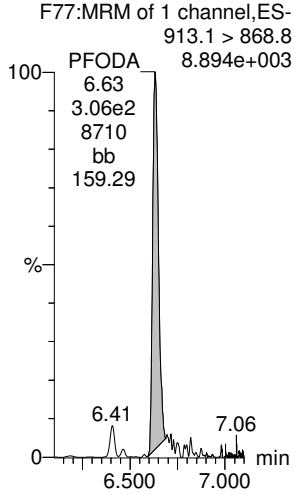
N-EtFOSA



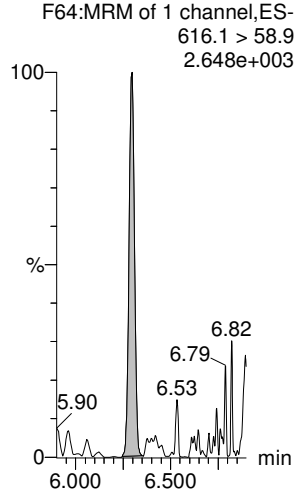
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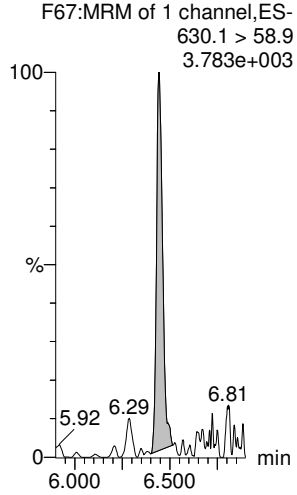
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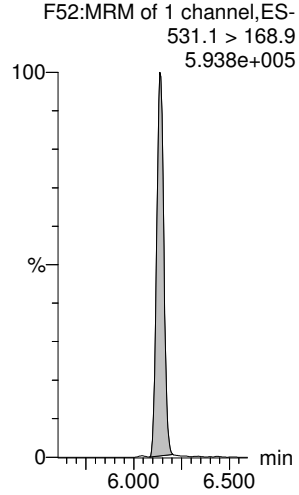
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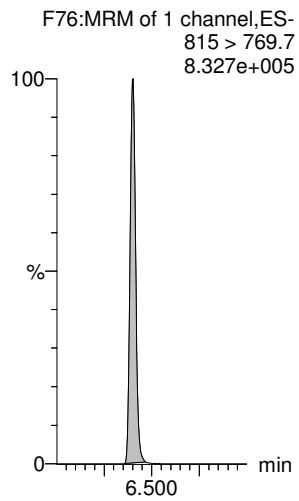
N-EtFOSE



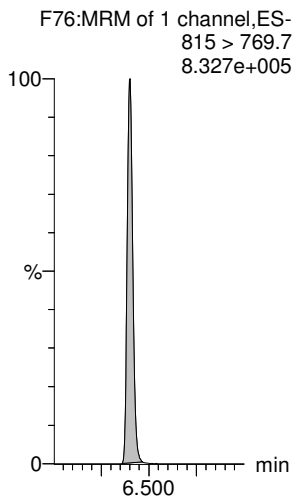
d5-N-ETFOSA-EIS



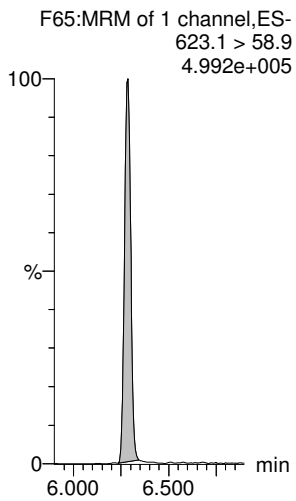
13C2-PFHxDA-EIS



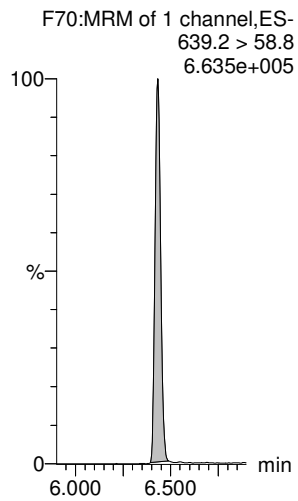
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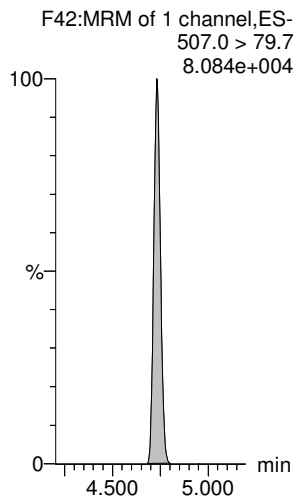
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



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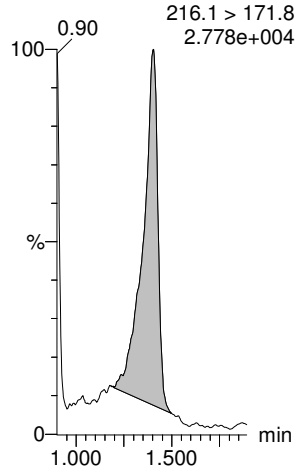


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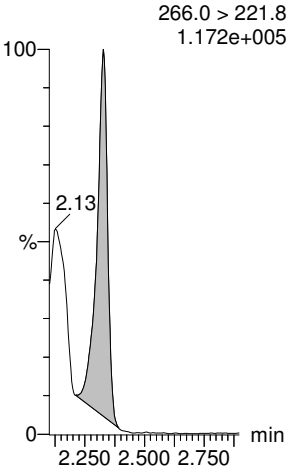
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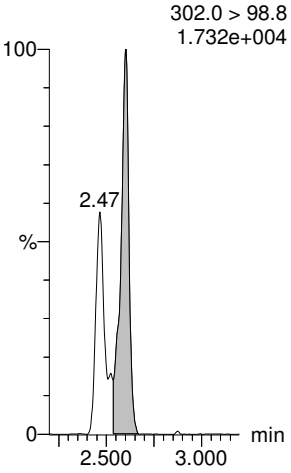
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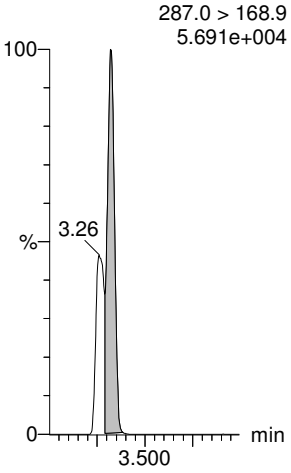
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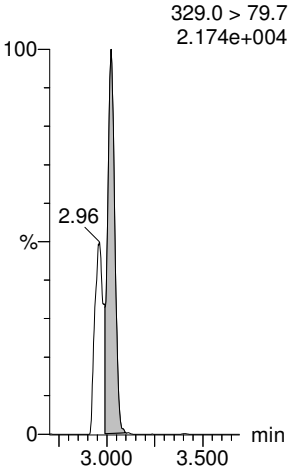
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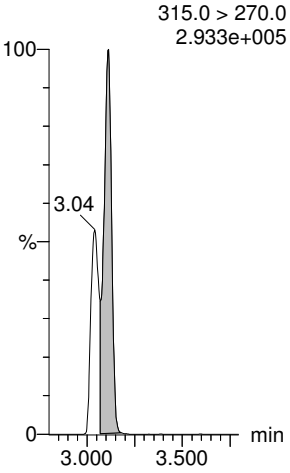
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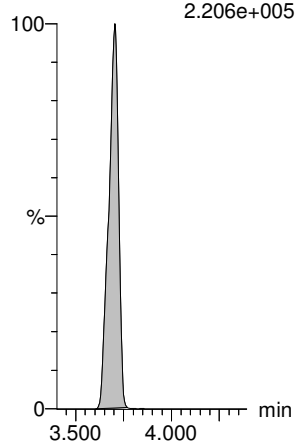
13C2-4:2 FTS-RSD



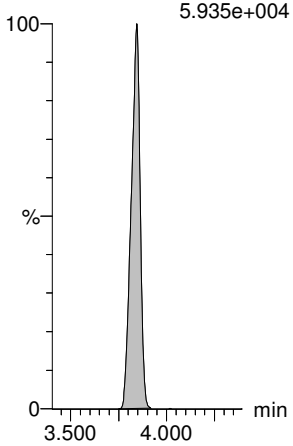
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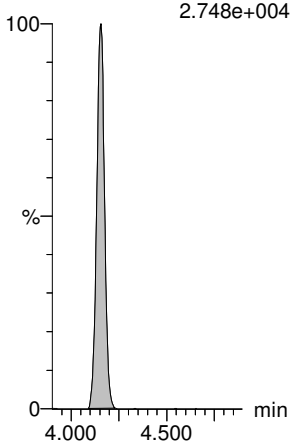
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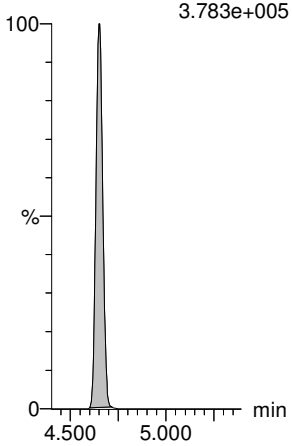
13C3-PFHxS-RSD



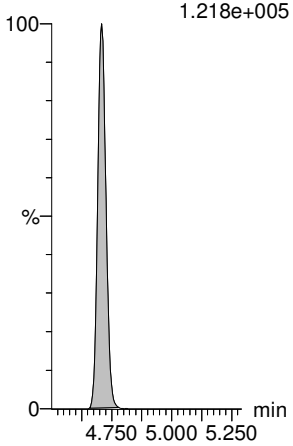
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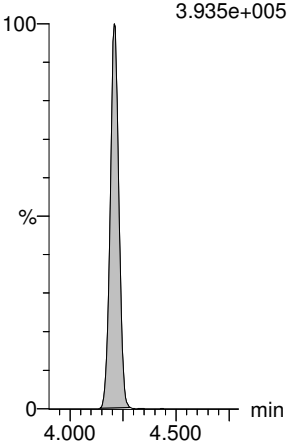
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13C8-PFOSA-RSD



13C2-PFOA-RSD

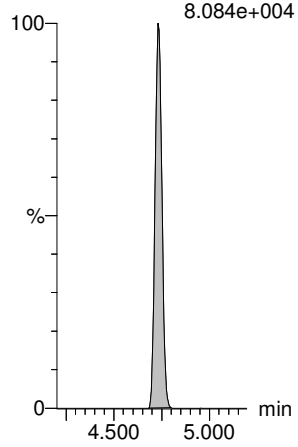


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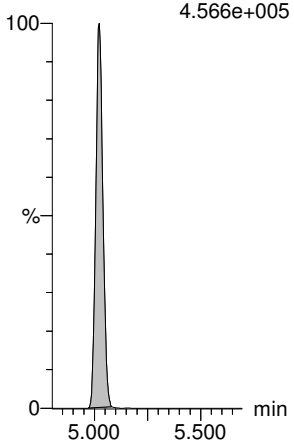
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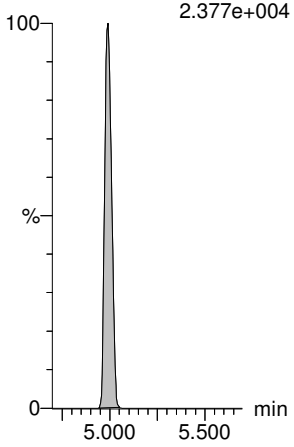
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.084e+004



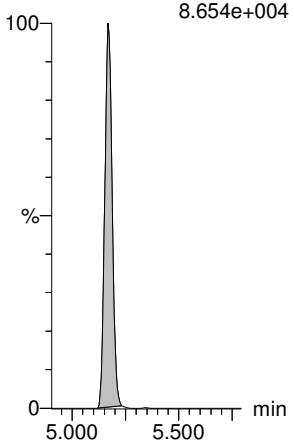
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.566e+005



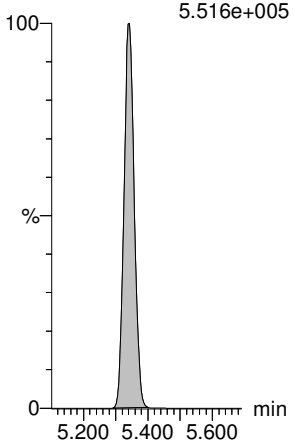
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.377e+004



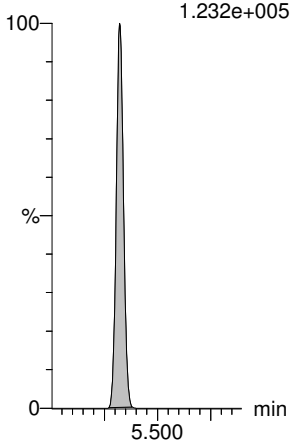
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
8.654e+004



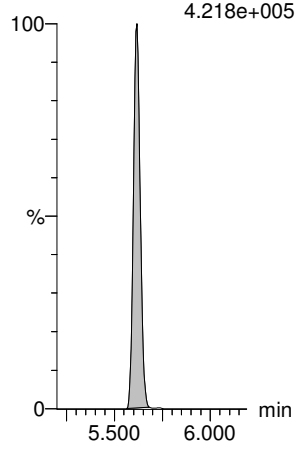
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F55:MRM of 1 channel,ES-
565 > 519.8
5.516e+005



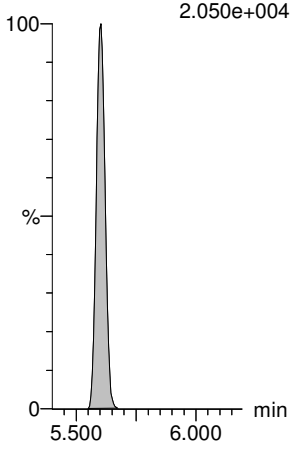
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.232e+005



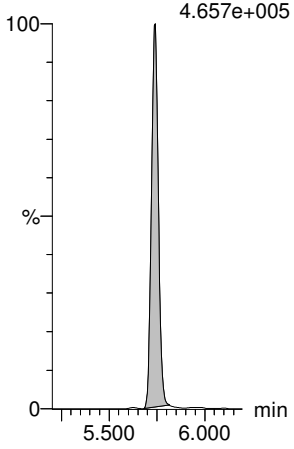
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.218e+005



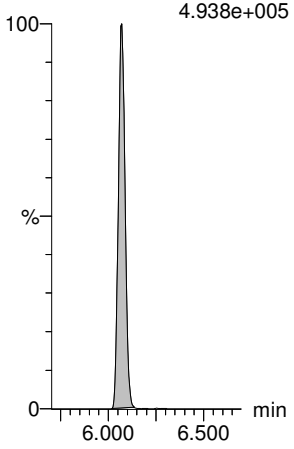
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.050e+004



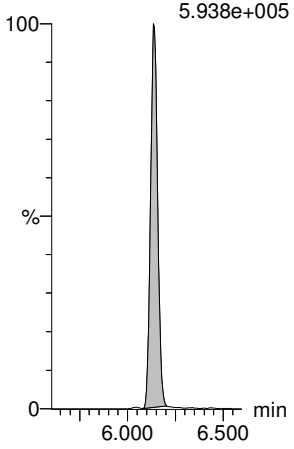
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.657e+005



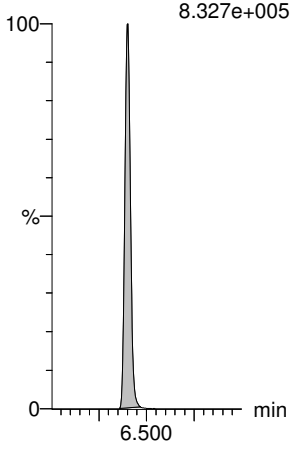
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.938e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.938e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.327e+005

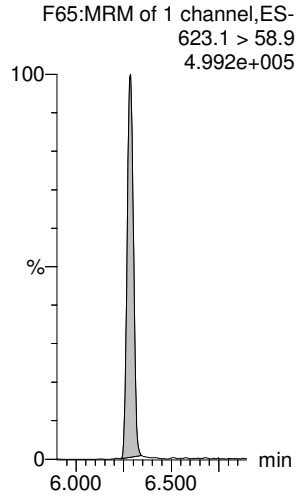


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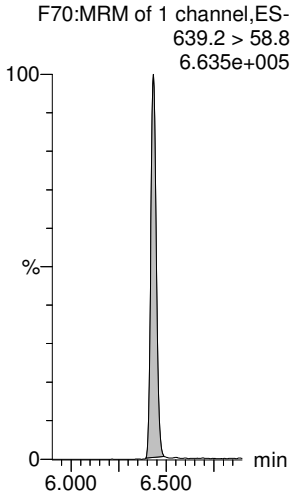
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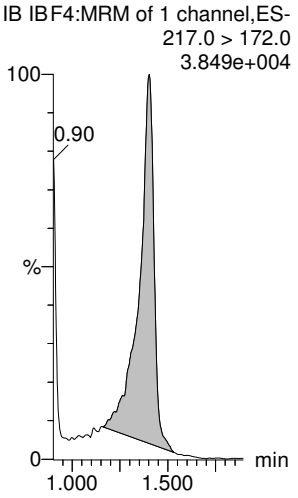
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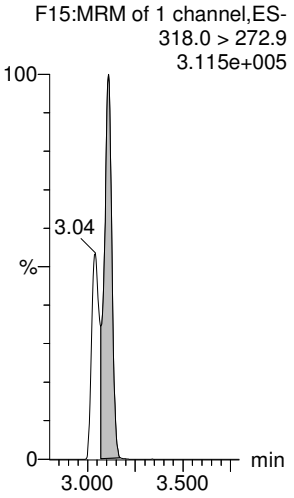
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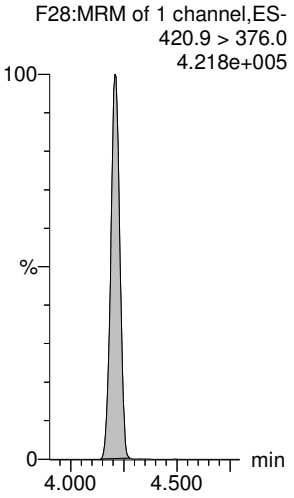
13C4-PFBA



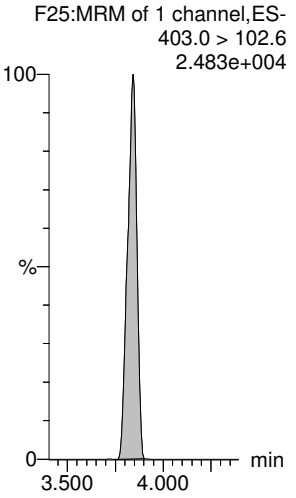
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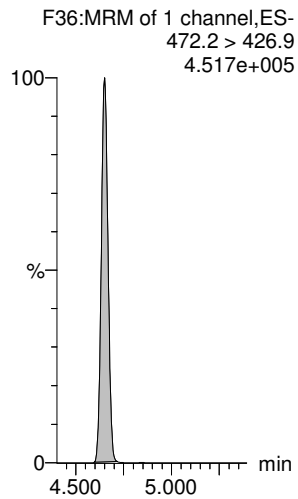
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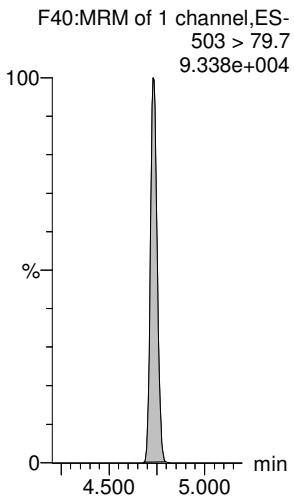
18O2-PFHxS



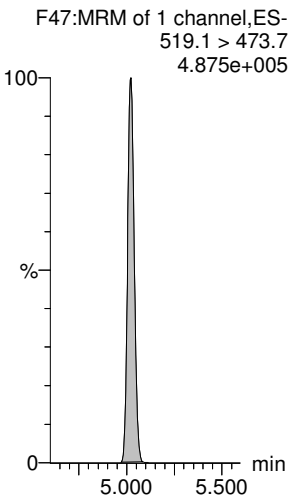
13C9-PFNA



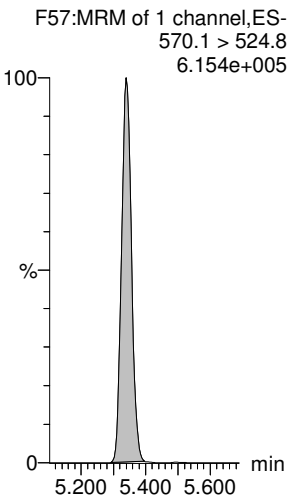
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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Name: 200224P1-13, Date: 24-Feb-2020, Time: 19:17:04, 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	17.345	2286.095	1.00	1.45	0.095		0.121		NO		
2	2	PFPrS	248.9 > 79.7		860.988	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		5796.285	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	13.667	5796.285	1.00	2.34	0.029				NO		
5	5	PFBS	299.0 > 79.7		860.988	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		941.953	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	2286.095		1.00	1.40	2286.095	12.500	3.41	27.2	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	5796.285		1.00	2.33	5796.285	12.500	5.53	44.3	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	5796.285		1.00	2.33	5796.285	12.500	5.53	44.3	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	941.953		1.00	3.02	941.953	12.500	7.21	57.6	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	30.871	13532.109	1.00	3.17	0.029				NO		YES
15	8	PFPeS	349.>79.7		860.988	1.00						NO		YES
16	9	HFPO-DA	285.1 > 168.9		2427.415	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		12934.563	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	36.457	12934.563	1.00	3.66	0.035				NO		YES
19	12	ADONA	376.8 > 250.9	152.260	12934.563	1.00	3.77	0.147		0.0180		NO	5.101	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	13532.109		1.00	3.11	13532.109	12.500	7.76	62.0	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	860.988		1.00	2.60	860.988	12.500	7.08	56.7	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2427.415		1.00	3.32	2427.415	12.500	7.40	59.2	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	12934.563		1.00	3.70	12934.563	12.500	12.2	97.3	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	8.673	3183.174	1.00	3.82	0.034		0.115		NO	1.625	NO
28	15	6:2 FTS	427.0 > 407		1292.694	1.00						NO		YES
29	16	L-PFOA	412.8 > 368.9	8.364	18580.375	1.00	4.25	0.006				NO	0.840	YES
30	18	PFecHS	460.8 > 381.0		18580.375	1.00						NO		YES
31	19	PFHpS	449.0 > 79.7		3277.543	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9		15172.096	1.00						NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	3183.174		1.00	3.84	3183.174	12.500	12.6	100.7	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1292.694		1.00	4.16	1292.694	12.500	11.7	93.7	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18580.375		1.00	4.21	18580.375	12.500	12.7	101.2	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18580.375		1.00	4.21	18580.375	12.500	12.7	101.2	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	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	15172.096		1.00	4.65	15172.096	12.500	11.9	94.9	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	106.009	15172.096	1.00	4.65	0.087		0.0372		NO		YES
41	22	PFOSA	497.9 > 77.9		4830.583	1.00						NO		YES
42	23	L-PFOS	498.9 > 79.7		3277.543	1.00						NO		YES
43	25	9Cl-PF30NS	530.7 > 350.8	14.631	3277.543	1.00	4.95	0.056				NO	1.868	YES
44	26	PFDA	513 > 468.8	124.631	17507.664	1.00	5.02	0.089		0.0262		NO		YES
45	27	8:2 FTS	526.9 > 507		978.842	1.00						NO		YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	15172.096		1.00	4.65	15172.096	12.500	11.9	94.9	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4830.583		1.00	4.71	4830.583	12.500	12.6	100.6	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17507.664		1.00	5.02	17507.664	12.500	12.0	95.8	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	978.842		1.00	4.99	978.842	12.500	10.3	82.7	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	16.454	3277.543	1.00	5.09	0.063				NO		YES
54	29	L-MeFOSAA	570 > 419	25.995	3466.039	1.00	5.15	0.094		0.0886		NO	0.511	YES
55	31	L-EtFOSAA	584.1 > 419	15.557	4789.026	1.00	5.31	0.041				NO	1.600	NO
56	33	PFUdA	563.0 > 518.9	102.787	20059.785	1.00	5.35	0.064				NO		YES
57	34	PFDS	598.8 > 79.7	6.203	3277.543	1.00	5.39	0.024				NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9	46.891	17273.014	1.00	5.55	0.034		0.0586		NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	3466.039		1.00	5.17	3466.039	12.500	12.1	96.4	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	4789.026		1.00	5.32	4789.026	12.500	13.5	107.7	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20059.785		1.00	5.34	20059.785	12.500	12.2	97.5	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	7.233	857.662	1.00	5.61	0.105		0.0212		NO	0.367	NO
67	37	PFDoA	612.9 > 569.0	91.874	17273.014	1.00	5.61	0.066		0.0180		NO	5.047	NO
68	38	N-MeFOSA	512.1 > 168.9	73.919	19370.490	1.00	5.72	0.569		0.295		NO	11.266	YES
69	39	PFTrDA	662.9 > 618.9	281.626	17273.014	1.00	5.86	0.204		0.0666		NO		YES
70	40	PFDoS	698.8 > 79.7	44.184	20111.619	1.00	5.89	0.027		0.00540		NO	4.287	NO
71	41	PFTeDA	713.0 > 669.0	268.223	20111.619	1.00	6.07	0.167		0.0448		NO	26.911	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	857.662		1.00	5.60	857.662	12.500	11.9	95.5	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	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	19370.490		1.00	5.74	19370.490	149.200	145	96.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	17273.014		1.00	5.62	17273.014	12.500	12.0	95.7	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	20111.619		1.00	6.07	20111.619	12.500	12.0	96.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	20111.619		1.00	6.07	20111.619	12.500	12.0	96.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	82.263	25283.104	1.00	6.13	0.485		0.629		NO	2.216	NO
80	43	PFHxDA	813.1 > 768.6	452.754	27486.043	1.00	6.40	0.206		0.114		NO		YES
81	44	PFODA	913.1 > 868.8	305.747	27486.043	1.00	6.63	0.139		0.140		NO		
82	45	N-MeFOSE	616.1 > 58.9	85.350	18314.305	1.00	6.30	0.695		0.565		NO		
83	46	N-EtFOSE	630.1 > 58.9	137.752	21844.439	1.00	6.44	0.941		0.745		NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25283.104		1.00	6.14	25283.104	149.200	146	98.1	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	27486.043		1.00	6.40	27486.043	12.500	11.7	93.9	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	27486.043		1.00	6.40	27486.043	12.500	11.7	93.9	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	18314.305		1.00	6.28	18314.305	149.200	138	92.5	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	21844.439		1.00	6.43	21844.439	149.200	142	95.1	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3277.543		1.00	4.73	3277.543	12.500	11.4	91.6	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	2286.095	3284.042	1.00	1.40	8.702	12.500	11.4	91.6	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	5796.285	13974.849	1.00	2.33	5.185	12.500	9.06	72.5	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	860.988	1369.801	1.00	2.60	7.857	12.500	7.21	57.7	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2427.415	13974.849	1.00	3.32	2.171	12.500	11.7	93.4	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	941.953	1369.801	1.00	3.02	8.596	12.500	7.14	57.1	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	13532.109	13974.849	1.00	3.11	12.104	12.500	12.5	99.6	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	12934.563	13974.849	1.00	3.70	11.570	12.500	19.2	153.4	YES		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	3183.174	1369.801	1.00	3.84	29.048	12.500	12.5	100.0	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1292.694	3743.210	1.00	4.16	4.317	12.500	11.2	89.8	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	15172.096	17839.887	1.00	4.65	10.631	12.500	11.4	91.2	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4830.583	21430.529	1.00	4.71	2.818	12.500	12.1	96.6	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18580.375	20545.320	1.00	4.21	11.305	12.500	12.6	100.7	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3277.543	3743.210	1.00	4.73	10.945	12.500	11.4	91.4	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17507.664	19231.645	1.00	5.02	11.379	12.500	12.1	96.6	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	978.842	3743.210	1.00	4.99	3.269	12.500	10.4	83.1	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	3466.039	21430.529	1.00	5.17	2.022	12.500	11.5	91.7	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20059.785	21430.529	1.00	5.34	11.700	12.500	11.6	92.5	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	4789.026	21430.529	1.00	5.32	2.793	12.500	12.2	98.0	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	17273.014	19231.645	1.00	5.62	11.227	12.500	11.0	88.0	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	857.662	3743.210	1.00	5.60	2.864	12.500	11.7	93.7	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	19370.490	21430.529	1.00	5.74	11.298	149.200	129	86.2	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	20111.619	21430.529	1.00	6.07	11.731	12.500	10.6	85.1	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25283.104	21430.529	1.00	6.14	14.747	149.200	136	90.9	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	27486.043	21430.529	1.00	6.40	16.032	12.500	10.5	83.7	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	18314.305	21430.529	1.00	6.28	10.682	149.200	126	84.4	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	21844.439	21430.529	1.00	6.43	12.741	149.200	128	85.5	NO		
119	99	13C4-PFBA	217.0 > 172.0	3284.042	3284.042	1.00	1.40	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	13974.849	13974.849	1.00	3.11	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20545.320	20545.320	1.00	4.21	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1369.801	1369.801	1.00	3.84	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	17839.887	17839.887	1.00	4.65	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3743.210	3743.210	1.00	4.73	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19231.645	19231.645	1.00	5.02	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	21430.529	21430.529	1.00	5.34	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

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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

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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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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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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

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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

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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

Quantify Sample Summary Report **MassLynx V4.2 SCN977**
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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

	#	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

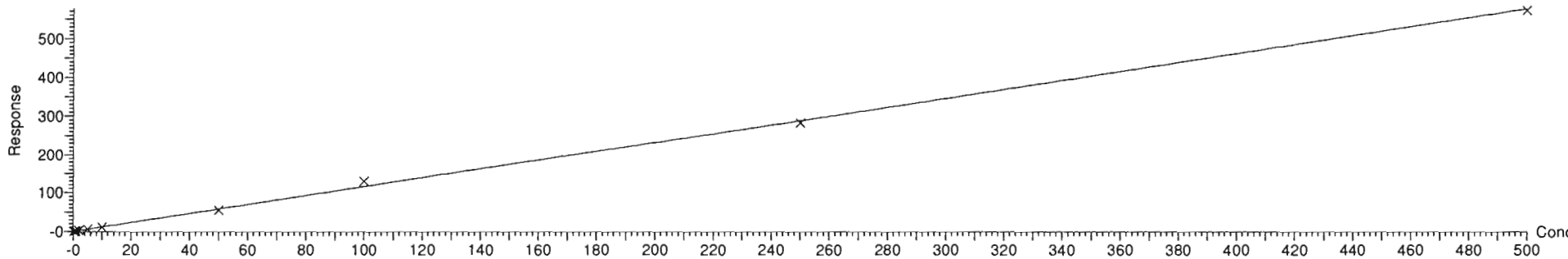
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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

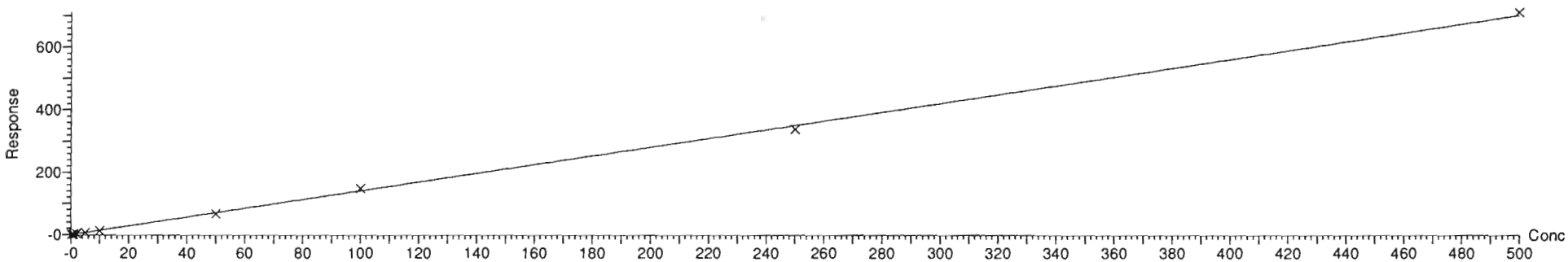
Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:21 Pacific Standard Time

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



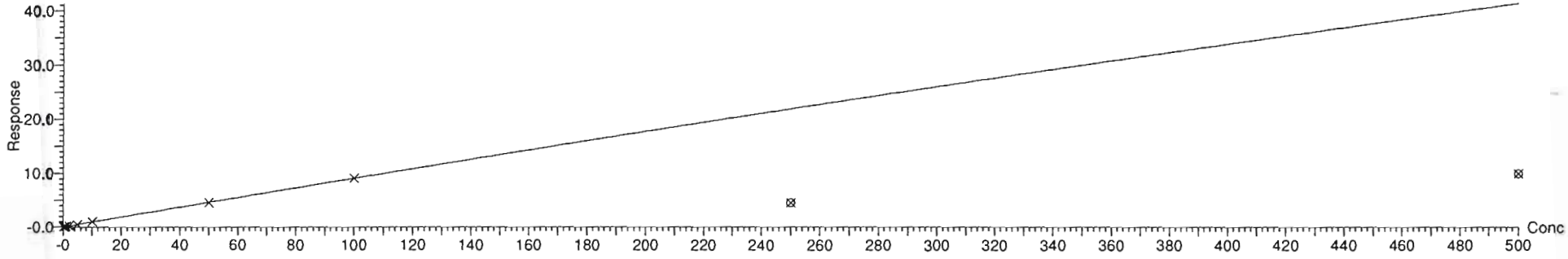
Compound name: PFPrS
Correlation coefficient: r = 0.999450, r^2 = 0.998900
Calibration curve: 1.40081 * x + -0.0217571
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



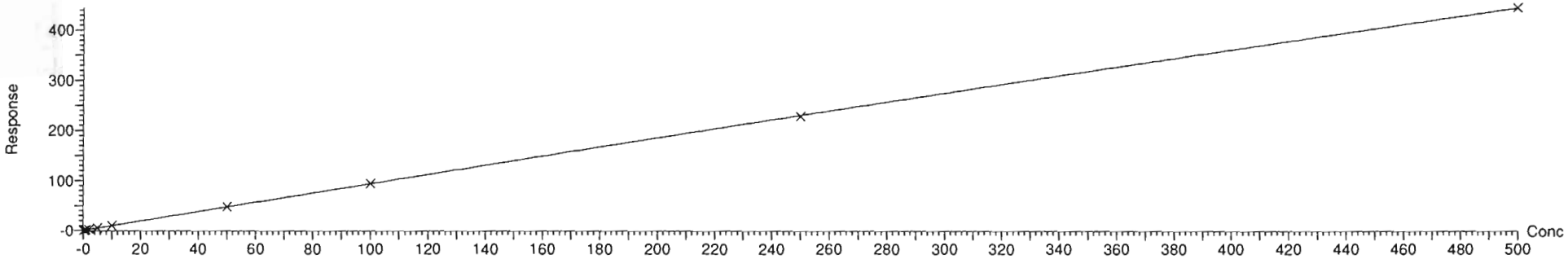
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



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

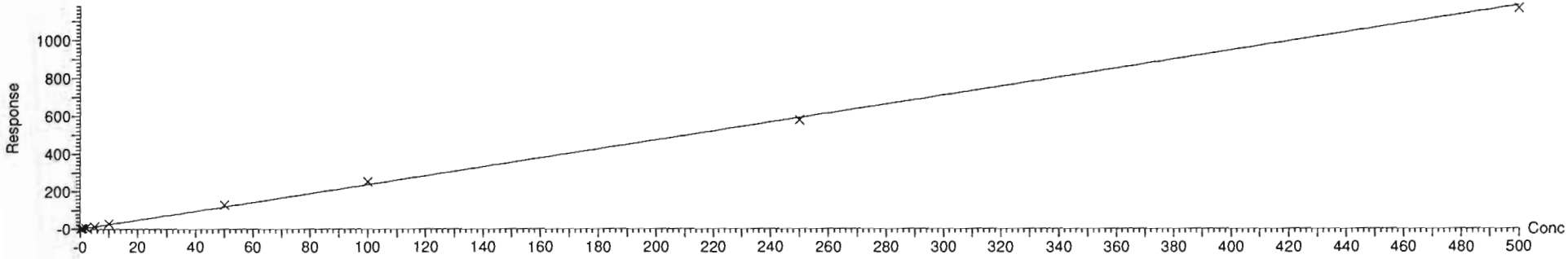


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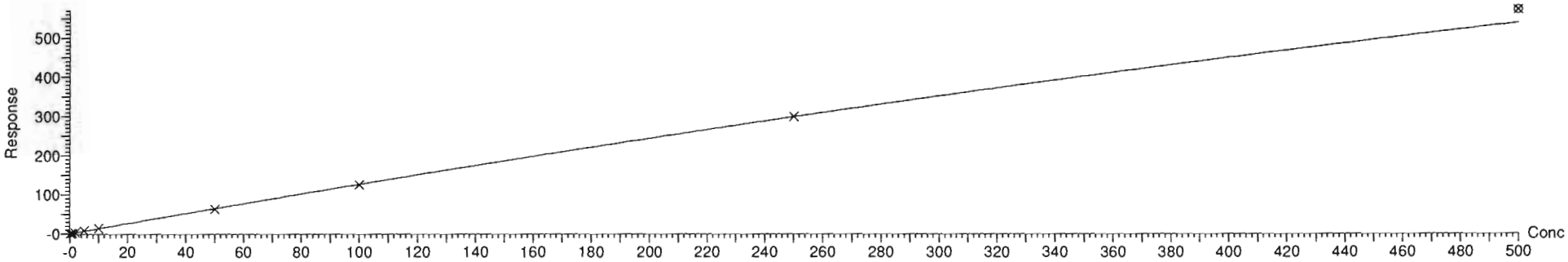
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



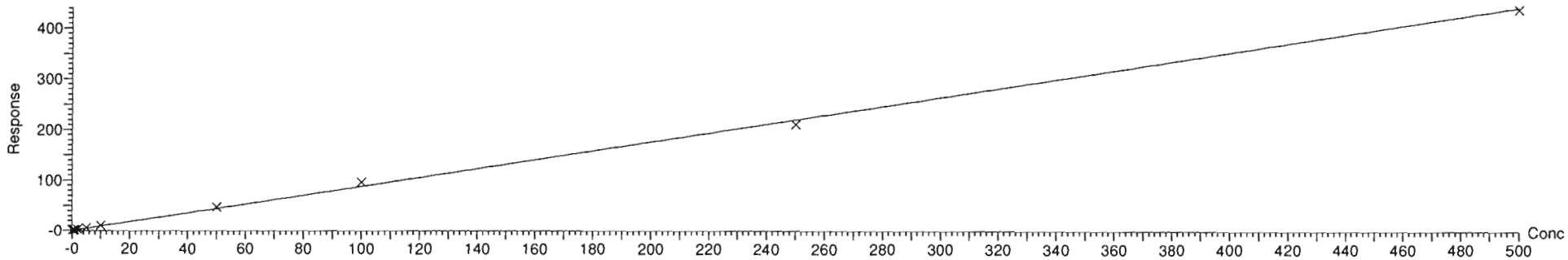
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999364
Calibration curve: -0.000477753 * x^2 + 1.31364 * x + -0.105697
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



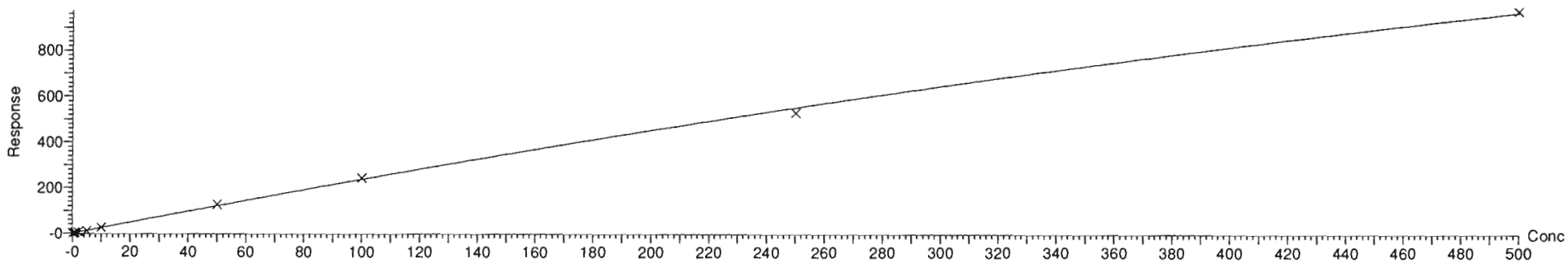
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



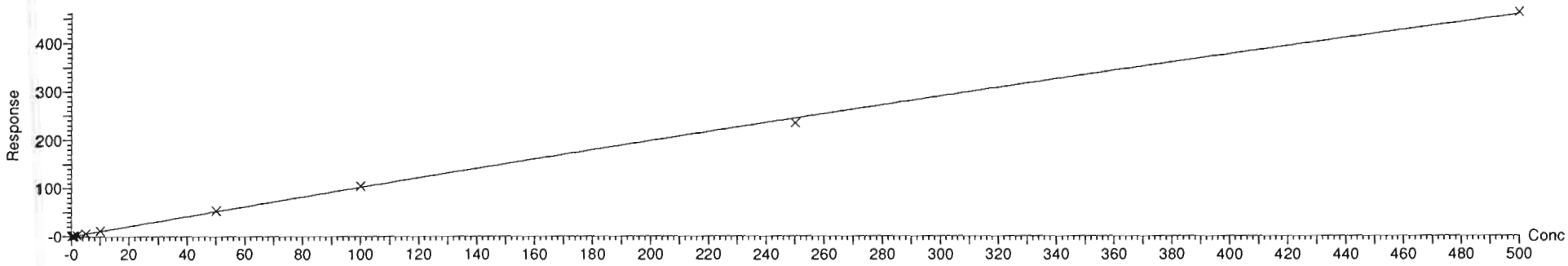
Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999066
Calibration curve: -0.00110209 * x^2 + 2.48401 * x + -0.0827776
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



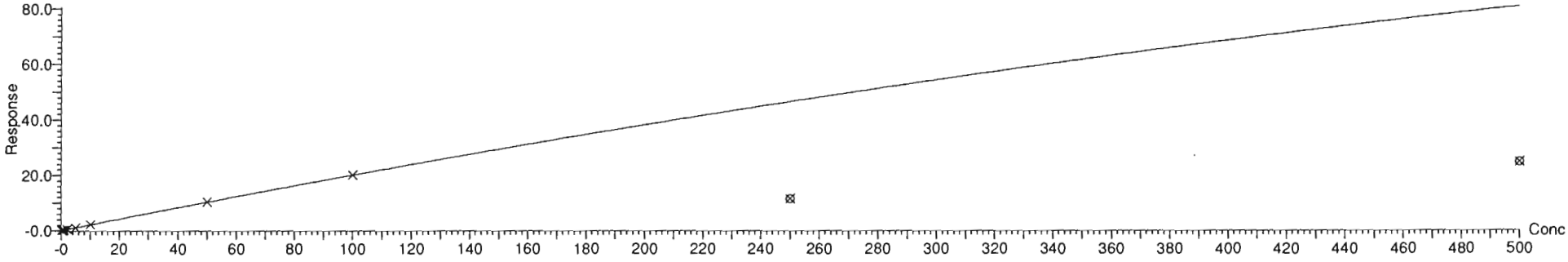
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



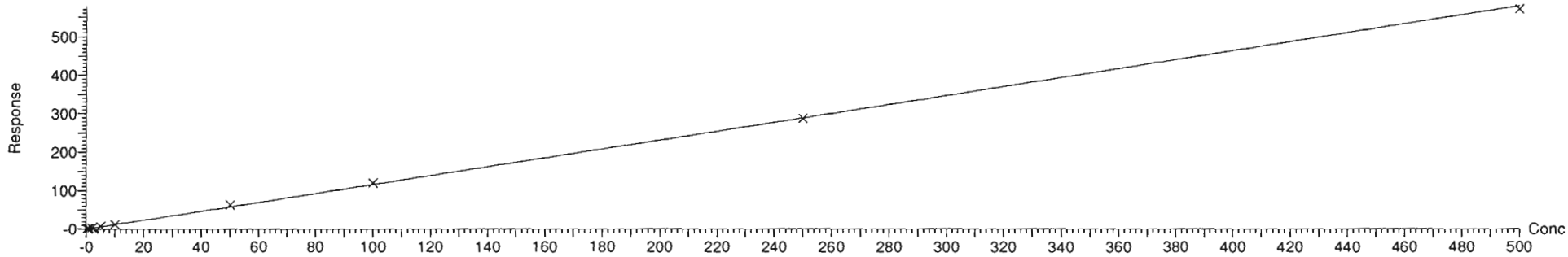
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999928
Calibration curve: -9.69019e-005 * x^2 + 0.209862 * x + 0.00231706
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



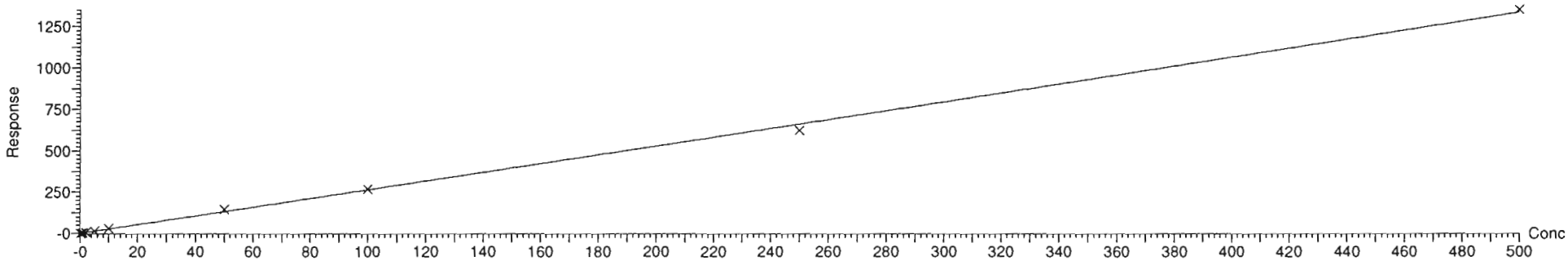
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



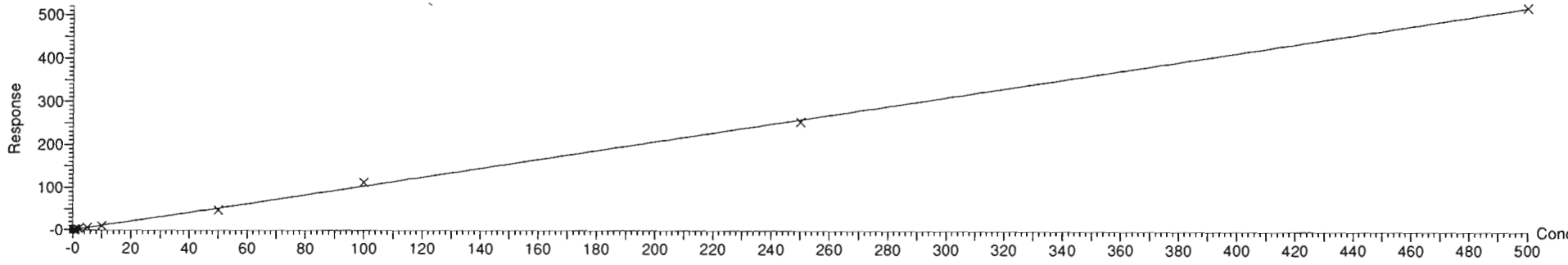
Compound name: ADONA
Coefficient of Determination: R^2 = 0.998227
Calibration curve: 9.46897e-005 * x^2 + 2.62123 * x + 0.106178
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



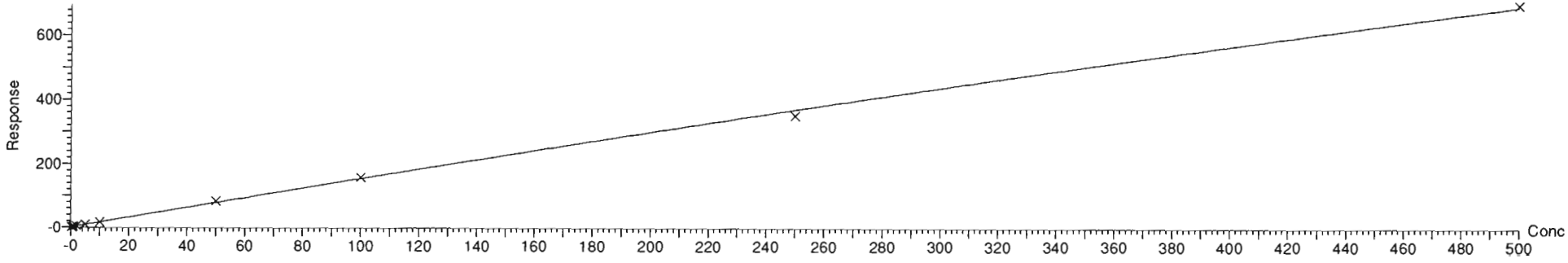
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Compound name: L-PFHxS
Correlation coefficient: r = 0.999244, r^2 = 0.998489
Calibration curve: 1.03912 * x + 0.141351
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



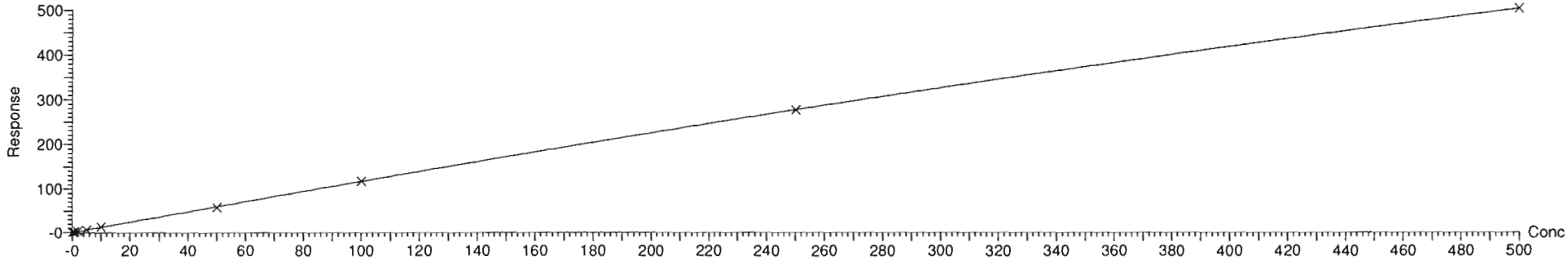
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998706
Calibration curve: -0.000387912 * x^2 + 1.57382 * x + 0.14932
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



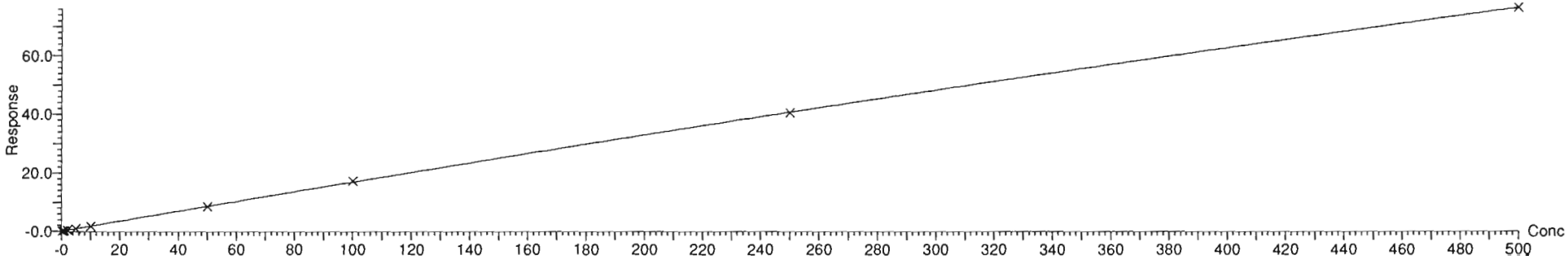
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



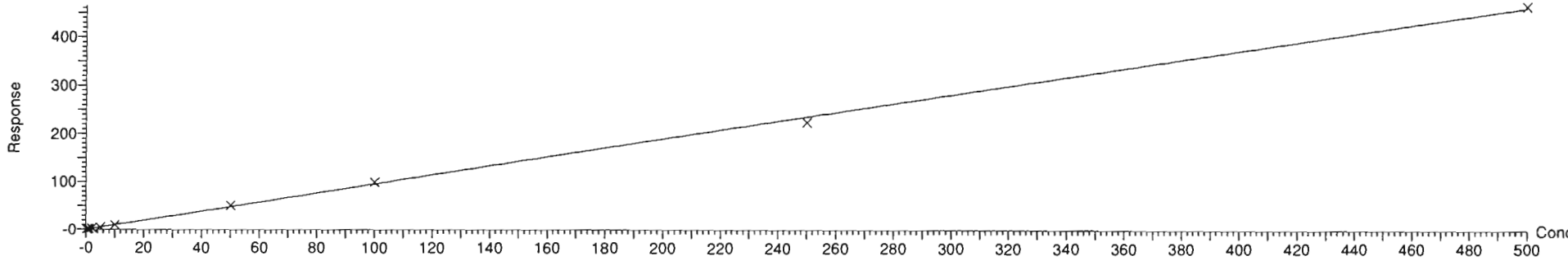
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999853
Calibration curve: -3.94401e-005 * x^2 + 0.172174 * x + -0.0073928
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



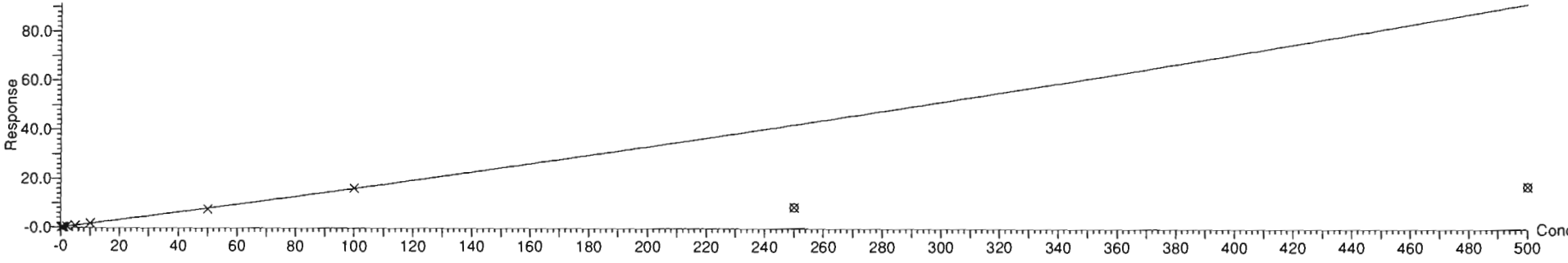
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



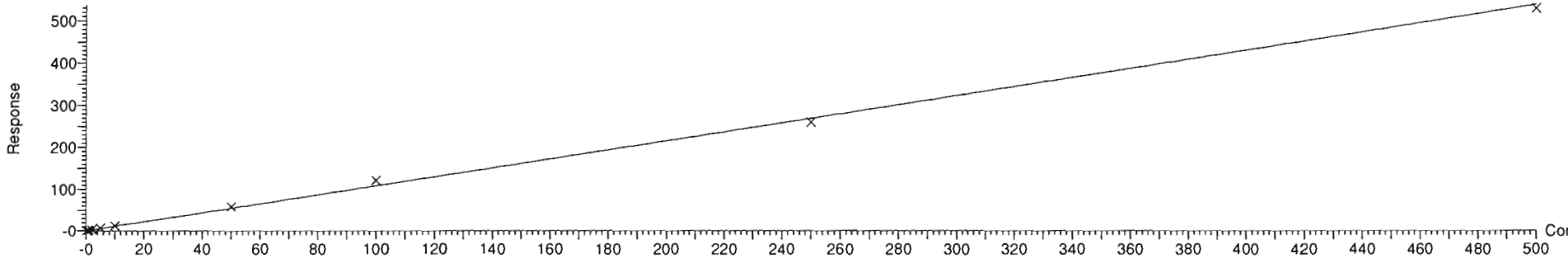
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998364
Calibration curve: 5.76096e-005 * x^2 + 0.154515 * x + 0.00622813
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



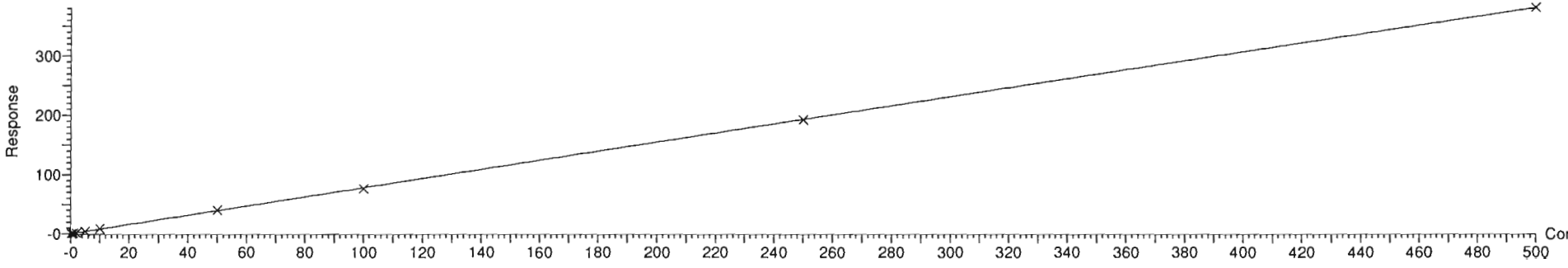
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Compound name: PFNA
Correlation coefficient: r = 0.998714, r^2 = 0.997430
Calibration curve: 1.07614 * x + 0.0721371
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



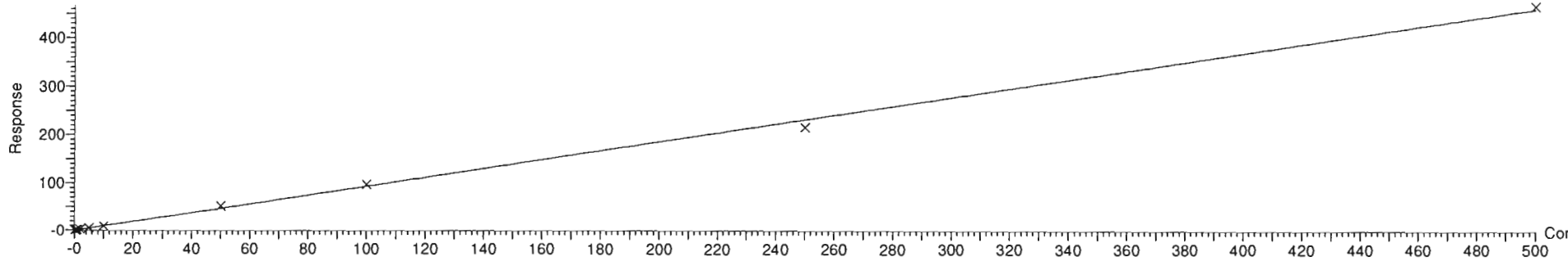
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999714
Calibration curve: -4.40009e-005 * x^2 + 0.782908 * x + 0.0473526
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



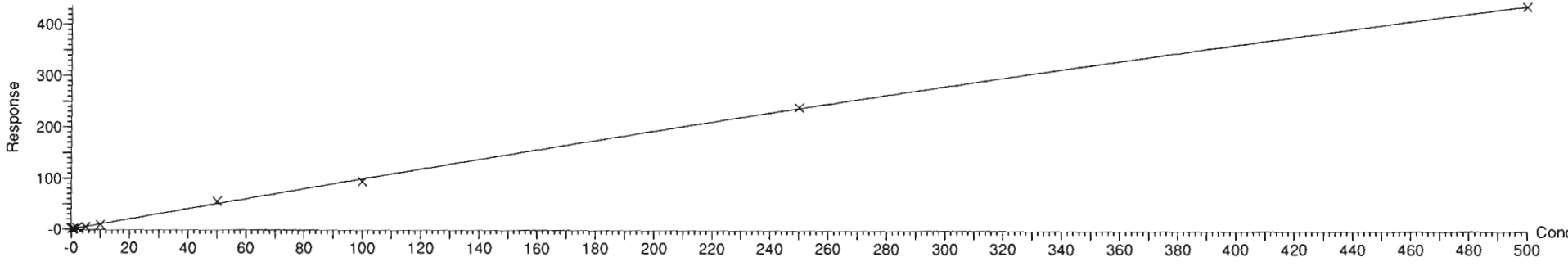
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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.997544
Calibration curve: -3.34868e-005 * x^2 + 0.937949 * x + -0.0268767
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



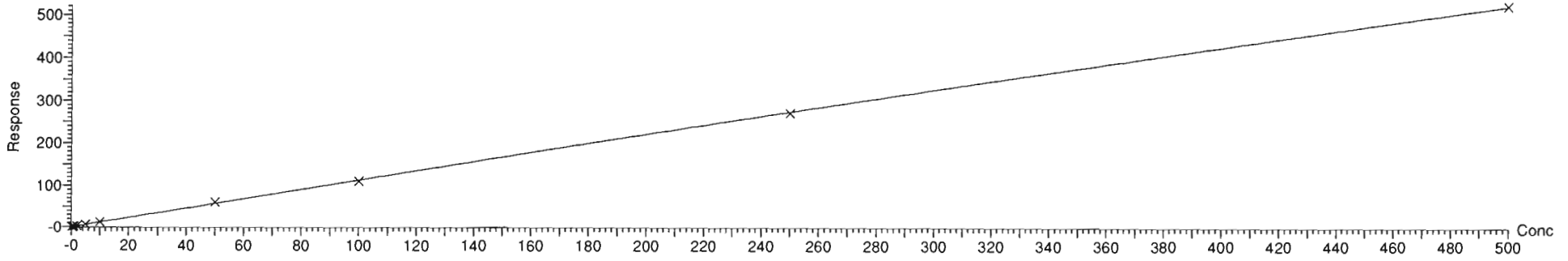
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.998806
Calibration curve: -0.000294917 * x^2 + 1.02474 * x + -0.150151
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



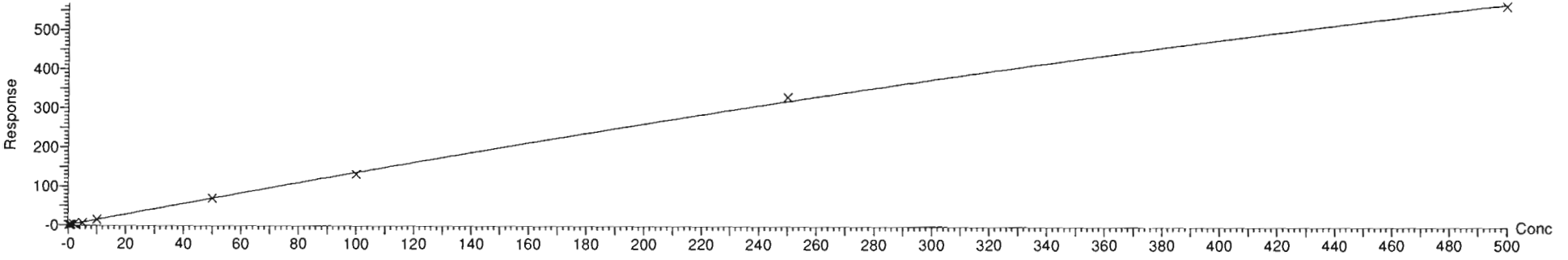
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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)
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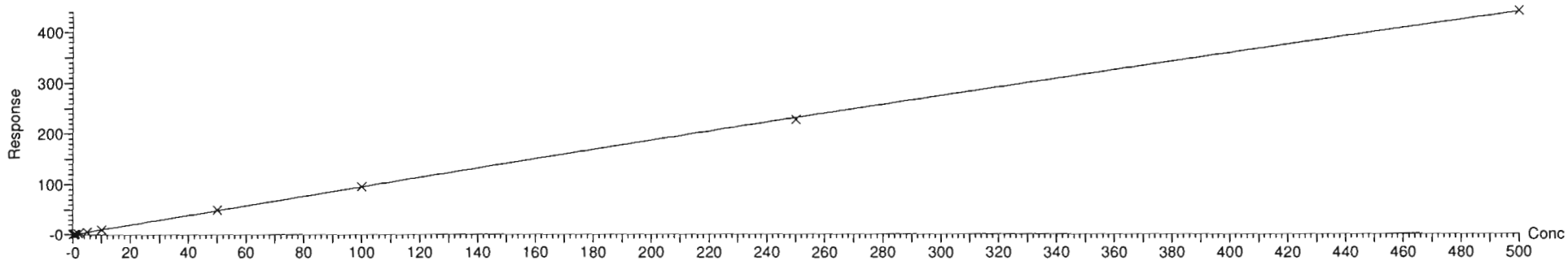


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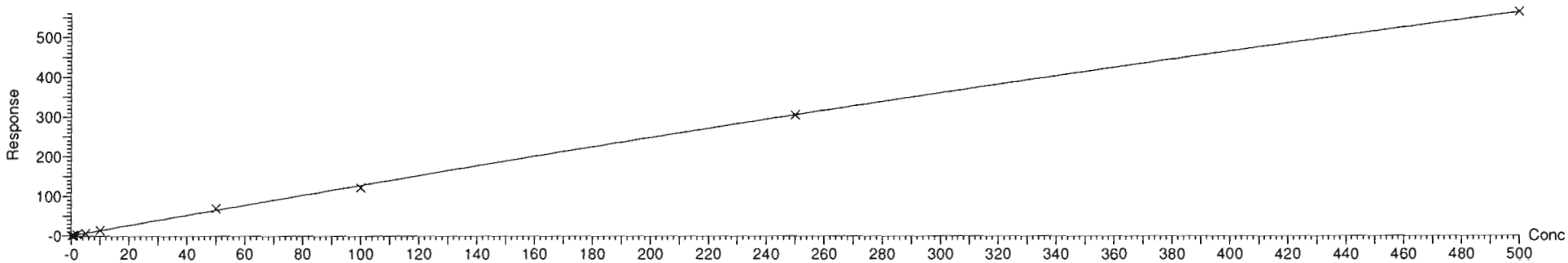
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



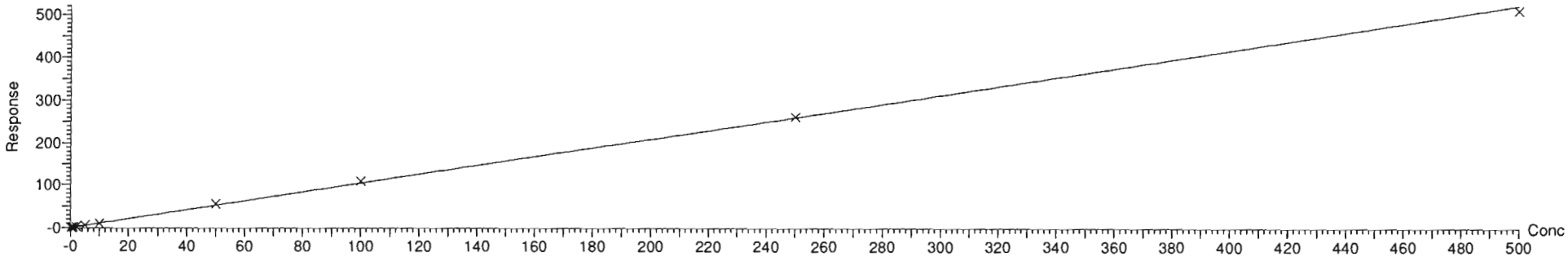
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Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

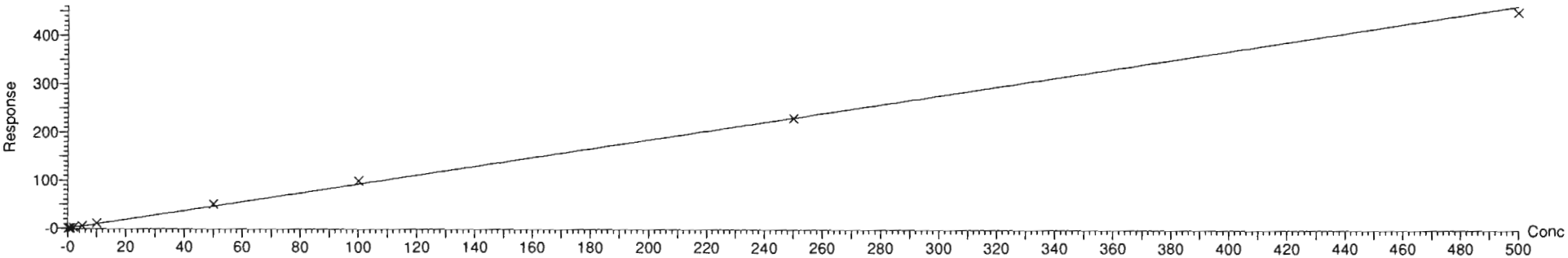
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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 08:07:56
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-27-20.cdb 28 Feb 2020 09:57:55

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



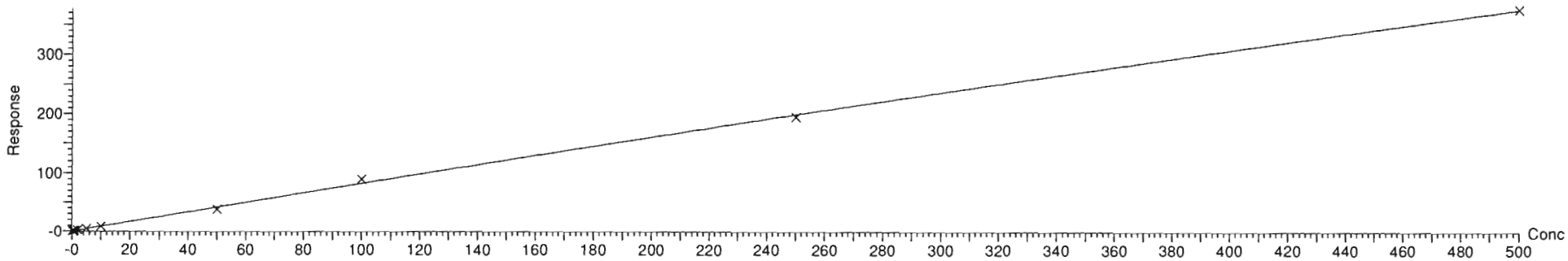
Compound name: PFUdA
Correlation coefficient: r = 0.999079, r^2 = 0.998158
Calibration curve: 0.924289 * x + 0.177335
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



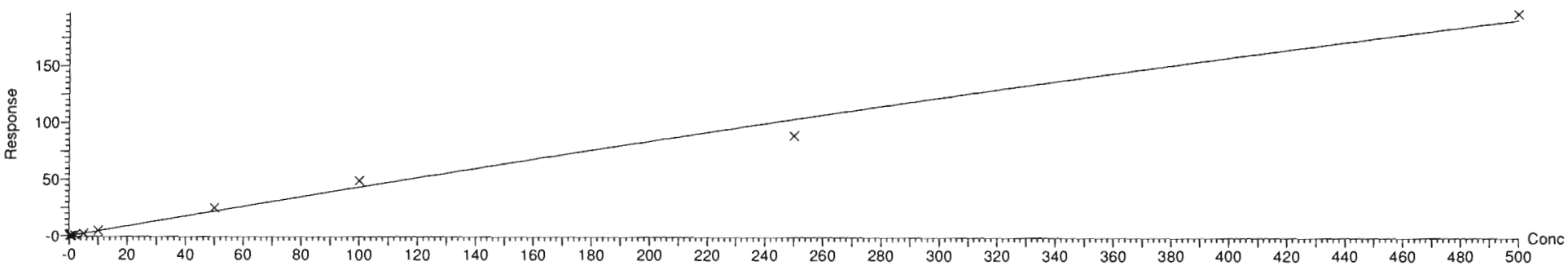
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



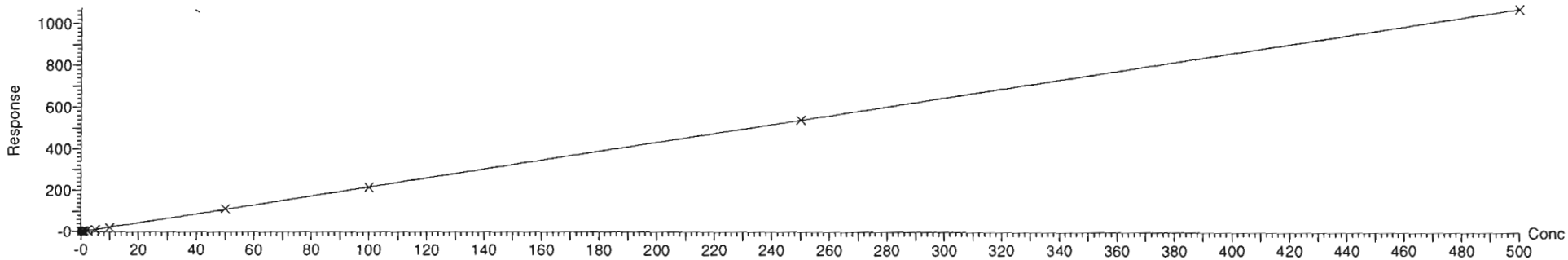
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.990533
Calibration curve: -0.000128075 * x^2 + 0.447138 * x + 0.0250385
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



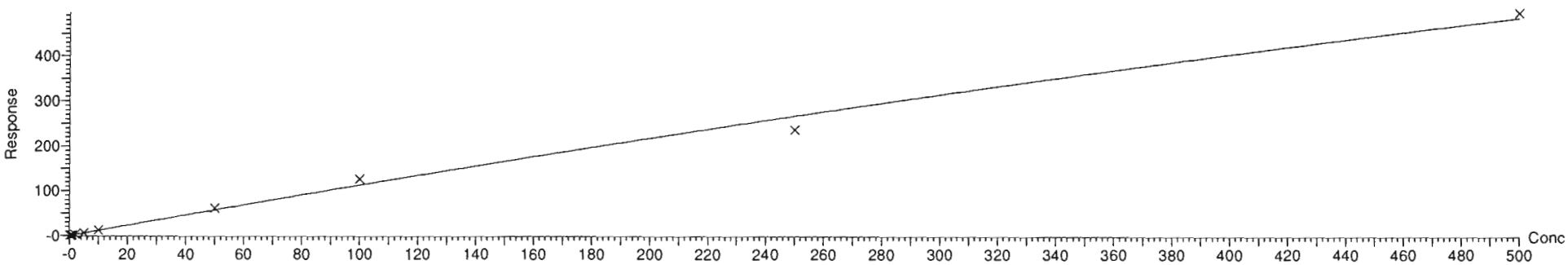
Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

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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



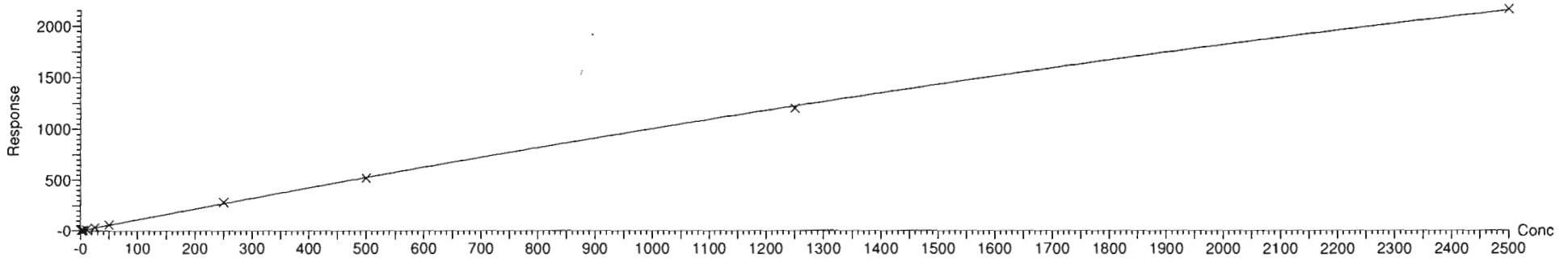
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.993601
Calibration curve: -0.000395328 * x^2 + 1.16883 * x + 0.0381445
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



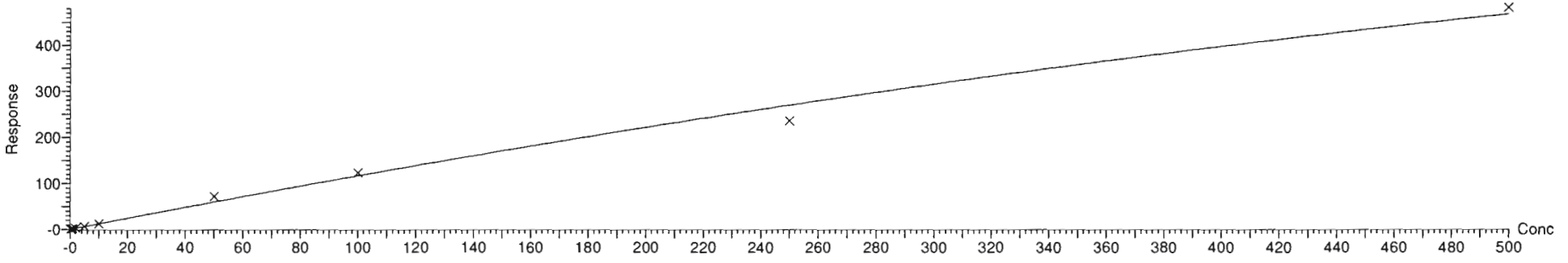
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Printed: Friday, February 28, 2020 10:13:53 Pacific Standard Time

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



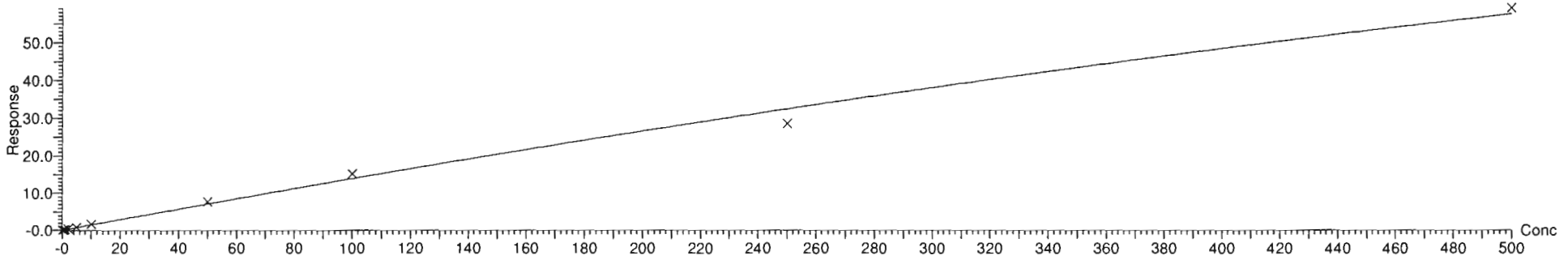
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.991155
Calibration curve: -0.000578829 * x^2 + 1.22195 * x + 0.123282
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



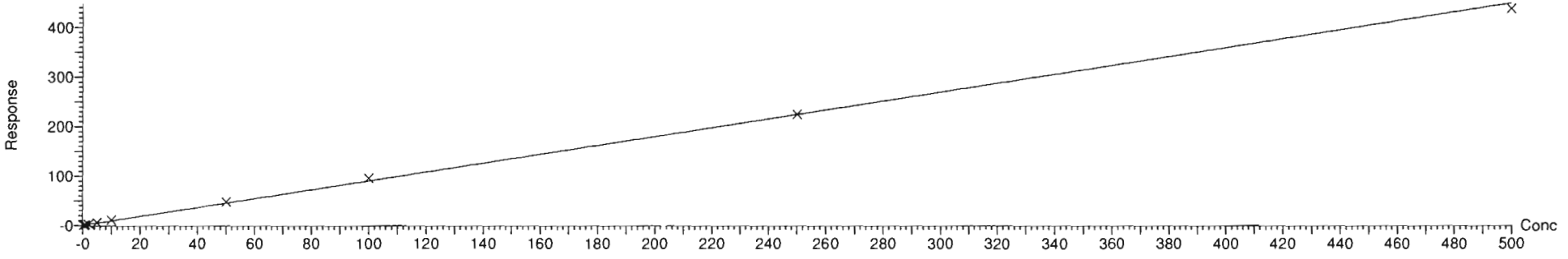
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Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:53 Pacific Standard Time

Compound name: 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

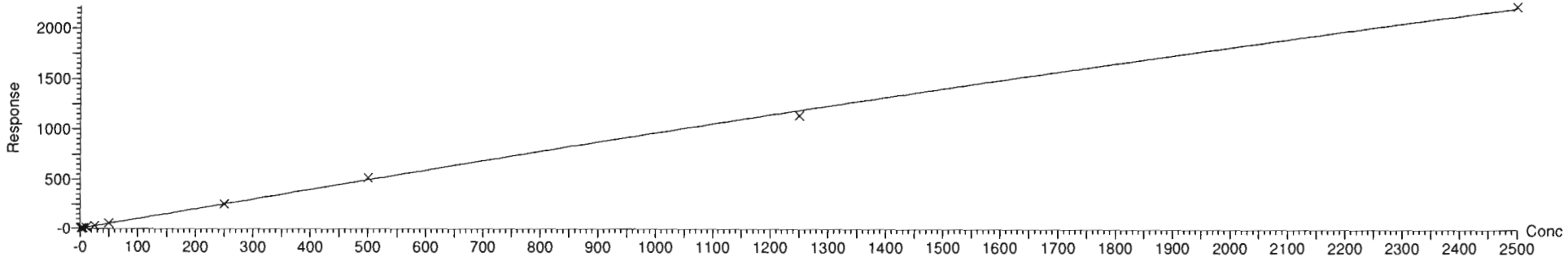


Vista Analytical Laboratory Q1

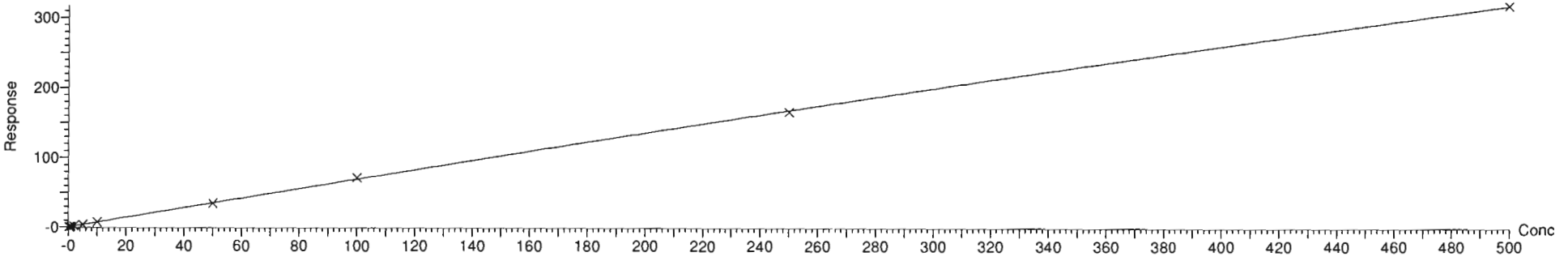
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Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
Printed: Friday, February 28, 2020 10:13:53 Pacific Standard Time

Compound name: 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



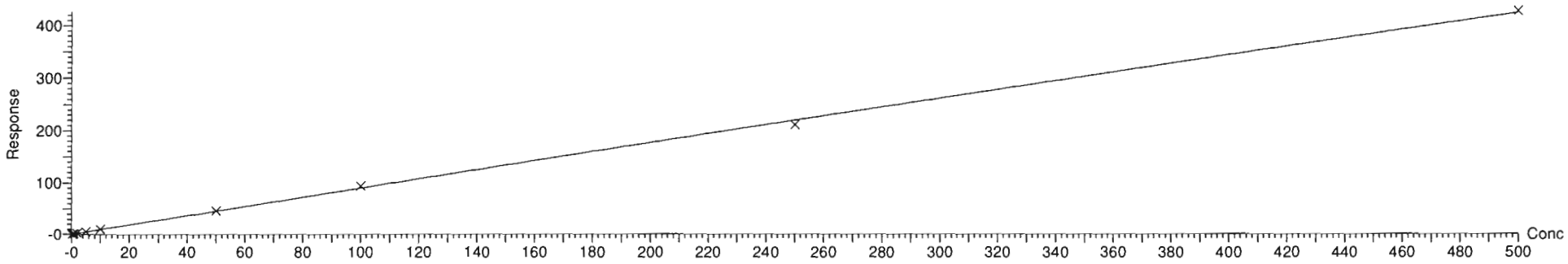
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999762
Calibration curve: -0.00014335 * x^2 + 0.706539 * x + 0.115848
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



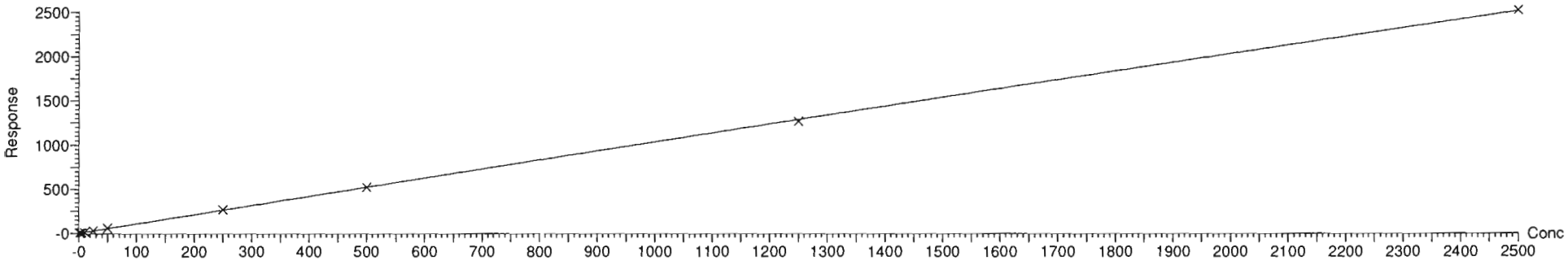
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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999135
Calibration curve: -0.000123507 * x^2 + 0.908012 * x + 0.0218764
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



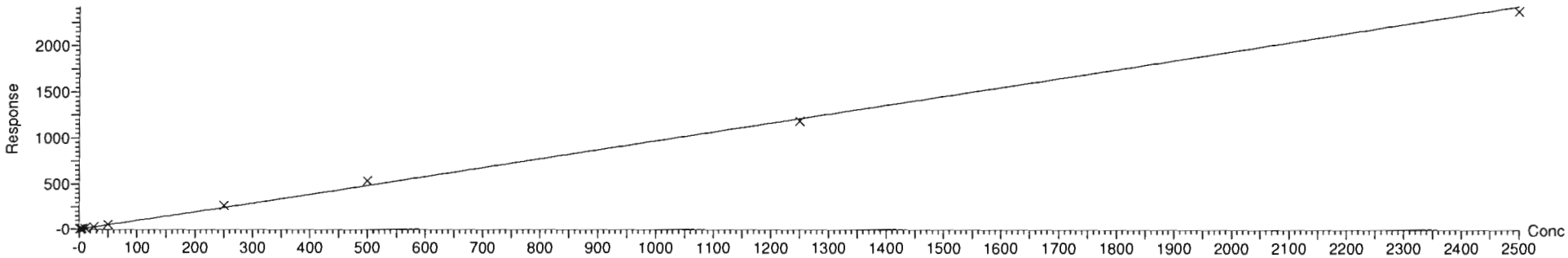
Compound name: N-MeFOSE
Coefficient of Determination: R^2 = 0.999771
Calibration curve: -1.98902e-005 * x^2 + 1.05441 * x + 0.358784
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-CRV.qld

Last Altered: Friday, February 28, 2020 09:57:55 Pacific Standard Time
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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



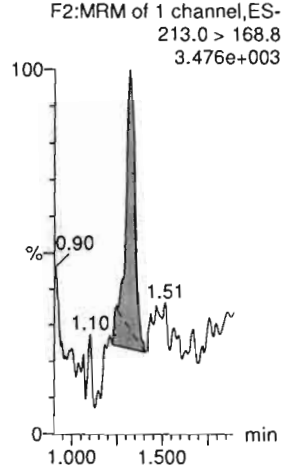
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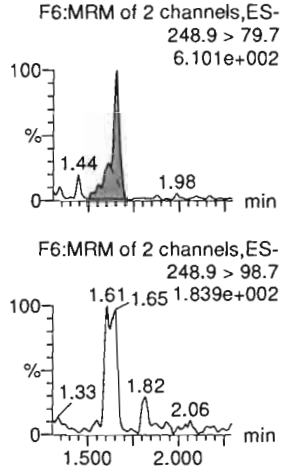
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Calibration: 28 Feb 2020 09:22:01

Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

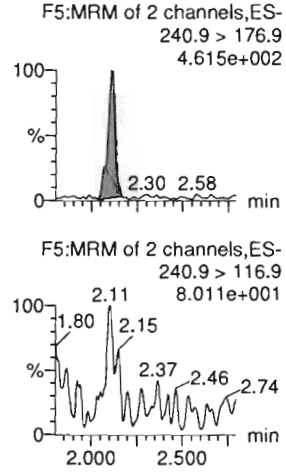
PFBA



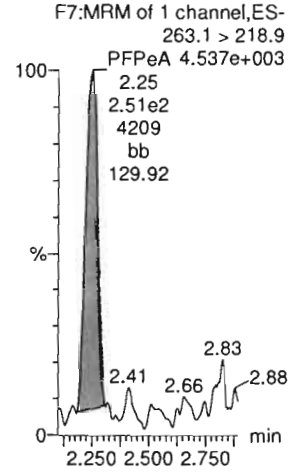
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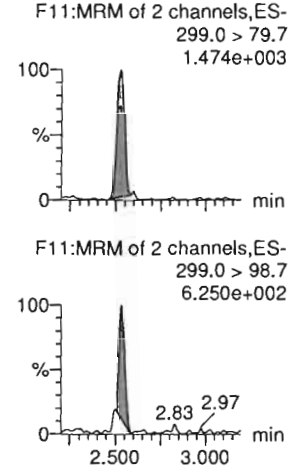
3:3 FTCA



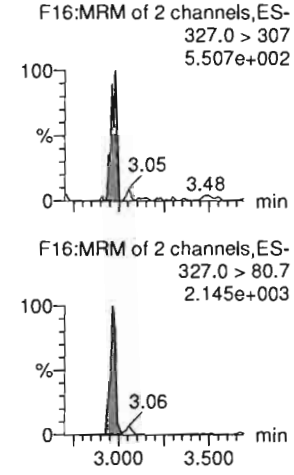
PFPeA



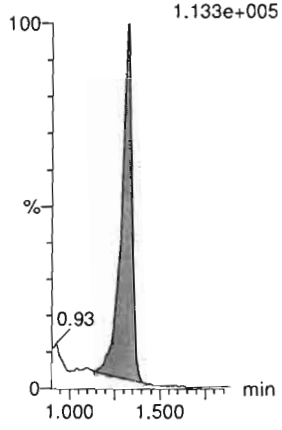
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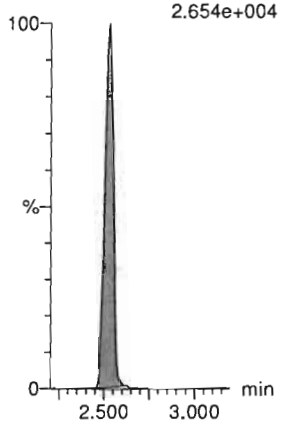
4:2 FTS



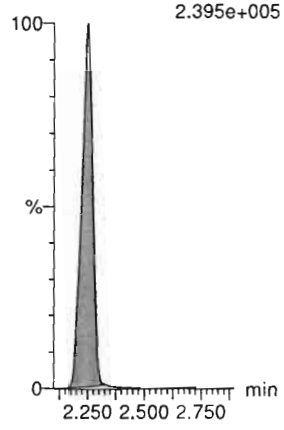
13C3-PFBA-EIS



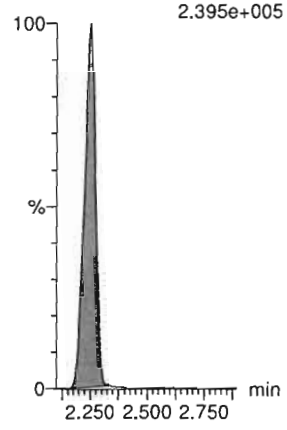
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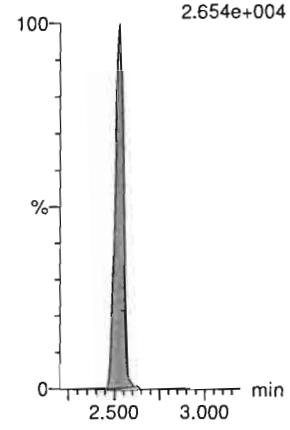
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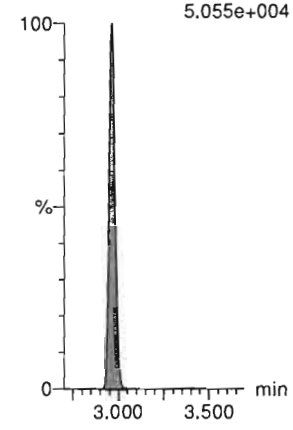
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

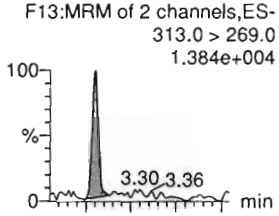


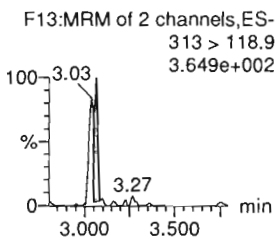
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

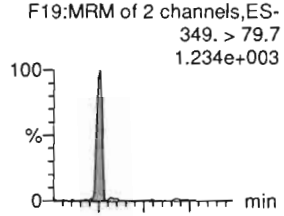
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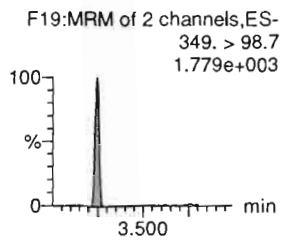
PFHxA



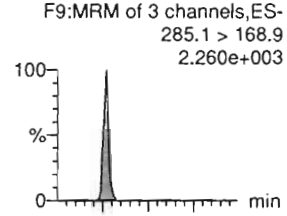


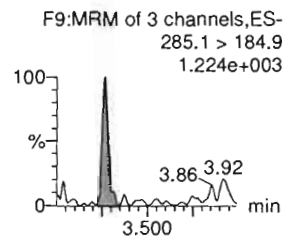
PFPeS



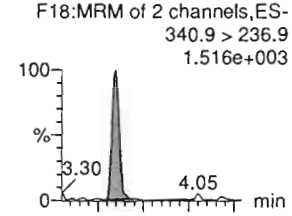


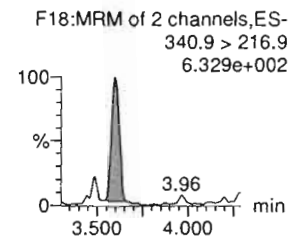
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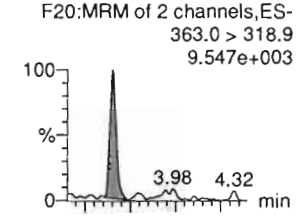


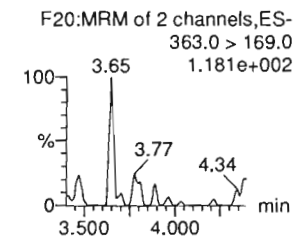
5:3 FTCA



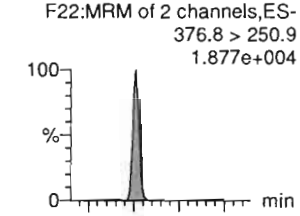


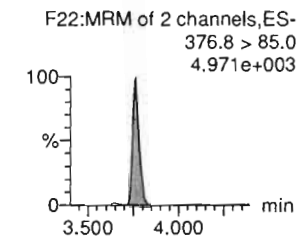
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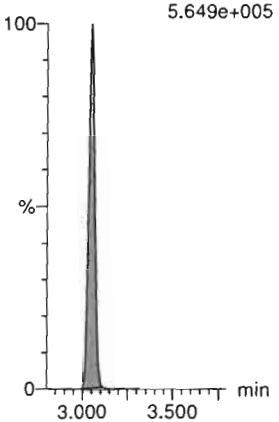


ADONA

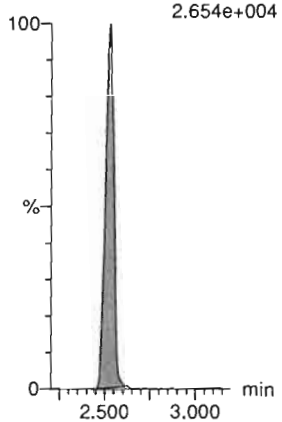




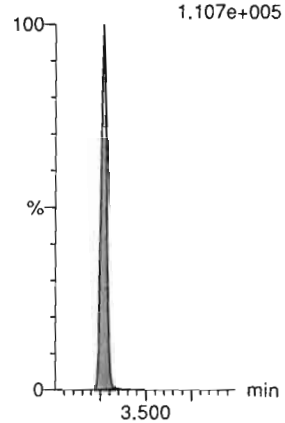
13C2-PFHxA-EIS



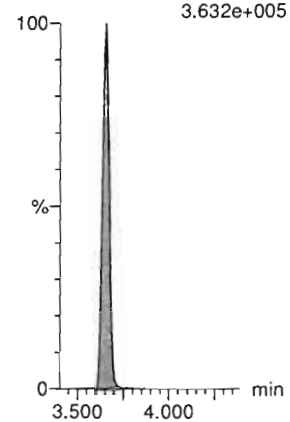
13C3-PFBS-EIS



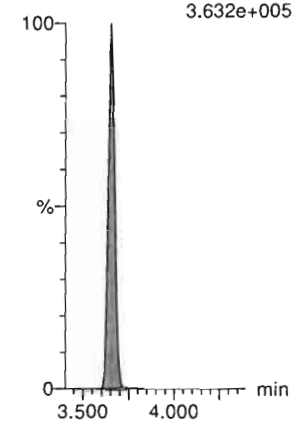
13C3-HFPO-DA-EIS



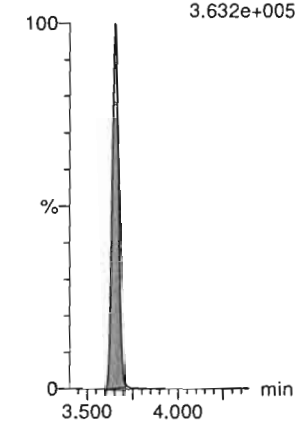
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

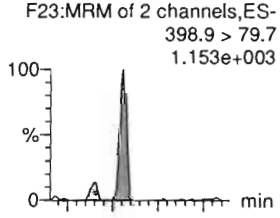


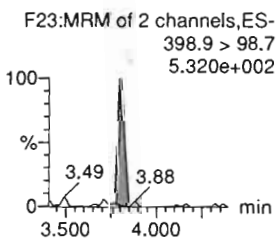
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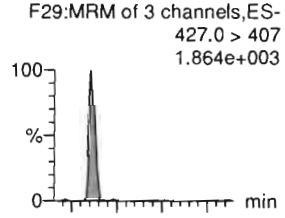
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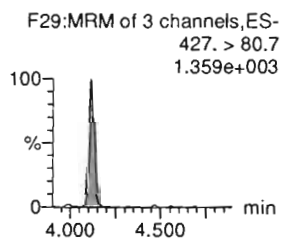
L-PFHxS



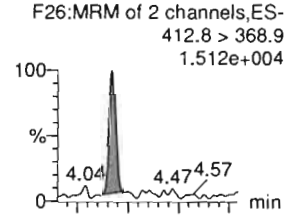


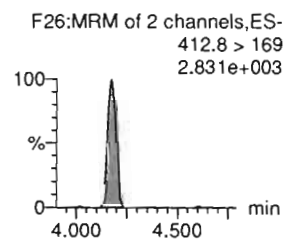
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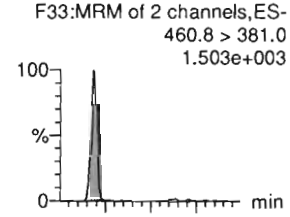


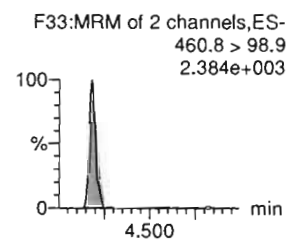
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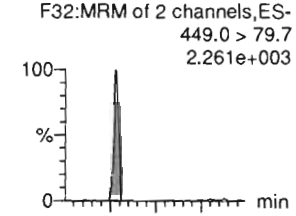


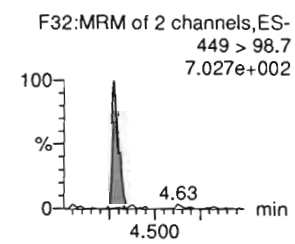
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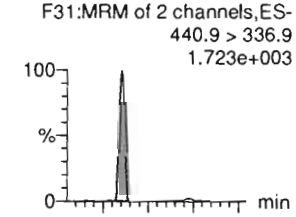


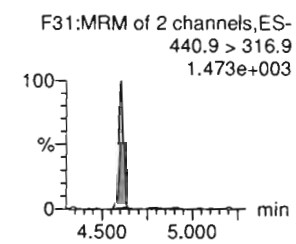
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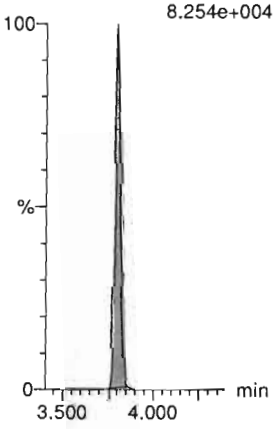


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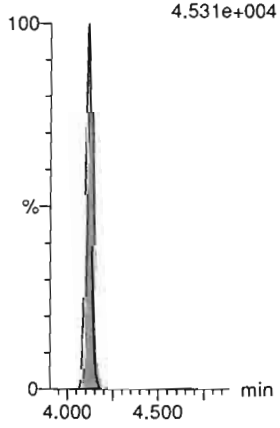




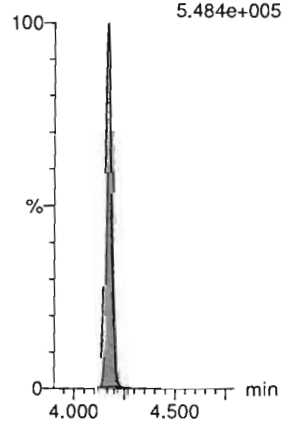
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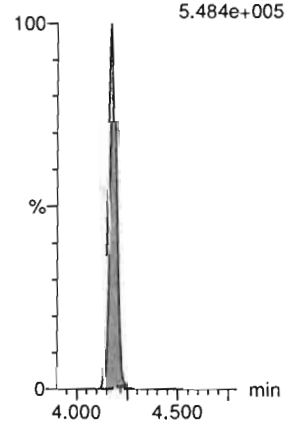
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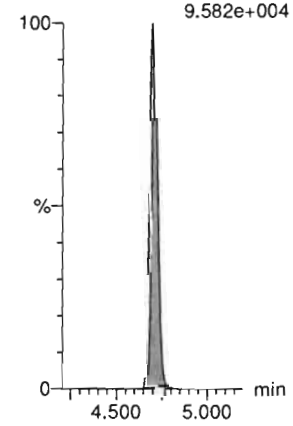
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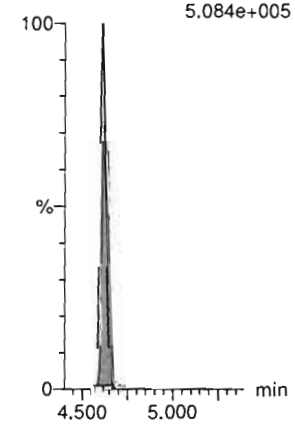
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13C8-PFOS-EIS



13C5-PFNA-EIS

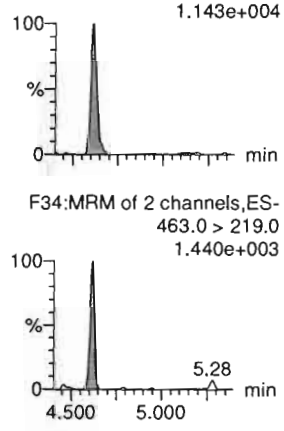


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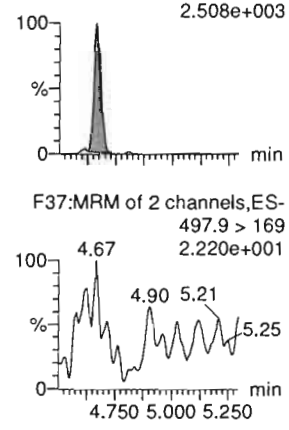
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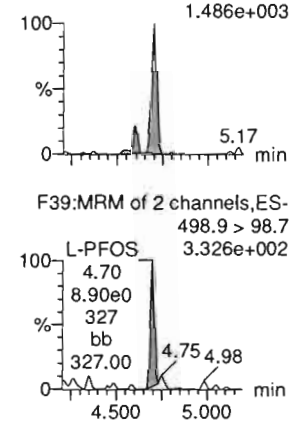
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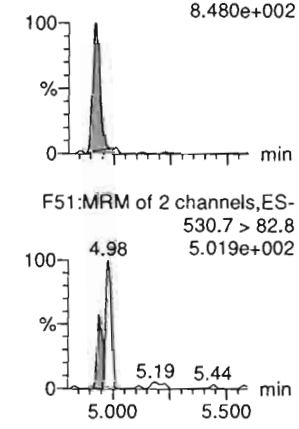
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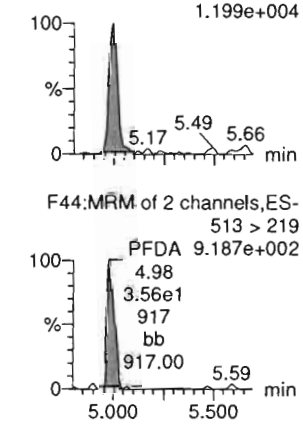
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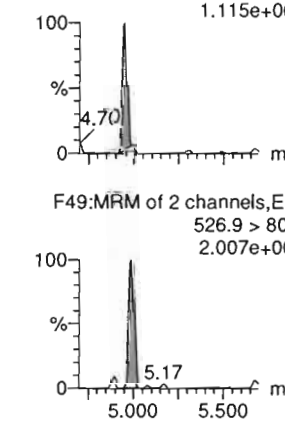
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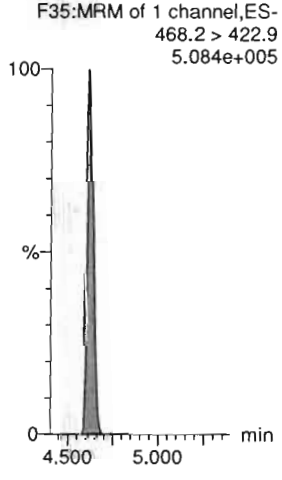
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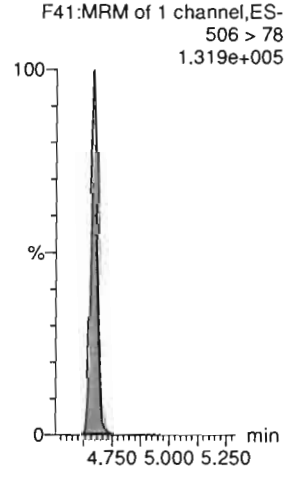
8:2 FTS



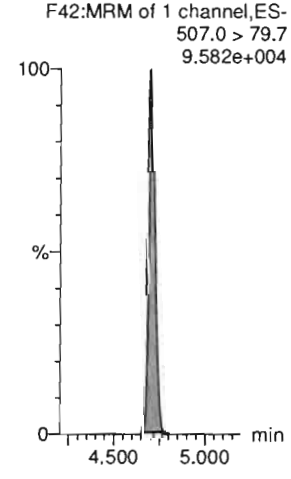
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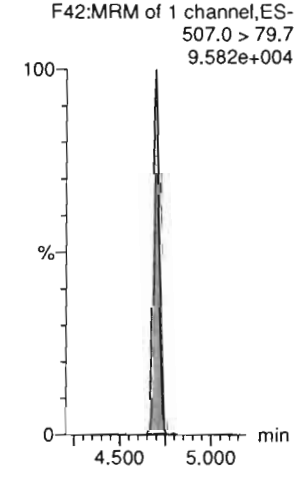
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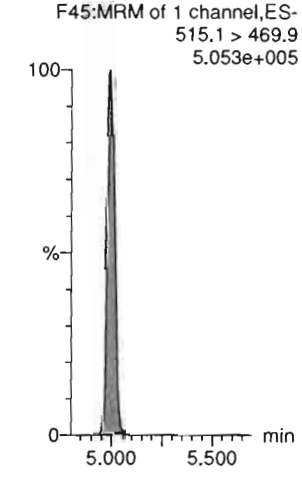
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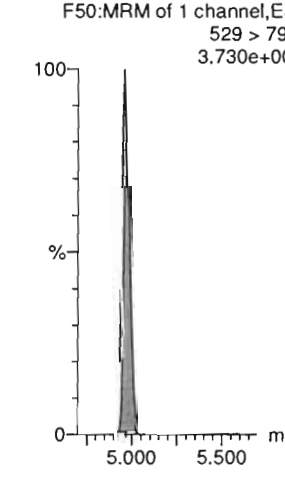
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13C2-PFDA-EIS



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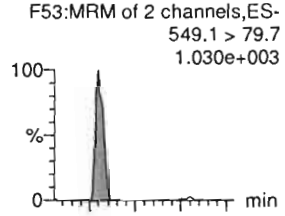


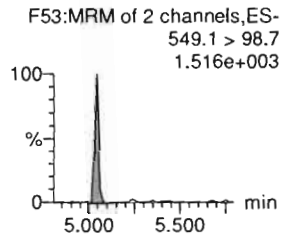
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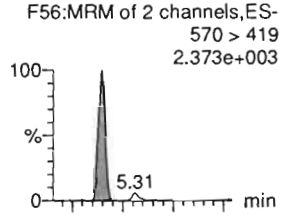
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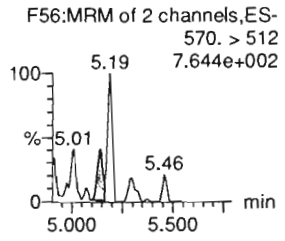
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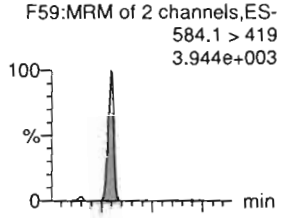


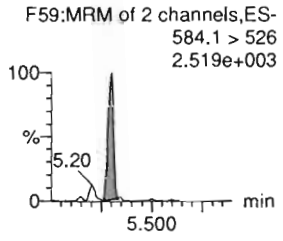
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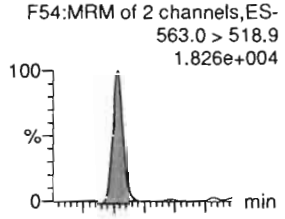


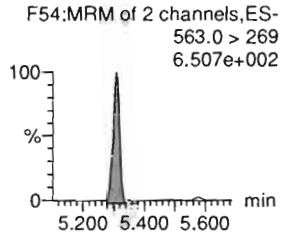
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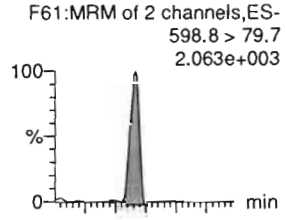


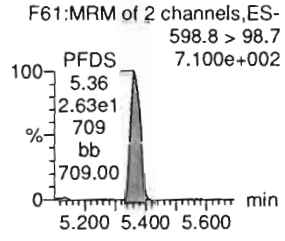
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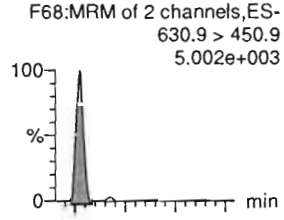


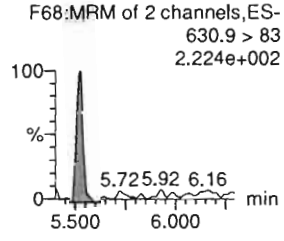
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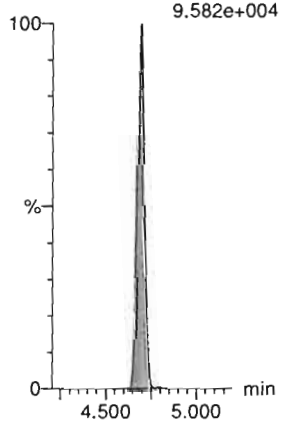


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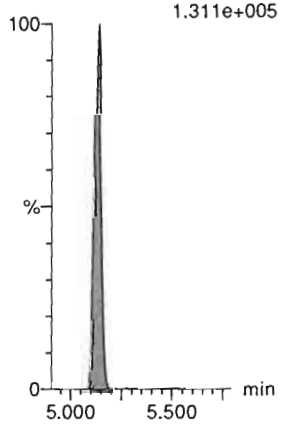




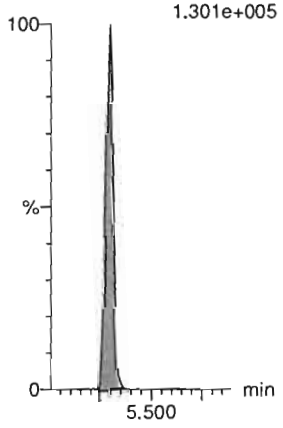
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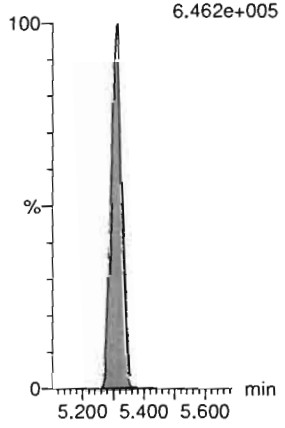
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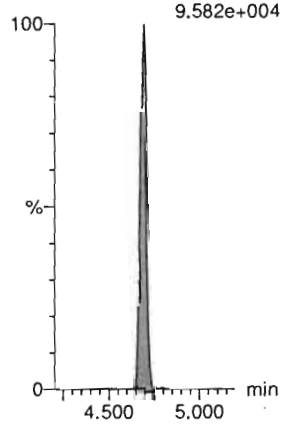
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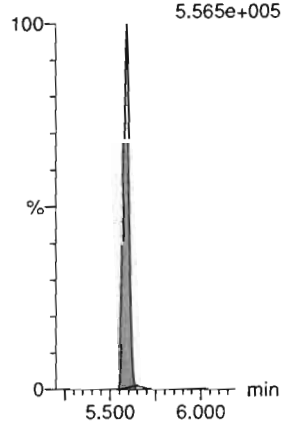
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13C8-PFOS-EIS



13C2-PFDoA-EIS

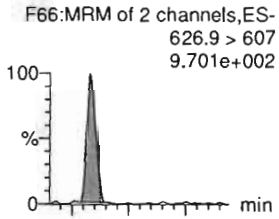


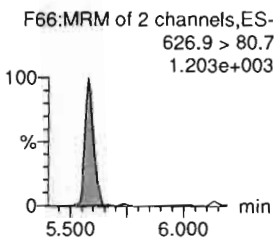
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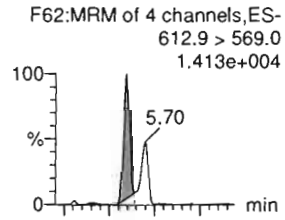
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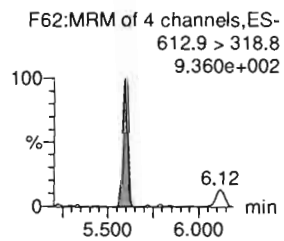
10:2 FTS



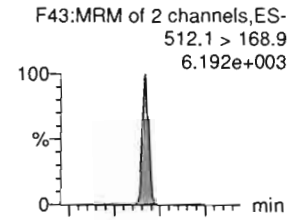


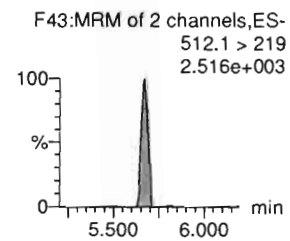
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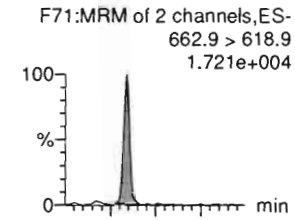


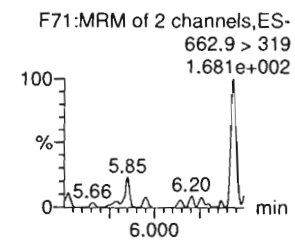
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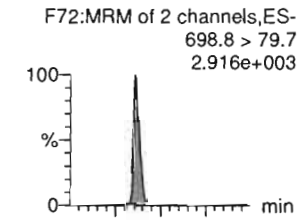


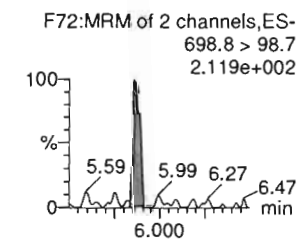
PFTrDA



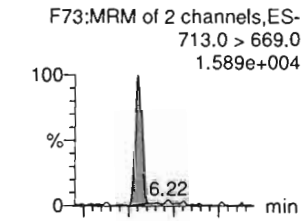


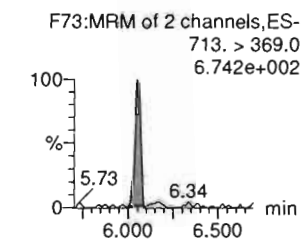
PFDoS



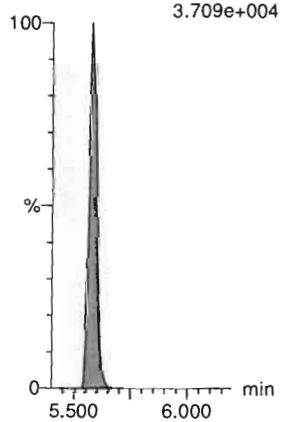


PFTeDA

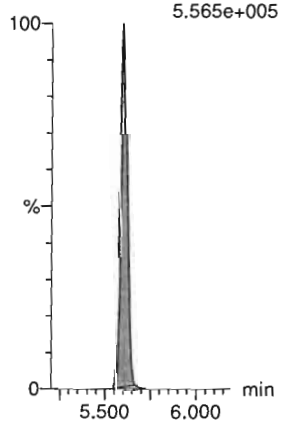




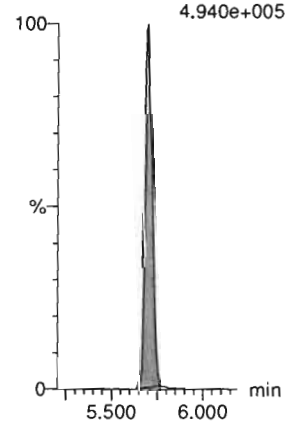
13C2-10:2 FTS-EIS



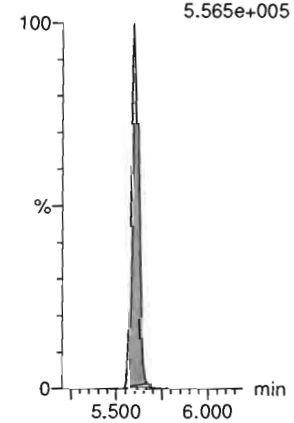
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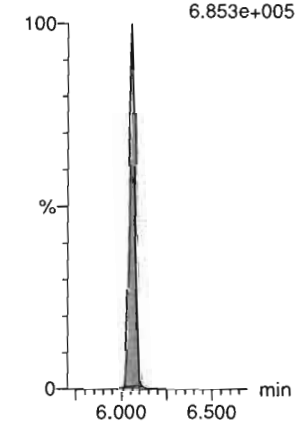
d3-N-MeFOSA-EIS



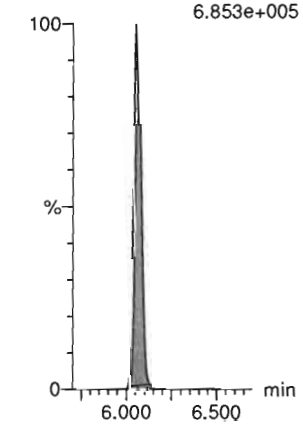
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

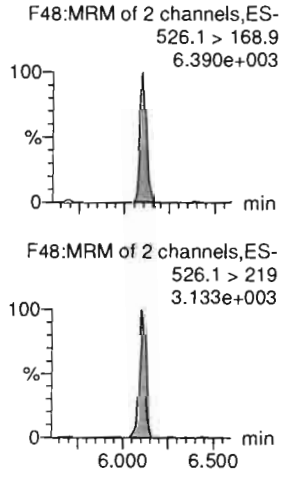


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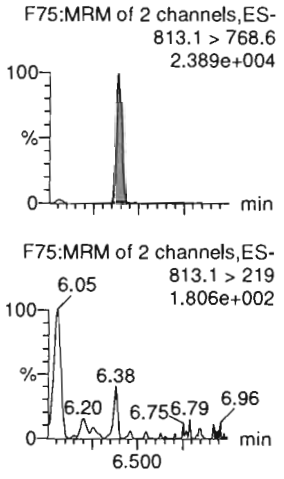
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

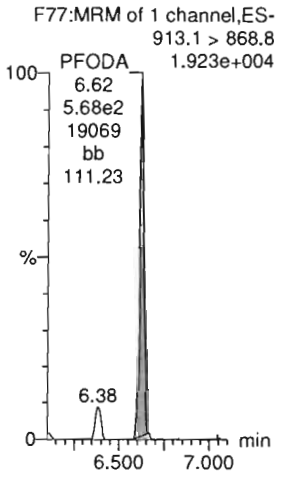
N-EtFOSA



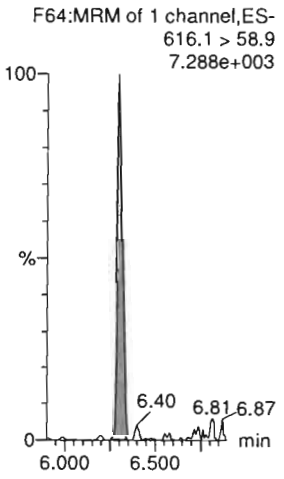
PFHxDA



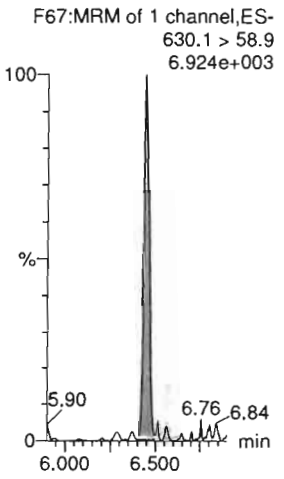
PFODA



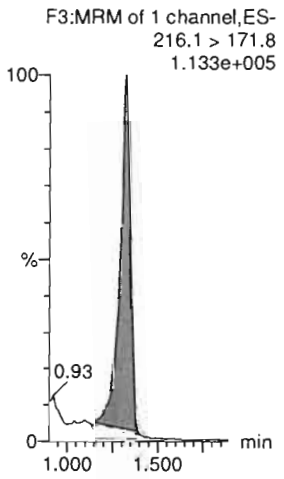
N-MeFOSE



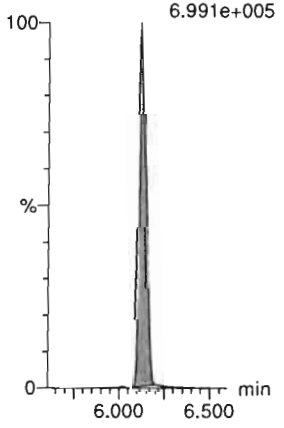
N-EtFOSE



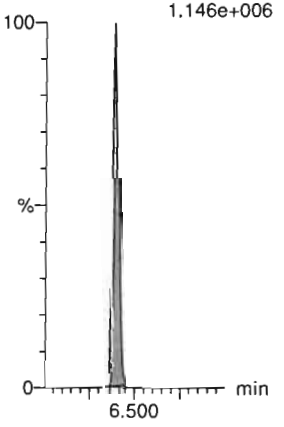
13C3-PFBA-RSD



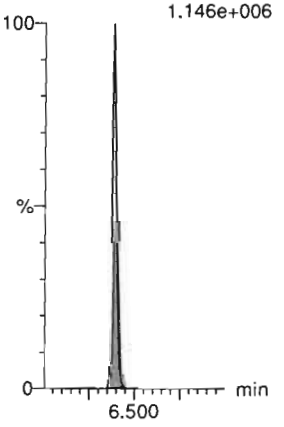
d5-N-ETFOSA-EIS



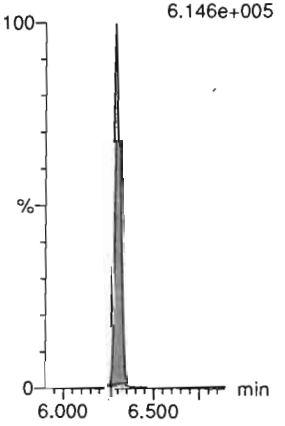
13C2-PFHxDA-EIS



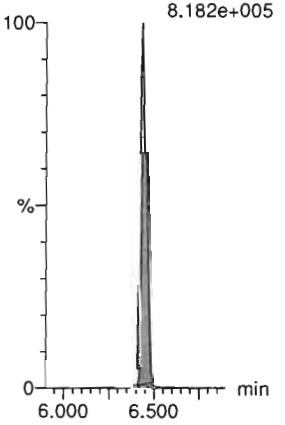
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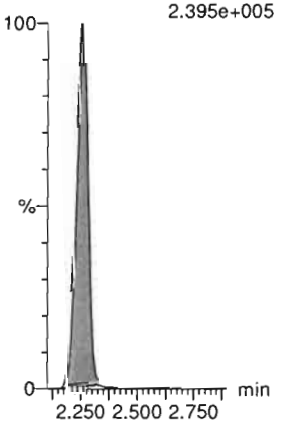
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

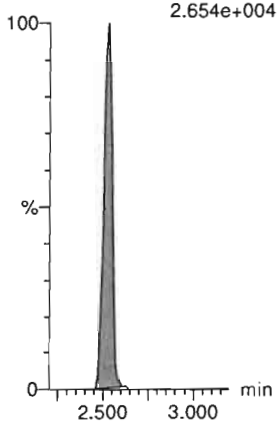


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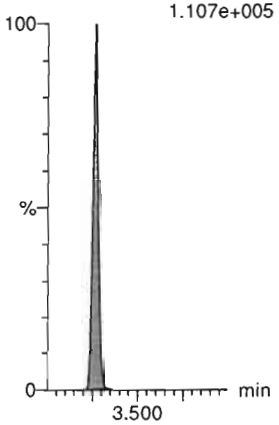
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Name: 200227P1-3, Date: 27-Feb-2020, Time: 15:42:07, ID: ST200227P1-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

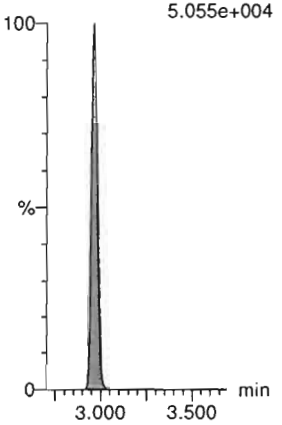
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.654e+004



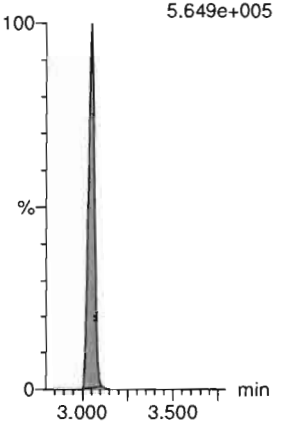
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.107e+005



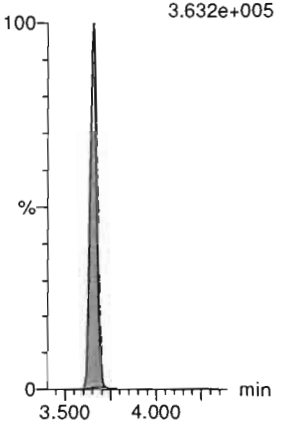
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.055e+004



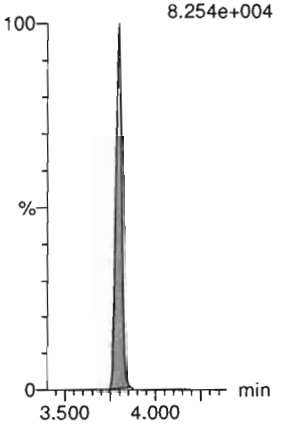
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.649e+005



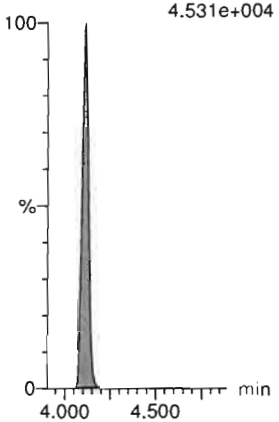
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.632e+005



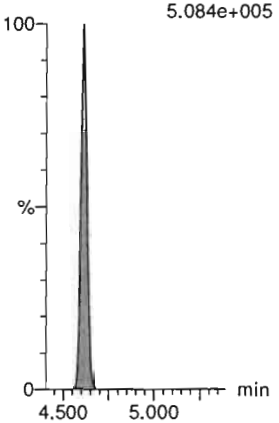
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.254e+004



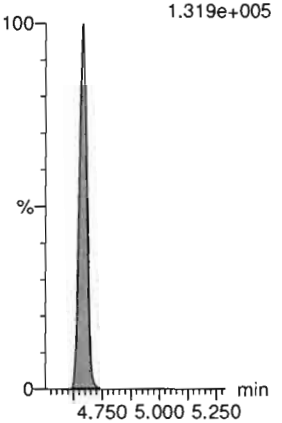
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.531e+004



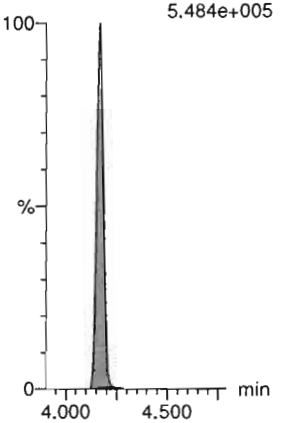
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.084e+005



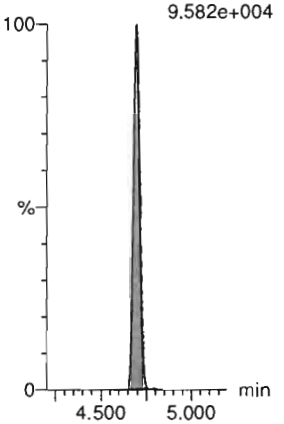
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.319e+005



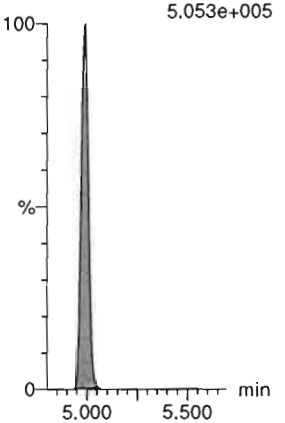
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.484e+005



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

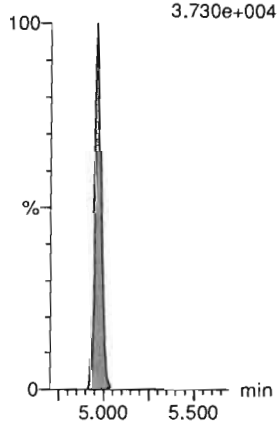


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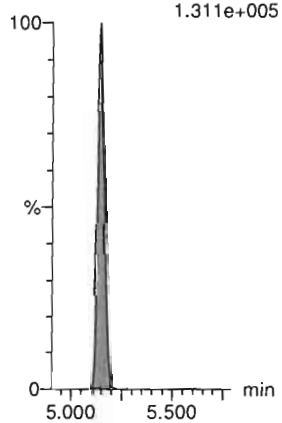
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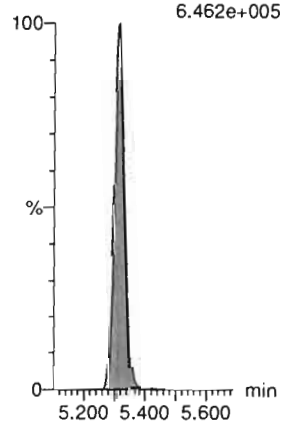
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.730e+004



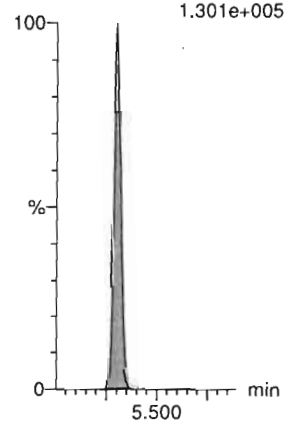
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.311e+005



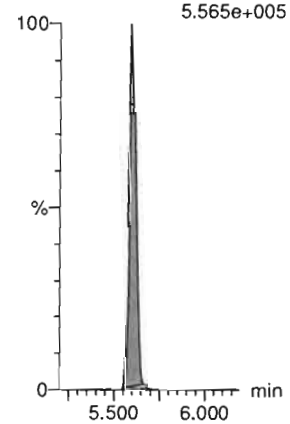
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.462e+005



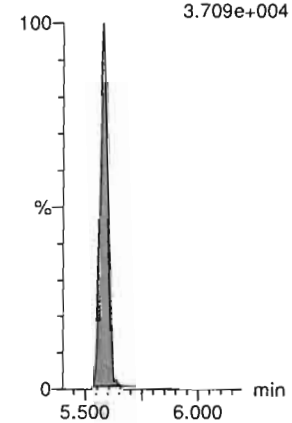
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.301e+005



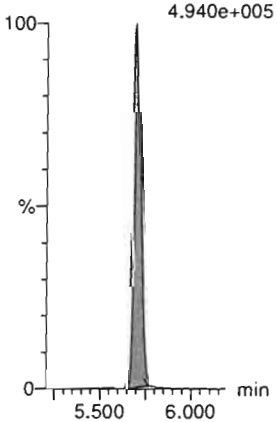
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.565e+005



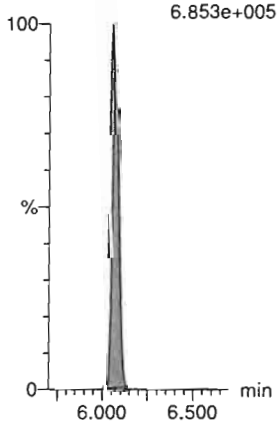
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.709e+004



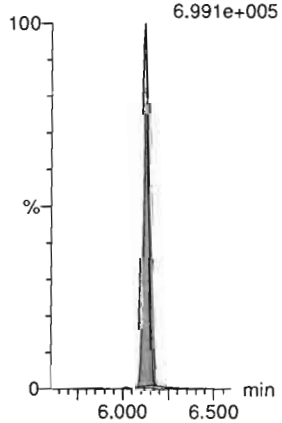
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.940e+005



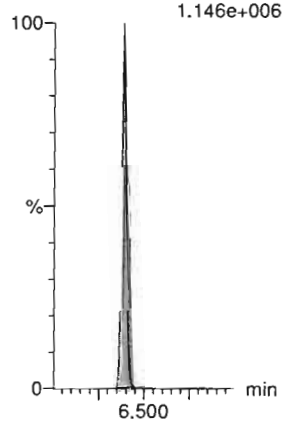
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.853e+005



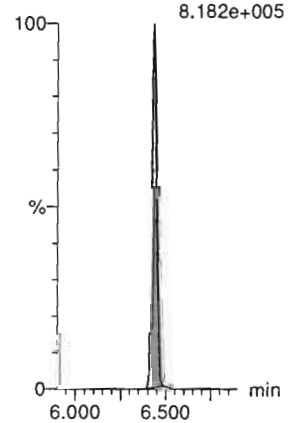
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.991e+005



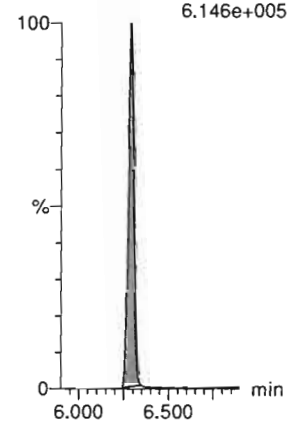
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.146e+006



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

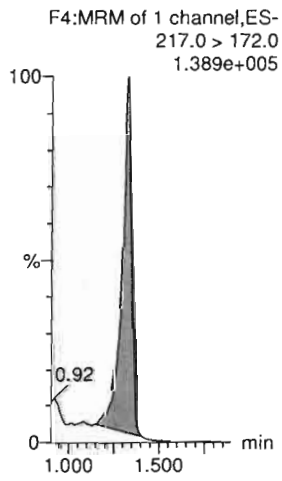


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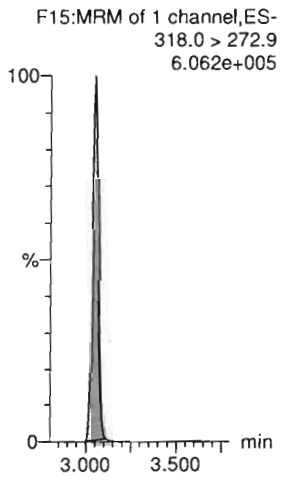
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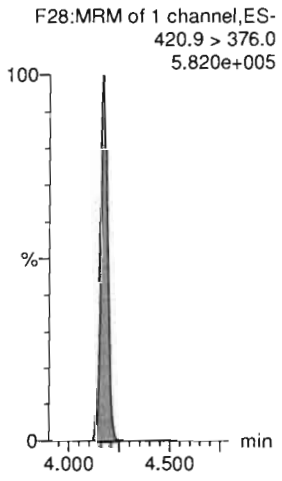
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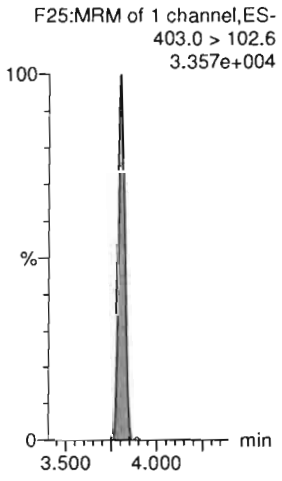
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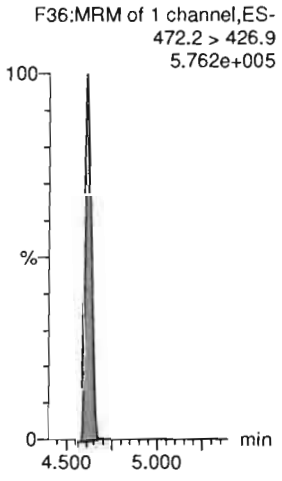
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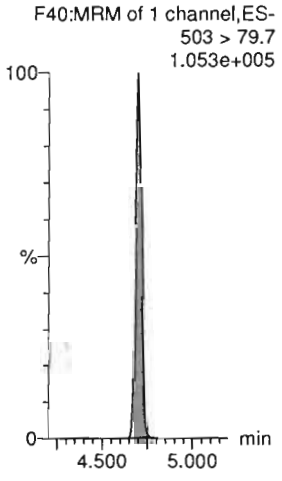
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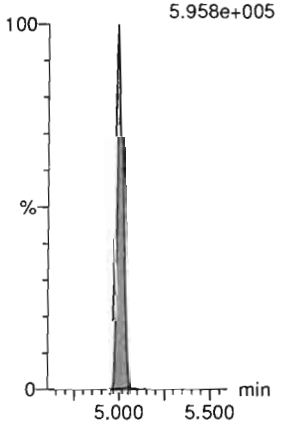
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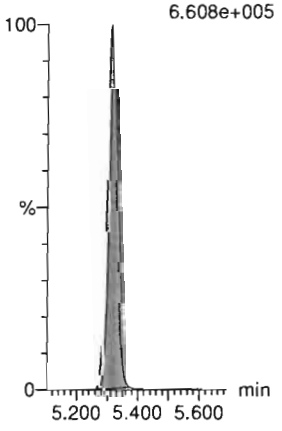
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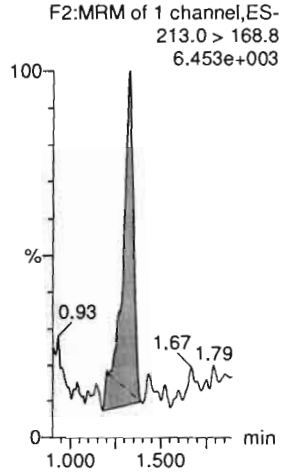


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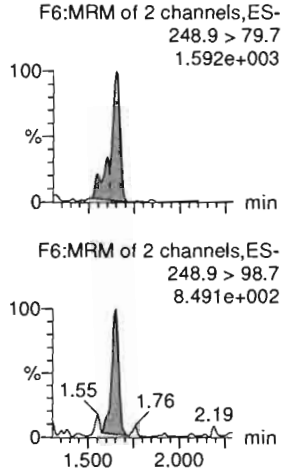
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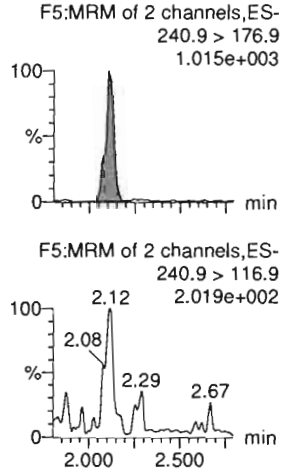
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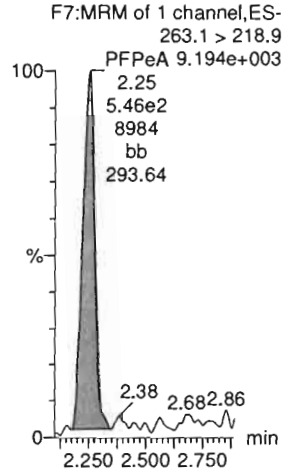
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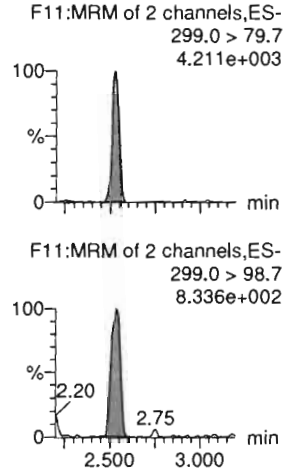
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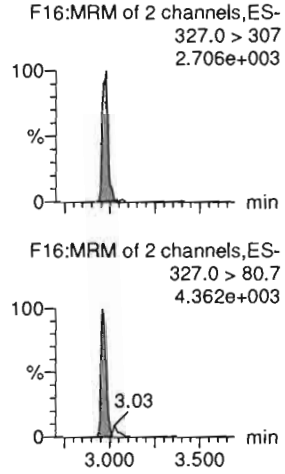
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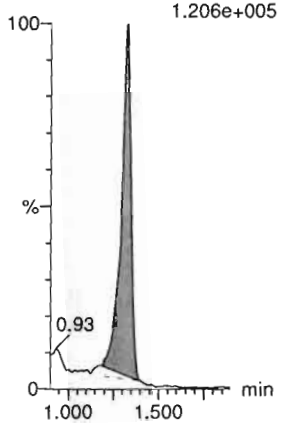
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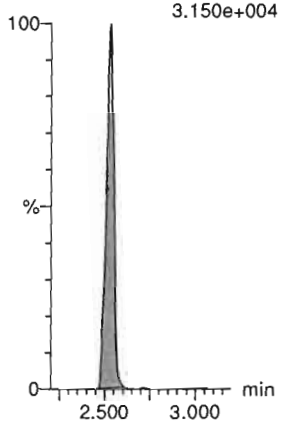
4:2 FTS



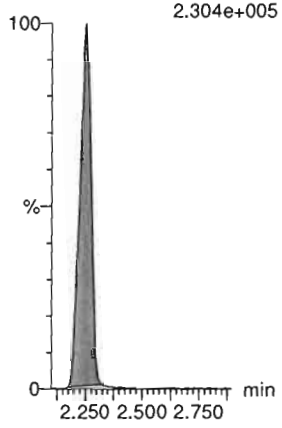
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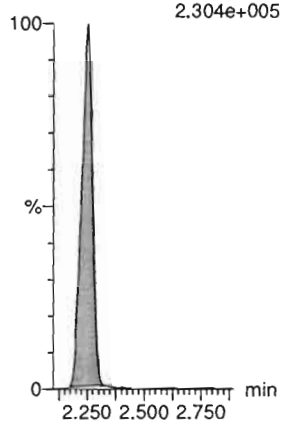
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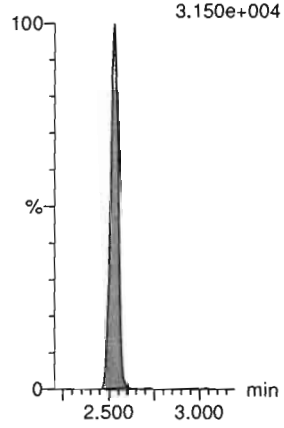
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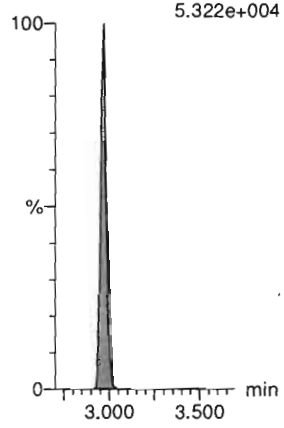
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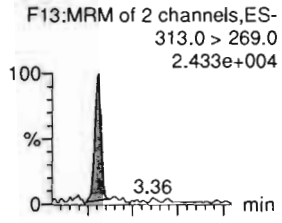


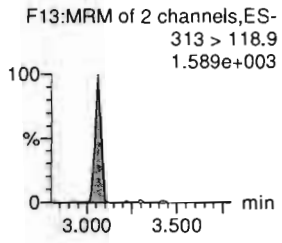
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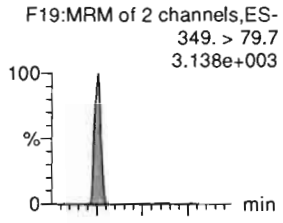
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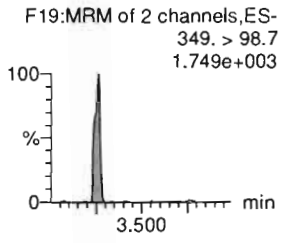
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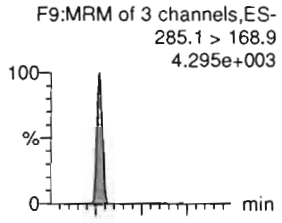


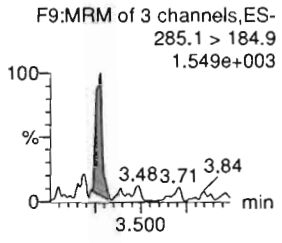
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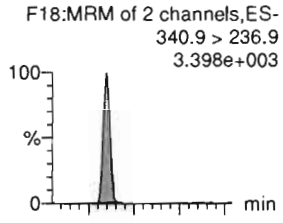


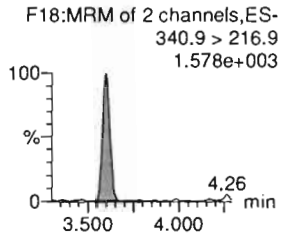
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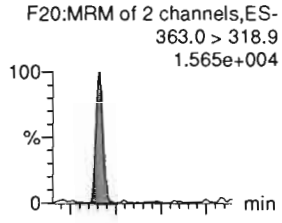


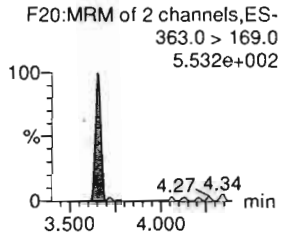
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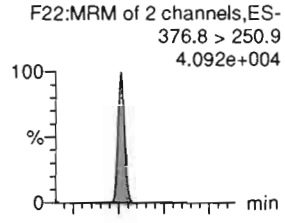


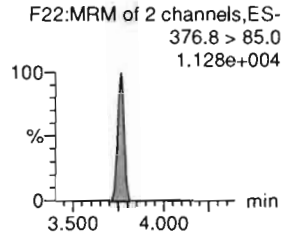
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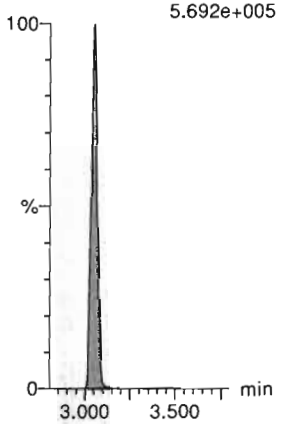


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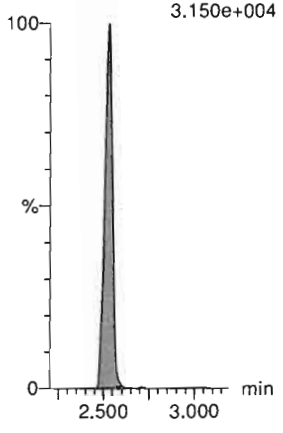




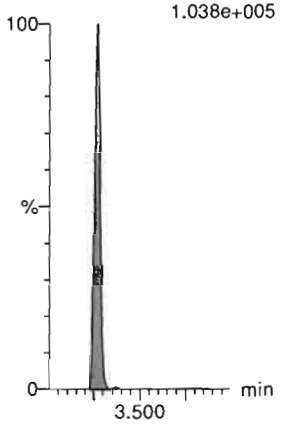
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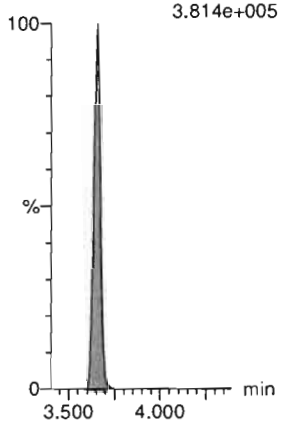
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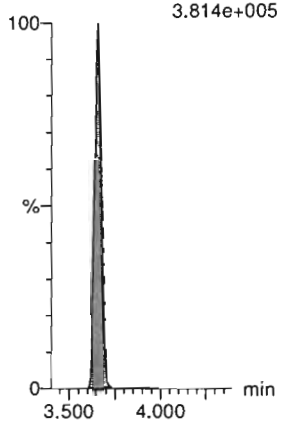
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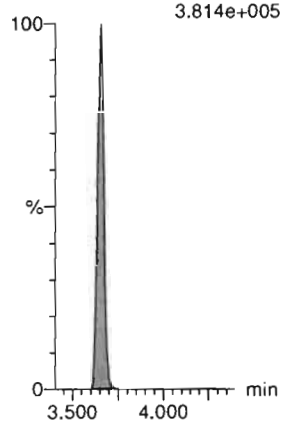
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13C4-PFHpA-EIS



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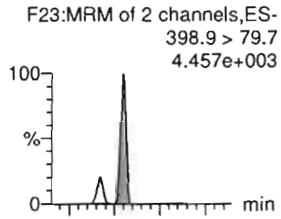


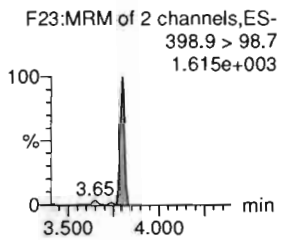
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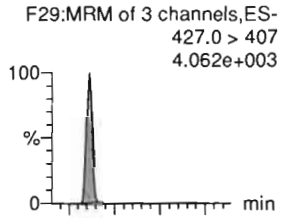
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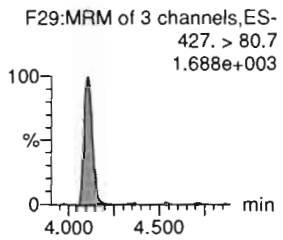
L-PFHxS



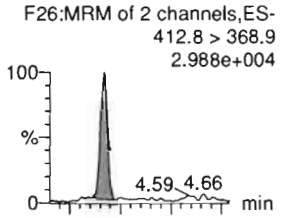


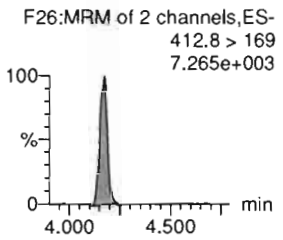
6:2 FTS



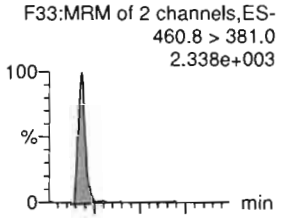


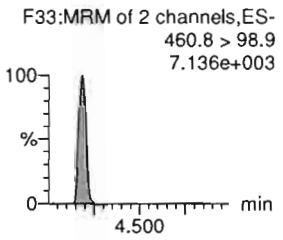
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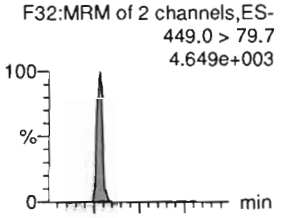


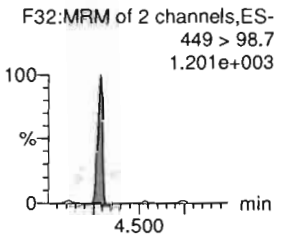
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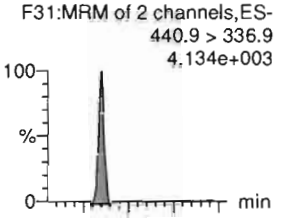


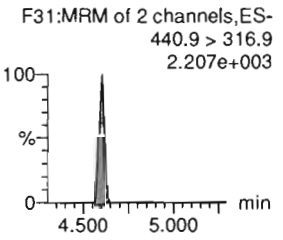
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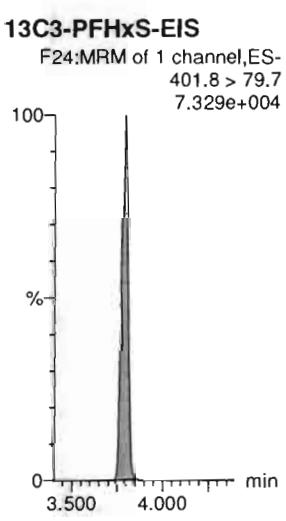


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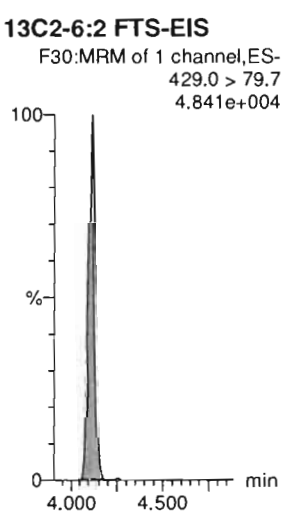




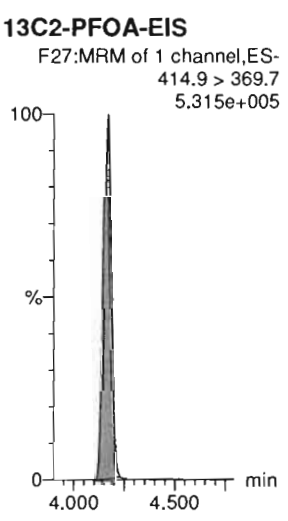
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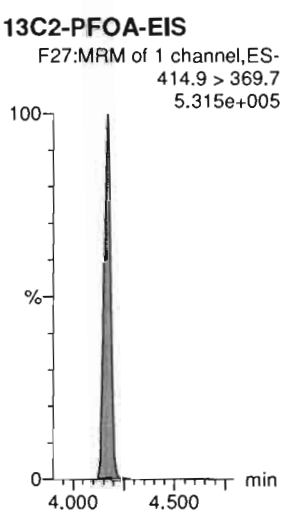
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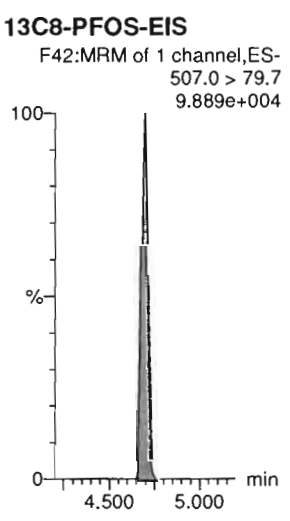
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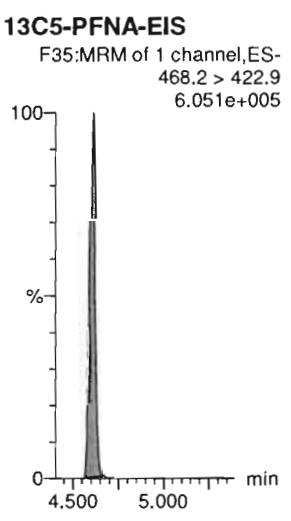
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13C8-PFOS-EIS



13C5-PFNA-EIS

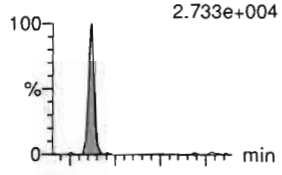


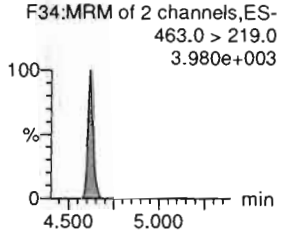
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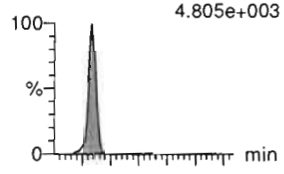
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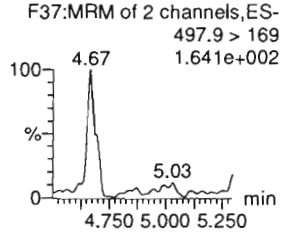
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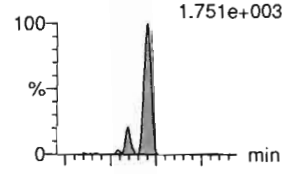


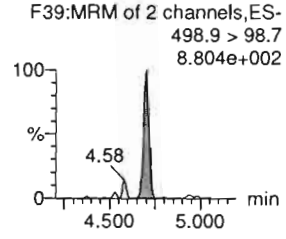
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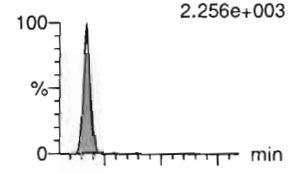


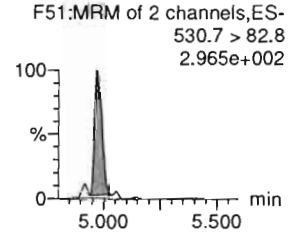
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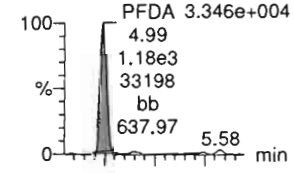


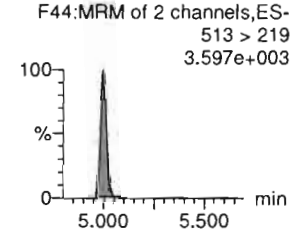
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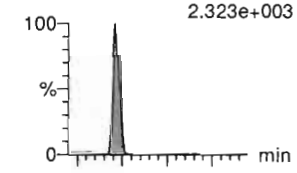


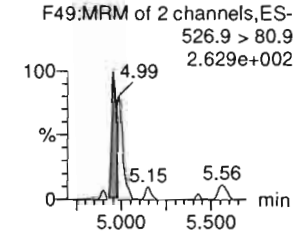
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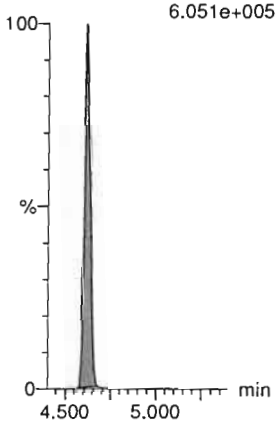


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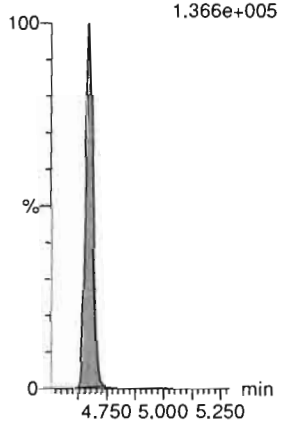




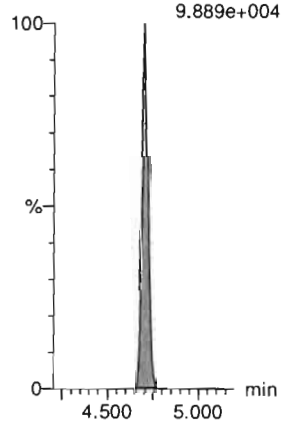
13C5-PFNA-EIS



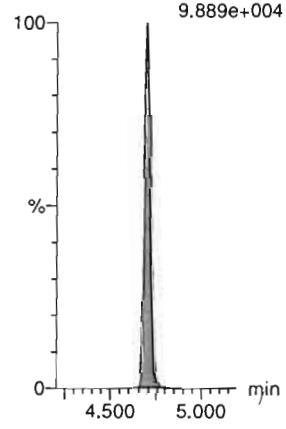
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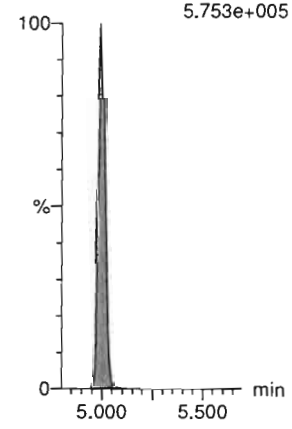
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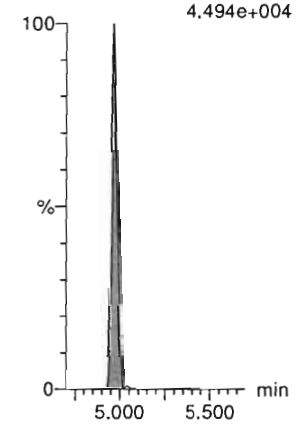
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

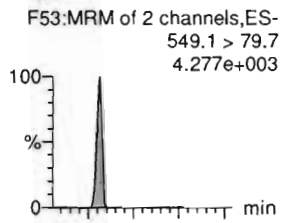


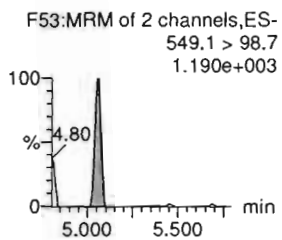
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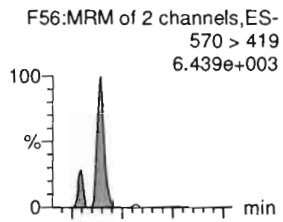
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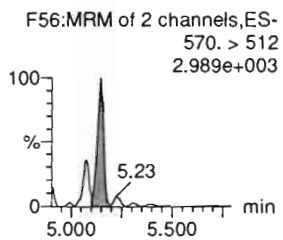
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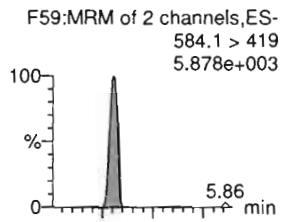


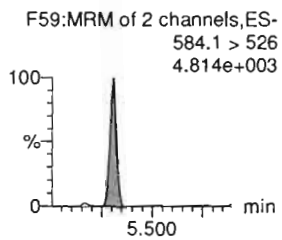
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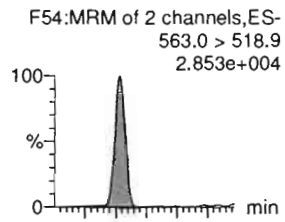


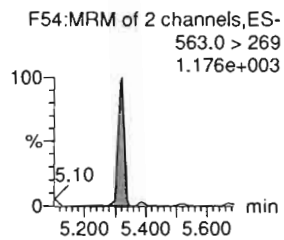
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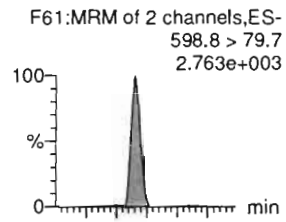


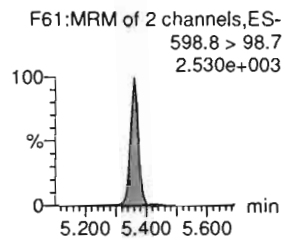
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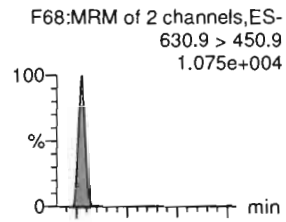


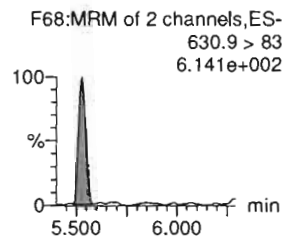
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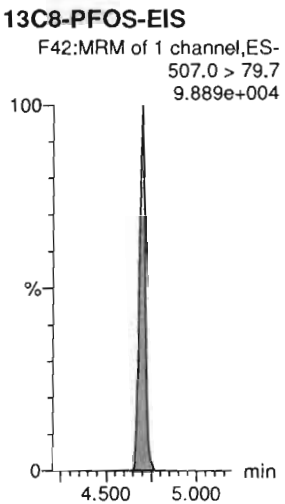


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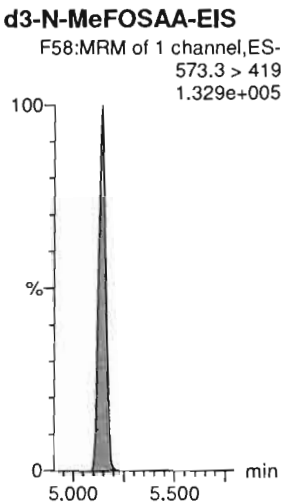




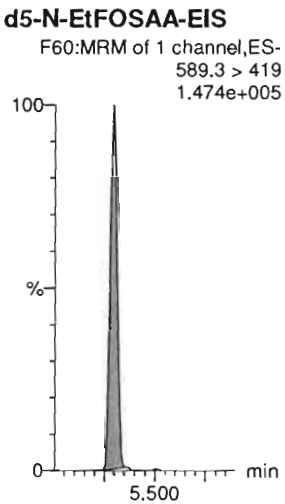
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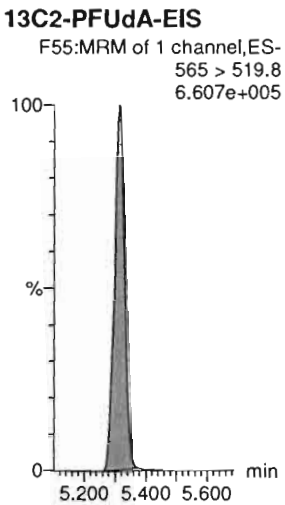
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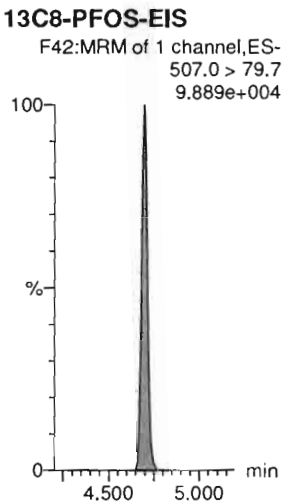
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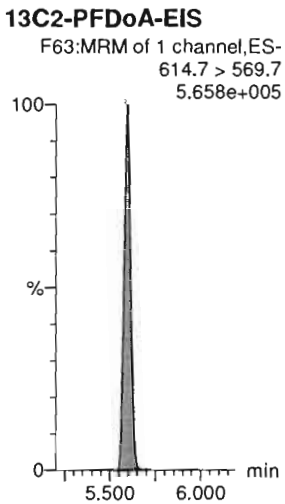
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13C8-PFOS-EIS



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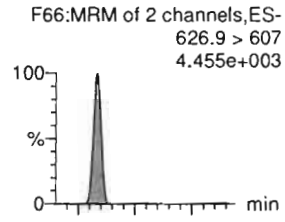


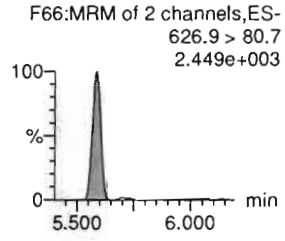
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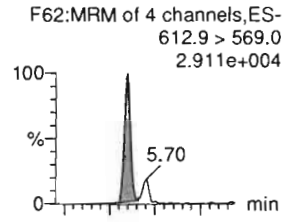
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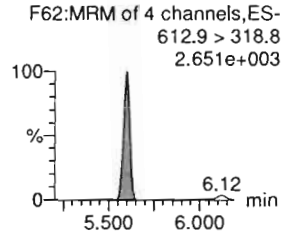
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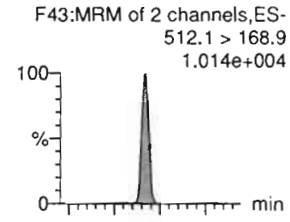


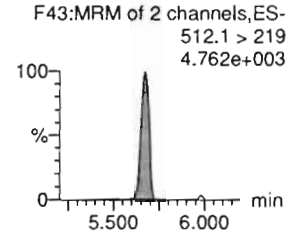
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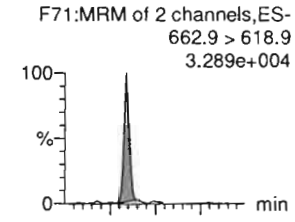


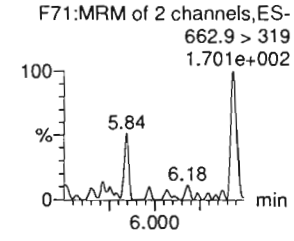
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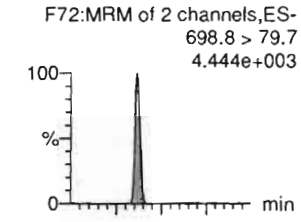


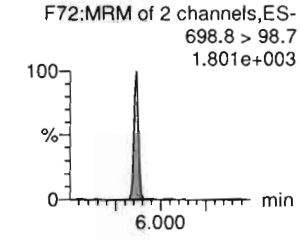
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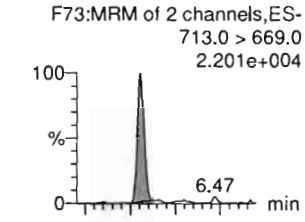


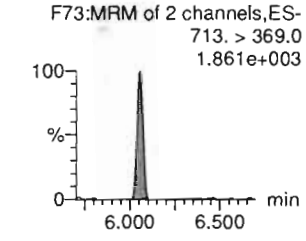
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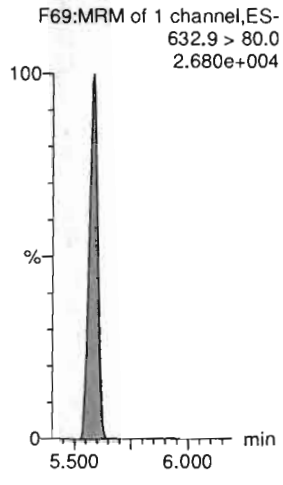


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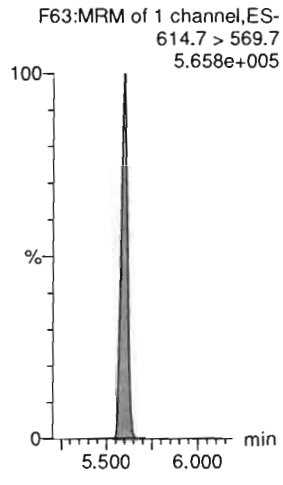




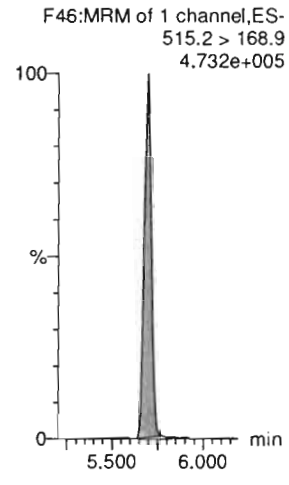
13C2-10:2 FTS-EIS



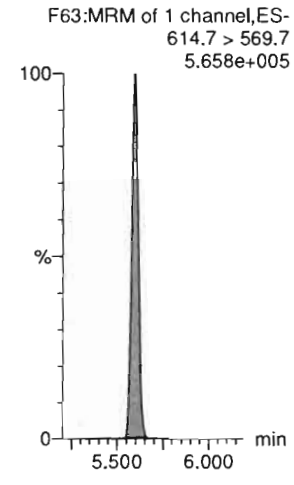
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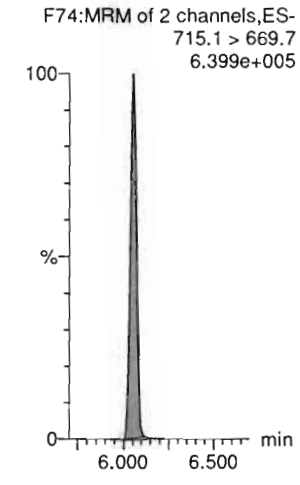
d3-N-MeFOSA-EIS



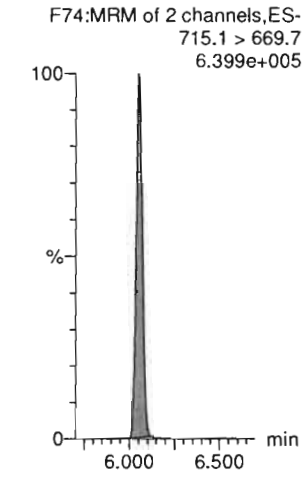
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

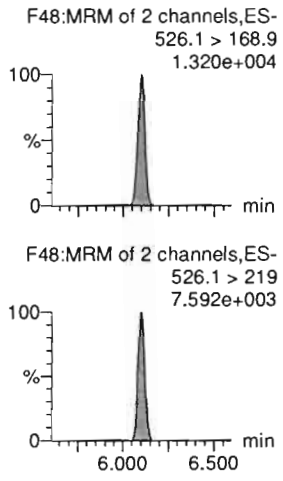


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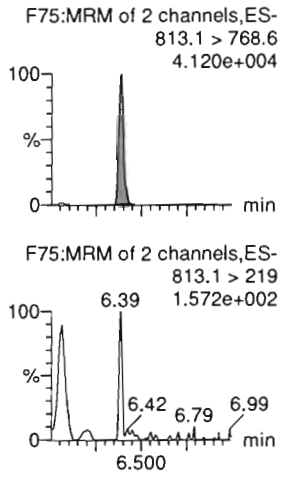
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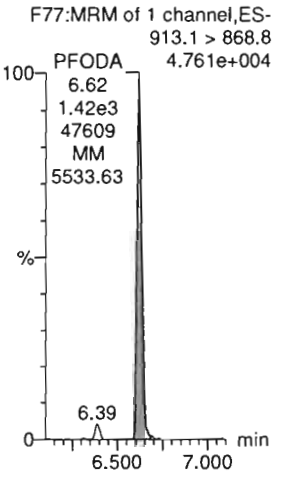
N-EtFOSA



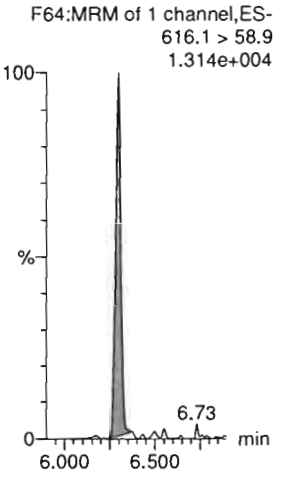
PFHxDA



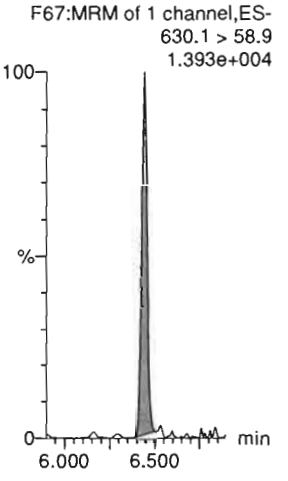
PFODA



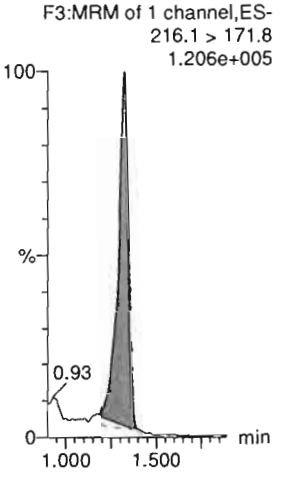
N-MeFOSE



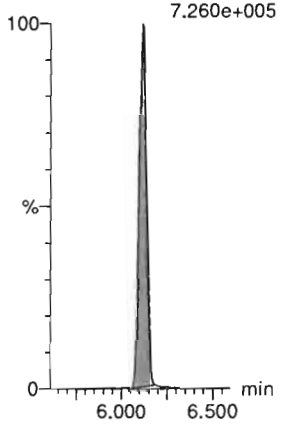
N-EtFOSE



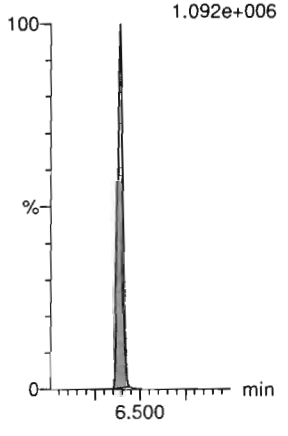
13C3-PFBA-RSD



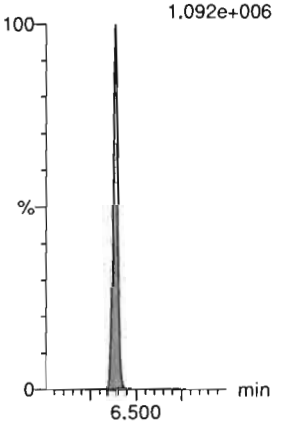
d5-N-ETFOSA-EIS



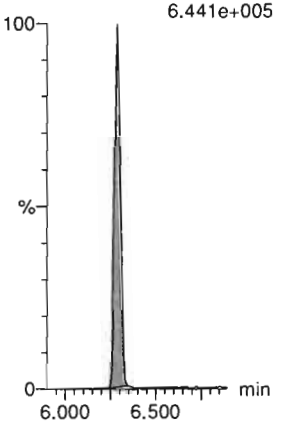
13C2-PFHxDA-EIS



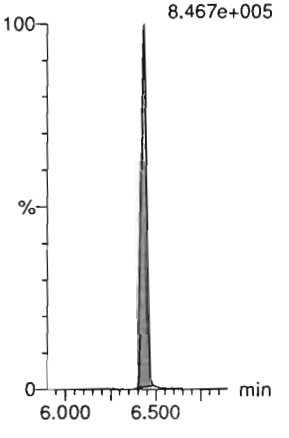
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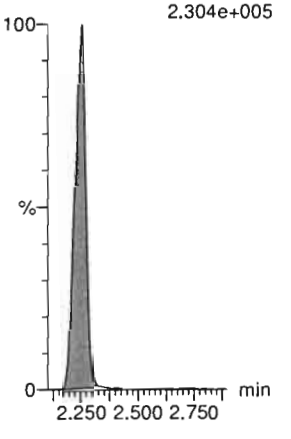
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

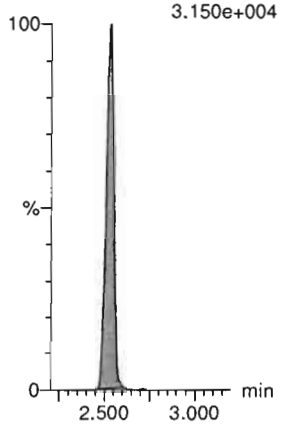


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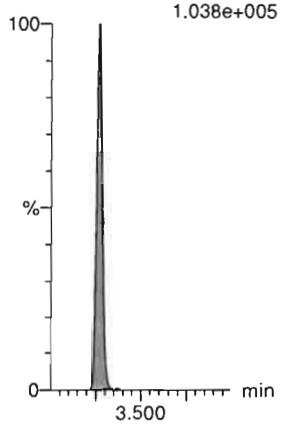
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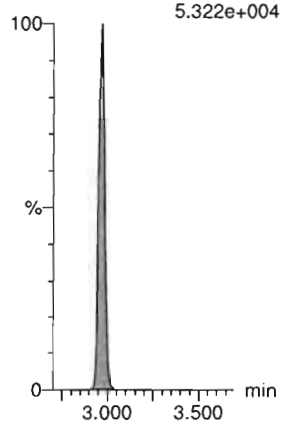
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.150e+004



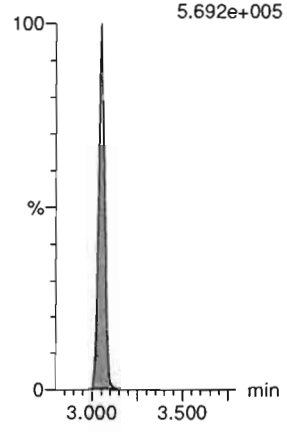
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.038e+005



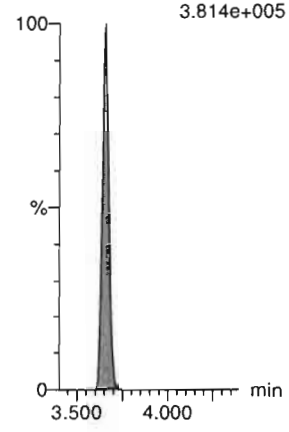
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.322e+004



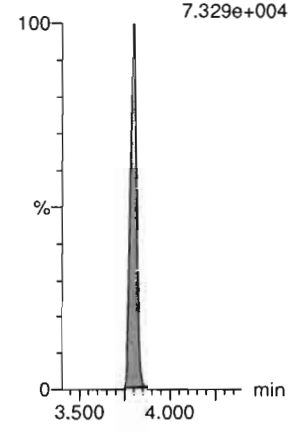
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.692e+005



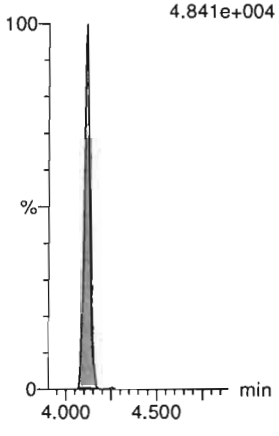
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.814e+005



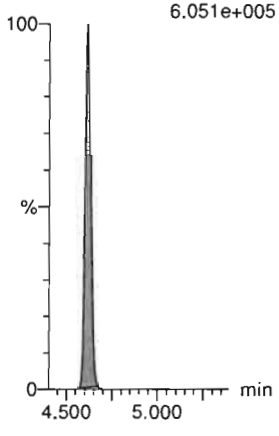
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.329e+004



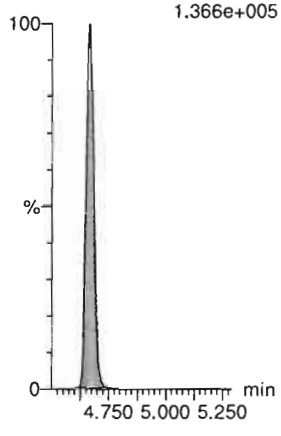
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.841e+004



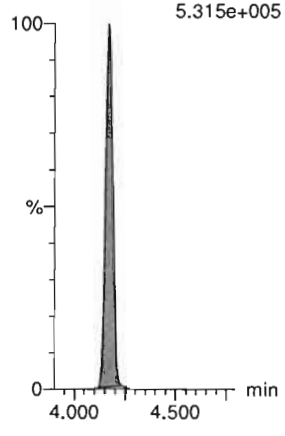
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
6.051e+005



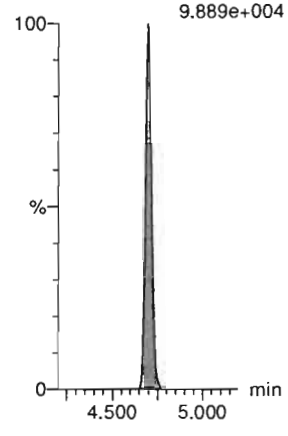
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.366e+005



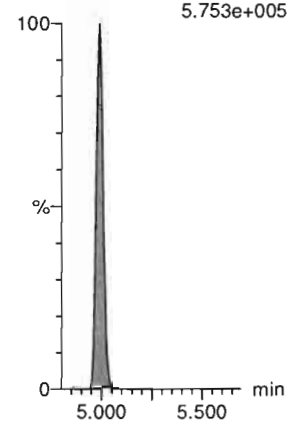
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.315e+005



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

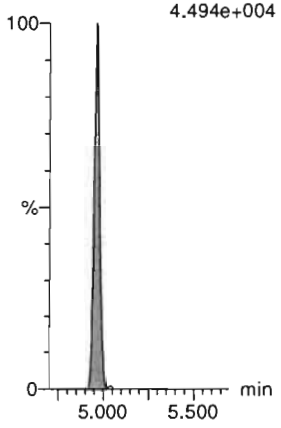


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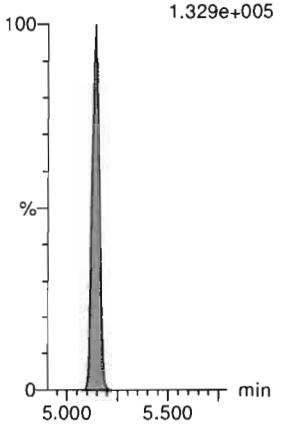
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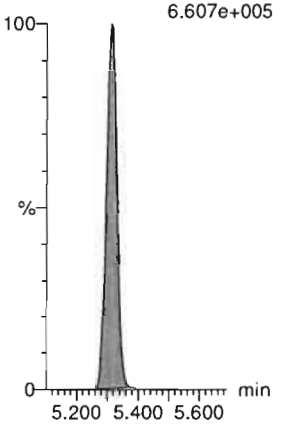
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.494e+004



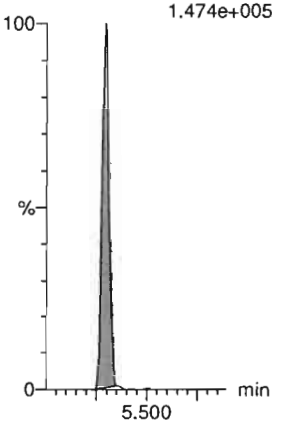
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.329e+005



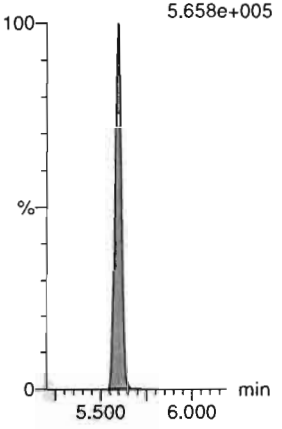
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.607e+005



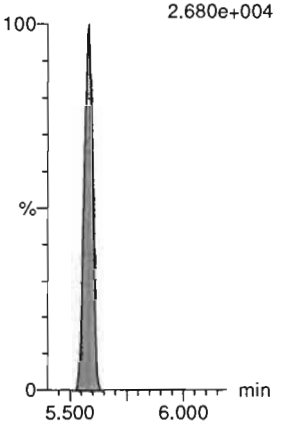
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.474e+005



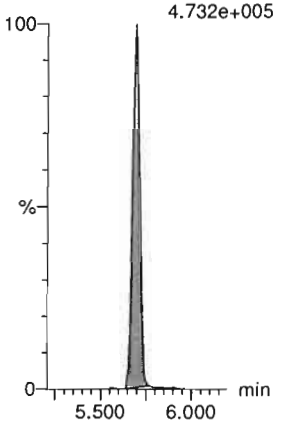
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.658e+005



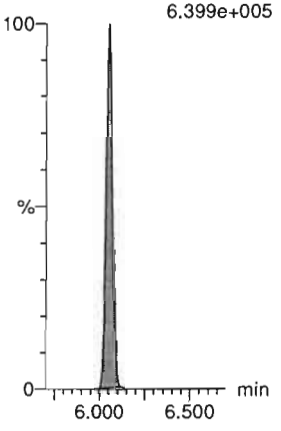
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.680e+004



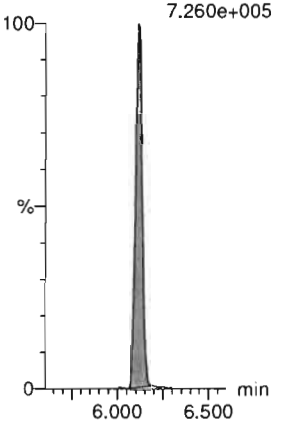
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.732e+005



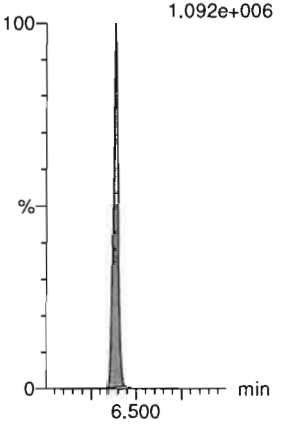
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.399e+005



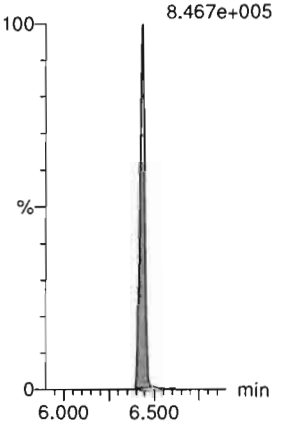
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.260e+005



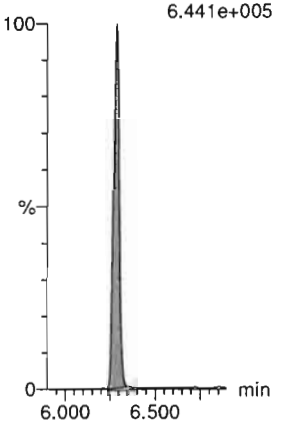
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.092e+006



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

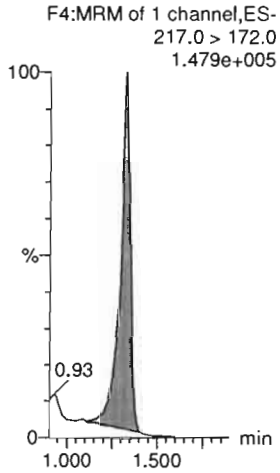


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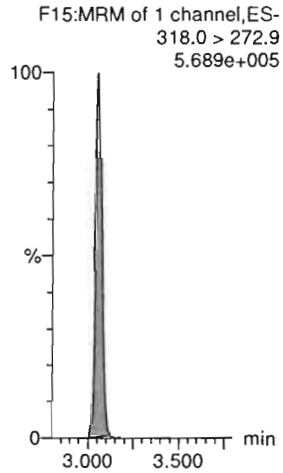
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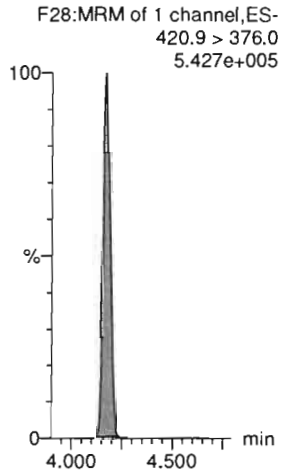
13C4-PFBA



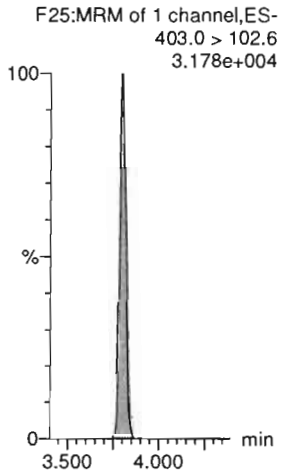
13C5-PFHxA



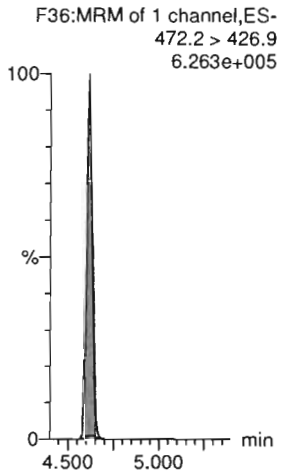
13C8-PFOA



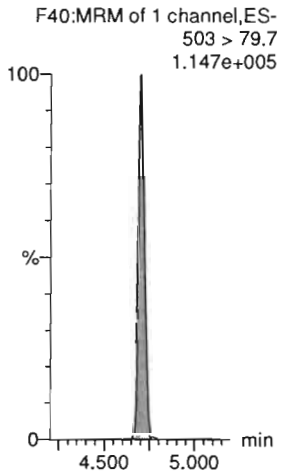
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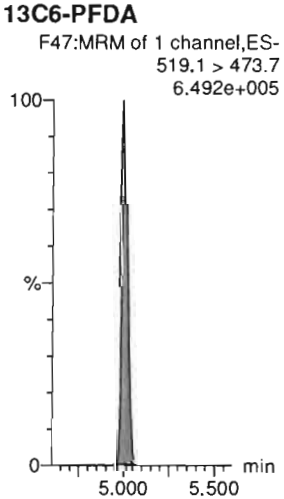
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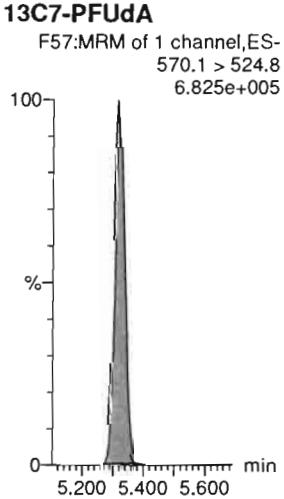
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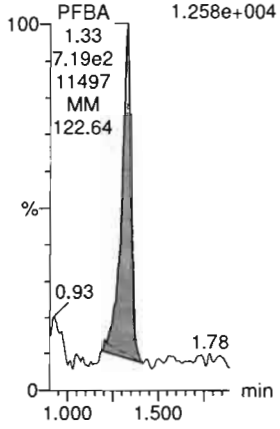


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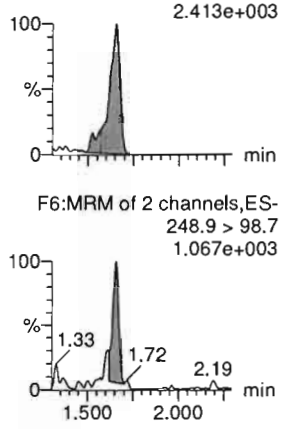
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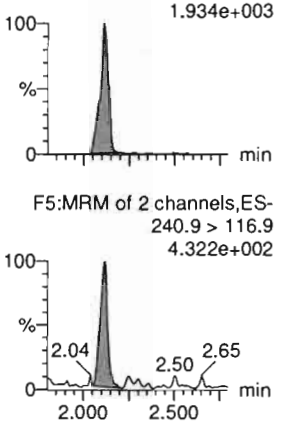
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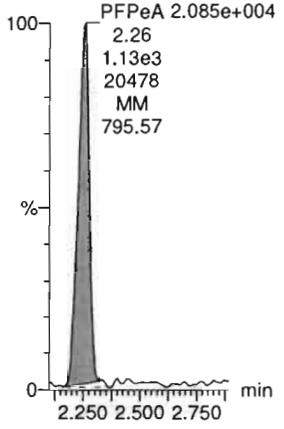
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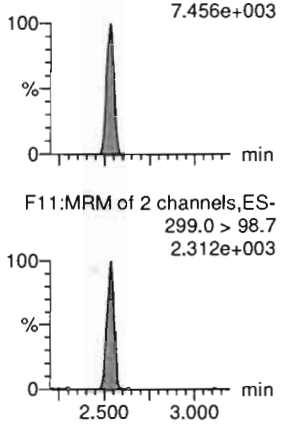
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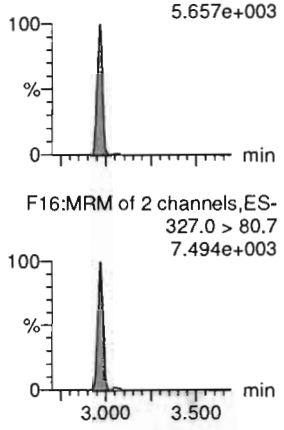
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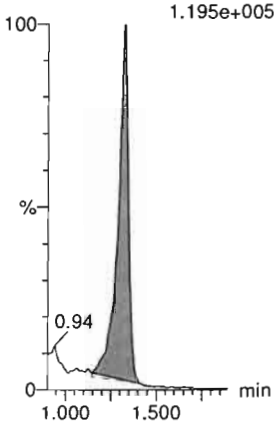
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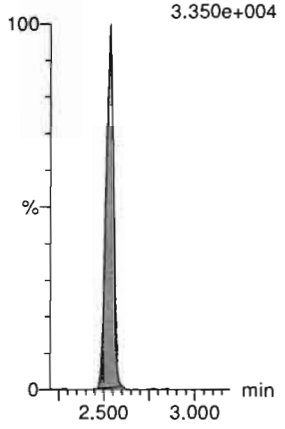
4:2 FTS



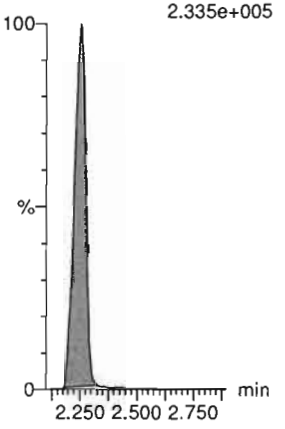
13C3-PFBA-EIS



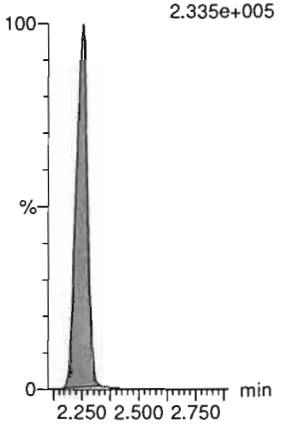
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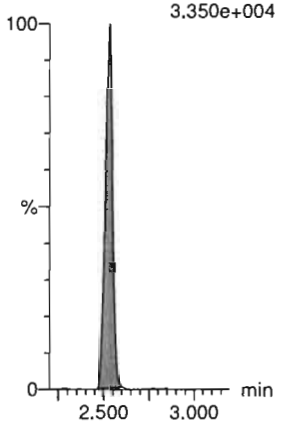
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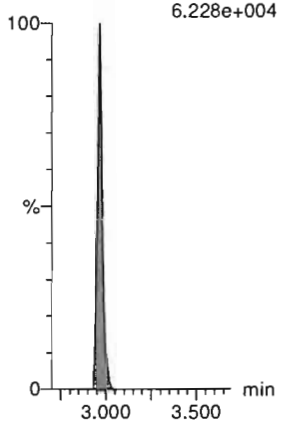
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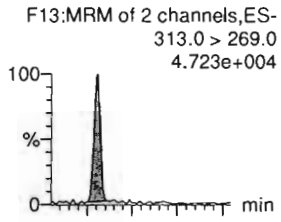


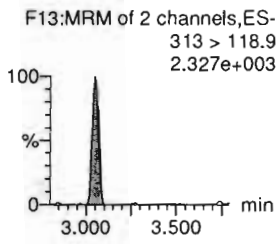
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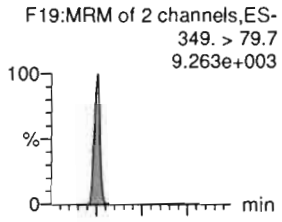
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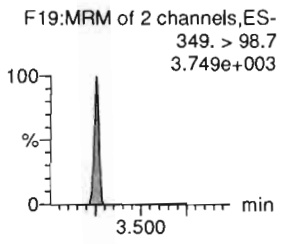
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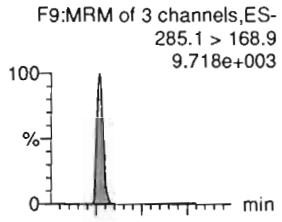


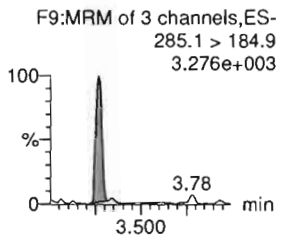
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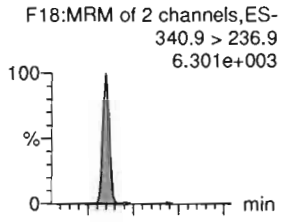


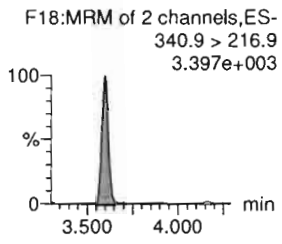
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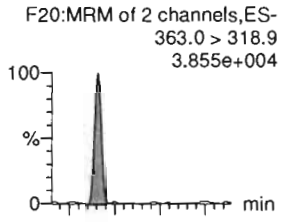


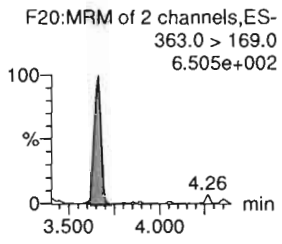
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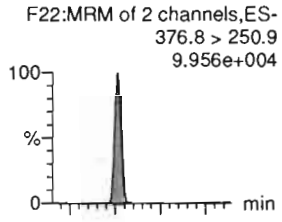


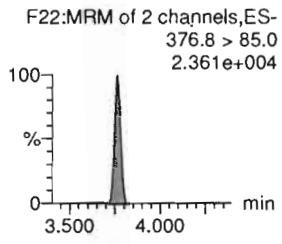
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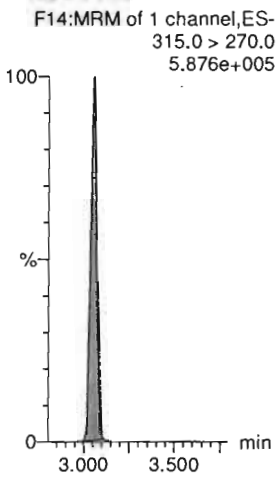


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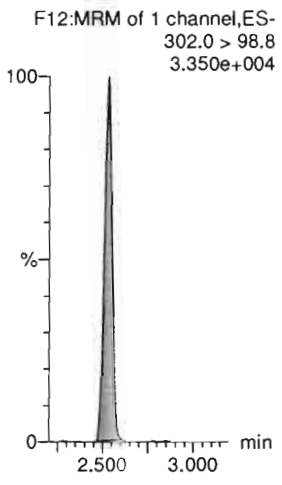




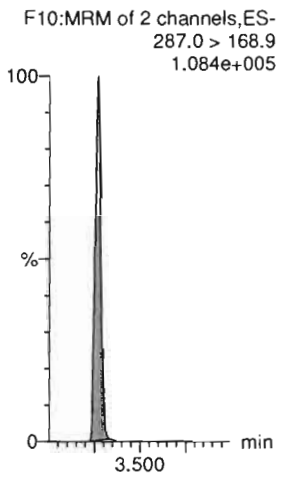
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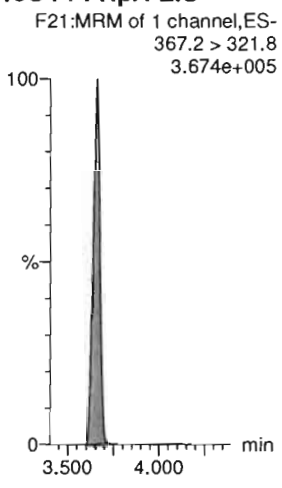
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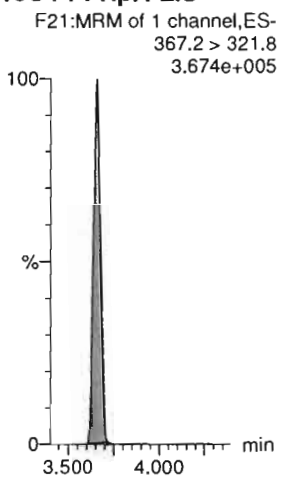
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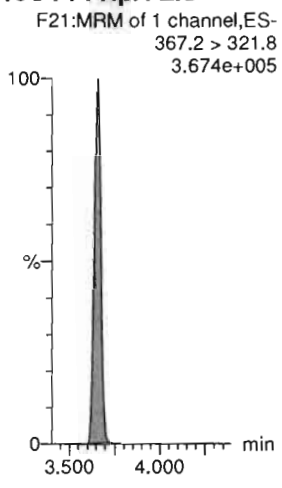
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13C4-PFHpA-EIS



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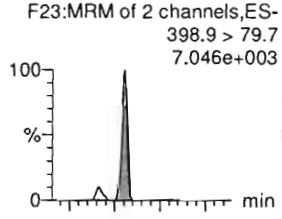


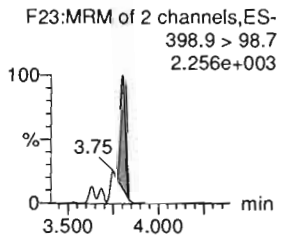
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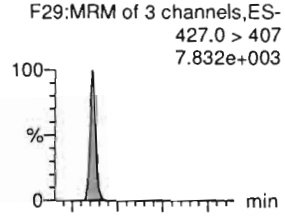
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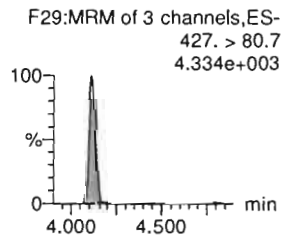
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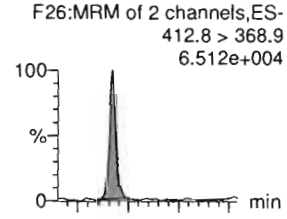


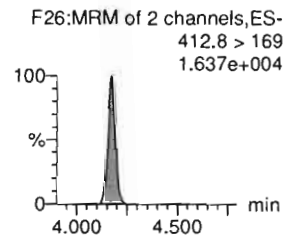
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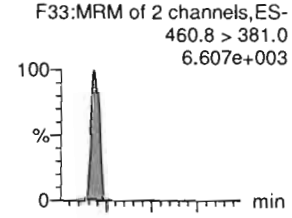


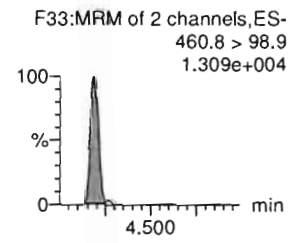
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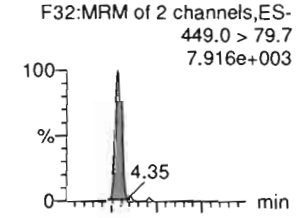


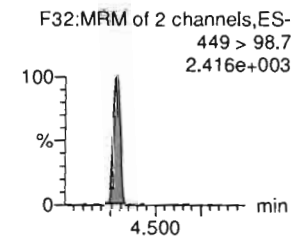
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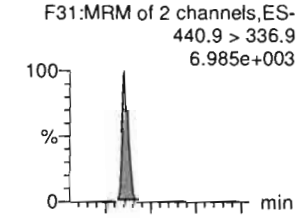


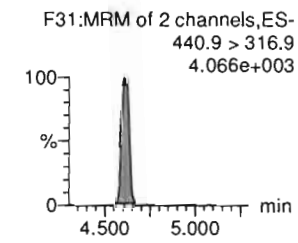
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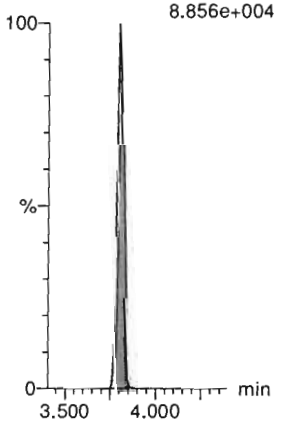


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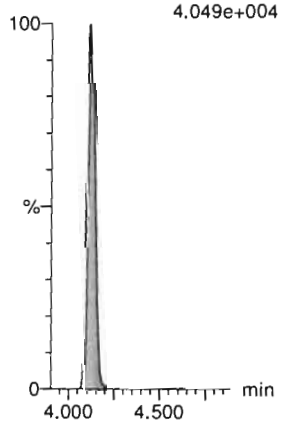




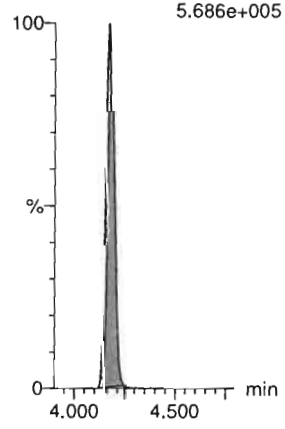
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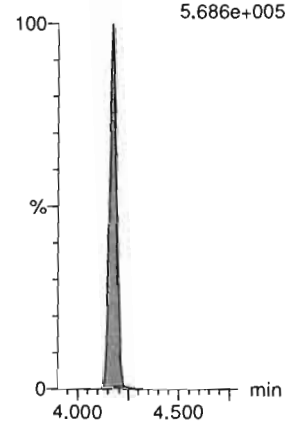
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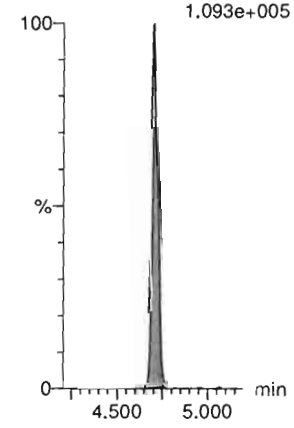
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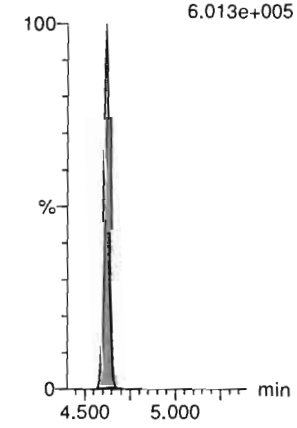
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13C8-PFOS-EIS



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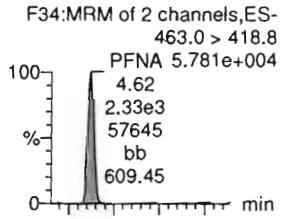


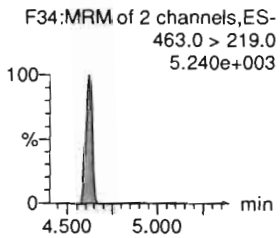
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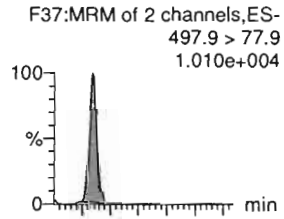
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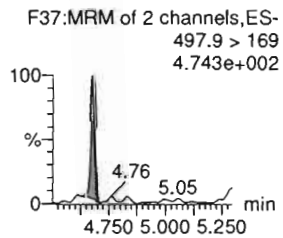
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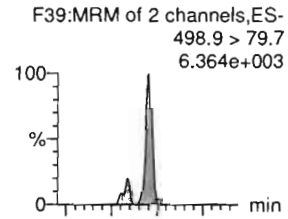


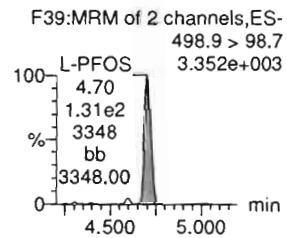
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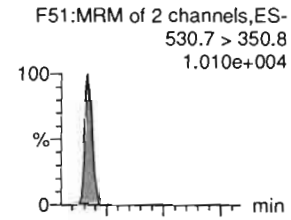


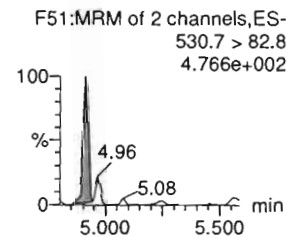
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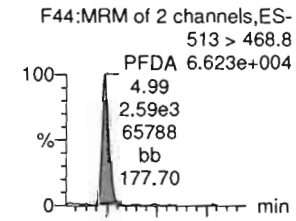


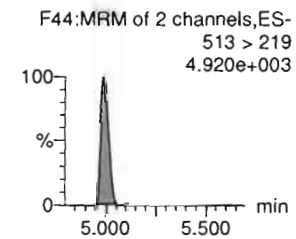
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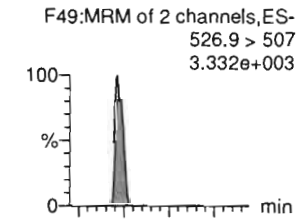


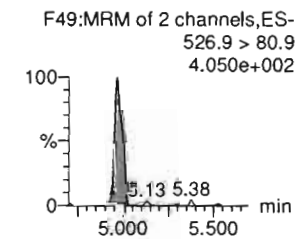
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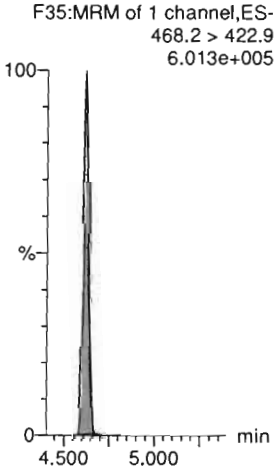


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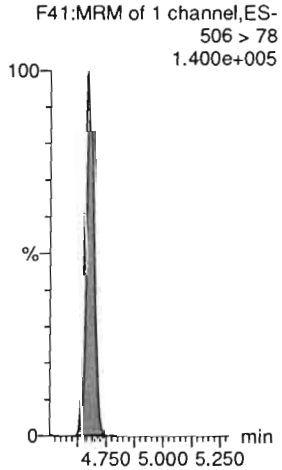




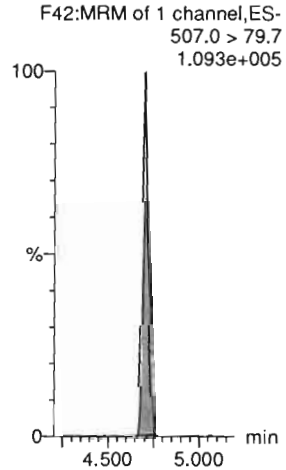
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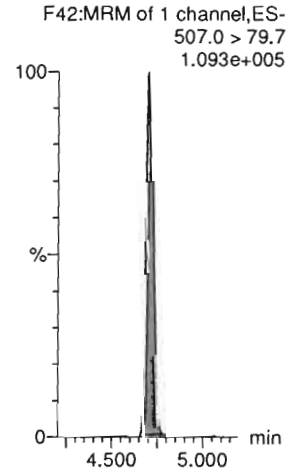
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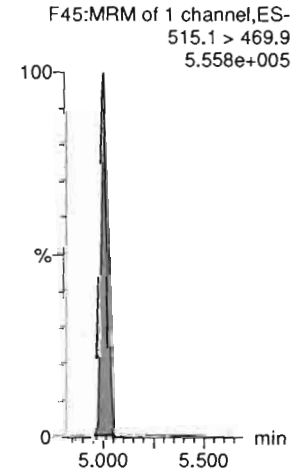
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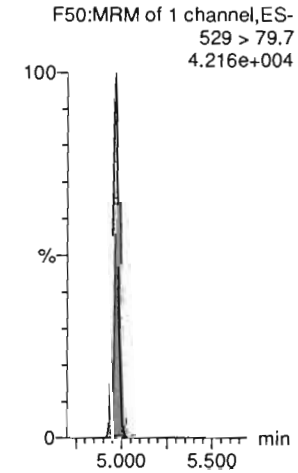
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

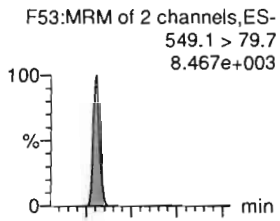


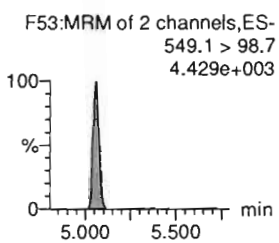
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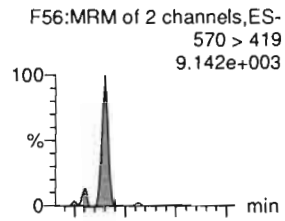
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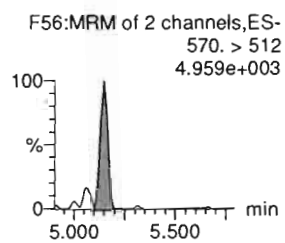
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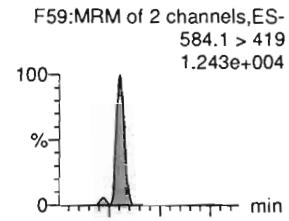


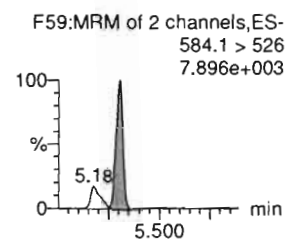
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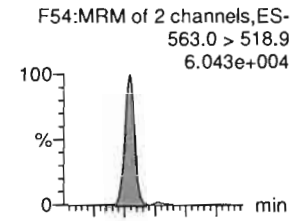


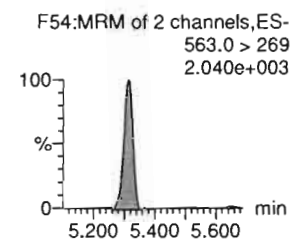
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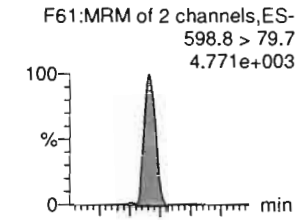


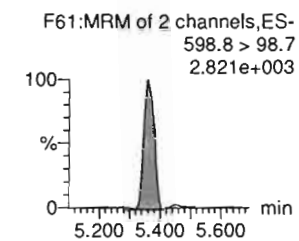
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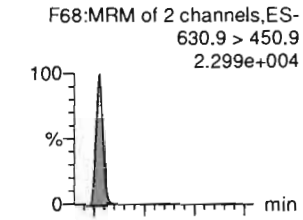


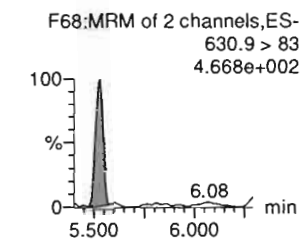
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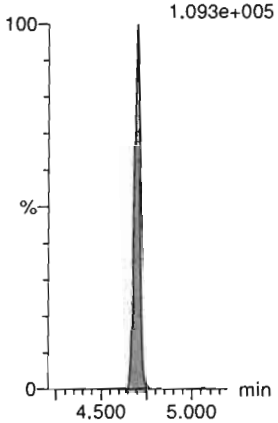


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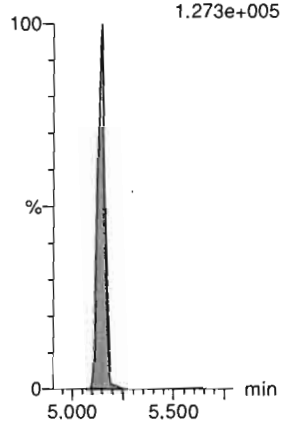




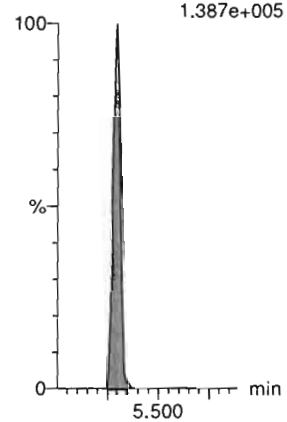
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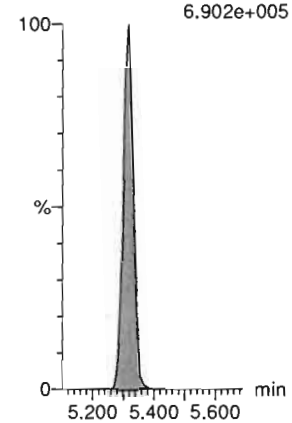
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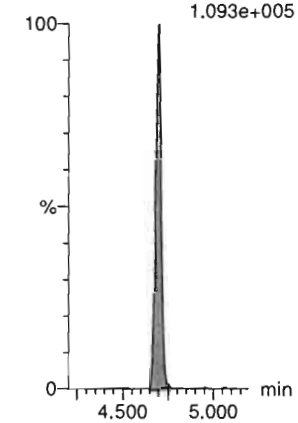
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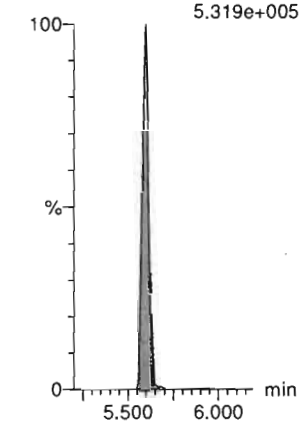
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13C8-PFOS-EIS



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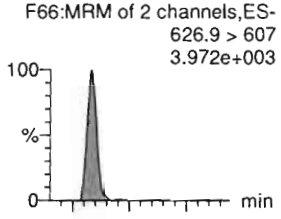


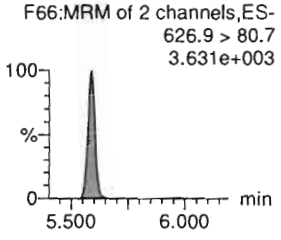
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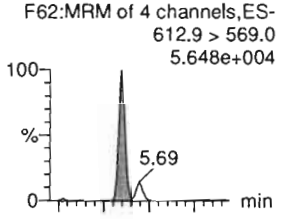
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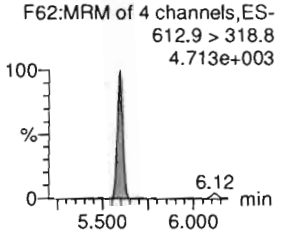
10:2 FTS



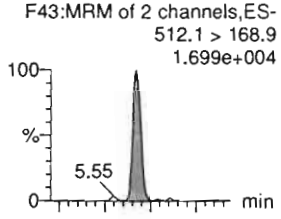


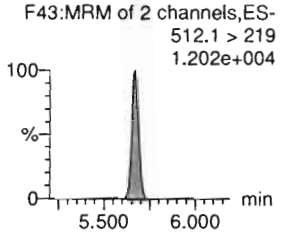
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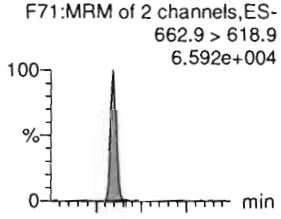


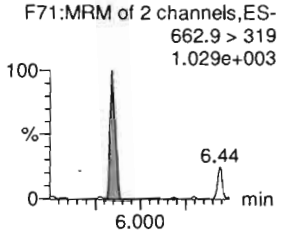
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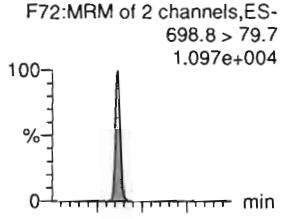


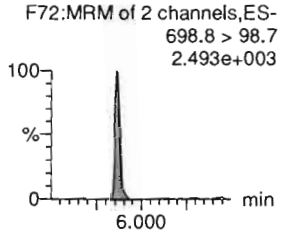
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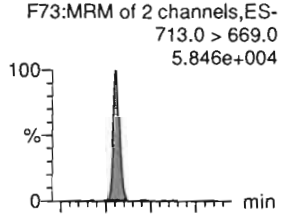


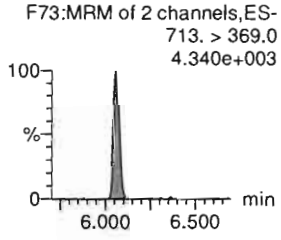
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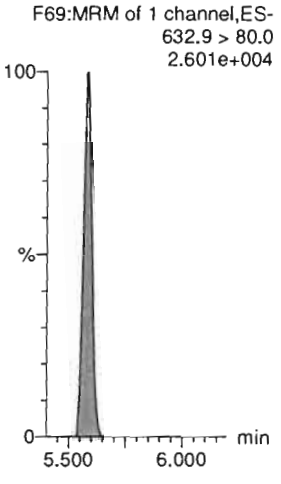


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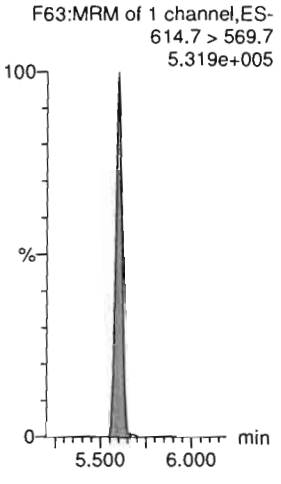




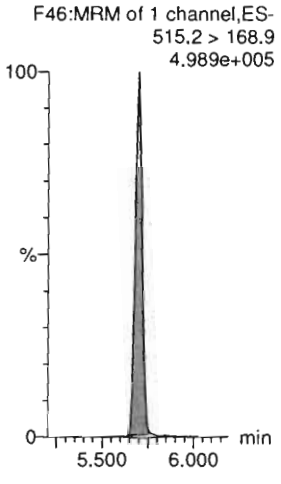
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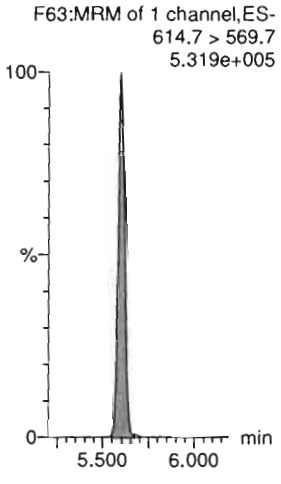
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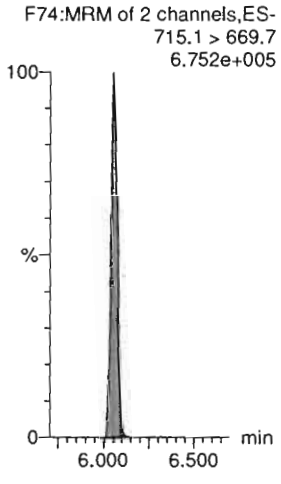
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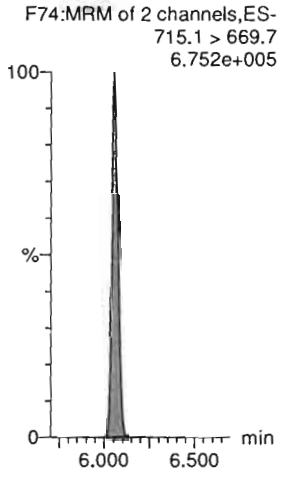
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

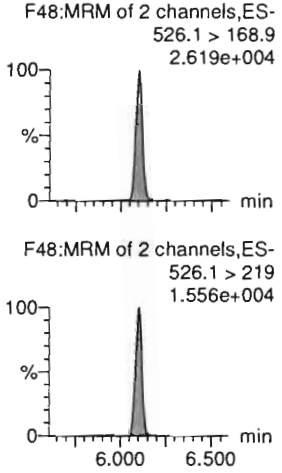


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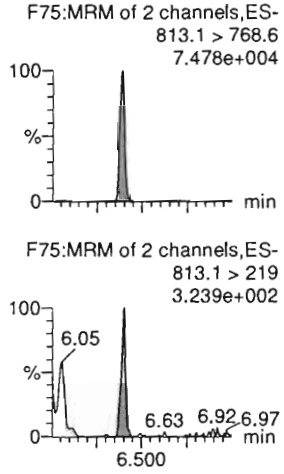
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Name: 200227P1-5, Date: 27-Feb-2020, Time: 16:03:08, ID: ST200227P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

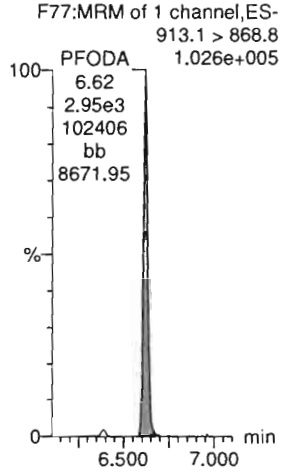
N-EtFOSA



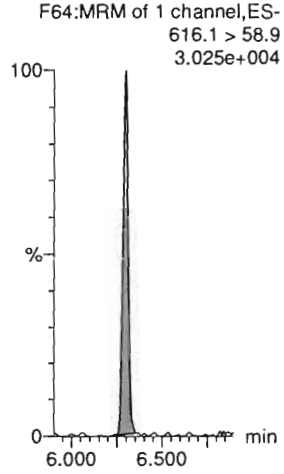
PFHxDA



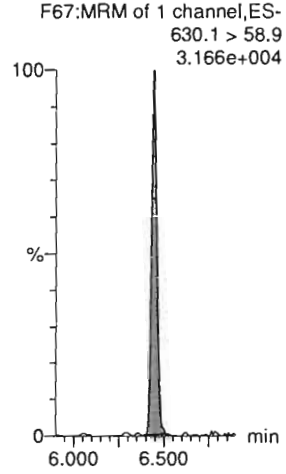
PFODA



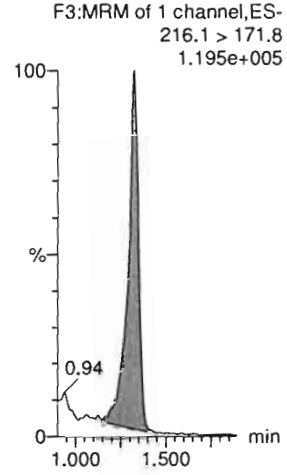
N-MeFOSE



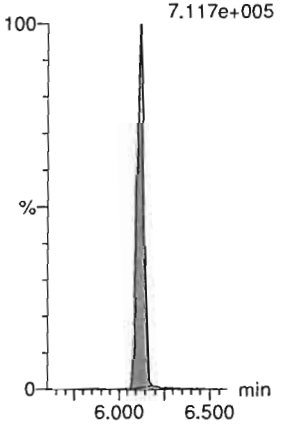
N-EtFOSE



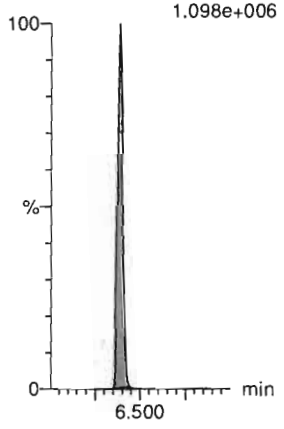
13C3-PFBA-RSD



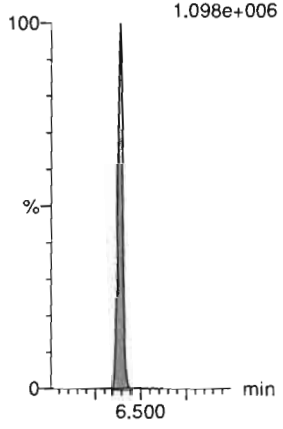
d5-N-ETFOSA-EIS



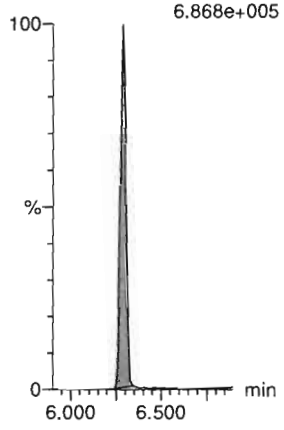
13C2-PFHxDA-EIS



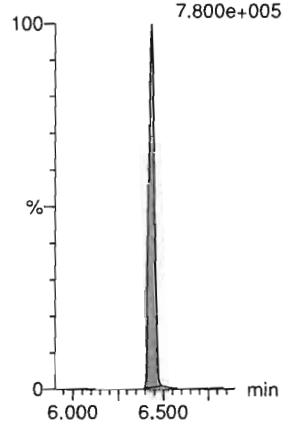
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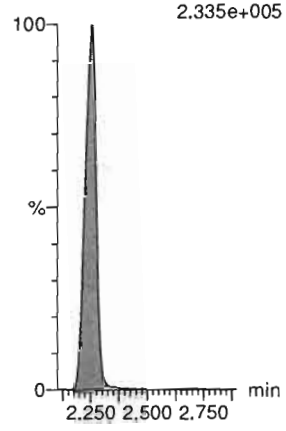
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

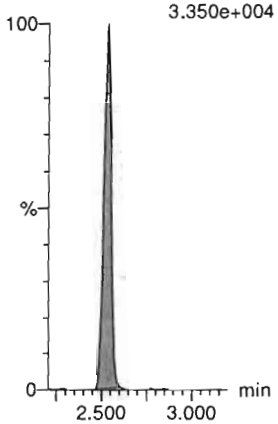


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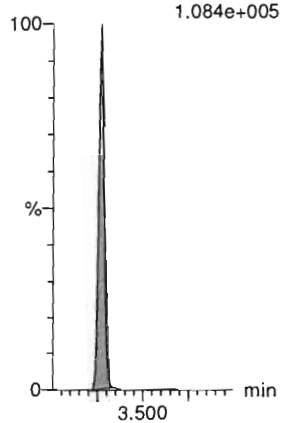
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Name: 200227P1-5, Date: 27-Feb-2020, Time: 16:03:08, ID: ST200227P1-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

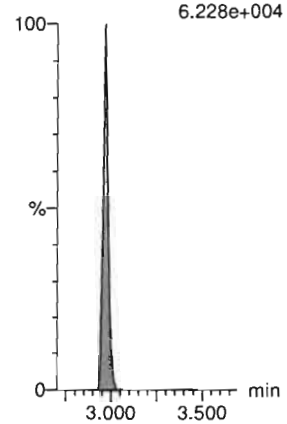
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.350e+004



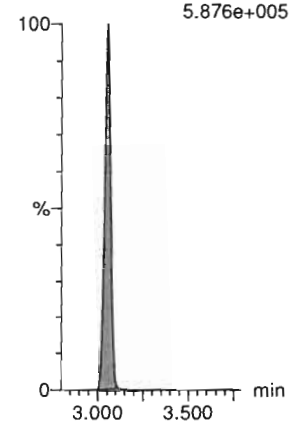
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.084e+005



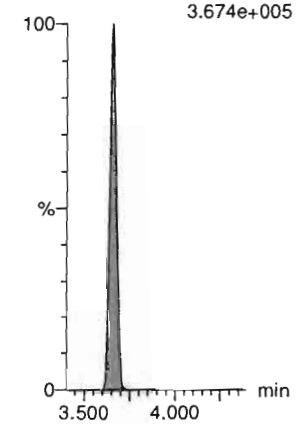
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
6.228e+004



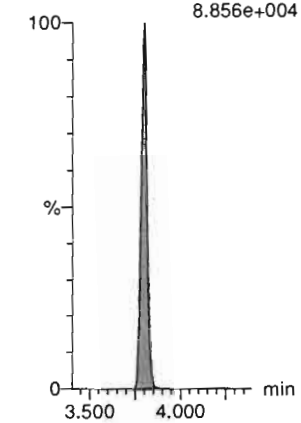
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.876e+005



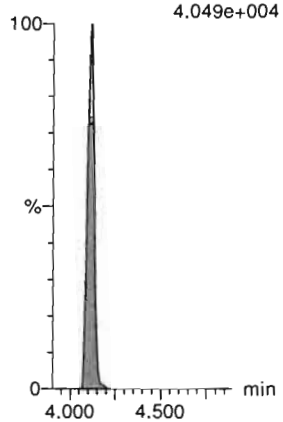
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.674e+005



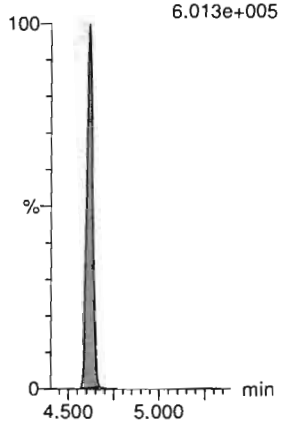
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.856e+004



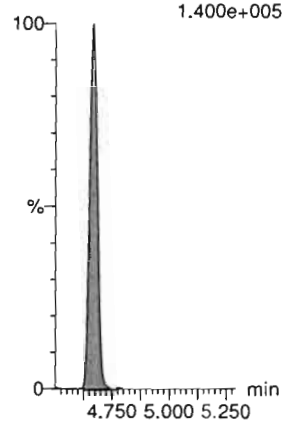
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.049e+004



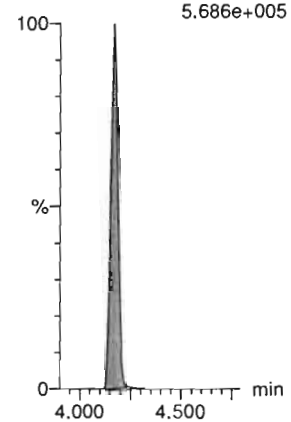
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
6.013e+005



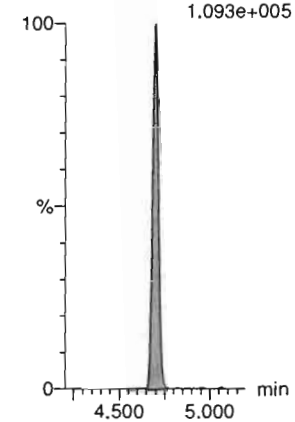
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.400e+005



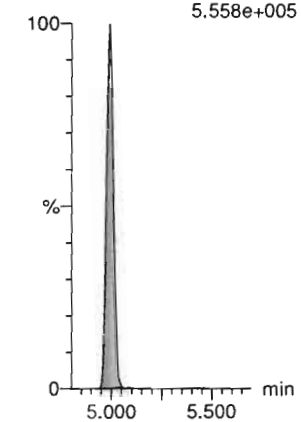
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.686e+005



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

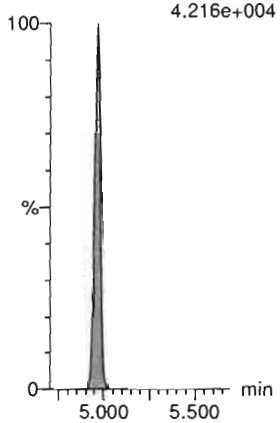


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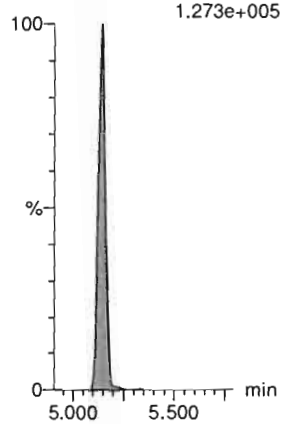
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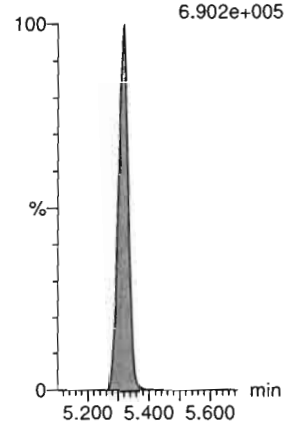
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.216e+004



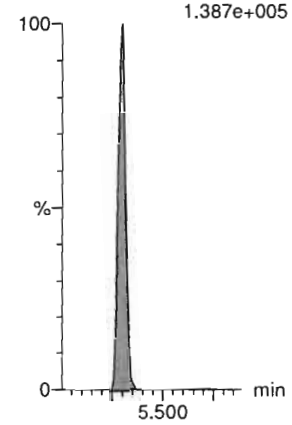
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F58:MRM of 1 channel,ES-
573.3 > 419
1.273e+005



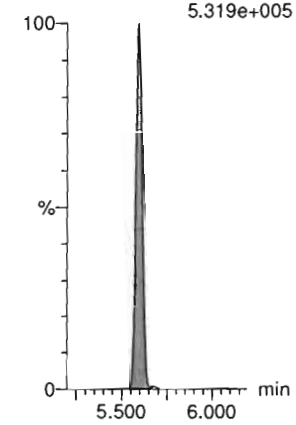
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F55:MRM of 1 channel,ES-
565 > 519.8
6.902e+005



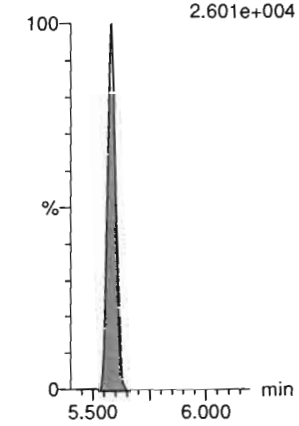
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.387e+005



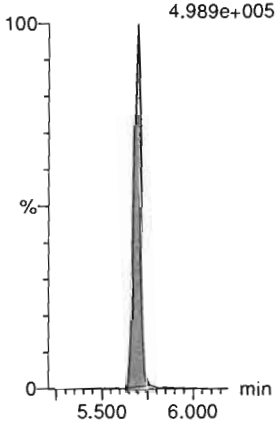
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.319e+005



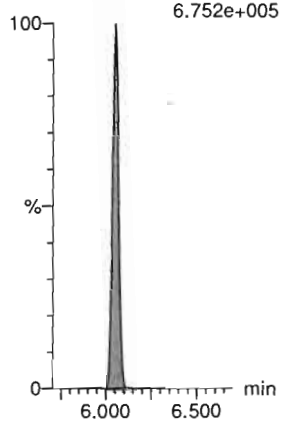
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.601e+004



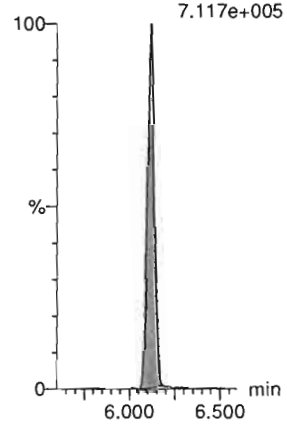
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.989e+005



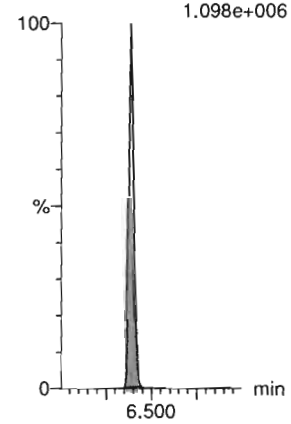
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.752e+005



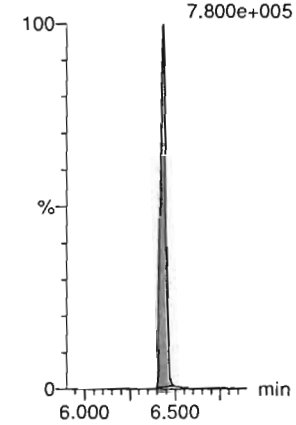
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.117e+005



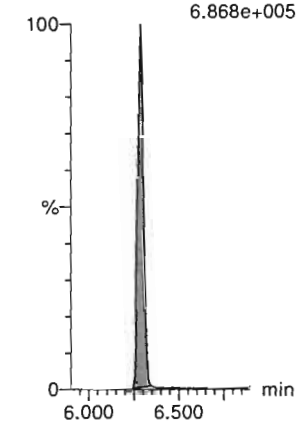
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.098e+006



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

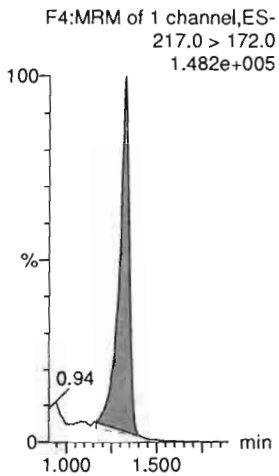


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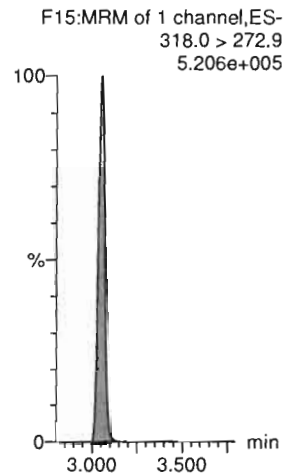
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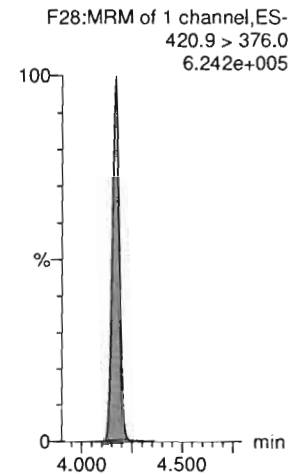
13C4-PFBA



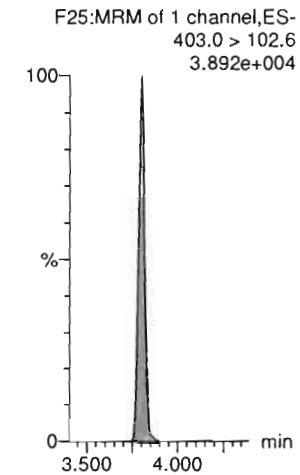
13C5-PFHxA



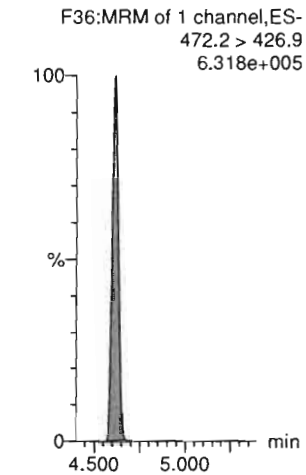
13C8-PFOA



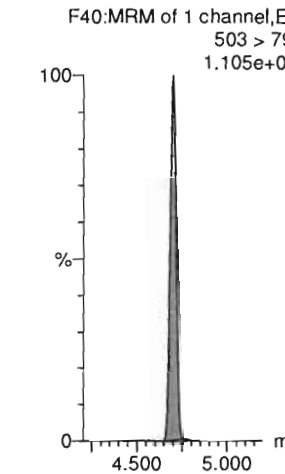
18O2-PFHxS



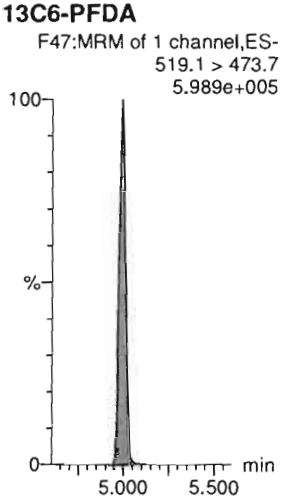
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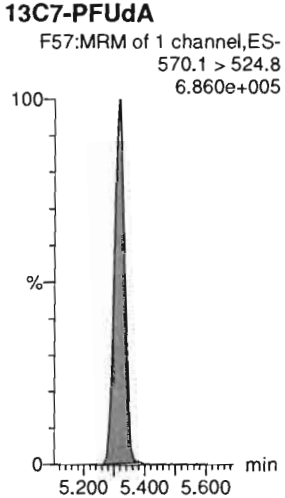
13C4-PFOS



13C6-PFDA



13C7-PFUdA

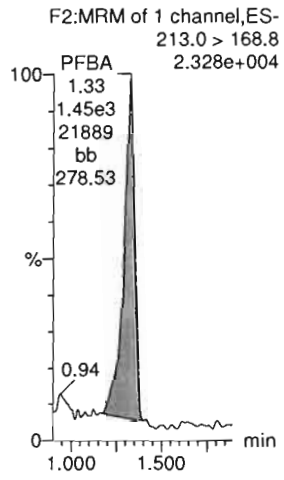


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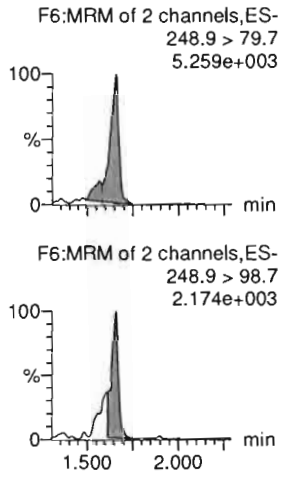
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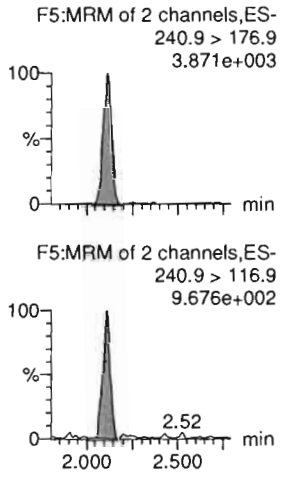
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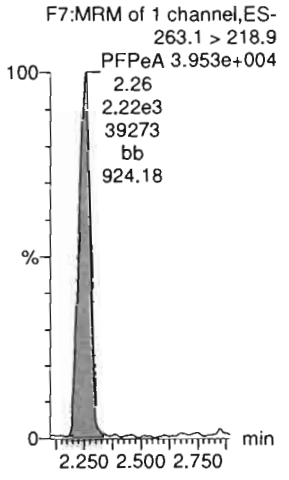
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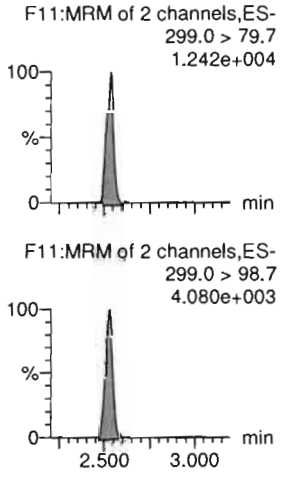
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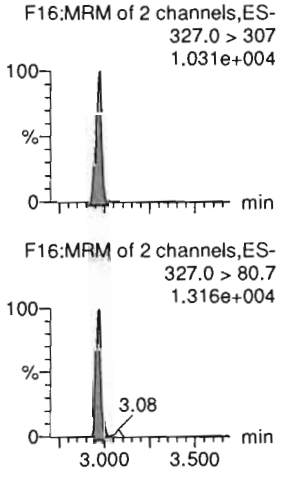
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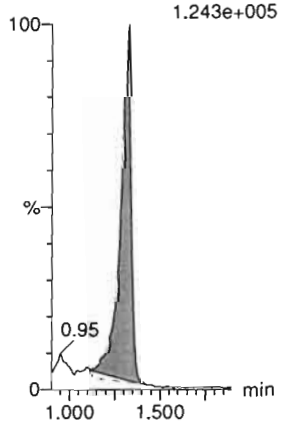
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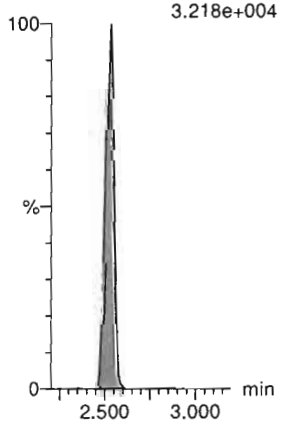
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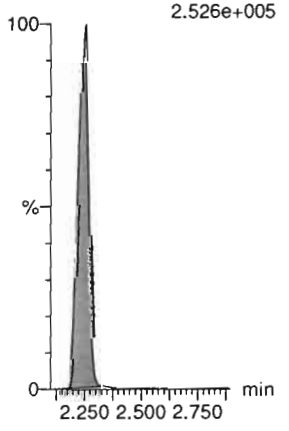
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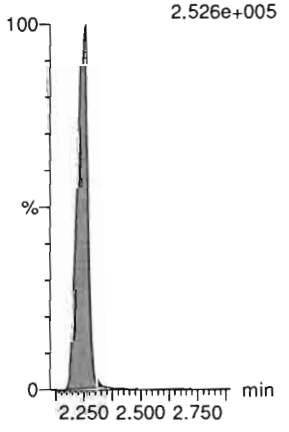
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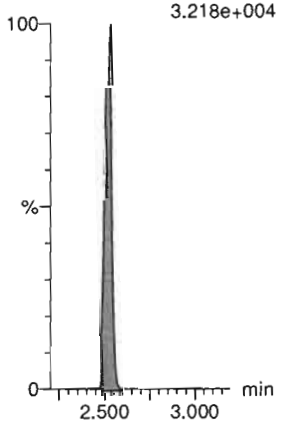
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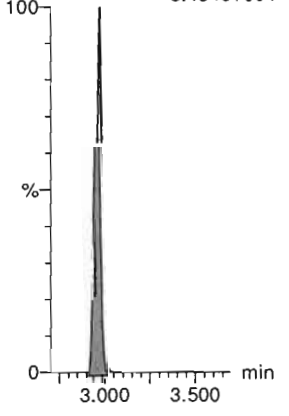
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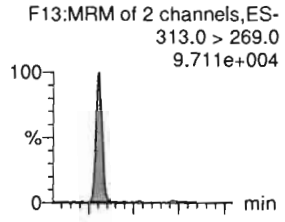


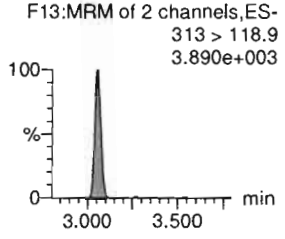
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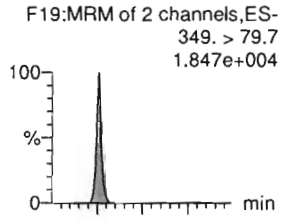
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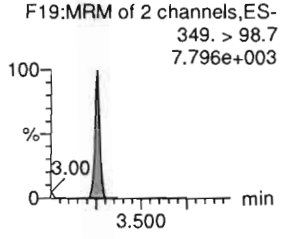
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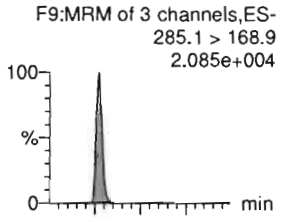


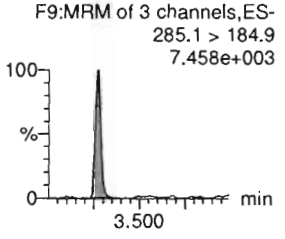
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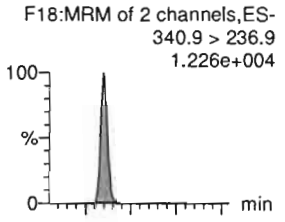


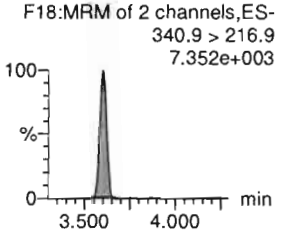
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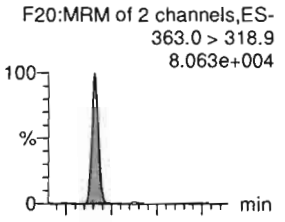


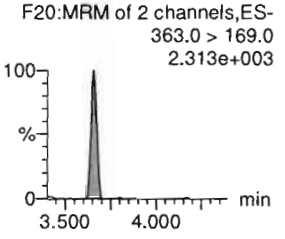
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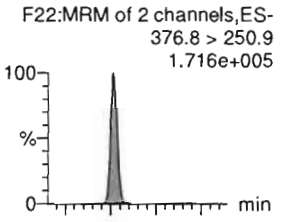


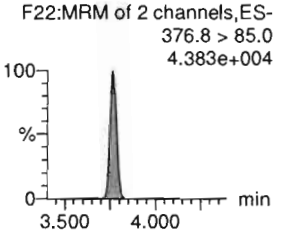
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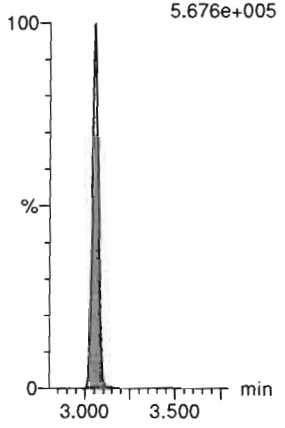


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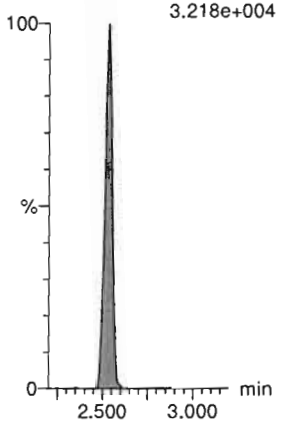




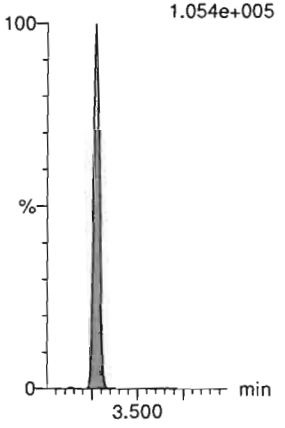
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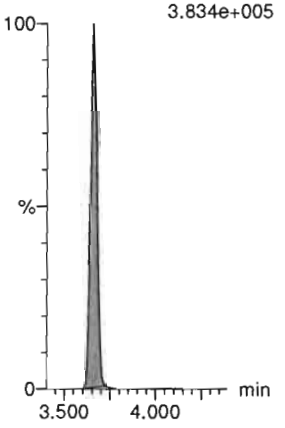
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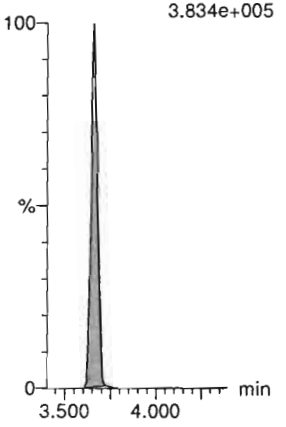
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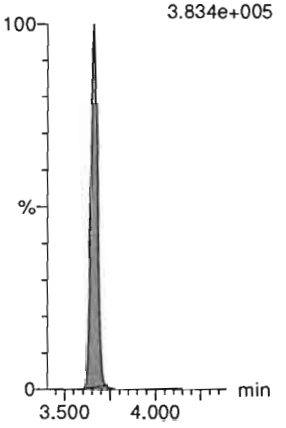
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13C4-PFHpA-EIS



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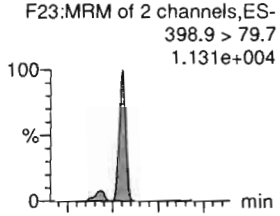


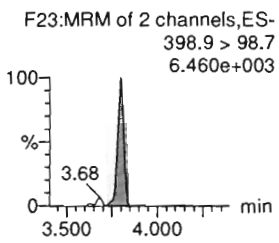
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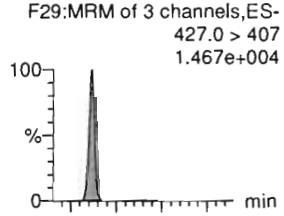
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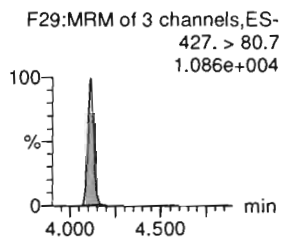
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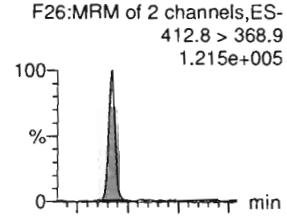


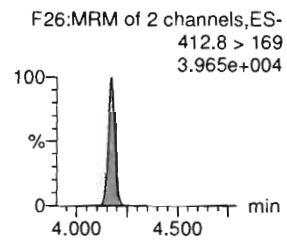
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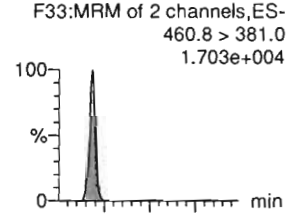


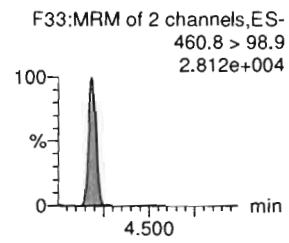
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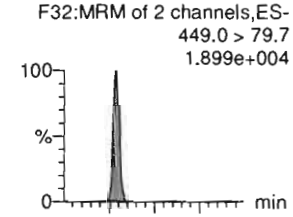


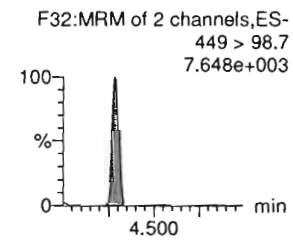
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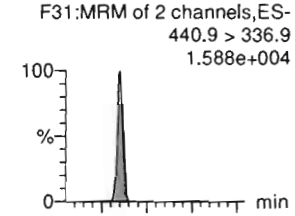


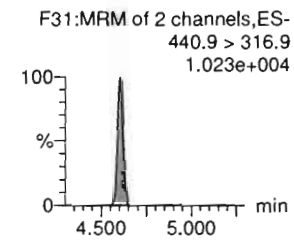
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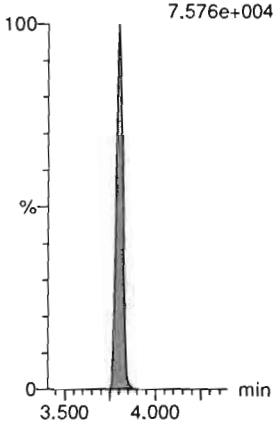


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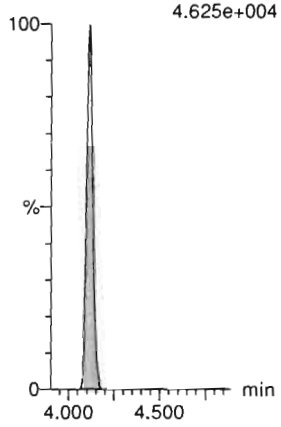




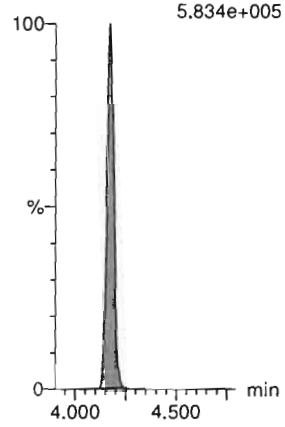
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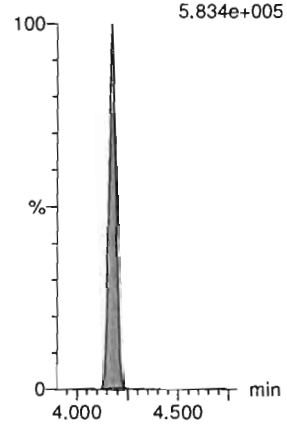
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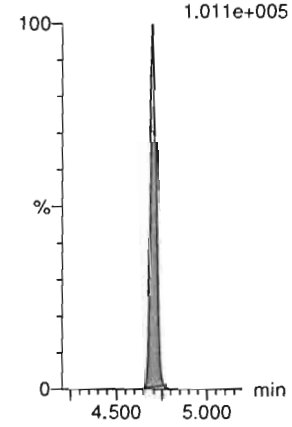
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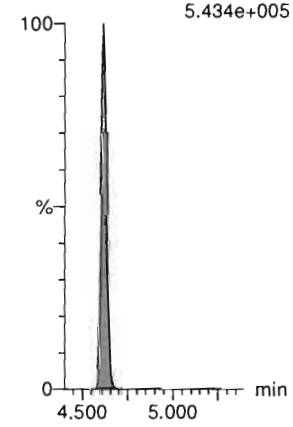
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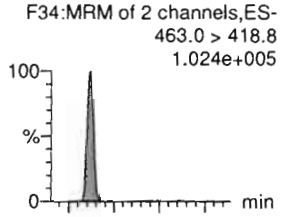


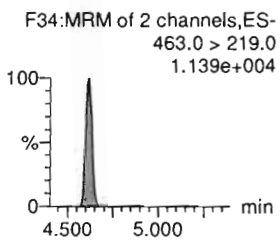
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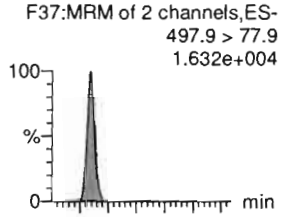
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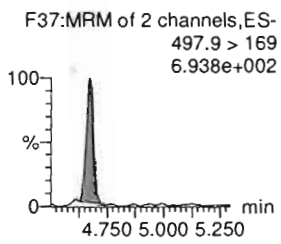
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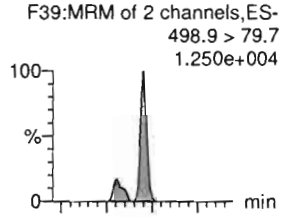


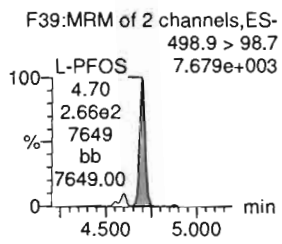
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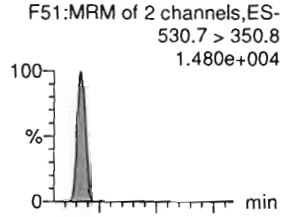


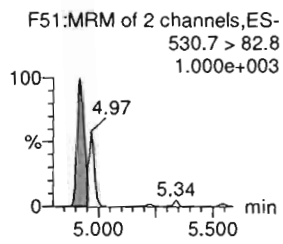
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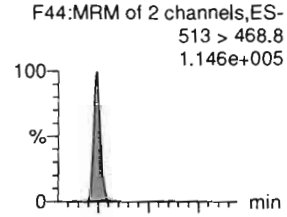


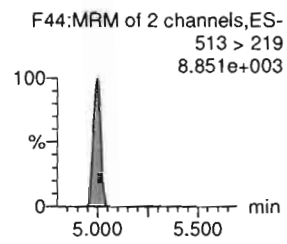
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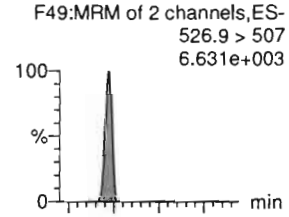


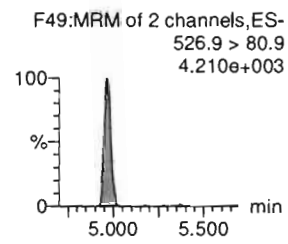
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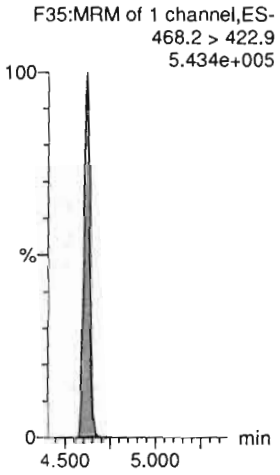


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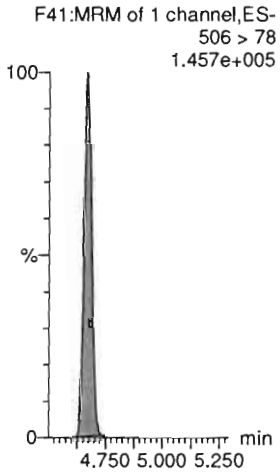




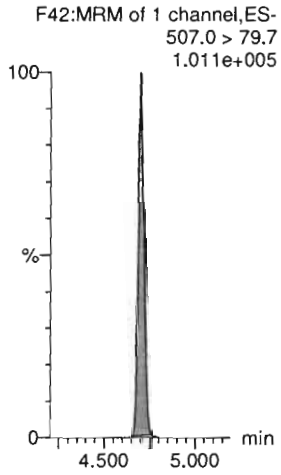
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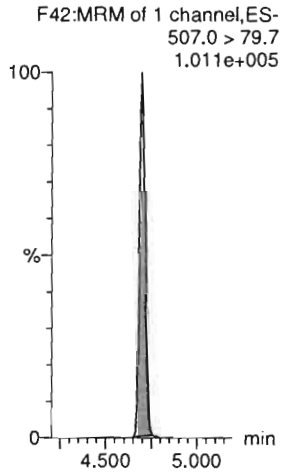
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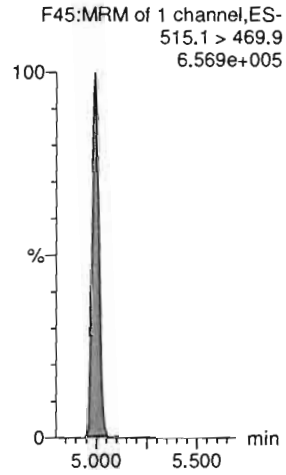
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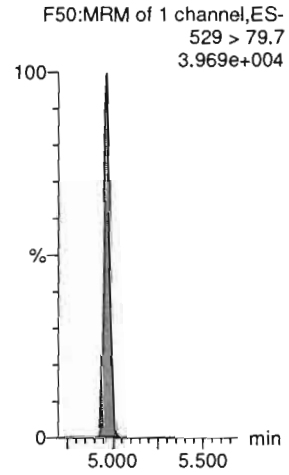
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

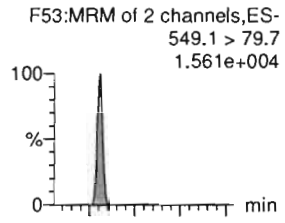


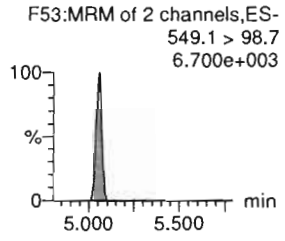
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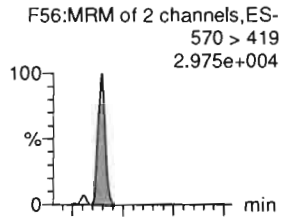
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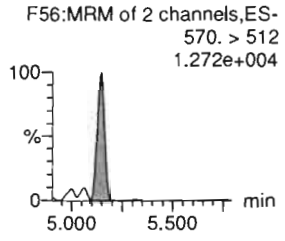
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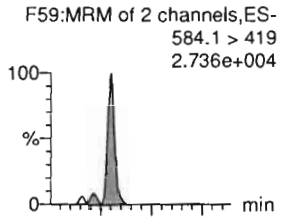


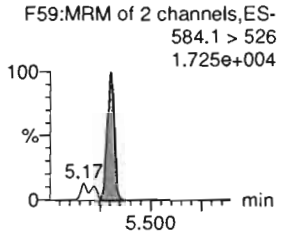
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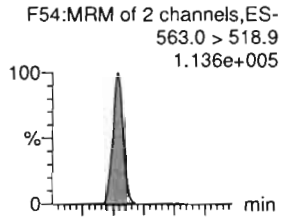


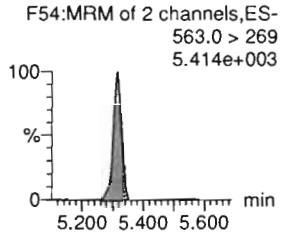
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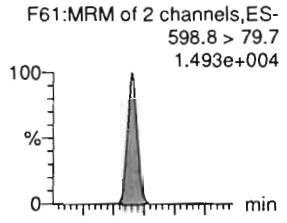


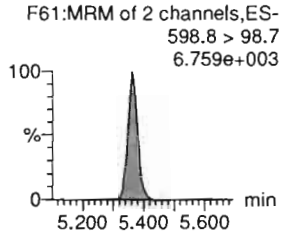
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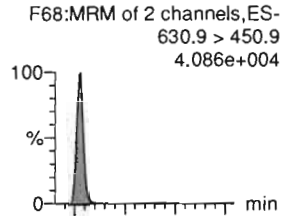


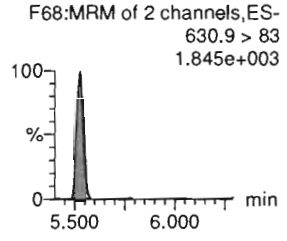
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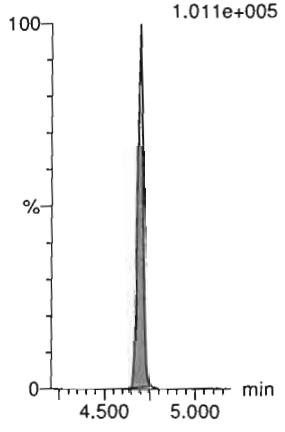


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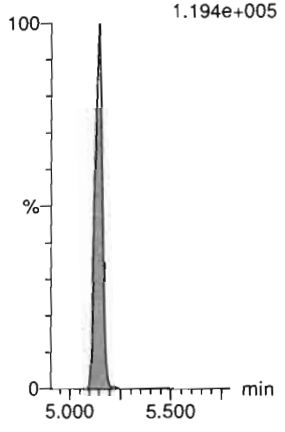




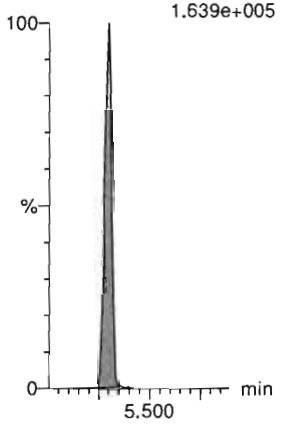
13C8-PFOS-EIS



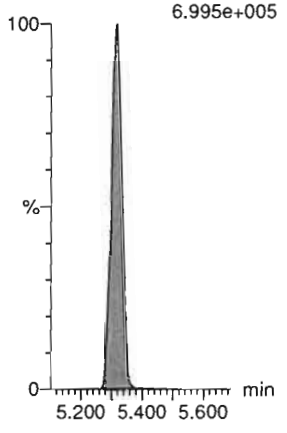
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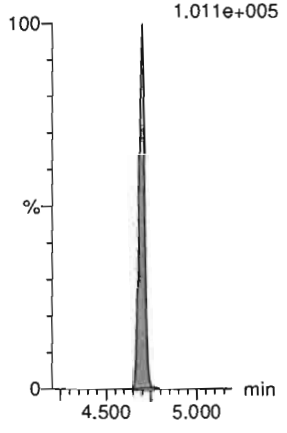
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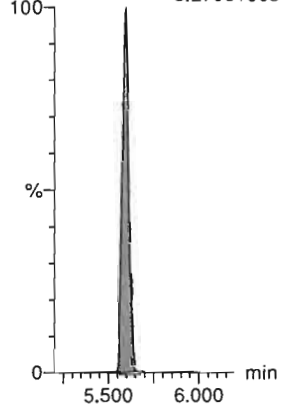
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13C8-PFOS-EIS



13C2-PFDoA-EIS

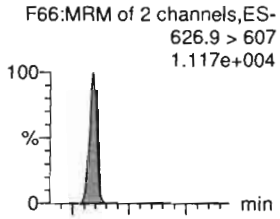


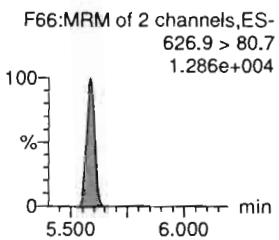
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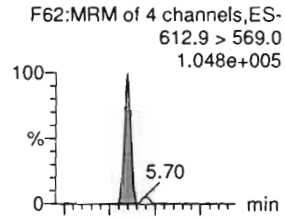
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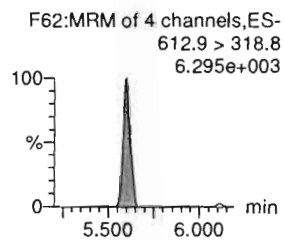
10:2 FTS



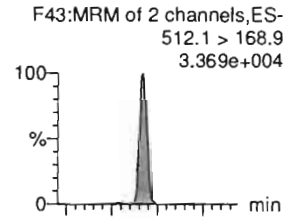


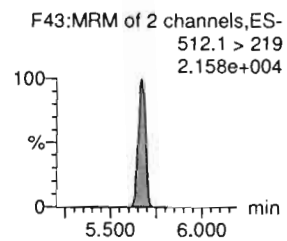
PFDoA



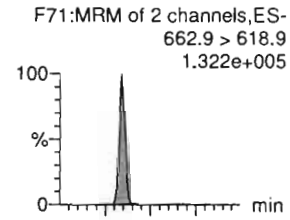


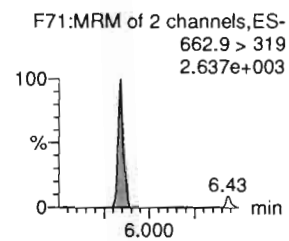
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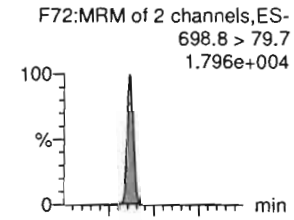


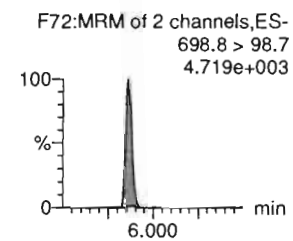
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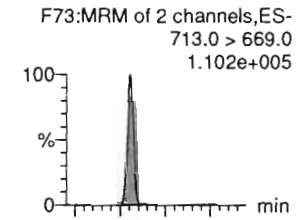


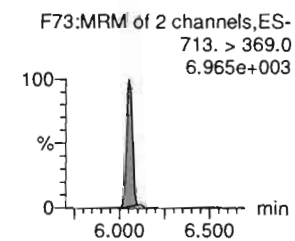
PFDoS



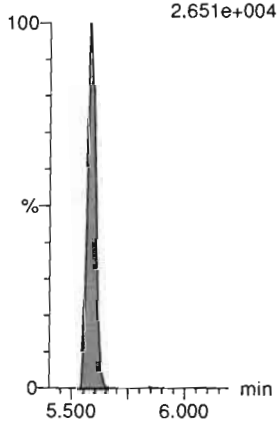


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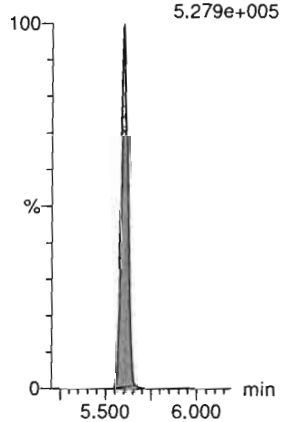




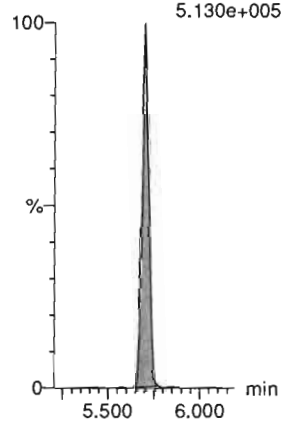
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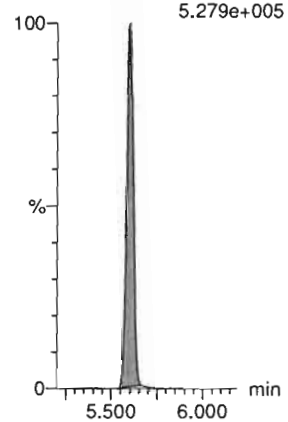
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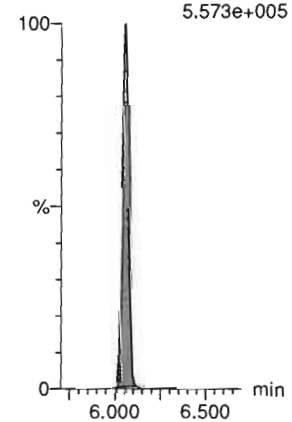
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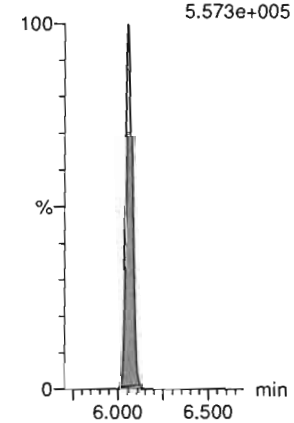
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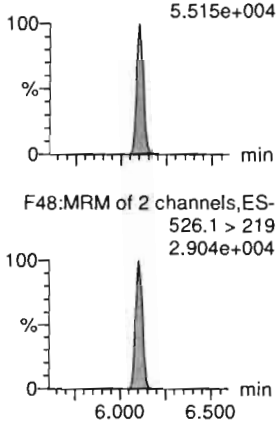


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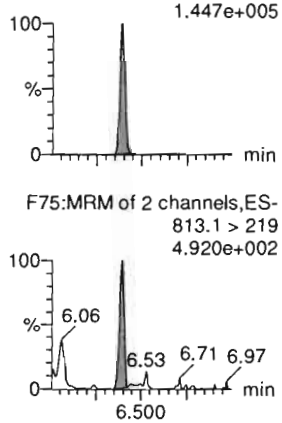
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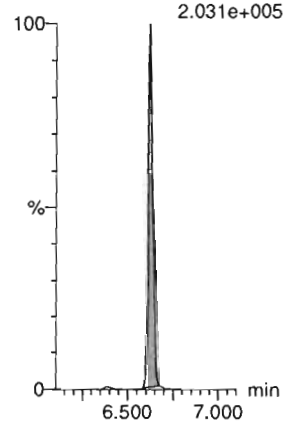
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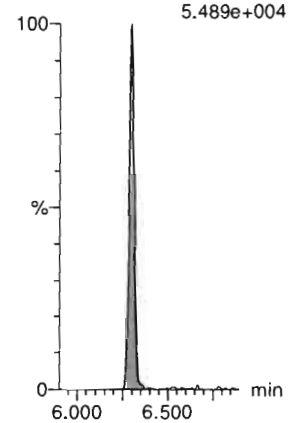
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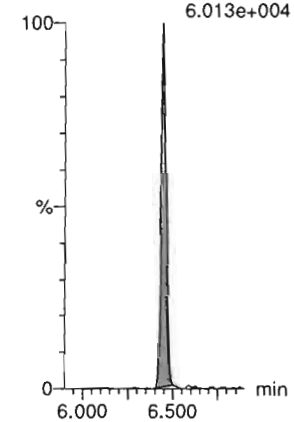
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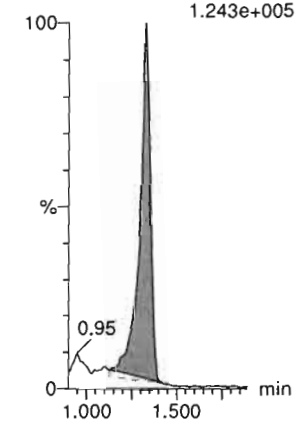
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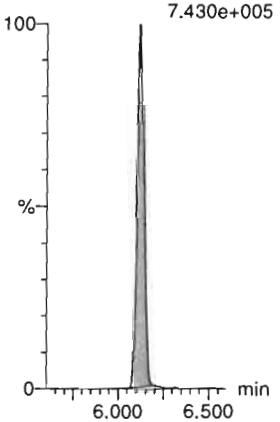
N-EtFOSE



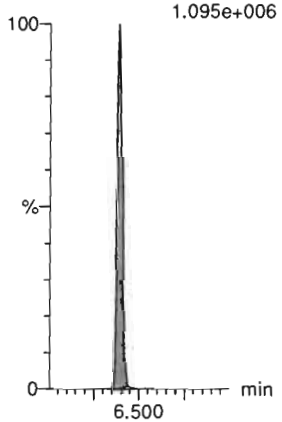
13C3-PFBA-RSD



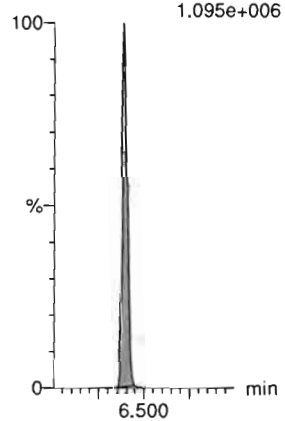
d5-N-ETFOSA-EIS



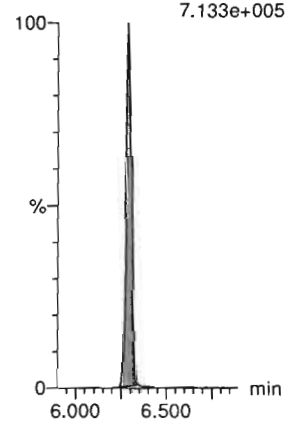
13C2-PFHxDA-EIS



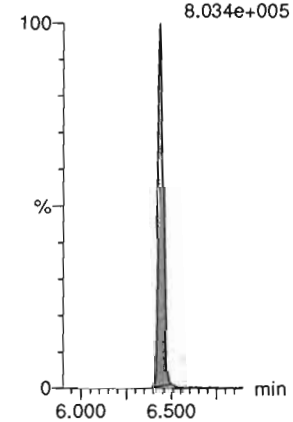
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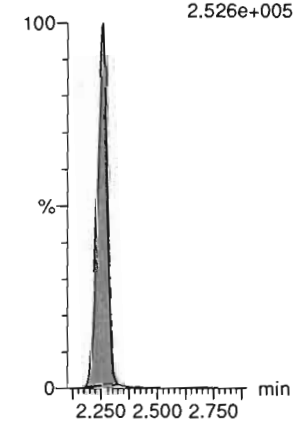
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

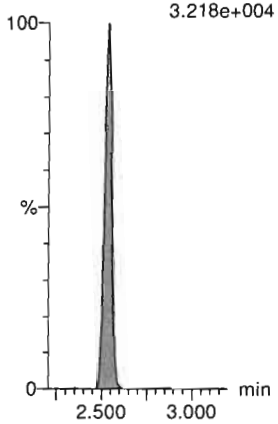


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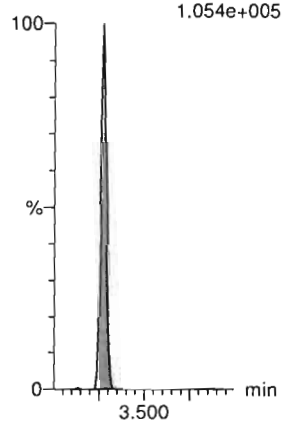
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Name: 200227P1-6, Date: 27-Feb-2020, Time: 16:13:39, ID: ST200227P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

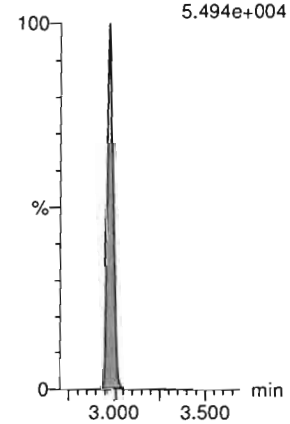
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.218e+004



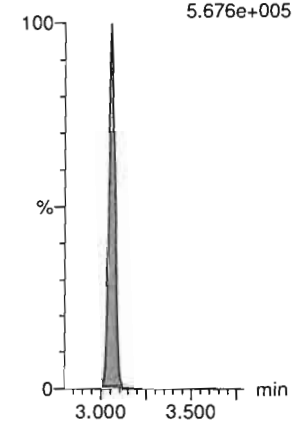
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.054e+005



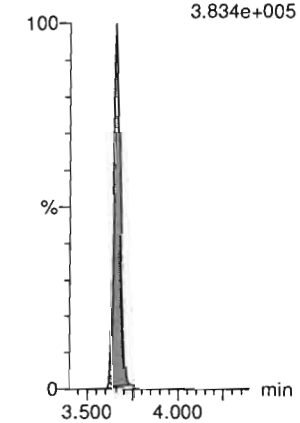
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.494e+004



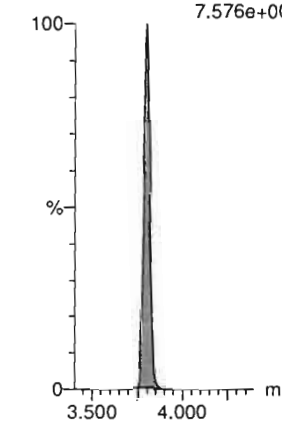
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.676e+005



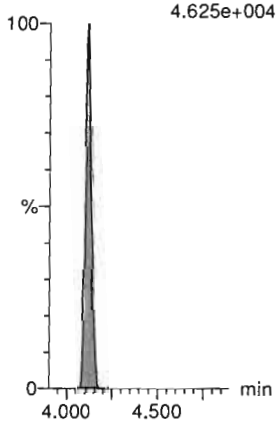
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.834e+005



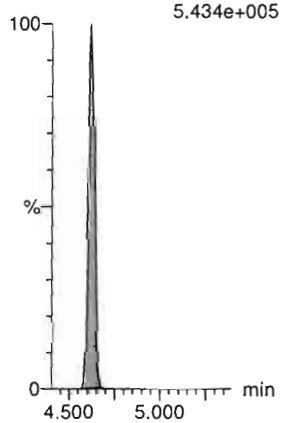
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.576e+004



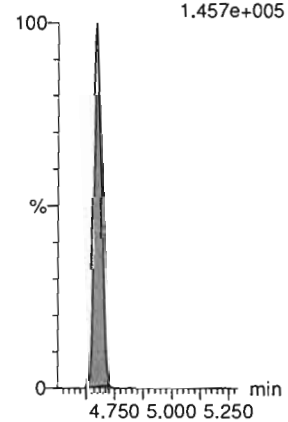
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.625e+004



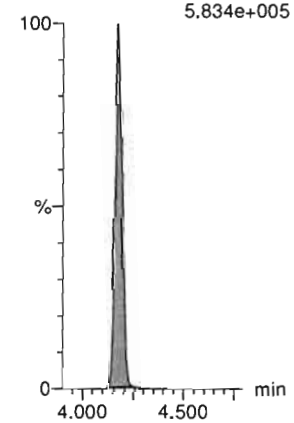
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.434e+005



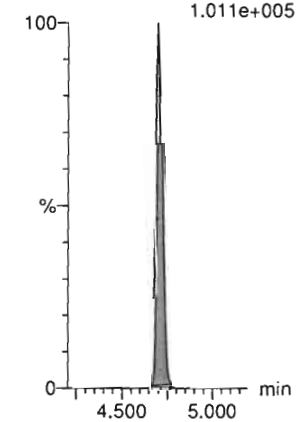
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.457e+005



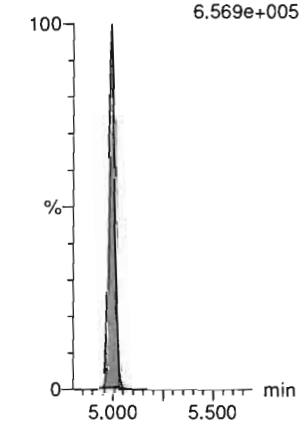
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.834e+005



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

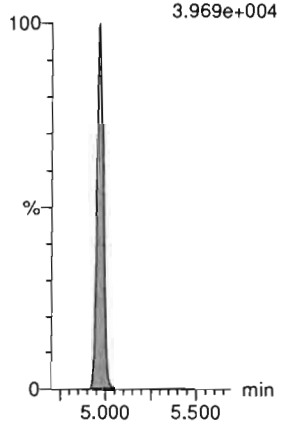


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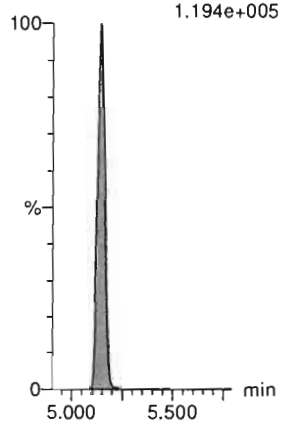
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Name: 200227P1-6, Date: 27-Feb-2020, Time: 16:13:39, ID: ST200227P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

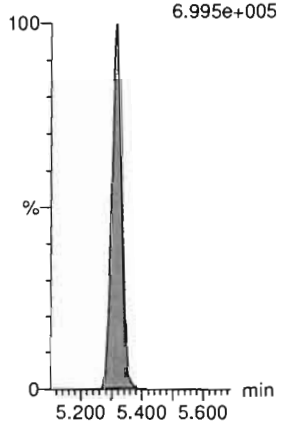
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.969e+004



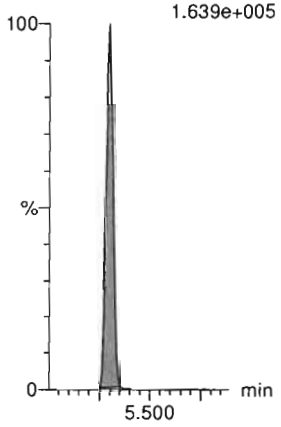
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.194e+005



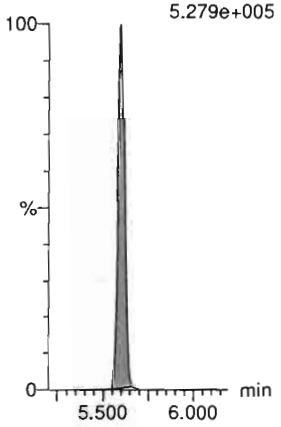
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.995e+005



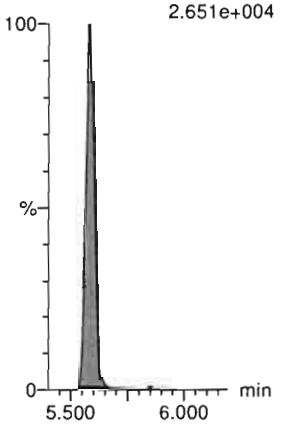
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.639e+005



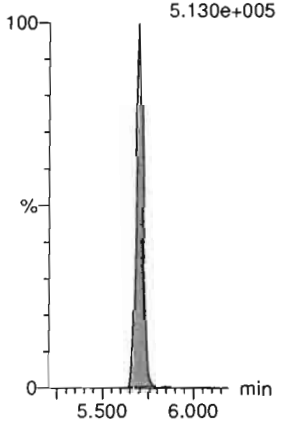
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.279e+005



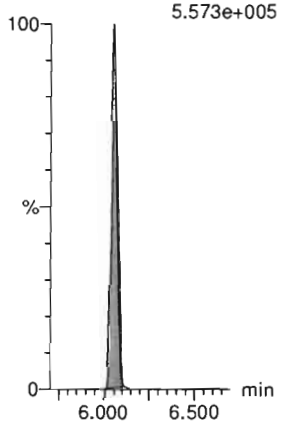
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.651e+004



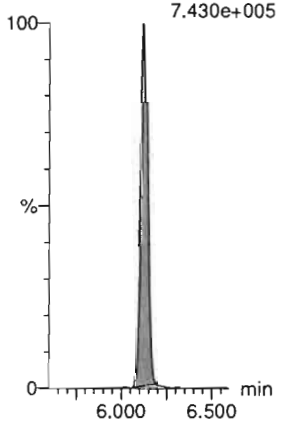
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.130e+005



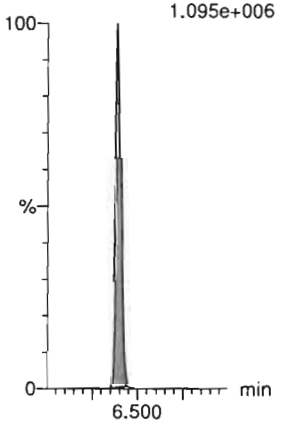
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.573e+005



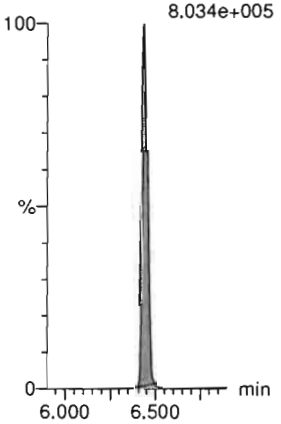
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.430e+005



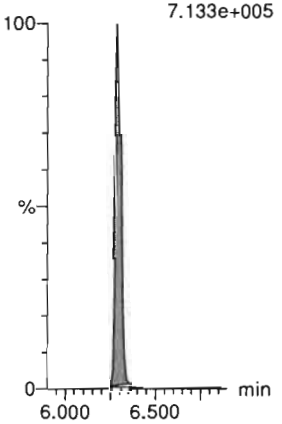
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.095e+006



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

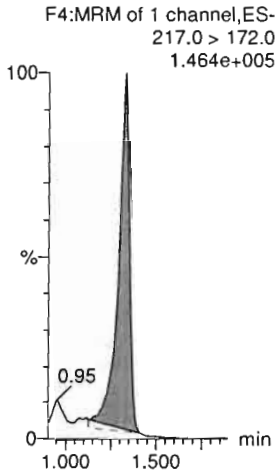


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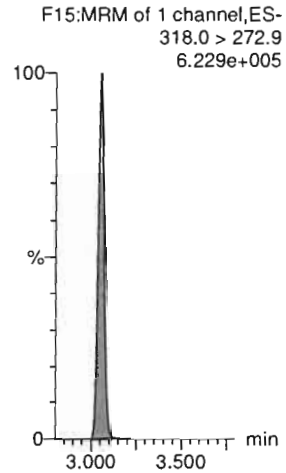
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Name: 200227P1-6, Date: 27-Feb-2020, Time: 16:13:39, ID: ST200227P1-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

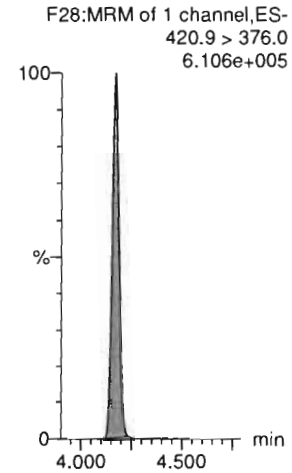
13C4-PFBA



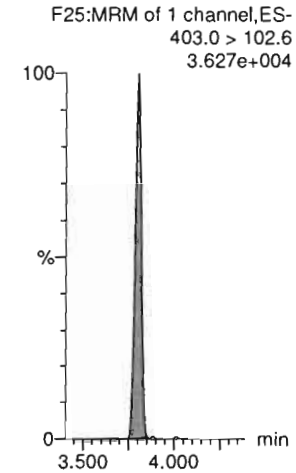
13C5-PFHxA



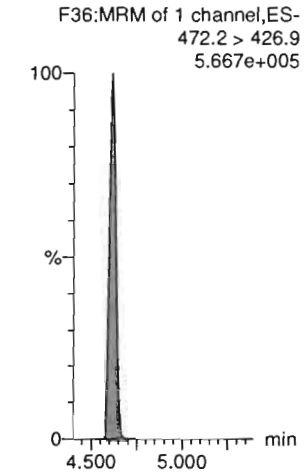
13C8-PFOA



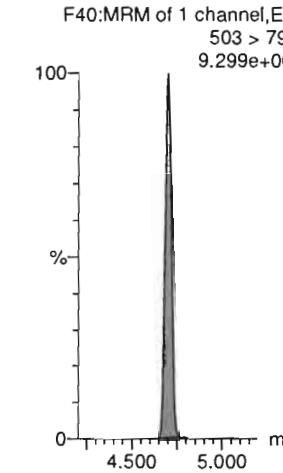
18O2-PFHxS



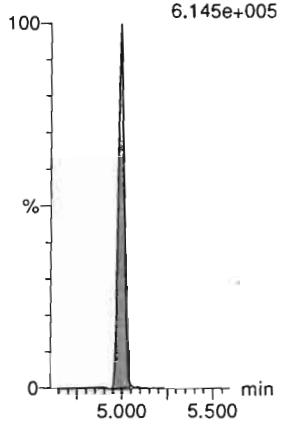
13C9-PFNA



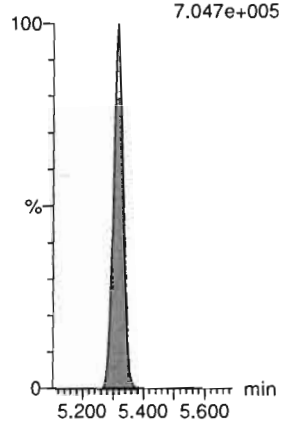
13C4-PFOS



13C6-PFDA



13C7-PFUdA

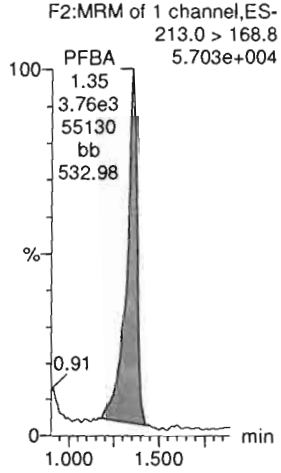


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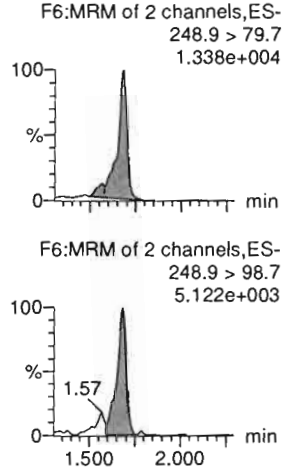
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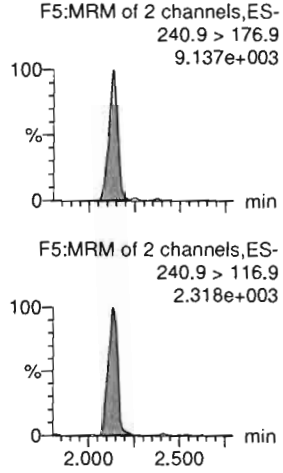
PFBA



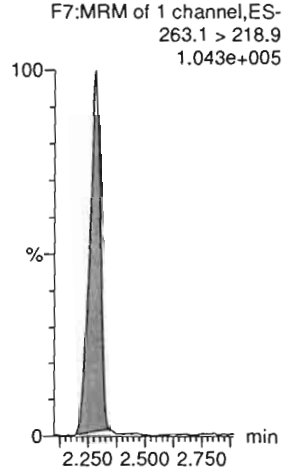
PFPrS



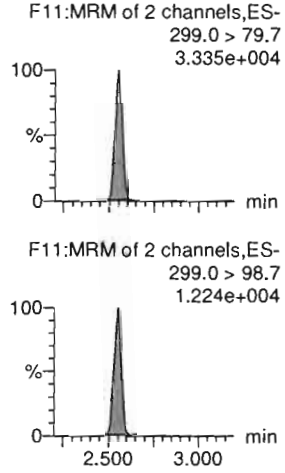
3:3 FTCA



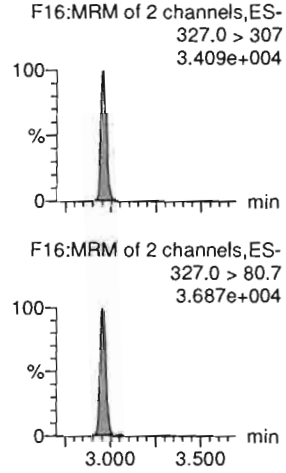
PFPeA



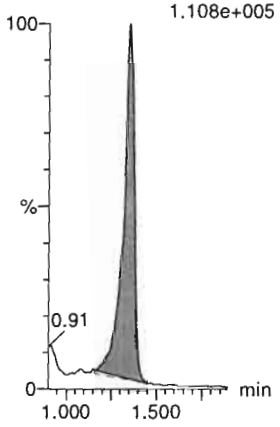
PFBS



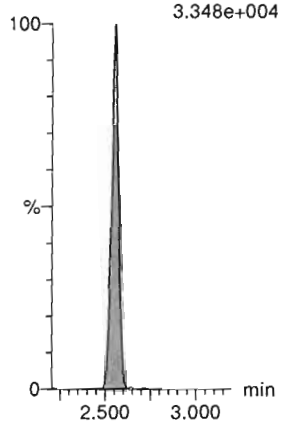
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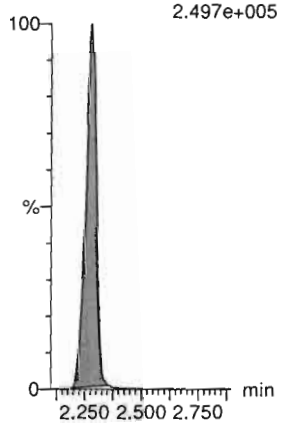
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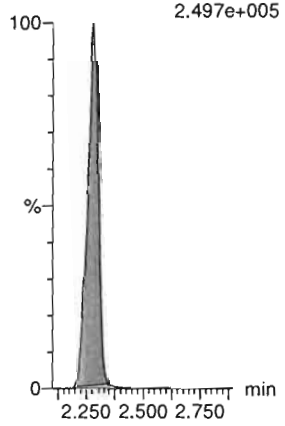
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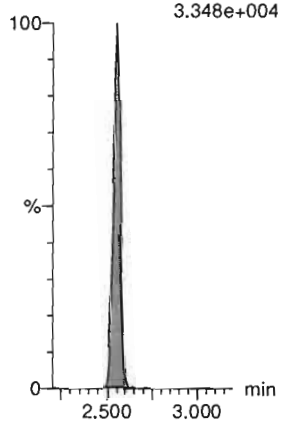
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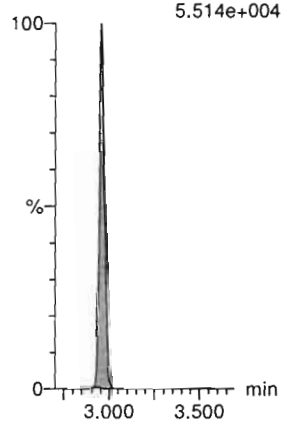
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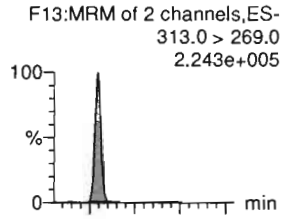


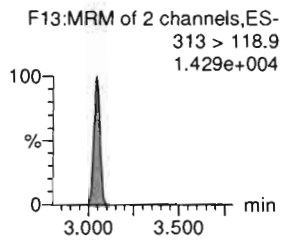
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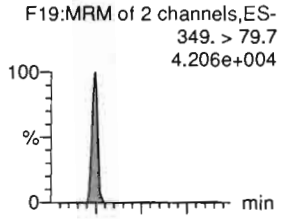
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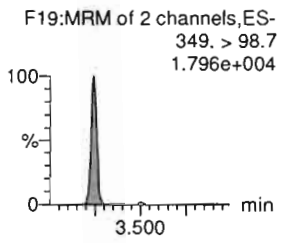
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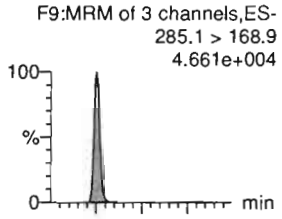


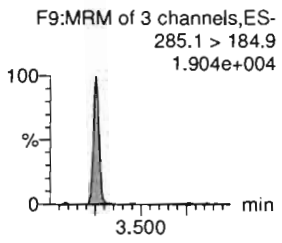
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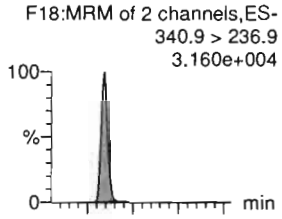


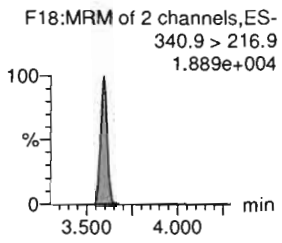
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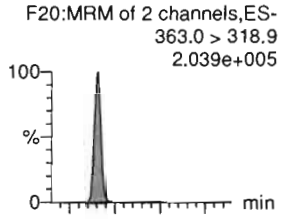


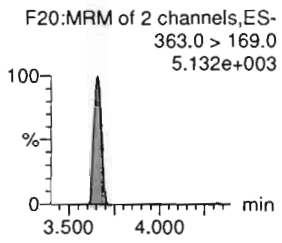
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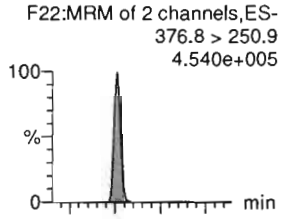


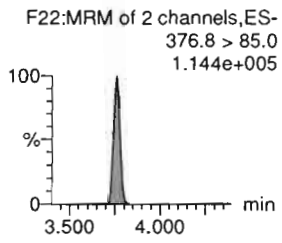
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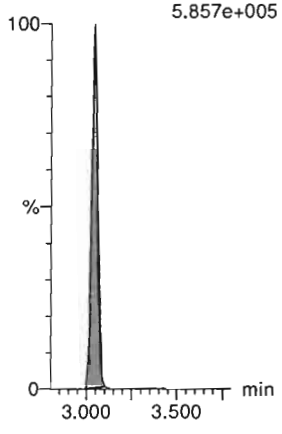


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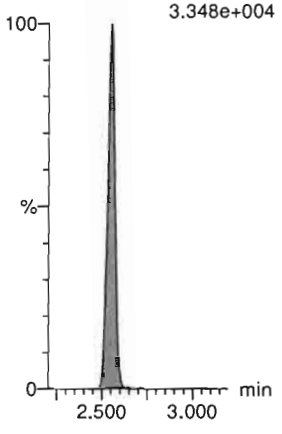




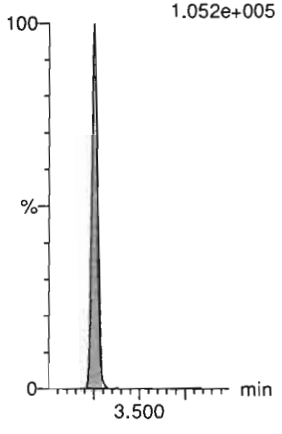
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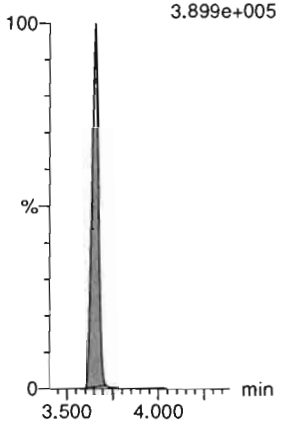
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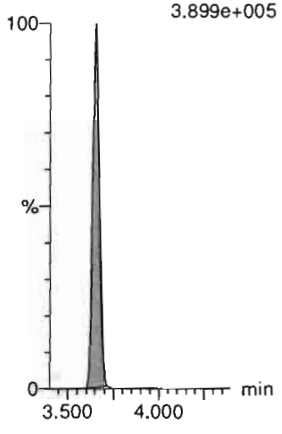
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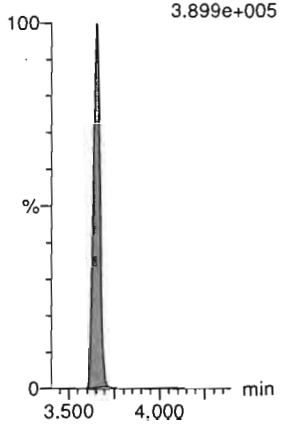
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13C4-PFHpA-EIS



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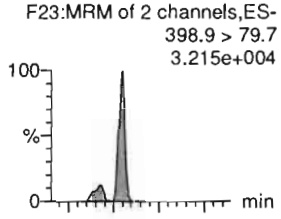


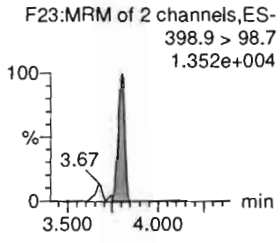
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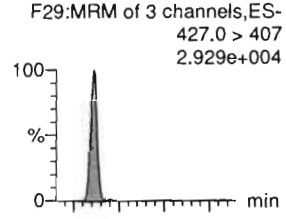
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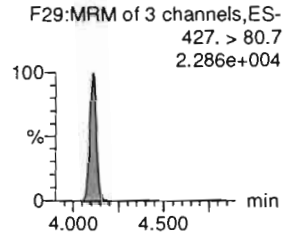
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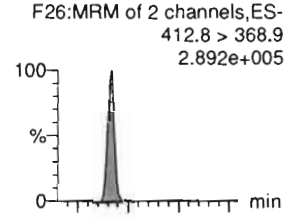


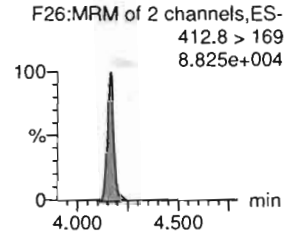
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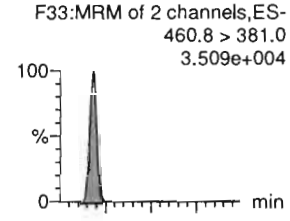


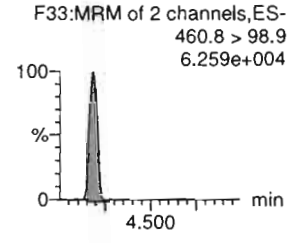
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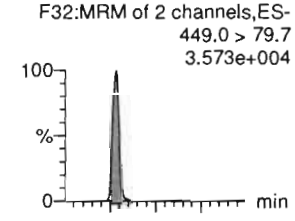


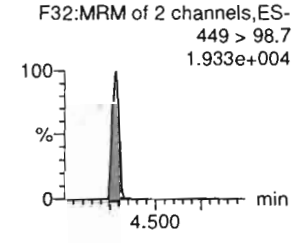
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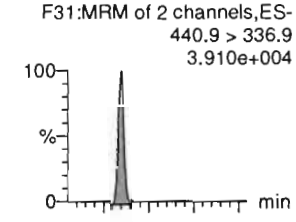


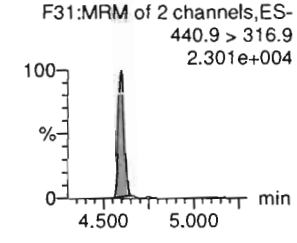
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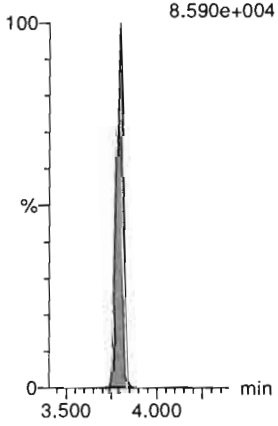


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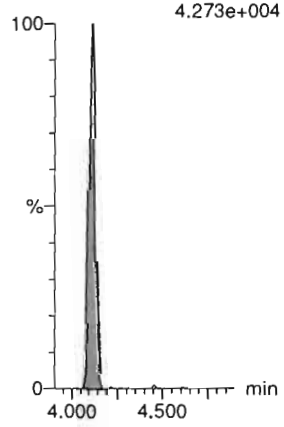




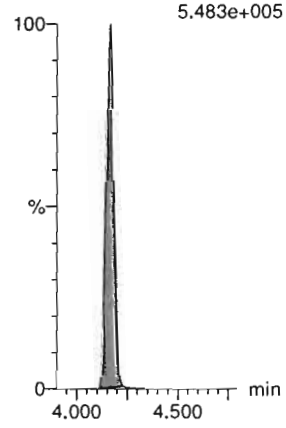
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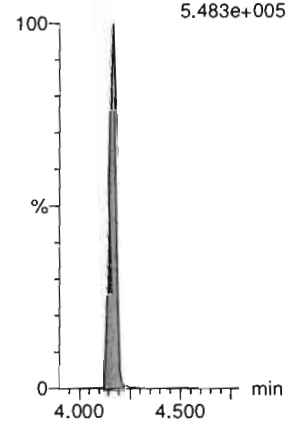
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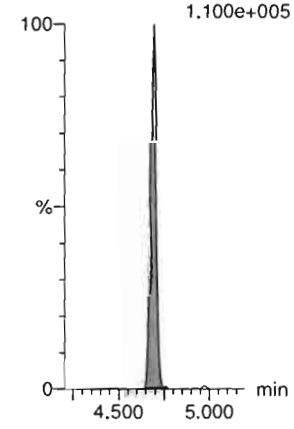
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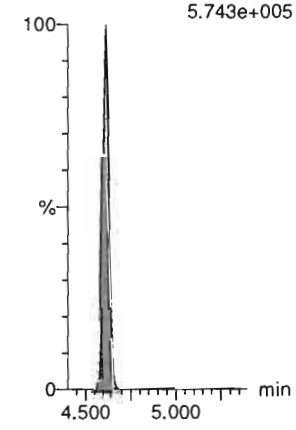
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13C8-PFOS-EIS



13C5-PFNA-EIS

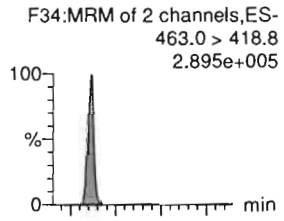


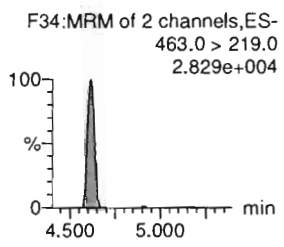
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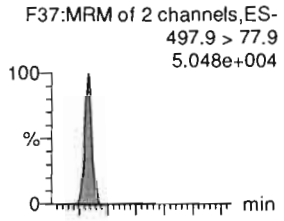
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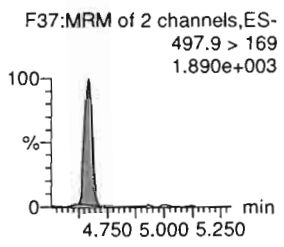
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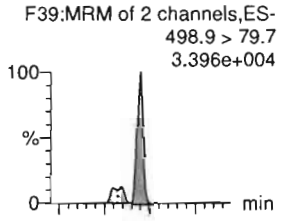


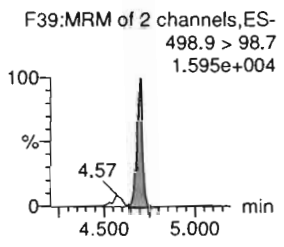
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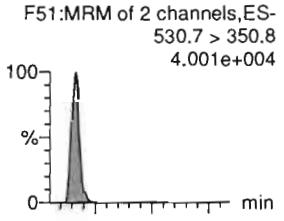


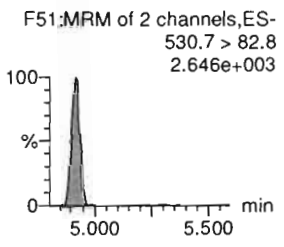
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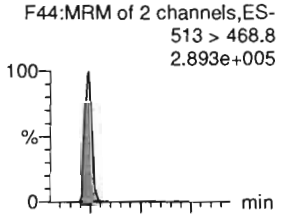


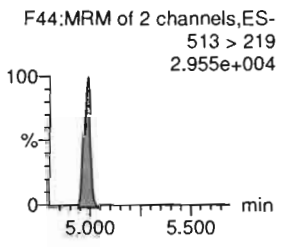
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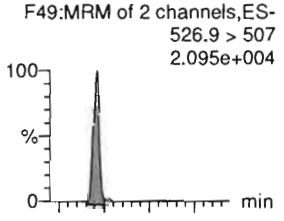


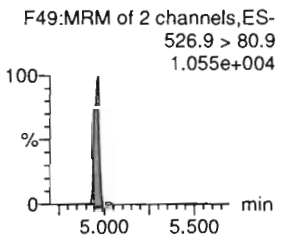
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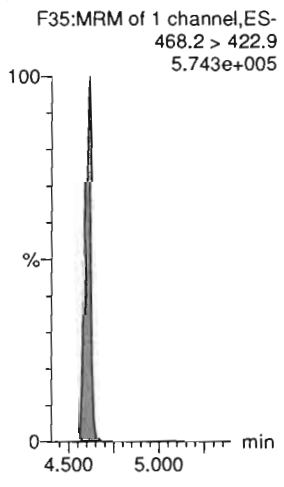


8:2 FTS

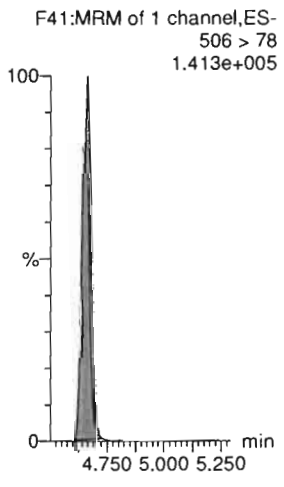




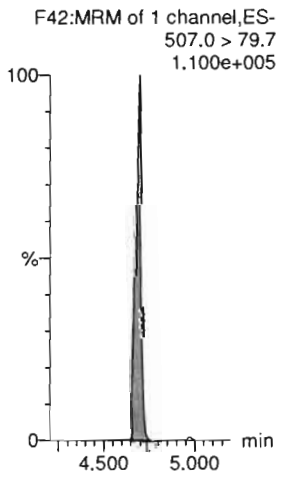
13C5-PFNA-EIS



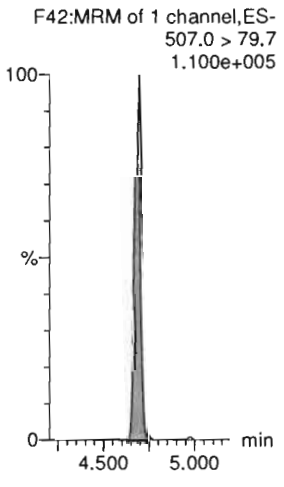
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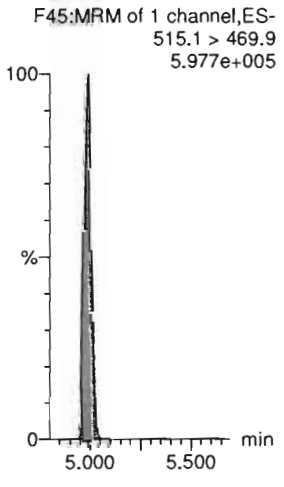
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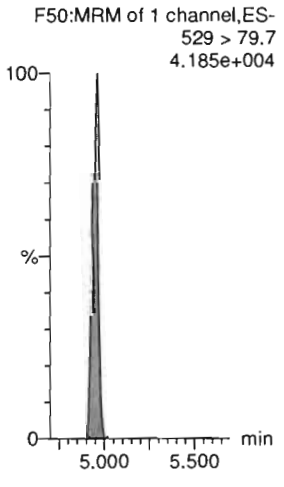
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

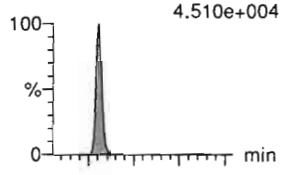


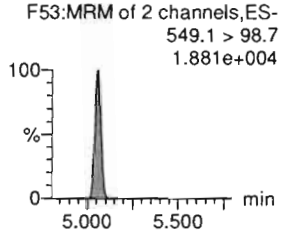
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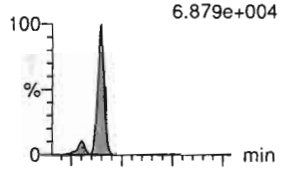
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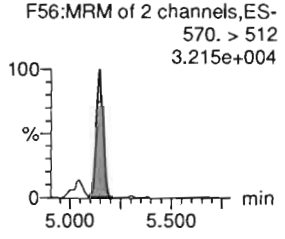
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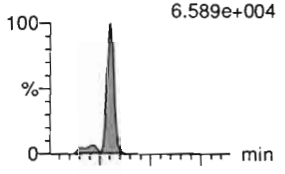


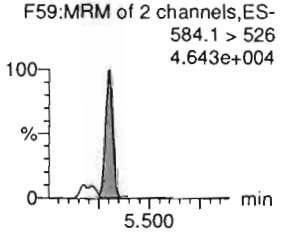
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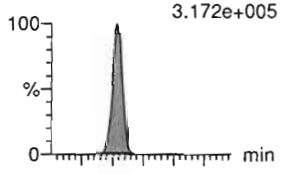


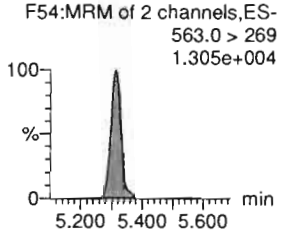
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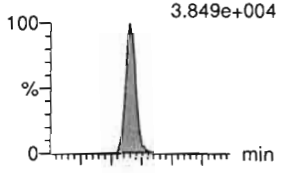


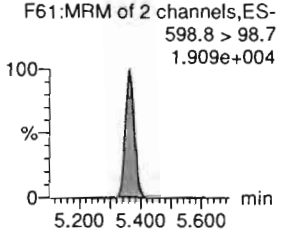
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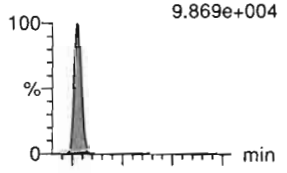


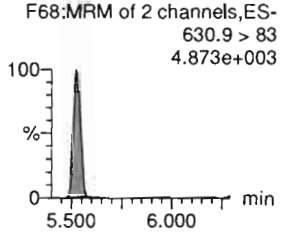
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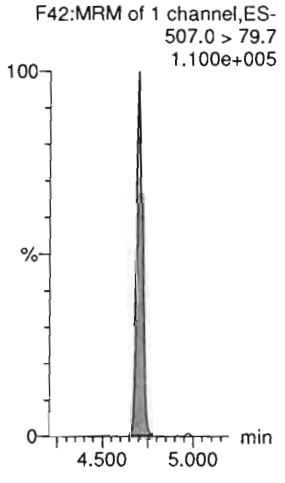


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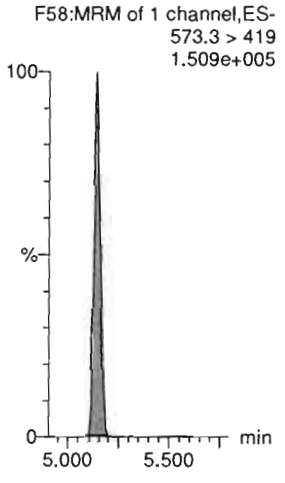




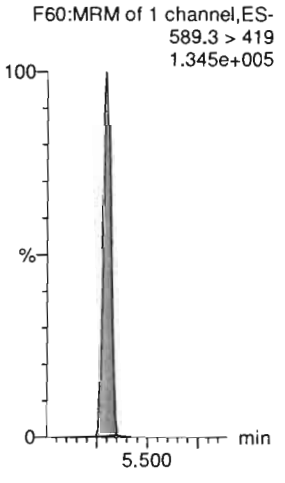
13C8-PFOS-EIS



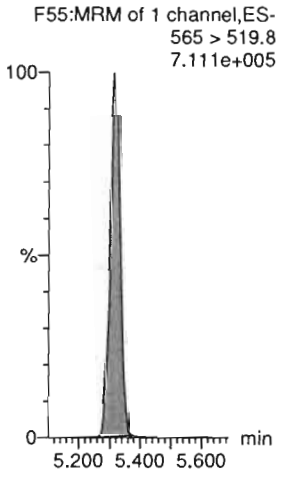
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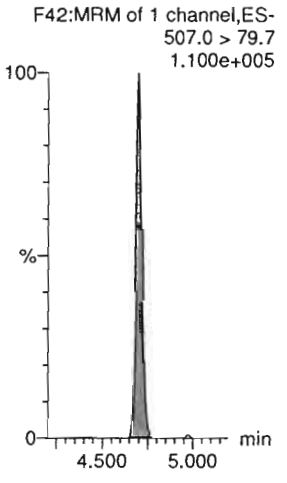
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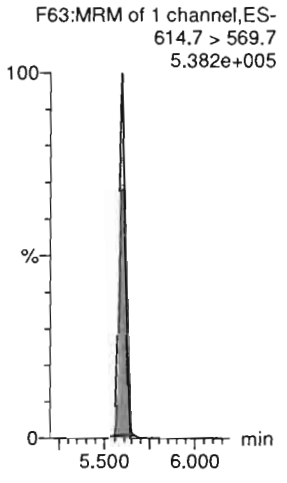
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

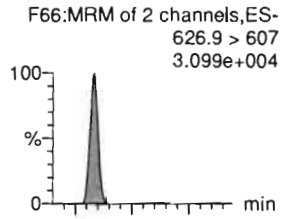


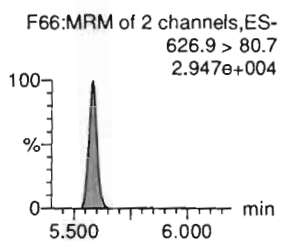
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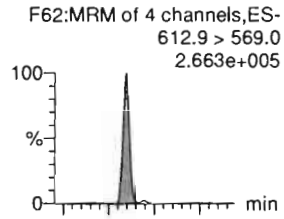
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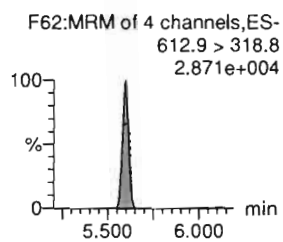
10:2 FTS



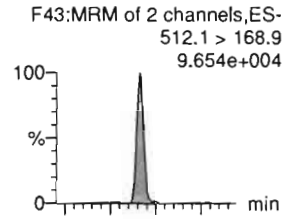


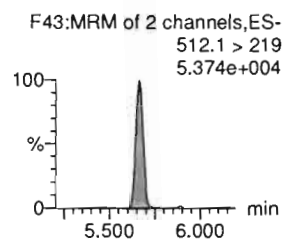
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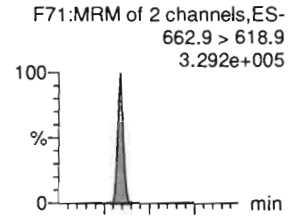


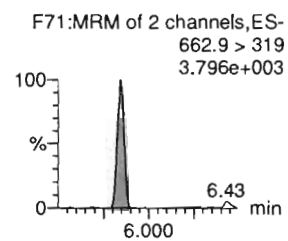
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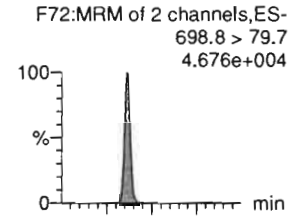


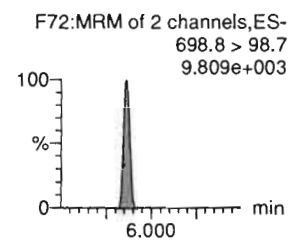
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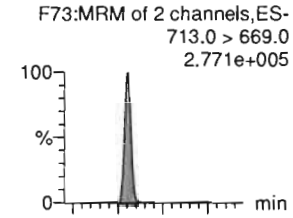


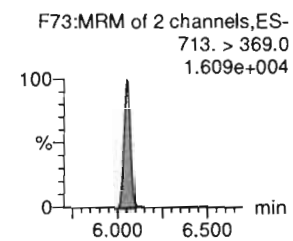
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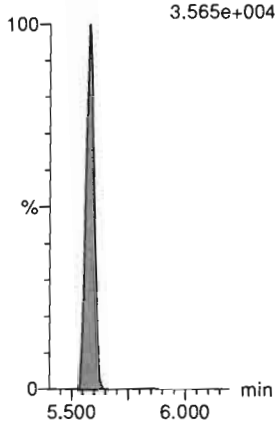


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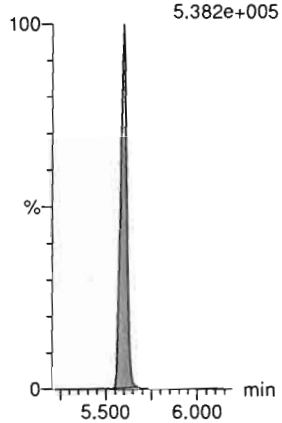




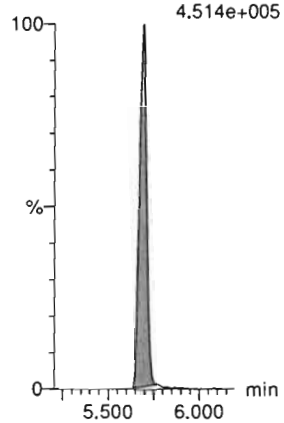
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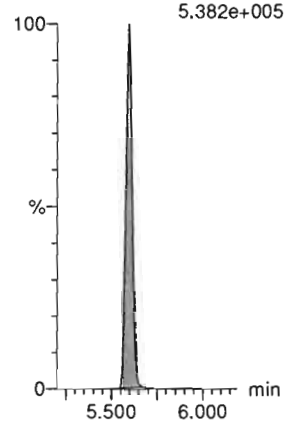
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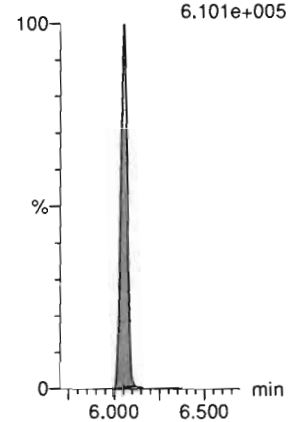
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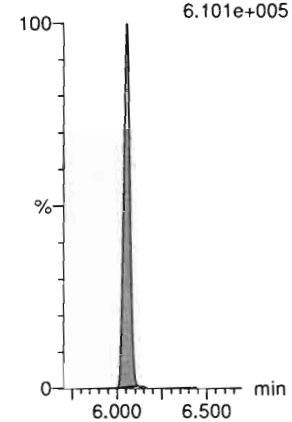
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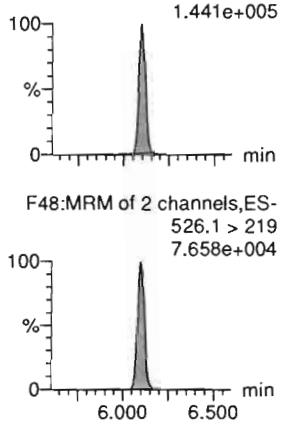


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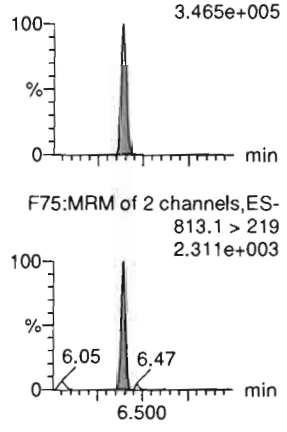
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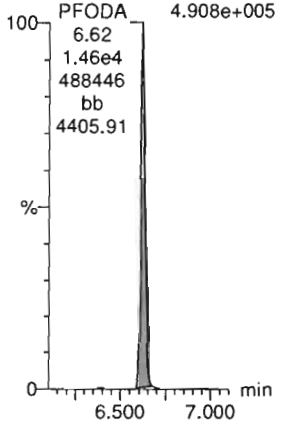
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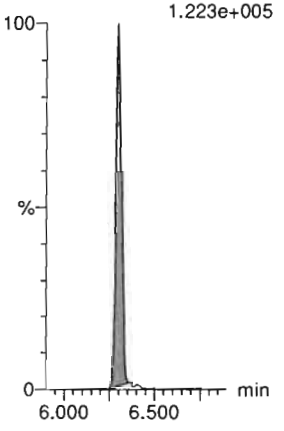
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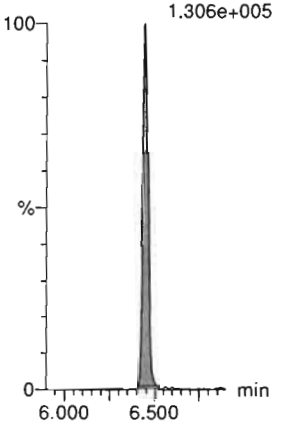
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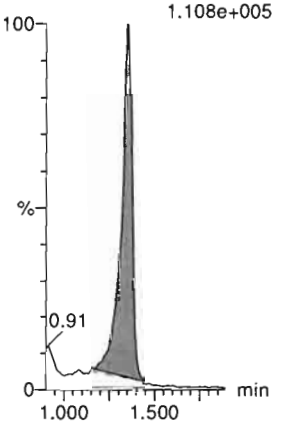
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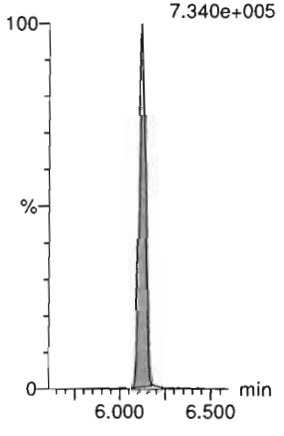
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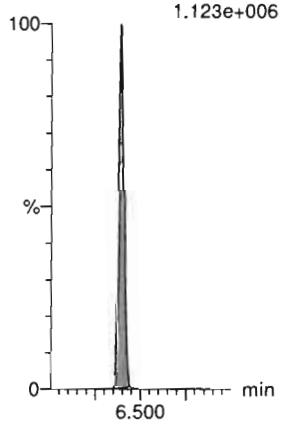
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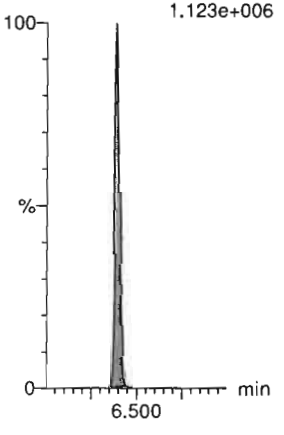
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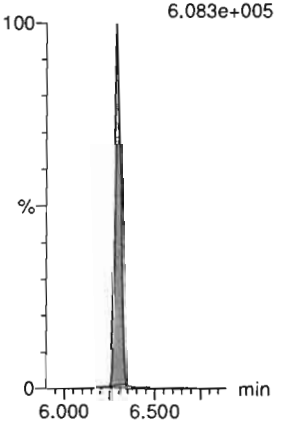
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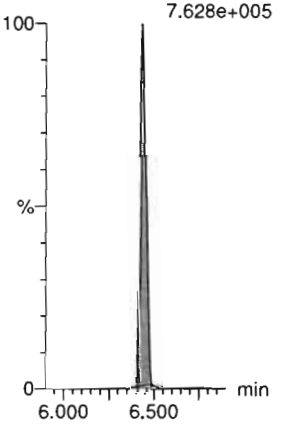
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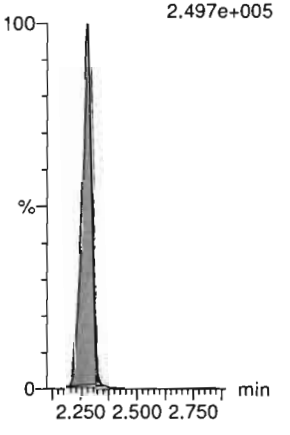
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

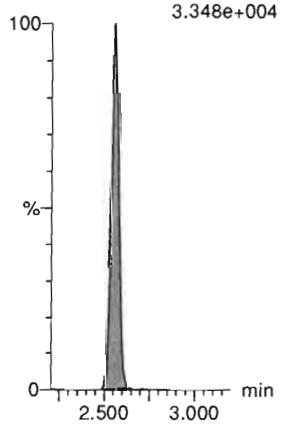


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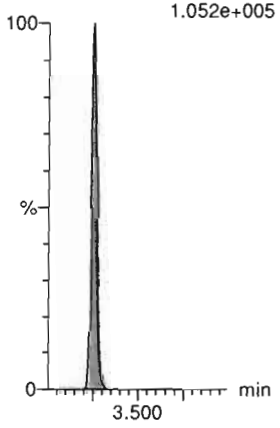
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Name: 200227P1-7, Date: 27-Feb-2020, Time: 16:26:17, ID: ST200227P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

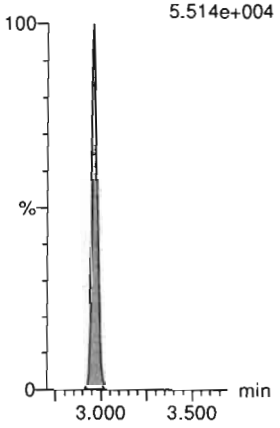
13C3-PFBS-RSD



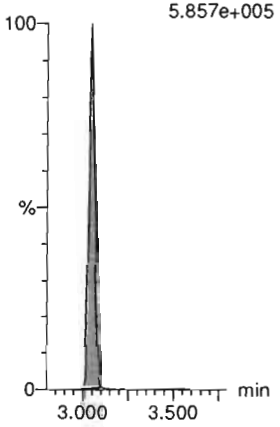
13C3-HFPO-DA-RSD



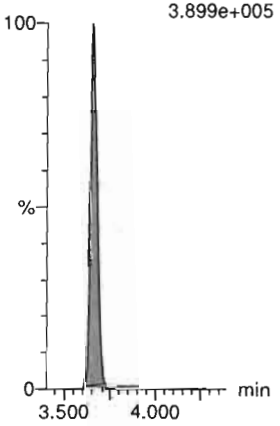
13C2-4:2 FTS-RSD



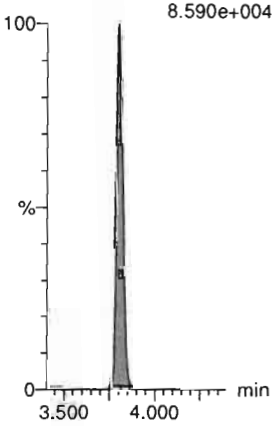
13C2-PFHxA-RSD



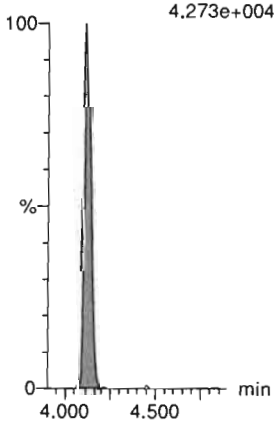
13C4-PFHpA-RSD



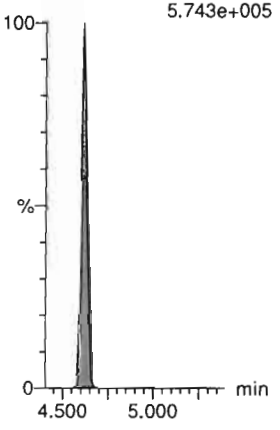
13C3-PFHxS-RSD



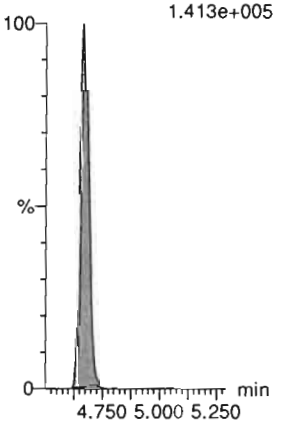
13C2-6:2 FTS-RSD



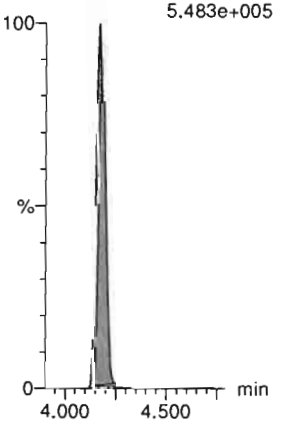
13C5-PFNA-RSD



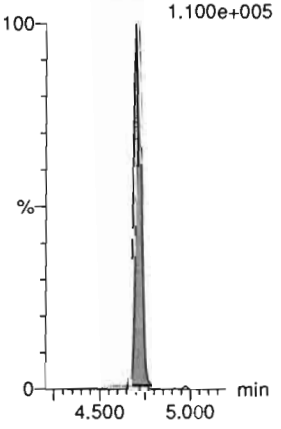
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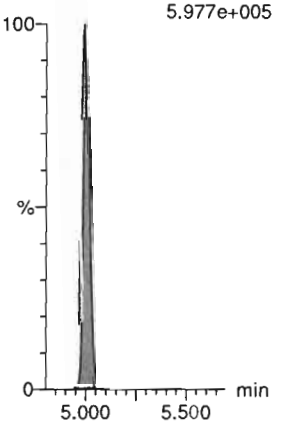
13C2-PFOA-RSD



13C8-PFOS-RSD



13C2-PFDA-RSD

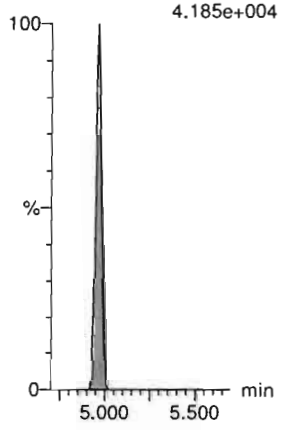


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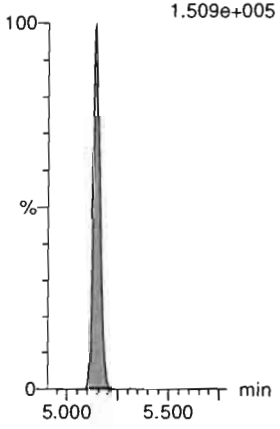
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Name: 200227P1-7, Date: 27-Feb-2020, Time: 16:26:17, ID: ST200227P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

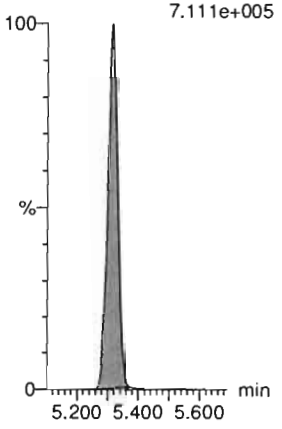
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.185e+004



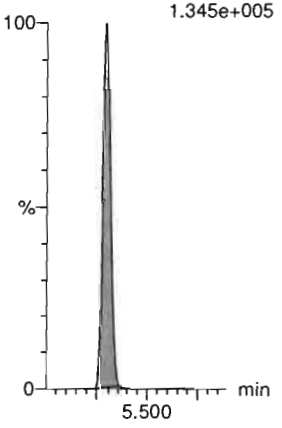
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.509e+005



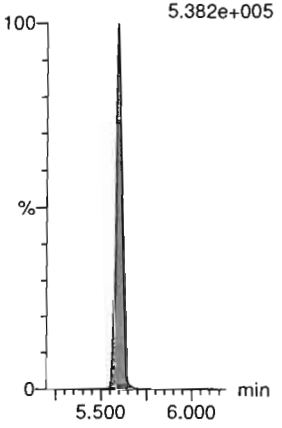
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.111e+005



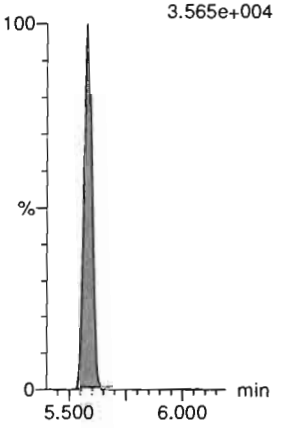
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.345e+005



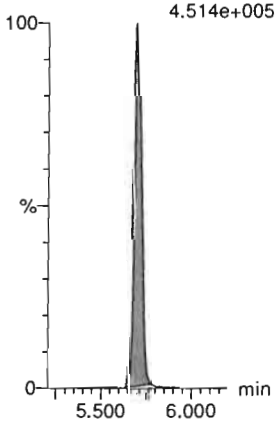
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.382e+005



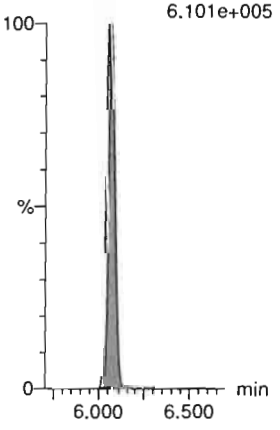
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.565e+004



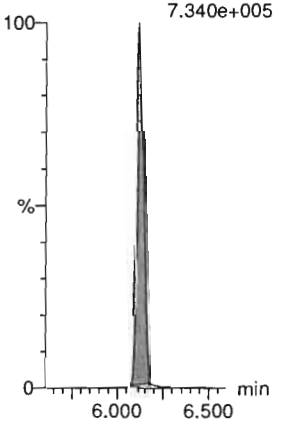
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.514e+005



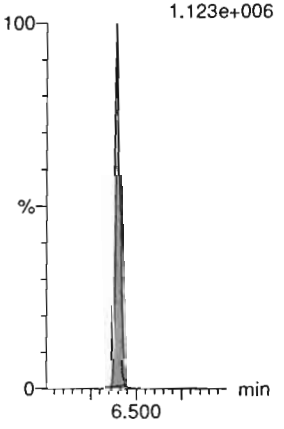
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.101e+005



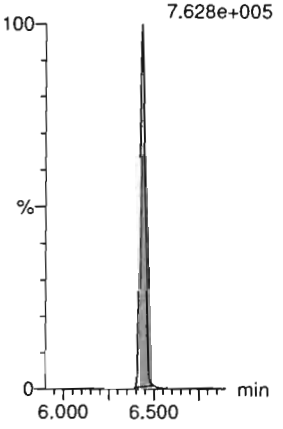
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.340e+005



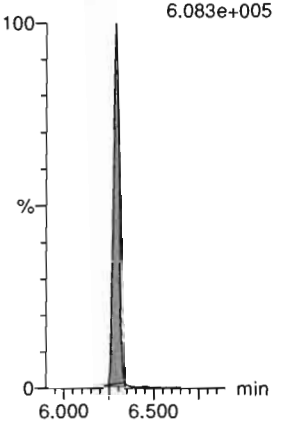
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.123e+006



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

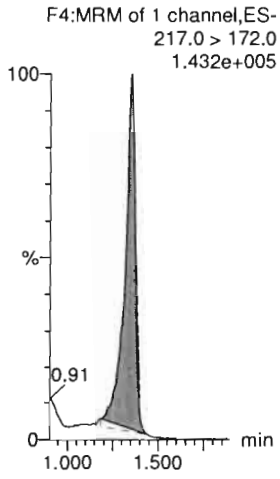


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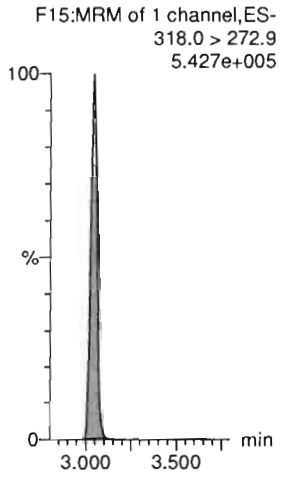
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Name: 200227P1-7, Date: 27-Feb-2020, Time: 16:26:17, ID: ST200227P1-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

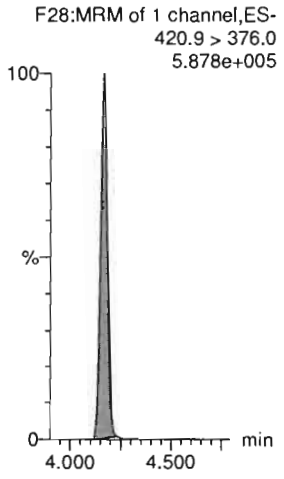
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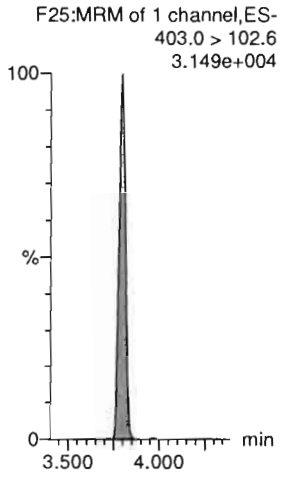
13C5-PFHxA



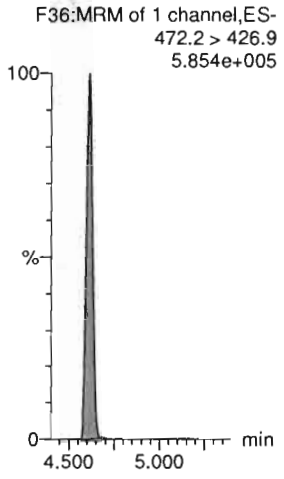
13C8-PFOA



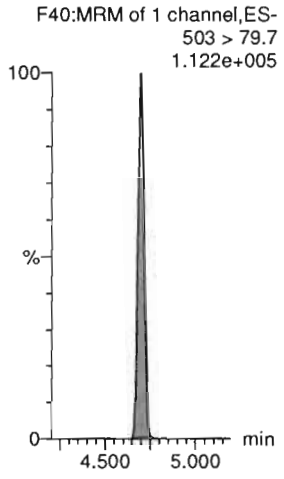
18O2-PFHxS



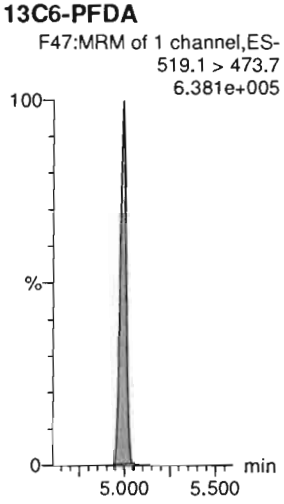
13C9-PFNA



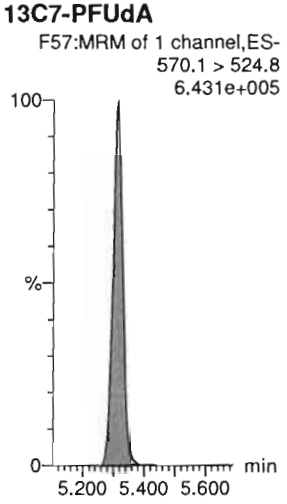
13C4-PFOS



13C6-PFDA



13C7-PFUdA

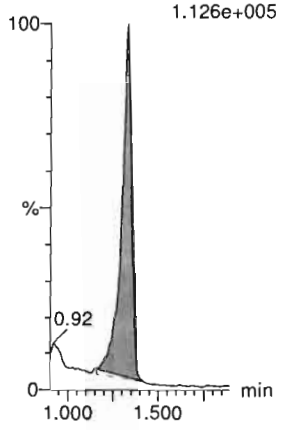


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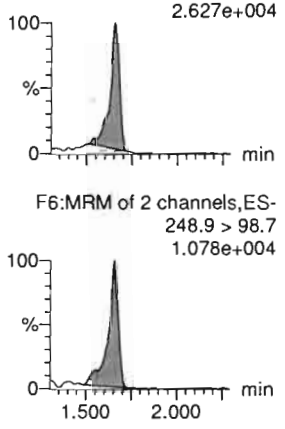
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Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

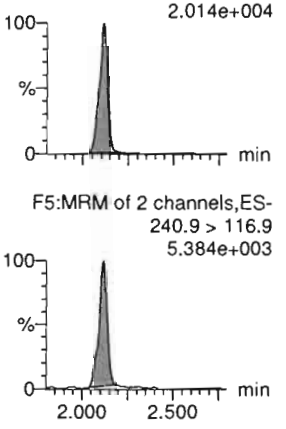
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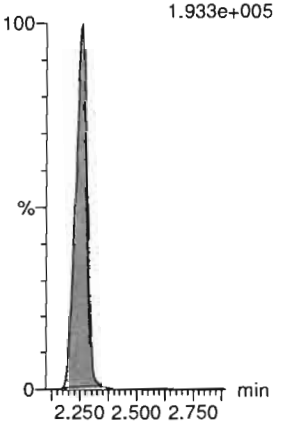
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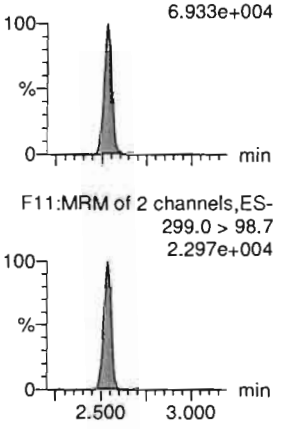
3:3 FTCA



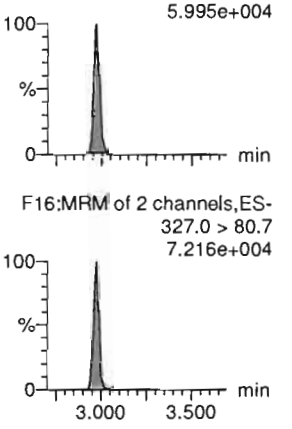
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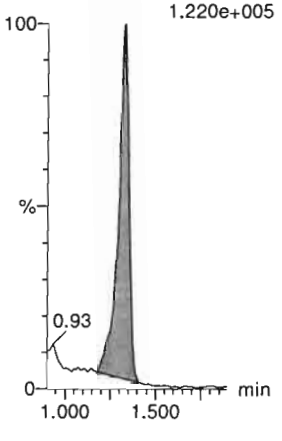
PFBS



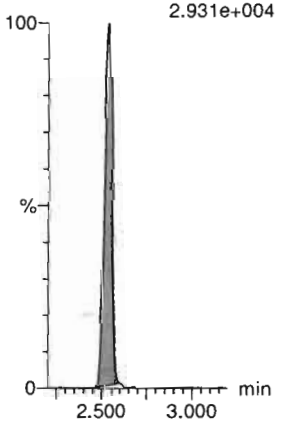
4:2 FTS



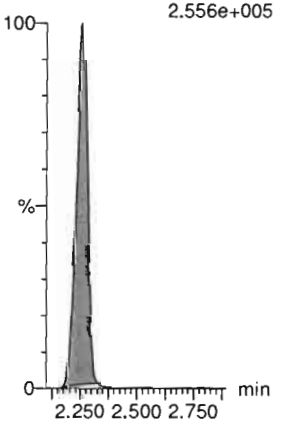
13C3-PFBA-EIS



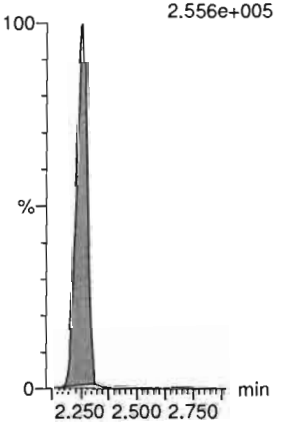
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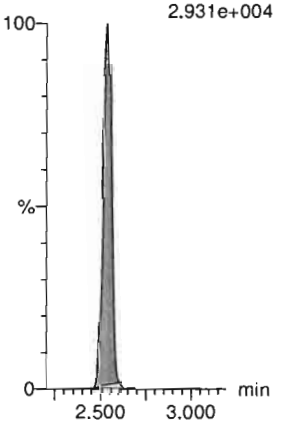
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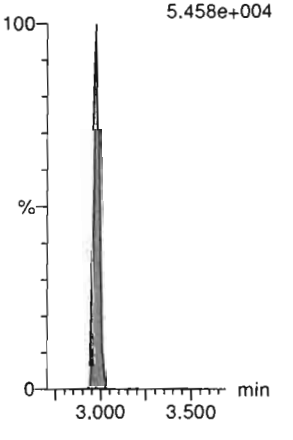
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

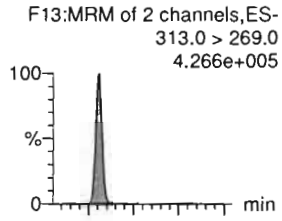


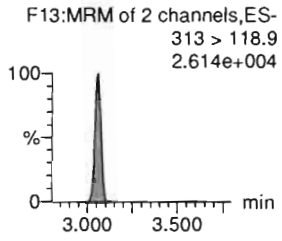
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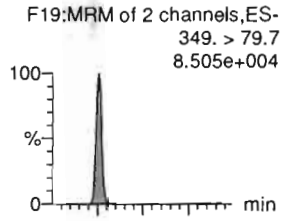
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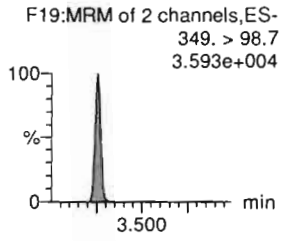
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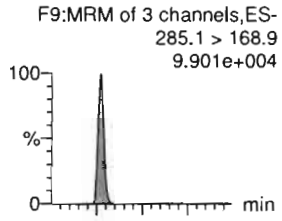


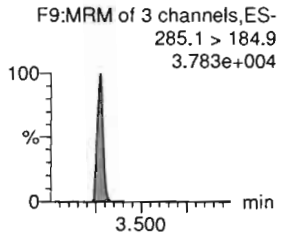
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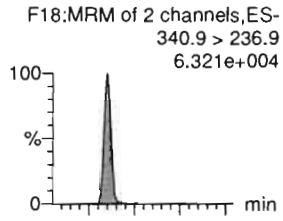


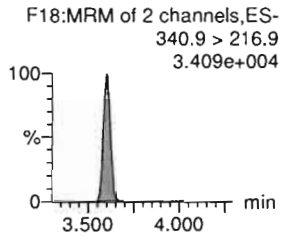
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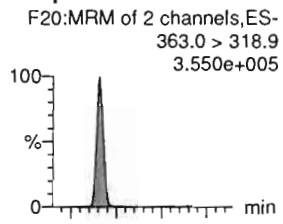


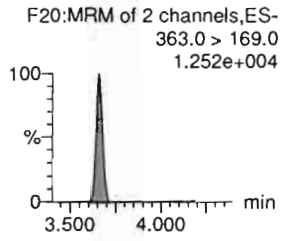
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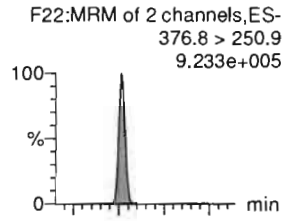


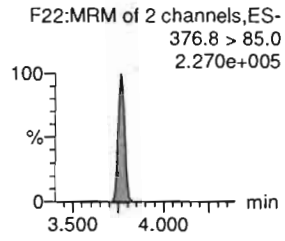
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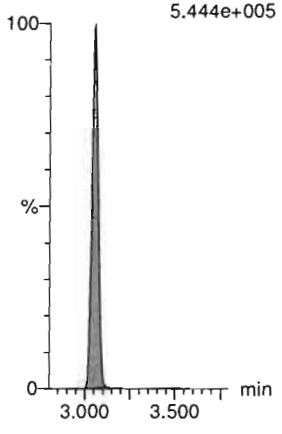


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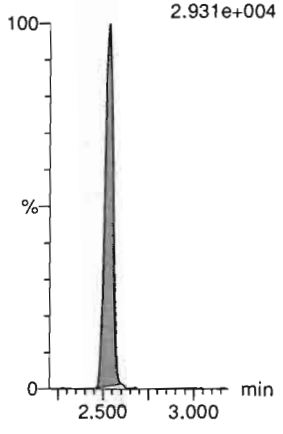




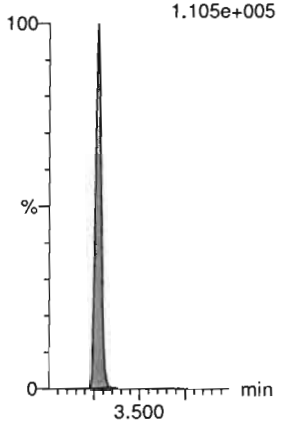
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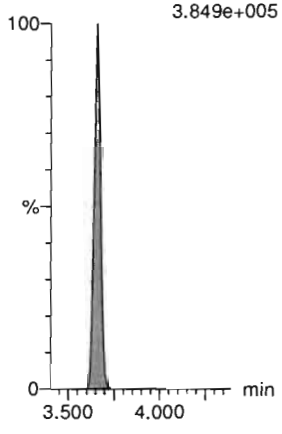
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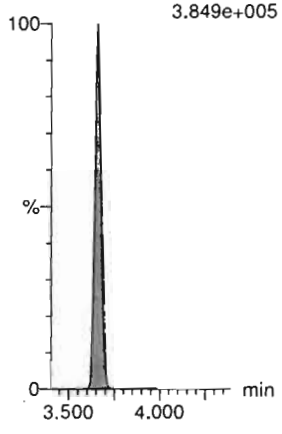
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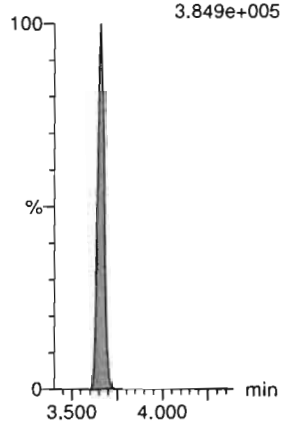
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13C4-PFHpA-EIS



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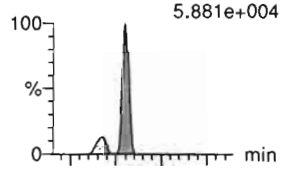


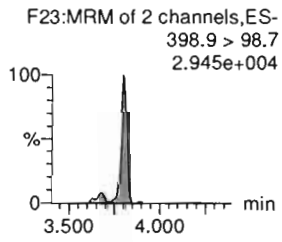
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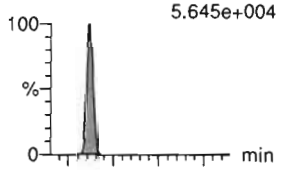
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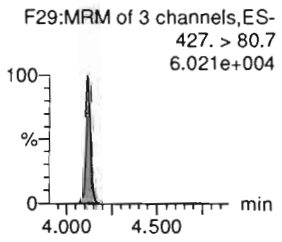
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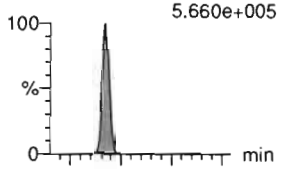


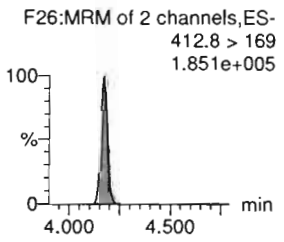
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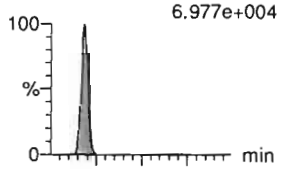


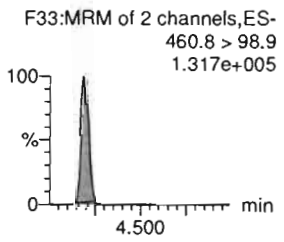
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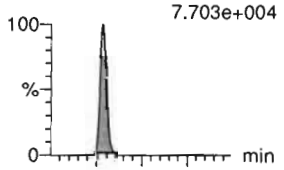


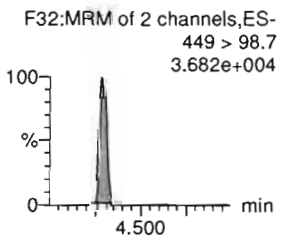
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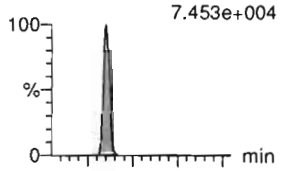


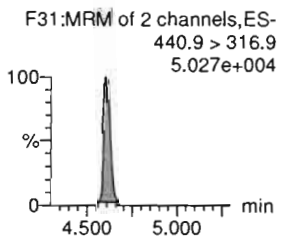
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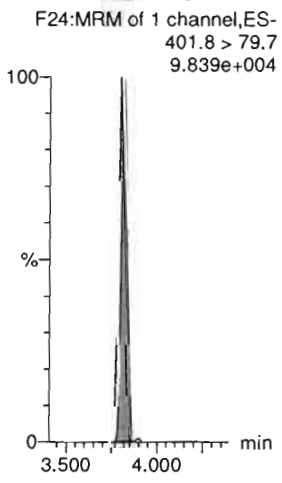


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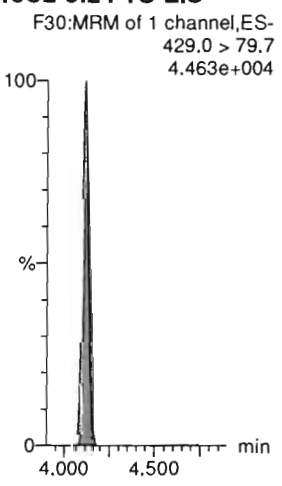




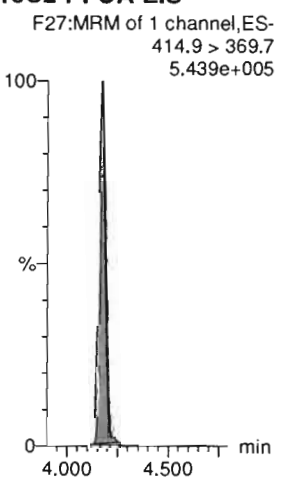
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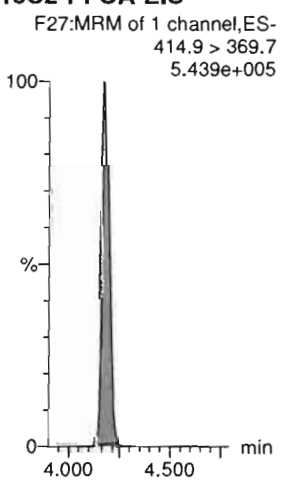
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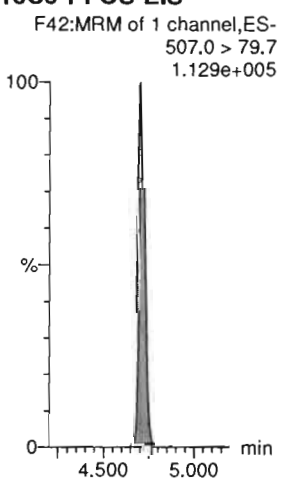
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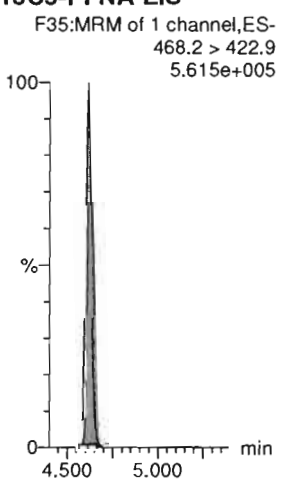
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13C8-PFOS-EIS



13C5-PFNA-EIS

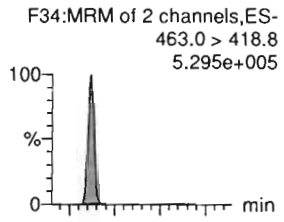


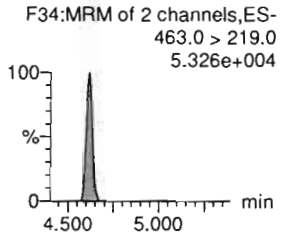
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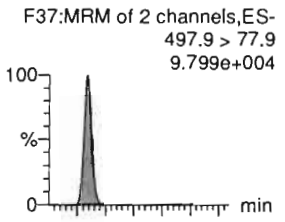
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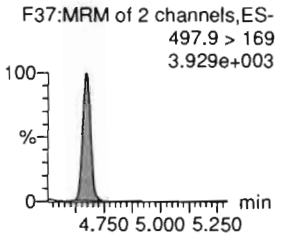
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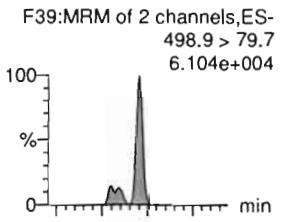


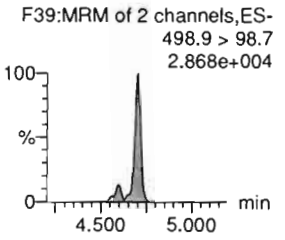
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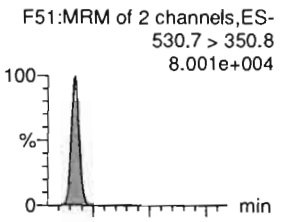


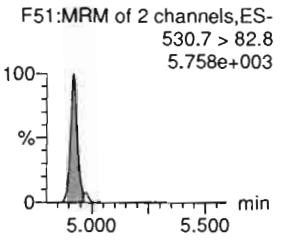
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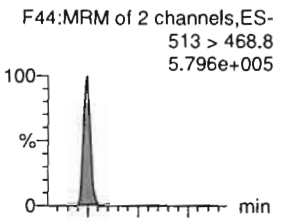


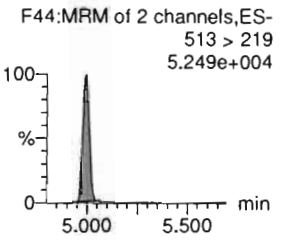
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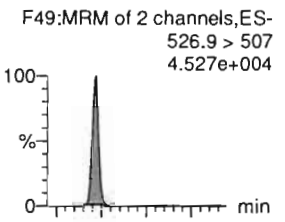


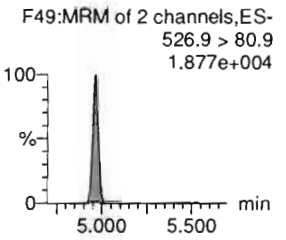
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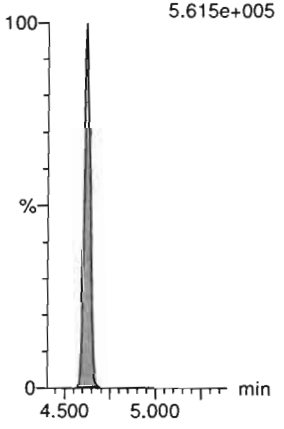


8:2 FTS

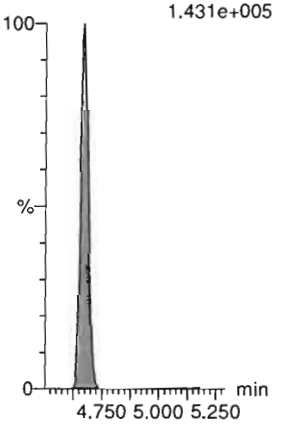




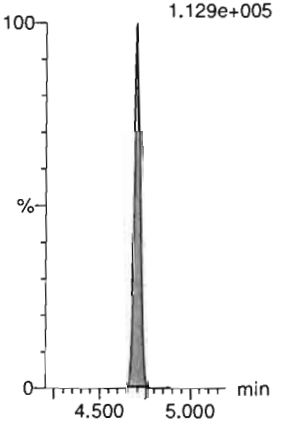
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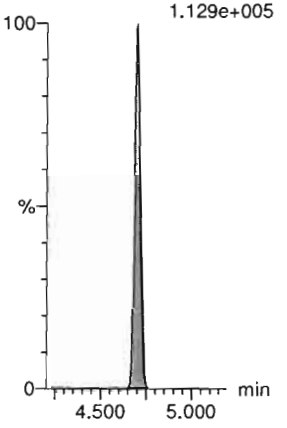
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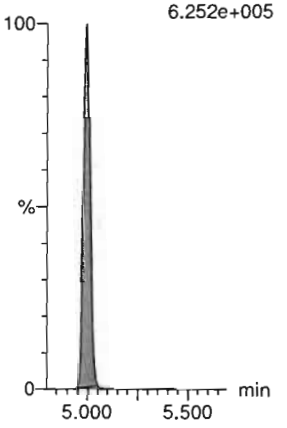
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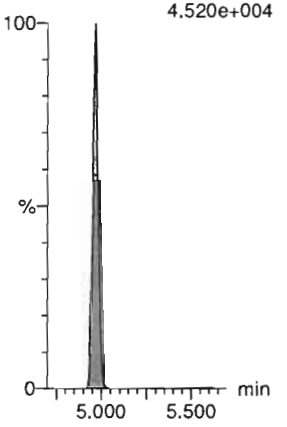
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

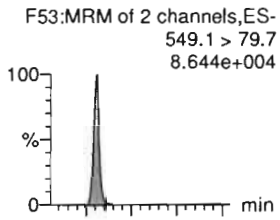


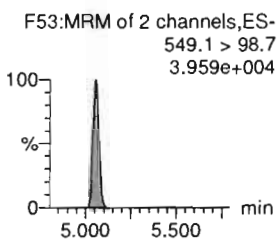
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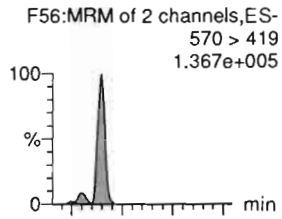
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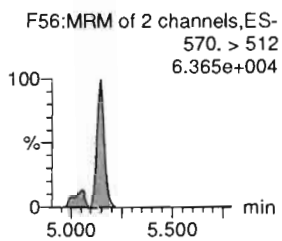
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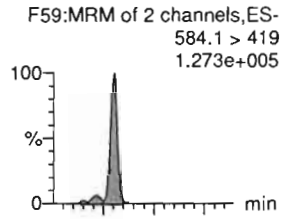


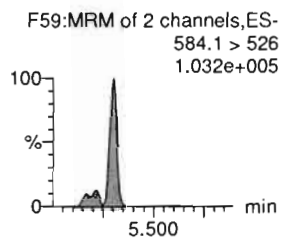
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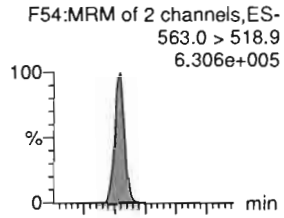


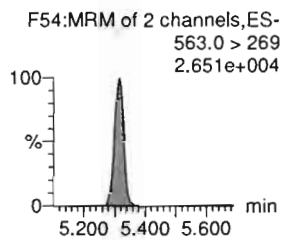
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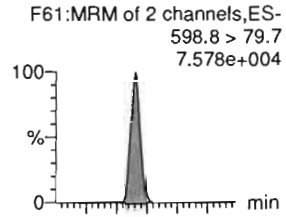


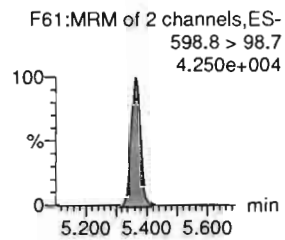
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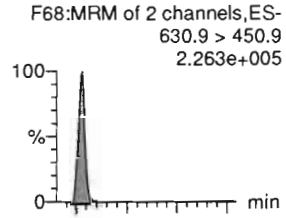


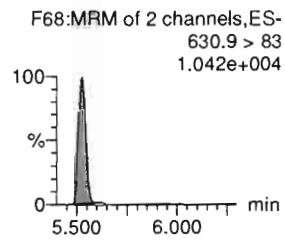
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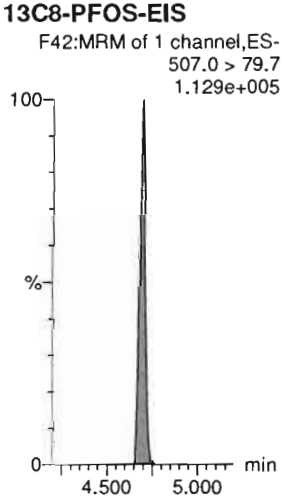


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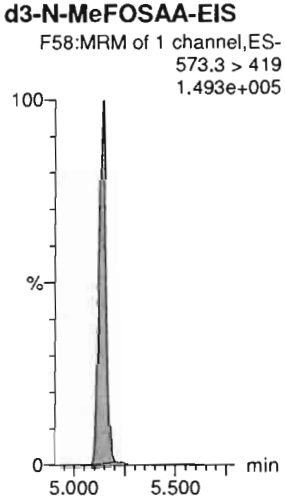




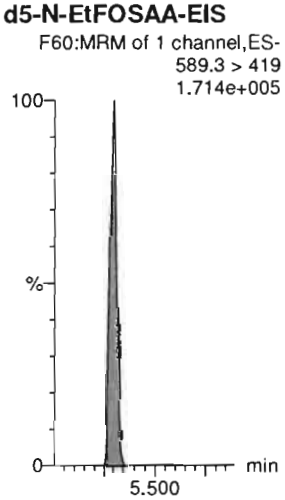
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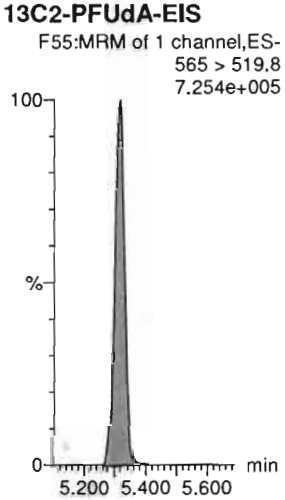
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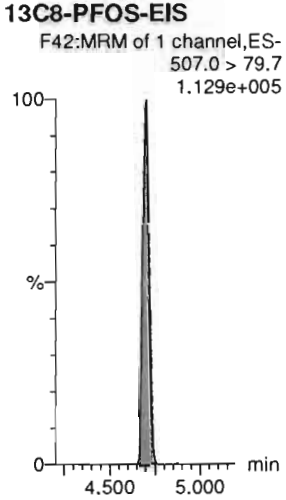
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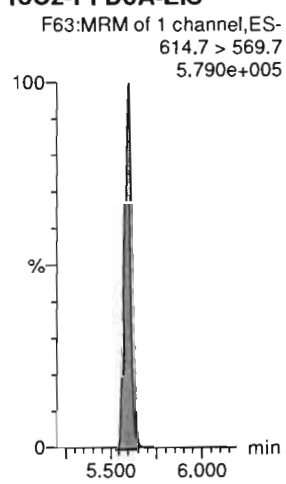
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13C8-PFOS-EIS



13C2-PFDoA-EIS

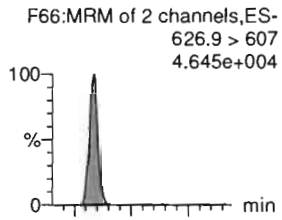


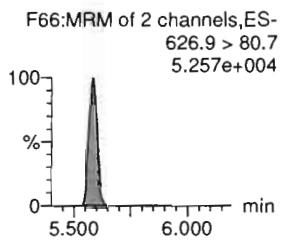
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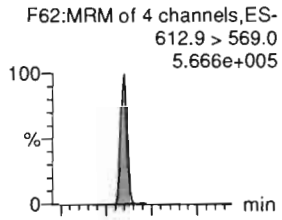
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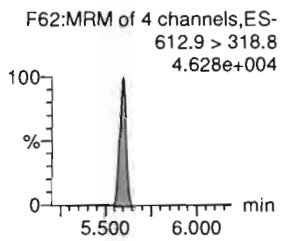
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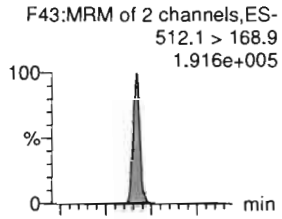


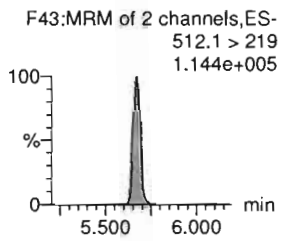
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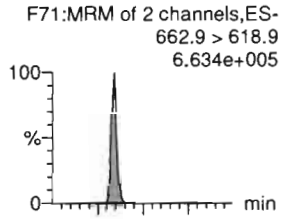


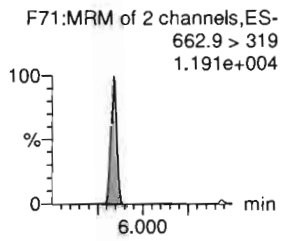
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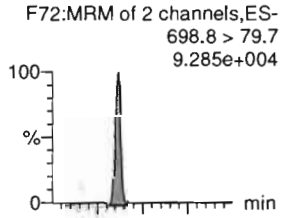


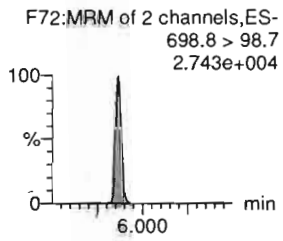
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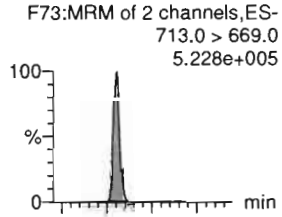


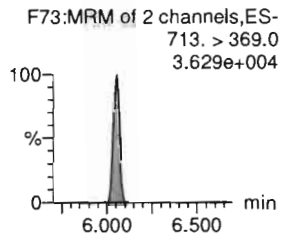
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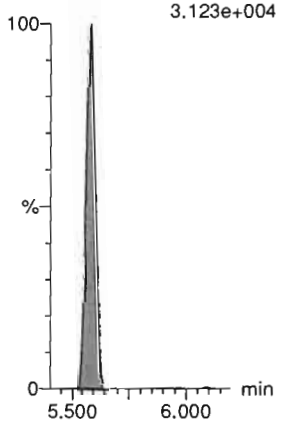


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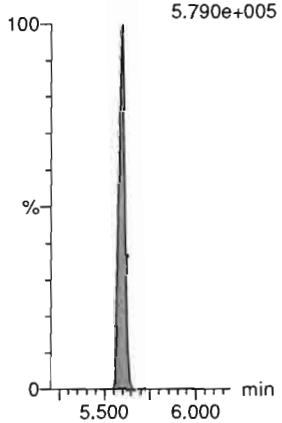




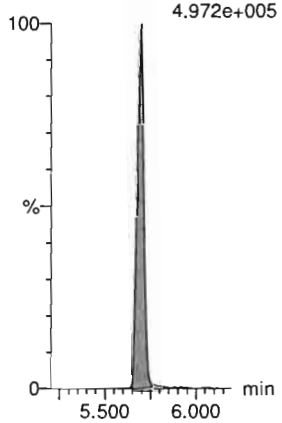
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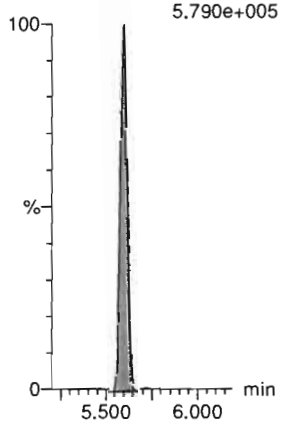
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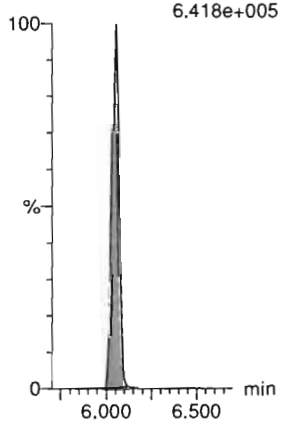
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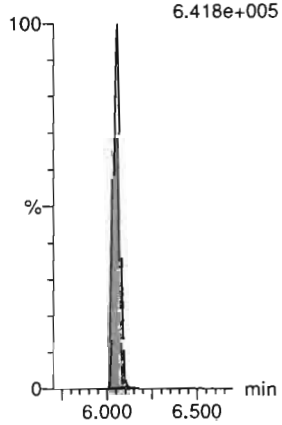
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13C2-PFTeDA-EIS



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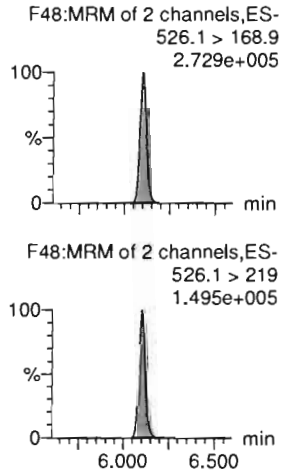


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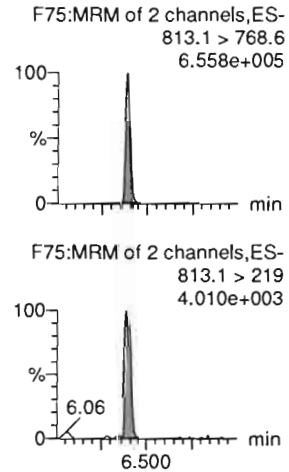
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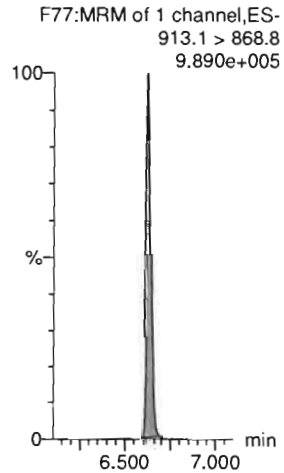
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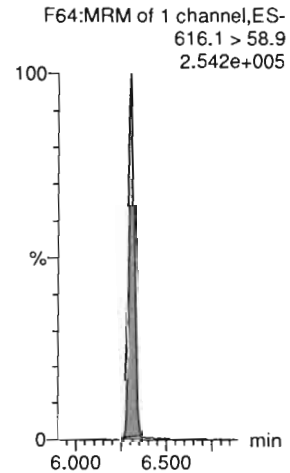
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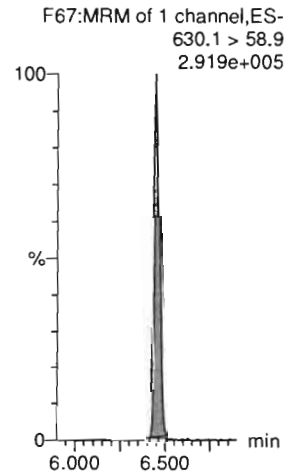
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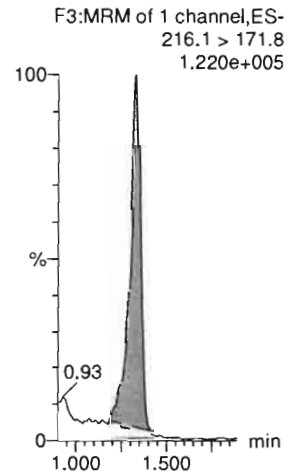
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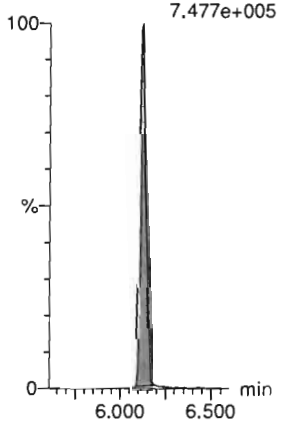
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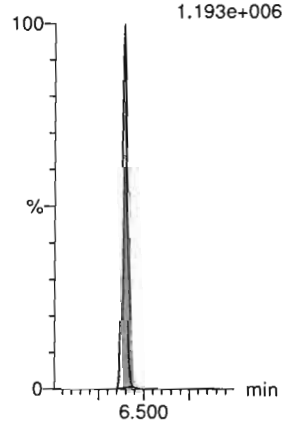
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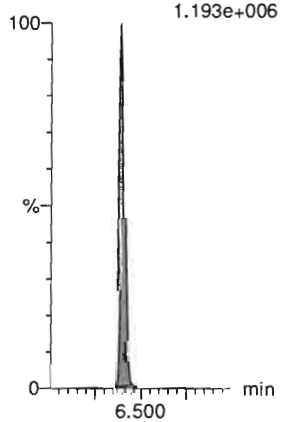
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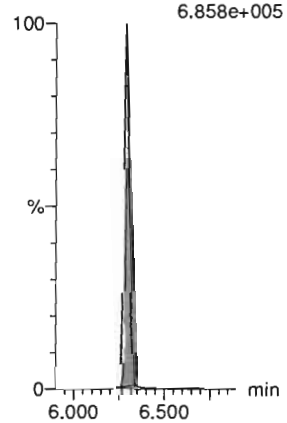
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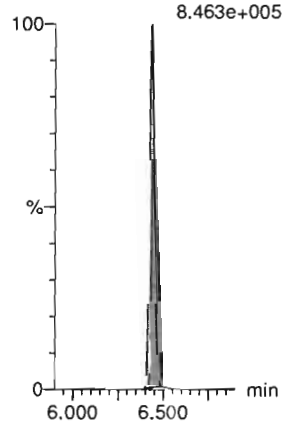
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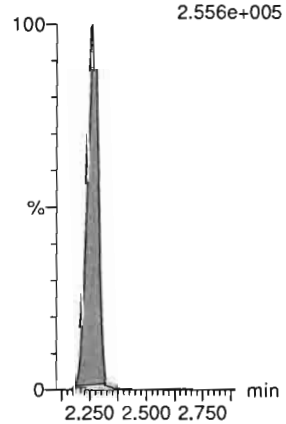
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d9-N-EtFOSE-EIS



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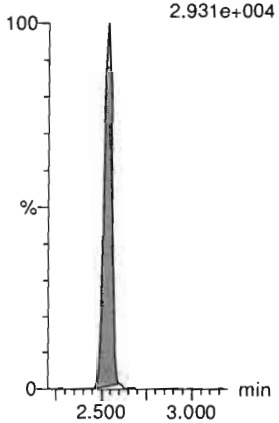


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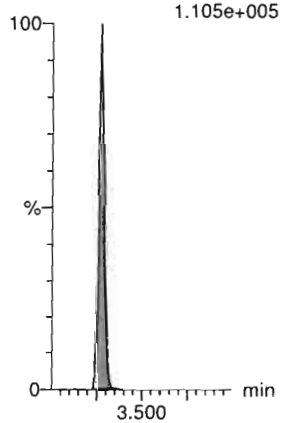
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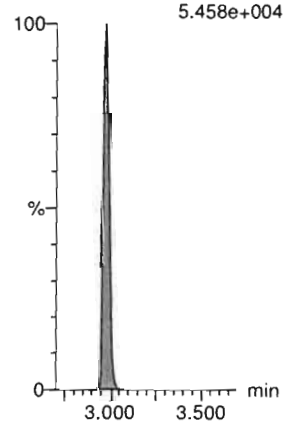
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
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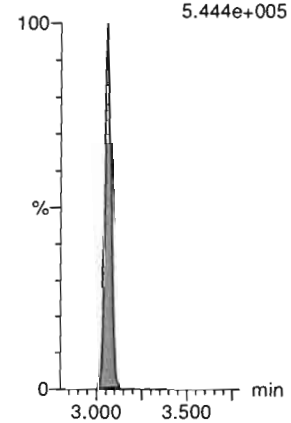
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F10:MRM of 2 channels,ES-
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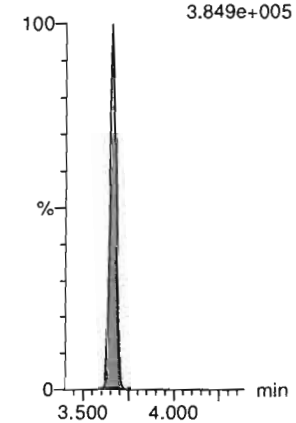
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F17:MRM of 2 channels,ES-
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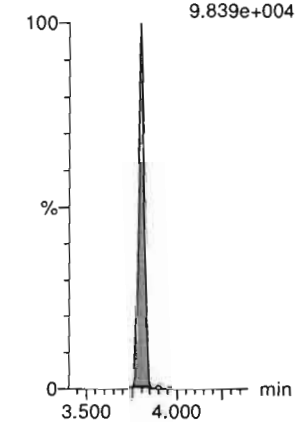
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F14:MRM of 1 channel,ES-
315.0 > 270.0
5.444e+005



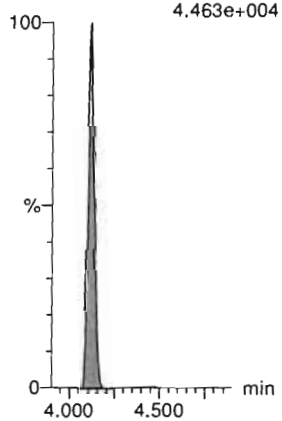
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.849e+005



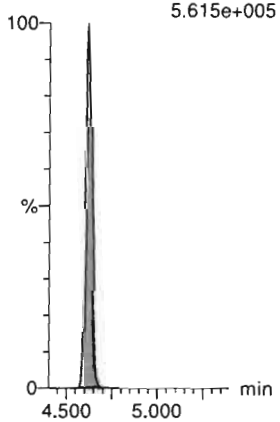
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.839e+004



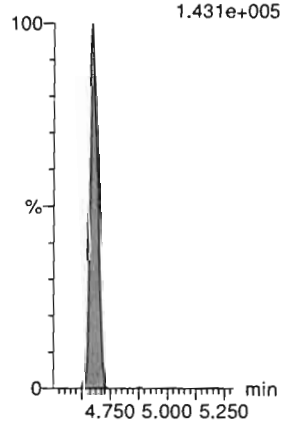
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.463e+004



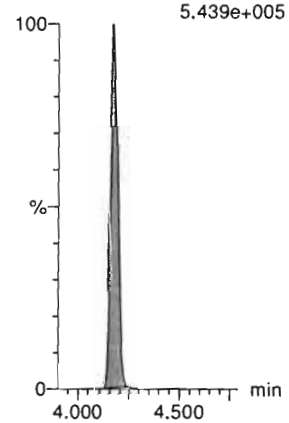
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.615e+005



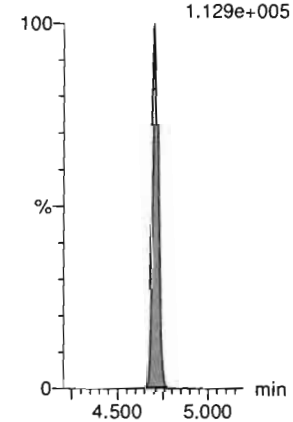
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.431e+005



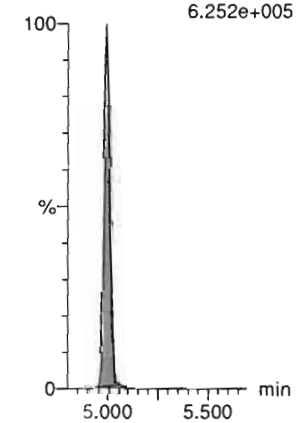
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.439e+005



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

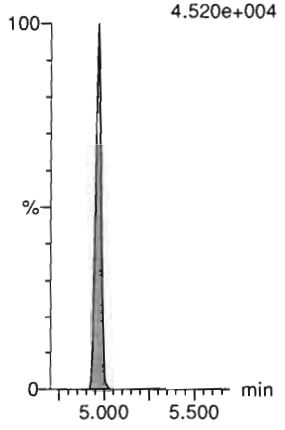


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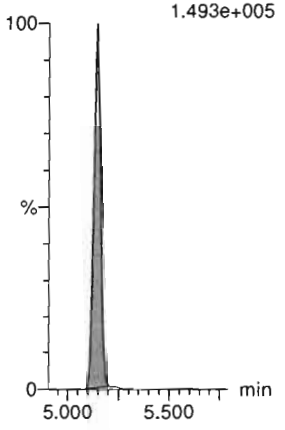
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Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

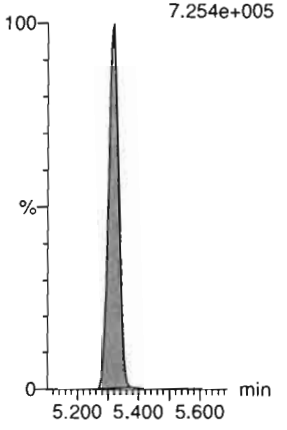
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.520e+004



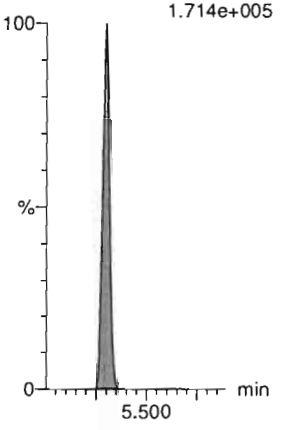
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.493e+005



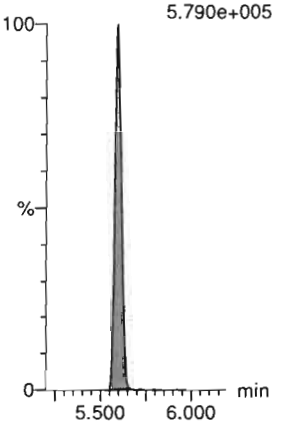
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.254e+005



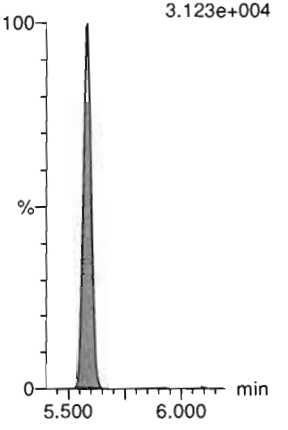
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F60:MRM of 1 channel,ES-
589.3 > 419
1.714e+005



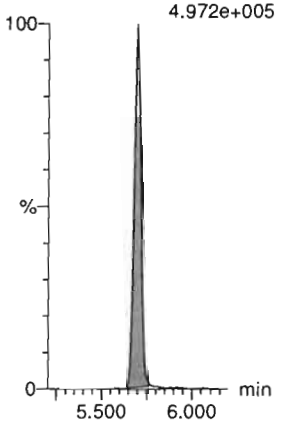
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.790e+005



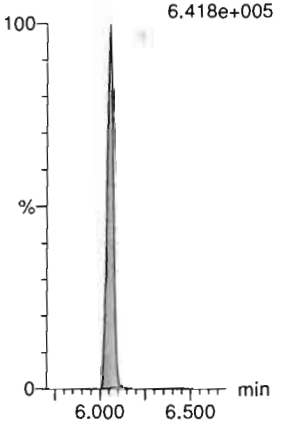
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
3.123e+004



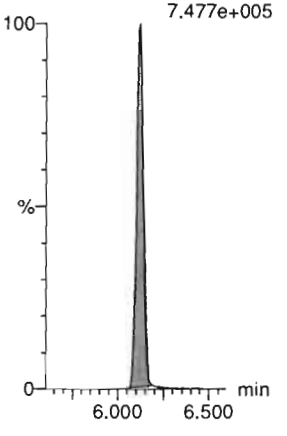
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.972e+005



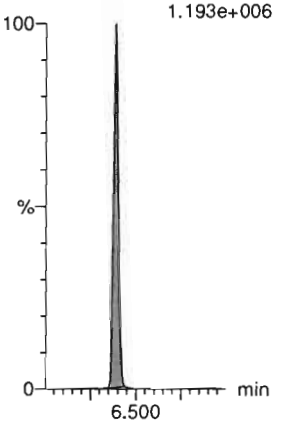
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.418e+005



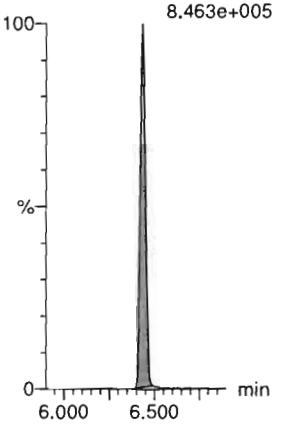
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.477e+005



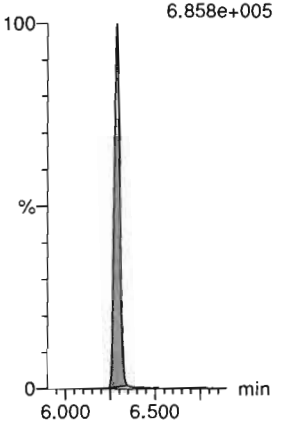
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.193e+006



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

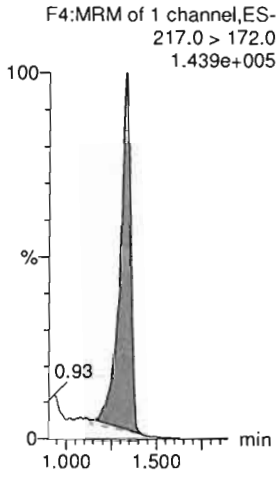


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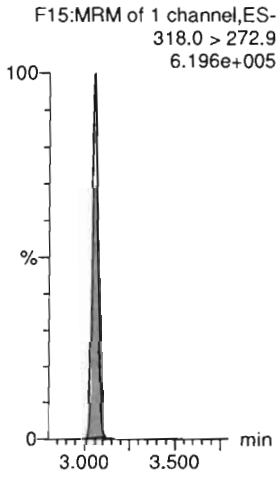
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Name: 200227P1-8, Date: 27-Feb-2020, Time: 16:36:51, ID: ST200227P1-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

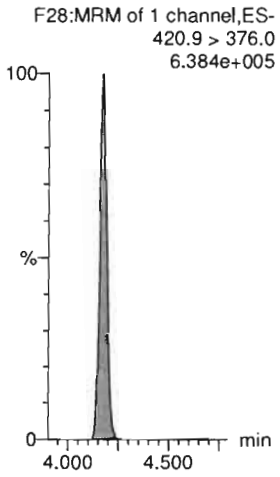
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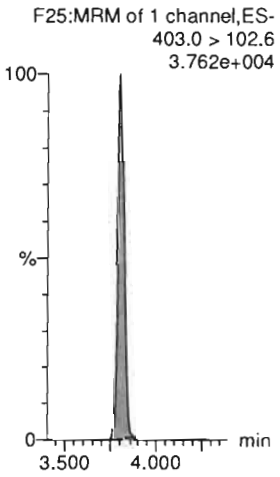
13C5-PFHxA



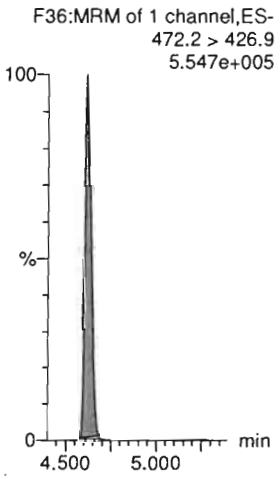
13C8-PFOA



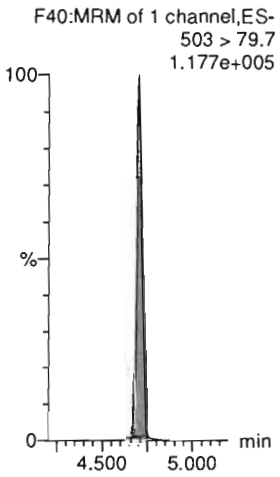
18O2-PFHxS



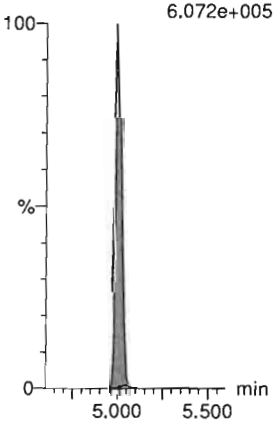
13C9-PFNA



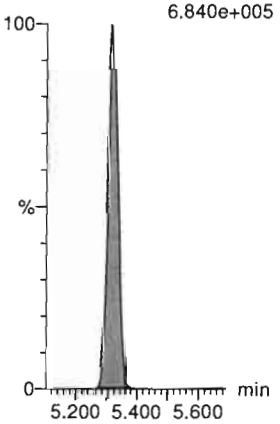
13C4-PFOS



13C6-PFDA



13C7-PFUdA

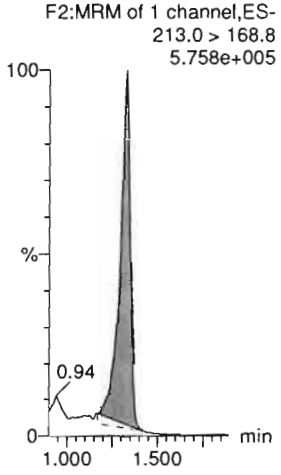


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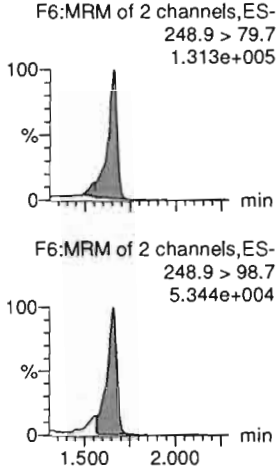
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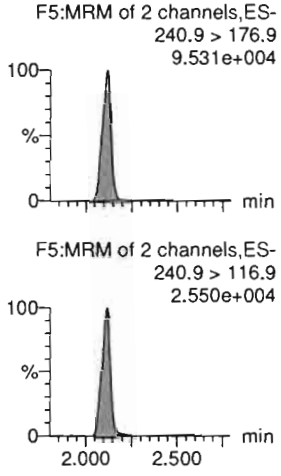
PFBA



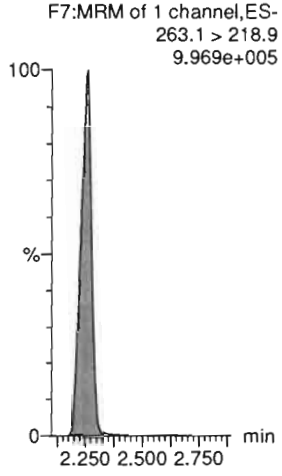
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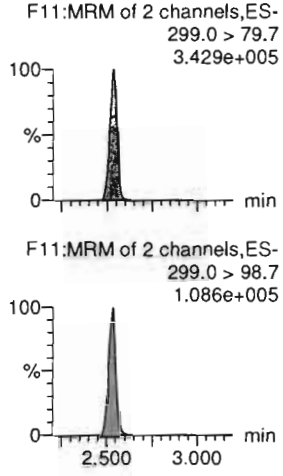
3:3 FTCA



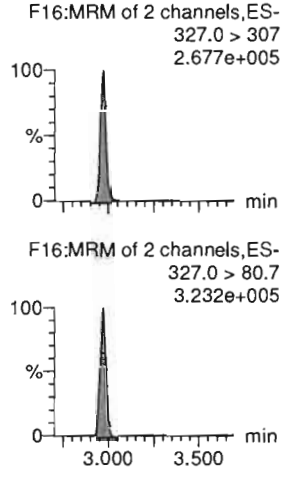
PFPeA



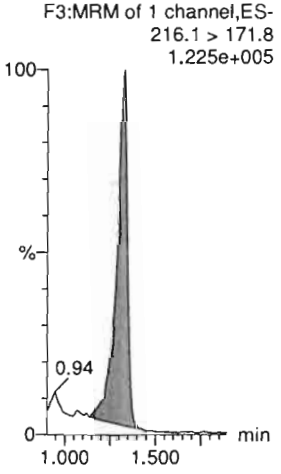
PFBS



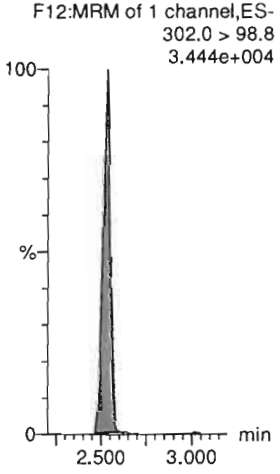
4:2 FTS



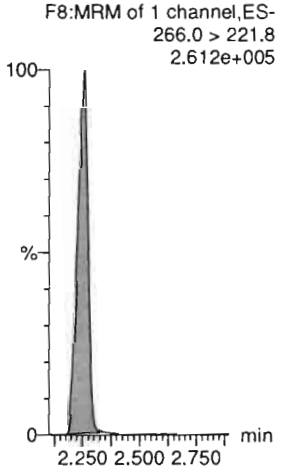
13C3-PFBA-EIS



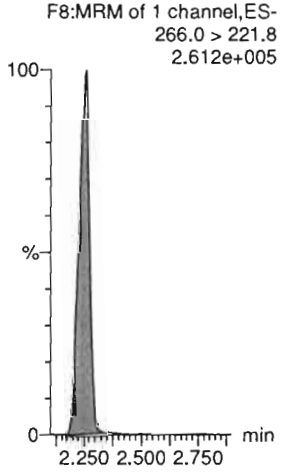
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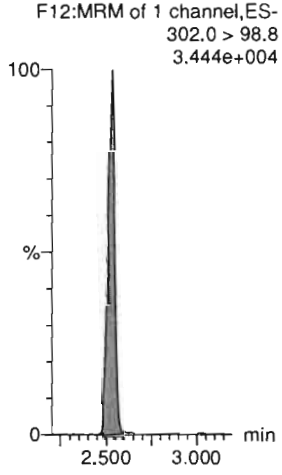
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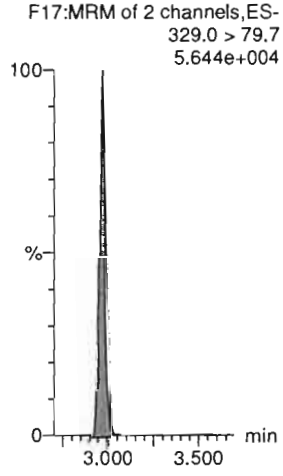
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

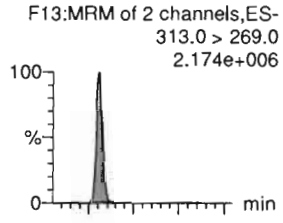


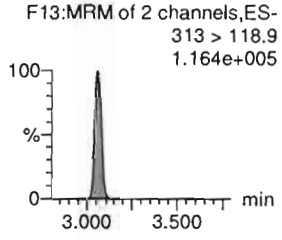
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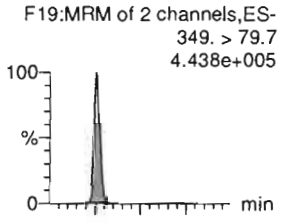
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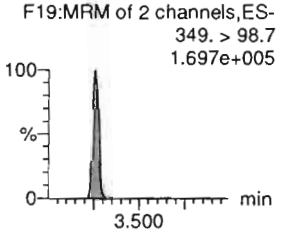
PFHxA



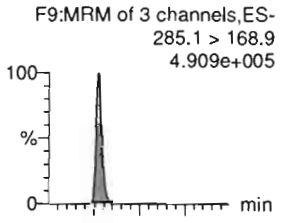


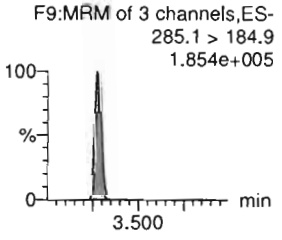
PFPeS



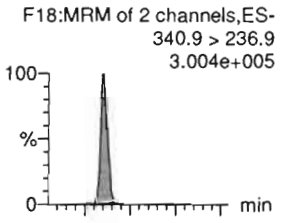


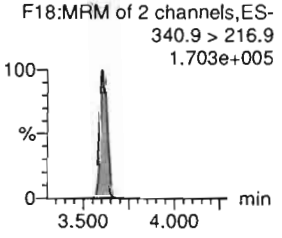
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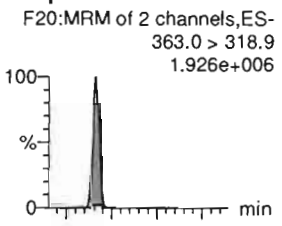


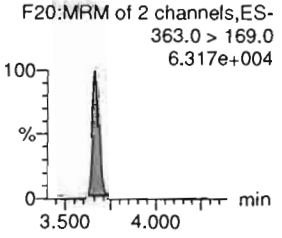
5:3 FTCA



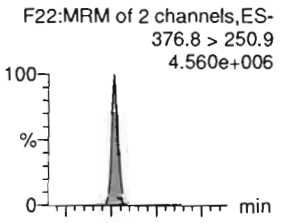


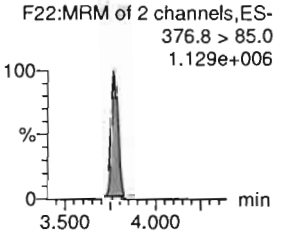
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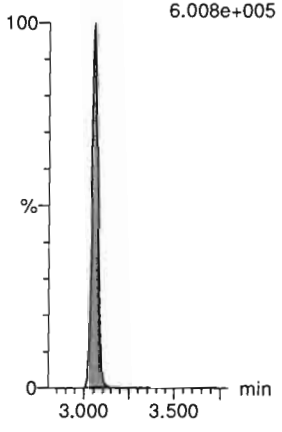


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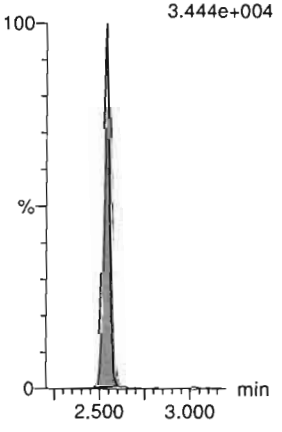




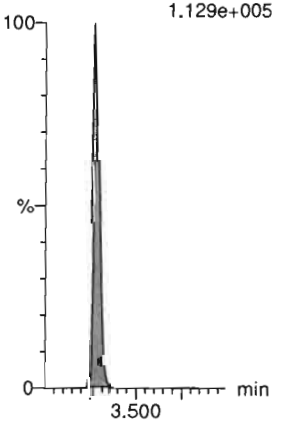
13C2-PFHxA-EIS



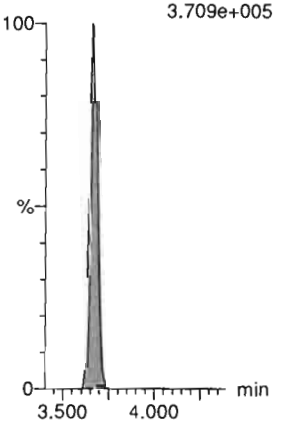
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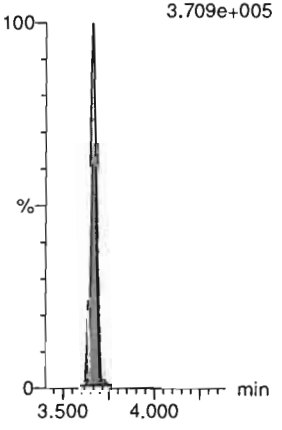
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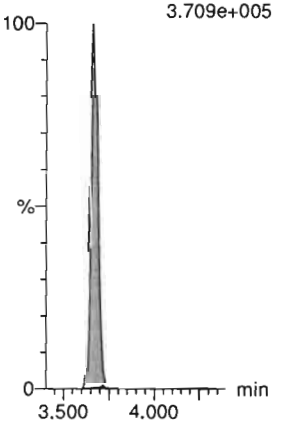
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

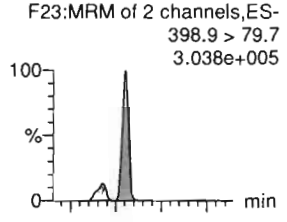


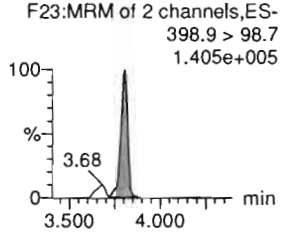
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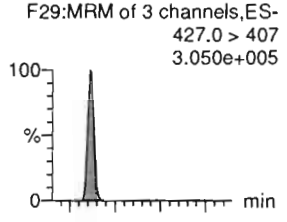
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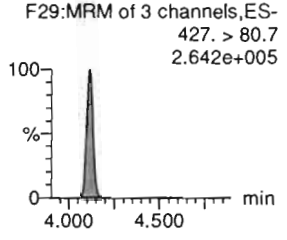
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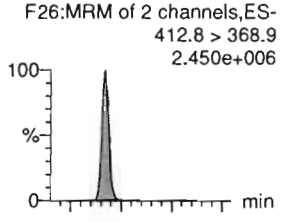


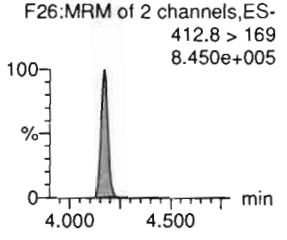
6:2 FTS



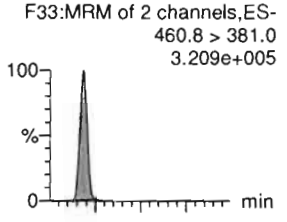


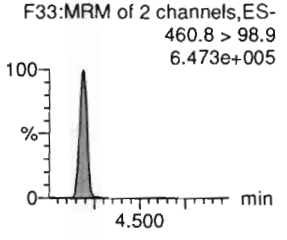
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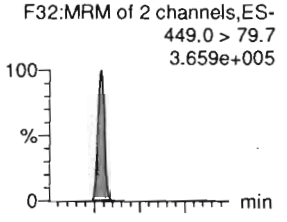


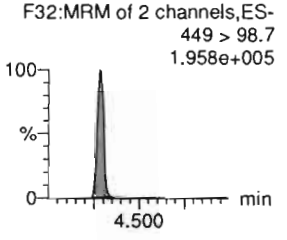
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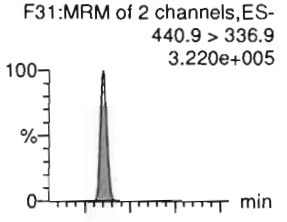


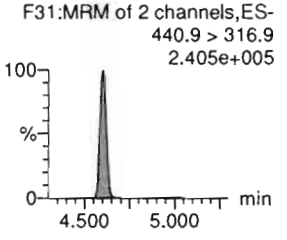
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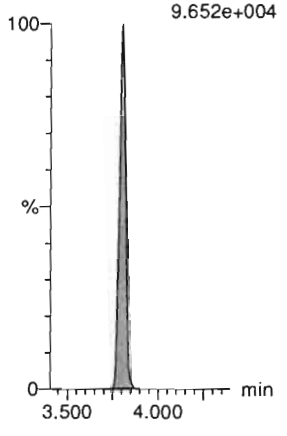


7:3 FTCA

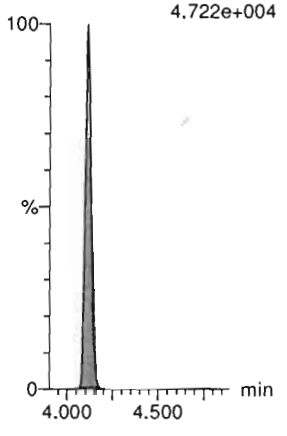




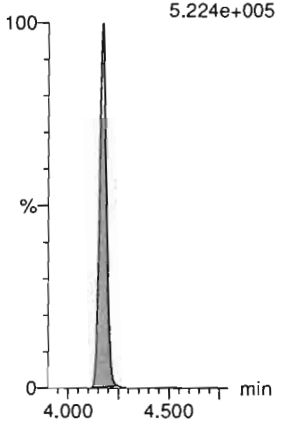
13C3-PFHxS-EIS



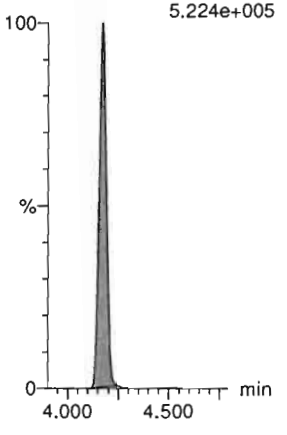
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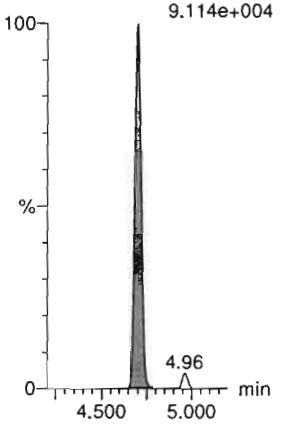
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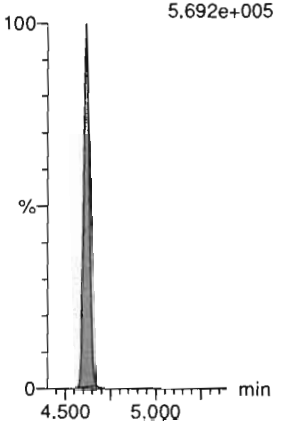
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

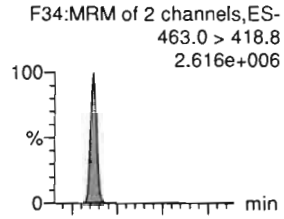


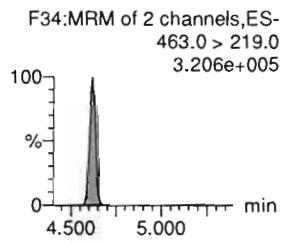
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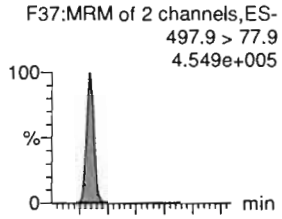
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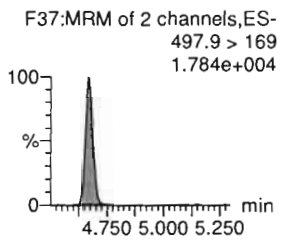
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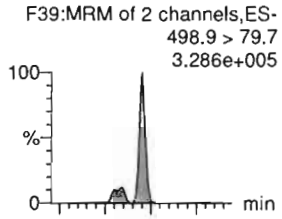


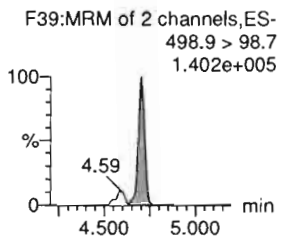
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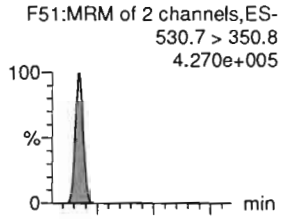


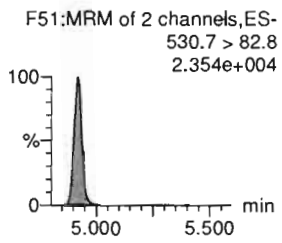
L-PFOS



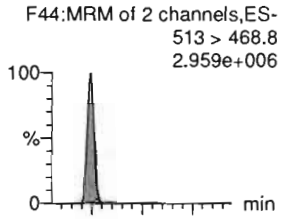


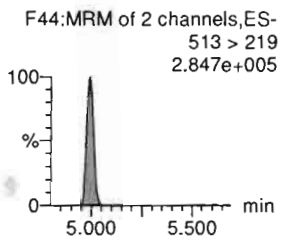
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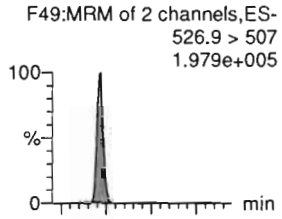


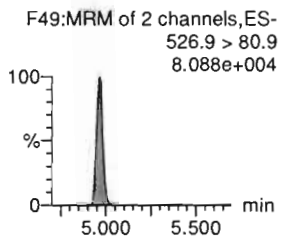
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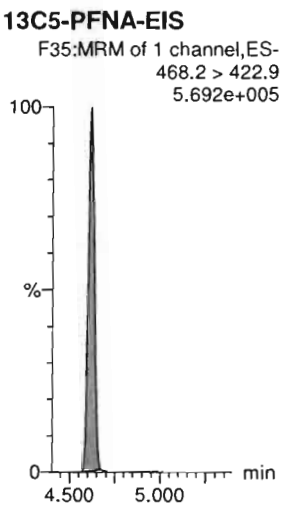


8:2 FTS

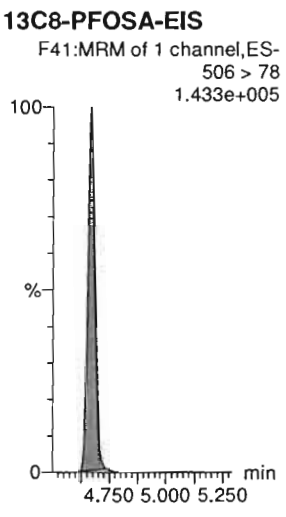




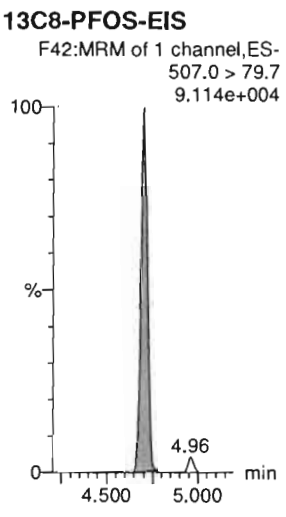
13C5-PFNA-EIS



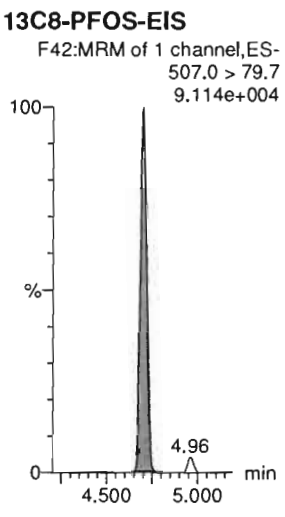
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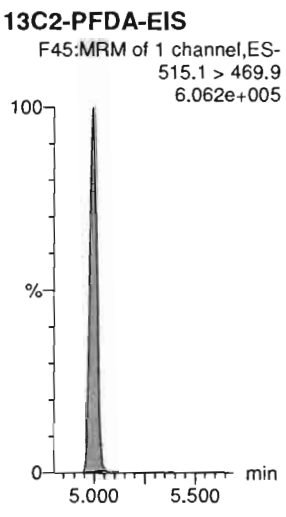
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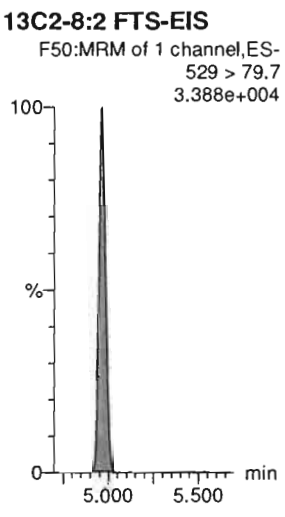
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

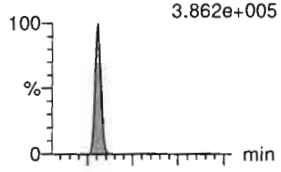


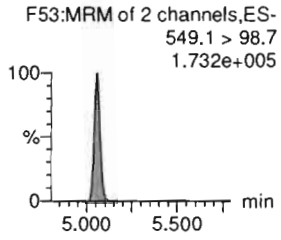
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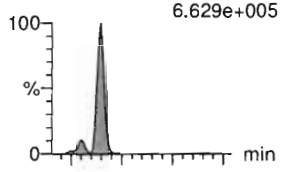
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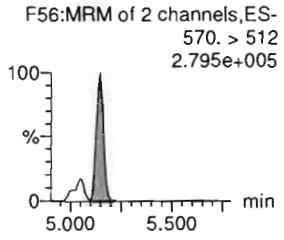
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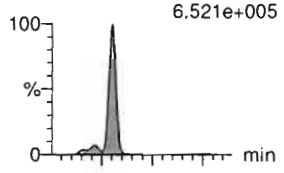


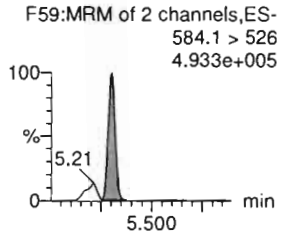
L-MeFOSAA



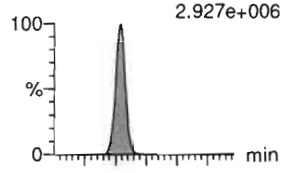


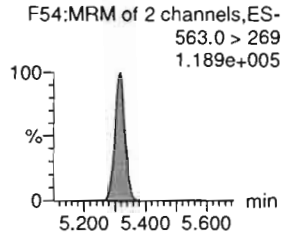
L-EtFOSAA



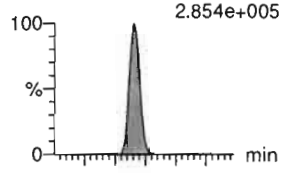


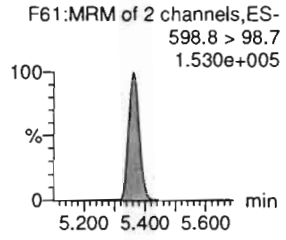
PFUdA



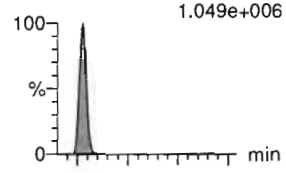


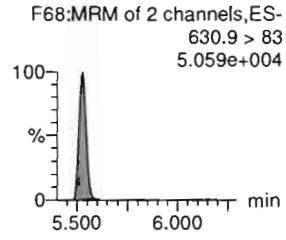
PFDS



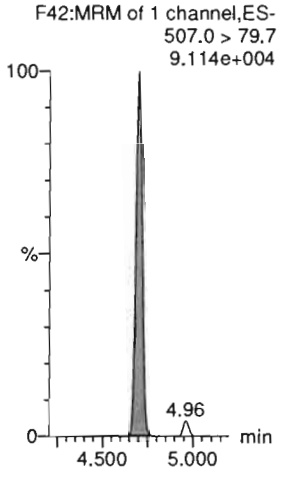


11Cl-PF30UdS

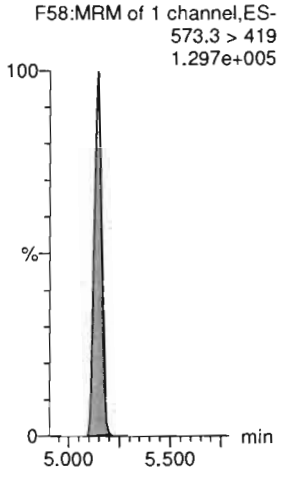




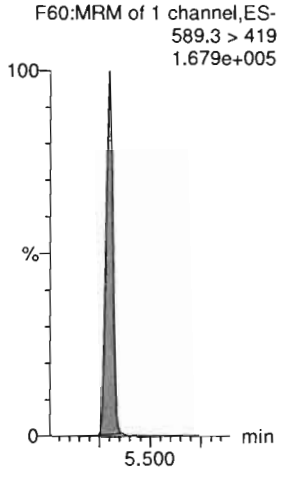
13C8-PFOS-EIS



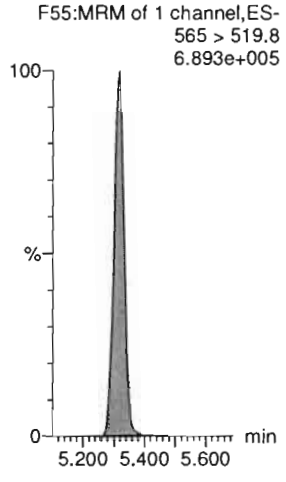
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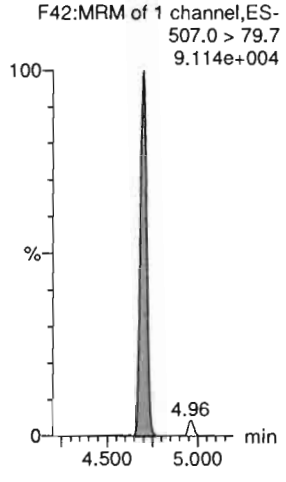
d5-N-EtFOSAA-EIS



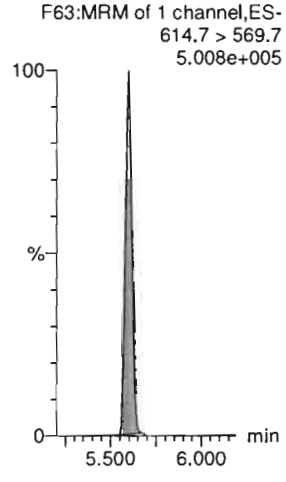
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

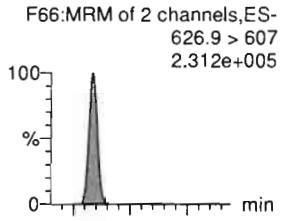


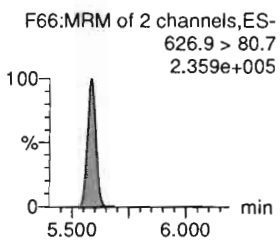
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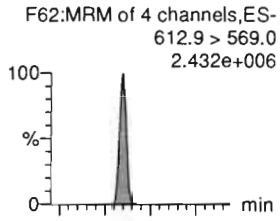
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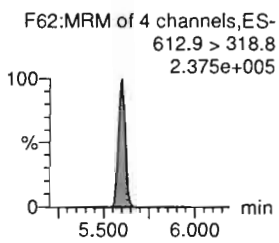
10:2 FTS



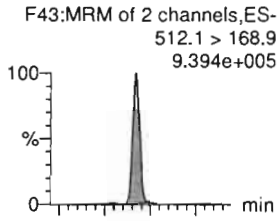


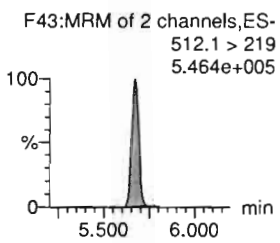
PFDoA



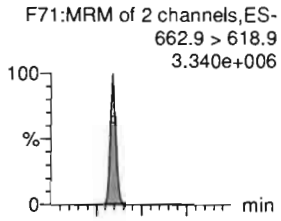


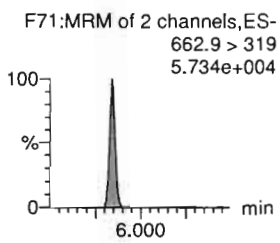
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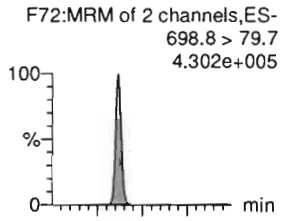


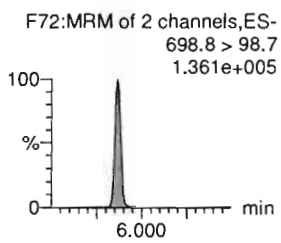
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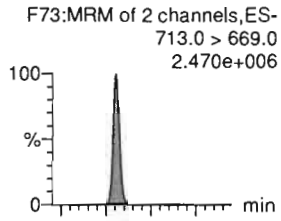


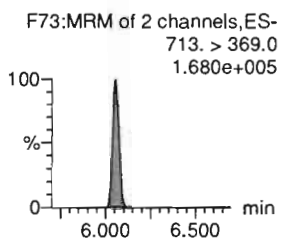
PFDoS



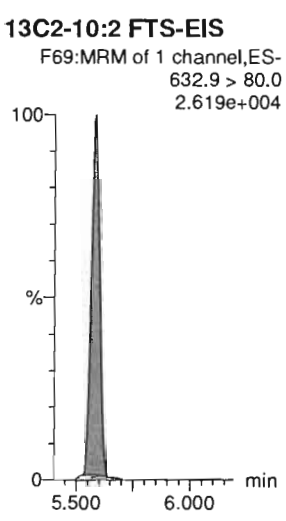


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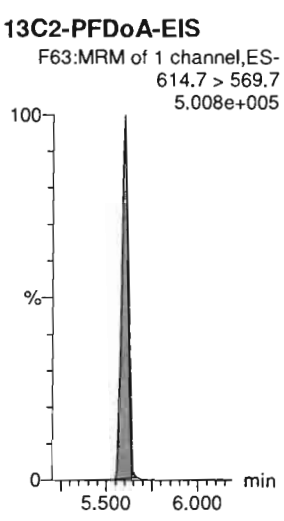




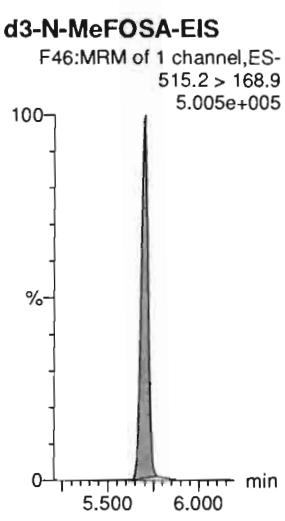
13C2-10:2 FTS-EIS



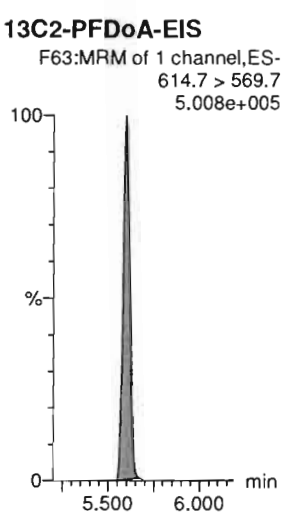
13C2-PFDoA-EIS



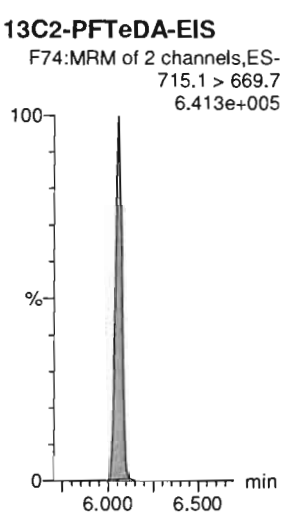
d3-N-MeFOSA-EIS



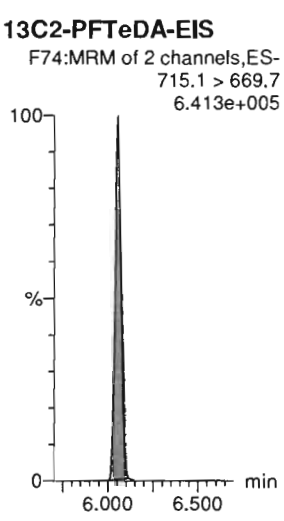
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

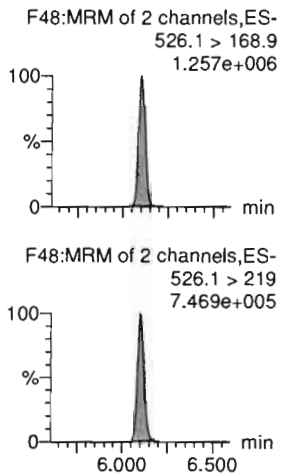


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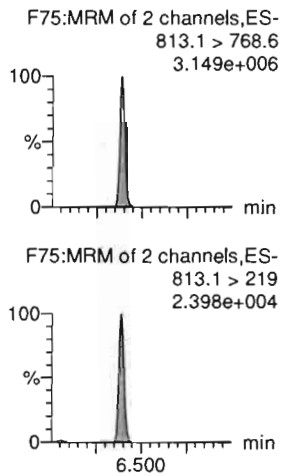
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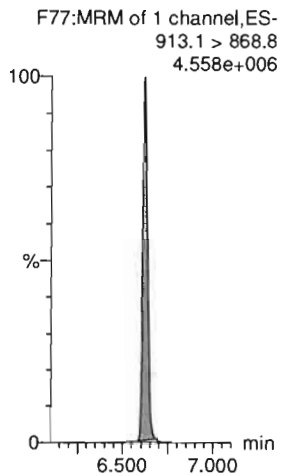
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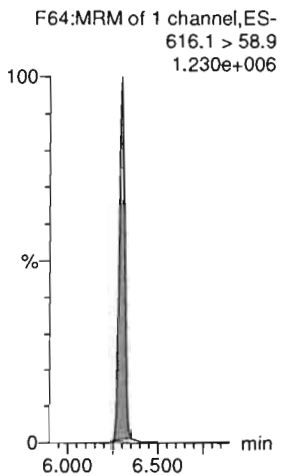
PFHxDA



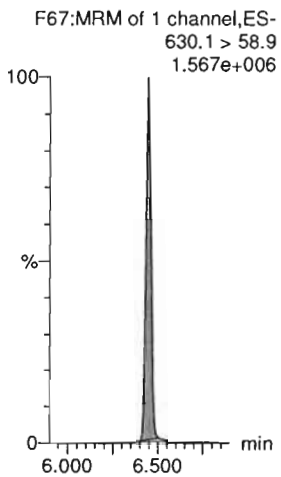
PFODA



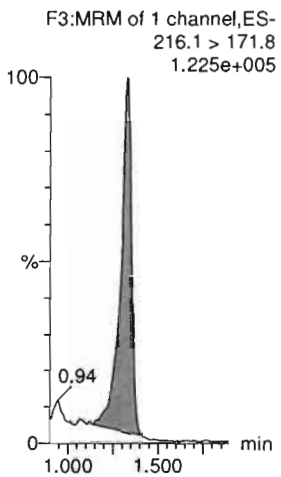
N-MeFOSE



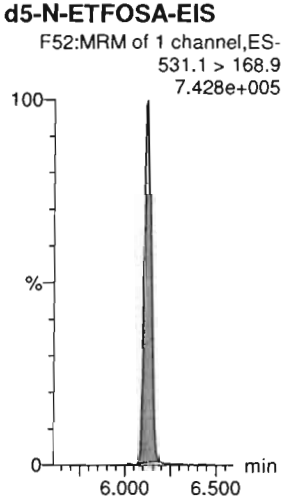
N-EtFOSE



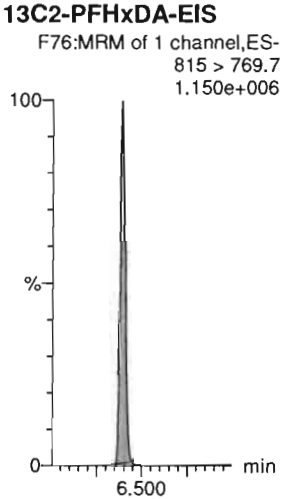
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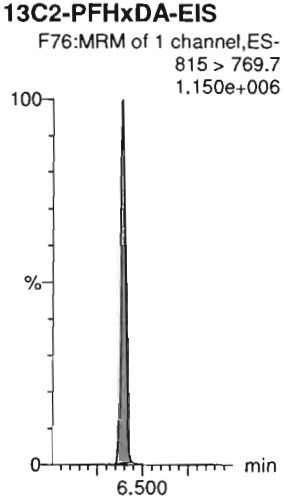
d5-N-ETFOSA-EIS



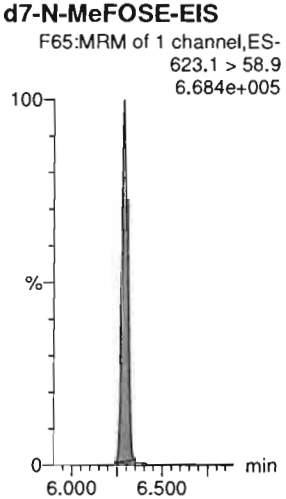
13C2-PFHxDA-EIS



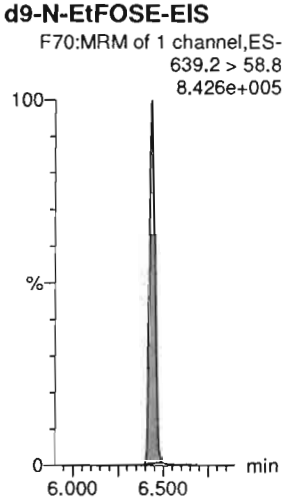
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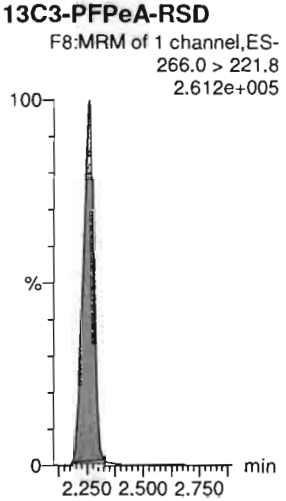
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d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

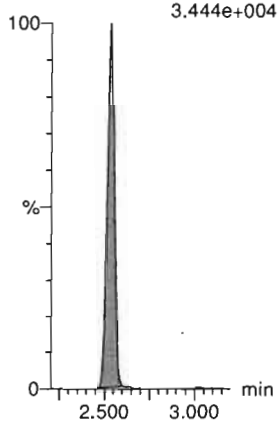


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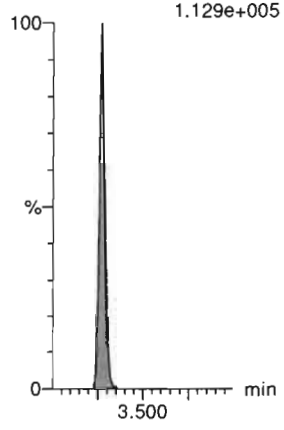
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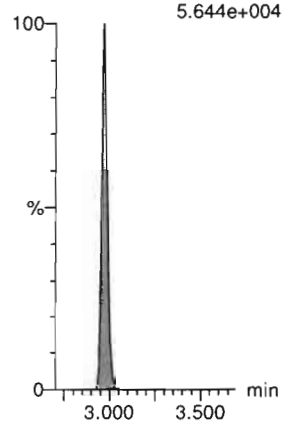
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.444e+004



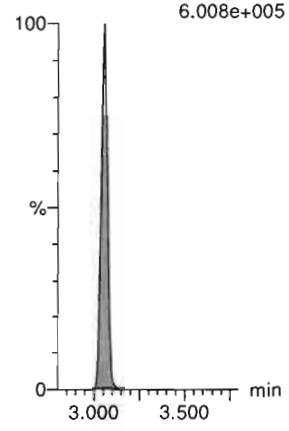
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F10:MRM of 2 channels,ES-
287.0 > 168.9
1.129e+005



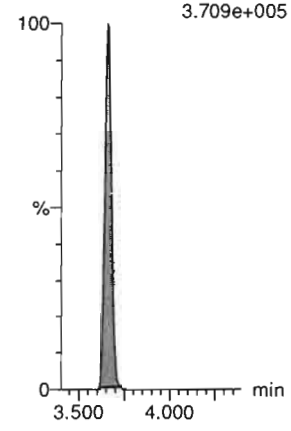
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.644e+004



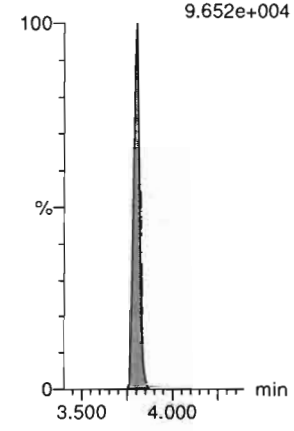
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F14:MRM of 1 channel,ES-
315.0 > 270.0
6.008e+005



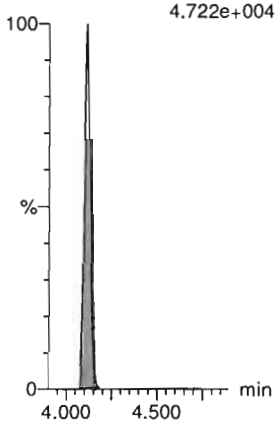
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F21:MRM of 1 channel,ES-
367.2 > 321.8
3.709e+005



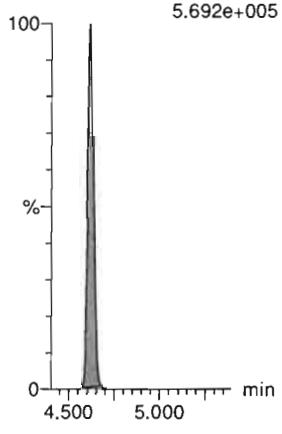
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
9.652e+004



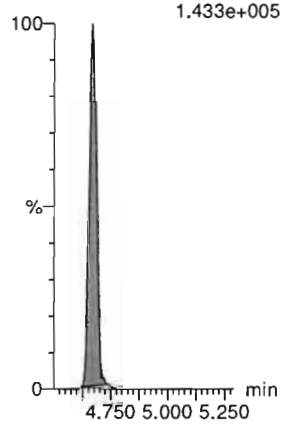
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.722e+004



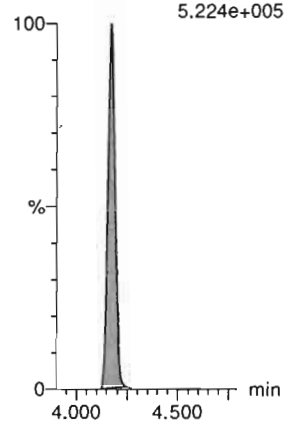
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.692e+005



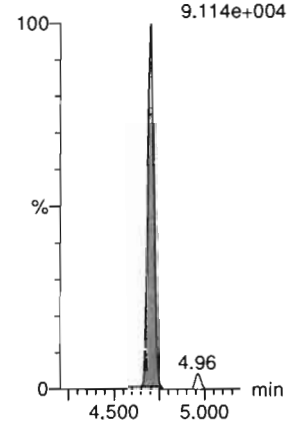
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.433e+005



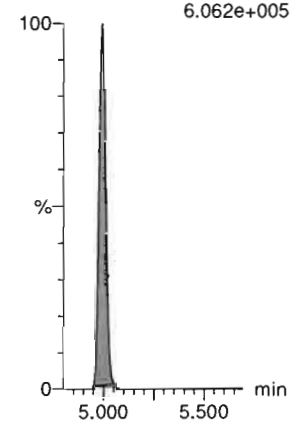
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.224e+005



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

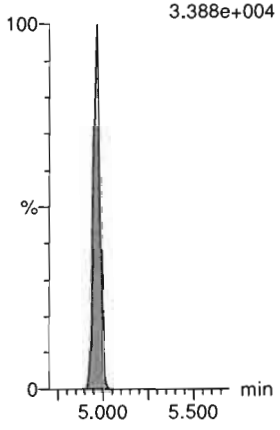


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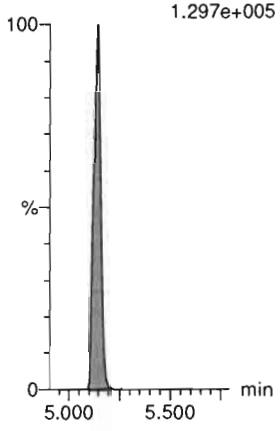
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Name: 200227P1-9, Date: 27-Feb-2020, Time: 16:47:20, ID: ST200227P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

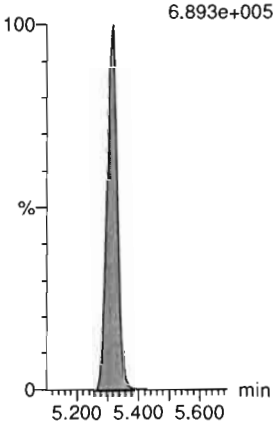
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F50:MRM of 1 channel,ES-
529 > 79.7
3.388e+004



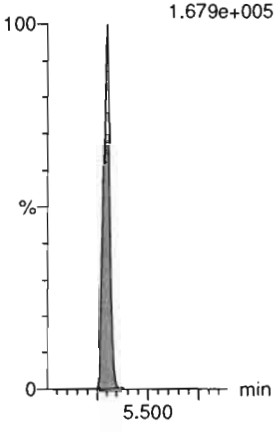
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F58:MRM of 1 channel,ES-
573.3 > 419
1.297e+005



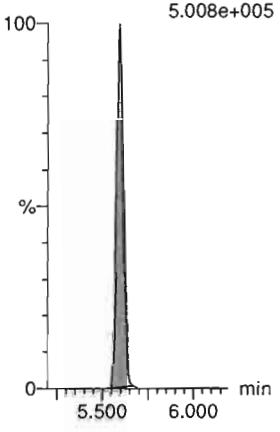
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F55:MRM of 1 channel,ES-
565 > 519.8
6.893e+005



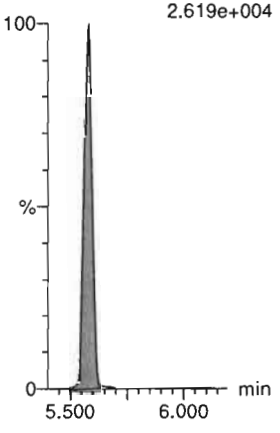
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.679e+005



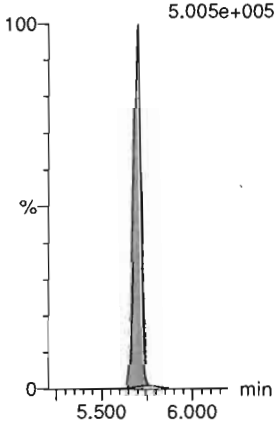
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.008e+005



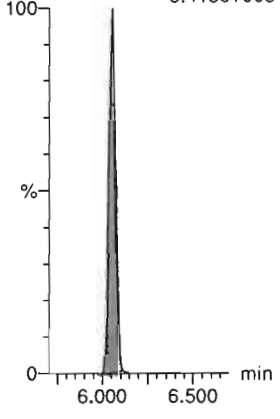
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.619e+004



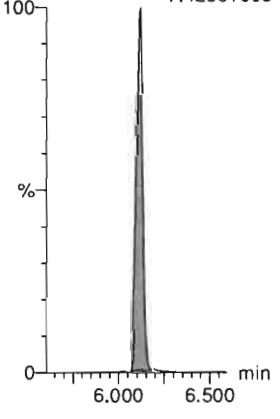
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F46:MRM of 1 channel,ES-
515.2 > 168.9
5.005e+005



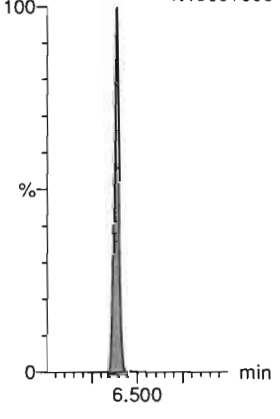
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.413e+005



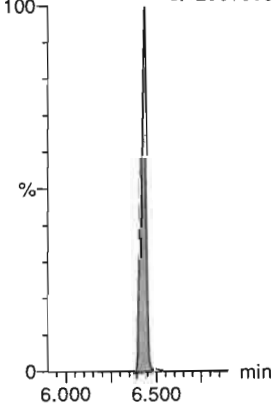
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.428e+005



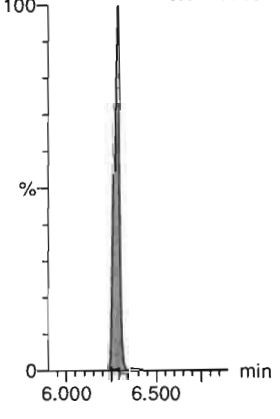
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.150e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.426e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.684e+005

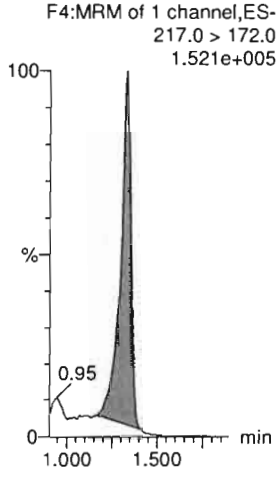


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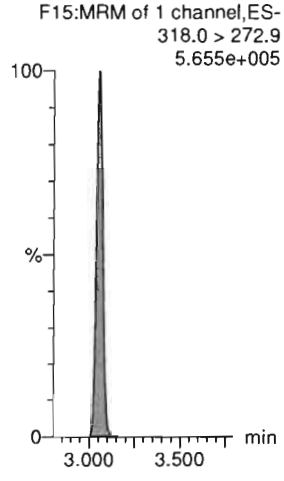
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Name: 200227P1-9, Date: 27-Feb-2020, Time: 16:47:20, ID: ST200227P1-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

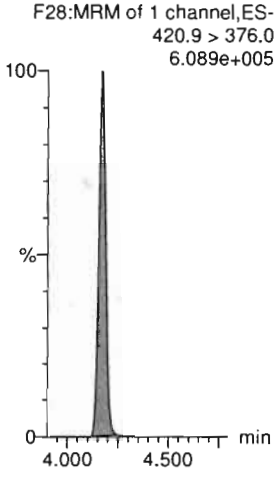
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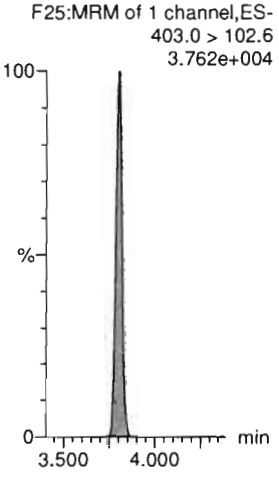
13C5-PFHxA



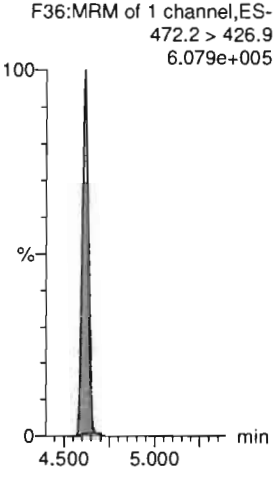
13C8-PFOA



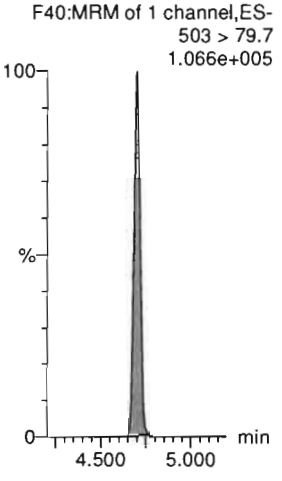
18O2-PFHxS



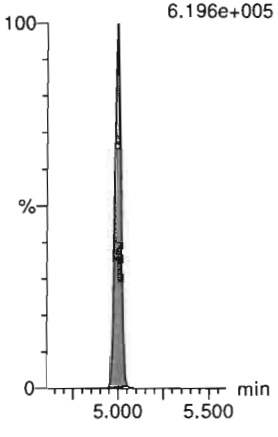
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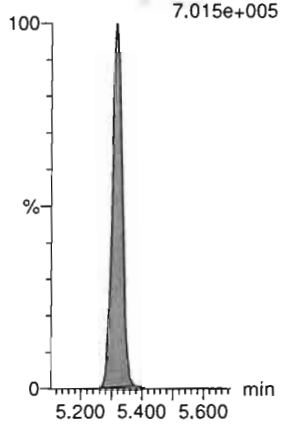
13C4-PFOS



13C6-PFDA



13C7-PFUdA

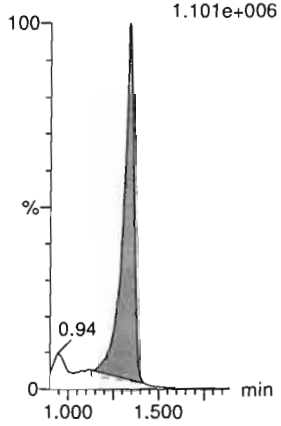


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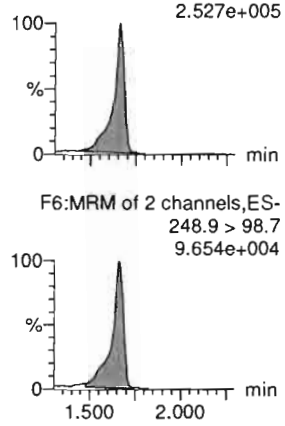
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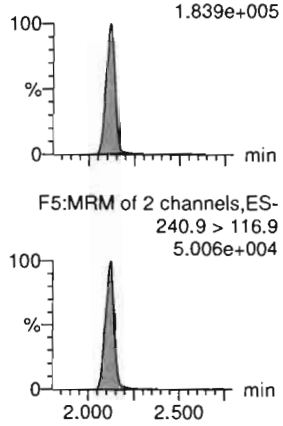
PFBA



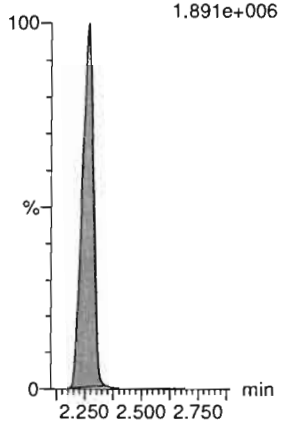
PFPrS



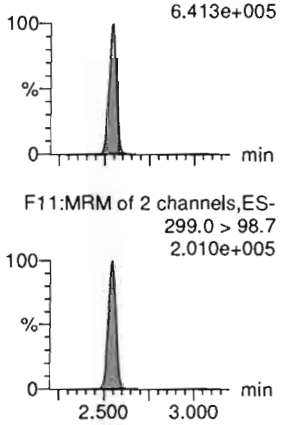
3:3 FTCA



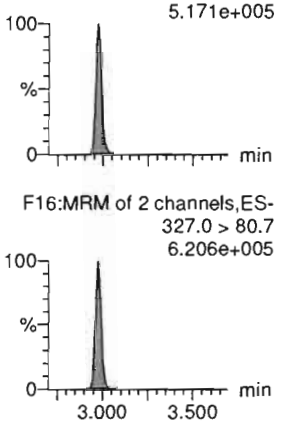
PFPeA



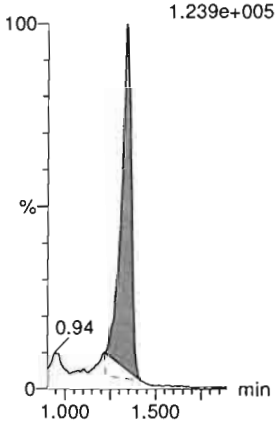
PFBS



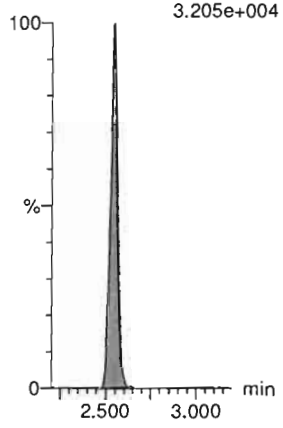
4:2 FTS



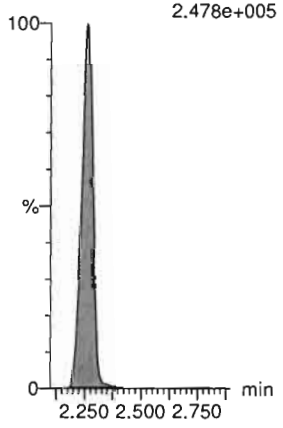
13C3-PFBA-EIS



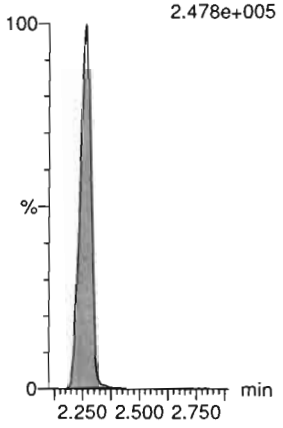
13C3-PFBS-EIS



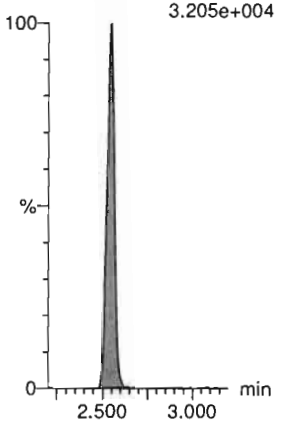
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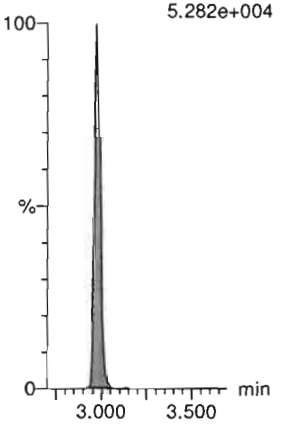
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

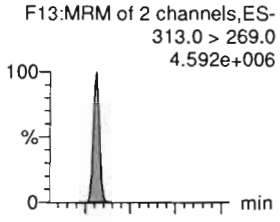


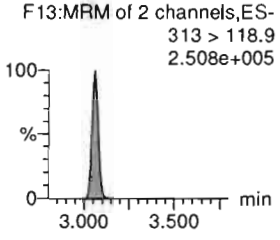
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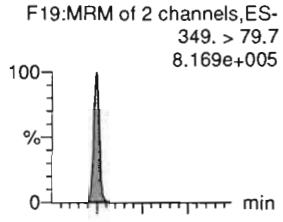
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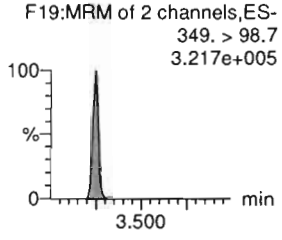
PFHxA



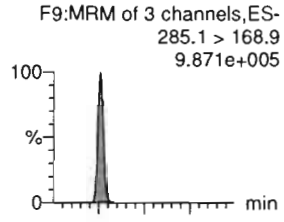


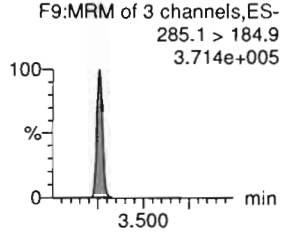
PFPeS



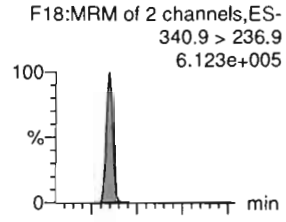


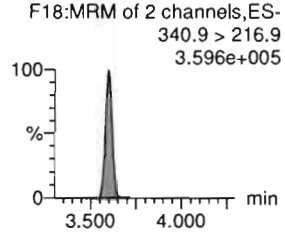
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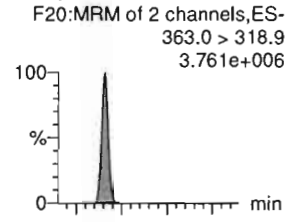


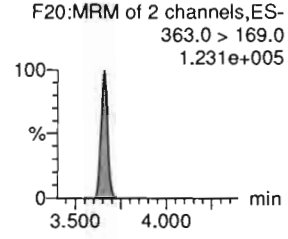
5:3 FTCA



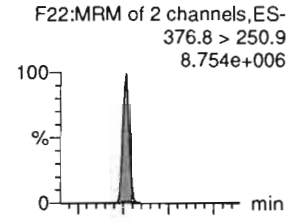


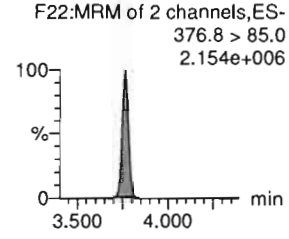
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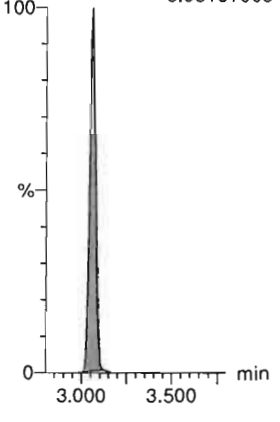


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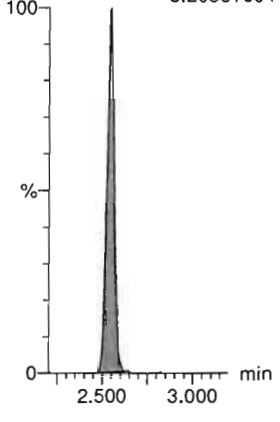




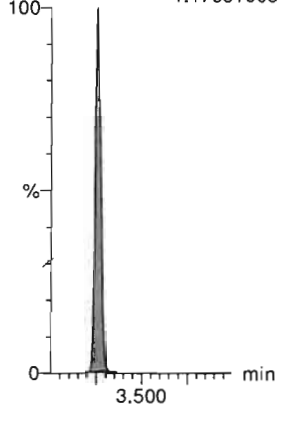
13C2-PFHxA-EIS



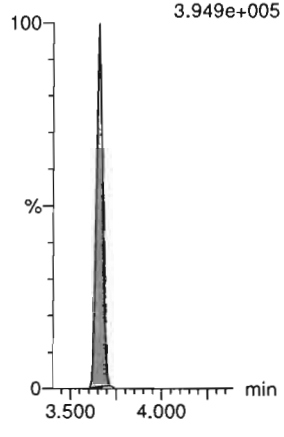
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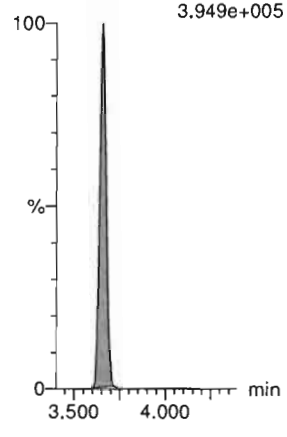
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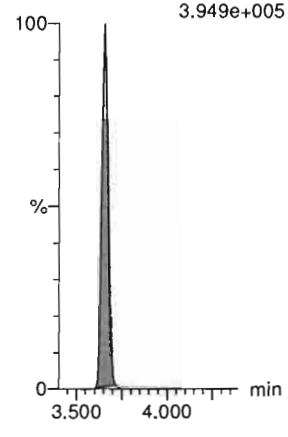
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13C4-PFHpA-EIS



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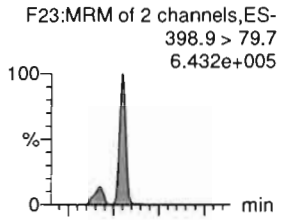


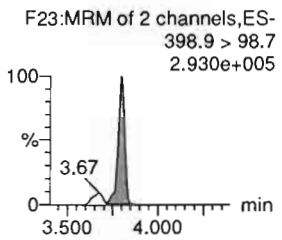
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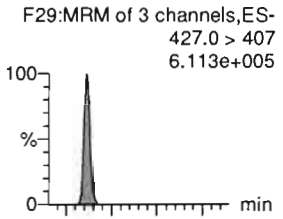
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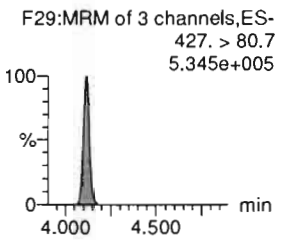
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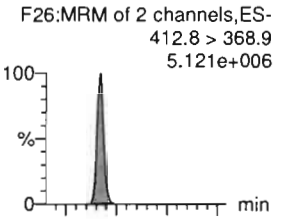


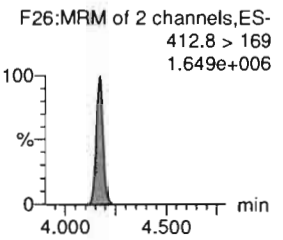
6:2 FTS



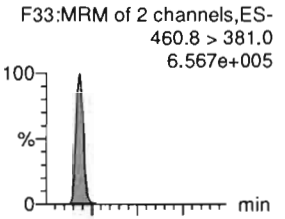


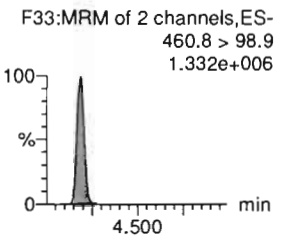
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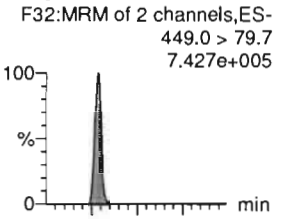


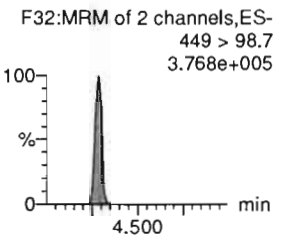
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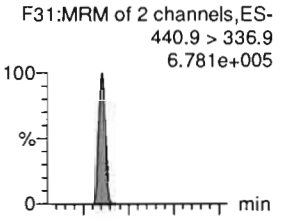


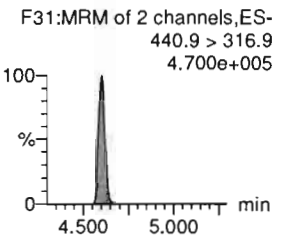
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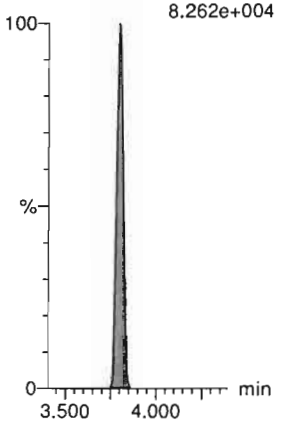


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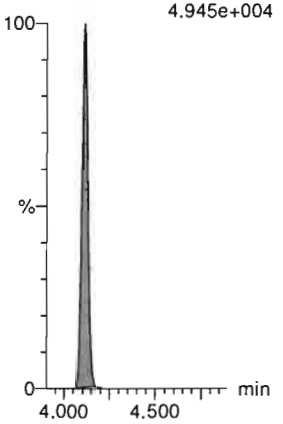




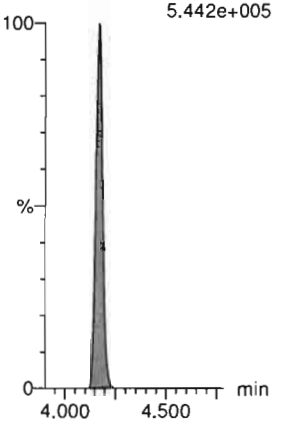
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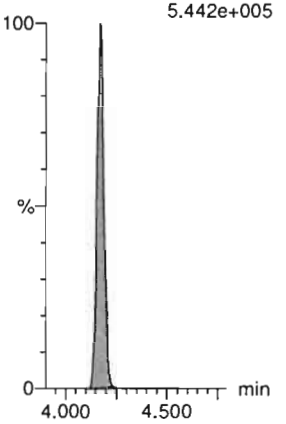
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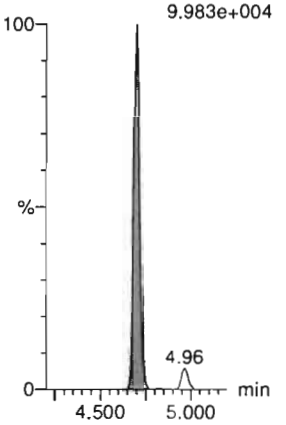
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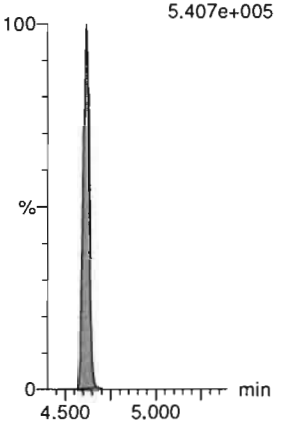
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13C8-PFOS-EIS



13C5-PFNA-EIS

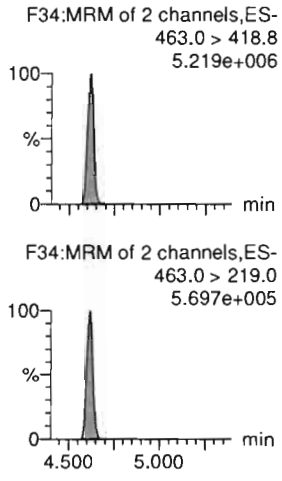


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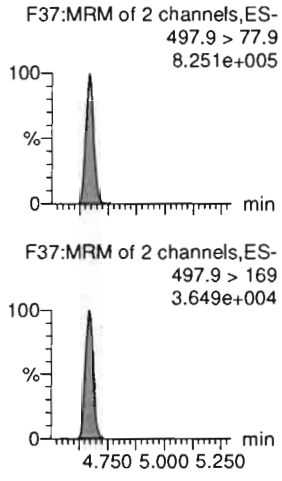
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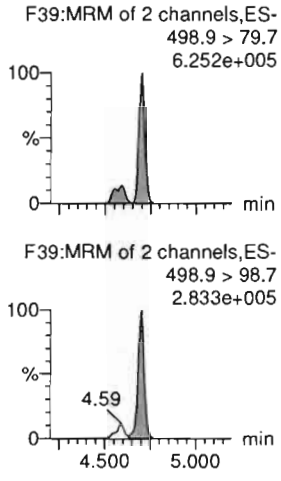
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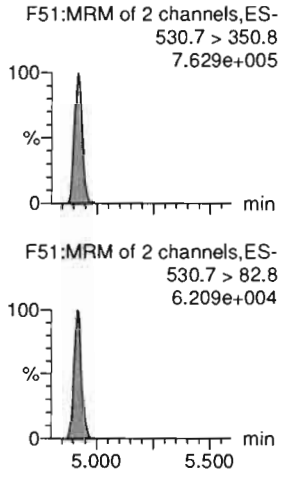
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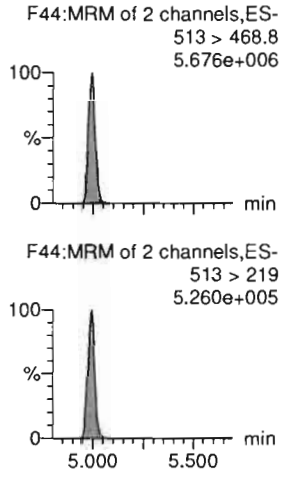
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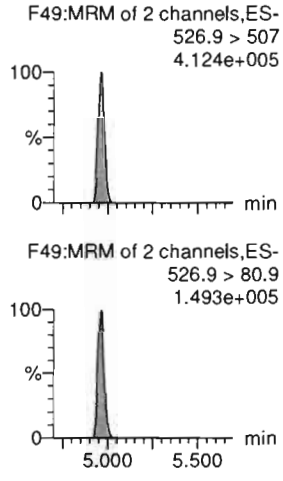
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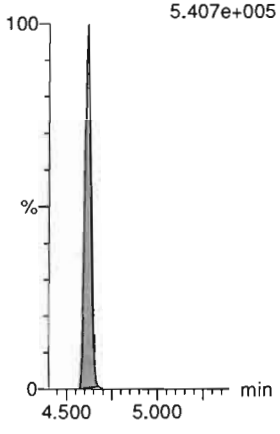
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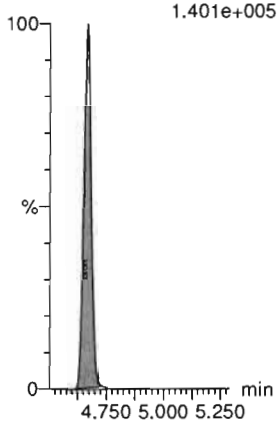
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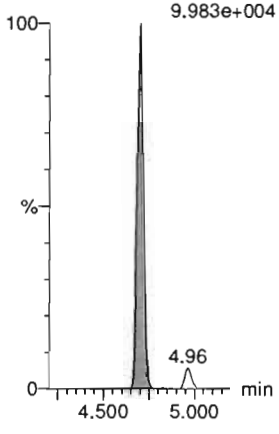
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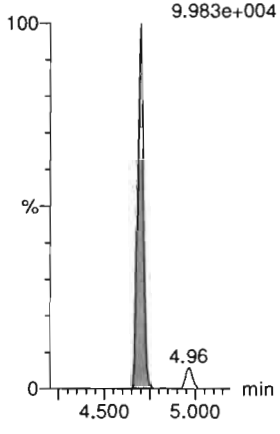
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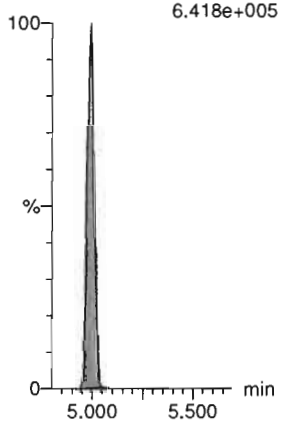
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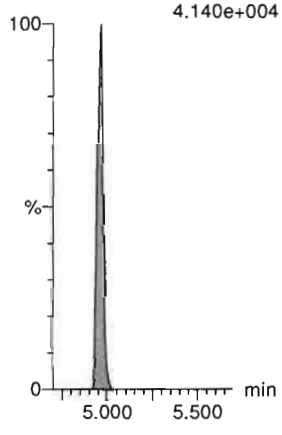
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13C2-PFDA-EIS



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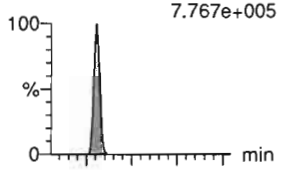


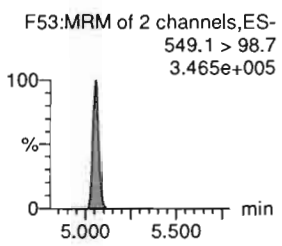
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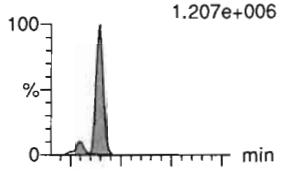
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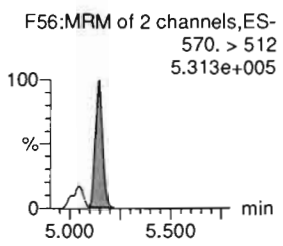
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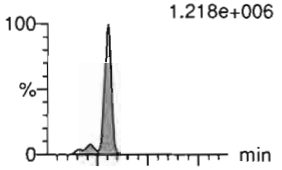


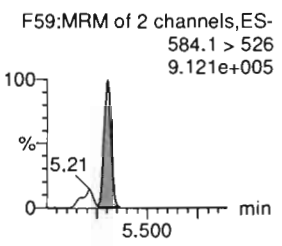
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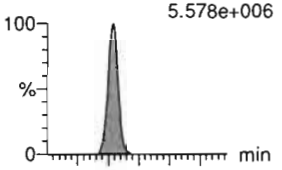


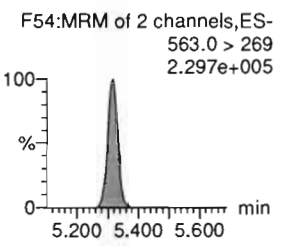
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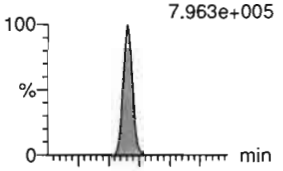


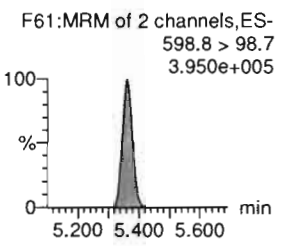
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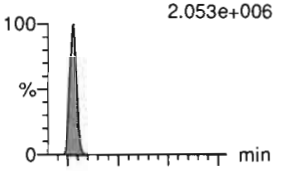


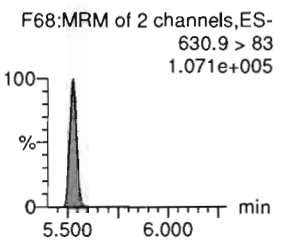
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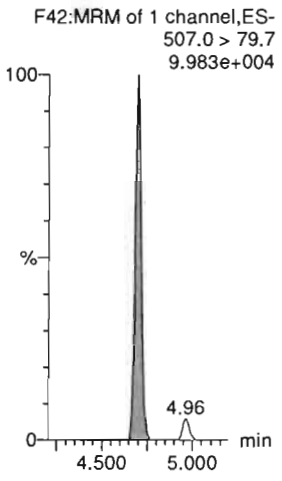


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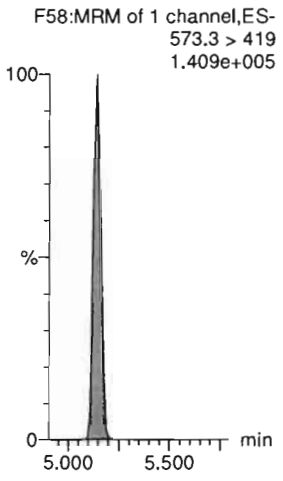




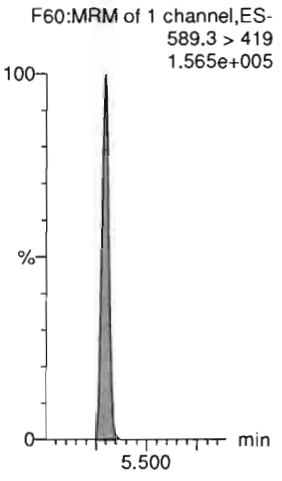
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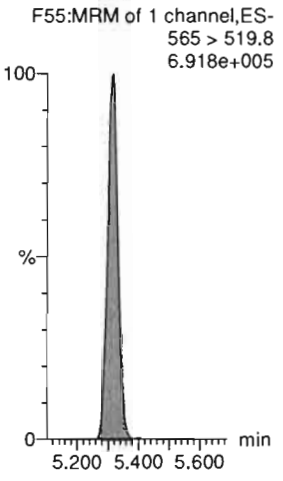
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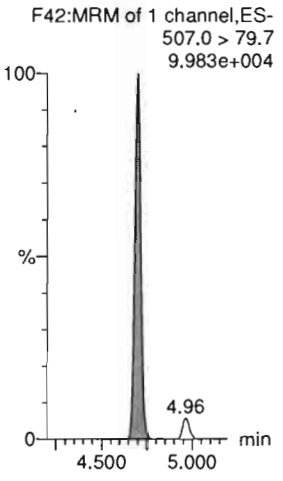
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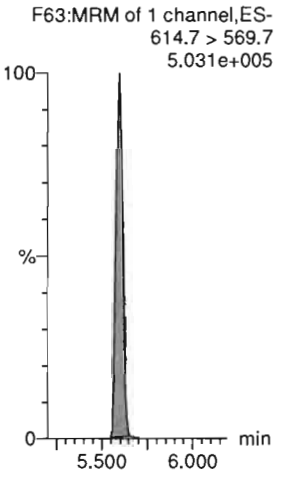
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13C8-PFOS-EIS



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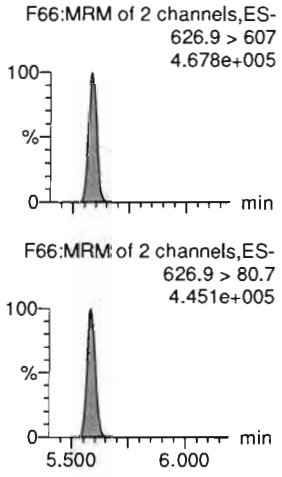


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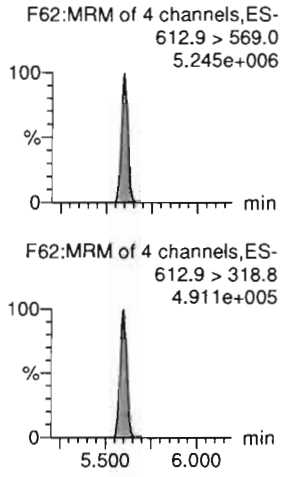
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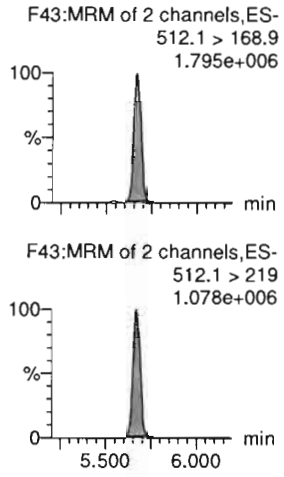
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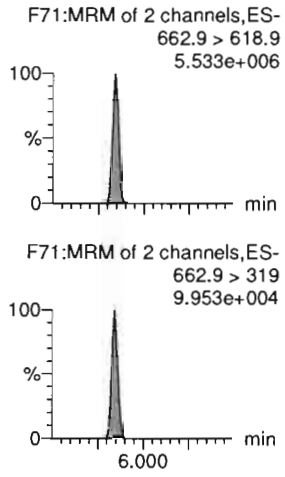
PFDoA



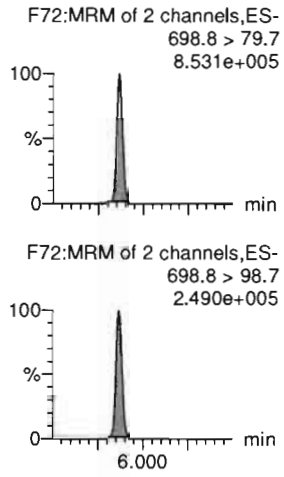
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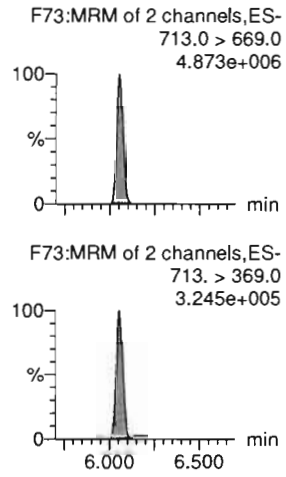
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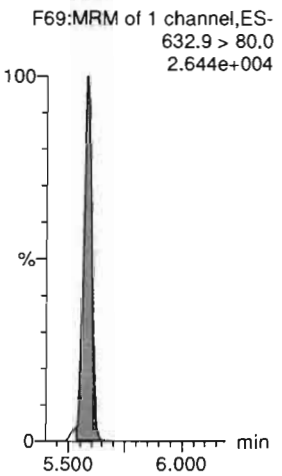
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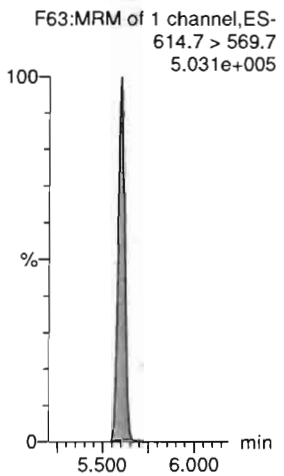
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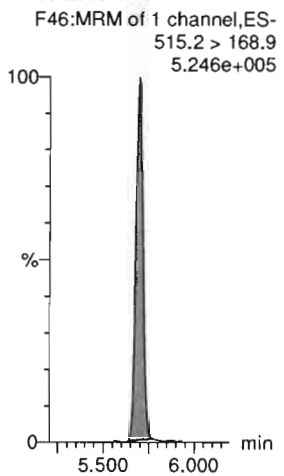
13C2-10:2 FTS-EIS



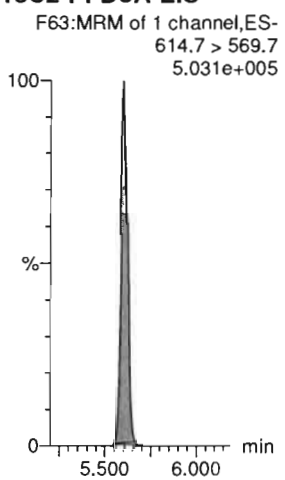
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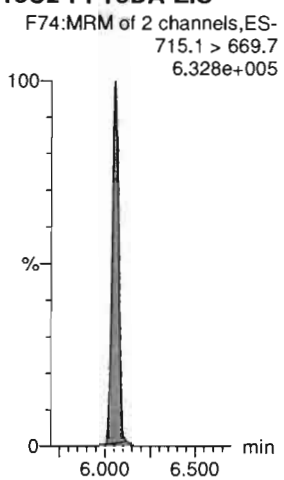
d3-N-MeFOSA-EIS



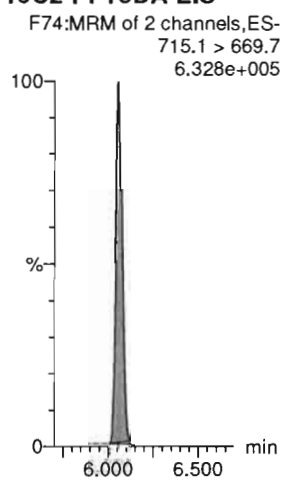
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

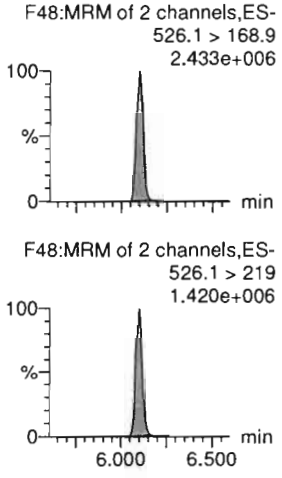


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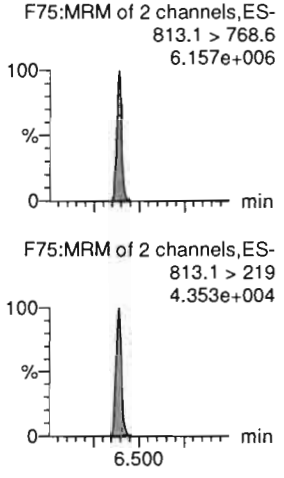
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Name: 200227P1-10, Date: 27-Feb-2020, Time: 16:58:53, ID: ST200227P1-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

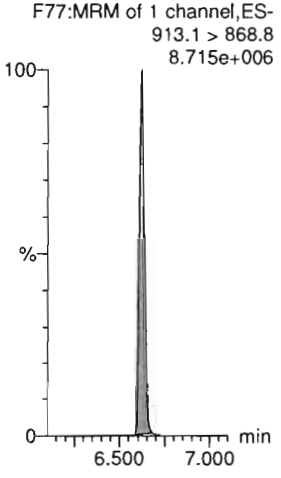
N-EtFOSA



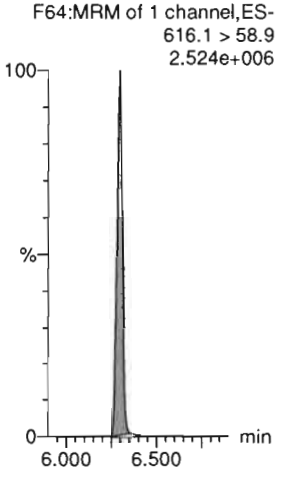
PFHxDA



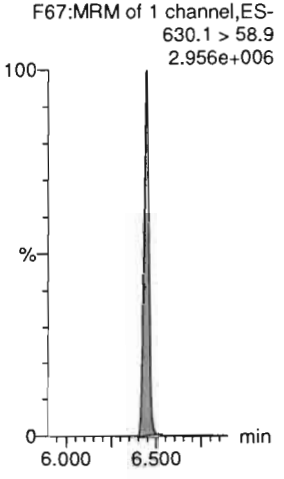
PFODA



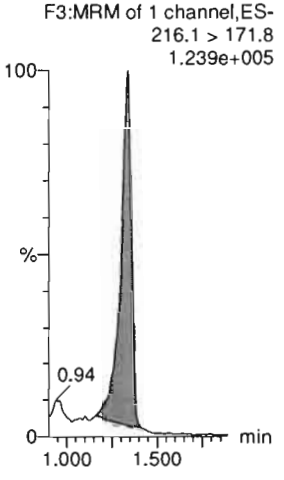
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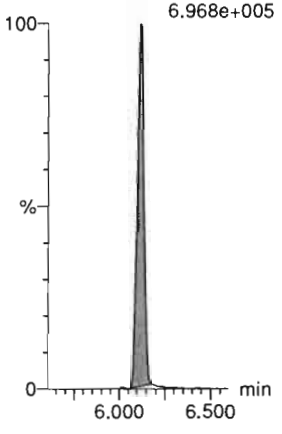
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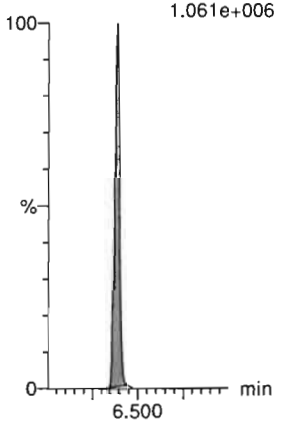
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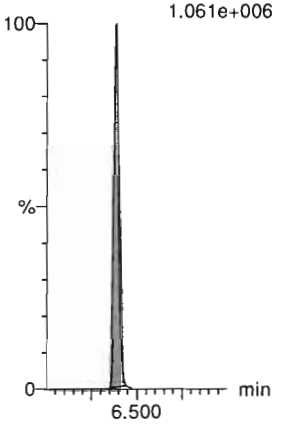
d5-N-ETFOSA-EIS



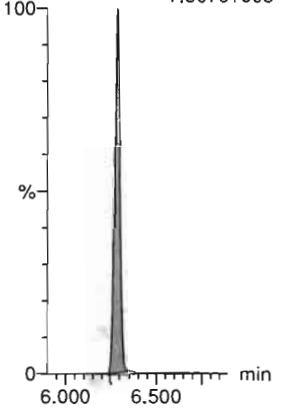
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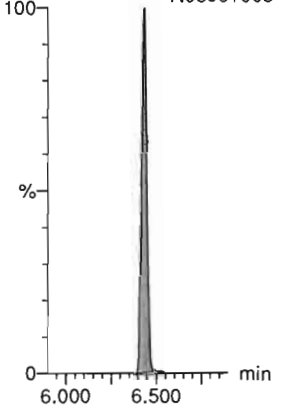
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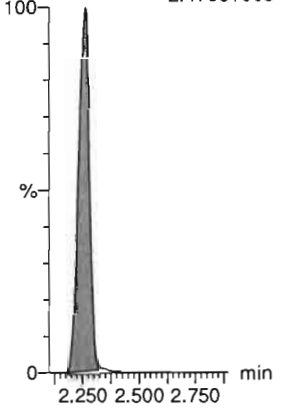
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

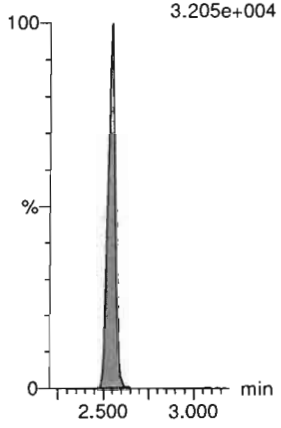


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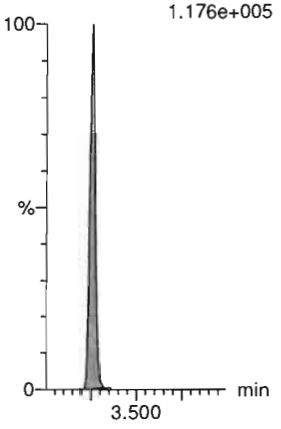
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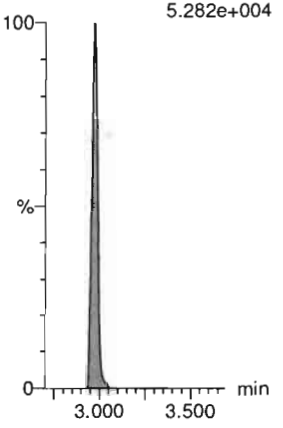
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.205e+004



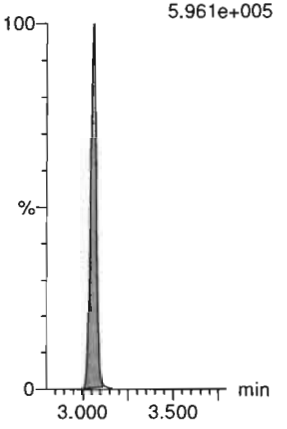
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.176e+005



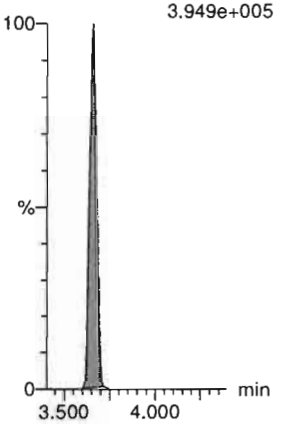
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
5.282e+004



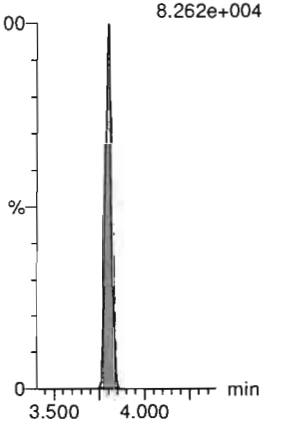
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.961e+005



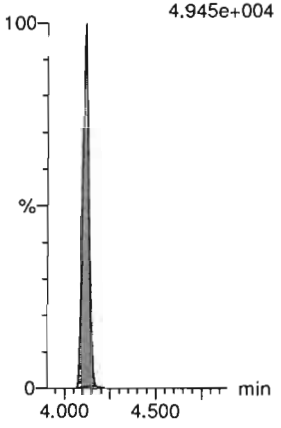
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.949e+005



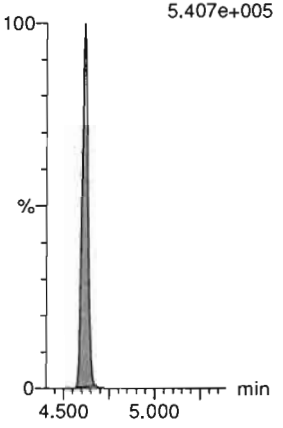
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.262e+004



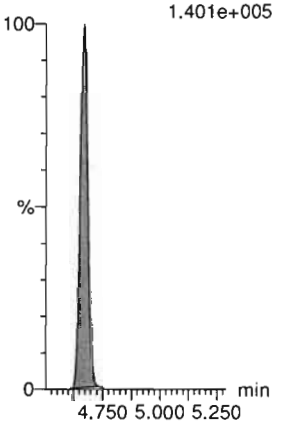
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.945e+004



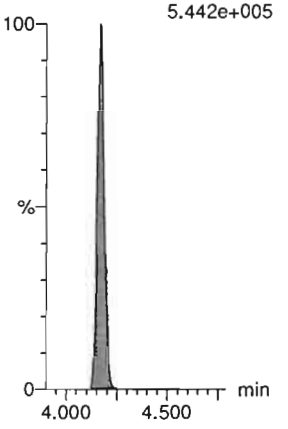
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F35:MRM of 1 channel,ES-
468.2 > 422.9
5.407e+005



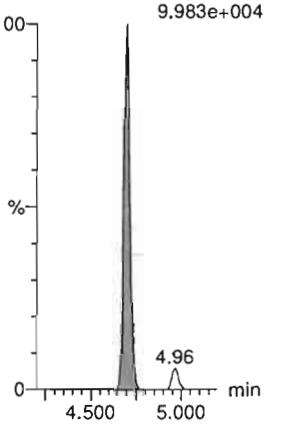
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.401e+005



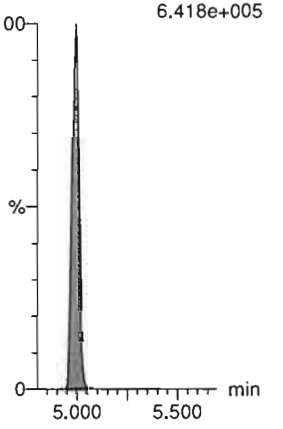
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
5.442e+005



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

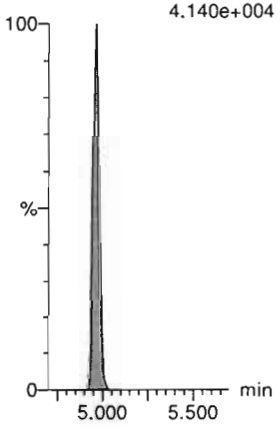


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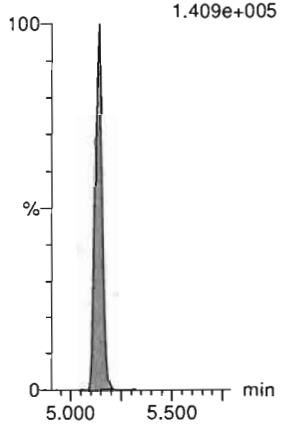
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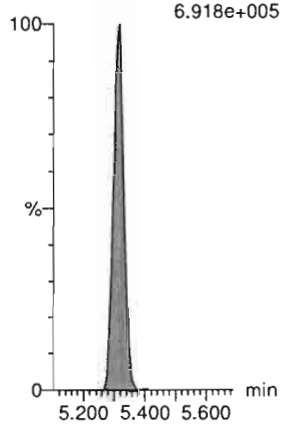
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F50:MRM of 1 channel,ES-
529 > 79.7
4.140e+004



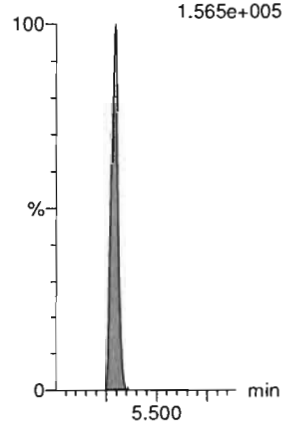
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F58:MRM of 1 channel,ES-
573.3 > 419
1.409e+005



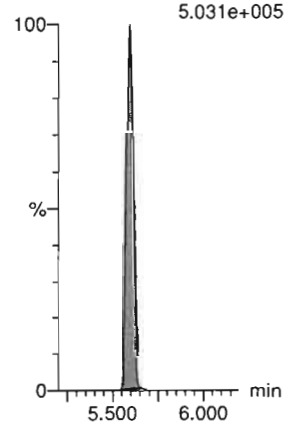
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.918e+005



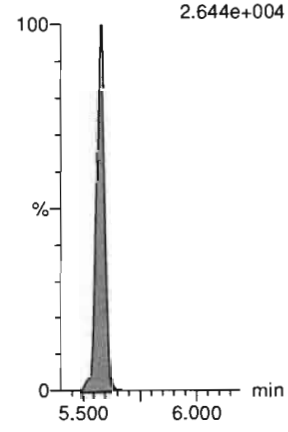
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F60:MRM of 1 channel,ES-
589.3 > 419
1.565e+005



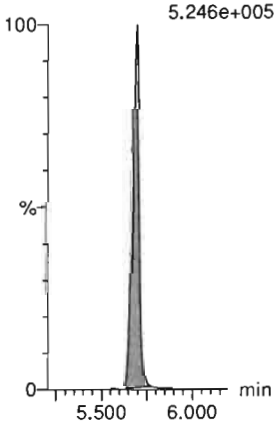
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.031e+005



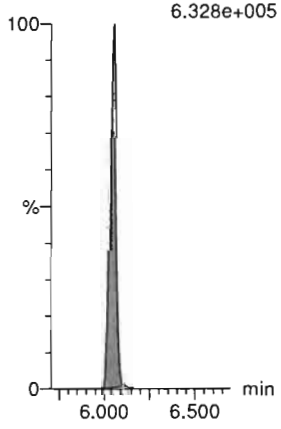
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F69:MRM of 1 channel,ES-
632.9 > 80.0
2.644e+004



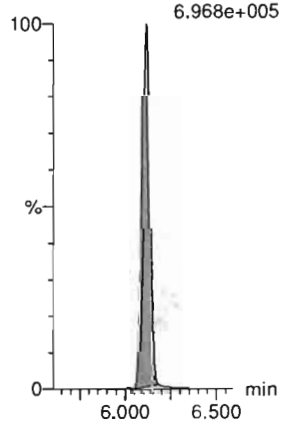
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F46:MRM of 1 channel,ES-
515.2 > 168.9
5.246e+005



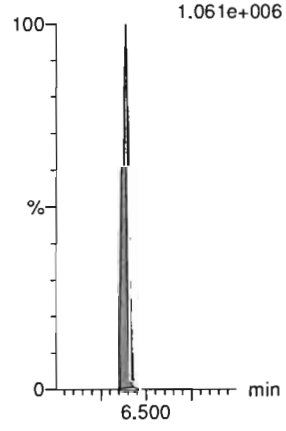
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F74:MRM of 2 channels,ES-
715.1 > 669.7
6.328e+005



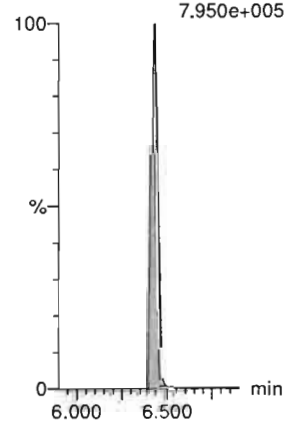
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F52:MRM of 1 channel,ES-
531.1 > 168.9
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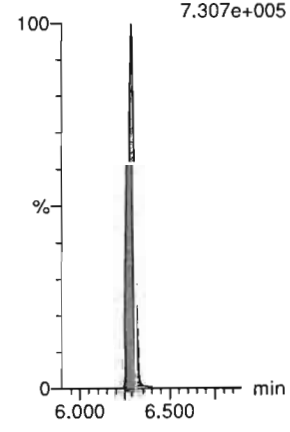
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F76:MRM of 1 channel,ES-
815 > 769.7
1.061e+006



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.950e+005



d7-N-MeFOSE-RSD
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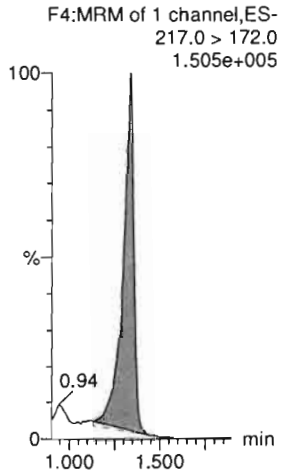


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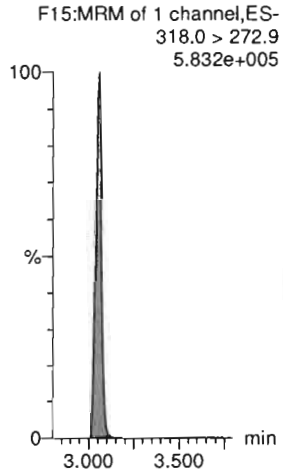
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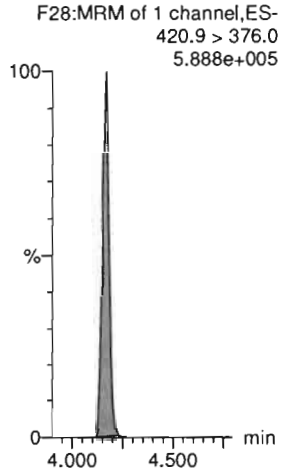
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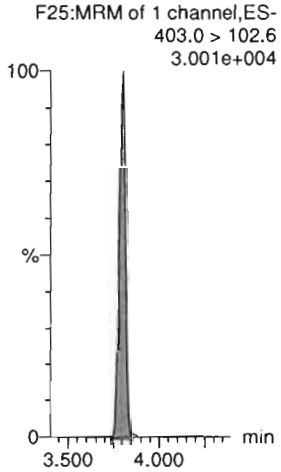
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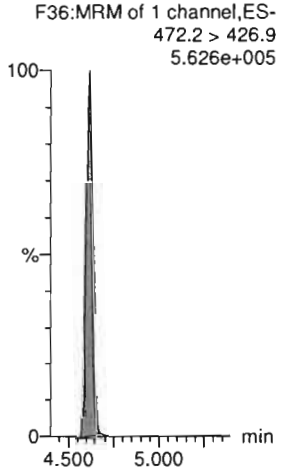
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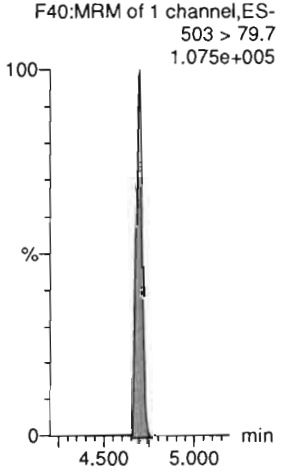
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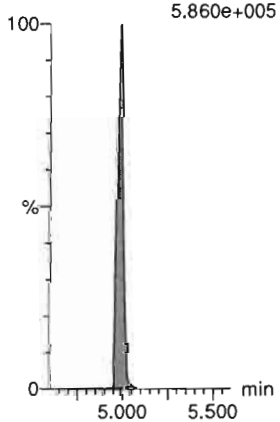
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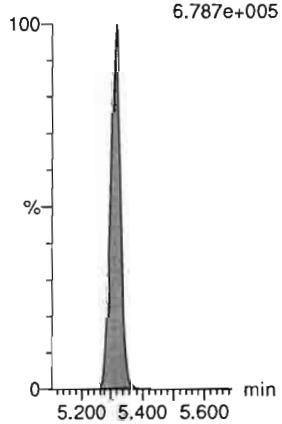
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13C6-PFDA



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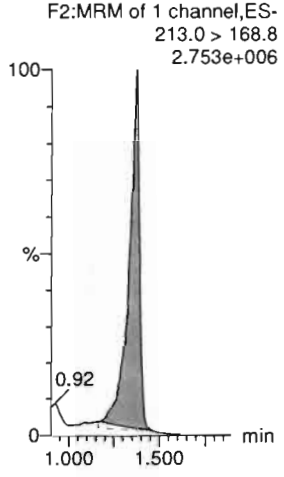


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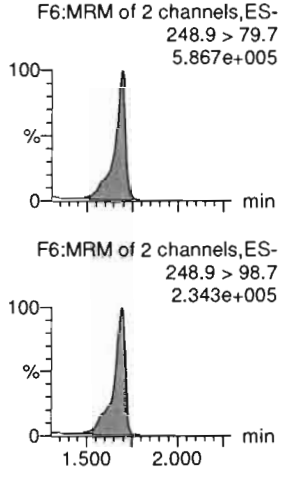
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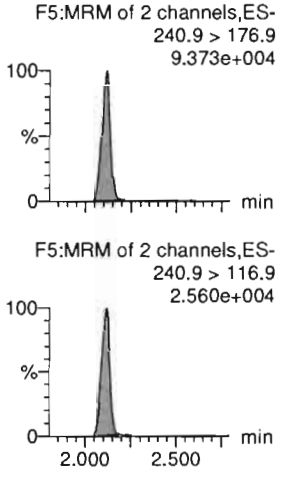
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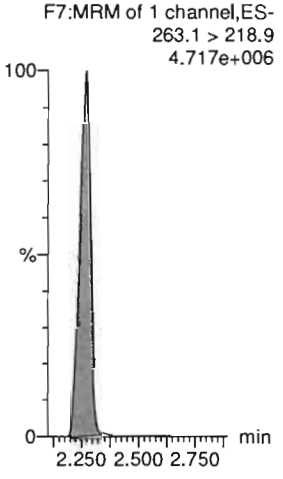
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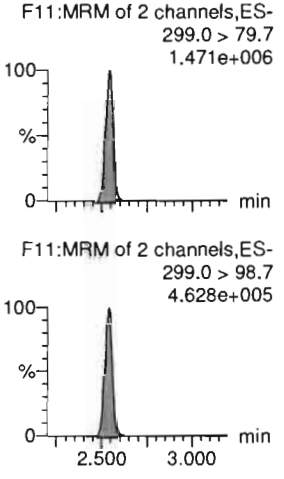
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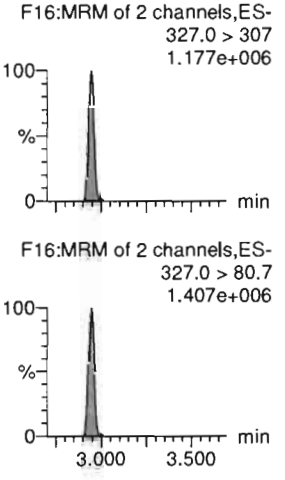
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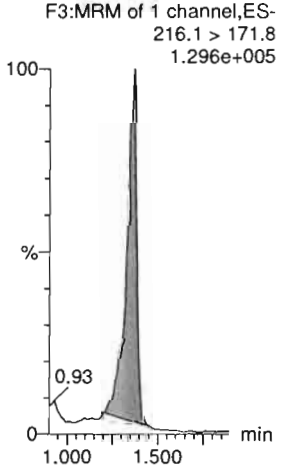
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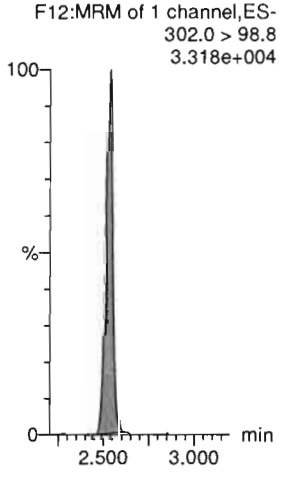
4:2 FTS



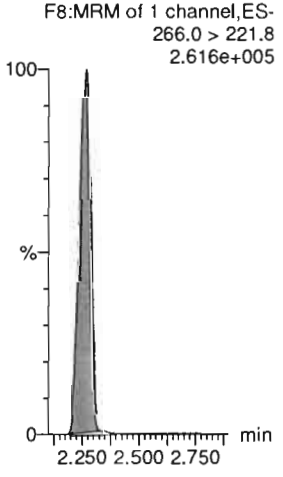
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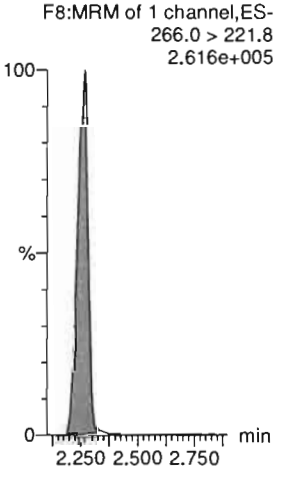
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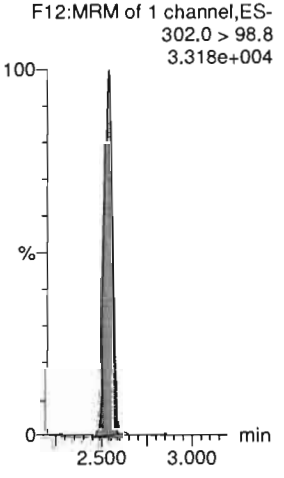
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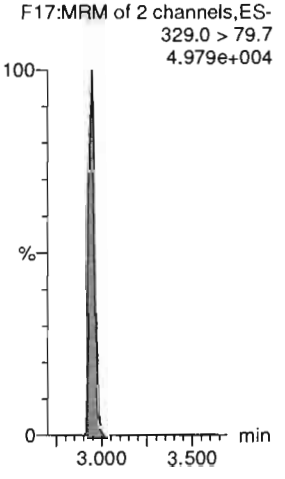
13C3-PFPeA-EIS



13C3-PFBS-EIS



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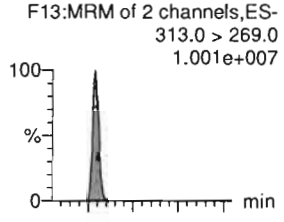


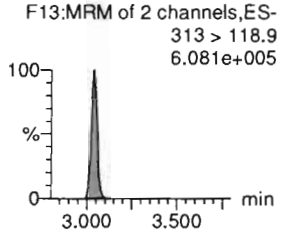
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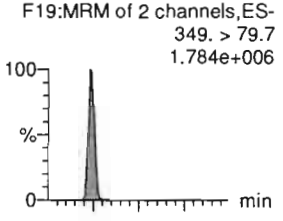
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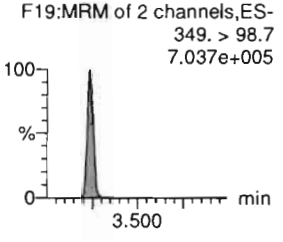
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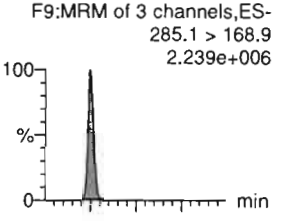


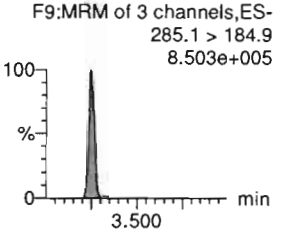
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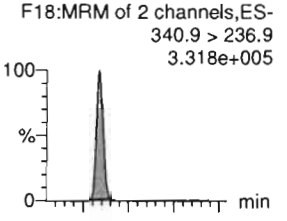


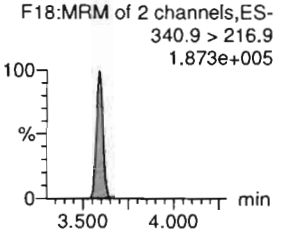
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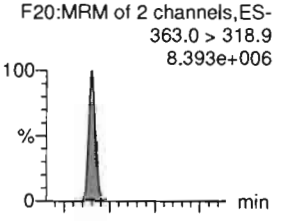


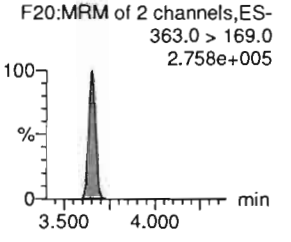
5:3 FTCA



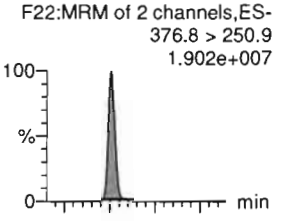


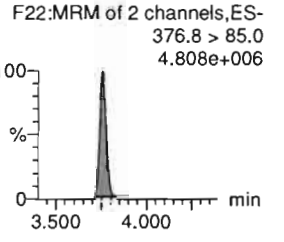
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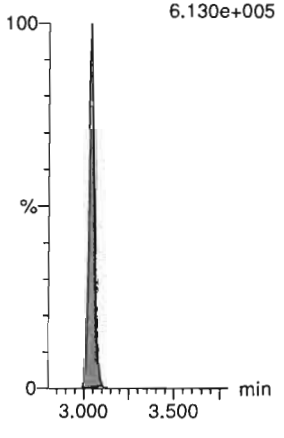


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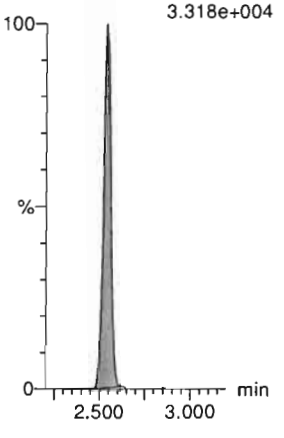




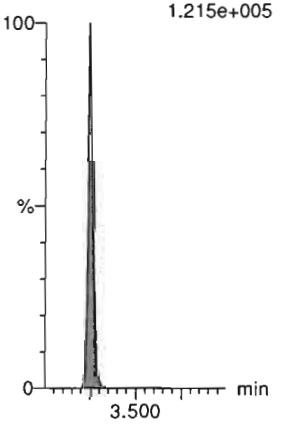
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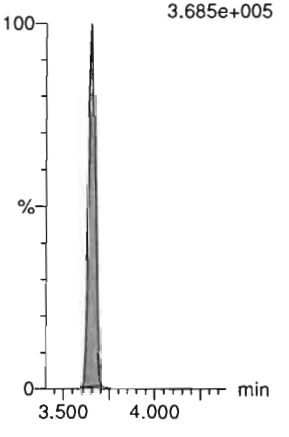
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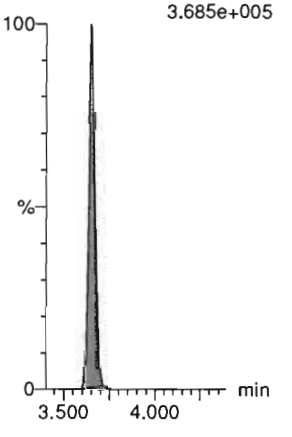
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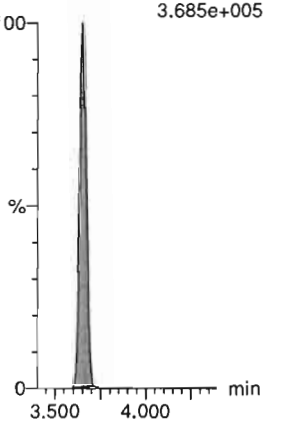
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

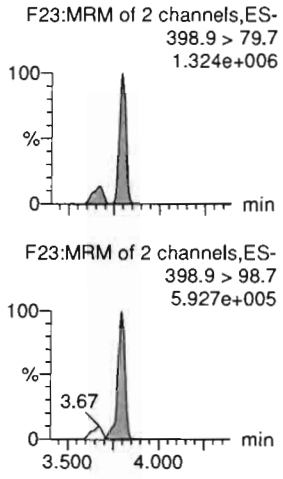


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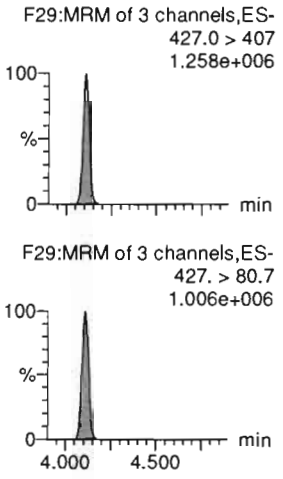
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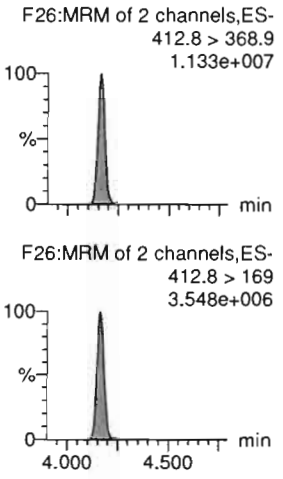
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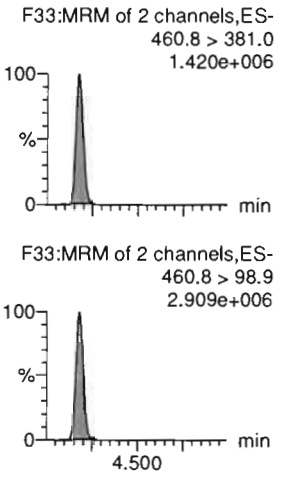
6:2 FTS



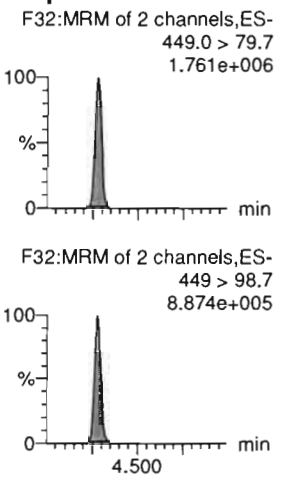
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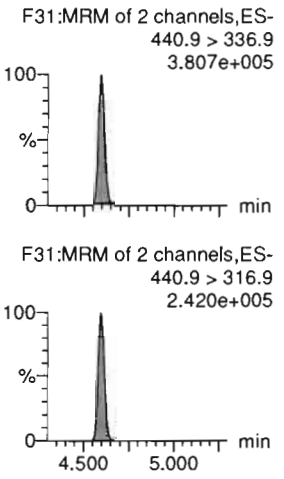
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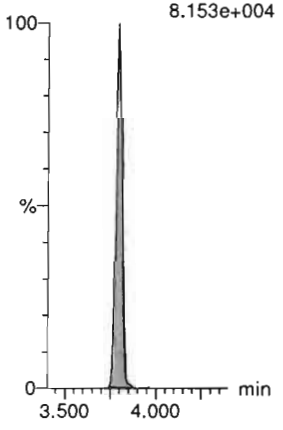
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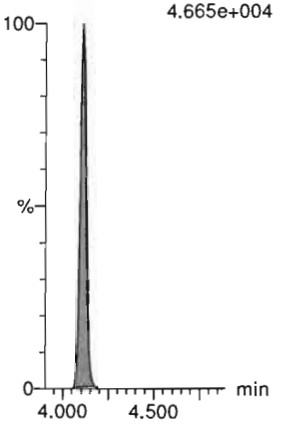
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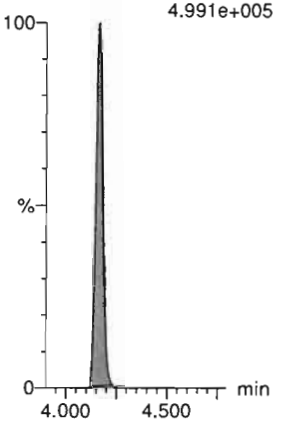
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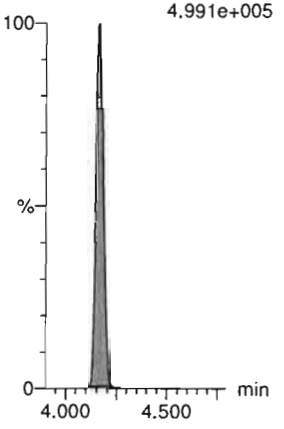
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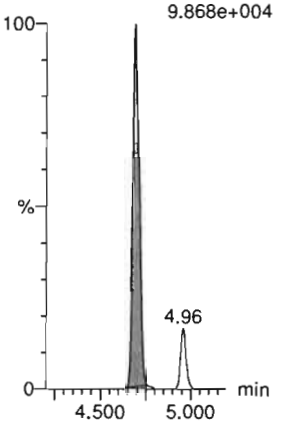
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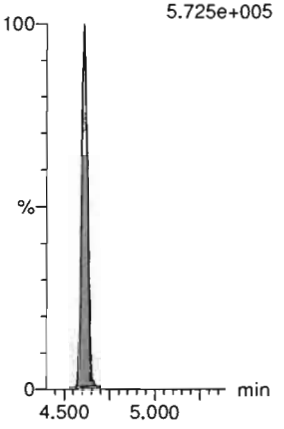
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

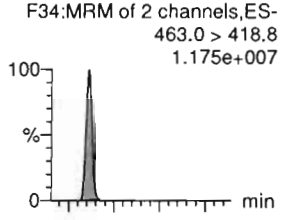


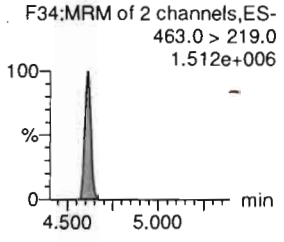
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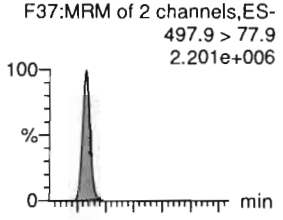
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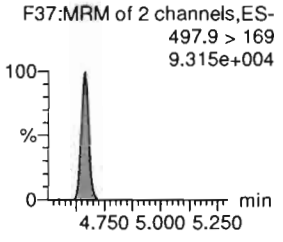
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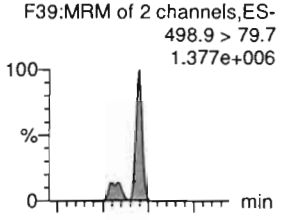


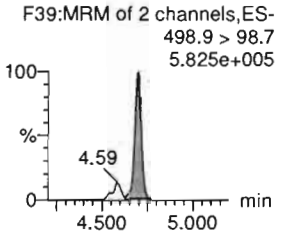
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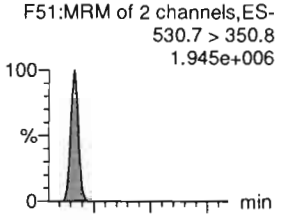


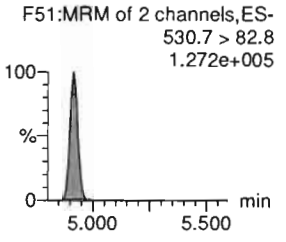
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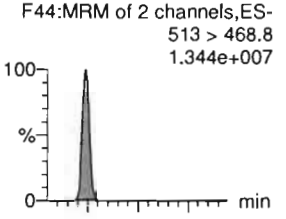


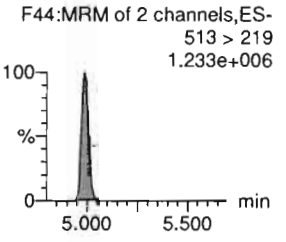
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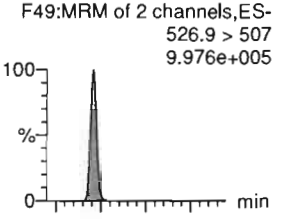


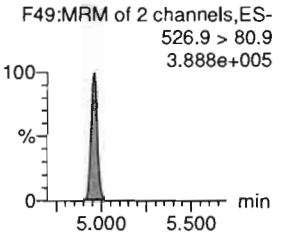
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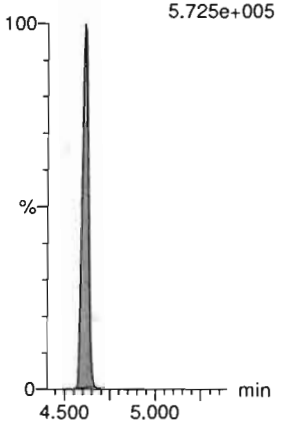


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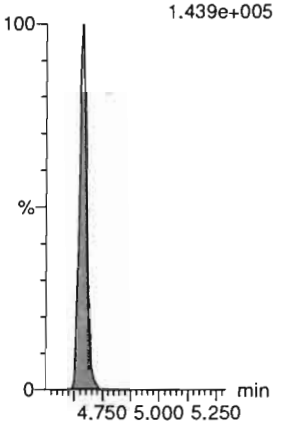




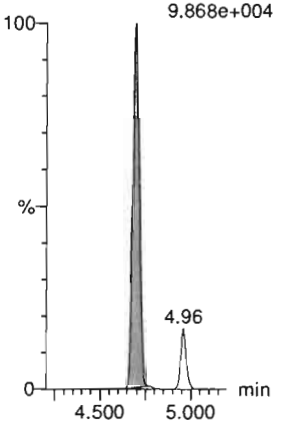
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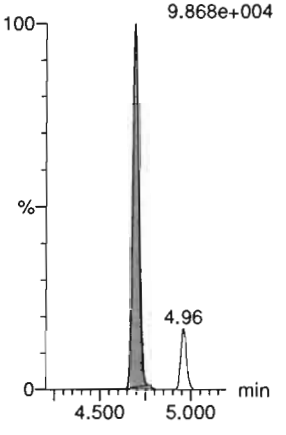
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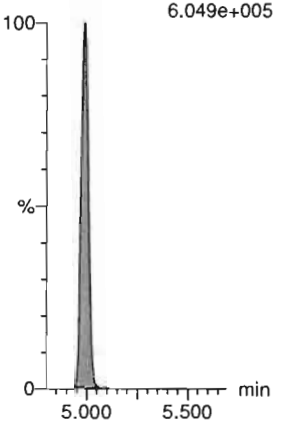
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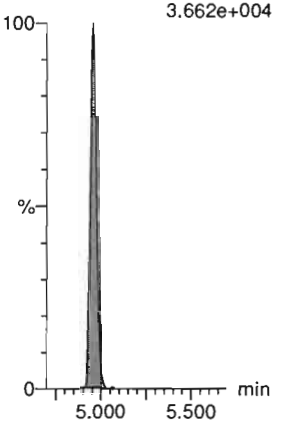
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

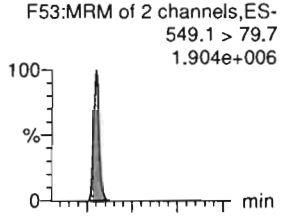


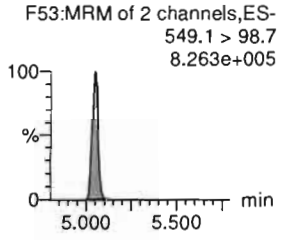
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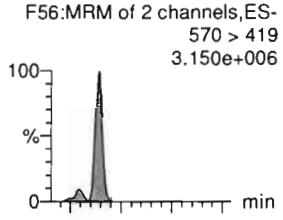
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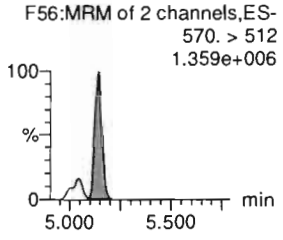
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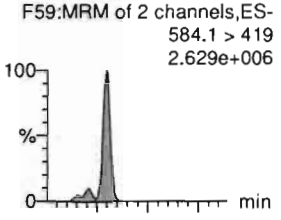


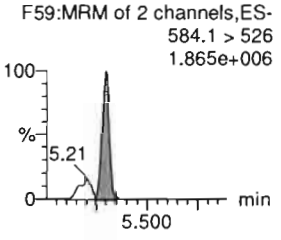
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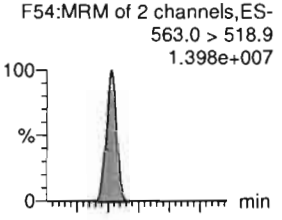


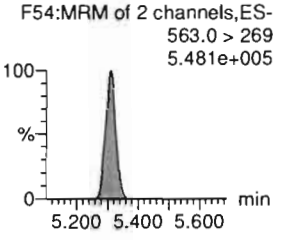
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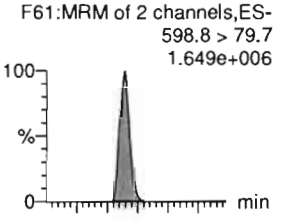


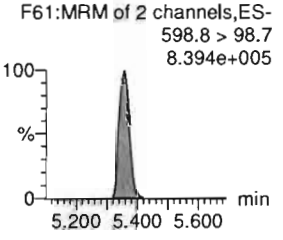
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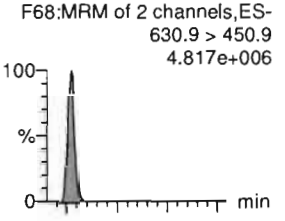


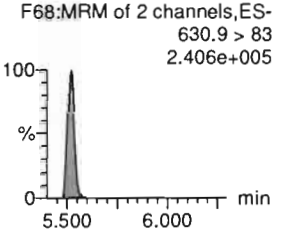
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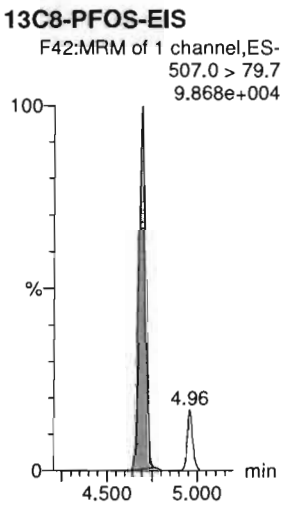


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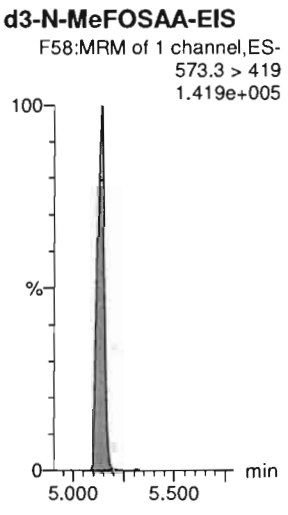




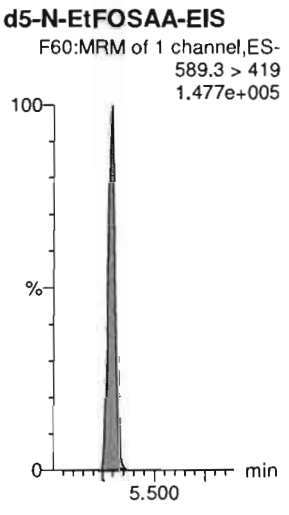
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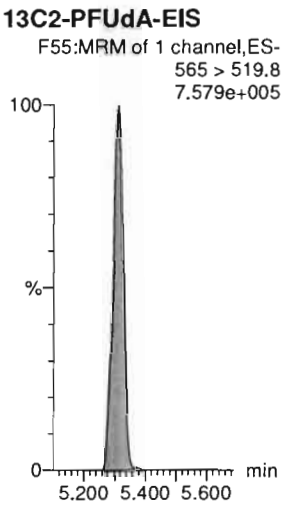
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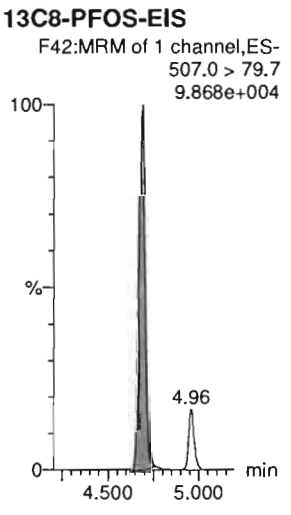
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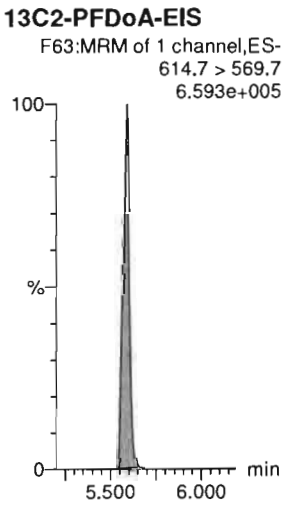
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13C8-PFOS-EIS



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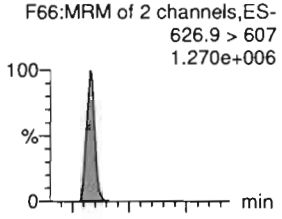


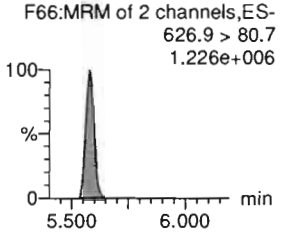
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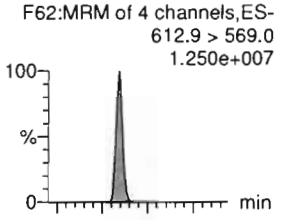
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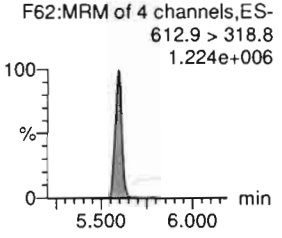
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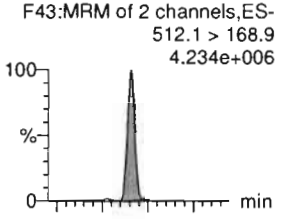


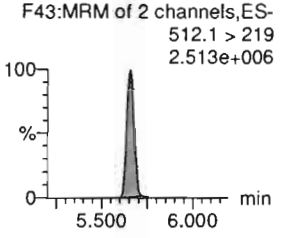
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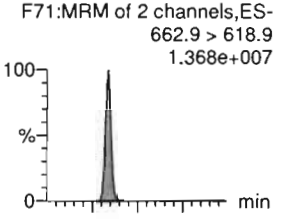


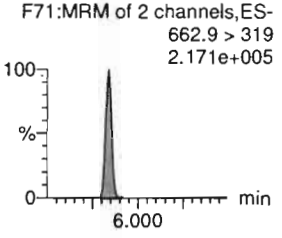
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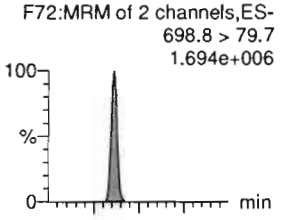


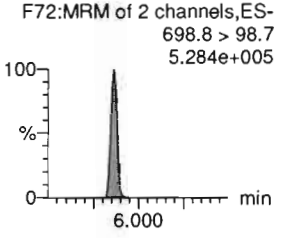
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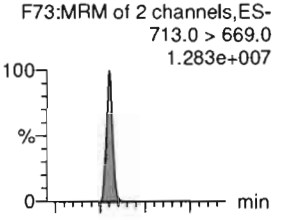


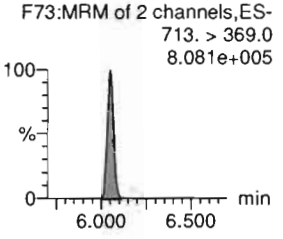
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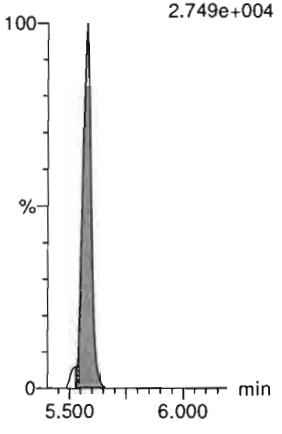


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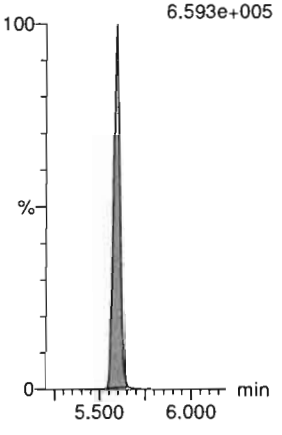




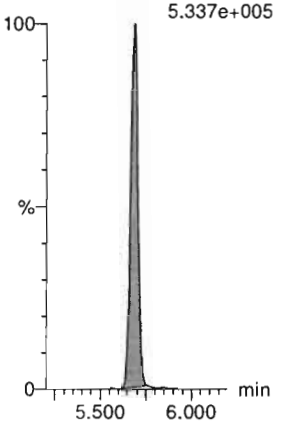
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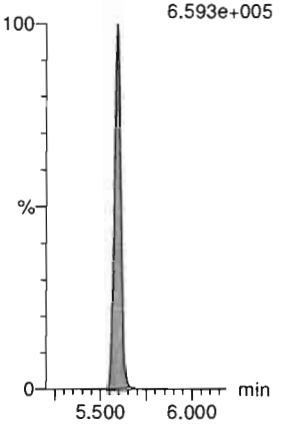
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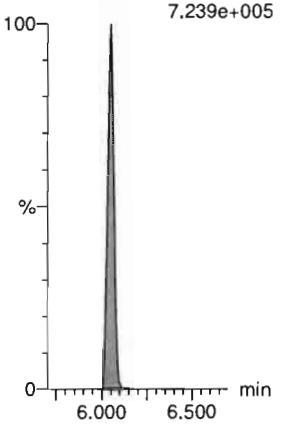
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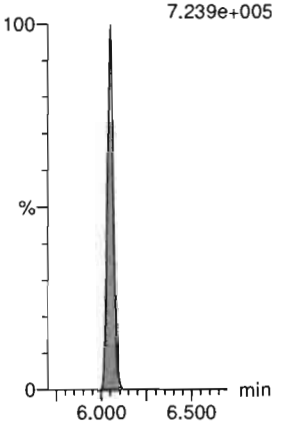
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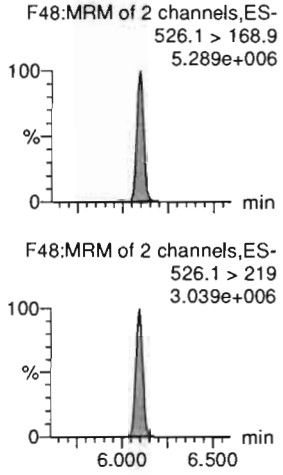


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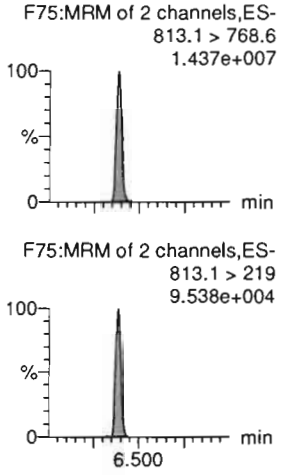
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Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

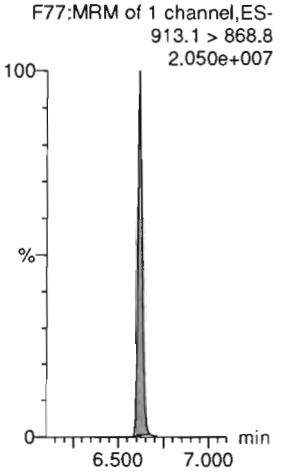
N-EtFOSA



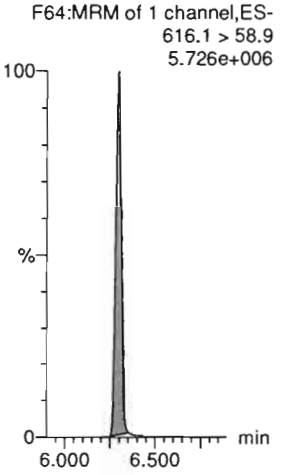
PFHxDA



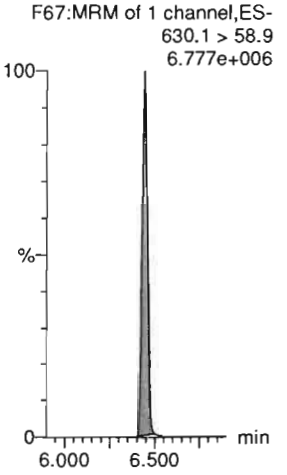
PFODA



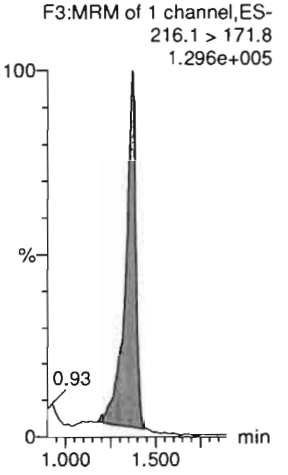
N-MeFOSE



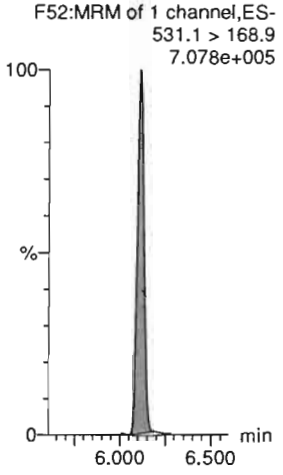
N-EtFOSE



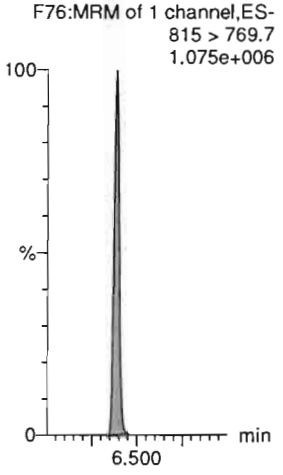
13C3-PFBA-RSD



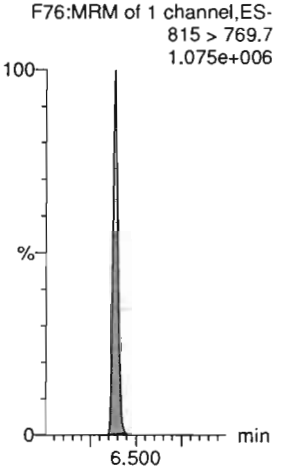
d5-N-ETFOSA-EIS



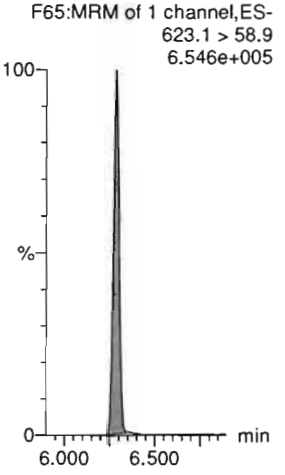
13C2-PFHxDA-EIS



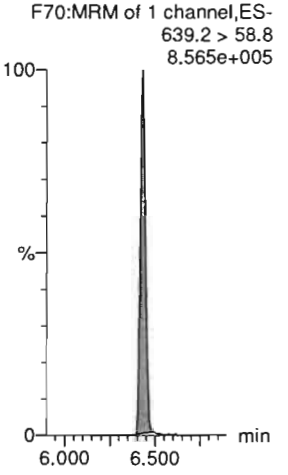
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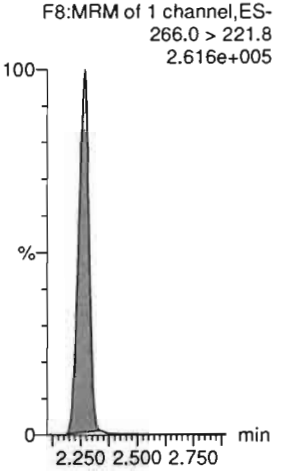
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

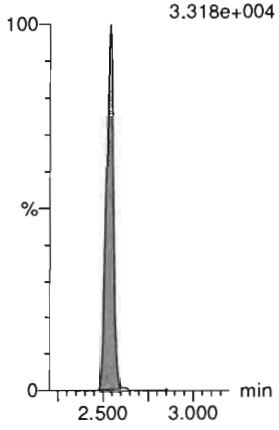


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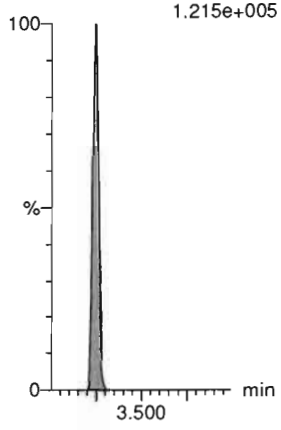
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Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

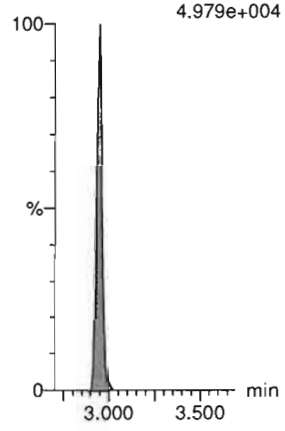
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.318e+004



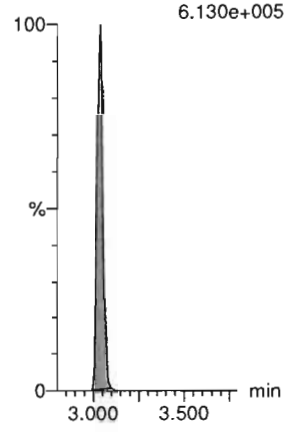
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.215e+005



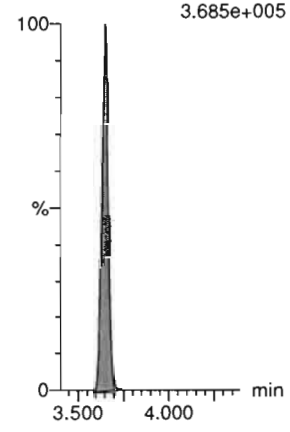
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.979e+004



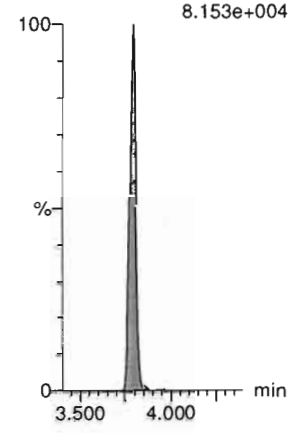
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
6.130e+005



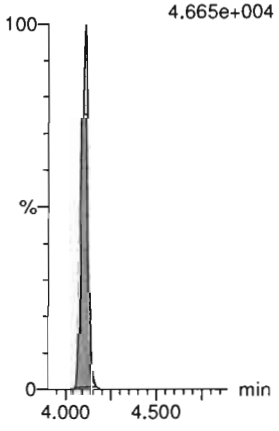
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.685e+005



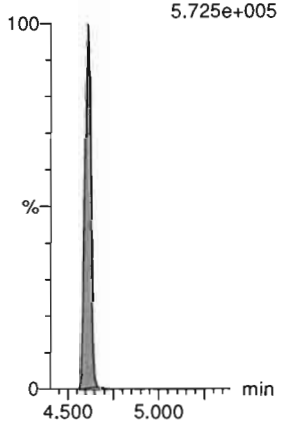
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.153e+004



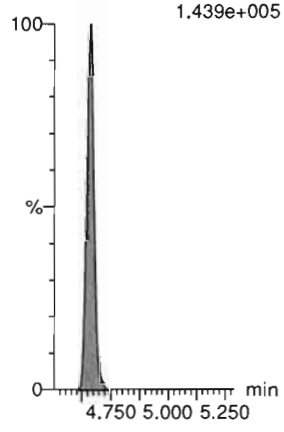
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.665e+004



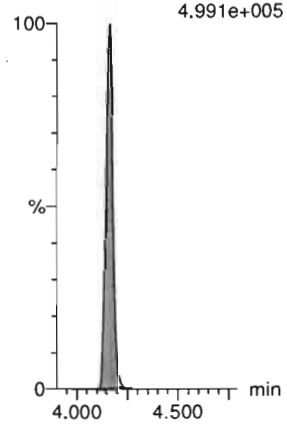
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.725e+005



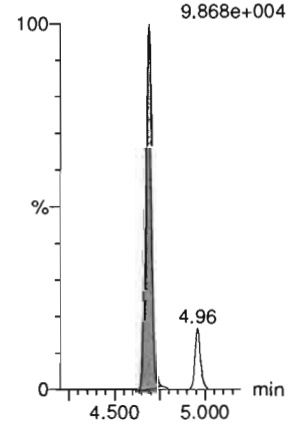
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.439e+005



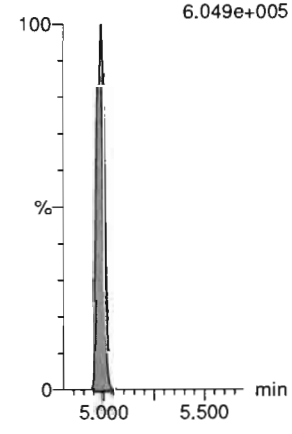
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.991e+005



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

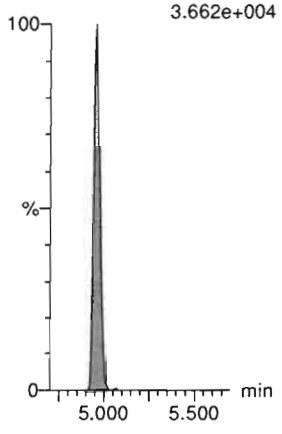


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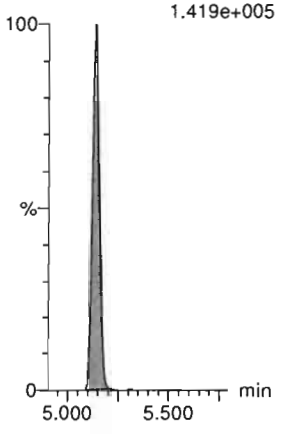
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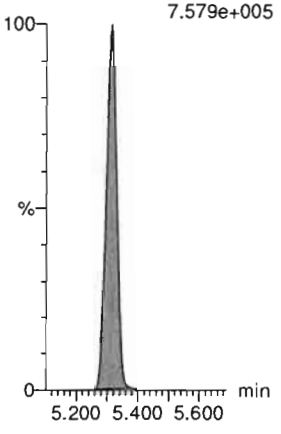
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.662e+004



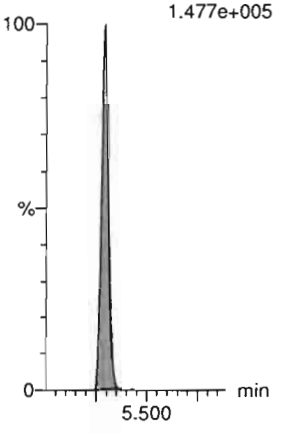
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.419e+005



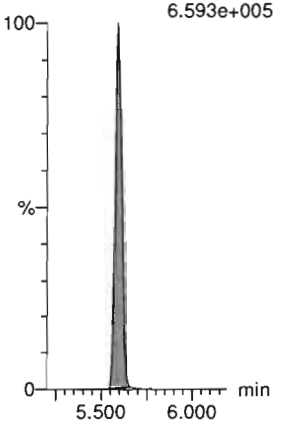
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.579e+005



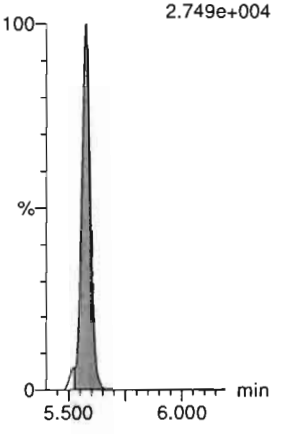
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.477e+005



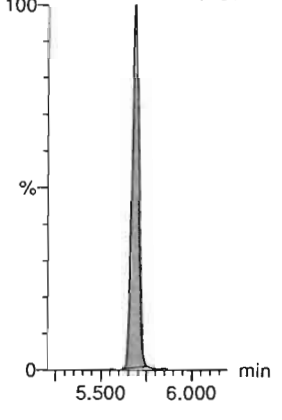
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.593e+005



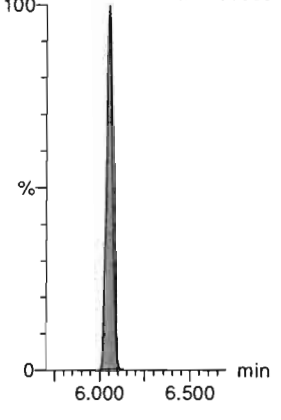
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.749e+004



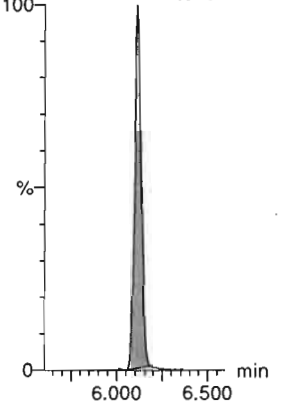
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.337e+005



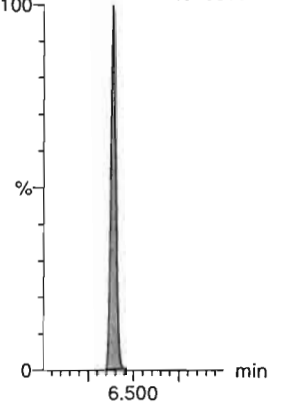
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
7.239e+005



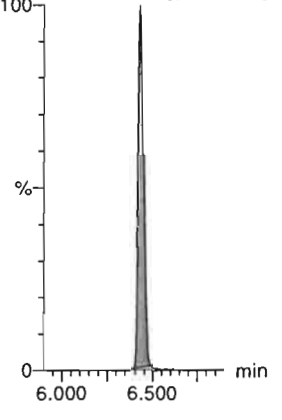
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
7.078e+005



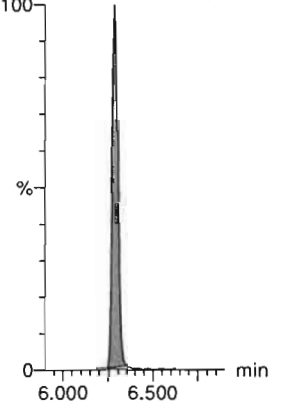
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
1.075e+006



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

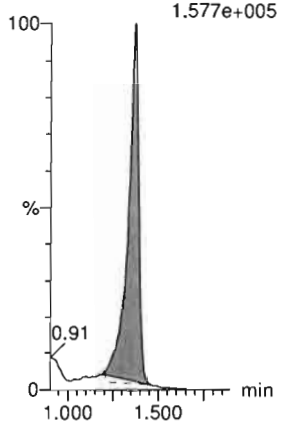


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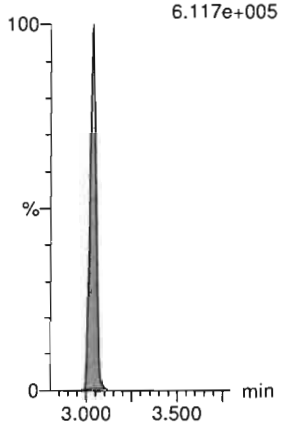
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Name: 200227P1-11, Date: 27-Feb-2020, Time: 17:16:12, ID: ST200227P1-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

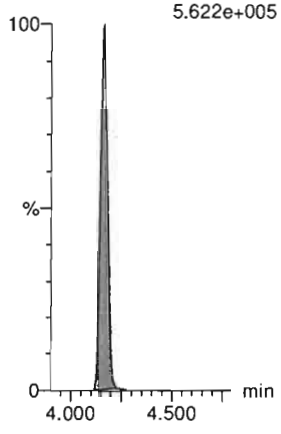
13C4-PFBA



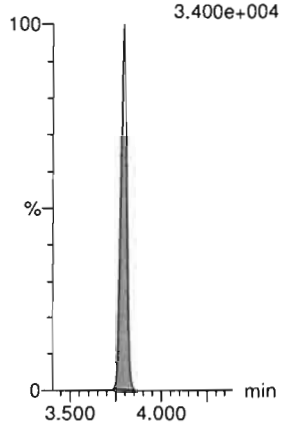
13C5-PFHxA



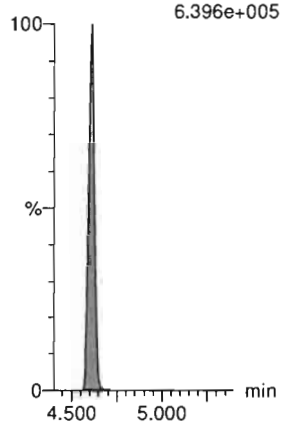
13C8-PFOA



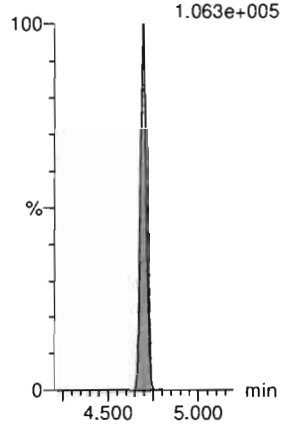
18O2-PFHxS



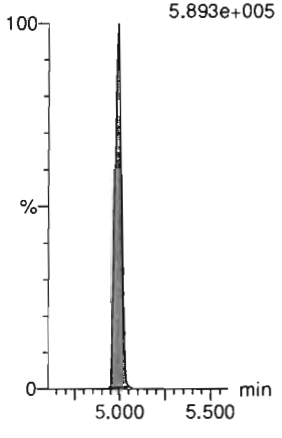
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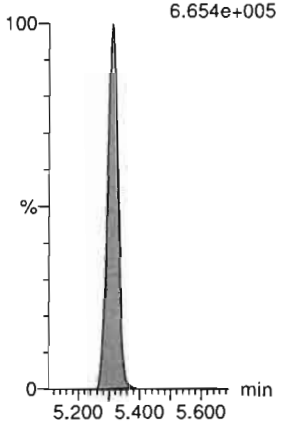
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13C6-PFDA



13C7-PFUdA

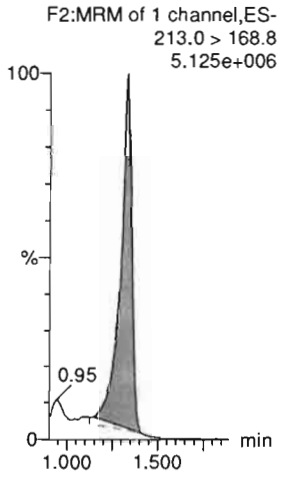


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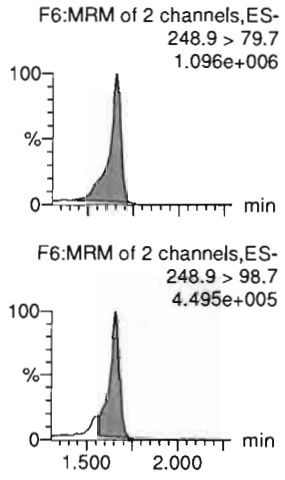
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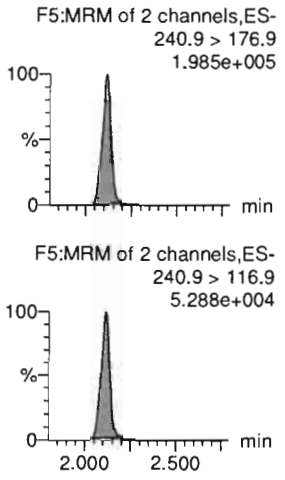
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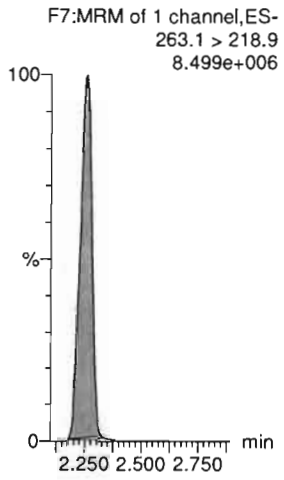
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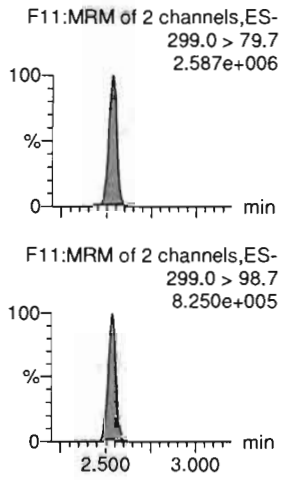
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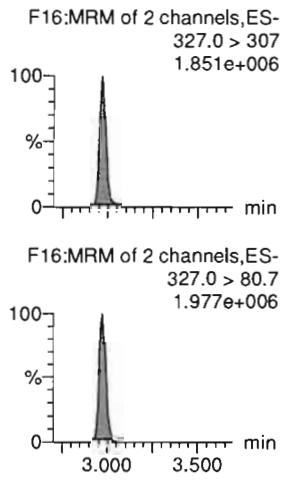
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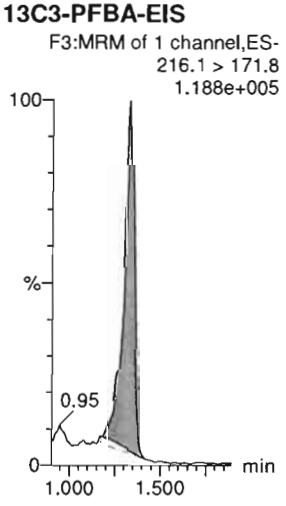
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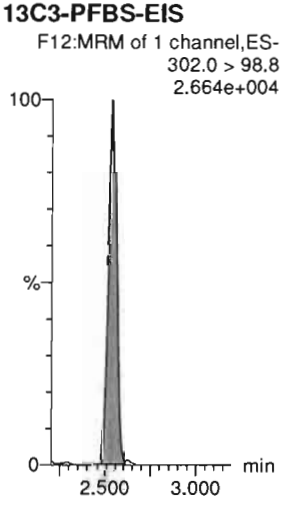
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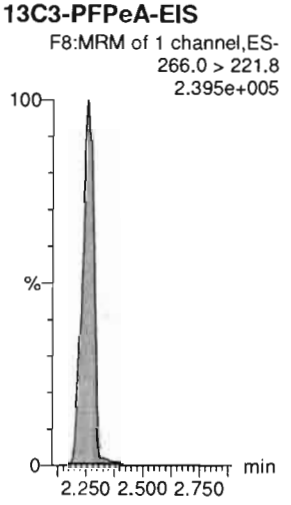
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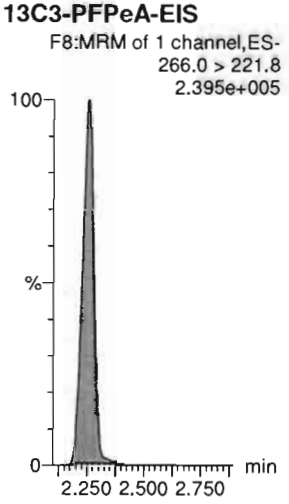
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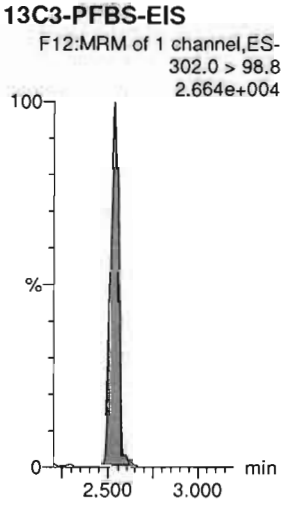
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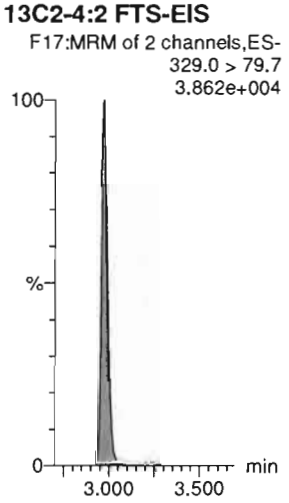
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13C3-PFBS-EIS



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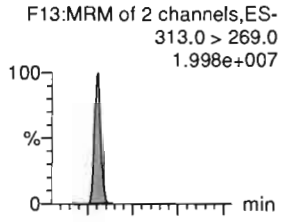


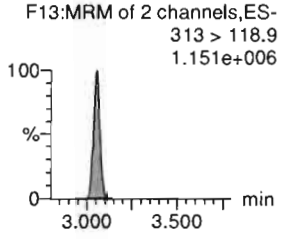
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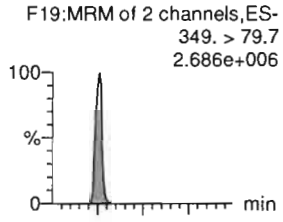
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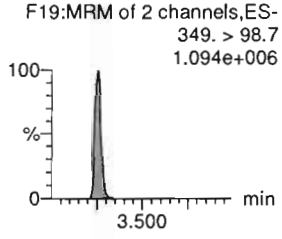
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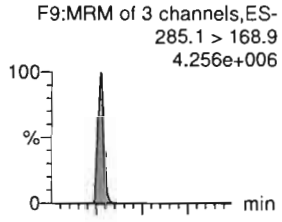


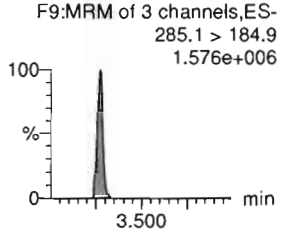
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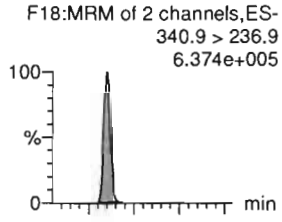


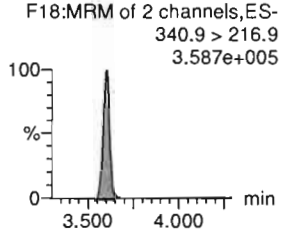
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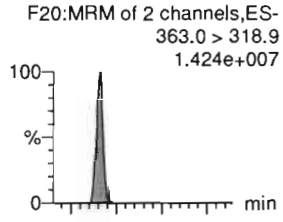


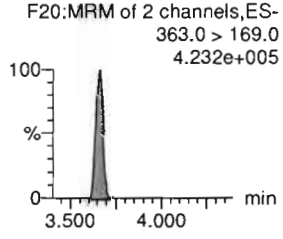
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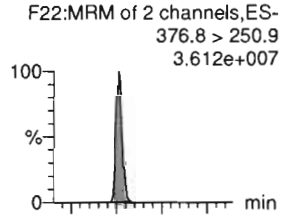


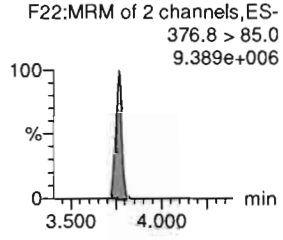
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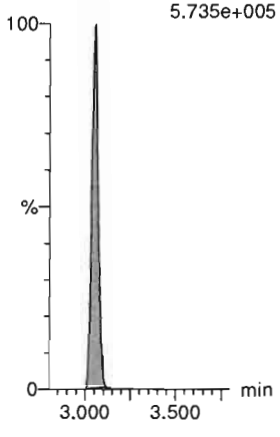


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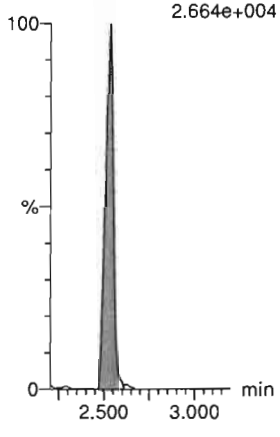




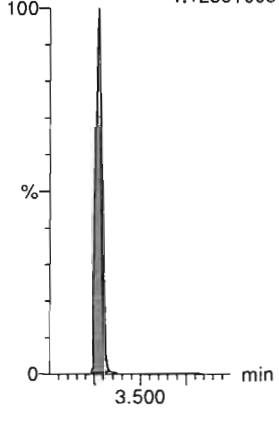
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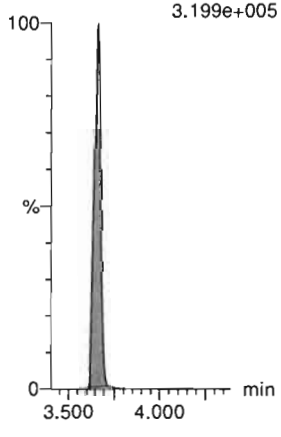
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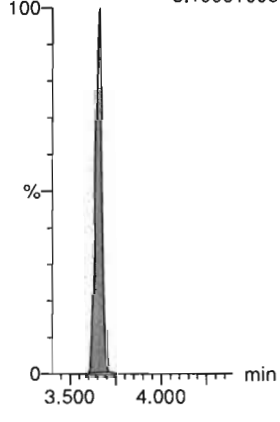
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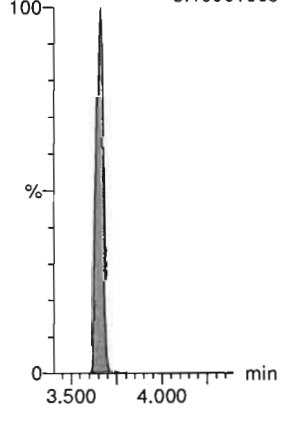
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13C4-PFHpA-EIS



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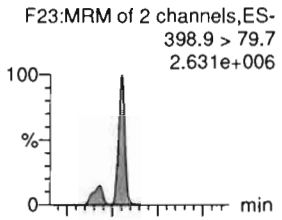


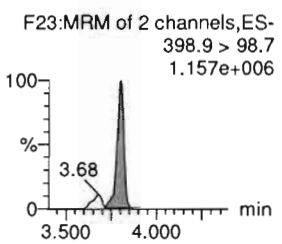
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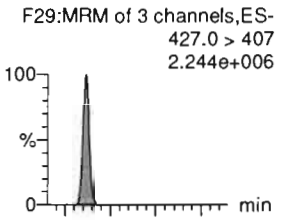
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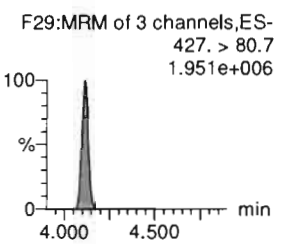
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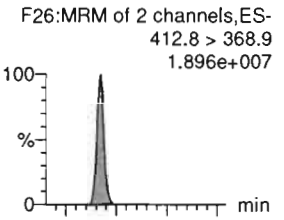


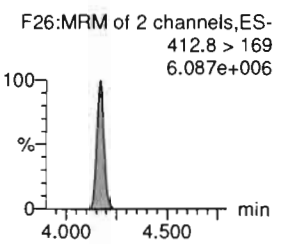
6:2 FTS



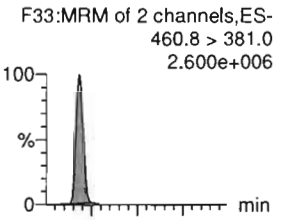


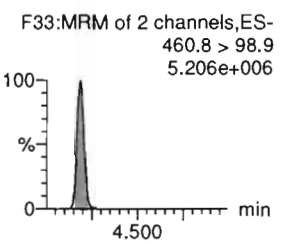
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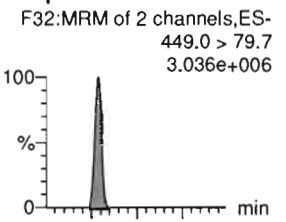


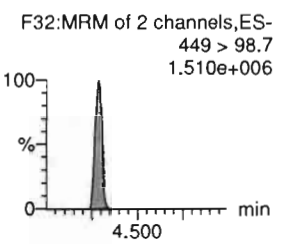
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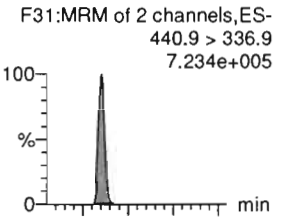


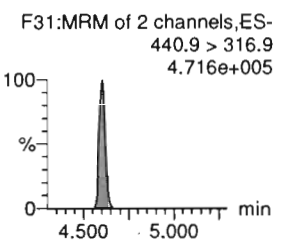
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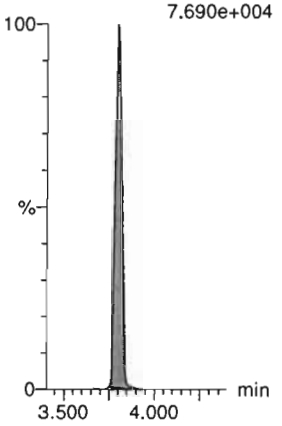


7:3 FTCA

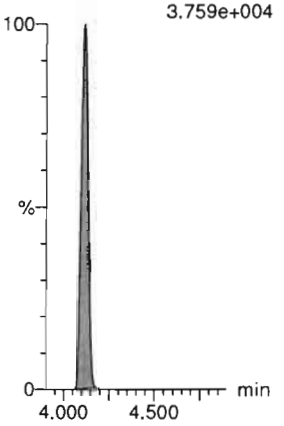




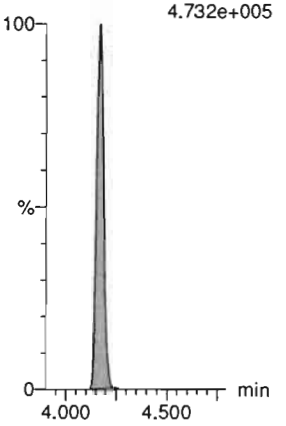
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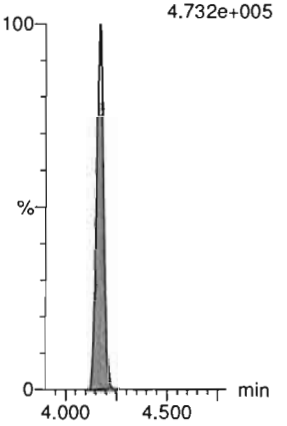
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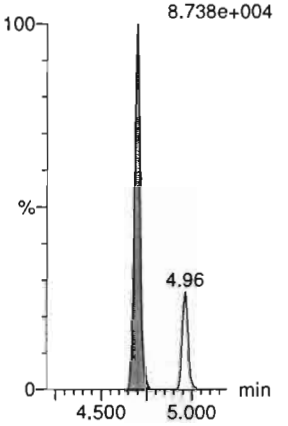
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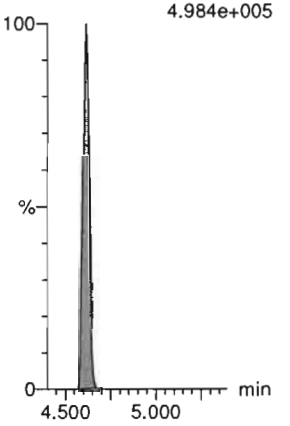
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13C8-PFOS-EIS



13C5-PFNA-EIS

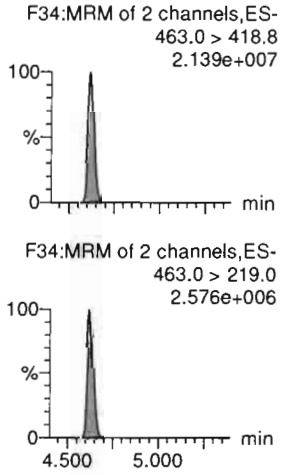


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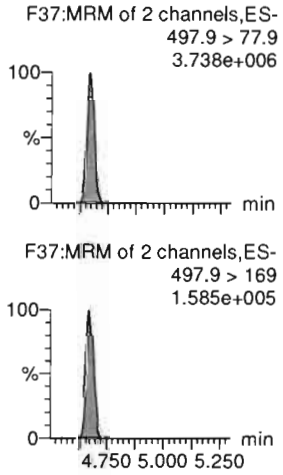
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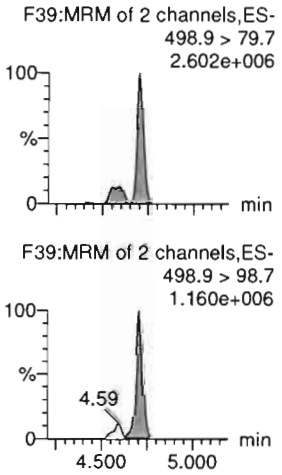
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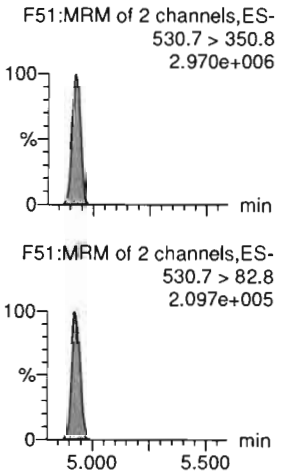
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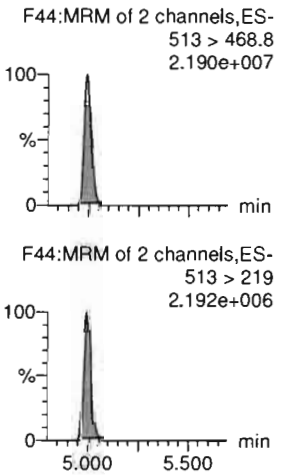
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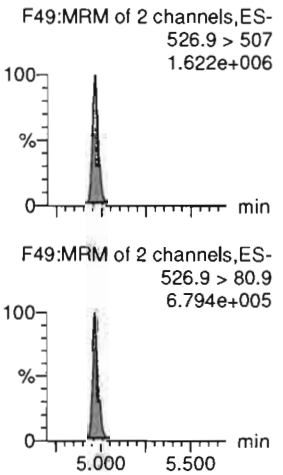
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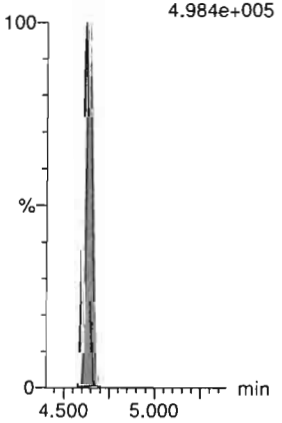
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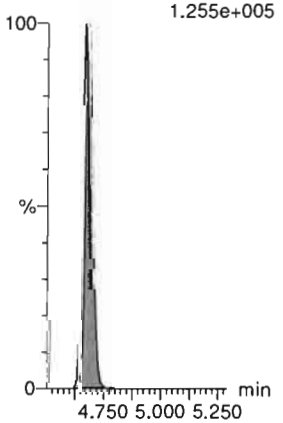
8:2 FTS



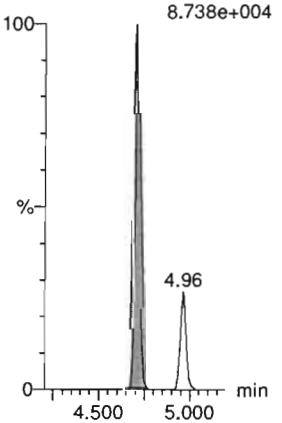
13C5-PFNA-EIS



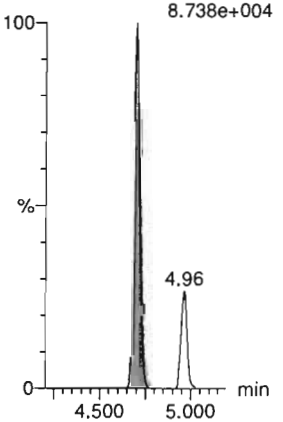
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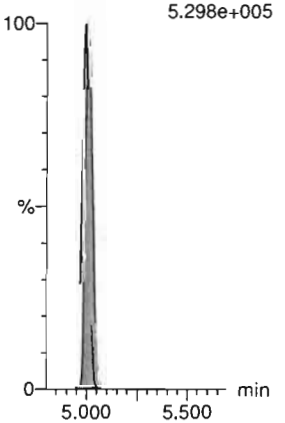
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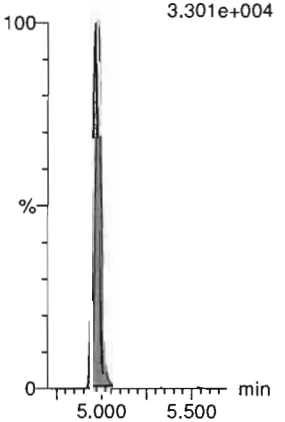
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

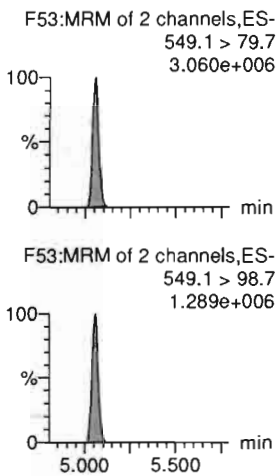


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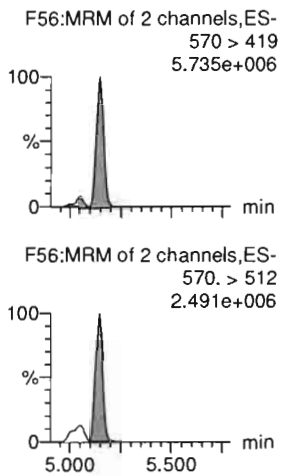
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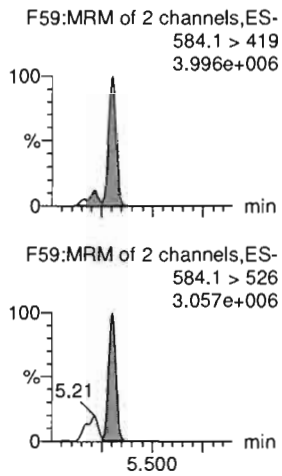
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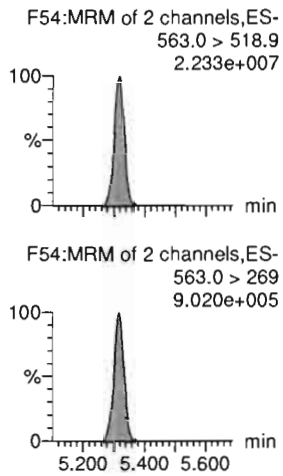
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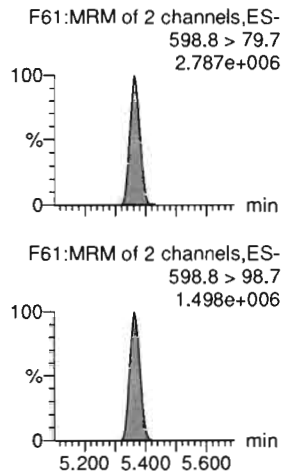
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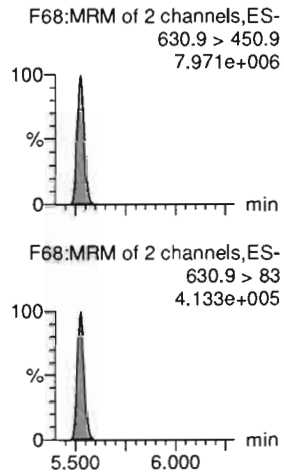
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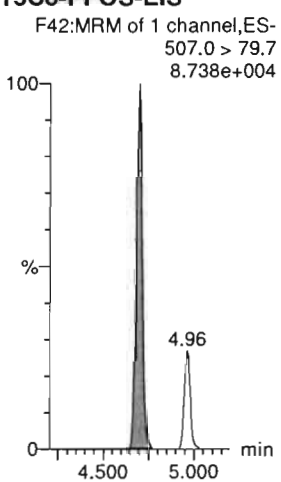
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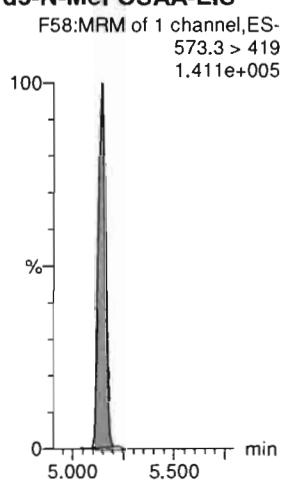
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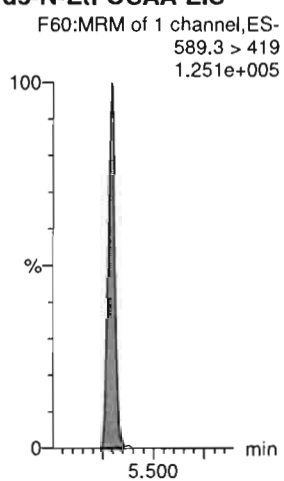
13C8-PFOS-EIS



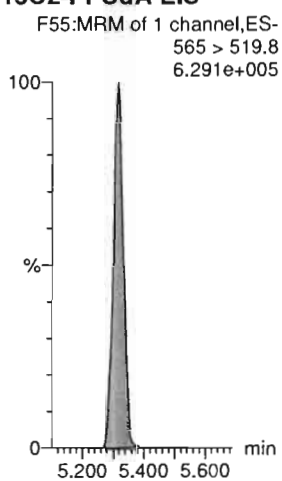
d3-N-MeFOSAA-EIS



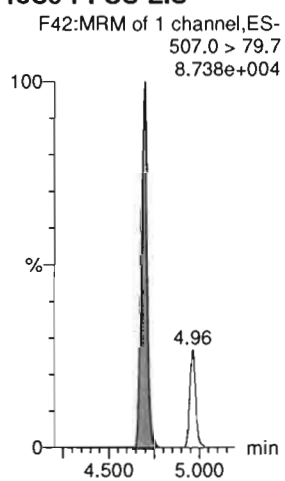
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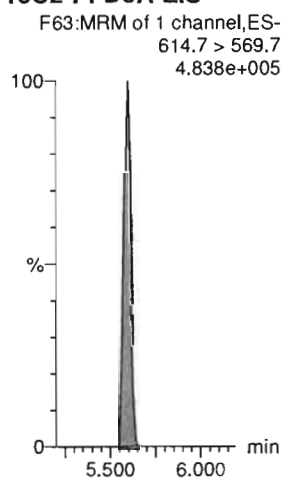
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

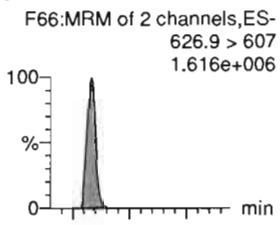


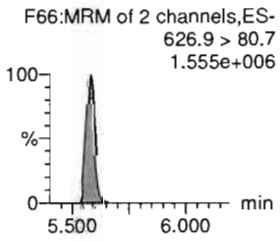
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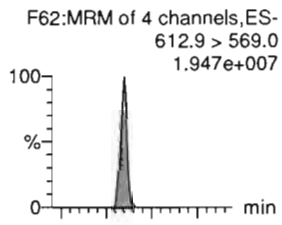
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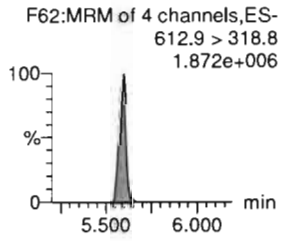
10:2 FTS



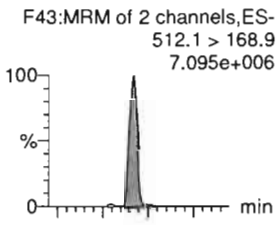


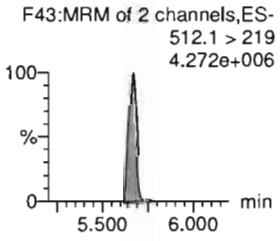
PFDoA



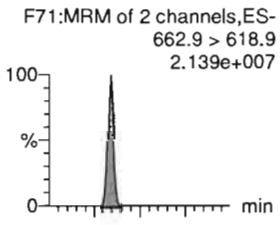


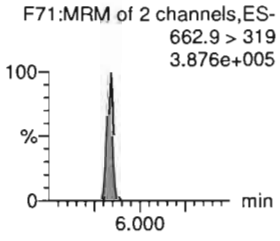
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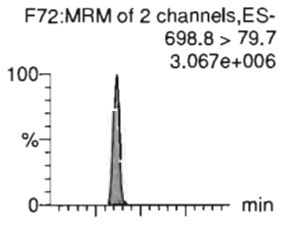


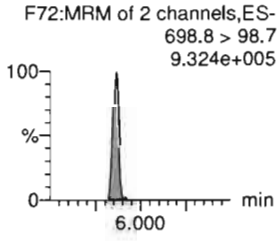
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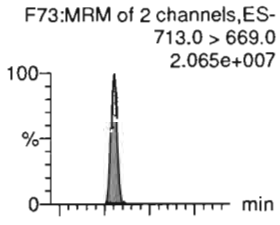


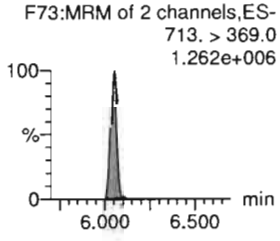
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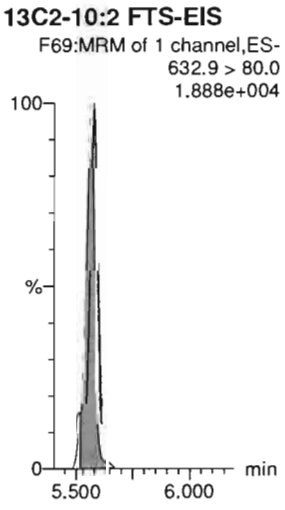


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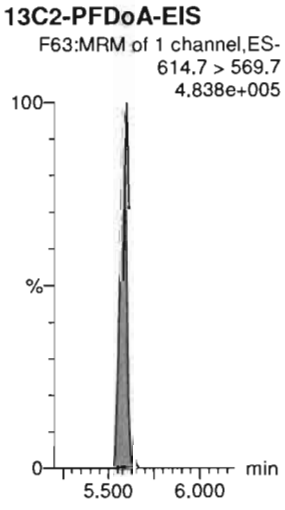




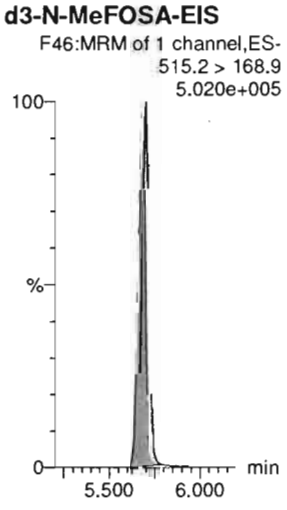
13C2-10:2 FTS-EIS



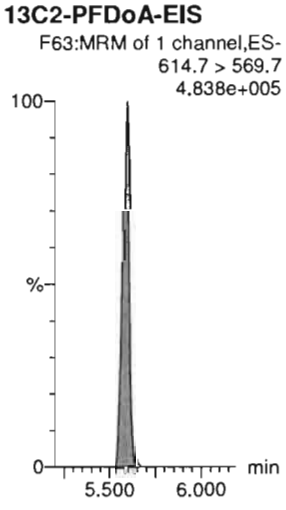
13C2-PFDoA-EIS



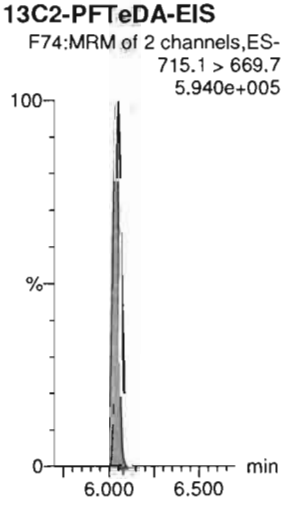
d3-N-MeFOSA-EIS



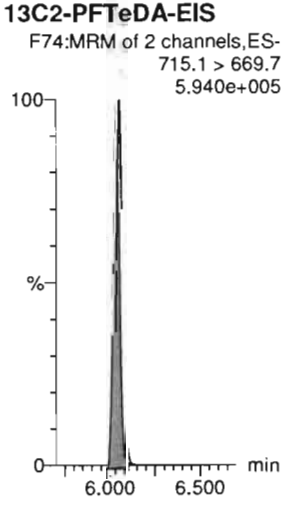
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

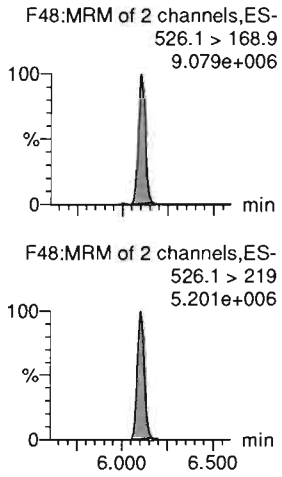


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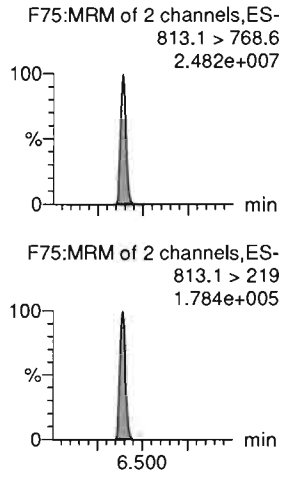
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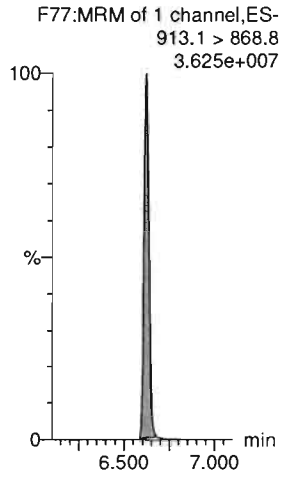
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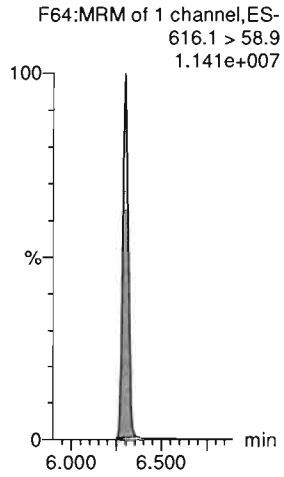
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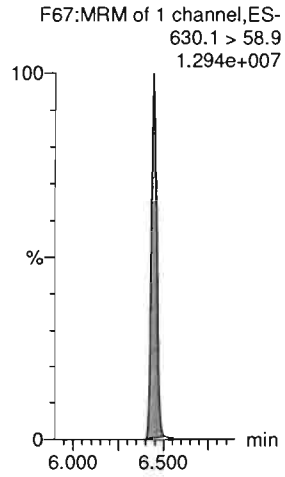
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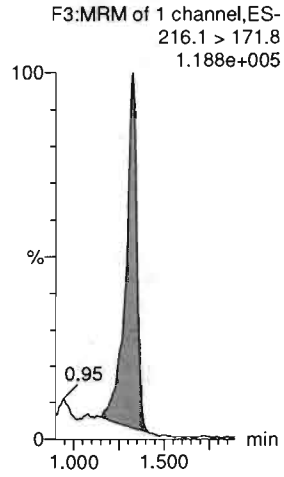
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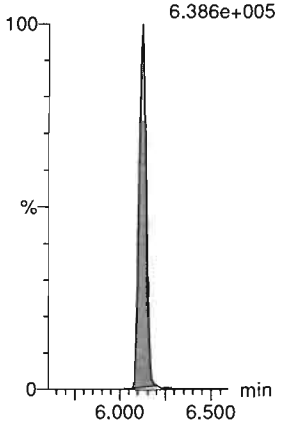
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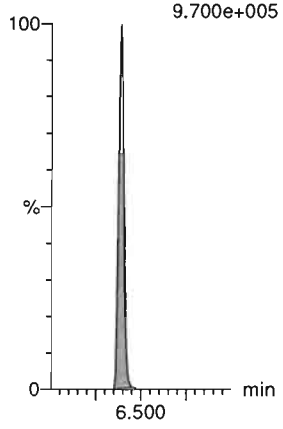
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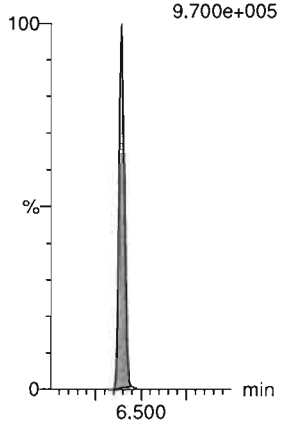
d5-N-ETFOSA-EIS



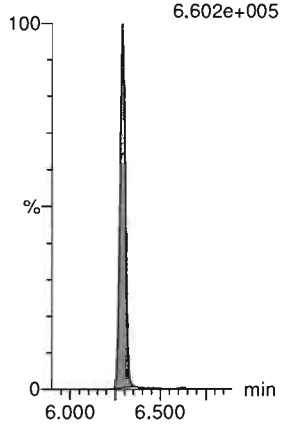
13C2-PFHxDA-EIS



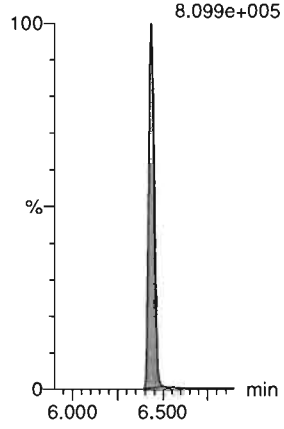
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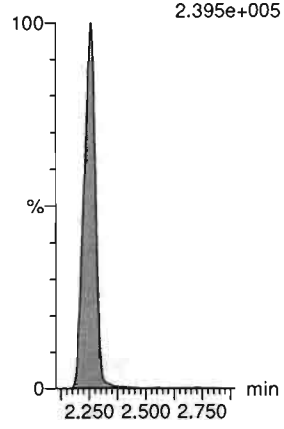
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



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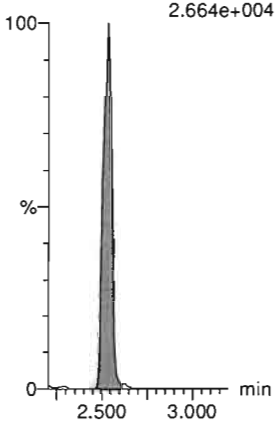


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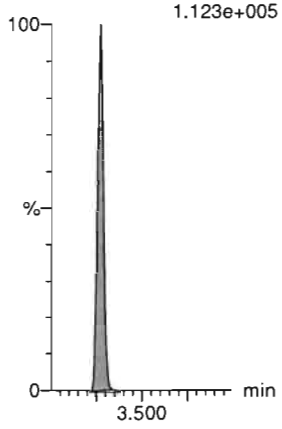
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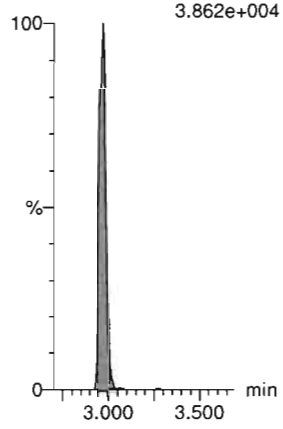
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
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2.664e+004



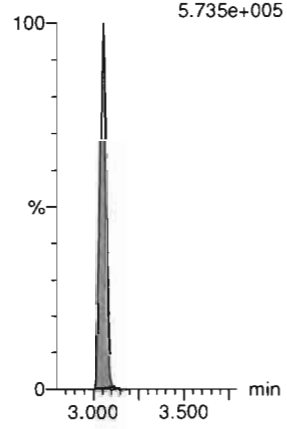
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.123e+005



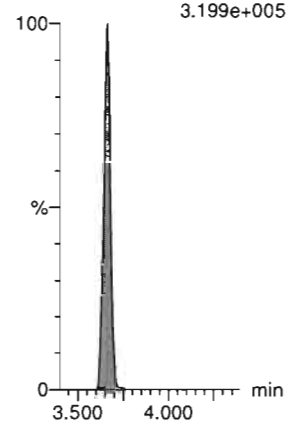
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F17:MRM of 2 channels,ES-
329.0 > 79.7
3.862e+004



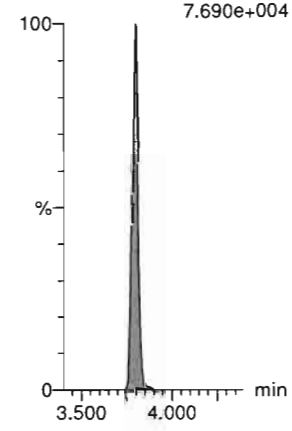
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.735e+005



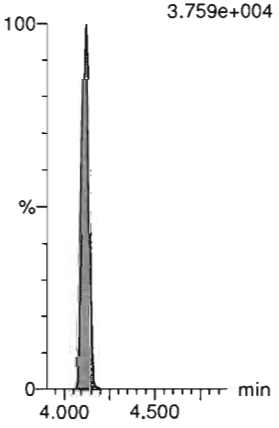
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.199e+005



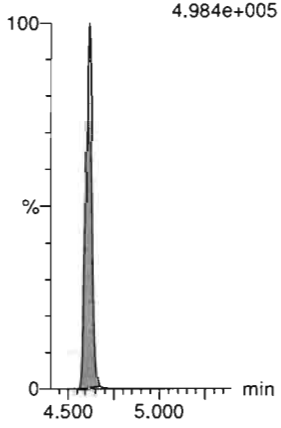
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.690e+004



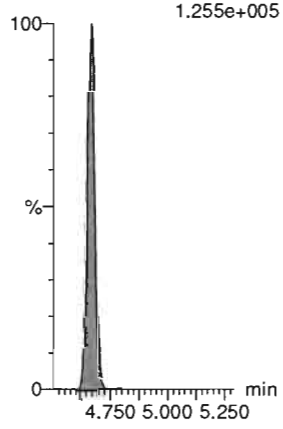
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.759e+004



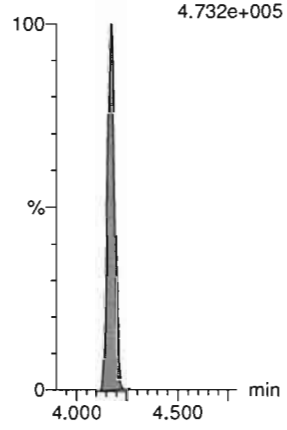
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.984e+005



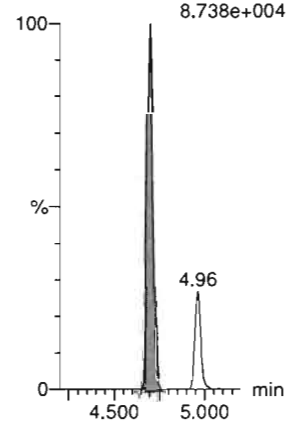
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.255e+005



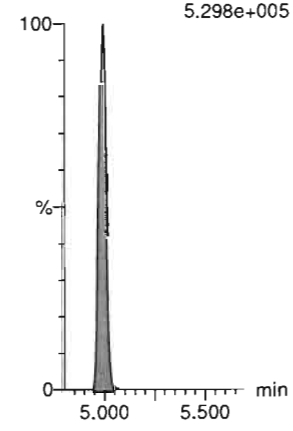
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.732e+005



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

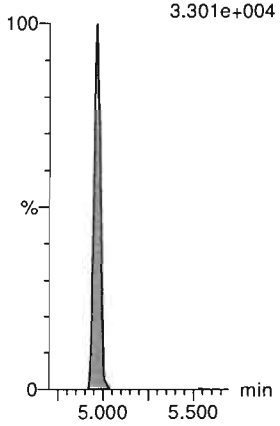


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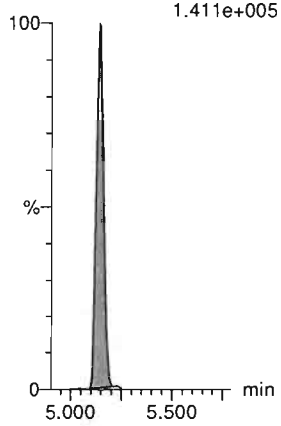
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-12, Date: 27-Feb-2020, Time: 17:26:40, ID: ST200227P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

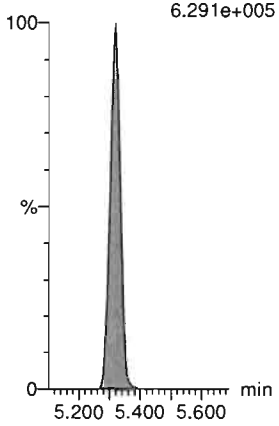
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.301e+004



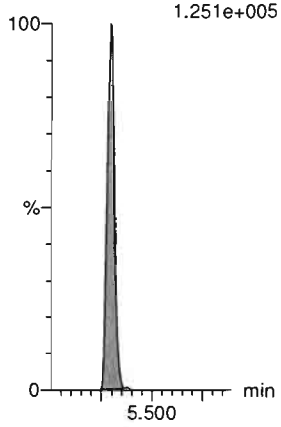
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.411e+005



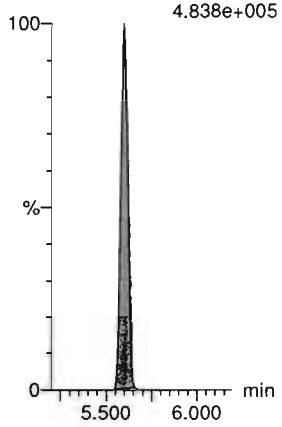
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
6.291e+005



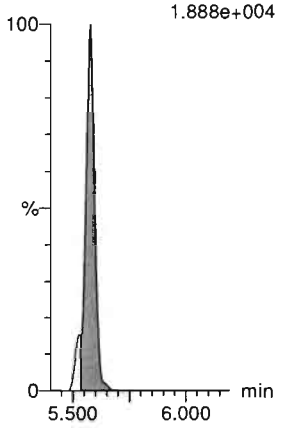
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.251e+005



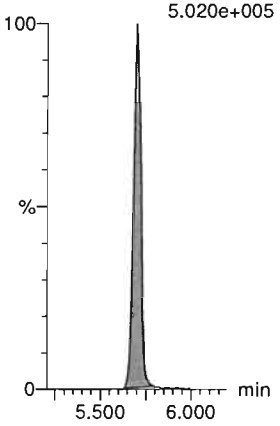
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.838e+005



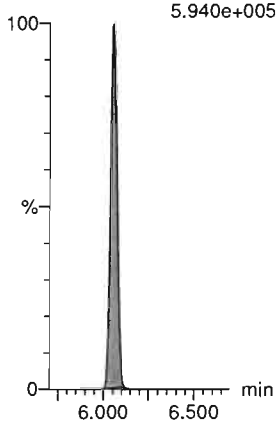
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.888e+004



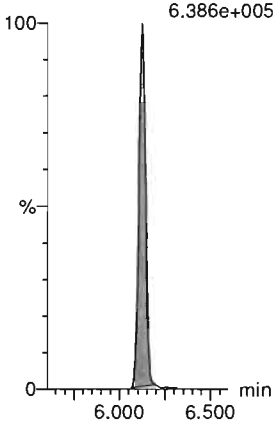
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.020e+005



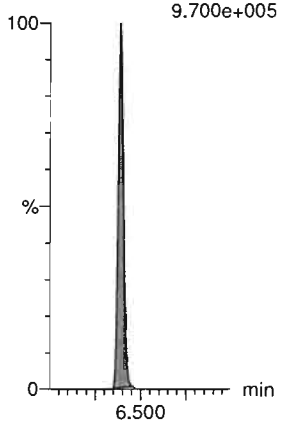
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.940e+005



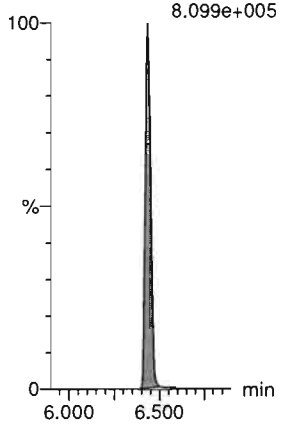
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.386e+005



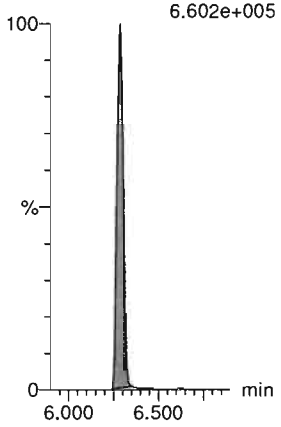
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.700e+005



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



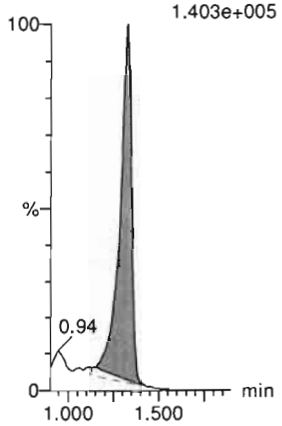
Vista Analytical Laboratory

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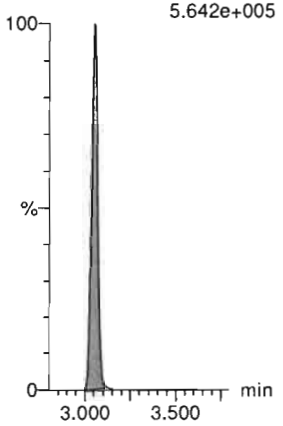
Last Altered: Friday, February 28, 2020 09:05:18 Pacific Standard Time
Printed: Friday, February 28, 2020 09:08:38 Pacific Standard Time

Name: 200227P1-12, Date: 27-Feb-2020, Time: 17:26:40, ID: ST200227P1-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

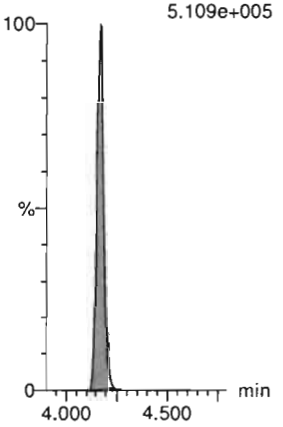
13C4-PFBA



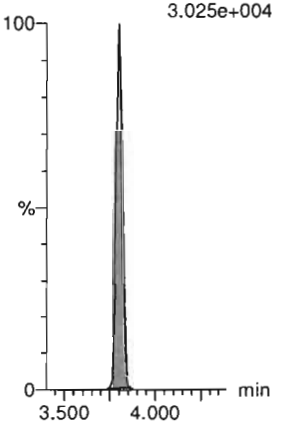
13C5-PFHxA



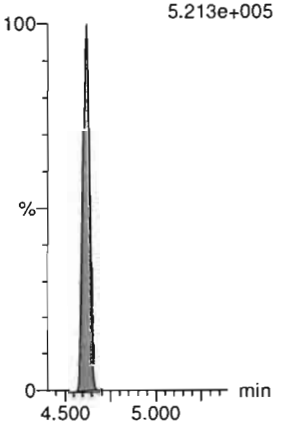
13C8-PFOA



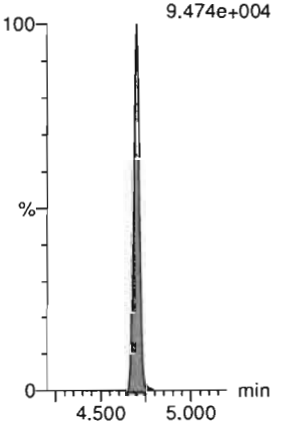
18O2-PFHxS



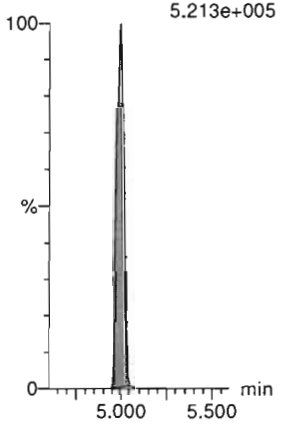
13C9-PFNA



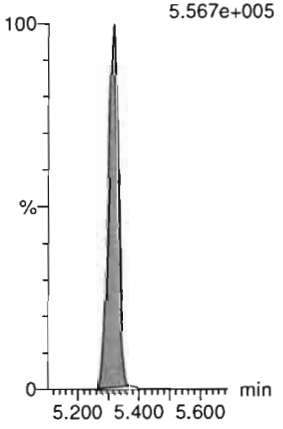
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Untitled

B.P. 2/28/2020

Last Altered: Friday, February 28, 2020 10:26:25 Pacific Standard Time
Printed: Friday, February 28, 2020 10:27:20 Pacific Standard Time

(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		

OPV 2/28/2020

Dataset: D:\PFAS5.PRO\RESULTS\200227P1\200227P1-ICV.qld

Last Altered: Friday, February 28, 2020 10:41:56 Pacific Standard Time
Printed: Friday, February 28, 2020 10:42:14 Pacific Standard Time

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		(K)	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		(K)	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		(K)	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		

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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	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		

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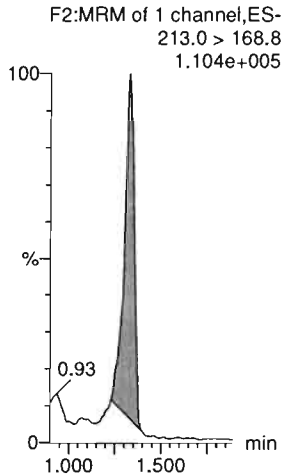
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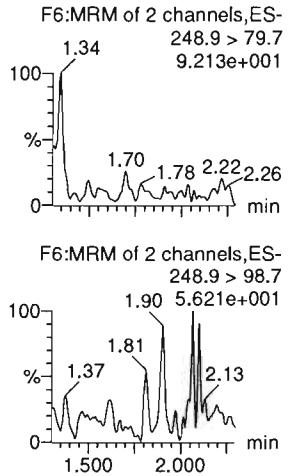
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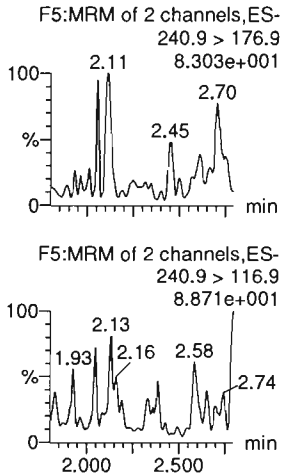
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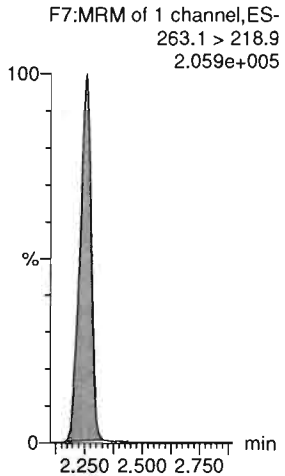
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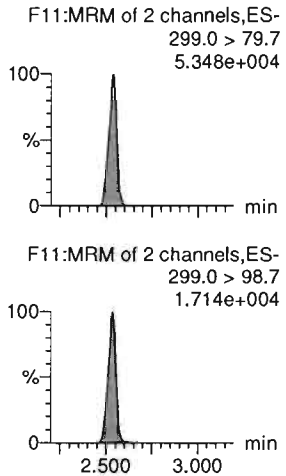
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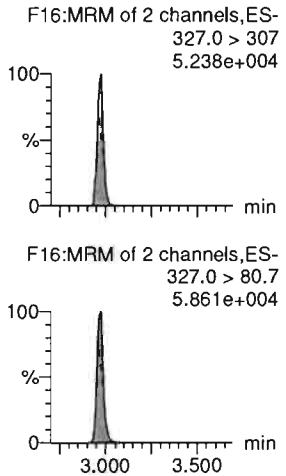
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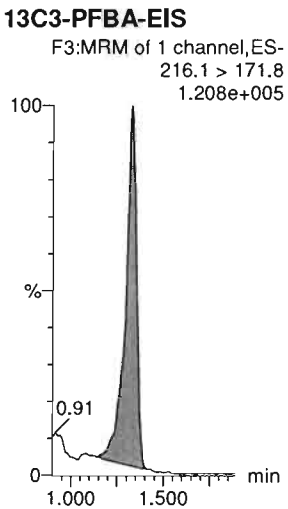
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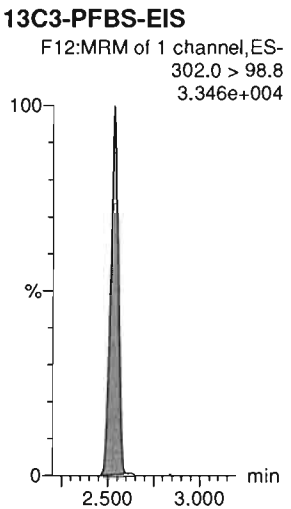
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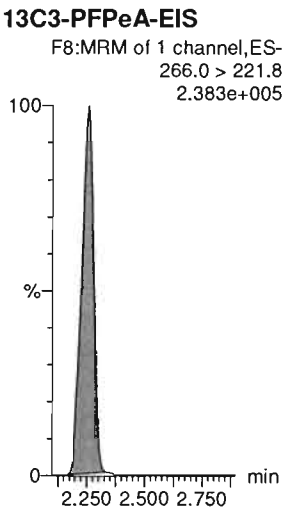
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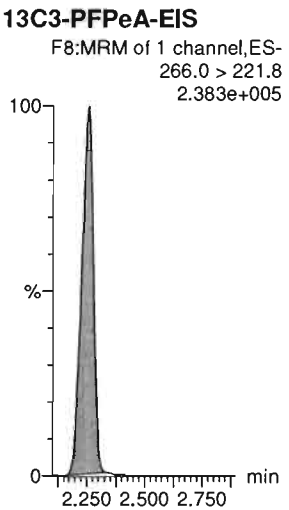
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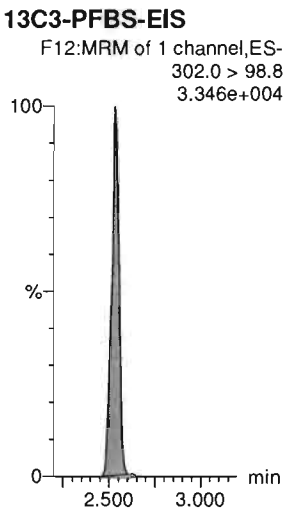
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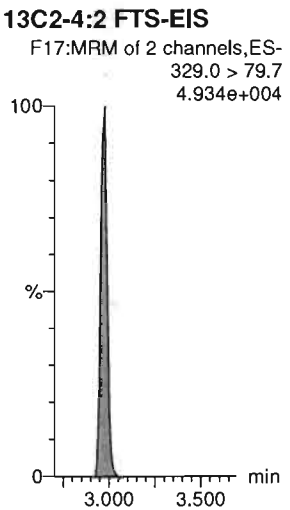
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS



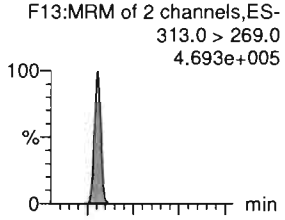
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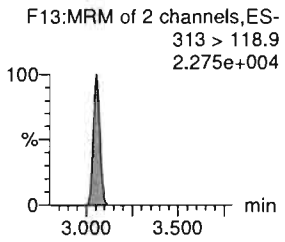
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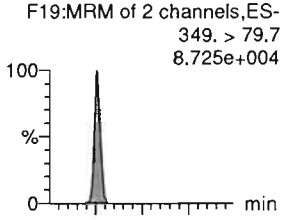
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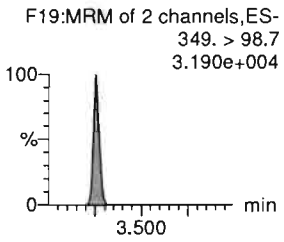
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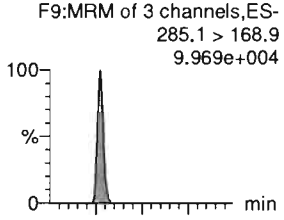


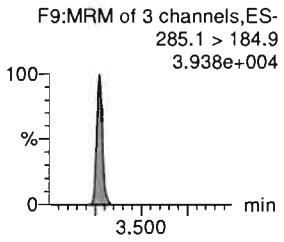
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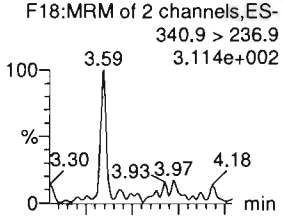


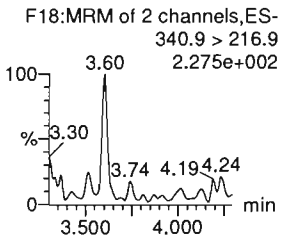
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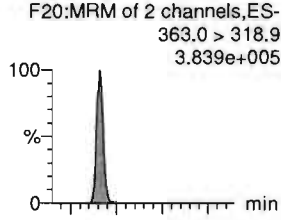


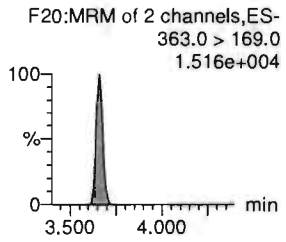
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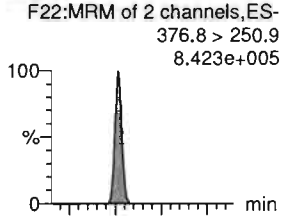


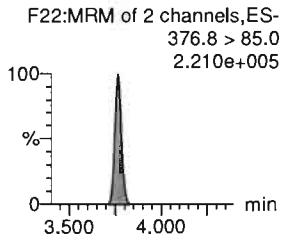
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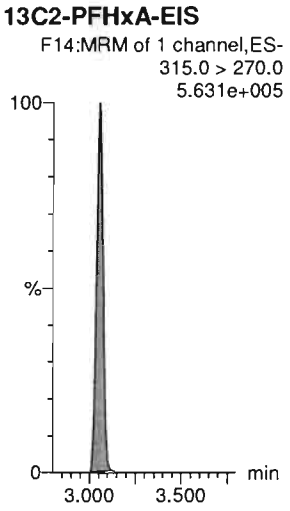


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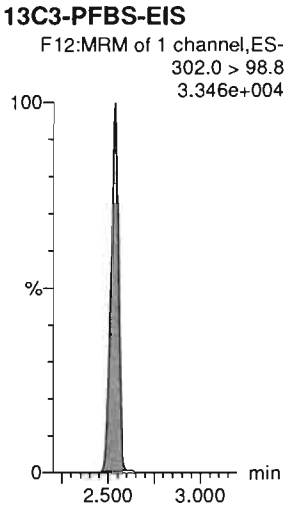




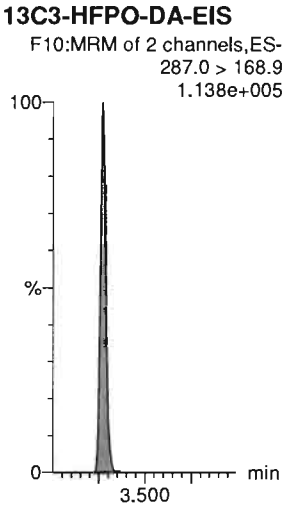
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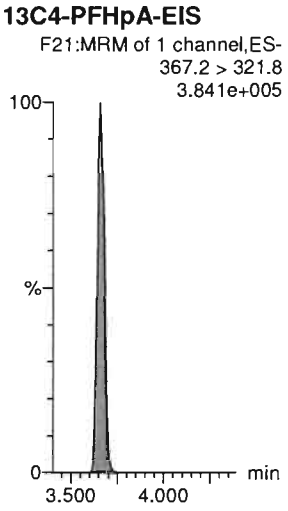
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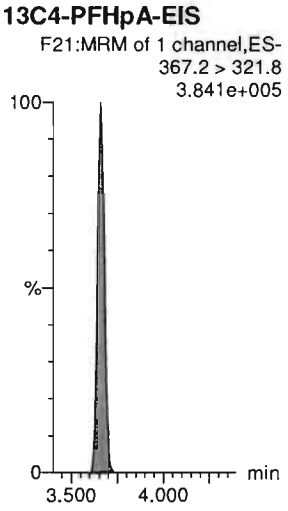
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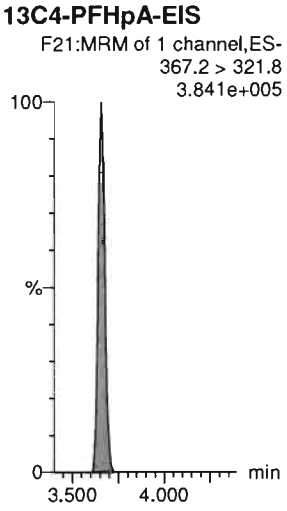
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13C4-PFHpA-EIS



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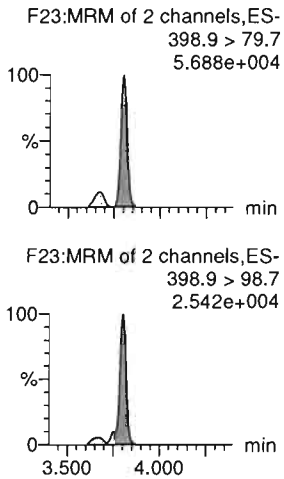
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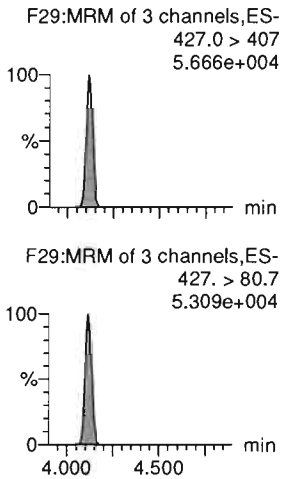
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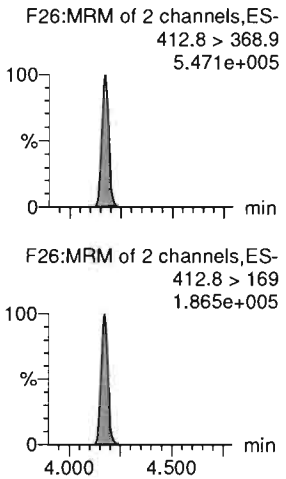
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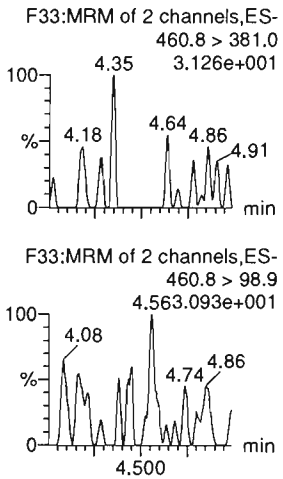
6:2 FTS



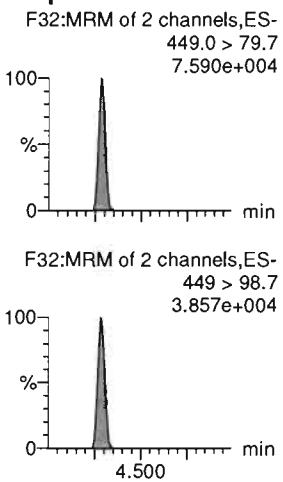
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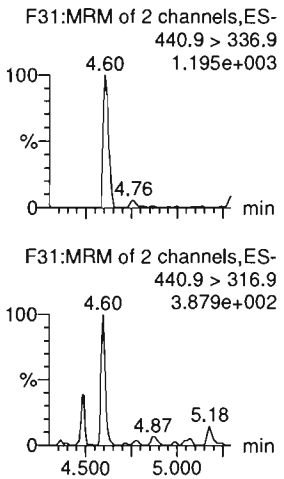
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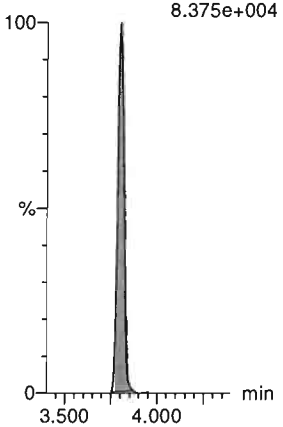
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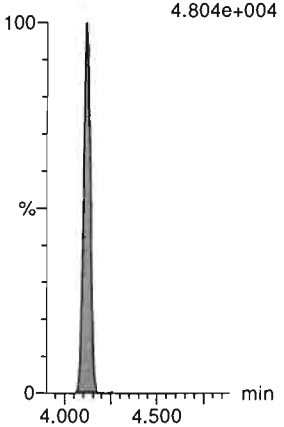
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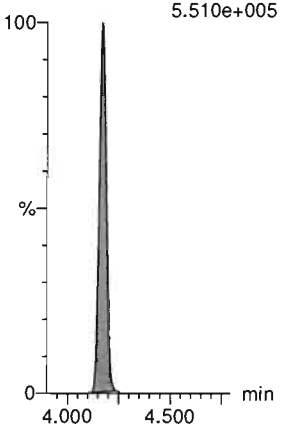
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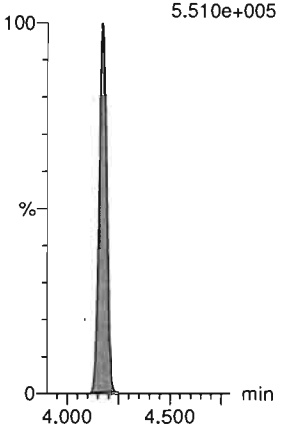
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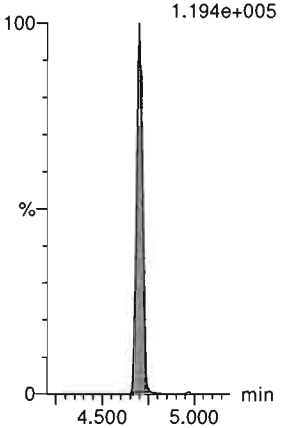
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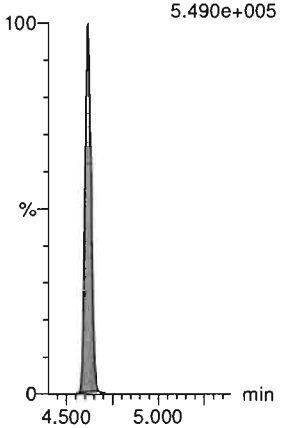
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS



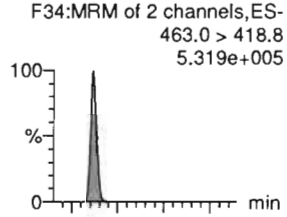
OPV 2/28/2020

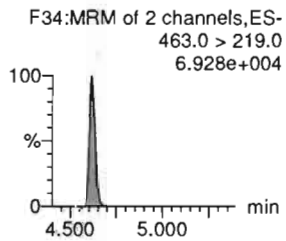
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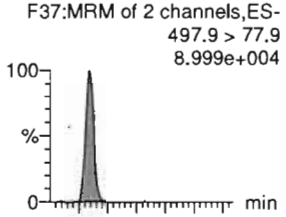
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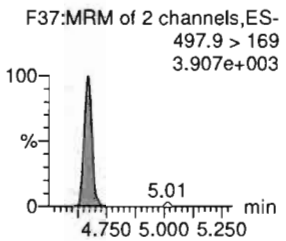
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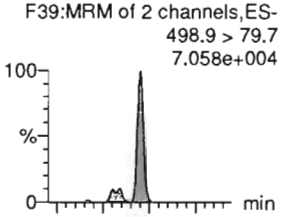


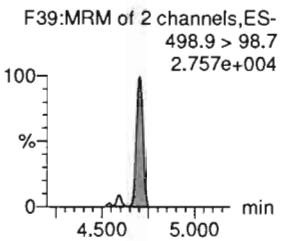
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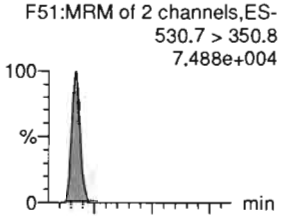


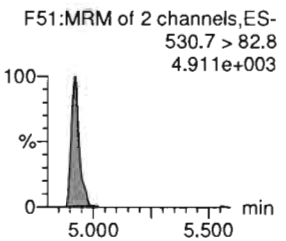
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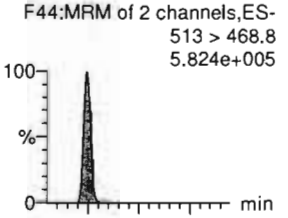


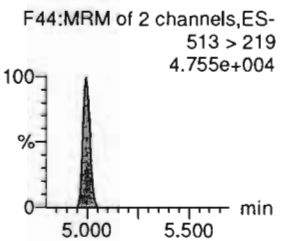
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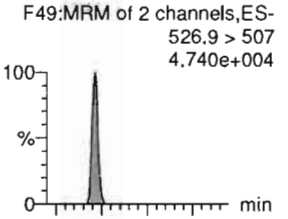


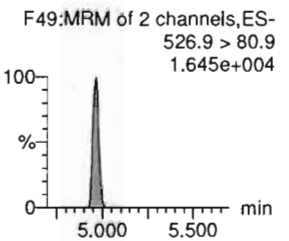
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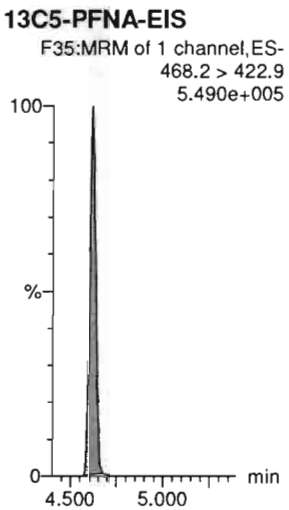


8:2 FTS

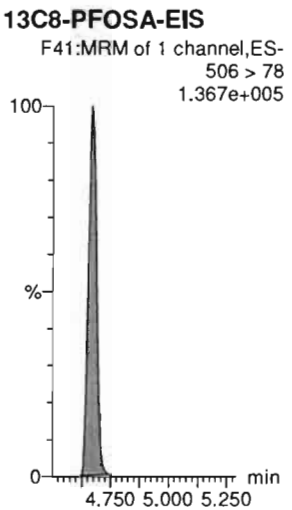




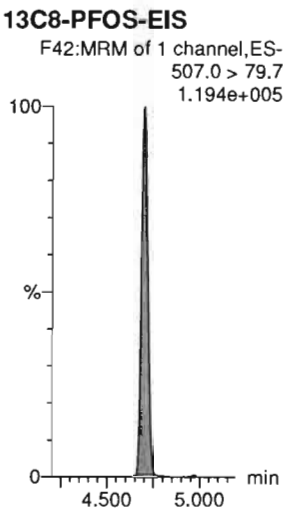
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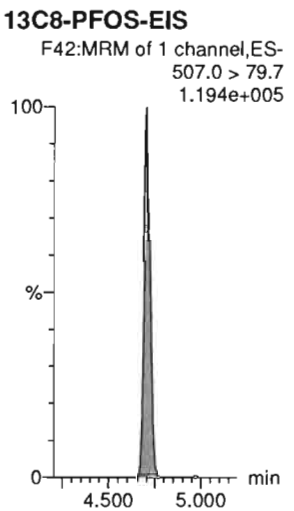
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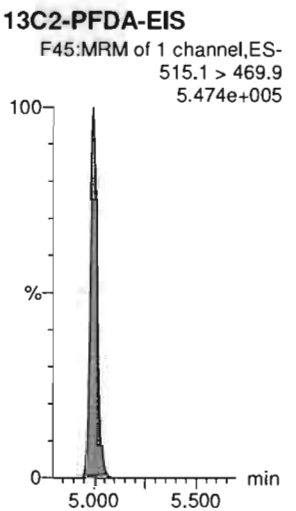
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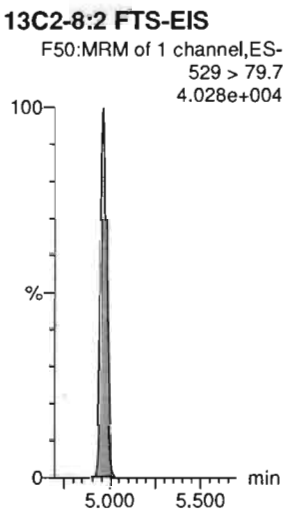
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS



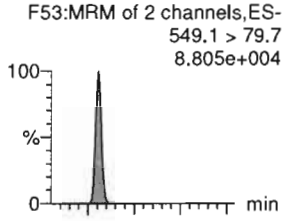
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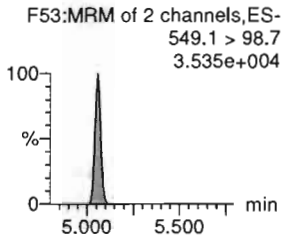
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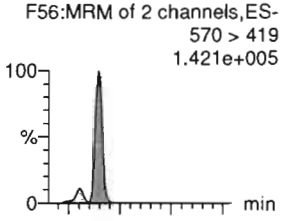
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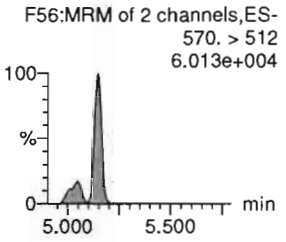
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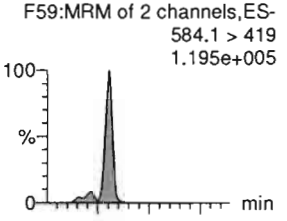


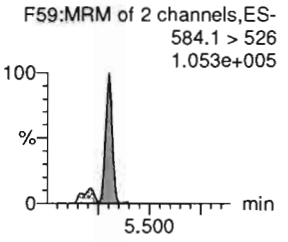
L-MeFOSAA



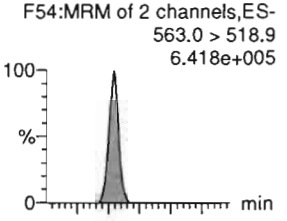


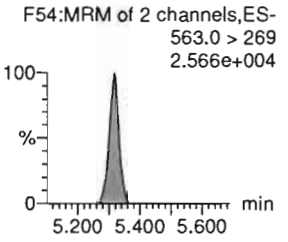
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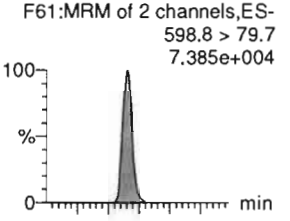


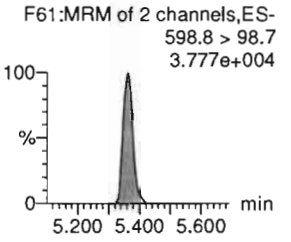
PFUdA



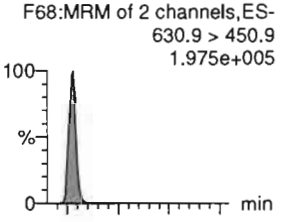


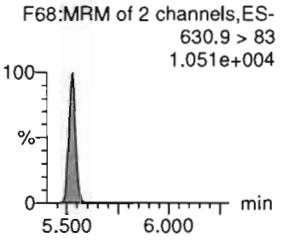
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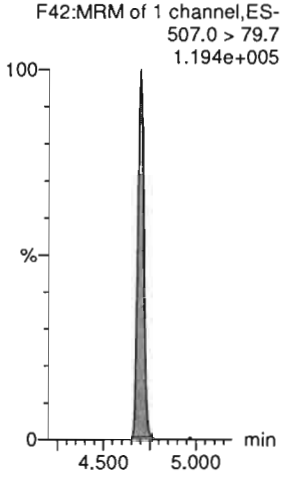


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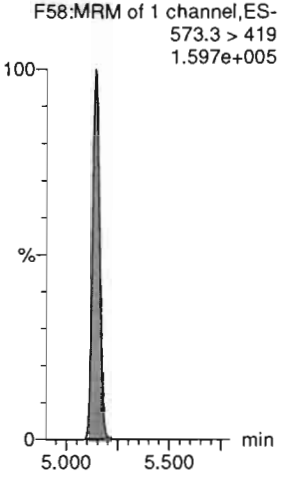




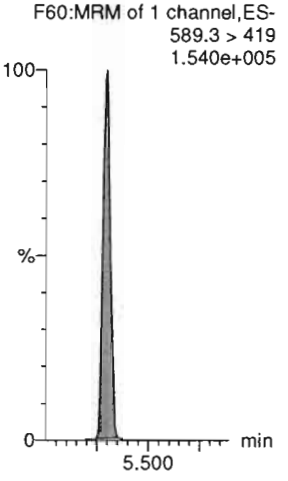
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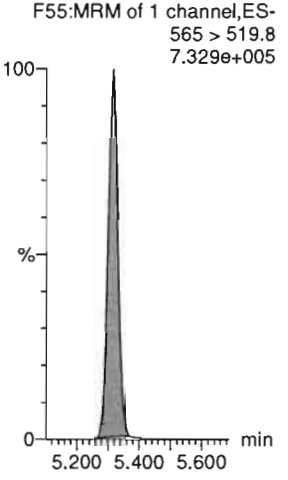
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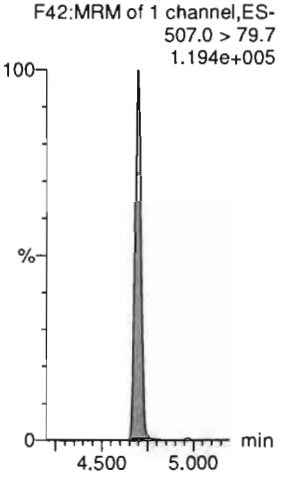
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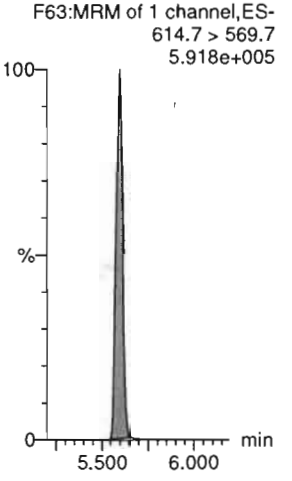
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13C8-PFOS-EIS



13C2-PFDoA-EIS



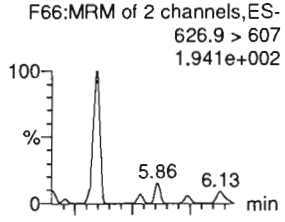
OPV 2/28/2020

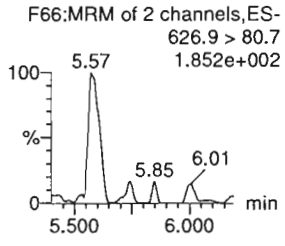
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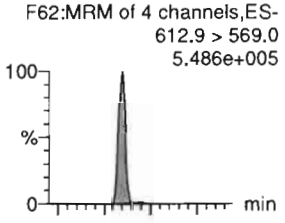
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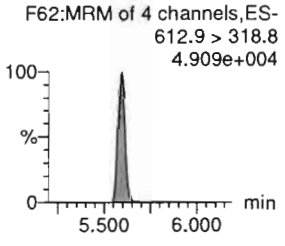
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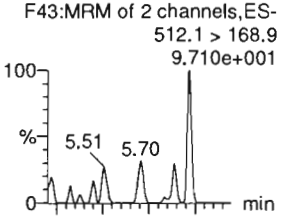


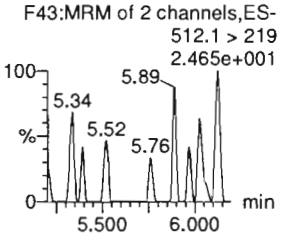
PFDoA



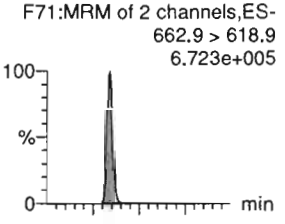


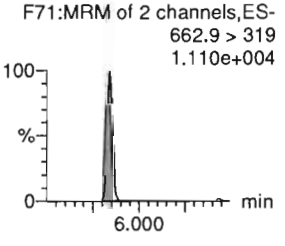
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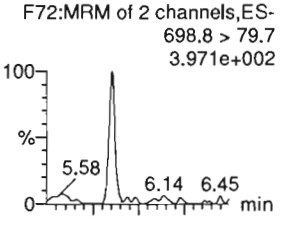


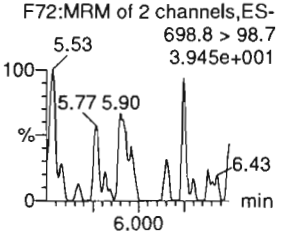
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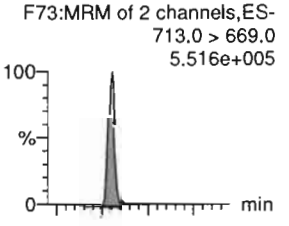


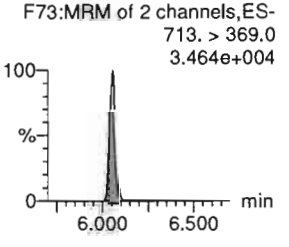
PFDoS



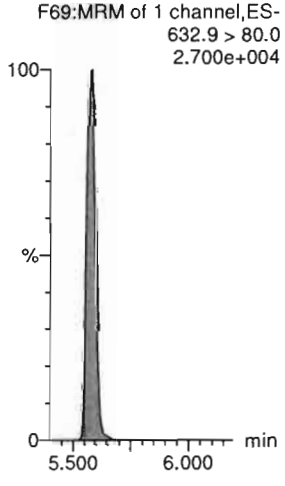


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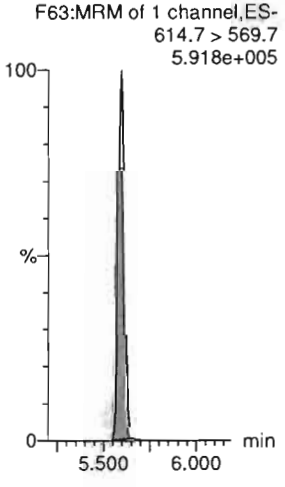




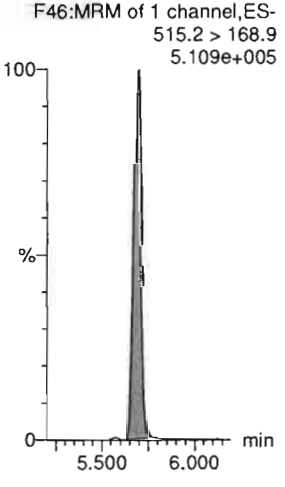
13C2-10:2 FTS-EIS



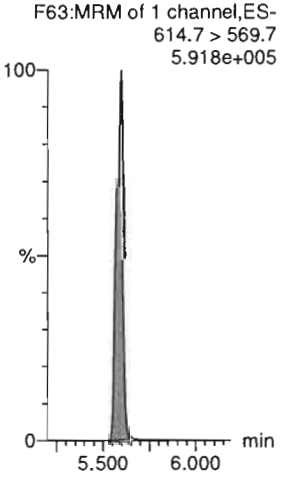
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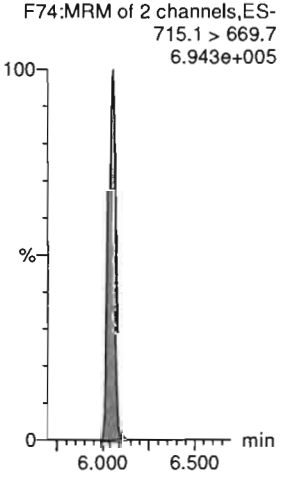
d3-N-MeFOSA-EIS



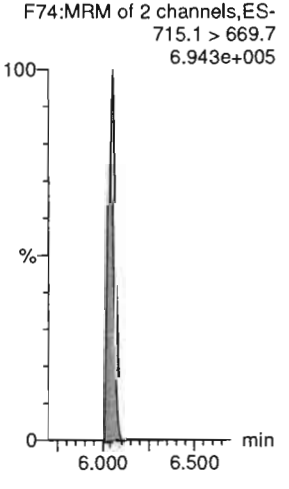
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

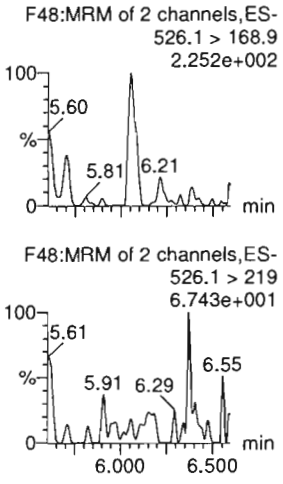


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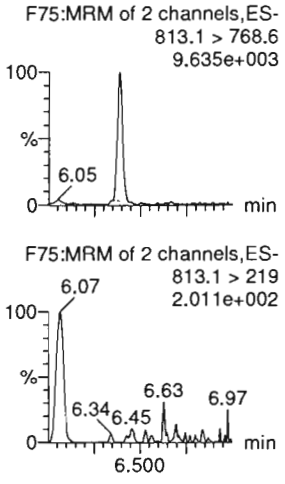
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Name: 200227P1-14, Date: 27-Feb-2020, Time: 17:47:42, ID: ICV200227P1-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

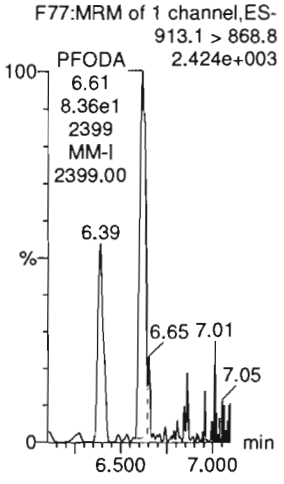
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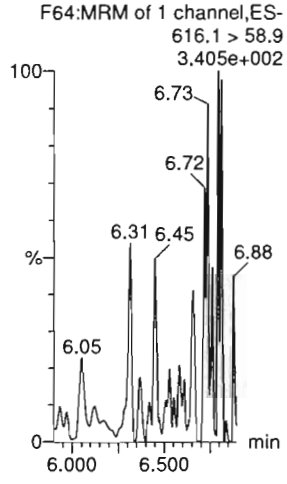
PFHxDA



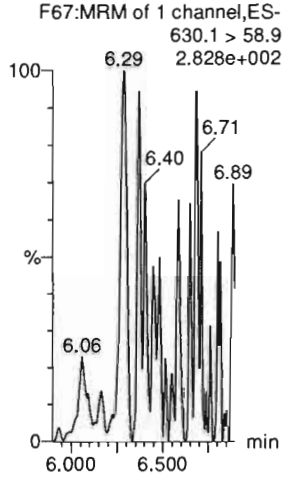
PFODA



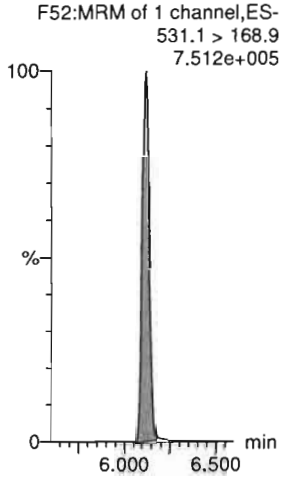
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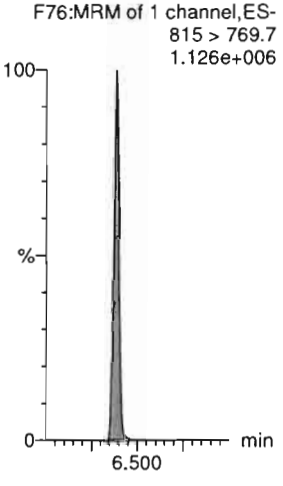
N-EtFOSE



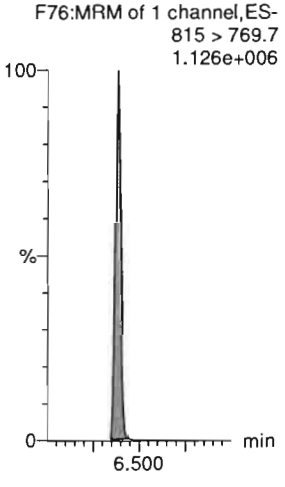
d5-N-ETFOSA-EIS



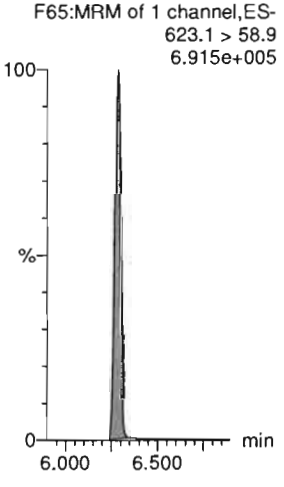
13C2-PFHxDA-EIS



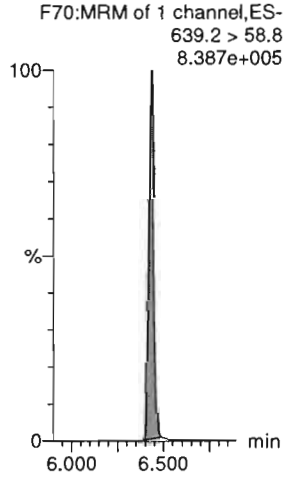
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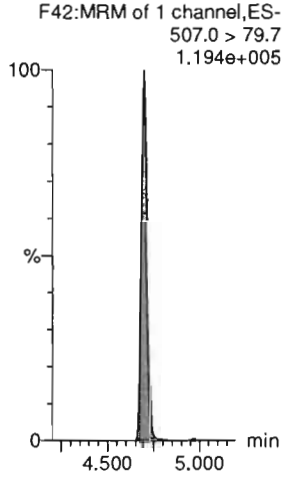
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d9-N-EtFOSE-EIS



13C8-PFOS-EIS



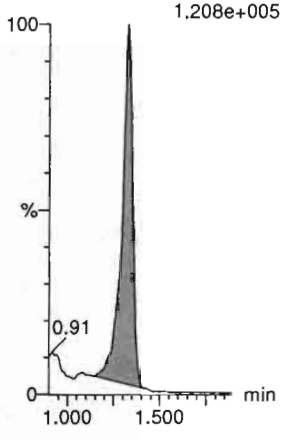
OPV 2/28/2020

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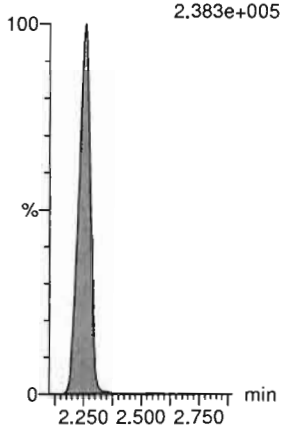
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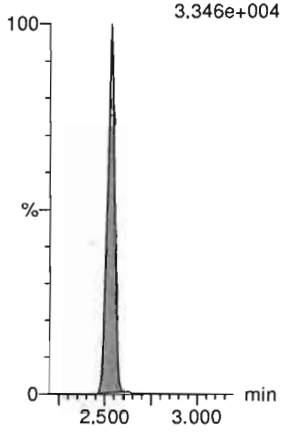
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
1.208e+005



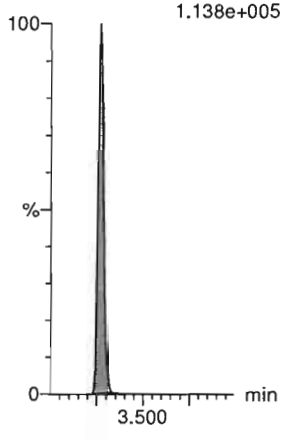
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
2.383e+005



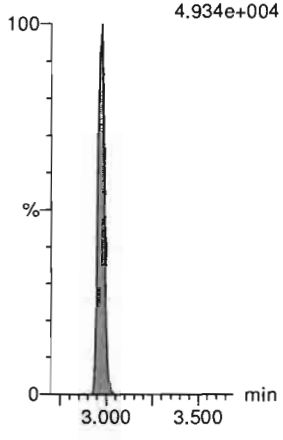
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.346e+004



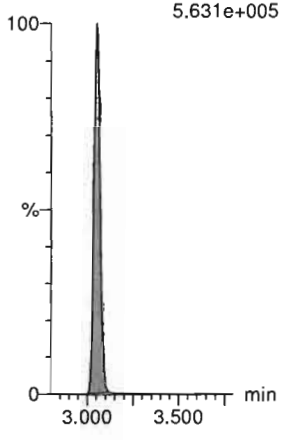
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.138e+005



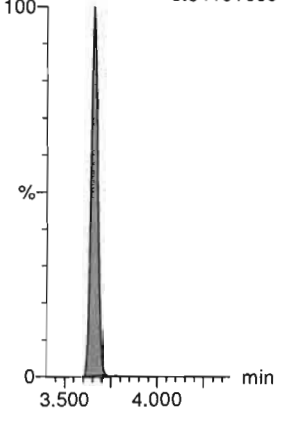
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.934e+004



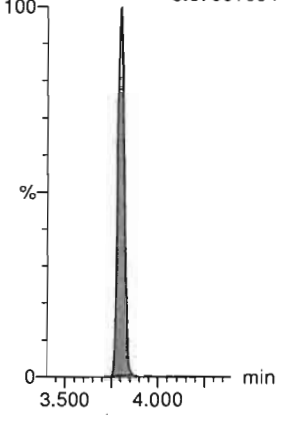
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.631e+005



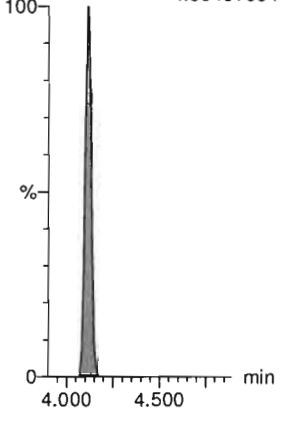
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.841e+005



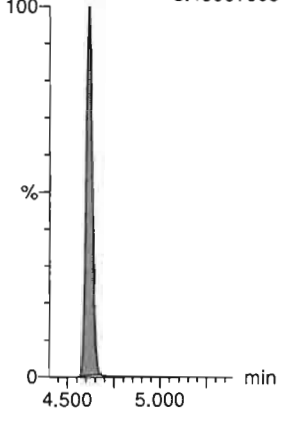
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
8.375e+004



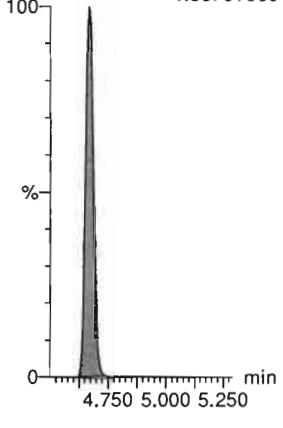
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.804e+004



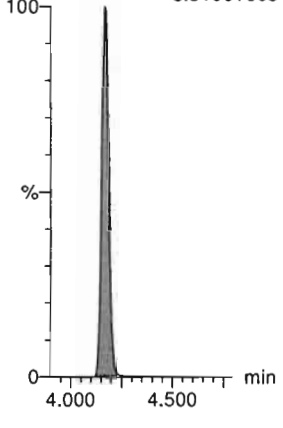
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
5.490e+005



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



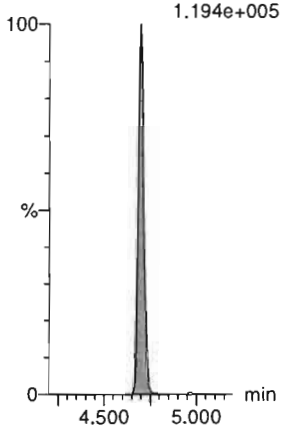
OPV 2/28/2020

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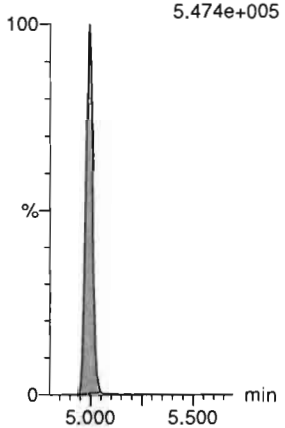
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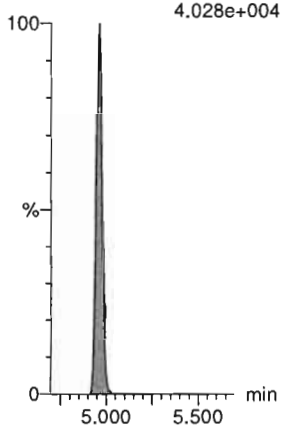
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
1.194e+005



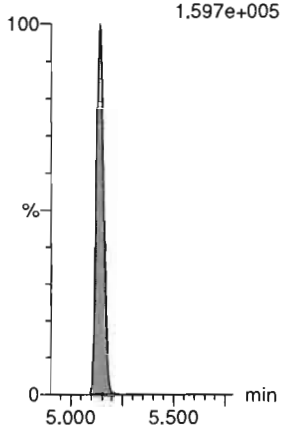
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.474e+005



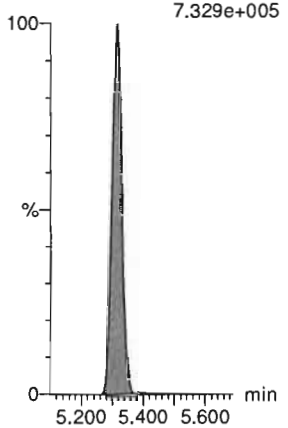
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
4.028e+004



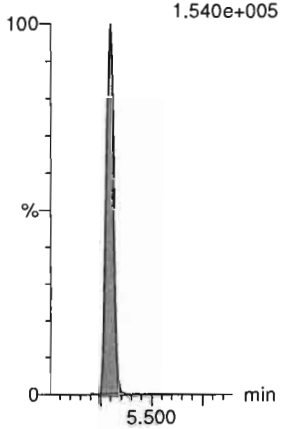
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.597e+005



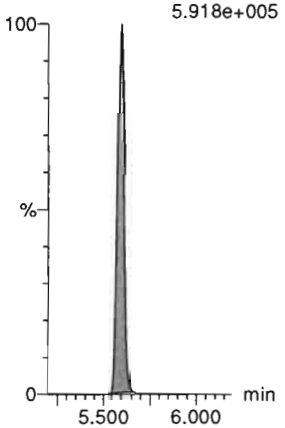
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
7.329e+005



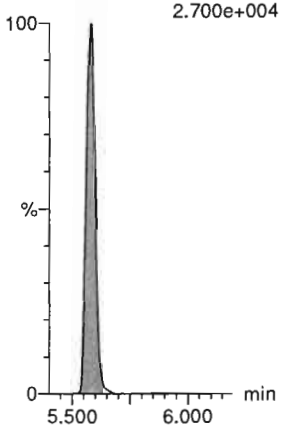
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.540e+005



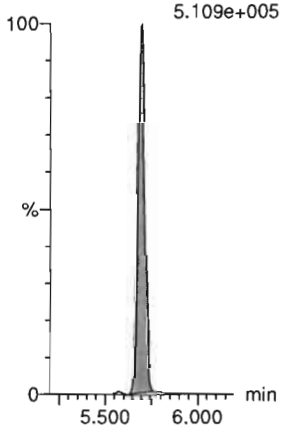
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.918e+005



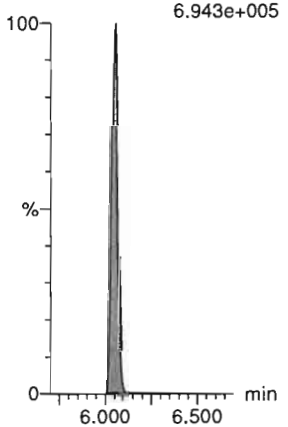
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.700e+004



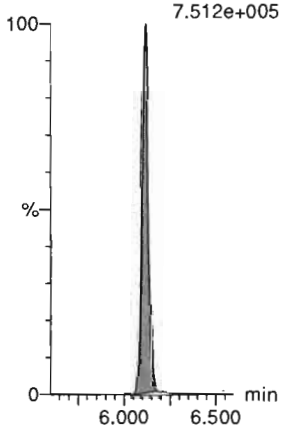
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
5.109e+005



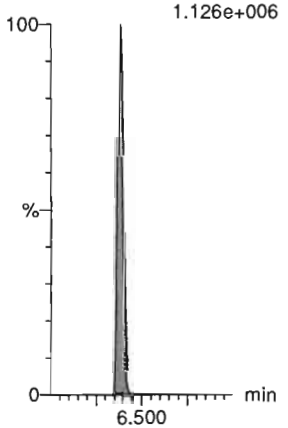
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
6.943e+005



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



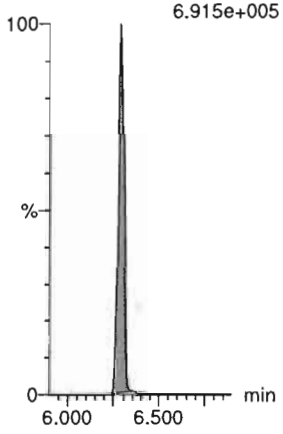
OPV 2/28/2020

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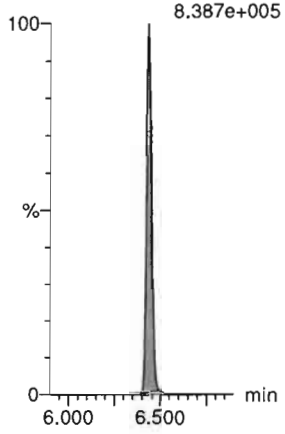
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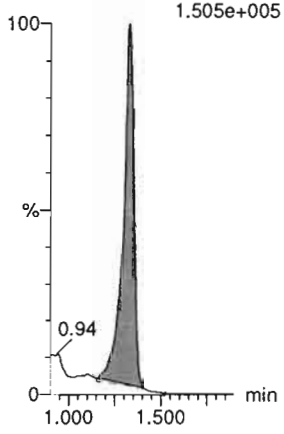
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.915e+005



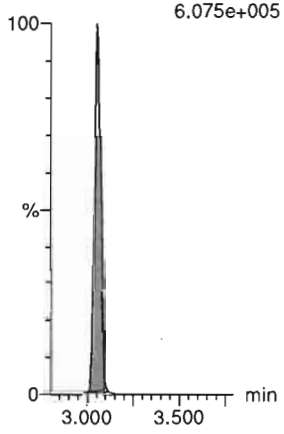
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.387e+005



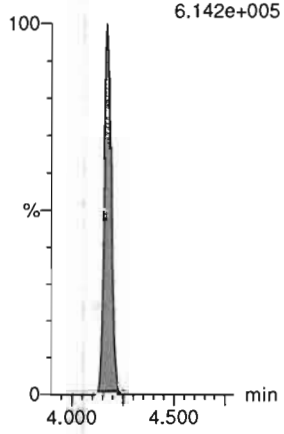
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.505e+005



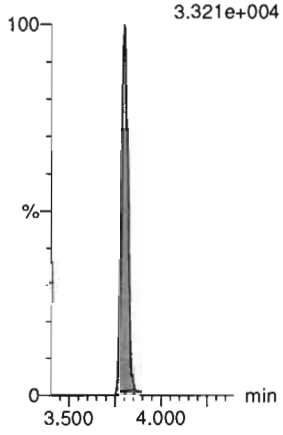
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
6.075e+005



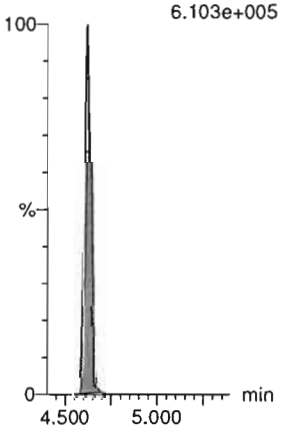
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
6.142e+005



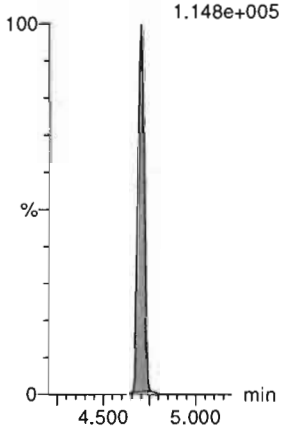
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.321e+004



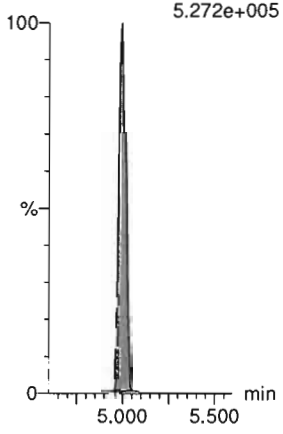
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
6.103e+005



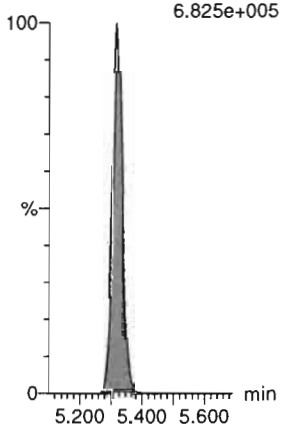
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
1.148e+005



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.272e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
6.825e+005



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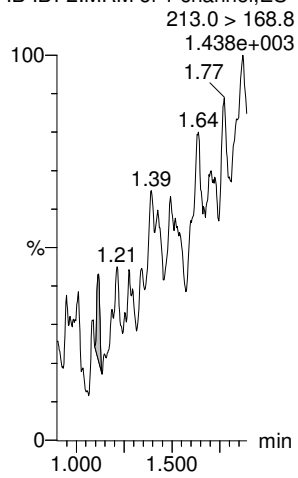
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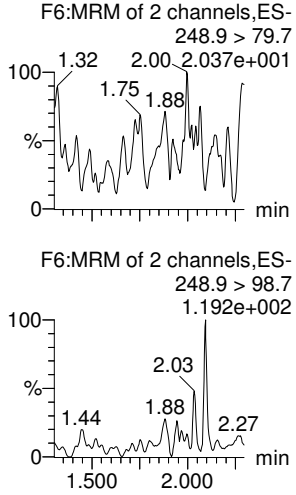
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

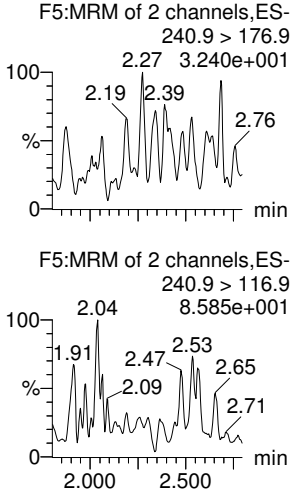
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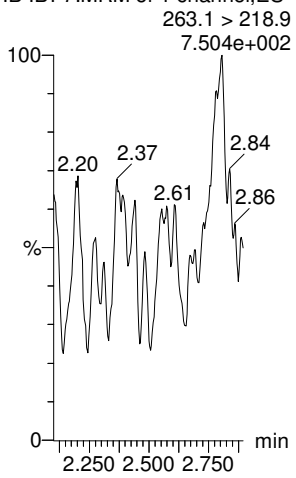
PFPrS



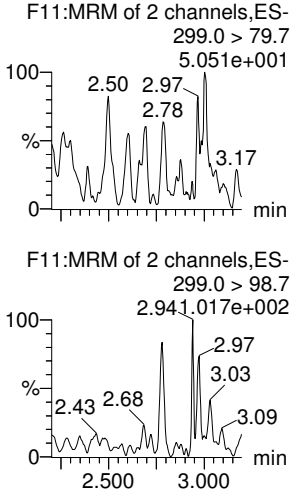
3:3 FTCA



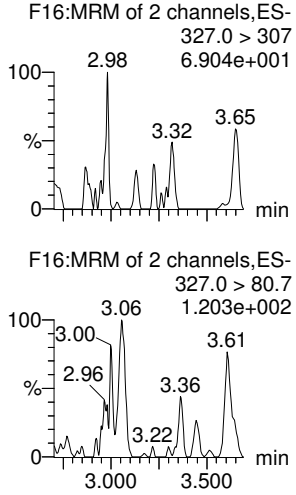
PFPeA



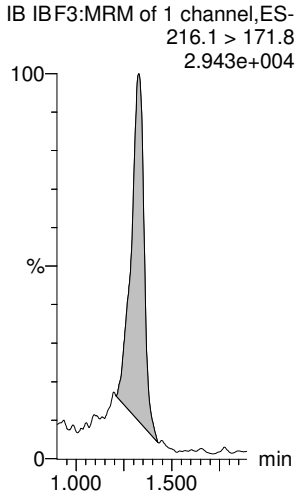
PFBS



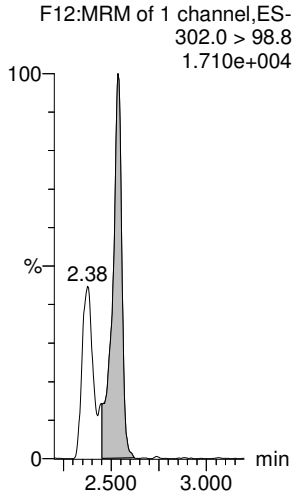
4:2 FTS



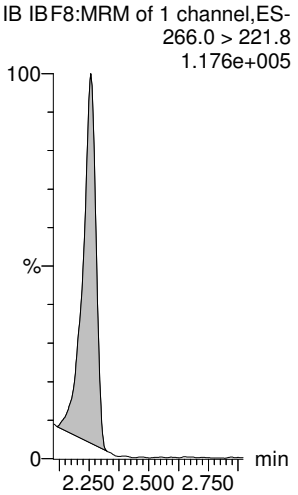
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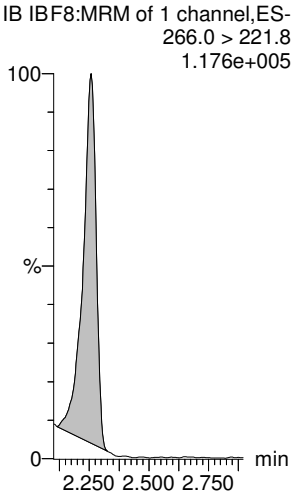
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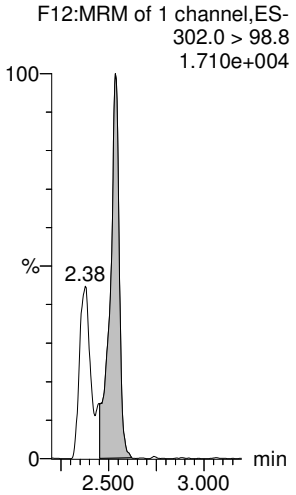
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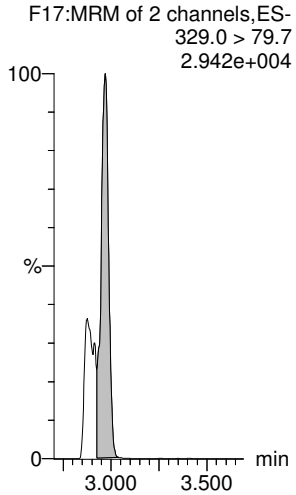
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

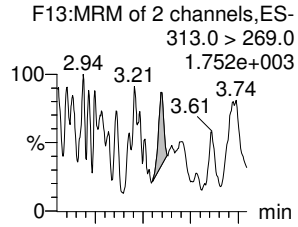


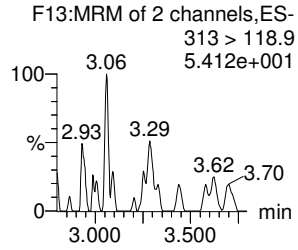
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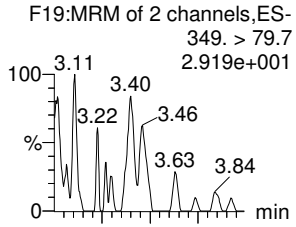
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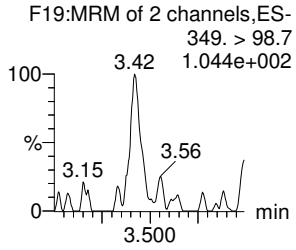
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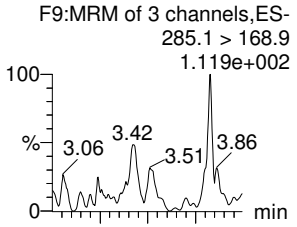


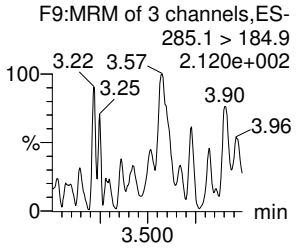
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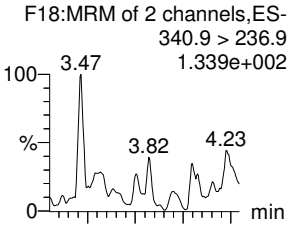


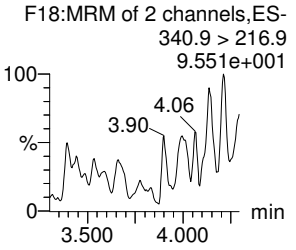
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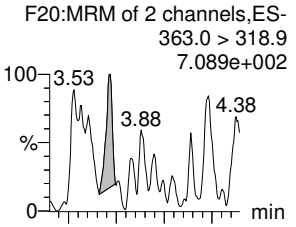


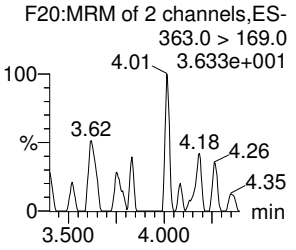
5:3 FTCA



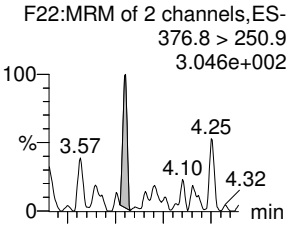


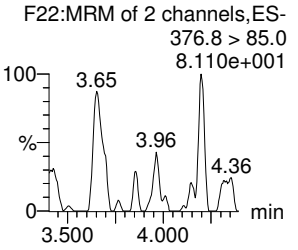
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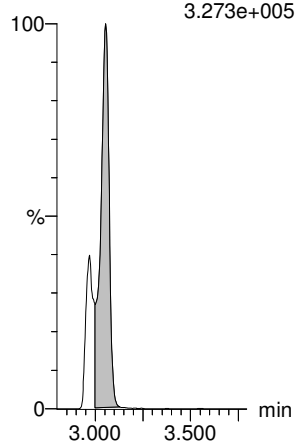


ADONA

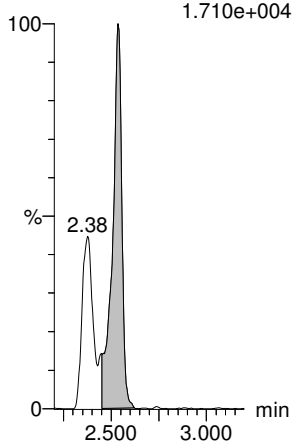




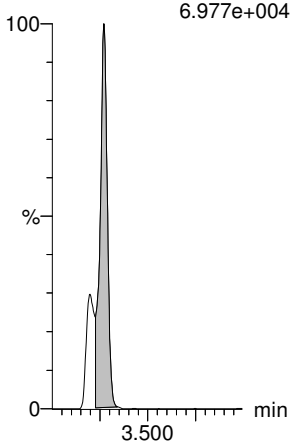
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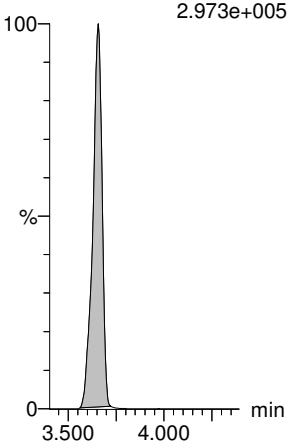
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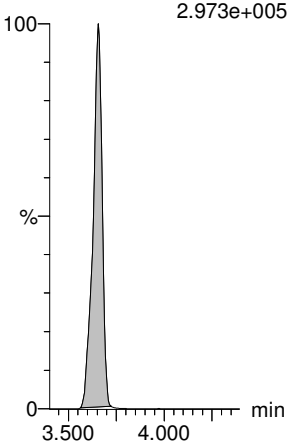
13C3-HFPO-DA-EIS



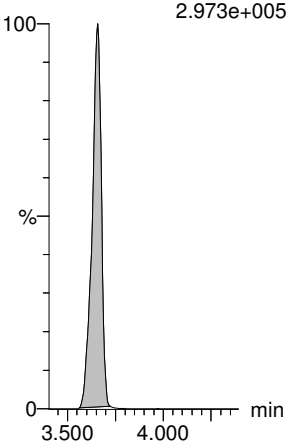
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

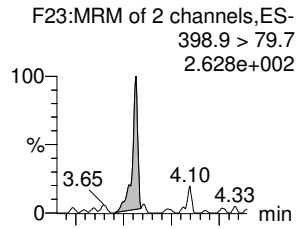


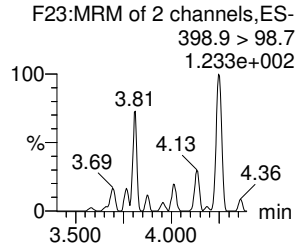
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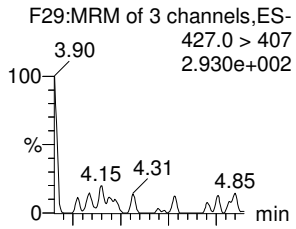
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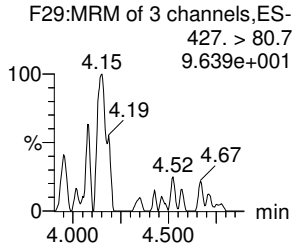
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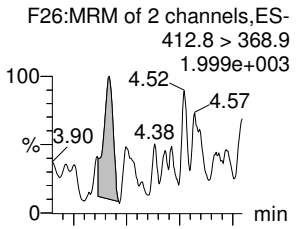


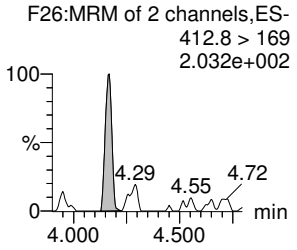
6:2 FTS



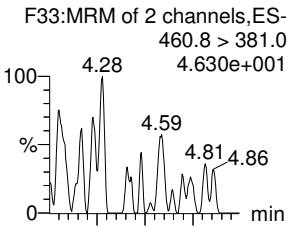


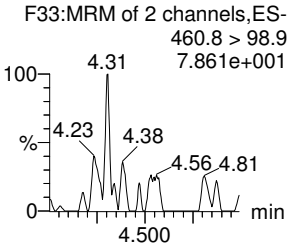
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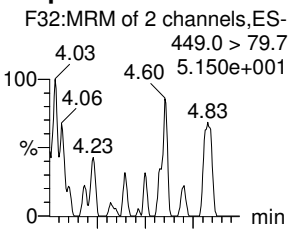


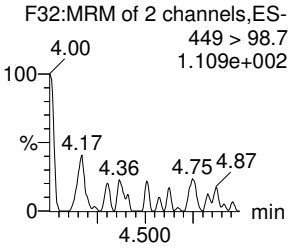
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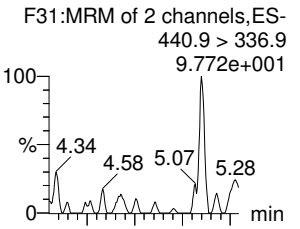


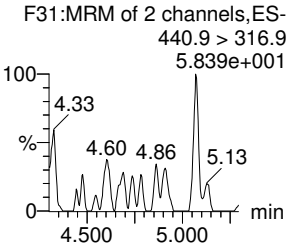
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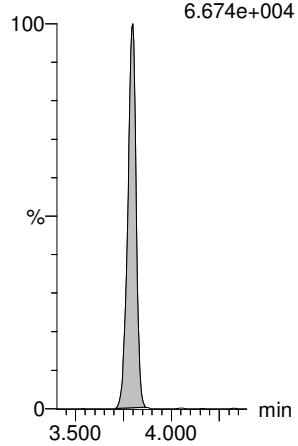


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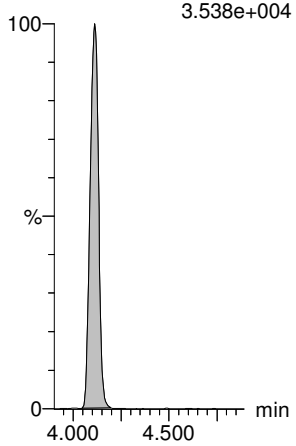




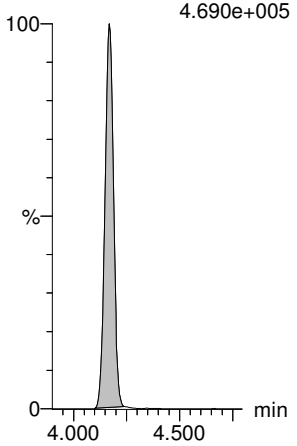
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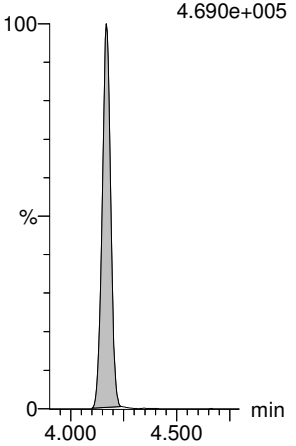
13C2-6:2 FTS-EIS



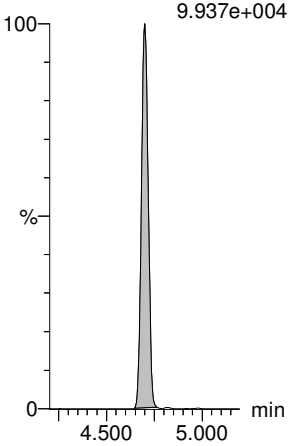
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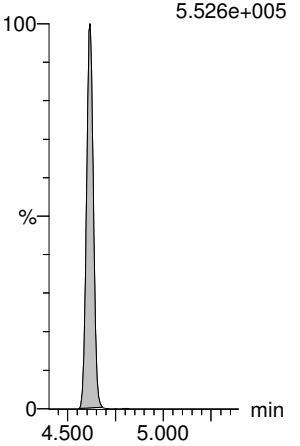
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13C8-PFOS-EIS



13C5-PFNA-EIS

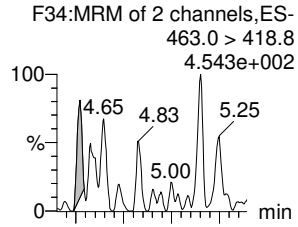


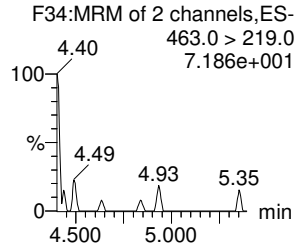
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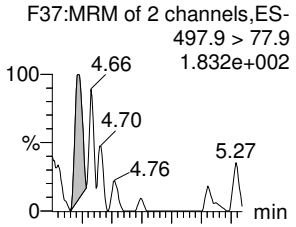
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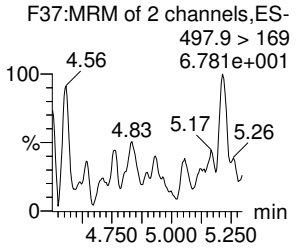
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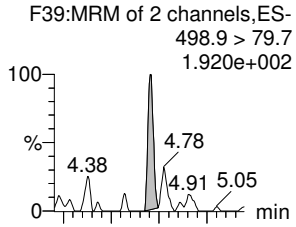


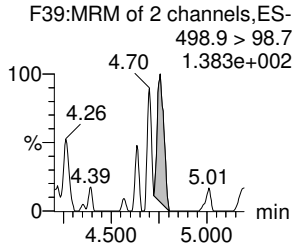
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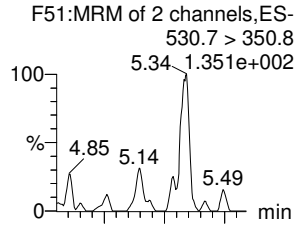


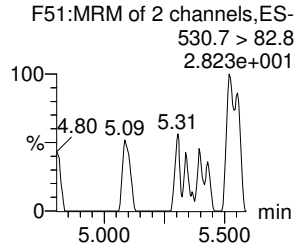
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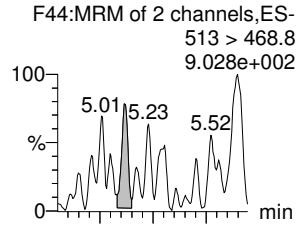


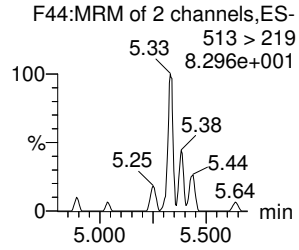
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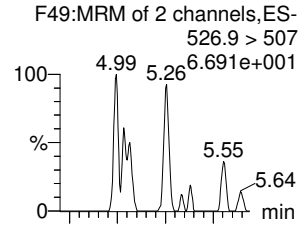


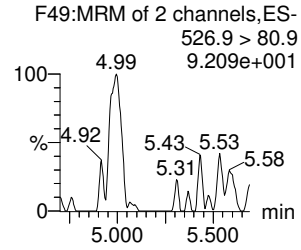
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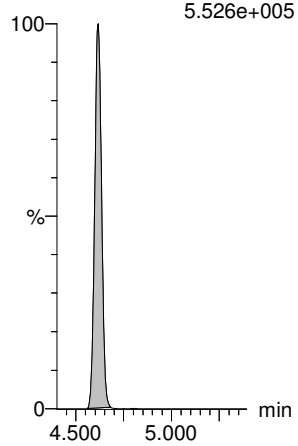


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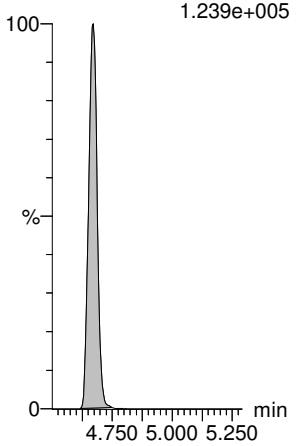




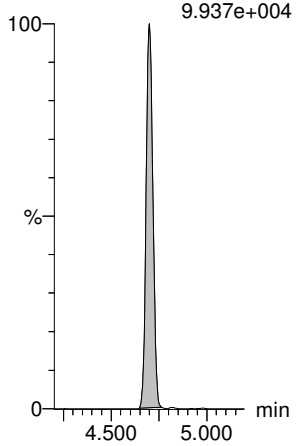
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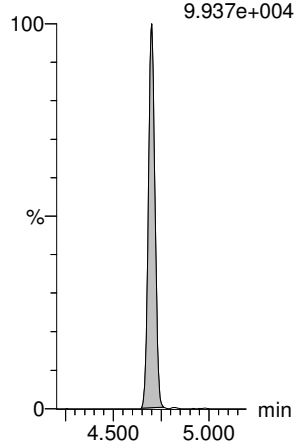
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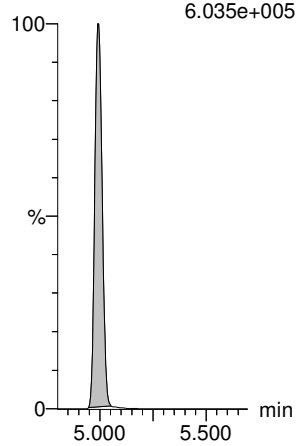
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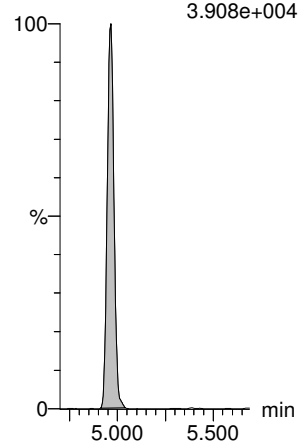
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

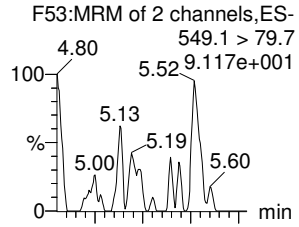


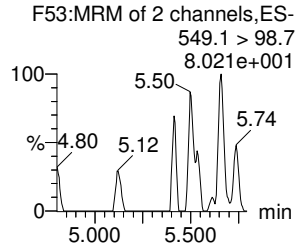
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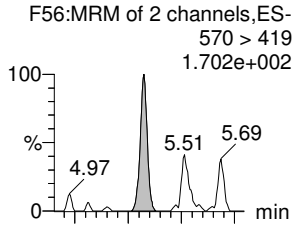
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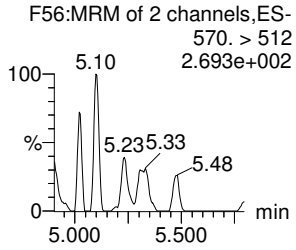
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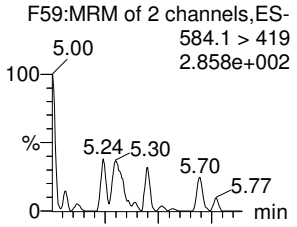


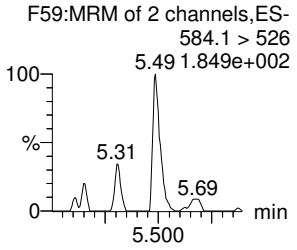
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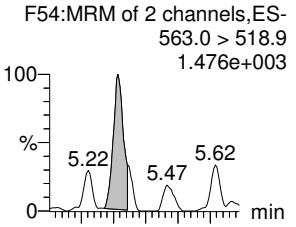


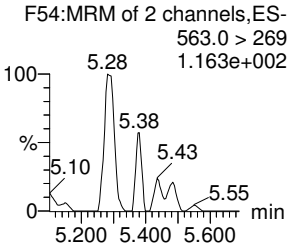
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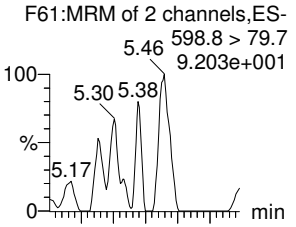


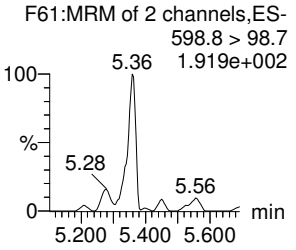
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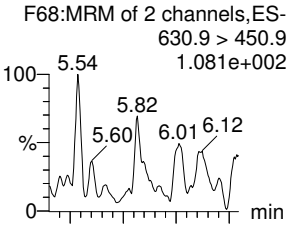


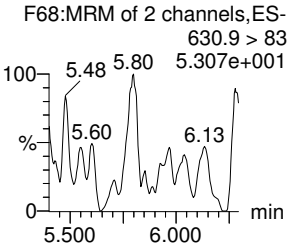
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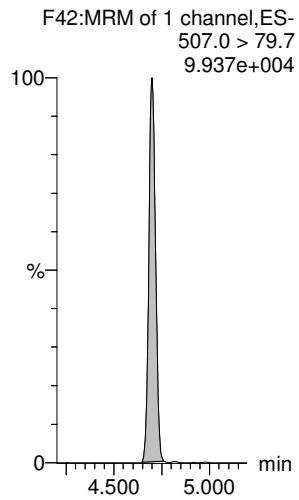


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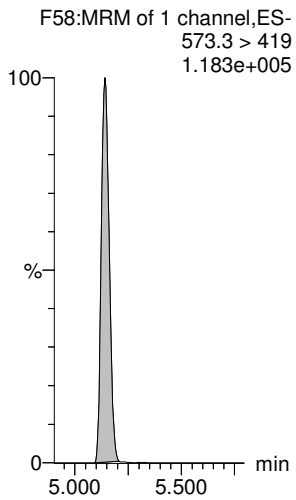




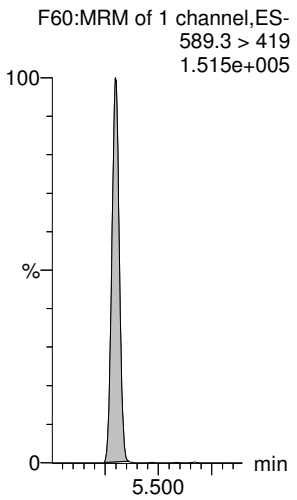
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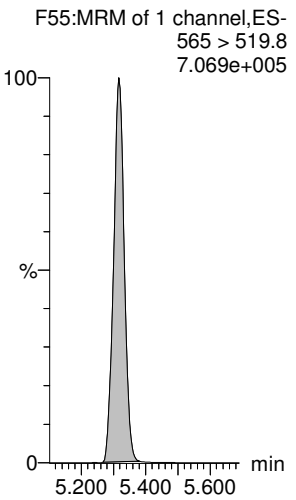
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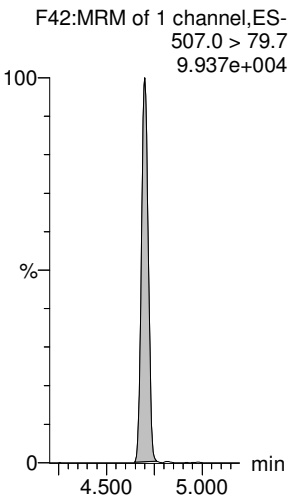
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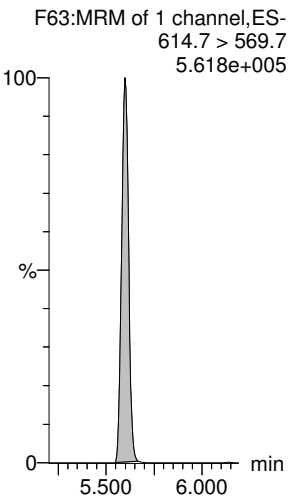
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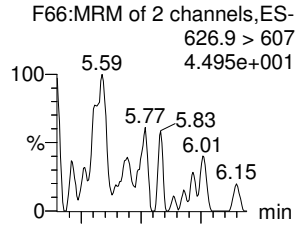


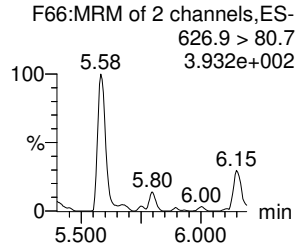
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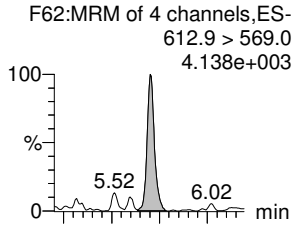
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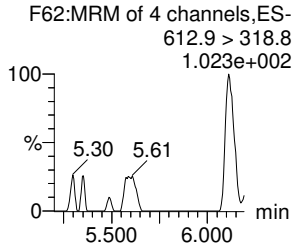
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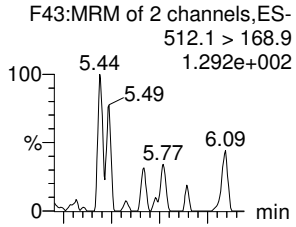


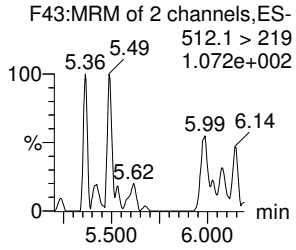
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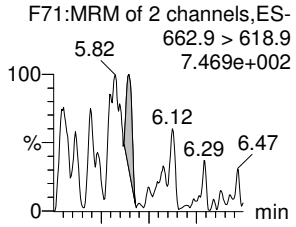


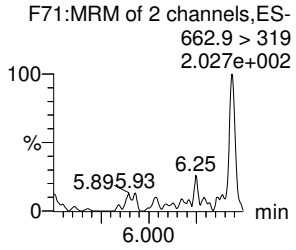
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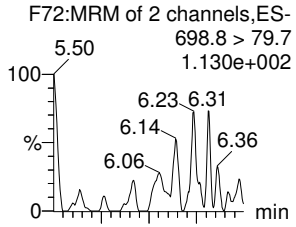


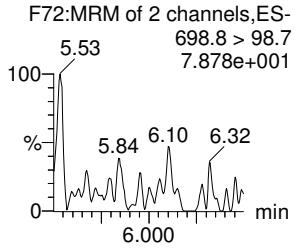
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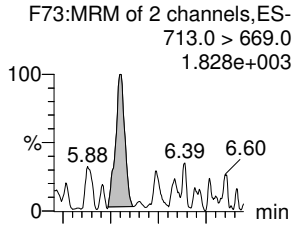


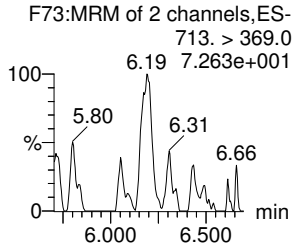
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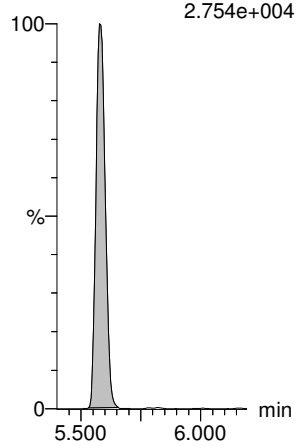


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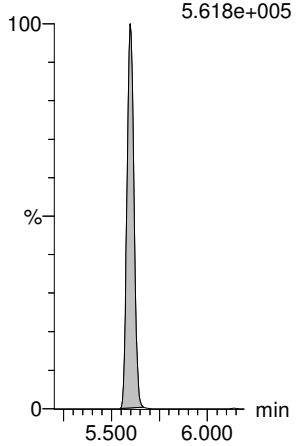




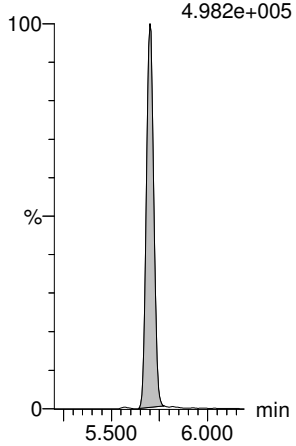
13C2-10:2 FTS-EIS



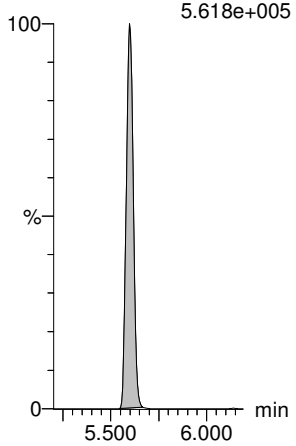
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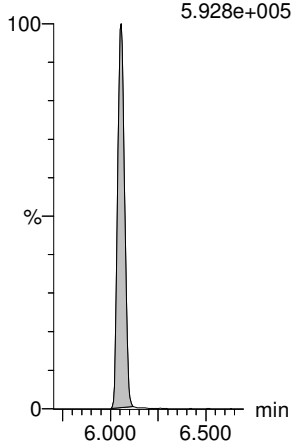
d3-N-MeFOSA-EIS



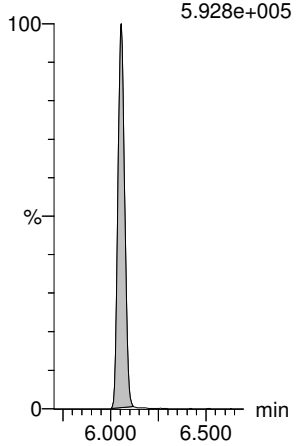
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

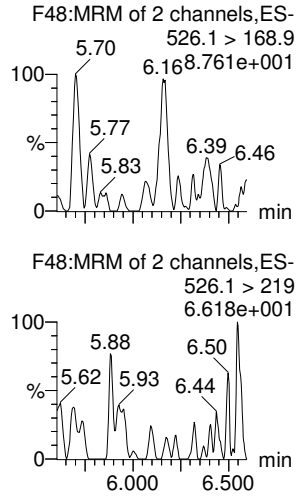


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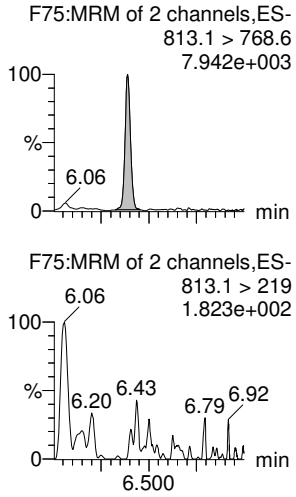
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Name: 200227P1-15, Date: 27-Feb-2020, Time: 17:58:10, ID: IB, Description: IB

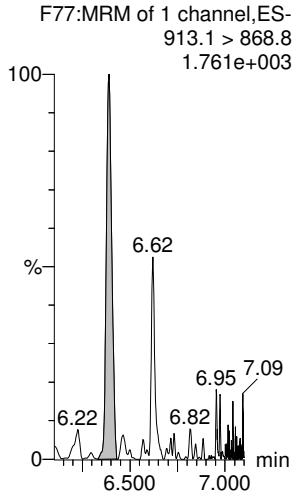
N-EtFOSA



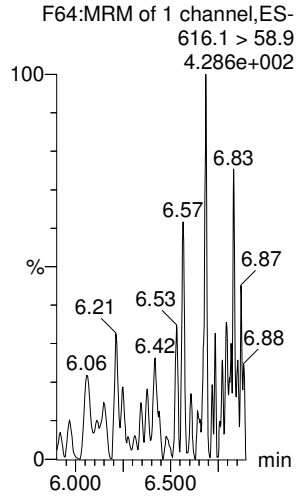
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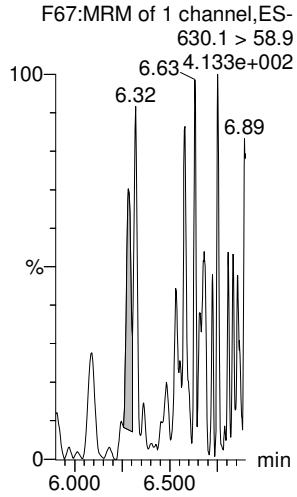
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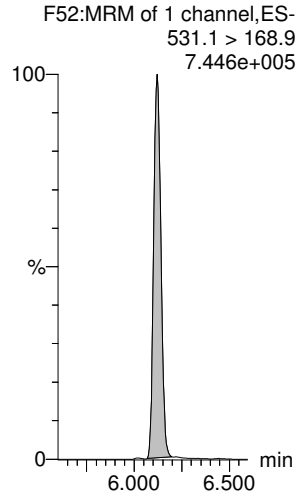
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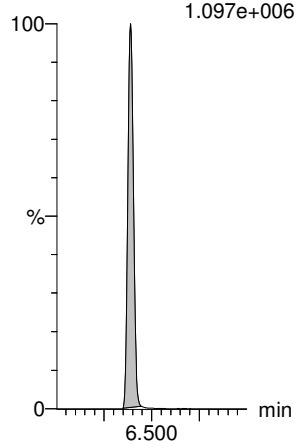
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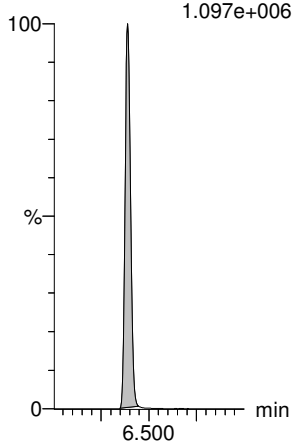
d5-N-ETFOSA-EIS



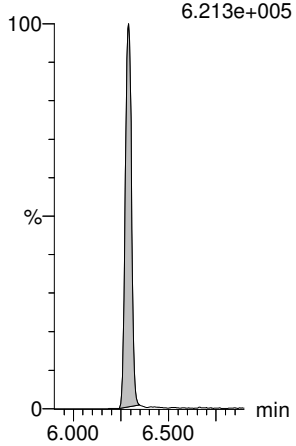
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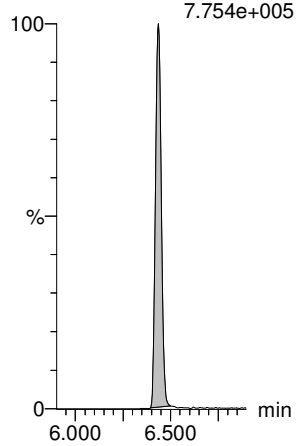
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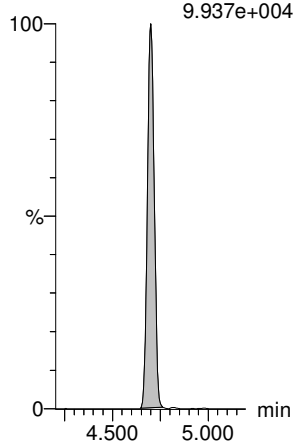
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



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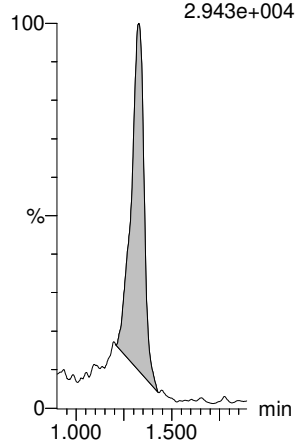


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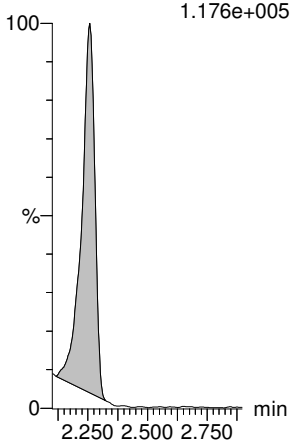
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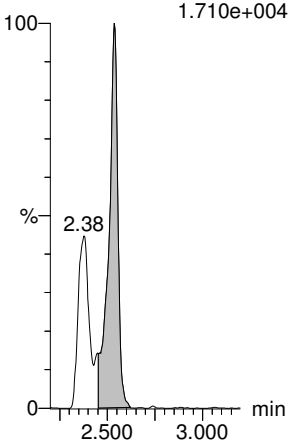
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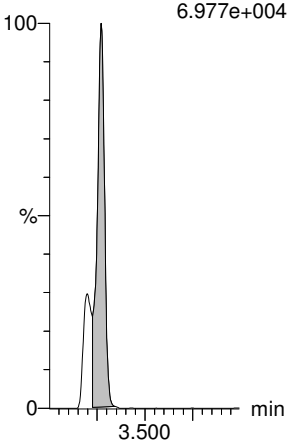
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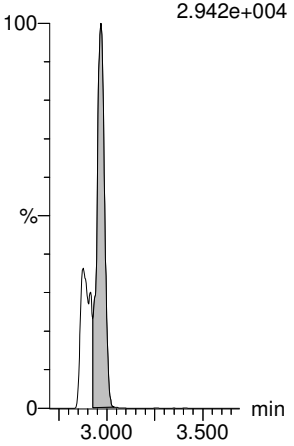
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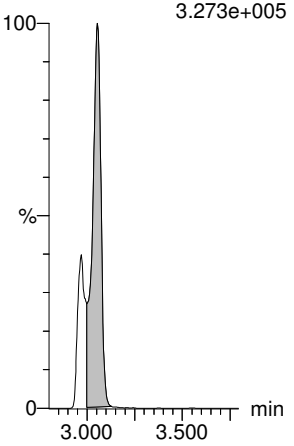
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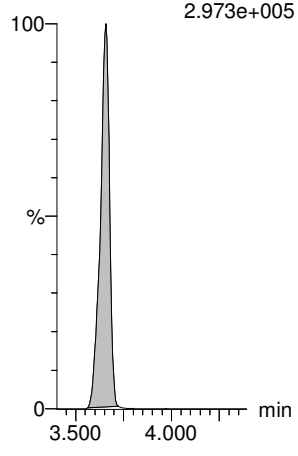
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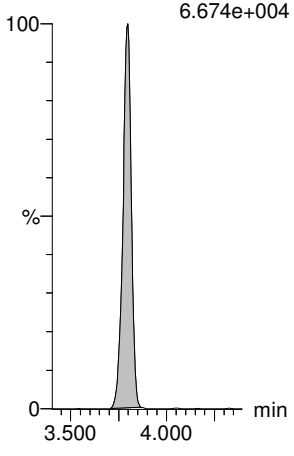
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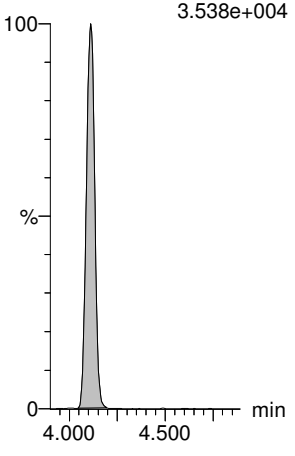
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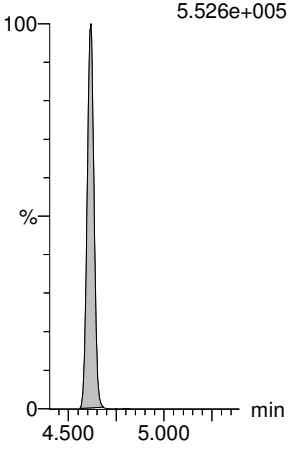
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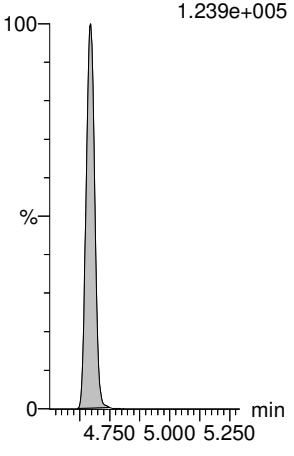
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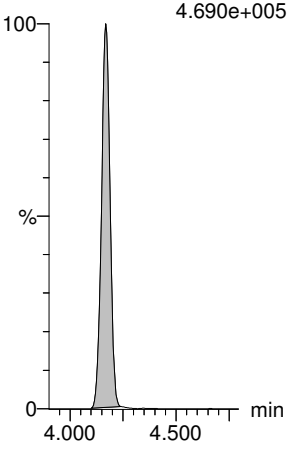
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13C8-PFOSA-RSD



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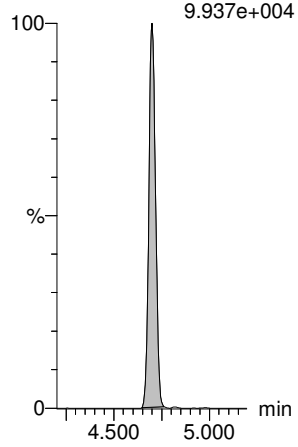


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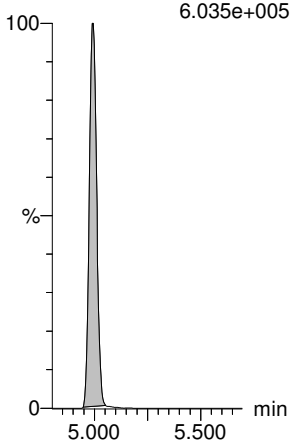
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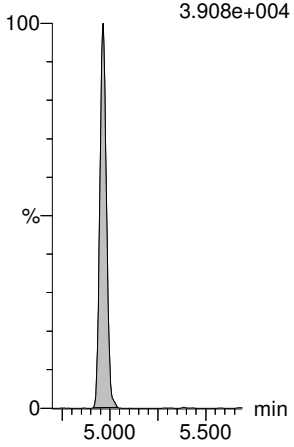
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F42:MRM of 1 channel,ES-
507.0 > 79.7
9.937e+004



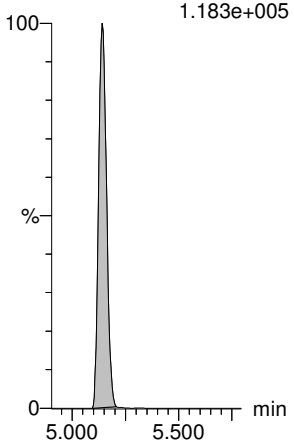
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F45:MRM of 1 channel,ES-
515.1 > 469.9
6.035e+005



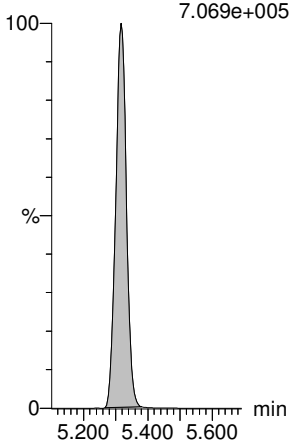
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F50:MRM of 1 channel,ES-
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3.908e+004



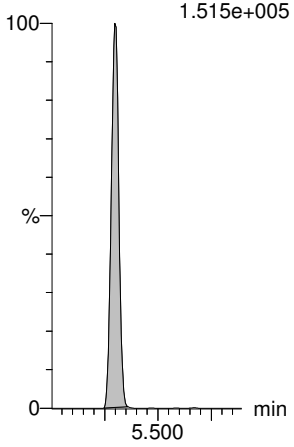
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.183e+005



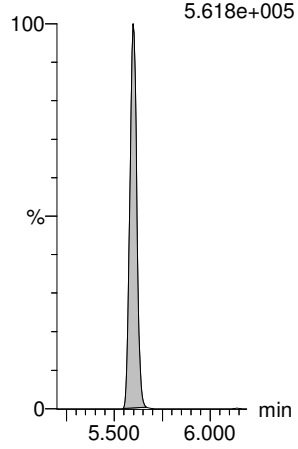
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F55:MRM of 1 channel,ES-
565 > 519.8
7.069e+005



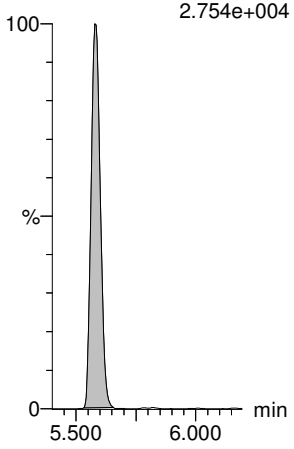
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.515e+005



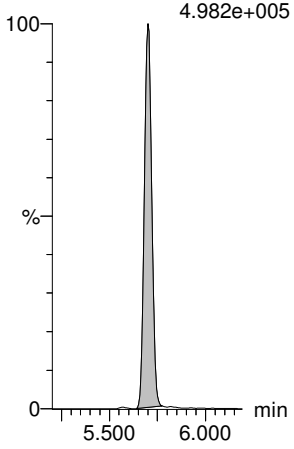
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.618e+005



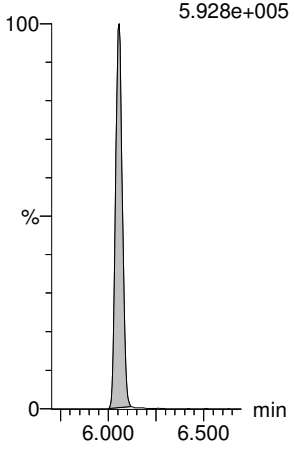
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.754e+004



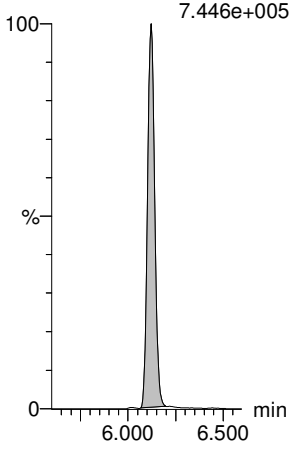
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.982e+005



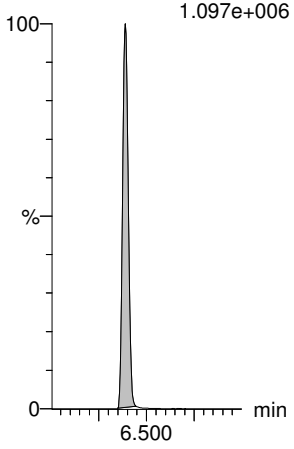
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.928e+005



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

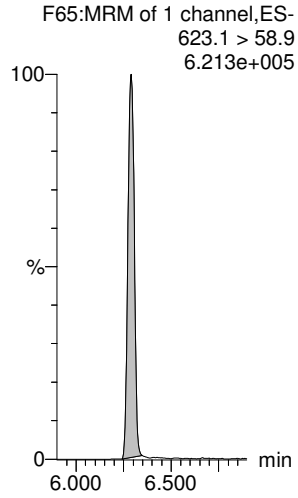


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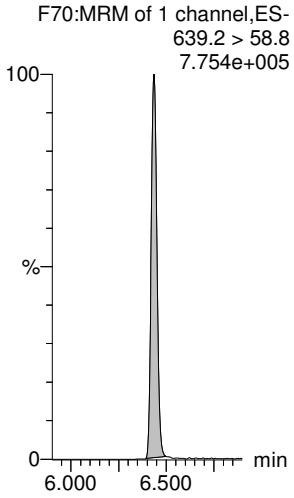
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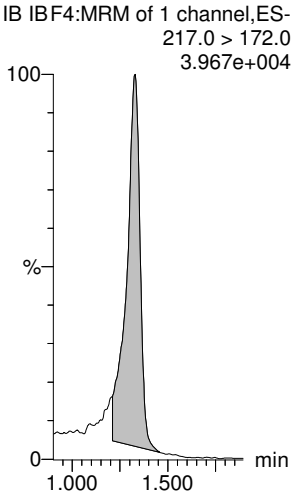
d7-N-MeFOSE-RSD



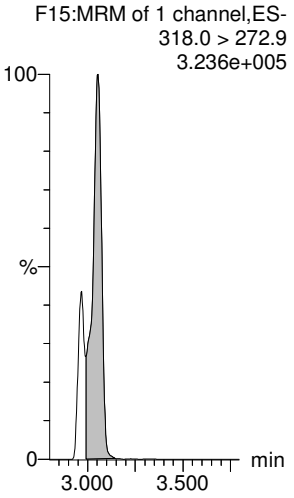
d9-N-EtFOSE-RSD



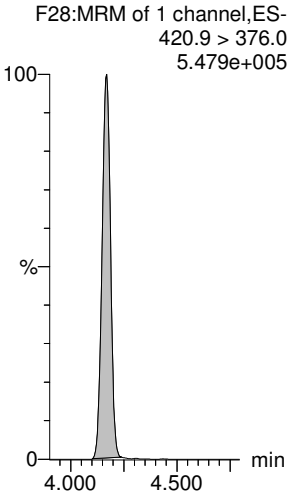
13C4-PFBA



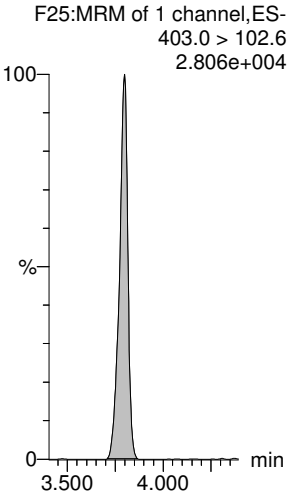
13C5-PFHxA



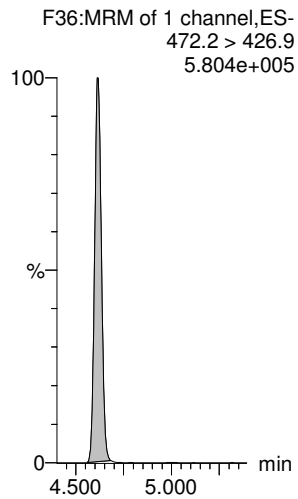
13C8-PFOA



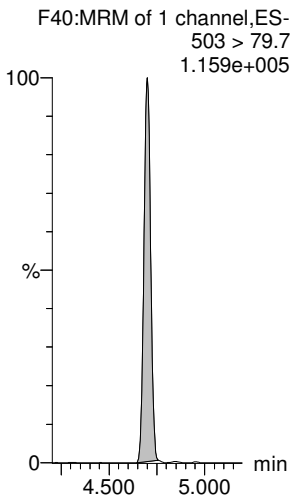
18O2-PFHxS



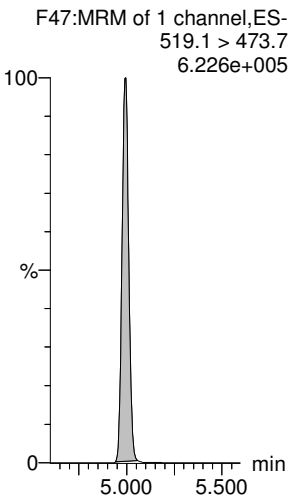
13C9-PFNA



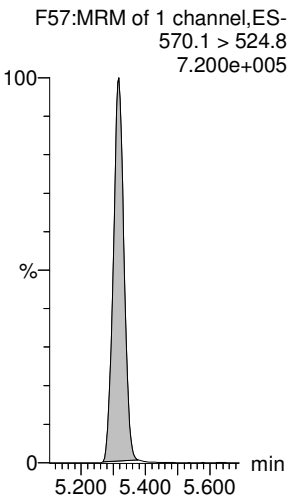
13C4-PFOS



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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	#	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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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		

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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		

Low point

gcl : 0.5
8:2 FTS : 0.5
L-MeFOSAA : 0.5
PFDS : 0.5
N-MeFOSA : 2.5
PFDoS : 0.5

High point

3:3 FTCA : 100
5:3 FTCA : 100
7:3 FTCA : 100
L-EtFOSAA : 250
PFDoS : 250

Quantify Compound Summary Report **MassLynx V4.2 SCN977**
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Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:51:32
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:17:47

Compound name: PFBA
Correlation coefficient: r = 0.999413, r^2 = 0.998826
Calibration curve: 1.10826 * x + 0.0696979
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

2/29/2020 VY 02/28/20

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	200228P2-3	Standard	0.250	1.35	143.710	5693.918	0.315	0.2	-11.3	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	1.34	290.052	6087.459	0.596	0.5	-5.1	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	1.34	552.765	6083.945	1.136	1.0	-3.8	NO	0.999	NO	MM
4	4	200228P2-6	Standard	2.000	1.35	1117.719	6339.746	2.204	1.9	-3.7	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	1.35	3020.311	6156.793	6.132	5.5	9.4	NO	0.999	NO	MM
6	6	200228P2-8	Standard	10.000	1.35	6221.964	6720.548	11.573	10.4	3.8	NO	0.999	NO	MM
7	7	200228P2-9	Standard	50.000	1.35	31316.611	6685.317	58.555	52.8	5.5	NO	0.999	NO	MM
8	8	200228P2-10	Standard	100.000	1.34	58478.980	6199.003	117.920	106.3	6.3	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	1.35	148265.453	6582.901	281.535	254.0	1.6	NO	0.999	NO	MM
10	10	200228P2-12	Standard	500.000	1.35	314632.031	7297.394	538.946	486.2	-2.8	NO	0.999	NO	MM

Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999747
Calibration curve: 4.84839e-005 * x^2 + 1.3627 * x + -0.100099
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	200228P2-3	Standard	0.250	1.67	25.533	1235.219	0.258	0.3	5.2	NO	1.000	NO	bb
2	2	200228P2-4	Standard	0.500	1.66	42.820	1240.708	0.431	0.4	-22.0	NO	1.000	NO	bb
3	3	200228P2-5	Standard	1.000	1.67	109.659	1189.869	1.152	0.9	-8.1	NO	1.000	NO	MM
4	4	200228P2-6	Standard	2.000	1.66	228.830	1284.728	2.226	1.7	-14.6	NO	1.000	NO	MM
5	5	200228P2-7	Standard	5.000	1.67	651.246	1226.688	6.636	4.9	-1.2	NO	1.000	NO	MM
6	6	200228P2-8	Standard	10.000	1.67	1441.833	1197.935	15.045	11.1	11.1	NO	1.000	NO	bb
7	7	200228P2-9	Standard	50.000	1.67	7126.206	1292.873	68.899	50.5	1.1	NO	1.000	NO	MM
8	8	200228P2-10	Standard	100.000	1.67	13495.909	1240.957	135.943	99.5	-0.5	NO	1.000	NO	MM
9	9	200228P2-11	Standard	250.000	1.67	33898.414	1239.422	341.877	248.8	-0.5	NO	1.000	NO	MM
10	10	200228P2-12	Standard	500.000	1.67	64273.449	1157.202	694.276	500.6	0.1	NO	1.000	NO	MM

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999800
Calibration curve: -7.45053e-006 * x^2 + 0.0966278 * x + -0.00141223
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 200228P2-3	Standard	0.250	2.14	18.645	10563.604	0.022	0.2	-2.8	NO	1.000	NO	bb
2	2 200228P2-4	Standard	0.500	2.14	34.119	10904.597	0.039	0.4	-16.1	NO	1.000	NO	bb
3	3 200228P2-5	Standard	1.000	2.12	89.880	11114.90	0.101	1.1	6.1	NO	1.000	NO	bb
4	4 200228P2-6	Standard	2.000	2.13	175.839	10781.746	0.204	2.1	6.2	NO	1.000	NO	bb
5	5 200228P2-7	Standard	5.000	2.13	425.441	11040.878	0.482	5.0	0.0	NO	1.000	NO	bb
6	6 200228P2-8	Standard	10.000	2.13	914.795	11689.495	0.978	10.1	1.5	NO	1.000	NO	bb
7	7 200228P2-9	Standard	50.000	2.13	4530.963	11880.203	4.767	49.5	-0.9	NO	1.000	NO	bb
8	8 200228P2-10	Standard	100.000	2.13	8604.997	11196.03	9.607	100.2	0.2	NO	1.000	NO	bb
9	9 200228P2-11	Standard	250.000	2.13	4491.213	11936.076	4.703	48.9	-80.5	YES	1.000	NO	bdX
10	10 200228P2-12	Standard	500.000	2.13	9082.521	10952.733	10.366	108.2	-78.4	YES	1.000	NO	bbX

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999151
Calibration curve: -8.29689e-005 * x^2 + 0.938772 * x + 0.0510655
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 200228P2-3	Standard	0.250	2.27	237.783	10563.604	0.281	0.2	-1.9	NO	0.999	NO	bb
2	2 200228P2-4	Standard	0.500	2.27	449.886	10904.597	0.516	0.5	-1.0	NO	0.999	NO	bb
3	3 200228P2-5	Standard	1.000	2.27	865.643	11114.90	0.974	1.0	-1.7	NO	0.999	NO	bb
4	4 200228P2-6	Standard	2.000	2.27	1801.183	10781.746	2.088	2.2	8.5	NO	0.999	NO	bb
5	5 200228P2-7	Standard	5.000	2.27	4652.290	11040.878	5.267	5.6	11.2	NO	0.999	NO	bb
6	6 200228P2-8	Standard	10.000	2.27	9091.417	11689.495	9.722	10.3	3.1	NO	0.999	NO	bb
7	7 200228P2-9	Standard	50.000	2.27	46130.504	11880.203	48.537	51.9	3.8	NO	0.999	NO	bb
8	8 200228P2-10	Standard	100.000	2.27	85981.695	11196.03	95.996	103.1	3.1	NO	0.999	NO	bb
9	9 200228P2-11	Standard	250.000	2.27	209967.578	11936.076	219.888	239.2	-4.3	NO	0.999	NO	bb
10	10 200228P2-12	Standard	500.000	2.27	396720.281	10952.733	452.764	504.8	1.0	NO	0.999	NO	bb

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Compound name: PFBS
Correlation coefficient: r = 0.999452, r^2 = 0.998905
Calibration curve: 2.32412 * x + 0.160204
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 200228P2-3	Standard	0.250	2.55	66.335	1235.219	0.671	0.2	-12.0	NO	0.999	NO	bb
2	2 200228P2-4	Standard	0.500	2.54	126.026	1240.708	1.270	0.5	-4.5	NO	0.999	NO	bb
3	3 200228P2-5	Standard	1.000	2.54	250.782	1189.869	2.635	1.1	6.5	NO	0.999	NO	bb
4	4 200228P2-6	Standard	2.000	2.55	478.026	1284.728	4.651	1.9	-3.4	NO	0.999	NO	bb
5	5 200228P2-7	Standard	5.000	2.55	1409.278	1226.688	14.361	6.1	22.2	NO	0.999	NO	bb
6	6 200228P2-8	Standard	10.000	2.55	2505.489	1197.935	26.144	11.2	11.8	NO	0.999	NO	bb
7	7 200228P2-9	Standard	50.000	2.55	12497.577	1292.873	120.831	51.9	3.8	NO	0.999	NO	bb
8	8 200228P2-10	Standard	100.000	2.55	24486.564	1240.957	246.650	106.1	6.1	NO	0.999	NO	bb
9	9 200228P2-11	Standard	250.000	2.55	56702.824	1239.422	571.868	246.0	-1.6	NO	0.999	NO	bb
10	10 200228P2-12	Standard	500.000	2.55	106259.227	1157.202	1147.803	493.8	-1.2	NO	0.999	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999388
Calibration curve: -0.000340962 * x^2 + 1.29353 * x + 0.0772484
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 200228P2-3	Standard	0.250	2.98	43.743	1544.957	0.354	0.2	-14.4	NO	0.999	NO	bb
2	2 200228P2-4	Standard	0.500	2.97	94.218	1566.614	0.752	0.5	4.3	NO	0.999	NO	bb
3	3 200228P2-5	Standard	1.000	2.98	124.512	1519.960	1.024	0.7	-26.8	NO	0.999	NO	bb
4	4 200228P2-6	Standard	2.000	2.98	387.712	1567.699	3.091	2.3	16.6	NO	0.999	NO	bb
5	5 200228P2-7	Standard	5.000	2.98	867.124	1527.414	7.096	5.4	8.7	NO	0.999	NO	bb
6	6 200228P2-8	Standard	10.000	2.98	1914.146	1659.260	14.420	11.1	11.2	NO	0.999	NO	bb
7	7 200228P2-9	Standard	50.000	2.98	9163.784	1763.701	64.947	50.8	1.7	NO	0.999	NO	bb
8	8 200228P2-10	Standard	100.000	2.98	16860.102	1660.416	126.927	100.7	0.7	NO	0.999	NO	bb
9	9 200228P2-11	Standard	250.000	2.98	36836.145	1562.131	294.759	243.4	-2.6	NO	0.999	NO	bb
10	10 200228P2-12	Standard	500.000	2.98	65634.766	1452.158	564.976	503.5	0.7	NO	0.999	NO	bb

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Compound name: PFHxA
Correlation coefficient: r = 0.998775, r^2 = 0.997551
Calibration curve: 0.87057 * x + 0.122807
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	200228P2-3	Standard	0.250	3.06	439.795	18107.494	0.304	0.2	-16.9	NO	0.998	NO	bb
2	2	200228P2-4	Standard	0.500	3.06	859.694	17982.678	0.598	0.5	9.1	NO	0.998	NO	bb
3	3	200228P2-5	Standard	1.000	3.06	1658.206	17804.041	1.164	1.2	19.6	NO	0.998	NO	db
4	4	200228P2-6	Standard	2.000	3.06	2814.434	17873.602	1.968	2.1	6.0	NO	0.998	NO	bb
5	5	200228P2-7	Standard	5.000	3.07	7577.538	18577.861	5.099	5.7	14.3	NO	0.998	NO	bb
6	6	200228P2-8	Standard	10.000	3.07	15270.910	19799.846	9.641	10.9	9.3	NO	0.998	NO	bb
7	7	200228P2-9	Standard	50.000	3.07	74544.500	19765.725	47.143	54.0	8.0	NO	0.998	NO	bb
8	8	200228P2-10	Standard	100.000	3.07	143988.594	18790.016	95.788	109.9	9.9	NO	0.998	NO	bb
9	9	200228P2-11	Standard	250.000	3.07	329673.719	18813.150	219.045	251.5	0.6	NO	0.998	NO	bb
10	10	200228P2-12	Standard	500.000	3.07	630300.125	18744.832	420.316	482.7	-3.5	NO	0.998	NO	bb

Compound name: PFPeS
Correlation coefficient: r = 0.996617, r^2 = 0.993246
Calibration curve: 2.10956 * x + 0.2038
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	200228P2-3	Standard	0.250	3.26	57.039	1235.219	0.577	0.2	-29.2	NO	0.993	NO	bb
2	2	200228P2-4	Standard	0.500	3.27	105.300	1240.708	1.061	0.4	-18.7	NO	0.993	NO	bb
3	3	200228P2-5	Standard	1.000	3.26	236.344	1189.869	2.483	1.1	8.0	NO	0.993	NO	bb
4	4	200228P2-6	Standard	2.000	3.26	451.814	1284.728	4.396	2.0	-0.6	NO	0.993	NO	bb
5	5	200228P2-7	Standard	5.000	3.26	1327.331	1226.688	13.526	6.3	26.3	NO	0.993	NO	bb
6	6	200228P2-8	Standard	10.000	3.26	2549.976	1197.935	26.608	12.5	25.2	NO	0.993	NO	bb
7	7	200228P2-9	Standard	50.000	3.26	13120.754	1292.873	126.857	60.0	20.1	NO	0.993	NO	bb
8	8	200228P2-10	Standard	100.000	3.27	23777.613	1240.957	239.509	113.4	13.4	NO	0.993	NO	bb
9	9	200228P2-11	Standard	250.000	3.27	51942.789	1239.422	523.861	248.2	-0.7	NO	0.993	NO	bb
10	10	200228P2-12	Standard	500.000	3.26	92697.883	1157.202	1001.315	474.6	-5.1	NO	0.993	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.998989
Calibration curve: -0.000240539 * x^2 + 1.02346 * x + 0.0413162
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	200228P2-3	Standard	0.250	3.28	67.501	3543.095	0.238	0.2	-23.1	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	3.28	163.477	3741.298	0.546	0.5	-1.3	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	3.28	354.316	3534.105	1.253	1.2	18.4	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	3.28	676.249	3658.248	2.311	2.2	10.9	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	3.28	1683.407	3811.648	5.521	5.4	7.2	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	3.28	3349.217	4003.488	10.457	10.2	2.0	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	3.28	16971.271	4182.291	50.724	50.1	0.2	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	3.28	31848.779	3789.889	105.045	105.2	5.2	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	3.28	77161.828	4179.957	230.749	238.8	-4.5	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	3.28	145104.125	3980.572	455.664	505.2	1.0	NO	0.999	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.998996
Calibration curve: 1.9554e-005 * x^2 + 0.201925 * x + 0.0100515
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	200228P2-3	Standard	0.250	3.61	57.915	12581.276	0.058	0.2	-5.9	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	3.61	94.190	12169.229	0.097	0.4	-14.1	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	3.61	227.966	11996.332	0.238	1.1	12.6	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	3.61	410.804	12809.899	0.401	1.9	-3.2	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	3.61	1145.145	13124.444	1.091	5.3	7.0	NO	0.999	NO	bd
6	6	200228P2-8	Standard	10.000	3.61	2255.137	13045.506	2.161	10.6	6.4	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	3.61	11267.840	14375.872	9.798	48.2	-3.5	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	3.61	21407.004	13014.601	20.561	100.8	0.8	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	3.61	11317.965	12944.269	10.930	53.8	-78.5	YES	0.999	NO	bbX
10	10	200228P2-12	Standard	500.000	3.61	22206.279	12388.945	22.405	109.7	-78.1	YES	0.999	NO	bbX

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Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999882
Calibration curve: -0.000137784 * x^2 + 1.16847 * x + 0.120302
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 200228P2-3	Standard	0.250	3.67	342.335	12581.276	0.340	0.2	-24.7	NO	1.000	NO	db
2	2 200228P2-4	Standard	0.500	3.67	693.637	12169.229	0.712	0.5	1.4	NO	1.000	NO	bb
3	3 200228P2-5	Standard	1.000	3.67	1333.191	11996.332	1.389	1.1	8.6	NO	1.000	NO	bb
4	4 200228P2-6	Standard	2.000	3.67	2748.854	12809.899	2.682	2.2	9.7	NO	1.000	NO	bb
5	5 200228P2-7	Standard	5.000	3.67	6226.021	13124.444	5.930	5.0	-0.5	NO	1.000	NO	bb
6	6 200228P2-8	Standard	10.000	3.67	12964.614	13045.506	12.422	10.5	5.4	NO	1.000	NO	bb
7	7 200228P2-9	Standard	50.000	3.67	67923.469	14375.872	59.060	50.7	1.5	NO	1.000	NO	bb
8	8 200228P2-10	Standard	100.000	3.67	119320.313	13014.601	114.602	99.1	-0.9	NO	1.000	NO	bb
9	9 200228P2-11	Standard	250.000	3.67	291973.625	12944.269	281.953	248.5	-0.6	NO	1.000	NO	bb
10	10 200228P2-12	Standard	500.000	3.67	545947.000	12388.945	550.841	500.9	0.2	NO	1.000	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.999691
Calibration curve: -0.000271075 * x^2 + 2.59794 * x + 0.191799
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 200228P2-3	Standard	0.250	3.77	689.053	12581.276	0.685	0.2	-24.1	NO	1.000	NO	bb
2	2 200228P2-4	Standard	0.500	3.77	1402.786	12169.229	1.441	0.5	-3.8	NO	1.000	NO	bb
3	3 200228P2-5	Standard	1.000	3.77	2742.247	11996.332	2.857	1.0	2.6	NO	1.000	NO	bb
4	4 200228P2-6	Standard	2.000	3.77	5653.880	12809.899	5.517	2.1	2.5	NO	1.000	NO	bb
5	5 200228P2-7	Standard	5.000	3.77	15634.994	13124.444	14.891	5.7	13.2	NO	1.000	NO	bb
6	6 200228P2-8	Standard	10.000	3.77	30086.199	13045.506	28.828	11.0	10.4	NO	1.000	NO	bb
7	7 200228P2-9	Standard	50.000	3.77	150297.172	14375.872	130.685	50.5	1.0	NO	1.000	NO	bb
8	8 200228P2-10	Standard	100.000	3.77	265503.969	13014.601	255.006	99.1	-0.9	NO	1.000	NO	bb
9	9 200228P2-11	Standard	250.000	3.77	647658.375	12944.269	625.430	247.0	-1.2	NO	1.000	NO	bb
10	10 200228P2-12	Standard	500.000	3.77	1224325.500	12388.945	1235.300	501.7	0.3	NO	1.000	NO	bb

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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999028
Calibration curve: -0.00036565 * x^2 + 1.12704 * x + -0.0812317
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 200228P2-3	Standard	0.250	3.81	28.231	2804.351	0.126	0.2	-26.5	NO	0.999	NO	MM
2	2 200228P2-4	Standard	0.500	3.81	123.861	2834.503	0.546	0.6	11.4	NO	0.999	NO	MM
3	3 200228P2-5	Standard	1.000	3.81	232.498	2641.797	1.100	1.0	4.9	NO	0.999	NO	MM
4	4 200228P2-6	Standard	2.000	3.81	496.561	2735.614	2.269	2.1	4.3	NO	0.999	NO	MM
5	5 200228P2-7	Standard	5.000	3.81	1393.777	2981.774	5.843	5.3	5.3	NO	0.999	NO	MM
6	6 200228P2-8	Standard	10.000	3.81	2533.260	2636.619	12.010	10.8	7.7	NO	0.999	NO	MM
7	7 200228P2-9	Standard	50.000	3.81	12718.212	3092.432	51.409	46.4	-7.2	NO	0.999	NO	MM
8	8 200228P2-10	Standard	100.000	3.81	22593.072	2661.052	106.128	97.3	-2.7	NO	0.999	NO	MM
9	9 200228P2-11	Standard	250.000	3.81	54803.711	2556.917	267.919	259.7	3.9	NO	0.999	NO	MM
10	10 200228P2-12	Standard	500.000	3.81	101084.070	2697.473	468.420	495.3	-0.9	NO	0.999	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999399
Calibration curve: -5.55014e-005 * x^2 + 1.56476 * x + 0.0780386
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 200228P2-3	Standard	0.250	4.13	56.309	1564.045	0.450	0.2	-4.9	NO	0.999	NO	bb
2	2 200228P2-4	Standard	0.500	4.12	102.608	1495.903	0.857	0.5	-0.4	NO	0.999	NO	bb
3	3 200228P2-5	Standard	1.000	4.12	170.545	1391.667	1.532	0.9	-7.1	NO	0.999	NO	bb
4	4 200228P2-6	Standard	2.000	4.12	453.035	1518.498	3.729	2.3	16.7	NO	0.999	NO	bb
5	5 200228P2-7	Standard	5.000	4.12	1009.307	1531.110	8.240	5.2	4.3	NO	0.999	NO	bb
6	6 200228P2-8	Standard	10.000	4.12	2179.885	1530.195	17.807	11.3	13.3	NO	0.999	NO	bb
7	7 200228P2-9	Standard	50.000	4.12	10402.798	1721.369	75.542	48.3	-3.4	NO	0.999	NO	bb
8	8 200228P2-10	Standard	100.000	4.13	19179.859	1491.310	160.764	103.1	3.1	NO	0.999	NO	bb
9	9 200228P2-11	Standard	250.000	4.13	40375.848	1330.319	379.381	244.5	-2.2	NO	0.999	NO	bb
10	10 200228P2-12	Standard	500.000	4.13	80265.609	1299.548	772.053	502.3	0.5	NO	0.999	NO	bb

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Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999347
Calibration curve: -0.000456114 * x^2 + 1.20238 * x + 0.0642634
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	200228P2-3	Standard	0.250	4.18	531.018	16386.402	0.405	0.3	13.4	NO	0.999	NO	MM
2	2	200228P2-4	Standard	0.500	4.18	774.749	16716.035	0.579	0.4	-14.3	NO	0.999	NO	MM
3	3	200228P2-5	Standard	1.000	4.18	1658.961	17407.059	1.191	0.9	-6.2	NO	0.999	NO	MM
4	4	200228P2-6	Standard	2.000	4.18	3627.830	17488.086	2.593	2.1	5.2	NO	0.999	NO	MM
5	5	200228P2-7	Standard	5.000	4.18	8798.688	17831.416	6.168	5.1	1.7	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	4.18	17861.650	19005.488	11.748	9.8	-2.5	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	4.18	90200.672	18969.861	59.437	50.3	0.7	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	4.18	162200.031	16762.920	120.952	104.7	4.7	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	4.18	357927.625	16981.471	263.469	241.1	-3.5	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	4.18	682264.625	17387.346	490.489	504.4	0.9	NO	0.999	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999401
Calibration curve: -6.57161e-005 * x^2 + 0.169715 * x + -0.00156209
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	200228P2-3	Standard	0.250	4.18	47.840	16386.402	0.036	0.2	-10.3	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	4.19	120.119	16716.035	0.090	0.5	7.7	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	4.19	230.880	17407.059	0.166	1.0	-1.4	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	4.19	482.296	17488.086	0.345	2.0	2.1	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	4.19	1207.108	17831.416	0.846	5.0	0.1	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	4.19	2423.717	19005.488	1.594	9.4	-5.6	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	4.19	12902.631	18969.861	8.502	51.1	2.2	NO	0.999	NO	bd
8	8	200228P2-10	Standard	100.000	4.19	22729.246	16762.920	16.949	104.1	4.1	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	4.19	50461.094	16981.471	37.144	241.4	-3.4	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	4.19	95798.539	17387.346	68.871	504.3	0.9	NO	0.999	NO	bb

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Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999647
Calibration curve: 0.000155667 * x^2 + 0.89521 * x + -0.0222947
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	200228P2-3	Standard	0.250	4.28	37.677	3307.030	0.142	0.2	-26.4	NO	1.000	NO	bb
2	2	200228P2-4	Standard	0.500	4.29	119.188	3096.751	0.481	0.6	12.5	NO	1.000	NO	bb
3	3	200228P2-5	Standard	1.000	4.29	193.080	2988.655	0.808	0.9	-7.3	NO	1.000	NO	bb
4	4	200228P2-6	Standard	2.000	4.29	456.093	3192.128	1.786	2.0	1.0	NO	1.000	NO	bb
5	5	200228P2-7	Standard	5.000	4.29	1231.264	3073.394	5.008	5.6	12.3	NO	1.000	NO	bb
6	6	200228P2-8	Standard	10.000	4.29	2593.760	3408.305	9.513	10.6	6.3	NO	1.000	NO	bb
7	7	200228P2-9	Standard	50.000	4.29	12482.933	3366.450	46.351	51.3	2.7	NO	1.000	NO	bb
8	8	200228P2-10	Standard	100.000	4.29	24656.650	3355.900	91.841	100.8	0.8	NO	1.000	NO	bb
9	9	200228P2-11	Standard	250.000	4.29	57210.895	3137.205	227.953	244.3	-2.3	NO	1.000	NO	bb
10	10	200228P2-12	Standard	500.000	4.29	103027.781	2633.736	488.981	502.4	0.5	NO	1.000	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998738
Calibration curve: -0.000145642 * x^2 + 0.181281 * x + -0.025321
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	200228P2-3	Standard	0.250	4.61	32.978	15947.615	0.026	0.3	12.9	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	4.60	98.454	17004.100	0.072	0.5	7.8	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	4.61	219.047	17405.514	0.157	1.0	0.8	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	4.61	424.446	18564.672	0.286	1.7	-14.1	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	4.61	1153.840	17174.816	0.840	4.8	-4.2	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	4.61	2315.783	17464.965	1.657	9.4	-6.5	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	4.61	11599.682	16066.092	9.025	52.1	4.2	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	4.61	21565.387	16351.739	16.486	98.9	-1.1	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	4.61	11657.833	18136.590	8.035	46.2	-81.5	YES	0.999	NO	bbX
10	10	200228P2-12	Standard	500.000	4.61	22210.365	16156.843	17.183	103.5	-79.3	YES	0.999	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.997210, r^2 = 0.994427
Calibration curve: 1.05725 * x + 0.0955486
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	200228P2-3	Standard	0.250	4.62	444.056	15947.615	0.348	0.2	-4.5	NO	0.994	NO	bb
2	2	200228P2-4	Standard	0.500	4.62	724.378	17004.100	0.533	0.4	-17.3	NO	0.994	NO	bb
3	3	200228P2-5	Standard	1.000	4.62	1488.471	17405.514	1.069	0.9	-7.9	NO	0.994	NO	bb
4	4	200228P2-6	Standard	2.000	4.62	3305.542	18564.672	2.226	2.0	0.7	NO	0.994	NO	bb
5	5	200228P2-7	Standard	5.000	4.62	8861.696	17174.816	6.450	6.0	20.2	NO	0.994	NO	bb
6	6	200228P2-8	Standard	10.000	4.62	17680.422	17464.965	12.654	11.9	18.8	NO	0.994	NO	bb
7	7	200228P2-9	Standard	50.000	4.62	82569.281	16066.092	64.242	60.7	21.3	NO	0.994	NO	bb
8	8	200228P2-10	Standard	100.000	4.62	154599.969	16351.739	118.183	111.7	11.7	NO	0.994	NO	bb
9	9	200228P2-11	Standard	250.000	4.62	369386.844	18136.590	254.587	240.7	-3.7	NO	0.994	NO	bb
10	10	200228P2-12	Standard	500.000	4.62	661804.938	16156.843	512.016	484.2	-3.2	NO	0.994	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999163
Calibration curve: -0.000128536 * x^2 + 0.807117 * x + 0.0383818
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	200228P2-3	Standard	0.250	4.67	56.935	3508.692	0.203	0.2	-18.5	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	4.67	143.500	3746.921	0.479	0.5	9.1	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	4.68	254.962	3909.152	0.815	1.0	-3.7	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	4.68	499.253	3762.045	1.659	2.0	0.4	NO	0.999	NO	MM
5	5	200228P2-7	Standard	5.000	4.67	1328.062	3920.882	4.234	5.2	4.1	NO	0.999	NO	db
6	6	200228P2-8	Standard	10.000	4.68	2693.240	3939.926	8.545	10.6	5.6	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	4.67	13647.335	3926.786	43.443	54.2	8.5	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	4.68	24329.160	4040.278	75.271	94.6	-5.4	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	4.68	60058.738	3884.290	193.275	249.3	-0.3	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	4.68	114894.477	3858.538	372.209	501.1	0.2	NO	0.999	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999449
Calibration curve: 0.000252685 * x^2 + 0.902177 * x + -0.0231466
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	200228P2-3	Standard	0.250	4.71	37.024	3307.030	0.140	0.2	-27.7	NO	0.999	NO	MM
2	2	200228P2-4	Standard	0.500	4.70	86.789	3096.751	0.350	0.4	-17.2	NO	0.999	NO	MM
3	3	200228P2-5	Standard	1.000	4.70	191.113	2988.655	0.799	0.9	-8.9	NO	0.999	NO	MM
4	4	200228P2-6	Standard	2.000	4.70	580.670	3192.128	2.274	2.5	27.2	NO	0.999	NO	MM
5	5	200228P2-7	Standard	5.000	4.70	1303.060	3073.394	5.300	5.9	17.8	NO	0.999	NO	MM
6	6	200228P2-8	Standard	10.000	4.70	2696.914	3408.305	9.891	11.0	9.6	NO	0.999	NO	MM
7	7	200228P2-9	Standard	50.000	4.70	12646.315	3366.450	46.957	51.3	2.7	NO	0.999	NO	MM
8	8	200228P2-10	Standard	100.000	4.70	24067.898	3355.900	89.648	96.8	-3.2	NO	0.999	NO	MM
9	9	200228P2-11	Standard	250.000	4.71	60276.000	3137.205	240.166	248.9	-0.4	NO	0.999	NO	MM
10	10	200228P2-12	Standard	500.000	4.71	108567.727	2633.736	515.274	500.9	0.2	NO	0.999	NO	MM

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999587
Calibration curve: 8.1805e-005 * x^2 + 0.939758 * x
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, 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	200228P2-3	Standard	0.250	4.93	21.385	3307.030	0.081	0.1	-65.6	YES	1.000	NO	bbX
2	2	200228P2-4	Standard	0.500	4.93	107.067	3096.751	0.432	0.5	-8.0	NO	1.000	NO	bb
3	3	200228P2-5	Standard	1.000	4.92	268.218	2988.655	1.122	1.2	19.4	NO	1.000	NO	bb
4	4	200228P2-6	Standard	2.000	4.92	458.591	3192.128	1.796	1.9	-4.5	NO	1.000	NO	bb
5	5	200228P2-7	Standard	5.000	4.92	1313.318	3073.394	5.341	5.7	13.6	NO	1.000	NO	bb
6	6	200228P2-8	Standard	10.000	4.93	2573.195	3408.305	9.437	10.0	0.3	NO	1.000	NO	bb
7	7	200228P2-9	Standard	50.000	4.92	13384.409	3366.450	49.698	52.6	5.3	NO	1.000	NO	bb
8	8	200228P2-10	Standard	100.000	4.93	25218.316	3355.900	93.933	99.1	-0.9	NO	1.000	NO	bb
9	9	200228P2-11	Standard	250.000	4.93	59097.375	3137.205	235.470	245.3	-1.9	NO	1.000	NO	bb
10	10	200228P2-12	Standard	500.000	4.93	103776.820	2633.736	492.536	502.2	0.4	NO	1.000	NO	bb

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Compound name: PFDA
Coefficient of Determination: R^2 = 0.999061
Calibration curve: -0.000223444 * x^2 + 1.11295 * x + 0.0911483
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	200228P2-3	Standard	0.250	4.99	497.680	16701.305	0.372	0.3	1.1	NO	0.999	NO	MM
2	2	200228P2-4	Standard	0.500	4.99	960.379	18137.516	0.662	0.5	2.6	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	4.99	1715.913	16917.445	1.268	1.1	5.8	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	4.99	3872.912	19539.207	2.478	2.1	7.3	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	4.99	8958.885	18620.824	6.014	5.3	6.5	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	4.99	19043.631	19607.719	12.140	10.9	8.5	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	5.00	93253.766	21206.717	54.967	49.8	-0.4	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	5.00	173128.891	18954.754	114.172	104.7	4.7	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	5.00	388694.000	19154.133	253.662	239.3	-4.3	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	5.00	762720.938	18877.402	505.049	504.9	1.0	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998241
Calibration curve: -0.000329705 * x^2 + 1.29152 * x + 0.0541173
Response type: Internal Std (Ref 75), 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	200228P2-3	Standard	0.250	4.98	58.741	1062.998	0.691	0.5	97.2	YES	0.998	NO	bbX
2	2	200228P2-4	Standard	0.500	4.96	52.464	1275.449	0.514	0.4	-28.8	NO	0.998	NO	bb
3	3	200228P2-5	Standard	1.000	4.97	121.110	1274.255	1.188	0.9	-12.2	NO	0.998	NO	bb
4	4	200228P2-6	Standard	2.000	4.97	280.028	1258.480	2.781	2.1	5.6	NO	0.998	NO	bd
5	5	200228P2-7	Standard	5.000	4.97	676.788	1101.410	7.681	5.9	18.3	NO	0.998	NO	bb
6	6	200228P2-8	Standard	10.000	4.97	1413.819	1079.929	16.365	12.7	26.7	NO	0.998	NO	bb
7	7	200228P2-9	Standard	50.000	4.96	7268.410	1417.717	64.086	50.2	0.4	NO	0.998	NO	bb
8	8	200228P2-10	Standard	100.000	4.97	13176.328	1291.610	127.518	101.3	1.3	NO	0.998	NO	bb
9	9	200228P2-11	Standard	250.000	4.97	29668.926	1276.225	290.593	239.6	-4.2	NO	0.998	NO	bb
10	10	200228P2-12	Standard	500.000	4.97	52137.152	1145.721	568.825	505.7	1.1	NO	0.998	NO	bb

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Compound name: PFNS
Correlation coefficient: r = 0.998843, r^2 = 0.997686
Calibration curve: 0.925171 * x + 0.00150863
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	200228P2-3	Standard	0.250	5.05	56.341	3307.030	0.213	0.2	-8.6	NO	0.998	NO	bb
2	2	200228P2-4	Standard	0.500	5.06	99.856	3096.751	0.403	0.4	-13.2	NO	0.998	NO	bb
3	3	200228P2-5	Standard	1.000	5.06	206.939	2988.655	0.866	0.9	-6.6	NO	0.998	NO	bb
4	4	200228P2-6	Standard	2.000	5.06	452.462	3192.128	1.772	1.9	-4.3	NO	0.998	NO	bb
5	5	200228P2-7	Standard	5.000	5.06	1373.442	3073.394	5.586	6.0	20.7	NO	0.998	NO	bb
6	6	200228P2-8	Standard	10.000	5.06	2754.505	3408.305	10.102	10.9	9.2	NO	0.998	NO	bb
7	7	200228P2-9	Standard	50.000	5.06	13471.567	3366.450	50.021	54.1	8.1	NO	0.998	NO	bb
8	8	200228P2-10	Standard	100.000	5.06	24820.855	3355.900	92.452	99.9	-0.1	NO	0.998	NO	bb
9	9	200228P2-11	Standard	250.000	5.06	54036.484	3137.205	215.305	232.7	-6.9	NO	0.998	NO	bb
10	10	200228P2-12	Standard	500.000	5.06	99722.930	2633.736	473.296	511.6	2.3	NO	0.998	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999797
Calibration curve: -0.000281991 * x^2 + 1.29029 * x + 0.141953
Response type: Internal Std (Ref 77), 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	200228P2-3	Standard	0.250	5.15	71.359	4440.857	0.201	0.0	-81.7	YES	1.000	NO	MMX
2	2	200228P2-4	Standard	0.500	5.14	277.734	4636.922	0.749	0.5	-5.9	NO	1.000	NO	MM
3	3	200228P2-5	Standard	1.000	5.15	509.296	4818.728	1.321	0.9	-8.6	NO	1.000	NO	MM
4	4	200228P2-6	Standard	2.000	5.15	1046.217	4594.937	2.846	2.1	4.8	NO	1.000	NO	MM
5	5	200228P2-7	Standard	5.000	5.14	2575.229	4343.470	7.411	5.6	12.8	NO	1.000	NO	MM
6	6	200228P2-8	Standard	10.000	5.15	5377.550	5256.091	12.789	9.8	-1.8	NO	1.000	NO	MM
7	7	200228P2-9	Standard	50.000	5.15	26576.254	5207.488	63.793	49.9	-0.3	NO	1.000	NO	MM
8	8	200228P2-10	Standard	100.000	5.15	49582.082	4999.120	123.977	98.1	-1.9	NO	1.000	NO	MM
9	9	200228P2-11	Standard	250.000	5.15	116341.227	4721.123	308.034	252.6	1.0	NO	1.000	NO	MM
10	10	200228P2-12	Standard	500.000	5.15	212127.219	4621.091	573.802	499.0	-0.2	NO	1.000	NO	MM

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022720.mdb 28 Feb 2020 10:51:32
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: L-EtFOSAA
Coefficient of Determination: R^2 = 0.998538
Calibration curve: -0.000703582 * x^2 + 1.0956 * x + -0.0674174
Response type: Internal Std (Ref 81), 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 200228P2-3	Standard	0.250	5.31	73.772	4848.913	0.190	0.2	-5.9	NO	0.999	NO	MM
2	2 200228P2-4	Standard	0.500	5.30	198.790	5232.013	0.475	0.5	-1.0	NO	0.999	NO	MM
3	3 200228P2-5	Standard	1.000	5.31	376.956	5357.471	0.880	0.9	-13.5	NO	0.999	NO	MM
4	4 200228P2-6	Standard	2.000	5.31	891.725	5044.189	2.210	2.1	4.1	NO	0.999	NO	MM
5	5 200228P2-7	Standard	5.000	5.31	2642.941	5133.022	6.436	6.0	19.2	NO	0.999	NO	MM
6	6 200228P2-8	Standard	10.000	5.31	4961.620	5961.130	10.404	9.6	-3.8	NO	0.999	NO	MM
7	7 200228P2-9	Standard	50.000	5.31	24538.893	5536.460	55.403	52.4	4.8	NO	0.999	NO	MM
8	8 200228P2-10	Standard	100.000	5.31	44267.332	5629.953	98.285	95.6	-4.4	NO	0.999	NO	MM
9	9 200228P2-11	Standard	250.000	5.31	101384.633	5485.366	231.034	251.6	0.6	NO	0.999	NO	MM
10	10 200228P2-12	Standard	500.000	5.31	176296.172	4388.995	502.097			NO	0.999	NO	MMXI

Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999396
Calibration curve: -0.00024686 * x^2 + 1.02132 * x + 0.0388613
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 200228P2-3	Standard	0.250	5.32	404.709	18573.832	0.272	0.2	-8.5	NO	0.999	NO	bb
2	2 200228P2-4	Standard	0.500	5.32	894.108	20339.076	0.550	0.5	0.0	NO	0.999	NO	bd
3	3 200228P2-5	Standard	1.000	5.32	1791.143	19144.830	1.169	1.1	10.7	NO	0.999	NO	bb
4	4 200228P2-6	Standard	2.000	5.32	3526.903	21978.574	2.006	1.9	-3.7	NO	0.999	NO	bb
5	5 200228P2-7	Standard	5.000	5.32	9020.064	22048.242	5.114	5.0	-0.5	NO	0.999	NO	bb
6	6 200228P2-8	Standard	10.000	5.32	17948.205	22638.875	9.910	9.7	-3.1	NO	0.999	NO	bb
7	7 200228P2-9	Standard	50.000	5.32	91829.648	21553.762	53.256	52.8	5.6	NO	0.999	NO	bb
8	8 200228P2-10	Standard	100.000	5.32	175154.313	21511.697	101.779	102.1	2.1	NO	0.999	NO	bb
9	9 200228P2-11	Standard	250.000	5.32	378869.625	20388.465	232.282	241.5	-3.4	NO	0.999	NO	bb
10	10 200228P2-12	Standard	500.000	5.32	704158.000	19467.848	452.129	504.1	0.8	NO	0.999	NO	bb

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Compound name: PFDS
Correlation coefficient: r = 0.997073, r^2 = 0.994155
Calibration curve: 0.810357 * x + 0.0107457
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	200228P2-3	Standard	0.250	5.36	29.619	3307.030	0.112	0.1	-50.0	YES	0.994	NO	bbX
2	2	200228P2-4	Standard	0.500	5.37	98.667	3096.751	0.398	0.5	-4.4	NO	0.994	NO	bb
3	3	200228P2-5	Standard	1.000	5.37	208.579	2988.655	0.872	1.1	6.3	NO	0.994	NO	db
4	4	200228P2-6	Standard	2.000	5.36	416.943	3192.128	1.633	2.0	0.1	NO	0.994	NO	db
5	5	200228P2-7	Standard	5.000	5.36	1099.104	3073.394	4.470	5.5	10.1	NO	0.994	NO	bb
6	6	200228P2-8	Standard	10.000	5.37	2128.758	3408.305	7.807	9.6	-3.8	NO	0.994	NO	bb
7	7	200228P2-9	Standard	50.000	5.37	11610.561	3366.450	43.111	53.2	6.4	NO	0.994	NO	bb
8	8	200228P2-10	Standard	100.000	5.37	19070.660	3355.900	71.034	87.6	-12.4	NO	0.994	NO	bb
9	9	200228P2-11	Standard	250.000	5.37	46639.227	3137.205	185.831	229.3	-8.3	NO	0.994	NO	bb
10	10	200228P2-12	Standard	500.000	5.37	90442.945	2633.736	429.252	529.7	5.9	NO	0.994	NO	bb

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.997770
Calibration curve: -0.000131372 * x^2 + 0.43548 * x + 0.0298851
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	200228P2-3	Standard	0.250	5.53	141.767	16184.979	0.109	0.2	-26.9	NO	0.998	NO	bb
2	2	200228P2-4	Standard	0.500	5.53	307.059	17512.301	0.219	0.4	-13.1	NO	0.998	NO	bb
3	3	200228P2-5	Standard	1.000	5.53	706.291	17816.285	0.496	1.1	7.0	NO	0.998	NO	bb
4	4	200228P2-6	Standard	2.000	5.53	1382.121	17523.025	0.986	2.2	9.8	NO	0.998	NO	bb
5	5	200228P2-7	Standard	5.000	5.53	3750.892	18587.152	2.523	5.7	14.7	NO	0.998	NO	bb
6	6	200228P2-8	Standard	10.000	5.53	7087.320	18789.406	4.715	10.8	7.9	NO	0.998	NO	bb
7	7	200228P2-9	Standard	50.000	5.53	34372.590	20632.824	20.824	48.5	-3.1	NO	0.998	NO	bb
8	8	200228P2-10	Standard	100.000	5.53	65764.742	17997.957	45.675	108.4	8.4	NO	0.998	NO	bb
9	9	200228P2-11	Standard	250.000	5.53	144219.688	18979.340	94.985	234.7	-6.1	NO	0.998	NO	bb
10	10	200228P2-12	Standard	500.000	5.53	273314.063	18254.855	187.152	507.3	1.5	NO	0.998	NO	bb

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.994215
Calibration curve: -0.000732966 * x^2 + 2.04332 * x + -0.0206719
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	200228P2-3	Standard	0.250	5.59	26.598	960.348	0.346	0.2	-28.2	NO	0.994	NO	bb
2	2	200228P2-4	Standard	0.500	5.58	63.920	1151.221	0.694	0.3	-30.0	~~YES~~ ND CM 2/29/20	0.994	NO	bb
3	3	200228P2-5	Standard	1.000	5.59	159.004	915.781	2.170	1.1	7.3	NO	0.994	NO	bb
4	4	200228P2-6	Standard	2.000	5.59	350.360	937.627	4.671	2.3	14.9	NO	0.994	NO	bb
5	5	200228P2-7	Standard	5.000	5.59	1022.777	1056.572	12.100	5.9	18.9	NO	0.994	NO	bb
6	6	200228P2-8	Standard	10.000	5.59	1518.448	894.798	21.212	10.4	4.3	NO	0.994	NO	bb
7	7	200228P2-9	Standard	50.000	5.59	8744.704	893.415	122.349	61.2	22.5	NO	0.994	NO	bb
8	8	200228P2-10	Standard	100.000	5.59	15698.558	1033.161	189.934	96.3	-3.7	NO	0.994	NO	bb
9	9	200228P2-11	Standard	250.000	5.59	31146.400	904.394	430.487	229.6	-8.2	NO	0.994	NO	bb
10	10	200228P2-12	Standard	500.000	5.59	57086.715	834.775	854.822	512.6	2.5	NO	0.994	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998870
Calibration curve: -0.000532708 * x^2 + 1.17293 * x + 0.0264657
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	200228P2-3	Standard	0.250	5.59	376.758	16184.979	0.291	0.2	-9.8	NO	0.999	NO	bd
2	2	200228P2-4	Standard	0.500	5.59	902.117	17512.301	0.644	0.5	5.3	NO	0.999	NO	bd
3	3	200228P2-5	Standard	1.000	5.60	1791.321	17816.285	1.257	1.0	4.9	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	5.60	3653.569	17523.025	2.606	2.2	10.1	NO	0.999	NO	bd
5	5	200228P2-7	Standard	5.000	5.60	9012.456	18587.152	6.061	5.2	3.1	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	5.60	17295.561	18789.406	11.506	9.8	-1.7	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	5.60	87056.453	20632.824	52.741	45.9	-8.2	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	5.60	171259.547	17997.957	118.944	106.5	6.5	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	5.60	389540.188	18979.340	256.555	246.2	-1.5	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	5.60	663151.063	18254.855	454.092	501.2	0.2	NO	0.999	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999025
Calibration curve: -8.12207e-005 * x^2 + 1.04177 * x + 0.809124
Response type: Internal Std (Ref 87), 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	200228P2-3	Standard	1.250	5.69	90.572	18159.350	0.744			NO	0.999	NO	bbXI
2	2	200228P2-4	Standard	2.500	5.68	324.528	18045.119	2.683	1.8	-28.0	NO	0.999	NO	bb
3	3	200228P2-5	Standard	5.000	5.69	704.051	17548.061	5.986	5.0	-0.6	NO	0.999	NO	bb
4	4	200228P2-6	Standard	10.000	5.69	1411.281	17690.459	11.903	10.7	6.6	NO	0.999	NO	bd
5	5	200228P2-7	Standard	25.000	5.69	3722.970	17803.273	31.200	29.2	17.0	NO	0.999	NO	bb
6	6	200228P2-8	Standard	50.000	5.69	7036.738	18883.377	55.598	52.8	5.6	NO	0.999	NO	bb
7	7	200228P2-9	Standard	250.000	5.69	33350.738	19870.102	250.423	244.3	-2.3	NO	0.999	NO	bb
8	8	200228P2-10	Standard	500.000	5.69	63135.125	18013.250	522.935	522.5	4.5	NO	0.999	NO	bb
9	9	200228P2-11	Standard	1250.000	5.69	146654.656	19231.553	1137.759	1204.5	-3.6	NO	0.999	NO	bb
10	10	200228P2-12	Standard	2500.000	5.69	272756.000	19259.861	2112.954	2524.2	1.0	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.997881
Calibration curve: -0.000454632 * x^2 + 1.13495 * x + 0.102846
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	200228P2-3	Standard	0.250	5.84	435.376	16184.979	0.336	0.2	-17.7	NO	0.998	NO	bb
2	2	200228P2-4	Standard	0.500	5.84	715.365	17512.301	0.511	0.4	-28.1	NO	0.998	NO	bb
3	3	200228P2-5	Standard	1.000	5.84	1999.068	17816.285	1.403	1.1	14.6	NO	0.998	NO	db
4	4	200228P2-6	Standard	2.000	5.84	3789.050	17523.025	2.703	2.3	14.7	NO	0.998	NO	bb
5	5	200228P2-7	Standard	5.000	5.84	8910.555	18587.152	5.992	5.2	4.0	NO	0.998	NO	bb
6	6	200228P2-8	Standard	10.000	5.84	19347.605	18789.406	12.871	11.3	13.0	NO	0.998	NO	bb
7	7	200228P2-9	Standard	50.000	5.84	88611.047	20632.824	53.683	48.1	-3.7	NO	0.998	NO	bb
8	8	200228P2-10	Standard	100.000	5.84	168571.297	17997.957	117.077	107.7	7.7	NO	0.998	NO	bb
9	9	200228P2-11	Standard	250.000	5.84	367976.031	18979.340	242.353	235.7	-5.7	NO	0.998	NO	bb
10	10	200228P2-12	Standard	500.000	5.84	670353.688	18254.855	459.024	507.5	1.5	NO	0.998	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999053
Calibration curve: -0.000154395 * x^2 + 0.16939 * x + 0.00789247
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	200228P2-3	Standard	0.250	5.87	47.092	19160.992	0.031	0.1	-46.1	YES	0.999	NO	bbX
2	2	200228P2-4	Standard	0.500	5.87	129.978	19432.734	0.084	0.4	-10.6	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	5.86	263.391	18393.316	0.179	1.0	1.1	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	5.87	493.386	18997.523	0.325	1.9	-6.3	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	5.87	1382.551	18252.168	0.947	5.6	11.4	NO	0.999	NO	db
6	6	200228P2-8	Standard	10.000	5.87	2867.940	19684.295	1.821	10.8	8.1	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	5.87	13080.840	21250.850	7.694	47.4	-5.1	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	5.87	23372.684	18719.377	15.607	101.5	1.5	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	5.87	51196.801	19572.852	32.696	249.9	-0.0	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	5.87	93181.367	17645.891	66.008			NO	0.999	NO	bbXI

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00044468 * x^2 + 1.04827 * x + 0.0538161
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	200228P2-3	Standard	0.250	6.05	408.702	19160.992	0.267	0.2	-18.8	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	6.06	727.446	19432.734	0.468	0.4	-21.0	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	6.05	1796.180	18393.316	1.221	1.1	11.4	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	6.05	3605.387	18997.523	2.372	2.2	10.7	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	6.06	9114.531	18252.168	6.242	5.9	18.4	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	6.06	17269.658	19684.295	10.967	10.5	4.6	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	6.06	80721.969	21250.850	47.482	46.1	-7.7	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	6.06	154223.000	18719.377	102.984	102.7	2.7	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	6.06	366454.719	19572.852	234.033	249.6	-0.1	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	6.06	583058.063	17645.891	413.027	500.0	0.0	NO	0.999	NO	db

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999287
Calibration curve: -5.59093e-005 * x^2 + 1.0186 * x + -0.0169663
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	200228P2-3	Standard	1.250	6.11	206.656	26306.035	1.172	1.2	-6.6	NO	0.999	NO	bb
2	2	200228P2-4	Standard	2.500	6.11	411.414	26606.641	2.307	2.3	-8.7	NO	0.999	NO	bb
3	3	200228P2-5	Standard	5.000	6.11	947.835	27114.072	5.216	5.1	2.8	NO	0.999	NO	db
4	4	200228P2-6	Standard	10.000	6.11	1829.091	26701.916	10.220	10.1	0.6	NO	0.999	NO	bb
5	5	200228P2-7	Standard	25.000	6.11	4923.130	27373.635	26.834	26.4	5.6	NO	0.999	NO	bb
6	6	200228P2-8	Standard	50.000	6.11	9860.575	27913.611	52.705	51.9	3.8	NO	0.999	NO	bb
7	7	200228P2-9	Standard	250.000	6.11	47969.539	28027.129	255.362	254.3	1.7	NO	0.999	NO	bb
8	8	200228P2-10	Standard	500.000	6.12	88039.047	25526.758	514.575	520.0	4.0	NO	0.999	NO	bb
9	9	200228P2-11	Standard	1250.000	6.11	200993.438	26280.881	1141.066	1199.2	-4.1	NO	0.999	NO	bb
10	10	200228P2-12	Standard	2500.000	6.11	350524.094	23609.523	2215.131	2524.5	1.0	NO	0.999	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999194
Calibration curve: -0.000191695 * x^2 + 0.708349 * x + 0.140307
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	200228P2-3	Standard	0.250	6.39	699.537	29822.758	0.293	0.2	-13.7	NO	0.999	NO	bb
2	2	200228P2-4	Standard	0.500	6.39	1116.967	28963.484	0.482	0.5	-3.5	NO	0.999	NO	bb
3	3	200228P2-5	Standard	1.000	6.39	1986.745	28612.426	0.868	1.0	2.8	NO	0.999	NO	bb
4	4	200228P2-6	Standard	2.000	6.39	3783.063	28804.293	1.642	2.1	6.0	NO	0.999	NO	bb
5	5	200228P2-7	Standard	5.000	6.39	9377.712	29791.461	3.935	5.4	7.3	NO	0.999	NO	bb
6	6	200228P2-8	Standard	10.000	6.39	18546.781	32327.924	7.171	10.0	-0.5	NO	0.999	NO	bb
7	7	200228P2-9	Standard	50.000	6.39	86309.844	31042.344	34.755	49.5	-0.9	NO	0.999	NO	bb
8	8	200228P2-10	Standard	100.000	6.39	171675.422	29518.701	72.698	105.4	5.4	NO	0.999	NO	bb
9	9	200228P2-11	Standard	250.000	6.39	358410.625	28101.732	159.426	240.5	-3.8	NO	0.999	NO	bb
10	10	200228P2-12	Standard	500.000	6.39	639401.875	25898.963	308.604	504.3	0.9	NO	0.999	NO	bb

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Compound name: PFODA
Coefficient of Determination: R^2 = 0.999807
Calibration curve: -0.000198865 * x^2 + 0.992712 * x + 0.0256061
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	200228P2-3	Standard	0.250	6.62	573.166	29822.758	0.240	0.2	-13.5	NO	1.000	NO	bb
2	2	200228P2-4	Standard	0.500	6.61	1305.184	28963.484	0.563	0.5	8.3	NO	1.000	NO	bb
3	3	200228P2-5	Standard	1.000	6.62	2436.274	28612.426	1.064	1.0	4.7	NO	1.000	NO	bb
4	4	200228P2-6	Standard	2.000	6.62	5017.258	28804.293	2.177	2.2	8.4	NO	1.000	NO	bb
5	5	200228P2-7	Standard	5.000	6.62	12267.357	29791.461	5.147	5.2	3.3	NO	1.000	NO	bb
6	6	200228P2-8	Standard	10.000	6.62	24955.527	32327.924	9.649	9.7	-2.9	NO	1.000	NO	bb
7	7	200228P2-9	Standard	50.000	6.62	124512.672	31042.344	50.138	51.0	2.0	NO	1.000	NO	bb
8	8	200228P2-10	Standard	100.000	6.62	232934.625	29518.701	98.639	101.4	1.4	NO	1.000	NO	bb
9	9	200228P2-11	Standard	250.000	6.62	520859.063	28101.732	231.685	245.4	-1.8	NO	1.000	NO	bb
10	10	200228P2-12	Standard	500.000	6.62	928944.563	25898.963	448.350	502.1	0.4	NO	1.000	NO	bb

Compound name: N-MeFOSE
Coefficient of Determination: R^2 = 0.999509
Calibration curve: -4.41238e-005 * x^2 + 1.08829 * x + 0.219461
Response type: Internal Std (Ref 95), 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	200228P2-3	Standard	1.250	6.30	157.375	18876.465	1.244	0.9	-24.7	NO	1.000	NO	bb
2	2	200228P2-4	Standard	2.500	6.30	429.819	20143.355	3.184	2.7	9.0	NO	1.000	NO	bb
3	3	200228P2-5	Standard	5.000	6.30	823.318	21041.822	5.838	5.2	3.3	NO	1.000	NO	bb
4	4	200228P2-6	Standard	10.000	6.30	1603.866	20855.742	11.474	10.3	3.5	NO	1.000	NO	bb
5	5	200228P2-7	Standard	25.000	6.30	4139.143	21036.621	29.356	26.8	7.2	NO	1.000	NO	bb
6	6	200228P2-8	Standard	50.000	6.30	8165.117	22270.443	54.702	50.2	0.3	NO	1.000	NO	bb
7	7	200228P2-9	Standard	250.000	6.30	41317.445	21702.188	284.053	263.6	5.4	NO	1.000	NO	bb
8	8	200228P2-10	Standard	500.000	6.30	77250.039	22608.139	509.803	477.5	-4.5	NO	1.000	NO	bb
9	9	200228P2-11	Standard	1250.000	6.30	189332.297	21762.920	1298.005	1256.5	0.5	NO	1.000	NO	bb
10	10	200228P2-12	Standard	2500.000	6.30	343171.969	20939.395	2445.212	2500.1	0.0	NO	1.000	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999753, r^2 = 0.999505
Calibration curve: 0.964785 * x + 0.495135
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 200228P2-3	Standard	1.250	6.45	224.216	23260.693	1.438	1.0	-21.8	NO	1.000	NO	bb
2	2 200228P2-4	Standard	2.500	6.44	407.488	24204.588	2.512	2.1	-16.4	NO	1.000	NO	MM
3	3 200228P2-5	Standard	5.000	6.45	954.318	24771.996	5.748	5.4	8.9	NO	1.000	NO	bd
4	4 200228P2-6	Standard	10.000	6.44	1729.268	23734.000	10.871	10.8	7.5	NO	1.000	NO	bb
5	5 200228P2-7	Standard	25.000	6.45	4561.072	24951.182	27.274	27.8	11.0	NO	1.000	NO	bb
6	6 200228P2-8	Standard	50.000	6.45	9265.671	26929.420	51.336	52.7	5.4	NO	1.000	NO	bb
7	7 200228P2-9	Standard	250.000	6.44	45291.969	27077.797	249.561	258.2	3.3	NO	1.000	NO	bb
8	8 200228P2-10	Standard	500.000	6.44	83955.500	24881.539	503.432	521.3	4.3	NO	1.000	NO	bb
9	9 200228P2-11	Standard	1250.000	6.45	210198.172	26395.951	1188.120	1231.0	-1.5	NO	1.000	NO	bb
10	10 200228P2-12	Standard	2500.000	6.44	402920.500	25083.348	2396.639	2483.6	-0.7	NO	1.000	NO	bb

Compound name: 13C3-PFBA-EIS
Response Factor: 537.644
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 200228P2-3	Standard	12.500	1.34	5693.918		5693.918	10.6	-15.3	NO		NO	MMX
2	2 200228P2-4	Standard	12.500	1.34	6087.459		6087.459	11.3	-9.4	NO		NO	MMX
3	3 200228P2-5	Standard	12.500	1.34	6083.945		6083.945	11.3	-9.5	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	1.34	6339.746		6339.746	11.8	-5.7	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	1.35	6156.793		6156.793	11.5	-8.4	NO		NO	MMX
6	6 200228P2-8	Standard	12.500	1.35	6720.548		6720.548	12.5	0.0	NO		NO	db
7	7 200228P2-9	Standard	12.500	1.35	6685.317		6685.317	12.4	-0.5	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	1.34	6199.003		6199.003	11.5	-7.8	NO		NO	MMX
9	9 200228P2-11	Standard	12.500	1.35	6582.901		6582.901	12.2	-2.0	NO		NO	MMX
10	10 200228P2-12	Standard	12.500	1.35	7297.394		7297.394	13.6	8.6	NO		NO	MMX

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Compound name: 13C3-PFBA-RSD
Response Factor: 0.803468
RRF SD: 0.0282566, Relative SD: 3.51683
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	200228P2-3	Standard	12.500	1.34	5685.271	7248.806	9.804	12.2	-2.4	NO		NO	MM
2	2	200228P2-4	Standard	12.500	1.34	6119.896	7590.792	10.078	12.5	0.3	NO		NO	MM
3	3	200228P2-5	Standard	12.500	1.34	6083.945	7162.085	10.618	13.2	5.7	NO		NO	bb
4	4	200228P2-6	Standard	12.500	1.34	6339.746	7872.748	10.066	12.5	0.2	NO		NO	bb
5	5	200228P2-7	Standard	12.500	1.35	6178.124	7554.741	10.222	12.7	1.8	NO		NO	MM
6	6	200228P2-8	Standard	12.500	1.35	6645.920	8415.775	9.871	12.3	-1.7	NO		NO	MM
7	7	200228P2-9	Standard	12.500	1.35	6685.317	8580.313	9.739	12.1	-3.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	1.34	6223.333	8282.436	9.392	11.7	-6.5	NO		NO	MM
9	9	200228P2-11	Standard	12.500	1.35	6582.901	7956.204	10.342	12.9	3.0	NO		NO	MM
10	10	200228P2-12	Standard	12.500	1.35	7305.919	8866.442	10.300	12.8	2.6	NO		NO	MM

Compound name: 13C3-PFPeA-EIS
Response Factor: 935.16
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	200228P2-3	Standard	12.500	2.27	10563.604		10563.604	11.3	-9.6	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	2.27	10904.597		10904.597	11.7	-6.7	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	2.27	11114.909		11114.909	11.9	-4.9	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	2.27	10781.746		10781.746	11.5	-7.8	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	2.27	11040.878		11040.878	11.8	-5.5	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	2.27	11689.495		11689.495	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	2.27	11880.203		11880.203	12.7	1.6	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	2.27	11196.039		11196.039	12.0	-4.2	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	2.27	11936.076		11936.076	12.8	2.1	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	2.27	10952.733		10952.733	11.7	-6.3	NO		NO	bbX

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Compound name: 13C3-PFPeA-RSD
Response Factor: 0.581386
RRF SD: 0.0233696, Relative SD: 4.01963
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 200228P2-3	Standard	12.500	2.27	10563.604	19238.939	6.863	11.8	-5.6	NO		NO	bb
2	2 200228P2-4	Standard	12.500	2.27	10904.597	19438.518	7.012	12.1	-3.5	NO		NO	bb
3	3 200228P2-5	Standard	12.500	2.27	11114.909	18858.510	7.367	12.7	1.4	NO		NO	bb
4	4 200228P2-6	Standard	12.500	2.27	10781.746	19720.152	6.834	11.8	-6.0	NO		NO	bb
5	5 200228P2-7	Standard	12.500	2.27	11040.878	17828.893	7.741	13.3	6.5	NO		NO	bb
6	6 200228P2-8	Standard	12.500	2.27	11689.495	20418.775	7.156	12.3	-1.5	NO		NO	bb
7	7 200228P2-9	Standard	12.500	2.27	11880.203	20156.393	7.368	12.7	1.4	NO		NO	bb
8	8 200228P2-10	Standard	12.500	2.27	11196.039	18867.879	7.417	12.8	2.1	NO		NO	bb
9	9 200228P2-11	Standard	12.500	2.27	11936.076	19947.314	7.480	12.9	2.9	NO		NO	bb
10	10 200228P2-12	Standard	12.500	2.27	10952.733	18415.488	7.434	12.8	2.3	NO		NO	bb

Compound name: 13C3-PFBS-EIS
Response Factor: 95.8348
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 200228P2-3	Standard	12.500	2.54	1235.219		1235.219	12.9	3.1	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	2.54	1240.708		1240.708	12.9	3.6	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	2.54	1189.869		1189.869	12.4	-0.7	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	2.54	1284.728		1284.728	13.4	7.2	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	2.54	1226.688		1226.688	12.8	2.4	NO		NO	bbX
6	6 200228P2-8	Standard	12.500	2.55	1197.935		1197.935	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	2.55	1292.873		1292.873	13.5	7.9	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	2.55	1240.957		1240.957	12.9	3.6	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	2.55	1239.422		1239.422	12.9	3.5	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	2.55	1157.202		1157.202	12.1	-3.4	NO		NO	bbX

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Compound name: 13C3-PFBS-RSD
Response Factor: 1.10464
RRF SD: 0.104552, Relative SD: 9.46483
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	200228P2-3	Standard	12.500	2.54	1235.219	1010.974	15.273	13.8	10.6	NO		NO	bb
2	2	200228P2-4	Standard	12.500	2.54	1240.708	1084.264	14.304	12.9	3.6	NO		NO	bb
3	3	200228P2-5	Standard	12.500	2.54	1189.869	1077.516	13.803	12.5	-0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	2.54	1284.728	990.154	16.219	14.7	17.5	NO		NO	bb
5	5	200228P2-7	Standard	12.500	2.54	1226.688	1245.659	12.310	11.1	-10.9	NO		NO	bb
6	6	200228P2-8	Standard	12.500	2.55	1197.935	1049.325	14.270	12.9	3.3	NO		NO	bb
7	7	200228P2-9	Standard	12.500	2.55	1292.873	1301.320	12.419	11.2	-10.1	NO		NO	bb
8	8	200228P2-10	Standard	12.500	2.55	1240.957	1271.190	12.203	11.0	-11.6	NO		NO	bb
9	9	200228P2-11	Standard	12.500	2.55	1239.422	1158.894	13.369	12.1	-3.2	NO		NO	bb
10	10	200228P2-12	Standard	12.500	2.55	1157.202	1039.799	13.911	12.6	0.7	NO		NO	bb

Compound name: 13C3-HFPO-DA-EIS
Response Factor: 320.279
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	200228P2-3	Standard	12.500	3.28	3543.095		3543.095	11.1	-11.5	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	3.28	3741.298		3741.298	11.7	-6.5	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	3.28	3534.105		3534.105	11.0	-11.7	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	3.28	3658.248		3658.248	11.4	-8.6	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	3.28	3811.648		3811.648	11.9	-4.8	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	3.28	4003.488		4003.488	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	3.28	4182.291		4182.291	13.1	4.5	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	3.28	3789.889		3789.889	11.8	-5.3	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	3.28	4179.957		4179.957	13.1	4.4	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	3.28	3980.572		3980.572	12.4	-0.6	NO		NO	bbX

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Compound name: 13C3-HFPO-DA-RSD
Response Factor: 0.199346
RRF SD: 0.0119567, Relative SD: 5.99796
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 200228P2-3	Standard	12.500	3.28	3543.095	19238.939	2.302	11.5	-7.6	NO		NO	bb
2	2 200228P2-4	Standard	12.500	3.28	3741.298	19438.518	2.406	12.1	-3.5	NO		NO	bb
3	3 200228P2-5	Standard	12.500	3.28	3534.105	18858.510	2.343	11.8	-6.0	NO		NO	bb
4	4 200228P2-6	Standard	12.500	3.28	3658.248	19720.152	2.319	11.6	-6.9	NO		NO	bb
5	5 200228P2-7	Standard	12.500	3.28	3811.648	17828.893	2.672	13.4	7.2	NO		NO	bb
6	6 200228P2-8	Standard	12.500	3.28	4003.488	20418.775	2.451	12.3	-1.6	NO		NO	bb
7	7 200228P2-9	Standard	12.500	3.28	4182.291	20156.393	2.594	13.0	4.1	NO		NO	bb
8	8 200228P2-10	Standard	12.500	3.28	3789.889	18867.879	2.511	12.6	0.8	NO		NO	bb
9	9 200228P2-11	Standard	12.500	3.28	4179.957	19947.314	2.619	13.1	5.1	NO		NO	bb
10	10 200228P2-12	Standard	12.500	3.28	3980.572	18415.488	2.702	13.6	8.4	NO		NO	bb

Compound name: 13C2-4:2 FTS-EIS
Response Factor: 132.741
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 200228P2-3	Standard	12.500	2.98	1544.957		1544.957	11.6	-6.9	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	2.98	1566.614		1566.614	11.8	-5.6	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	2.98	1519.960		1519.960	11.5	-8.4	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	2.98	1567.699		1567.699	11.8	-5.5	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	2.98	1527.414		1527.414	11.5	-7.9	NO		NO	bbX
6	6 200228P2-8	Standard	12.500	2.98	1659.260		1659.260	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	2.98	1763.701		1763.701	13.3	6.3	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	2.98	1660.416		1660.416	12.5	0.1	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	2.98	1562.131		1562.131	11.8	-5.9	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	2.98	1452.158		1452.158	10.9	-12.5	NO		NO	bbX

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Compound name: 13C2-4:2 FTS-RSD
Response Factor: 1.41804
RRF SD: 0.118077, Relative SD: 8.32678
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 200228P2-3	Standard	12.500	2.98	1544.957	1010.974	19.102	13.5	7.8	NO		NO	bb
2	2 200228P2-4	Standard	12.500	2.98	1566.614	1084.264	18.061	12.7	1.9	NO		NO	bb
3	3 200228P2-5	Standard	12.500	2.98	1519.960	1077.516	17.633	12.4	-0.5	NO		NO	bb
4	4 200228P2-6	Standard	12.500	2.98	1567.699	990.154	19.791	14.0	11.7	NO		NO	bb
5	5 200228P2-7	Standard	12.500	2.98	1527.414	1245.659	15.327	10.8	-13.5	NO		NO	bb
6	6 200228P2-8	Standard	12.500	2.98	1659.260	1049.325	19.766	13.9	11.5	NO		NO	bb
7	7 200228P2-9	Standard	12.500	2.98	1763.701	1301.320	16.941	11.9	-4.4	NO		NO	bb
8	8 200228P2-10	Standard	12.500	2.98	1660.416	1271.190	16.327	11.5	-7.9	NO		NO	bb
9	9 200228P2-11	Standard	12.500	2.98	1562.131	1158.894	16.849	11.9	-4.9	NO		NO	bb
10	10 200228P2-12	Standard	12.500	2.98	1452.158	1039.799	17.457	12.3	-1.5	NO		NO	bb

Compound name: 13C2-PFHxA-EIS
Response Factor: 1583.99
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 200228P2-3	Standard	12.500	3.06	18107.494		18107.494	11.4	-8.5	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	3.06	17982.678		17982.678	11.4	-9.2	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	3.06	17804.041		17804.041	11.2	-10.1	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	3.06	17873.602		17873.602	11.3	-9.7	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	3.06	18577.861		18577.861	11.7	-6.2	NO		NO	bbX
6	6 200228P2-8	Standard	12.500	3.06	19799.846		19799.846	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	3.06	19765.725		19765.725	12.5	-0.2	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	3.07	18790.016		18790.016	11.9	-5.1	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	3.07	18813.150		18813.150	11.9	-5.0	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	3.07	18744.832		18744.832	11.8	-5.3	NO		NO	bbX

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Compound name: 13C2-PFHxA-RSD
Response Factor: 0.966596
RRF SD: 0.0427301, Relative SD: 4.42068
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	200228P2-3	Standard	12.500	3.06	18107.494	19238.939	11.765	12.2	-2.6	NO		NO	bb
2	2	200228P2-4	Standard	12.500	3.06	17982.678	19438.518	11.564	12.0	-4.3	NO		NO	bb
3	3	200228P2-5	Standard	12.500	3.06	17804.041	18858.510	11.801	12.2	-2.3	NO		NO	bb
4	4	200228P2-6	Standard	12.500	3.06	17873.602	19720.152	11.330	11.7	-6.2	NO		NO	bb
5	5	200228P2-7	Standard	12.500	3.06	18577.861	17828.893	13.025	13.5	7.8	NO		NO	bb
6	6	200228P2-8	Standard	12.500	3.06	19799.846	20418.775	12.121	12.5	0.3	NO		NO	bb
7	7	200228P2-9	Standard	12.500	3.06	19765.725	20156.393	12.258	12.7	1.5	NO		NO	bb
8	8	200228P2-10	Standard	12.500	3.07	18790.016	18867.879	12.448	12.9	3.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	3.07	18813.150	19947.314	11.789	12.2	-2.4	NO		NO	bb
10	10	200228P2-12	Standard	12.500	3.07	18744.832	18415.488	12.724	13.2	5.3	NO		NO	bb

Compound name: 13C4-PFHpA-EIS
Response Factor: 1043.64
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	200228P2-3	Standard	12.500	3.67	12581.276		12581.276	12.1	-3.6	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	3.66	12169.229		12169.229	11.7	-6.7	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	3.67	11996.332		11996.332	11.5	-8.0	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	3.67	12809.899		12809.899	12.3	-1.8	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	3.67	13124.444		13124.444	12.6	0.6	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	3.67	13045.506		13045.506	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	3.67	14375.872		14375.872	13.8	10.2	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	3.67	13014.601		13014.601	12.5	-0.2	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	3.67	12944.269		12944.269	12.4	-0.8	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	3.67	12388.945		12388.945	11.9	-5.0	NO		NO	bbX

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Compound name: 13C4-PFHpA-RSD
Response Factor: 0.666538
RRF SD: 0.0360348, Relative SD: 5.40626
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	200228P2-3	Standard	12.500	3.67	12581.276	19238.939	8.174	12.3	-1.9	NO		NO	bb
2	2	200228P2-4	Standard	12.500	3.66	12169.229	19438.518	7.825	11.7	-6.1	NO		NO	bb
3	3	200228P2-5	Standard	12.500	3.67	11996.332	18858.510	7.952	11.9	-4.6	NO		NO	bb
4	4	200228P2-6	Standard	12.500	3.67	12809.899	19720.152	8.120	12.2	-2.5	NO		NO	bb
5	5	200228P2-7	Standard	12.500	3.67	13124.444	17828.893	9.202	13.8	10.4	NO		NO	bb
6	6	200228P2-8	Standard	12.500	3.67	13045.506	20418.775	7.986	12.0	-4.1	NO		NO	bb
7	7	200228P2-9	Standard	12.500	3.67	14375.872	20156.393	8.915	13.4	7.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	3.67	13014.601	18867.879	8.622	12.9	3.5	NO		NO	bb
9	9	200228P2-11	Standard	12.500	3.67	12944.269	19947.314	8.112	12.2	-2.6	NO		NO	bb
10	10	200228P2-12	Standard	12.500	3.67	12388.945	18415.488	8.409	12.6	0.9	NO		NO	bb

Compound name: 13C3-PFHxS-EIS
Response Factor: 210.93
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	200228P2-3	Standard	12.500	3.81	2804.351		2804.351	13.3	6.4	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	3.80	2834.503		2834.503	13.4	7.5	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	3.81	2641.797		2641.797	12.5	0.2	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	3.81	2735.614		2735.614	13.0	3.8	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	3.81	2981.774		2981.774	14.1	13.1	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	3.81	2636.619		2636.619	12.5	0.0	NO		NO	MM
7	7	200228P2-9	Standard	12.500	3.81	3092.432		3092.432	14.7	17.3	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	3.81	2661.052		2661.052	12.6	0.9	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	3.81	2556.917		2556.917	12.1	-3.0	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	3.81	2697.473		2697.473	12.8	2.3	NO		NO	bbX

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Compound name: 13C3-PFHxS-RSD
Response Factor: 2.47767
RRF SD: 0.221519, Relative SD: 8.94061
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	200228P2-3	Standard	12.500	3.81	2804.351	1010.974	34.674	14.0	12.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	3.80	2834.503	1084.264	32.678	13.2	5.5	NO		NO	bb
3	3	200228P2-5	Standard	12.500	3.81	2641.797	1077.516	30.647	12.4	-1.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	3.81	2735.614	990.154	34.535	13.9	11.5	NO		NO	bb
5	5	200228P2-7	Standard	12.500	3.81	2981.774	1245.659	29.922	12.1	-3.4	NO		NO	bb
6	6	200228P2-8	Standard	12.500	3.81	2633.811	1049.325	31.375	12.7	1.3	NO		NO	MM
7	7	200228P2-9	Standard	12.500	3.81	3092.432	1301.320	29.705	12.0	-4.1	NO		NO	bb
8	8	200228P2-10	Standard	12.500	3.81	2661.052	1271.190	26.167	10.6	-15.5	NO		NO	bb
9	9	200228P2-11	Standard	12.500	3.81	2556.917	1158.894	27.579	11.1	-11.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	3.81	2697.473	1039.799	32.428	13.1	4.7	NO		NO	bb

Compound name: 13C2-6:2 FTS-EIS
Response Factor: 122.416
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	200228P2-3	Standard	12.500	4.12	1564.045		1564.045	12.8	2.2	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	4.12	1495.903		1495.903	12.2	-2.2	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	4.12	1391.667		1391.667	11.4	-9.1	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	4.12	1518.498		1518.498	12.4	-0.8	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	4.12	1531.110		1531.110	12.5	0.1	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	4.12	1530.195		1530.195	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.12	1721.369		1721.369	14.1	12.5	NO		NO	bdX
8	8	200228P2-10	Standard	12.500	4.12	1491.310		1491.310	12.2	-2.5	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	4.13	1330.319		1330.319	10.9	-13.1	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	4.13	1299.548		1299.548	10.6	-15.1	NO		NO	bbX

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Compound name: 13C2-6:2 FTS-RSD
Response Factor: 0.437387
RRF SD: 0.0367159, Relative SD: 8.39437
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	200228P2-3	Standard	12.500	4.12	1564.045	3039.571	6.432	14.7	17.6	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.12	1495.903	3466.657	5.394	12.3	-1.3	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.12	1391.667	3106.286	5.600	12.8	2.4	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.12	1518.498	3707.464	5.120	11.7	-6.4	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.12	1531.110	3568.517	5.363	12.3	-1.9	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.12	1530.195	3567.552	5.362	12.3	-1.9	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.12	1721.369	3800.974	5.661	12.9	3.5	NO		NO	bd
8	8	200228P2-10	Standard	12.500	4.12	1491.310	3201.337	5.823	13.3	6.5	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.13	1330.319	3526.663	4.715	10.8	-13.8	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.13	1299.548	3121.729	5.204	11.9	-4.8	NO		NO	bb

Compound name: 13C5-PFNA-EIS
Response Factor: 1397.2
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	200228P2-3	Standard	12.500	4.62	15947.615		15947.615	11.4	-8.7	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	4.62	17004.100		17004.100	12.2	-2.6	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	4.62	17405.514		17405.514	12.5	-0.3	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	4.62	18564.672		18564.672	13.3	6.3	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	4.62	17174.816		17174.816	12.3	-1.7	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	4.62	17464.965		17464.965	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.62	16066.092		16066.092	11.5	-8.0	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	4.62	16351.739		16351.739	11.7	-6.4	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	4.62	18136.590		18136.590	13.0	3.8	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	4.62	16156.843		16156.843	11.6	-7.5	NO		NO	bbX

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Compound name: 13C5-PFNA-RSD
Response Factor: 0.930713
RRF SD: 0.0483582, Relative SD: 5.19583
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	200228P2-3	Standard	12.500	4.62	15947.615	16622.115	11.993	12.9	3.1	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.62	17004.100	18325.652	11.599	12.5	-0.3	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.62	17405.514	18594.150	11.701	12.6	0.6	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.62	18564.672	19121.793	12.136	13.0	4.3	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.62	17174.816	18431.674	11.648	12.5	0.1	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.62	17464.965	18453.684	11.830	12.7	1.7	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.62	16066.092	19558.520	10.268	11.0	-11.7	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.62	16351.739	18416.230	11.099	11.9	-4.6	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.62	18136.590	18171.371	12.476	13.4	7.2	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.62	16156.843	17424.914	11.590	12.5	-0.4	NO		NO	bb

Compound name: 13C8-PFOSA-EIS
Response Factor: 315.194
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	200228P2-3	Standard	12.500	4.68	3508.692		3508.692	11.1	-10.9	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	4.68	3746.921		3746.921	11.9	-4.9	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	4.68	3909.152		3909.152	12.4	-0.8	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	4.68	3762.045		3762.045	11.9	-4.5	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	4.68	3920.882		3920.882	12.4	-0.5	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	4.68	3939.926		3939.926	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.68	3926.786		3926.786	12.5	-0.3	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	4.68	4040.278		4040.278	12.8	2.5	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	4.68	3884.290		3884.290	12.3	-1.4	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	4.68	3858.538		3858.538	12.2	-2.1	NO		NO	bbX

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Compound name: 13C8-PFOSA-RSD
Response Factor: 0.190836
RRF SD: 0.00911114, Relative SD: 4.77433
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 200228P2-3	Standard	12.500	4.68	3508.692	19170.955	2.288	12.0	-4.1	NO		NO	bb
2	2 200228P2-4	Standard	12.500	4.68	3746.921	19971.170	2.345	12.3	-1.7	NO		NO	bb
3	3 200228P2-5	Standard	12.500	4.68	3909.152	20536.209	2.379	12.5	-0.3	NO		NO	bb
4	4 200228P2-6	Standard	12.500	4.68	3762.045	18845.355	2.495	13.1	4.6	NO		NO	bb
5	5 200228P2-7	Standard	12.500	4.68	3920.882	21036.143	2.330	12.2	-2.3	NO		NO	bb
6	6 200228P2-8	Standard	12.500	4.68	3939.926	22479.787	2.191	11.5	-8.2	NO		NO	bb
7	7 200228P2-9	Standard	12.500	4.68	3926.786	21272.746	2.307	12.1	-3.3	NO		NO	bb
8	8 200228P2-10	Standard	12.500	4.68	4040.278	20457.059	2.469	12.9	3.5	NO		NO	bb
9	9 200228P2-11	Standard	12.500	4.68	3884.290	19353.719	2.509	13.1	5.2	NO		NO	bb
10	10 200228P2-12	Standard	12.500	4.68	3858.538	18979.961	2.541	13.3	6.5	NO		NO	bb

Compound name: 13C2-PFOA-EIS
Response Factor: 1520.44
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 200228P2-3	Standard	12.500	4.18	16386.402		16386.402	10.8	-13.8	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	4.18	16716.035		16716.035	11.0	-12.0	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	4.18	17407.059		17407.059	11.4	-8.4	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	4.18	17488.086		17488.086	11.5	-8.0	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	4.18	17831.416		17831.416	11.7	-6.2	NO		NO	bbX
6	6 200228P2-8	Standard	12.500	4.18	19005.488		19005.488	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	4.18	18969.861		18969.861	12.5	-0.2	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	4.18	16762.920		16762.920	11.0	-11.8	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	4.18	16981.471		16981.471	11.2	-10.6	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	4.18	17387.346		17387.346	11.4	-8.5	NO		NO	bbX

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Compound name: 13C2-PFOA-RSD
Response Factor: 0.92465
RRF SD: 0.0425102, Relative SD: 4.59744
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	200228P2-3	Standard	12.500	4.18	16386.402	18004.723	11.376	12.3	-1.6	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.18	16716.035	19584.238	10.669	11.5	-7.7	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.18	17407.059	19046.402	11.424	12.4	-1.2	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.18	17488.086	19435.168	11.248	12.2	-2.7	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.18	17831.416	20020.416	11.133	12.0	-3.7	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.18	19005.488	20665.604	11.496	12.4	-0.5	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.18	18969.861	20043.463	11.830	12.8	2.4	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.18	16762.920	17432.254	12.020	13.0	4.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.18	16981.471	18008.961	11.787	12.7	2.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.18	17387.346	17253.141	12.597	13.6	9.0	NO		NO	bb

Compound name: 13C8-PFOS-EIS
Response Factor: 272.664
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	200228P2-3	Standard	12.500	4.70	3307.030		3307.030	12.1	-3.0	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	4.70	3096.751		3096.751	11.4	-9.1	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	4.70	2988.655		2988.655	11.0	-12.3	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	4.70	3192.128		3192.128	11.7	-6.3	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	4.70	3073.394		3073.394	11.3	-9.8	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	4.70	3408.305		3408.305	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.70	3366.450		3366.450	12.3	-1.2	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	4.70	3355.900		3355.900	12.3	-1.5	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	4.70	3137.205		3137.205	11.5	-8.0	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	4.70	2633.736		2633.736	9.7	-22.7	NO		NO	bbX

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Compound name: 13C8-PFOS-RSD
Response Factor: 0.928705
RRF SD: 0.0834682, Relative SD: 8.98759
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	200228P2-3	Standard	12.500	4.70	3307.030	3039.571	13.600	14.6	17.2	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.70	3096.751	3466.657	11.166	12.0	-3.8	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.70	2988.655	3106.286	12.027	12.9	3.6	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.70	3192.128	3707.464	10.763	11.6	-7.3	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.70	3073.394	3568.517	10.766	11.6	-7.3	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.70	3408.305	3567.552	11.942	12.9	2.9	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.70	3366.450	3800.974	11.071	11.9	-4.6	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.70	3355.900	3201.337	13.104	14.1	12.9	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.70	3137.205	3526.663	11.120	12.0	-4.2	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.70	2630.020	3121.729	10.531	11.3	-9.3	NO		NO	bb

Compound name: 13C2-PFDA-EIS
Response Factor: 1568.62
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	200228P2-3	Standard	12.500	4.99	16701.305		16701.305	10.6	-14.8	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	4.99	18137.516		18137.516	11.6	-7.5	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	4.99	16917.445		16917.445	10.8	-13.7	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	5.00	19539.207		19539.207	12.5	-0.3	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	4.99	18620.824		18620.824	11.9	-5.0	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	5.00	19607.719		19607.719	12.5	0.0	NO		NO	MM
7	7	200228P2-9	Standard	12.500	5.00	21206.717		21206.717	13.5	8.2	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	5.00	18954.754		18954.754	12.1	-3.3	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	5.00	19154.133		19154.133	12.2	-2.3	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	5.00	18877.402		18877.402	12.0	-3.7	NO		NO	bbX

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Compound name: 13C2-PFDA-RSD
Response Factor: 0.985195
RRF SD: 0.0597551, Relative SD: 6.06531
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 200228P2-3	Standard	12.500	4.99	16701.305	18681.912	11.175	11.3	-9.3	NO		NO	bb
2	2 200228P2-4	Standard	12.500	4.99	18137.516	18092.438	12.531	12.7	1.8	NO		NO	bb
3	3 200228P2-5	Standard	12.500	4.99	16917.445	18230.012	11.600	11.8	-5.8	NO		NO	bb
4	4 200228P2-6	Standard	12.500	5.00	19539.207	19853.422	12.302	12.5	-0.1	NO		NO	bb
5	5 200228P2-7	Standard	12.500	4.99	18620.824	19566.799	11.896	12.1	-3.4	NO		NO	bb
6	6 200228P2-8	Standard	12.500	5.00	19615.248	20881.883	11.742	11.9	-4.7	NO		NO	MM
7	7 200228P2-9	Standard	12.500	5.00	21206.717	19756.271	13.418	13.6	9.0	NO		NO	bb
8	8 200228P2-10	Standard	12.500	5.00	18954.754	19158.900	12.367	12.6	0.4	NO		NO	bb
9	9 200228P2-11	Standard	12.500	5.00	19154.133	18922.775	12.653	12.8	2.7	NO		NO	bb
10	10 200228P2-12	Standard	12.500	5.00	18877.402	17522.609	13.466	13.7	9.4	NO		NO	bb

Compound name: 13C2-8:2 FTS-EIS
Response Factor: 86.3943
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 200228P2-3	Standard	12.500	4.96	1062.998		1062.998	12.3	-1.6	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	4.96	1275.449		1275.449	14.8	18.1	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	4.96	1274.255		1274.255	14.7	18.0	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	4.97	1258.480		1258.480	14.6	16.5	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	4.96	1101.410		1101.410	12.7	2.0	NO		NO	MMX
6	6 200228P2-8	Standard	12.500	4.97	1079.929		1079.929	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	4.97	1417.717		1417.717	16.4	31.3	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	4.97	1291.610		1291.610	15.0	19.6	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	4.97	1276.225		1276.225	14.8	18.2	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	4.97	1145.721		1145.721	13.3	6.1	NO		NO	bbX

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Compound name: 13C2-8:2 FTS-RSD
Response Factor: 0.358407
RRF SD: 0.0351336, Relative SD: 9.80269
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	200228P2-3	Standard	12.500	4.96	1062.998	3039.571	4.371	12.2	-2.4	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.96	1275.449	3466.657	4.599	12.8	2.7	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.96	1274.255	3106.286	5.128	14.3	14.5	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.97	1258.480	3707.464	4.243	11.8	-5.3	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.96	1101.679	3568.517	3.859	10.8	-13.9	NO		NO	MM
6	6	200228P2-8	Standard	12.500	4.97	1079.929	3567.552	3.784	10.6	-15.5	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.97	1417.717	3800.974	4.662	13.0	4.1	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.97	1291.610	3201.337	5.043	14.1	12.6	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.97	1276.225	3526.663	4.523	12.6	1.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.97	1145.721	3121.729	4.588	12.8	2.4	NO		NO	bb

Compound name: d3-N-MeFOSAA-EIS
Response Factor: 420.487
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	200228P2-3	Standard	12.500	5.14	4440.857		4440.857	10.6	-15.5	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	5.14	4636.922		4636.922	11.0	-11.8	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	5.14	4818.728		4818.728	11.5	-8.3	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	5.14	4594.937		4594.937	10.9	-12.6	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	5.14	4343.470		4343.470	10.3	-17.4	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	5.14	5256.091		5256.091	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.14	5207.488		5207.488	12.4	-0.9	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	5.14	4999.120		4999.120	11.9	-4.9	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	5.14	4721.123		4721.123	11.2	-10.2	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	5.14	4621.091		4621.091	11.0	-12.1	NO		NO	bbX

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Compound name: d3-N-MeFOSAA-RSD
Response Factor: 0.235916
RRF SD: 0.0117343, Relative SD: 4.97392
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	200228P2-3	Standard	12.500	5.14	4440.857	19170.955	2.896	12.3	-1.8	NO		NO	bb
2	2	200228P2-4	Standard	12.500	5.14	4636.922	19971.170	2.902	12.3	-1.6	NO		NO	bb
3	3	200228P2-5	Standard	12.500	5.14	4818.728	20536.209	2.933	12.4	-0.5	NO		NO	bb
4	4	200228P2-6	Standard	12.500	5.14	4594.937	18845.355	3.048	12.9	3.4	NO		NO	bb
5	5	200228P2-7	Standard	12.500	5.14	4343.470	21036.143	2.581	10.9	-12.5	NO		NO	bb
6	6	200228P2-8	Standard	12.500	5.14	5256.091	22479.787	2.923	12.4	-0.9	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.14	5207.488	21272.746	3.060	13.0	3.8	NO		NO	bb
8	8	200228P2-10	Standard	12.500	5.14	4999.120	20457.059	3.055	12.9	3.6	NO		NO	bb
9	9	200228P2-11	Standard	12.500	5.14	4721.123	19353.719	3.049	12.9	3.4	NO		NO	bb
10	10	200228P2-12	Standard	12.500	5.14	4621.091	18979.961	3.043	12.9	3.2	NO		NO	bb

Compound name: 13C2-PFUdA-EIS
Response Factor: 1811.11
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	200228P2-3	Standard	12.500	5.32	18573.832		18573.832	10.3	-18.0	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	5.32	20339.076		20339.076	11.2	-10.2	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	5.32	19144.830		19144.830	10.6	-15.4	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	5.32	21978.574		21978.574	12.1	-2.9	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	5.32	22048.242		22048.242	12.2	-2.6	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	5.32	22638.875		22638.875	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.32	21553.762		21553.762	11.9	-4.8	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	5.32	21511.697		21511.697	11.9	-5.0	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	5.32	20388.465		20388.465	11.3	-9.9	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	5.32	19467.848		19467.848	10.7	-14.0	NO		NO	bbX

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Compound name: 13C2-PFUdA-RSD
Response Factor: 1.02849
RRF SD: 0.0615914, Relative SD: 5.98852
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	200228P2-3	Standard	12.500	5.32	18573.832	19170.955	12.111	11.8	-5.8	NO		NO	bb
2	2	200228P2-4	Standard	12.500	5.32	20339.076	19971.170	12.730	12.4	-1.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	5.32	19144.830	20536.209	11.653	11.3	-9.4	NO		NO	bb
4	4	200228P2-6	Standard	12.500	5.32	21978.574	18845.355	14.578	14.2	13.4	NO		NO	bb
5	5	200228P2-7	Standard	12.500	5.32	22048.242	21036.143	13.101	12.7	1.9	NO		NO	bb
6	6	200228P2-8	Standard	12.500	5.32	22638.875	22479.787	12.588	12.2	-2.1	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.32	21553.762	21272.746	12.665	12.3	-1.5	NO		NO	bb
8	8	200228P2-10	Standard	12.500	5.32	21511.697	20457.059	13.144	12.8	2.2	NO		NO	bb
9	9	200228P2-11	Standard	12.500	5.32	20388.465	19353.719	13.168	12.8	2.4	NO		NO	bb
10	10	200228P2-12	Standard	12.500	5.32	19467.848	18979.961	12.821	12.5	-0.3	NO		NO	bb

Compound name: d5-N-EtFOSAA-EIS
Response Factor: 476.89
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	200228P2-3	Standard	12.500	5.30	4848.913		4848.913	10.2	-18.7	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	5.30	5232.013		5232.013	11.0	-12.2	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	5.30	5357.471		5357.471	11.2	-10.1	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	5.30	5044.189		5044.189	10.6	-15.4	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	5.30	5133.022		5133.022	10.8	-13.9	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	5.30	5961.130		5961.130	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.30	5536.460		5536.460	11.6	-7.1	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	5.30	5629.953		5629.953	11.8	-5.6	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	5.30	5485.366		5485.366	11.5	-8.0	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	5.30	4388.995		4388.995	9.2	-26.4	NO		NO	bbX

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Compound name: d5-N-EtFOSAA-RSD
Response Factor: 0.260278
RRF SD: 0.0149154, Relative SD: 5.73056
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 200228P2-3	Standard	12.500	5.30	4848.913	19170.955	3.162	12.1	-2.8	NO		NO	bb
2	2 200228P2-4	Standard	12.500	5.30	5232.013	19971.170	3.275	12.6	0.7	NO		NO	bb
3	3 200228P2-5	Standard	12.500	5.30	5357.471	20536.209	3.261	12.5	0.2	NO		NO	bb
4	4 200228P2-6	Standard	12.500	5.30	5044.189	18845.355	3.346	12.9	2.8	NO		NO	bb
5	5 200228P2-7	Standard	12.500	5.30	5133.022	21036.143	3.050	11.7	-6.3	NO		NO	bb
6	6 200228P2-8	Standard	12.500	5.30	5961.130	22479.787	3.315	12.7	1.9	NO		NO	bb
7	7 200228P2-9	Standard	12.500	5.30	5536.460	21272.746	3.253	12.5	-0.0	NO		NO	bb
8	8 200228P2-10	Standard	12.500	5.30	5629.953	20457.059	3.440	13.2	5.7	NO		NO	bb
9	9 200228P2-11	Standard	12.500	5.30	5485.366	19353.719	3.543	13.6	8.9	NO		NO	bb
10	10 200228P2-12	Standard	12.500	5.30	4388.995	18979.961	2.891	11.1	-11.2	NO		NO	bb

Compound name: 13C2-PFDoA-EIS
Response Factor: 1503.15
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 200228P2-3	Standard	12.500	5.59	16184.979		16184.979	10.8	-13.9	NO		NO	bbX
2	2 200228P2-4	Standard	12.500	5.59	17512.301		17512.301	11.7	-6.8	NO		NO	bbX
3	3 200228P2-5	Standard	12.500	5.60	17816.285		17816.285	11.9	-5.2	NO		NO	bbX
4	4 200228P2-6	Standard	12.500	5.60	17523.025		17523.025	11.7	-6.7	NO		NO	bbX
5	5 200228P2-7	Standard	12.500	5.60	18587.152		18587.152	12.4	-1.1	NO		NO	bbX
6	6 200228P2-8	Standard	12.500	5.60	18789.406		18789.406	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	5.60	20632.824		20632.824	13.7	9.8	NO		NO	bbX
8	8 200228P2-10	Standard	12.500	5.60	17997.957		17997.957	12.0	-4.2	NO		NO	bbX
9	9 200228P2-11	Standard	12.500	5.60	18979.340		18979.340	12.6	1.0	NO		NO	bbX
10	10 200228P2-12	Standard	12.500	5.60	18254.855		18254.855	12.1	-2.8	NO		NO	bbX

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Compound name: 13C2-PFDoA-RSD
Response Factor: 0.957248
RRF SD: 0.0622284, Relative SD: 6.50076
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	200228P2-3	Standard	12.500	5.59	16184.979	18681.912	10.829	11.3	-9.5	NO		NO	bb
2	2	200228P2-4	Standard	12.500	5.59	17512.301	18092.438	12.099	12.6	1.1	NO		NO	bb
3	3	200228P2-5	Standard	12.500	5.60	17816.285	18230.012	12.216	12.8	2.1	NO		NO	bb
4	4	200228P2-6	Standard	12.500	5.60	17523.025	19853.422	11.033	11.5	-7.8	NO		NO	bb
5	5	200228P2-7	Standard	12.500	5.60	18587.152	19566.799	11.874	12.4	-0.8	NO		NO	bb
6	6	200228P2-8	Standard	12.500	5.60	18789.406	20881.883	11.247	11.7	-6.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.60	20632.824	19756.271	13.055	13.6	9.1	NO		NO	bb
8	8	200228P2-10	Standard	12.500	5.60	17997.957	19158.900	11.743	12.3	-1.9	NO		NO	bb
9	9	200228P2-11	Standard	12.500	5.60	18979.340	18922.775	12.537	13.1	4.8	NO		NO	bb
10	10	200228P2-12	Standard	12.500	5.60	18254.855	17522.609	13.022	13.6	8.8	NO		NO	bb

Compound name: 13C2-10:2 FTS-EIS
Response Factor: 71.5838
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	200228P2-3	Standard	12.500	5.58	960.348		960.348	13.4	7.3	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	5.58	1151.221		1151.221	16.1	28.7	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	5.58	915.781		915.781	12.8	2.3	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	5.58	937.627		937.627	13.1	4.8	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	5.58	1056.572		1056.572	14.8	18.1	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	5.58	894.798		894.798	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.58	893.415		893.415	12.5	-0.2	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	5.58	1033.161		1033.161	14.4	15.5	NO		NO	MMX
9	9	200228P2-11	Standard	12.500	5.58	904.394		904.394	12.6	1.1	NO		NO	MMX
10	10	200228P2-12	Standard	12.500	5.58	834.775		834.775	11.7	-6.7	NO		NO	MMX

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Compound name: 13C2-10:2 FTS-RSD
Response Factor: 0.283441
RRF SD: 0.036088, Relative SD: 12.7321
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 200228P2-3	Standard	12.500	5.58	960.348	3039.571	3.949	13.9	11.5	NO		NO	bb
2	2 200228P2-4	Standard	12.500	5.58	1151.221	3466.657	4.151	14.6	17.2	NO		NO	bb
3	3 200228P2-5	Standard	12.500	5.58	915.781	3106.286	3.685	13.0	4.0	NO		NO	bb
4	4 200228P2-6	Standard	12.500	5.58	937.627	3707.464	3.161	11.2	-10.8	NO		NO	bb
5	5 200228P2-7	Standard	12.500	5.58	1056.572	3568.517	3.701	13.1	4.5	NO		NO	bb
6	6 200228P2-8	Standard	12.500	5.58	894.798	3567.552	3.135	11.1	-11.5	NO		NO	bb
7	7 200228P2-9	Standard	12.500	5.58	893.415	3800.974	2.938	10.4	-17.1	NO		NO	bb
8	8 200228P2-10	Standard	12.500	5.58	1071.093	3201.337	4.182	14.8	18.0	NO		NO	MM
9	9 200228P2-11	Standard	12.500	5.58	902.295	3526.663	3.198	11.3	-9.7	NO		NO	MM
10	10 200228P2-12	Standard	12.500	5.58	831.288	3121.729	3.329	11.7	-6.1	NO		NO	MM

Compound name: d3-N-MeFOSA-EIS
Response Factor: 126.564
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 200228P2-3	Standard	149.200	5.72	18159.350		18159.350	143.5	-3.8	NO		NO	bbX
2	2 200228P2-4	Standard	149.200	5.71	18045.119		18045.119	142.6	-4.4	NO		NO	bbX
3	3 200228P2-5	Standard	149.200	5.72	17548.061		17548.061	138.6	-7.1	NO		NO	bbX
4	4 200228P2-6	Standard	149.200	5.72	17690.459		17690.459	139.8	-6.3	NO		NO	bbX
5	5 200228P2-7	Standard	149.200	5.72	17803.273		17803.273	140.7	-5.7	NO		NO	bbX
6	6 200228P2-8	Standard	149.200	5.72	18883.377		18883.377	149.2	0.0	NO		NO	bb
7	7 200228P2-9	Standard	149.200	5.72	19870.102		19870.102	157.0	5.2	NO		NO	bbX
8	8 200228P2-10	Standard	149.200	5.72	18013.250		18013.250	142.3	-4.6	NO		NO	bbX
9	9 200228P2-11	Standard	149.200	5.72	19231.553		19231.553	152.0	1.8	NO		NO	bbX
10	10 200228P2-12	Standard	149.200	5.72	19259.861		19259.861	152.2	2.0	NO		NO	bbX

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Compound name: d3-N-MeFOSA-RSD
Response Factor: 0.0766871
RRF SD: 0.00510564, Relative SD: 6.65776
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	200228P2-3	Standard	149.200	5.72	18159.350	19170.955	11.840	154.4	3.5	NO		NO	bb
2	2	200228P2-4	Standard	149.200	5.71	18045.119	19971.170	11.294	147.3	-1.3	NO		NO	bb
3	3	200228P2-5	Standard	149.200	5.72	17548.061	20536.209	10.681	139.3	-6.6	NO		NO	bb
4	4	200228P2-6	Standard	149.200	5.72	17690.459	18845.355	11.734	153.0	2.6	NO		NO	bb
5	5	200228P2-7	Standard	149.200	5.72	17803.273	21036.143	10.579	137.9	-7.5	NO		NO	bb
6	6	200228P2-8	Standard	149.200	5.72	18883.377	22479.787	10.500	136.9	-8.2	NO		NO	bb
7	7	200228P2-9	Standard	149.200	5.72	19870.102	21272.746	11.676	152.3	2.0	NO		NO	bb
8	8	200228P2-10	Standard	149.200	5.72	18013.250	20457.059	11.007	143.5	-3.8	NO		NO	bb
9	9	200228P2-11	Standard	149.200	5.72	19231.553	19353.719	12.421	162.0	8.6	NO		NO	bb
10	10	200228P2-12	Standard	149.200	5.72	19259.861	18979.961	12.684	165.4	10.9	NO		NO	bb

Compound name: 13C2-PFTeDA-EIS
Response Factor: 1574.74
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	200228P2-3	Standard	12.500	6.05	19160.992		19160.992	12.2	-2.7	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	6.05	19432.734		19432.734	12.3	-1.3	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	6.05	18393.316		18393.316	11.7	-6.6	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	6.05	18997.523		18997.523	12.1	-3.5	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	6.05	18252.168		18252.168	11.6	-7.3	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	6.05	19684.295		19684.295	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	6.06	21250.850		21250.850	13.5	8.0	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	6.06	18719.377		18719.377	11.9	-4.9	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	6.06	19572.852		19572.852	12.4	-0.6	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	6.06	17645.891		17645.891	11.2	-10.4	NO		NO	bbX

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Compound name: 13C2-PFTeDA-RSD
Response Factor: 0.947461
RRF SD: 0.0570976, Relative SD: 6.02638
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 200228P2-3	Standard	12.500	6.05	19160.992	19170.955	12.494	13.2	5.5	NO		NO	bb
2	2 200228P2-4	Standard	12.500	6.05	19432.734	19971.170	12.163	12.8	2.7	NO		NO	bb
3	3 200228P2-5	Standard	12.500	6.05	18393.316	20536.209	11.196	11.8	-5.5	NO		NO	bb
4	4 200228P2-6	Standard	12.500	6.05	18997.523	18845.355	12.601	13.3	6.4	NO		NO	bb
5	5 200228P2-7	Standard	12.500	6.05	18252.168	21036.143	10.846	11.4	-8.4	NO		NO	bb
6	6 200228P2-8	Standard	12.500	6.05	19684.295	22479.787	10.946	11.6	-7.6	NO		NO	bb
7	7 200228P2-9	Standard	12.500	6.06	21250.850	21272.746	12.487	13.2	5.4	NO		NO	bb
8	8 200228P2-10	Standard	12.500	6.06	18719.377	20457.059	11.438	12.1	-3.4	NO		NO	bb
9	9 200228P2-11	Standard	12.500	6.06	19572.852	19353.719	12.642	13.3	6.7	NO		NO	bb
10	10 200228P2-12	Standard	12.500	6.06	17645.891	18979.961	11.621	12.3	-1.9	NO		NO	bb

Compound name: d5-N-ETFOSA-EIS
Response Factor: 187.089
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 200228P2-3	Standard	149.200	6.13	26306.035		26306.035	140.6	-5.8	NO		NO	bbX
2	2 200228P2-4	Standard	149.200	6.13	26606.641		26606.641	142.2	-4.7	NO		NO	bbX
3	3 200228P2-5	Standard	149.200	6.13	27114.072		27114.072	144.9	-2.9	NO		NO	bbX
4	4 200228P2-6	Standard	149.200	6.13	26701.916		26701.916	142.7	-4.3	NO		NO	bbX
5	5 200228P2-7	Standard	149.200	6.13	27373.635		27373.635	146.3	-1.9	NO		NO	bbX
6	6 200228P2-8	Standard	149.200	6.13	27913.611		27913.611	149.2	0.0	NO		NO	MM
7	7 200228P2-9	Standard	149.200	6.13	28027.129		28027.129	149.8	0.4	NO		NO	bbX
8	8 200228P2-10	Standard	149.200	6.13	25526.758		25526.758	136.4	-8.6	NO		NO	bbX
9	9 200228P2-11	Standard	149.200	6.13	26280.881		26280.881	140.5	-5.8	NO		NO	bbX
10	10 200228P2-12	Standard	149.200	6.13	23609.523		23609.523	126.2	-15.4	NO		NO	bbX

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Compound name: d5-N-ETFOSA-RSD
Response Factor: 0.110236
RRF SD: 0.00484534, Relative SD: 4.39541
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	200228P2-3	Standard	149.200	6.13	26306.035	19170.955	17.152	155.6	4.3	NO		NO	bb
2	2	200228P2-4	Standard	149.200	6.13	26606.641	19971.170	16.653	151.1	1.3	NO		NO	bb
3	3	200228P2-5	Standard	149.200	6.13	27114.072	20536.209	16.504	149.7	0.3	NO		NO	bb
4	4	200228P2-6	Standard	149.200	6.13	26701.916	18845.355	17.711	160.7	7.7	NO		NO	bb
5	5	200228P2-7	Standard	149.200	6.13	27373.635	21036.143	16.266	147.6	-1.1	NO		NO	bb
6	6	200228P2-8	Standard	149.200	6.13	28048.318	22479.787	15.596	141.5	-5.2	NO		NO	bd
7	7	200228P2-9	Standard	149.200	6.13	28027.129	21272.746	16.469	149.4	0.1	NO		NO	bb
8	8	200228P2-10	Standard	149.200	6.13	25526.758	20457.059	15.598	141.5	-5.2	NO		NO	bb
9	9	200228P2-11	Standard	149.200	6.13	26280.881	19353.719	16.974	154.0	3.2	NO		NO	bb
10	10	200228P2-12	Standard	149.200	6.13	23609.523	18979.961	15.549	141.1	-5.5	NO		NO	bb

Compound name: 13C2-PFHxDA-EIS
Response Factor: 2586.23
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	200228P2-3	Standard	12.500	6.38	29822.758		29822.758	11.5	-7.7	NO		NO	bbX
2	2	200228P2-4	Standard	12.500	6.39	28963.484		28963.484	11.2	-10.4	NO		NO	bbX
3	3	200228P2-5	Standard	12.500	6.39	28612.426		28612.426	11.1	-11.5	NO		NO	bbX
4	4	200228P2-6	Standard	12.500	6.39	28804.293		28804.293	11.1	-10.9	NO		NO	bbX
5	5	200228P2-7	Standard	12.500	6.39	29791.461		29791.461	11.5	-7.8	NO		NO	bbX
6	6	200228P2-8	Standard	12.500	6.39	32327.924		32327.924	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	6.39	31042.344		31042.344	12.0	-4.0	NO		NO	bbX
8	8	200228P2-10	Standard	12.500	6.39	29518.701		29518.701	11.4	-8.7	NO		NO	bbX
9	9	200228P2-11	Standard	12.500	6.39	28101.732		28101.732	10.9	-13.1	NO		NO	bbX
10	10	200228P2-12	Standard	12.500	6.39	25898.963		25898.963	10.0	-19.9	NO		NO	bbX

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Compound name: 13C2-PFHxDA-RSD
Response Factor: 1.45007
RRF SD: 0.0570149, Relative SD: 3.93188
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	200228P2-3	Standard	12.500	6.38	29822.758	19170.955	19.445	13.4	7.3	NO		NO	bb
2	2	200228P2-4	Standard	12.500	6.39	28963.484	19971.170	18.128	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	6.39	28612.426	20536.209	17.416	12.0	-3.9	NO		NO	bb
4	4	200228P2-6	Standard	12.500	6.39	28804.293	18845.355	19.106	13.2	5.4	NO		NO	bb
5	5	200228P2-7	Standard	12.500	6.39	29791.461	21036.143	17.703	12.2	-2.3	NO		NO	bb
6	6	200228P2-8	Standard	12.500	6.39	32327.924	22479.787	17.976	12.4	-0.8	NO		NO	bb
7	7	200228P2-9	Standard	12.500	6.39	31042.344	21272.746	18.241	12.6	0.6	NO		NO	bb
8	8	200228P2-10	Standard	12.500	6.39	29518.701	20457.059	18.037	12.4	-0.5	NO		NO	bb
9	9	200228P2-11	Standard	12.500	6.39	28101.732	19353.719	18.150	12.5	0.1	NO		NO	bb
10	10	200228P2-12	Standard	12.500	6.39	25898.963	18979.961	17.057	11.8	-5.9	NO		NO	bb

Compound name: d7-N-MeFOSE-EIS
Response Factor: 149.266
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	200228P2-3	Standard	149.200	6.29	18876.465		18876.465	126.5	-15.2	NO		NO	MMX
2	2	200228P2-4	Standard	149.200	6.29	20143.355		20143.355	134.9	-9.6	NO		NO	bbX
3	3	200228P2-5	Standard	149.200	6.29	21041.822		21041.822	141.0	-5.5	NO		NO	bbX
4	4	200228P2-6	Standard	149.200	6.29	20855.742		20855.742	139.7	-6.4	NO		NO	bbX
5	5	200228P2-7	Standard	149.200	6.29	21036.621		21036.621	140.9	-5.5	NO		NO	bbX
6	6	200228P2-8	Standard	149.200	6.29	22270.443		22270.443	149.2	0.0	NO		NO	MM
7	7	200228P2-9	Standard	149.200	6.29	21702.188		21702.188	145.4	-2.6	NO		NO	bbX
8	8	200228P2-10	Standard	149.200	6.29	22608.139		22608.139	151.5	1.5	NO		NO	bbX
9	9	200228P2-11	Standard	149.200	6.29	21762.920		21762.920	145.8	-2.3	NO		NO	bbX
10	10	200228P2-12	Standard	149.200	6.29	20939.395		20939.395	140.3	-6.0	NO		NO	bbX

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Compound name: d7-N-MeFOSE-RSD
Response Factor: 0.0877832
RRF SD: 0.00459125, Relative SD: 5.23021
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	200228P2-3	Standard	149.200	6.29	18917.463	19170.955	12.335	140.5	-5.8	NO		NO	MM
2	2	200228P2-4	Standard	149.200	6.29	20143.355	19971.170	12.608	143.6	-3.7	NO		NO	bb
3	3	200228P2-5	Standard	149.200	6.29	21041.822	20536.209	12.808	145.9	-2.2	NO		NO	bb
4	4	200228P2-6	Standard	149.200	6.29	20855.742	18845.355	13.833	157.6	5.6	NO		NO	bb
5	5	200228P2-7	Standard	149.200	6.29	21036.621	21036.143	12.500	142.4	-4.6	NO		NO	bb
6	6	200228P2-8	Standard	149.200	6.29	22435.268	22479.787	12.475	142.1	-4.7	NO		NO	bd
7	7	200228P2-9	Standard	149.200	6.29	21702.188	21272.746	12.752	145.3	-2.6	NO		NO	bb
8	8	200228P2-10	Standard	149.200	6.29	22608.139	20457.059	13.814	157.4	5.5	NO		NO	bb
9	9	200228P2-11	Standard	149.200	6.29	21762.920	19353.719	14.056	160.1	7.3	NO		NO	bb
10	10	200228P2-12	Standard	149.200	6.29	20939.395	18979.961	13.790	157.1	5.3	NO		NO	bb

Compound name: d9-N-EtFOSE-EIS
Response Factor: 180.492
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	200228P2-3	Standard	149.200	6.43	23260.693		23260.693	128.9	-13.6	NO		NO	bbX
2	2	200228P2-4	Standard	149.200	6.43	24204.588		24204.588	134.1	-10.1	NO		NO	bbX
3	3	200228P2-5	Standard	149.200	6.44	24771.996		24771.996	137.2	-8.0	NO		NO	bbX
4	4	200228P2-6	Standard	149.200	6.44	23734.000		23734.000	131.5	-11.9	NO		NO	bbX
5	5	200228P2-7	Standard	149.200	6.44	24951.182		24951.182	138.2	-7.3	NO		NO	MMX
6	6	200228P2-8	Standard	149.200	6.43	26929.420		26929.420	149.2	0.0	NO		NO	bb
7	7	200228P2-9	Standard	149.200	6.43	27077.797		27077.797	150.0	0.6	NO		NO	bbX
8	8	200228P2-10	Standard	149.200	6.43	24881.539		24881.539	137.9	-7.6	NO		NO	bbX
9	9	200228P2-11	Standard	149.200	6.44	26395.951		26395.951	146.2	-2.0	NO		NO	bbX
10	10	200228P2-12	Standard	149.200	6.43	25083.348		25083.348	139.0	-6.9	NO		NO	bbX

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Compound name: d9-N-EtFOSE-RSD
Response Factor: 0.104305
RRF SD: 0.00492162, Relative SD: 4.7185
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	200228P2-3	Standard	149.200	6.43	23260.693	19170.955	15.167	145.4	-2.5	NO		NO	bb
2	2	200228P2-4	Standard	149.200	6.43	24204.588	19971.170	15.150	145.2	-2.7	NO		NO	bb
3	3	200228P2-5	Standard	149.200	6.44	24771.996	20536.209	15.078	144.6	-3.1	NO		NO	bb
4	4	200228P2-6	Standard	149.200	6.44	23734.000	18845.355	15.743	150.9	1.2	NO		NO	bb
5	5	200228P2-7	Standard	149.200	6.44	24955.105	21036.143	14.829	142.2	-4.7	NO		NO	MM
6	6	200228P2-8	Standard	149.200	6.43	26929.420	22479.787	14.974	143.6	-3.8	NO		NO	bb
7	7	200228P2-9	Standard	149.200	6.43	27077.797	21272.746	15.911	152.5	2.2	NO		NO	bb
8	8	200228P2-10	Standard	149.200	6.43	24881.539	20457.059	15.204	145.8	-2.3	NO		NO	bb
9	9	200228P2-11	Standard	149.200	6.44	26395.951	19353.719	17.048	163.4	9.5	NO		NO	bb
10	10	200228P2-12	Standard	149.200	6.43	25083.348	18979.961	16.520	158.4	6.2	NO		NO	bb

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 7.40149e-017, Relative SD: 7.40149e-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	200228P2-3	Standard	12.500	1.34	7248.806	7248.806	12.500	12.5	0.0	NO		NO	MM
2	2	200228P2-4	Standard	12.500	1.34	7590.792	7590.792	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	1.34	7162.085	7162.085	12.500	12.5	0.0	NO		NO	MM
4	4	200228P2-6	Standard	12.500	1.34	7872.748	7872.748	12.500	12.5	0.0	NO		NO	MM
5	5	200228P2-7	Standard	12.500	1.34	7554.741	7554.741	12.500	12.5	0.0	NO		NO	MM
6	6	200228P2-8	Standard	12.500	1.34	8415.775	8415.775	12.500	12.5	0.0	NO		NO	MM
7	7	200228P2-9	Standard	12.500	1.34	8580.313	8580.313	12.500	12.5	0.0	NO		NO	MM
8	8	200228P2-10	Standard	12.500	1.34	8282.436	8282.436	12.500	12.5	0.0	NO		NO	db
9	9	200228P2-11	Standard	12.500	1.35	7956.204	7956.204	12.500	12.5	0.0	NO		NO	MM
10	10	200228P2-12	Standard	12.500	1.35	8866.442	8866.442	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 200228P2-3	Standard	12.500	3.06	19238.939	19238.939	12.500	12.5	0.0	NO		NO	bb
2	2 200228P2-4	Standard	12.500	3.06	19438.518	19438.518	12.500	12.5	0.0	NO		NO	bb
3	3 200228P2-5	Standard	12.500	3.06	18858.510	18858.510	12.500	12.5	0.0	NO		NO	bb
4	4 200228P2-6	Standard	12.500	3.06	19720.152	19720.152	12.500	12.5	0.0	NO		NO	bb
5	5 200228P2-7	Standard	12.500	3.07	17828.893	17828.893	12.500	12.5	0.0	NO		NO	bb
6	6 200228P2-8	Standard	12.500	3.06	20418.775	20418.775	12.500	12.5	0.0	NO		NO	bb
7	7 200228P2-9	Standard	12.500	3.06	20156.393	20156.393	12.500	12.5	0.0	NO		NO	bb
8	8 200228P2-10	Standard	12.500	3.07	18867.879	18867.879	12.500	12.5	0.0	NO		NO	bb
9	9 200228P2-11	Standard	12.500	3.07	19947.314	19947.314	12.500	12.5	0.0	NO		NO	bb
10	10 200228P2-12	Standard	12.500	3.07	18415.488	18415.488	12.500	12.5	0.0	NO		NO	bb

Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 5.23364e-017, Relative SD: 5.23364e-015
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 200228P2-3	Standard	12.500	3.81	1010.974	1010.974	12.500	12.5	0.0	NO		NO	bb
2	2 200228P2-4	Standard	12.500	3.81	1084.264	1084.264	12.500	12.5	0.0	NO		NO	bb
3	3 200228P2-5	Standard	12.500	3.81	1077.516	1077.516	12.500	12.5	0.0	NO		NO	bb
4	4 200228P2-6	Standard	12.500	3.81	990.154	990.154	12.500	12.5	0.0	NO		NO	bb
5	5 200228P2-7	Standard	12.500	3.81	1245.659	1245.659	12.500	12.5	0.0	NO		NO	dd
6	6 200228P2-8	Standard	12.500	3.81	1049.325	1049.325	12.500	12.5	0.0	NO		NO	MM
7	7 200228P2-9	Standard	12.500	3.81	1301.320	1301.320	12.500	12.5	0.0	NO		NO	bb
8	8 200228P2-10	Standard	12.500	3.81	1271.190	1271.190	12.500	12.5	0.0	NO		NO	bb
9	9 200228P2-11	Standard	12.500	3.81	1158.894	1158.894	12.500	12.5	0.0	NO		NO	bb
10	10 200228P2-12	Standard	12.500	3.81	1039.799	1039.799	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	200228P2-3	Standard	12.500	4.18	18004.723	18004.723	12.500	12.5	0.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.17	19584.238	19584.238	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.18	19046.402	19046.402	12.500	12.5	0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.18	19435.168	19435.168	12.500	12.5	0.0	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.18	20020.416	20020.416	12.500	12.5	0.0	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.18	20665.604	20665.604	12.500	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.18	20043.463	20043.463	12.500	12.5	0.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.18	17432.254	17432.254	12.500	12.5	0.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.18	18008.961	18008.961	12.500	12.5	0.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.18	17253.141	17253.141	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	200228P2-3	Standard	12.500	4.62	16622.115	16622.115	12.500	12.5	0.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.62	18325.652	18325.652	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.62	18594.150	18594.150	12.500	12.5	0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.62	19121.793	19121.793	12.500	12.5	0.0	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.62	18431.674	18431.674	12.500	12.5	0.0	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.62	18453.684	18453.684	12.500	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.62	19558.520	19558.520	12.500	12.5	0.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.62	18416.230	18416.230	12.500	12.5	0.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.62	18171.371	18171.371	12.500	12.5	0.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.62	17424.914	17424.914	12.500	12.5	0.0	NO		NO	bb

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Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 8.27511e-017, Relative SD: 8.27511e-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	200228P2-3	Standard	12.500	4.70	3039.571	3039.571	12.500	12.5	0.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.70	3466.657	3466.657	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.70	3106.286	3106.286	12.500	12.5	0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	4.70	3707.464	3707.464	12.500	12.5	0.0	NO		NO	bb
5	5	200228P2-7	Standard	12.500	4.70	3568.517	3568.517	12.500	12.5	0.0	NO		NO	bb
6	6	200228P2-8	Standard	12.500	4.70	3567.552	3567.552	12.500	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	4.70	3800.974	3800.974	12.500	12.5	0.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	4.70	3201.337	3201.337	12.500	12.5	0.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	4.70	3526.663	3526.663	12.500	12.5	0.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	4.71	3121.729	3121.729	12.500	12.5	0.0	NO		NO	bb

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	200228P2-3	Standard	12.500	4.99	18681.912	18681.912	12.500	12.5	0.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	4.99	18092.438	18092.438	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	4.99	18230.012	18230.012	12.500	12.5	0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	5.00	19853.422	19853.422	12.500	12.5	0.0	NO		NO	bb
5	5	200228P2-7	Standard	12.500	5.00	19566.799	19566.799	12.500	12.5	0.0	NO		NO	bb
6	6	200228P2-8	Standard	12.500	5.00	20881.883	20881.883	12.500	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.00	19756.271	19756.271	12.500	12.5	0.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	5.00	19158.900	19158.900	12.500	12.5	0.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	5.00	18922.775	18922.775	12.500	12.5	0.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	5.00	17522.609	17522.609	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C7-PFUdA
Response Factor: 1
RRF SD: 0, Relative SD: 0
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	200228P2-3	Standard	12.500	5.32	19170.955	19170.955	12.500	12.5	0.0	NO		NO	bb
2	2	200228P2-4	Standard	12.500	5.32	19971.170	19971.170	12.500	12.5	0.0	NO		NO	bb
3	3	200228P2-5	Standard	12.500	5.32	20536.209	20536.209	12.500	12.5	0.0	NO		NO	bb
4	4	200228P2-6	Standard	12.500	5.32	18845.355	18845.355	12.500	12.5	0.0	NO		NO	bb
5	5	200228P2-7	Standard	12.500	5.32	21036.143	21036.143	12.500	12.5	0.0	NO		NO	bb
6	6	200228P2-8	Standard	12.500	5.32	22479.787	22479.787	12.500	12.5	0.0	NO		NO	bb
7	7	200228P2-9	Standard	12.500	5.32	21272.746	21272.746	12.500	12.5	0.0	NO		NO	bb
8	8	200228P2-10	Standard	12.500	5.32	20457.059	20457.059	12.500	12.5	0.0	NO		NO	bb
9	9	200228P2-11	Standard	12.500	5.32	19353.719	19353.719	12.500	12.5	0.0	NO		NO	bb
10	10	200228P2-12	Standard	12.500	5.32	18979.961	18979.961	12.500	12.5	0.0	NO		NO	bb

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9988	NO	
2	2	PFPrS	51	0.9997	NO	
3	3	3:3 FTCA	49	0.9998	NO	
4	4	PFPeA	49	0.9992	NO	
5	5	PFBS	51	0.9989	NO	
6	6	4:2 FTS	55	0.9994	NO	
7	7	PFHxA	57	0.9976	NO	
8	8	PFPeS	51	0.9932	NO	
9	9	HFPO-DA	53	0.9990	NO	
10	10	5:3 FTCA	59	0.9990	NO	
11	11	PFHpA	59	0.9999	NO	
12	12	ADONA	59	0.9997	NO	
13	13	L-PFHxS	61	0.9990	NO	
14	15	6:2 FTS	63	0.9994	NO	
15	16	L-PFOA	69	0.9993	NO	
16	18	PFecHS	69	0.9994	NO	
17	19	PFHpS	71	0.9996	NO	
18	20	7:3 FTCA	65	0.9987	NO	
19	21	PFNA	65	0.9944	NO	
20	22	PFOSA	67	0.9992	NO	
21	23	L-PFOS	71	0.9994	NO	
22	25	9Cl-PF30NS	71	0.9996	NO	
23	26	PFDA	73	0.9991	NO	
24	27	8:2 FTS	75	0.9982	NO	
25	28	PFNS	71	0.9977	NO	
26	29	L-MeFOSAA	77	0.9998	NO	

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Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	81	0.9985	NO	
2	33	PFUdA	79	0.9994	NO	
3	34	PFDS	71	0.9942	NO	
4	35	11Cl-PF30UdS	83	0.9978	NO	
5	36	10:2 FTS	85	0.9942	NO	
6	37	PFDoA	83	0.9989	NO	
7	38	N-MeFOSA	87	0.9990	NO	
8	39	PFTrDA	83	0.9979	NO	
9	40	PFDoS	89	0.9991	NO	
10	41	PFTeDA	89	0.9991	NO	
11	42	N-EtFOSA	91	0.9993	NO	
12	43	PFHxDA	93	0.9992	NO	
13	44	PFODA	93	0.9998	NO	
14	45	N-MeFOSE	95	0.9995	NO	
15	46	N-EtFOSE	97	0.9995	NO	
16	47	13C3-PFBA-EIS			NO	0.000
17	48	13C3-PFBA-RSD	99		NO	3.517
18	49	13C3-PFPeA-EIS			NO	0.000
19	50	13C3-PFPeA-RSD	100		NO	4.020
20	51	13C3-PFBS-EIS			NO	0.000
21	52	13C3-PFBS-RSD	101		NO	9.465
22	53	13C3-HFPO-DA-EIS			NO	0.000
23	54	13C3-HFPO-DA-RSD	100		NO	5.998
24	55	13C2-4:2 FTS-EIS			NO	0.000
25	56	13C2-4:2 FTS-RSD	101		NO	8.327
26	57	13C2-PFHxA-EIS			NO	0.000
27	58	13C2-PFHxA-RSD	100		NO	4.421
28	59	13C4-PFHpA-EIS			NO	0.000
29	60	13C4-PFHpA-RSD	100		NO	5.406
30	61	13C3-PFHxS-EIS			NO	0.000
31	62	13C3-PFHxS-RSD	101		NO	8.941
32	63	13C2-6:2 FTS-EIS			NO	0.000

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Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	13C2-6:2 FTS-RSD	104		NO	8.394
34	65	13C5-PFNA-EIS			NO	0.000
35	66	13C5-PFNA-RSD	103		NO	5.196
36	67	13C8-PFOSA-EIS			NO	0.000
37	68	13C8-PFOSA-RSD	106		NO	4.774
38	69	13C2-PFOA-EIS			NO	0.000
39	70	13C2-PFOA-RSD	102		NO	4.597
40	71	13C8-PFOS-EIS			NO	0.000
41	72	13C8-PFOS-RSD	104		NO	8.988
42	73	13C2-PFDA-EIS			NO	0.000
43	74	13C2-PFDA-RSD	105		NO	6.065
44	75	13C2-8:2 FTS-EIS			NO	0.000
45	76	13C2-8:2 FTS-RSD	104		NO	9.803
46	77	d3-N-MeFOSAA-EIS			NO	0.000
47	78	d3-N-MeFOSAA-RSD	106		NO	4.974
48	79	13C2-PFUdA-EIS			NO	0.000
49	80	13C2-PFUdA-RSD	106		NO	5.989
50	81	d5-N-EtFOSAA-EIS			NO	0.000
51	82	d5-N-EtFOSAA-RSD	106		NO	5.731
52	83	13C2-PFDoA-EIS			NO	0.000
53	84	13C2-PFDoA-RSD	105		NO	6.501
54	85	13C2-10:2 FTS-EIS			NO	0.000
55	86	13C2-10:2 FTS-RSD	104		NO	12.732
56	87	d3-N-MeFOSA-EIS			NO	0.000
57	88	d3-N-MeFOSA-RSD	106		NO	6.658
58	89	13C2-PFTeDA-EIS			NO	0.000
59	90	13C2-PFTeDA-RSD	106		NO	6.026
60	91	d5-N-ETFOSA-EIS			NO	0.000
61	92	d5-N-ETFOSA-RSD	106		NO	4.395
62	93	13C2-PFHxDA-EIS			NO	0.000
63	94	13C2-PFHxDA-RSD	106		NO	3.932
64	95	d7-N-MeFOSE-EIS			NO	0.000
65	96	d7-N-MeFOSE-RSD	106		NO	5.230
66	97	d9-N-EtFOSE-EIS			NO	0.000
67	98	d9-N-EtFOSE-RSD	106		NO	4.718
68	99	13C4-PFBA	99		NO	0.000

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 11:33:45 Pacific Standard Time

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 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
74	1...	13C6-PFDA	105		NO	0.000
75	1...	13C7-PFUdA	106		NO	0.000

Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:38:32 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.35	1.35			
2	PFPrS	1.71	1.67	2.395	2.743	NO
3	3:3 FTCA	2.13	2.13	3.660	3.671	NO
4	PFPeA	2.27	2.27			
5	PFBS	2.55	2.55	3.139	3.004	NO
6	4:2 FTS	2.98	2.98	0.899	0.886	NO
7	PFHxA	3.06	3.07	16.931	18.870	NO
8	PFPeS	3.22	3.26	2.432	2.571	NO
9	HFPO-DA	3.28	3.28	2.776	2.612	NO
10	5:3 FTCA	3.61	3.61	1.853	1.751	NO
11	PFHpA	3.67	3.67	33.693	30.813	NO
12	ADONA	3.76	3.77	4.296	4.293	NO
13	L-PFHxS	3.81	3.81	2.174	2.384	NO
14	6:2 FTS	4.12	4.12	1.229	1.287	NO
15	L-PFOA	4.18	4.18	2.800	3.135	NO
16	PFecHS	4.19	4.19	0.486	0.494	NO
17	PFHpS	4.31	4.29	2.025	2.146	NO
18	7:3 FTCA	4.61	4.61	1.539	1.441	NO
19	PFNA	4.62	4.62	9.406	8.741	NO
20	PFOSA	4.68	4.68	26.472	28.332	NO
21	L-PFOS	4.70	4.70	2.608	2.518	NO
22	9Cl-PF30NS	4.91	4.93	16.976	12.185	NO
23	PFDA	5.00	4.99	11.681	10.193	NO
24	8:2 FTS	4.97	4.97	2.559	2.811	NO
25	PFNS	5.05	5.06	2.122	2.390	NO
26	L-MeFOSAA	5.14	5.15	1.874	2.039	NO

Vista Analytical Laboratory

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:38:56 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.30	5.31	1.127	1.206	NO
2	PFUdA	5.32	5.32	23.768	24.381	NO
3	PFDS	5.33	5.37	2.050	1.794	NO
4	11Cl-PF30UdS	5.53	5.53	19.229	19.152	NO
5	10:2 FTS	5.58	5.59	0.992	0.857	NO
6	PFDoA	5.60	5.60	9.903	9.557	NO
7	N-MeFOSA	5.71	5.69	1.781	1.624	NO
8	PFTrDA	5.85	5.84	50.652	61.024	NO
9	PFDoS	5.86	5.87	3.011	3.764	NO
10	PFTeDA	6.05	6.06	17.346	15.579	NO
11	N-EtFOSA	6.11	6.11	1.652	1.698	NO
12	PFHxDA	6.39	6.39	155.012	149.421	NO
13	PFODA	6.60	6.62			
14	N-MeFOSE	6.29	6.30			
15	N-EtFOSE	6.43	6.45			

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, February 29, 2020 10:40:23 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:40:41 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	200228P2-1	IPA	28-Feb-20	12:45:37
2	2	200228P2-2	IPA	28-Feb-20	12:56:16
3	3	200228P2-3	ST200228P2-1 PFC CS-2 20B1102	28-Feb-20	13:06:47
4	4	200228P2-4	ST200228P2-2 PFC CS-1 20B1103	28-Feb-20	13:17:15
5	5	200228P2-5	ST200228P2-3 PFC CS0 20B1104	28-Feb-20	13:27:47
6	6	200228P2-6	ST200228P2-4 PFC CS1 20B1105	28-Feb-20	13:38:16
7	7	200228P2-7	ST200228P2-5 PFC CS2 20B1106	28-Feb-20	13:48:48
8	8	200228P2-8	ST200228P2-6 PFC CS3 20B1107	28-Feb-20	13:59:16
9	9	200228P2-9	ST200228P2-7 PFC CS4 20B1108	28-Feb-20	14:09:48
10	10	200228P2-10	ST200228P2-8 PFC CS5 20B1109	28-Feb-20	14:20:17
11	11	200228P2-11	ST200228P2-9 PFC CS6 20B1110	28-Feb-20	14:30:48
12	12	200228P2-12	ST200228P2-10 PFC CS7 20B1111	28-Feb-20	14:41:18
13	13	200228P2-13	IB	28-Feb-20	14:51:49
14	14	200228P2-14	ICV200228P2-1 PFC ICV 20B1112	28-Feb-20	15:02:18
15	15	200228P2-15	IB	28-Feb-20	15:12:50

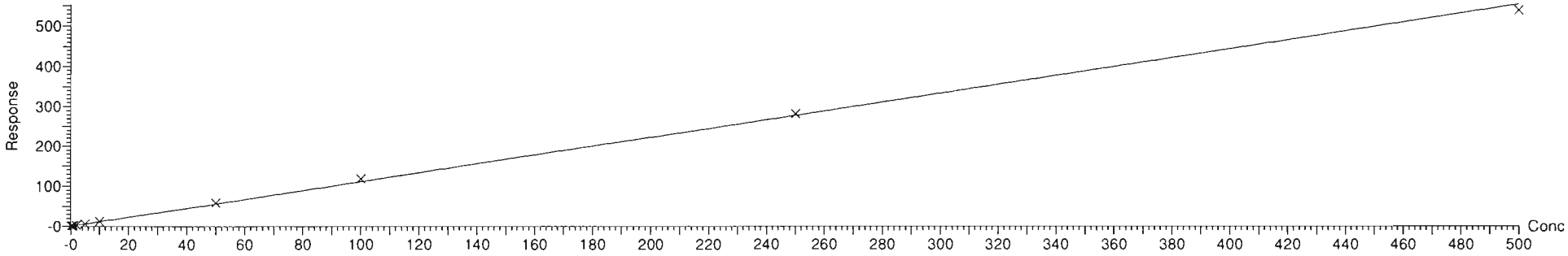
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

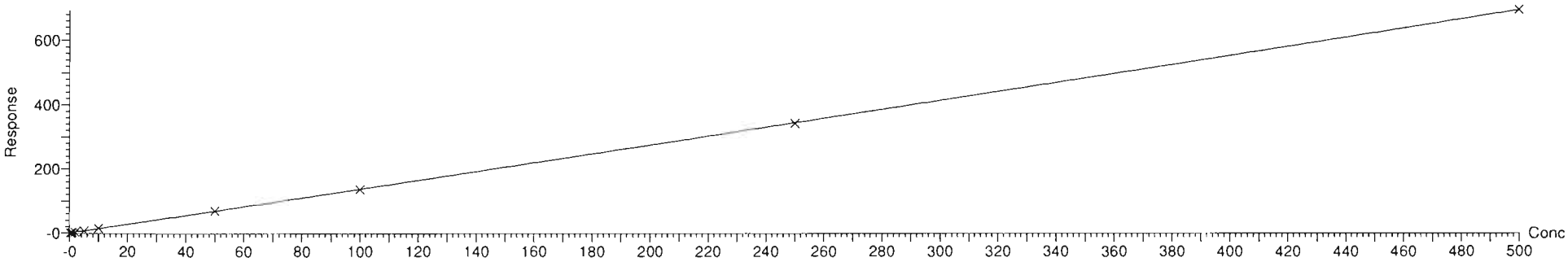
Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: PFBA
Correlation coefficient: r = 0.999413, r^2 = 0.998826
Calibration curve: 1.10826 * x + 0.0696979
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



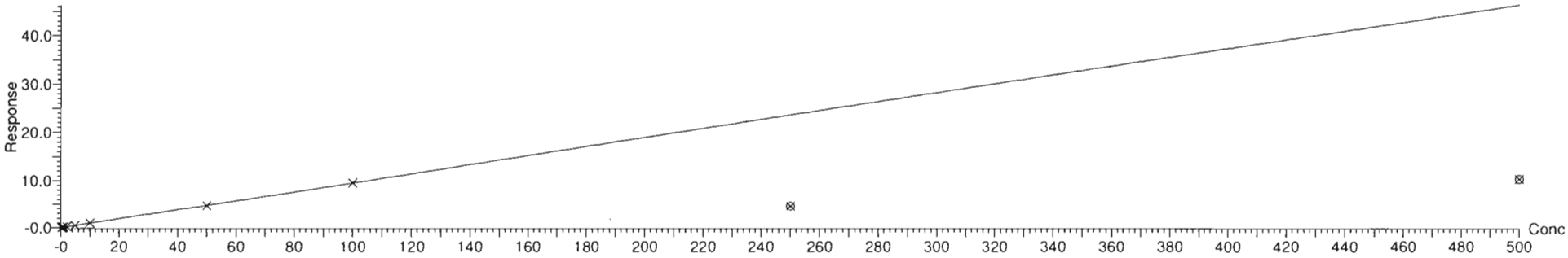
Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999747
Calibration curve: 4.84839e-005 * x^2 + 1.3627 * x + -0.100099
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



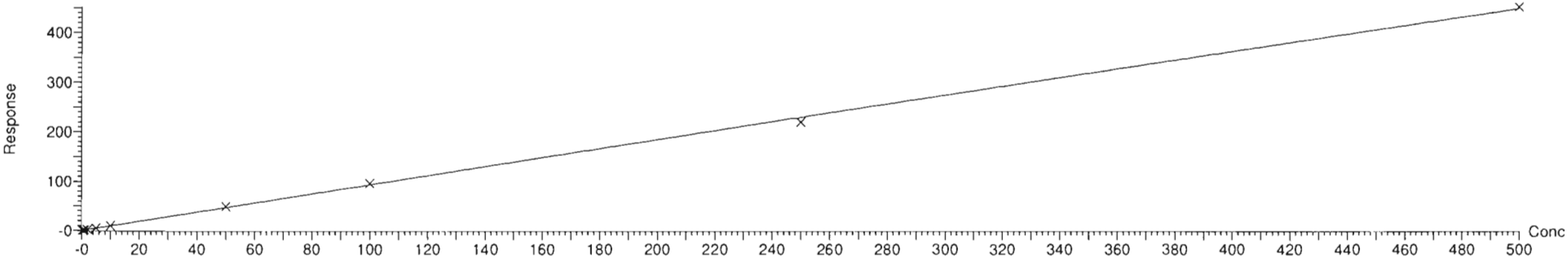
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999800
Calibration curve: -7.45053e-006 * x^2 + 0.0966278 * x + -0.00141223
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



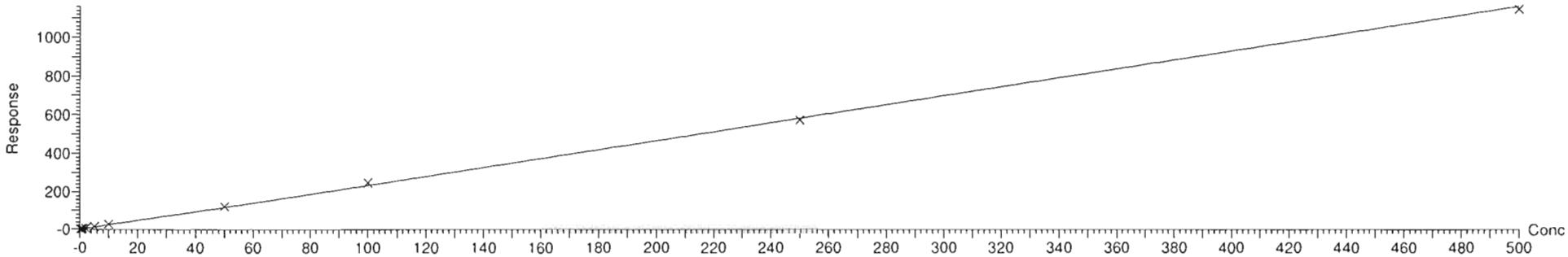
Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999151
Calibration curve: -8.29689e-005 * x^2 + 0.938772 * x + 0.0510655
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



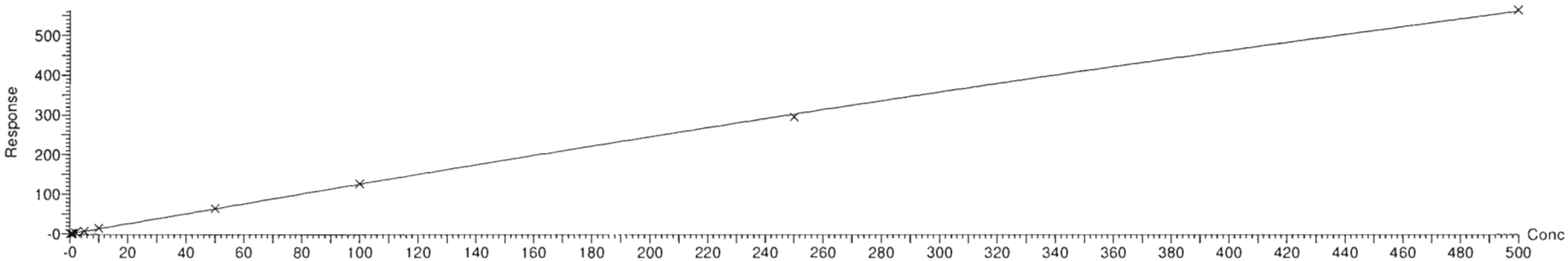
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFBS
Correlation coefficient: r = 0.999452, r^2 = 0.998905
Calibration curve: 2.32412 * x + 0.160204
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



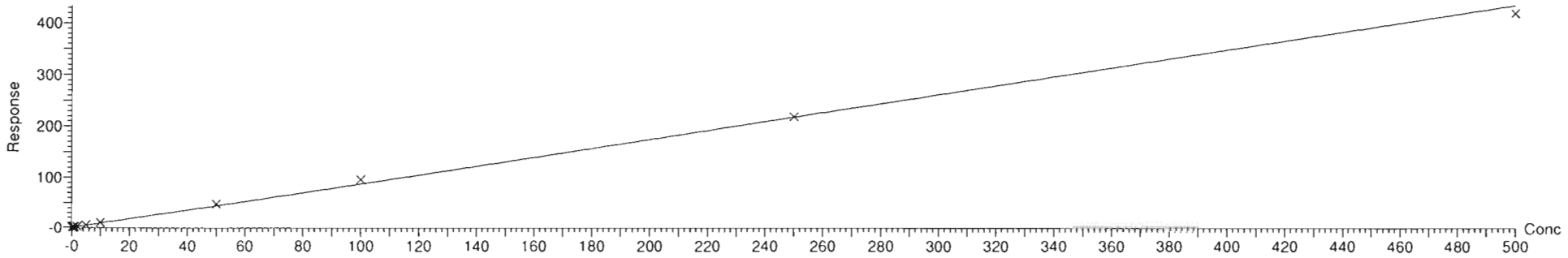
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999388
Calibration curve: -0.000340962 * x^2 + 1.29353 * x + 0.0772484
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



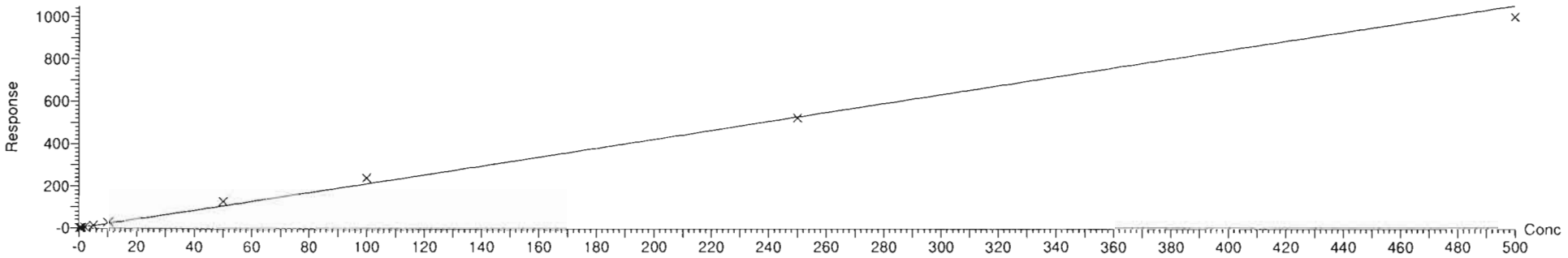
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFHxA
Correlation coefficient: r = 0.998775, r^2 = 0.997551
Calibration curve: 0.87057 * x + 0.122807
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



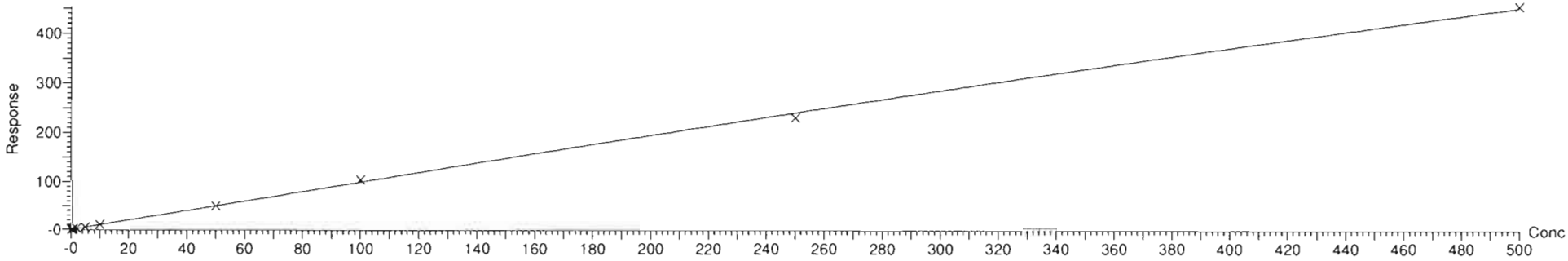
Compound name: PFPeS
Correlation coefficient: r = 0.996617, r^2 = 0.993246
Calibration curve: 2.10956 * x + 0.2038
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



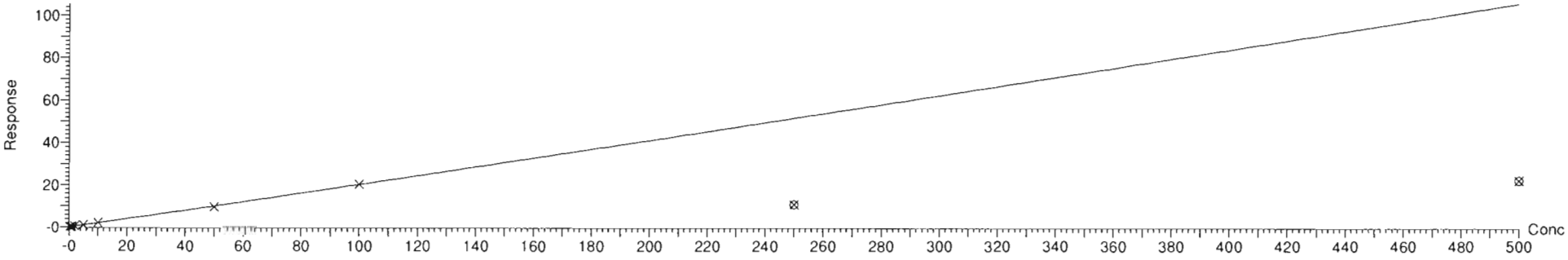
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.998989
Calibration curve: -0.000240539 * x^2 + 1.02346 * x + 0.0413162
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



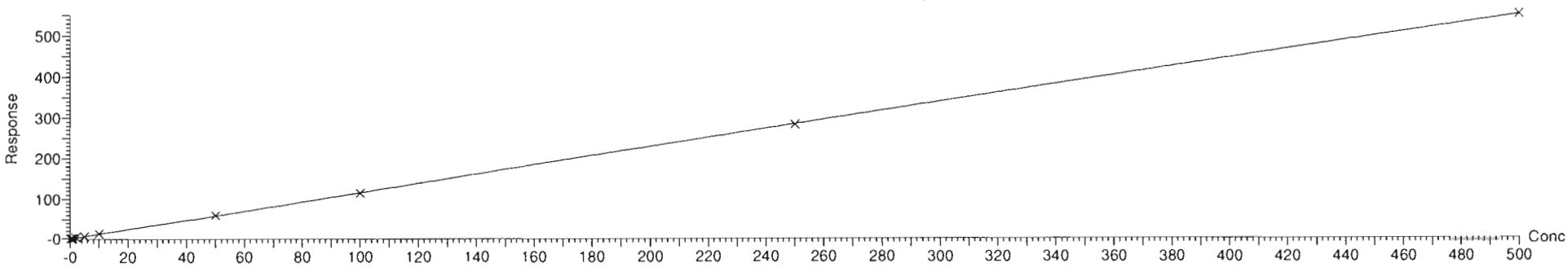
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.998996
Calibration curve: 1.9554e-005 * x^2 + 0.201925 * x + 0.0100515
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



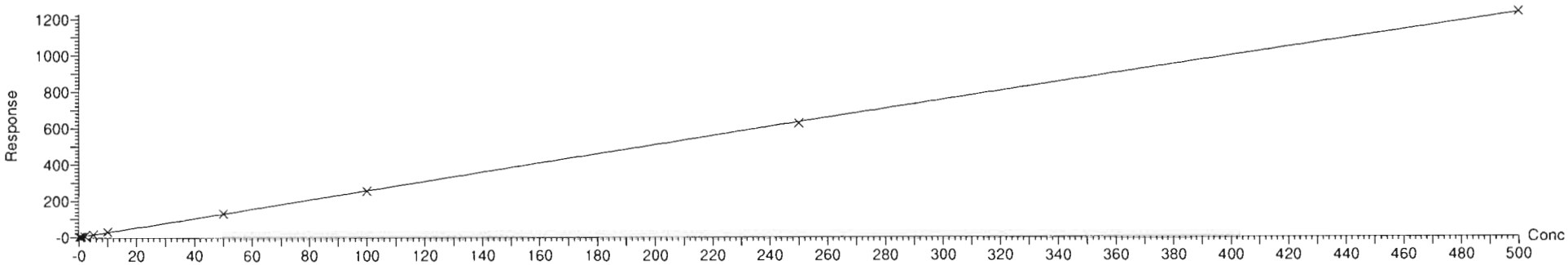
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999882
Calibration curve: -0.000137784 * x^2 + 1.16847 * x + 0.120302
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



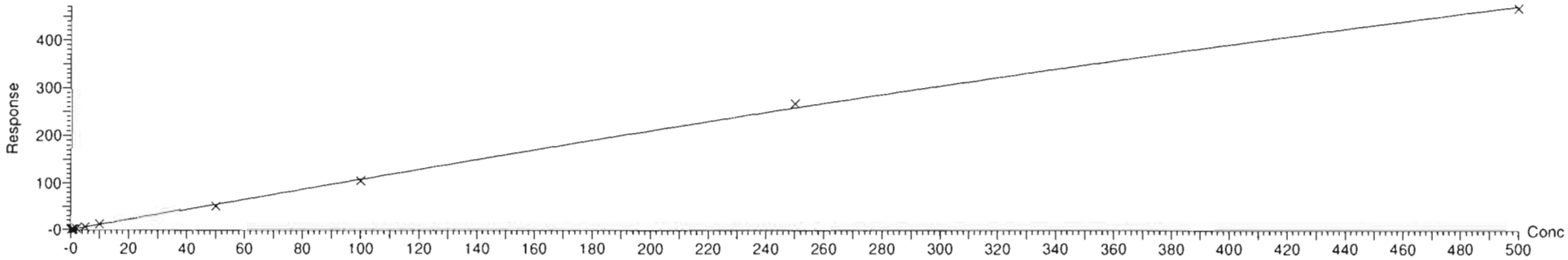
Compound name: ADONA
Coefficient of Determination: R^2 = 0.999691
Calibration curve: -0.000271075 * x^2 + 2.59794 * x + 0.191799
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



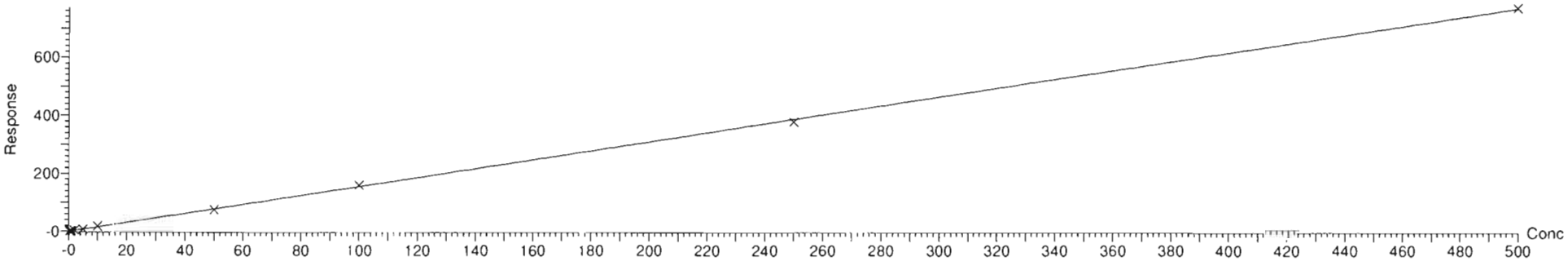
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999028
Calibration curve: -0.00036565 * x^2 + 1.12704 * x + -0.0812317
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



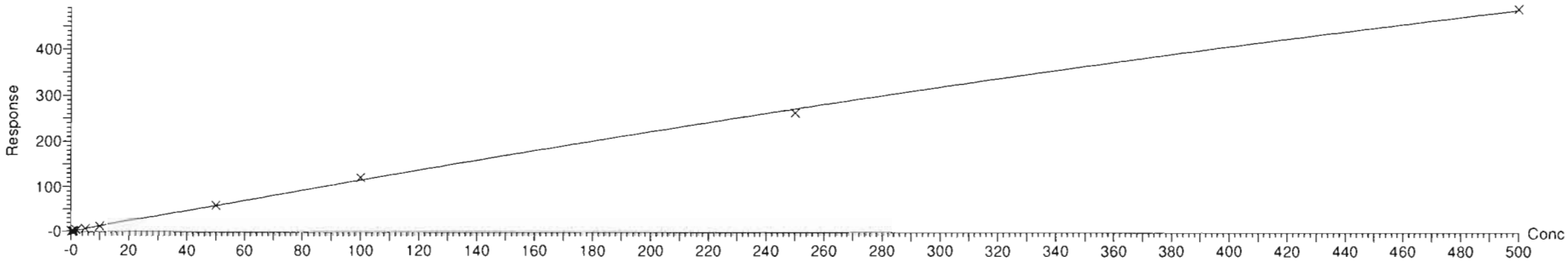
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999399
Calibration curve: -5.55014e-005 * x^2 + 1.56476 * x + 0.0780386
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



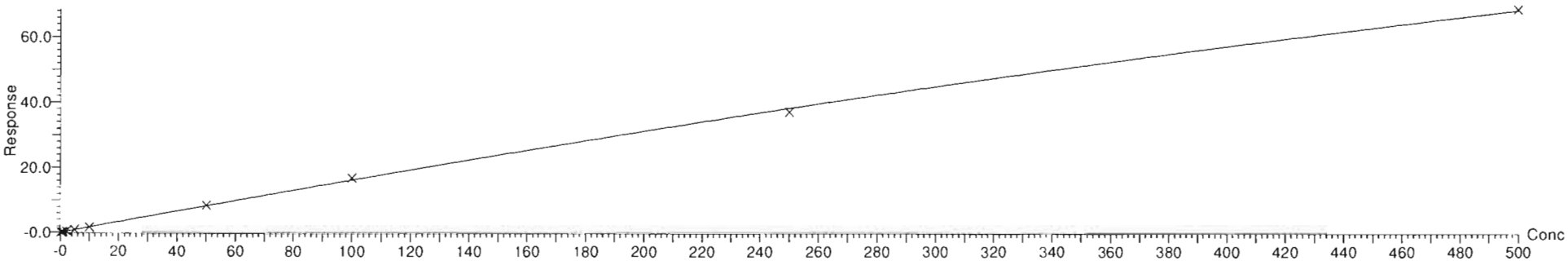
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999347
Calibration curve: -0.000456114 * x^2 + 1.20238 * x + 0.0642634
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



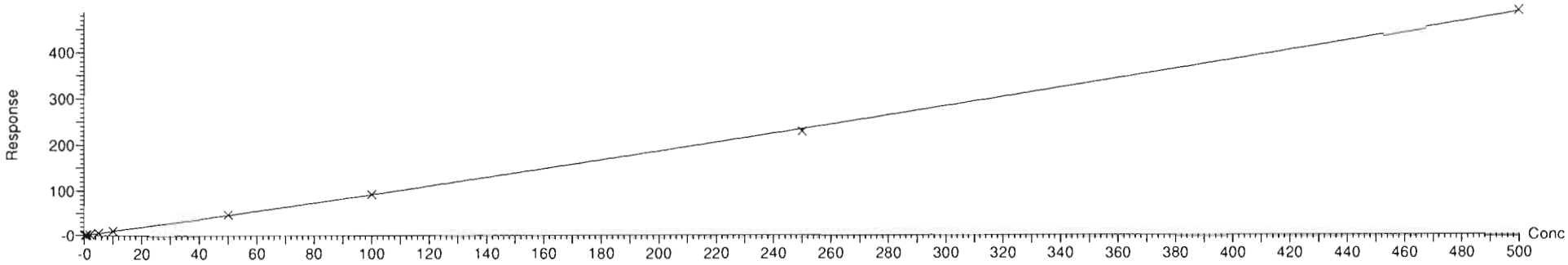
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999401
Calibration curve: -6.57161e-005 * x^2 + 0.169715 * x + -0.00156209
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



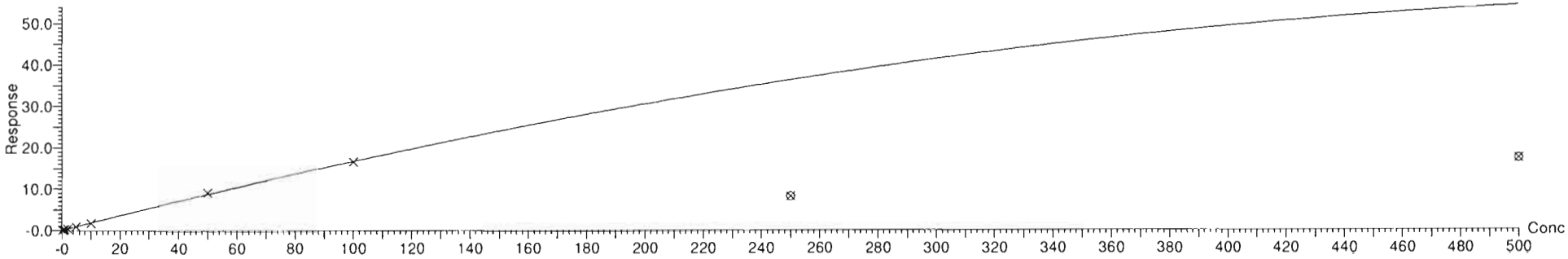
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999647
Calibration curve: 0.000155667 * x^2 + 0.89521 * x + -0.0222947
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



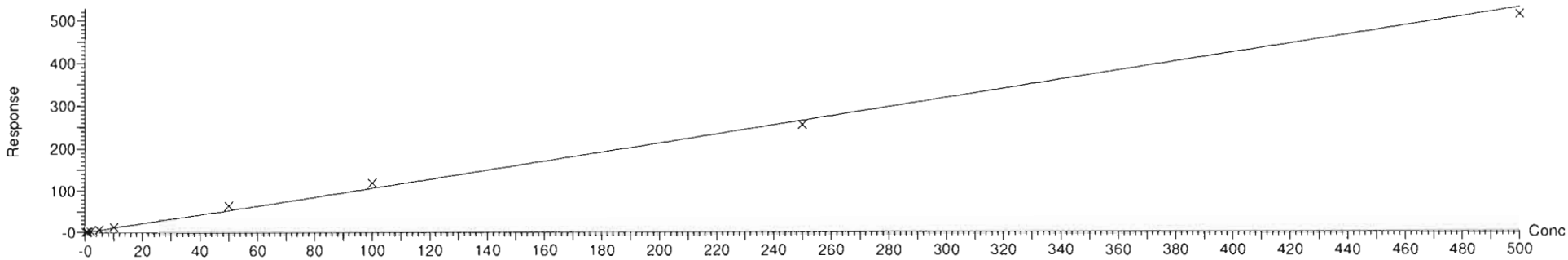
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998738
Calibration curve: -0.000145642 * x^2 + 0.181281 * x + -0.025321
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



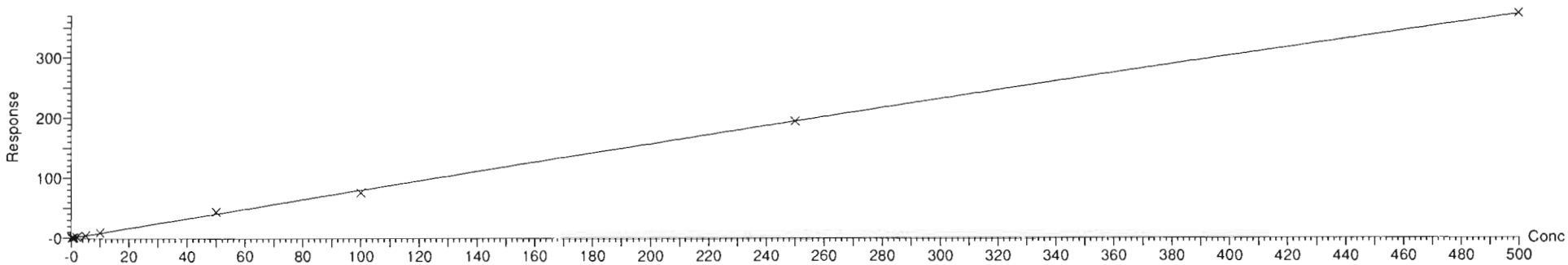
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFNA
Correlation coefficient: r = 0.997210, r^2 = 0.994427
Calibration curve: 1.05725 * x + 0.0955486
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



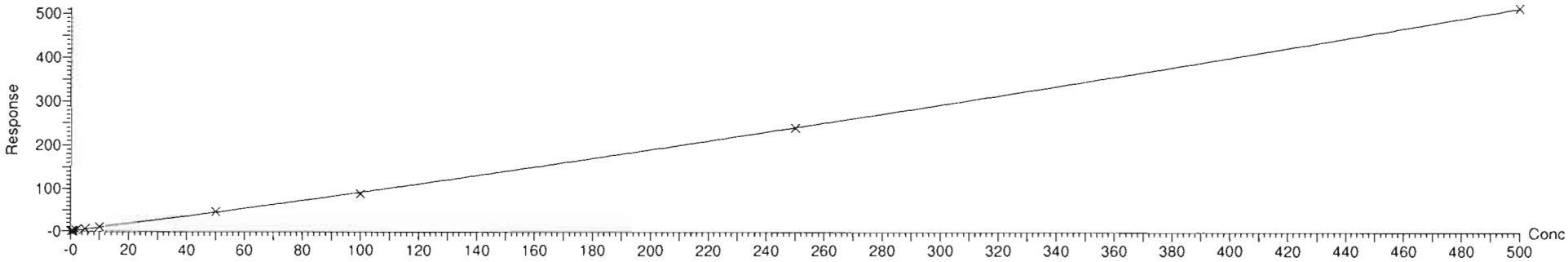
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999163
Calibration curve: -0.000128536 * x^2 + 0.807117 * x + 0.0383818
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



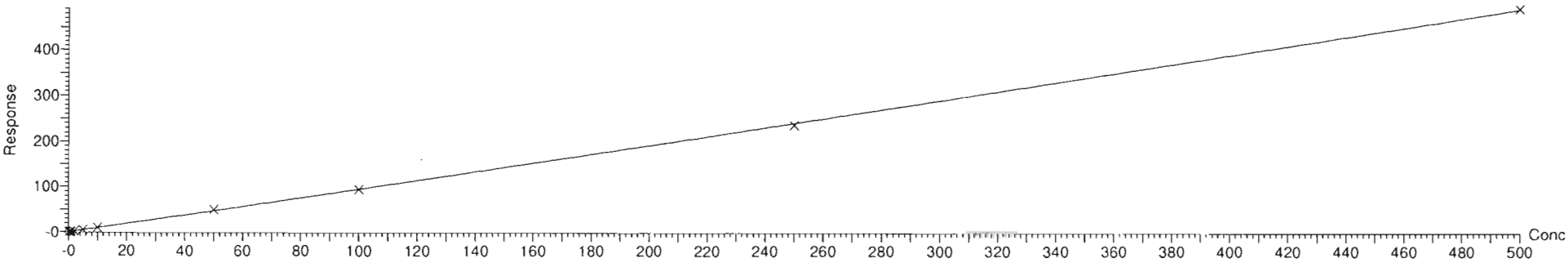
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999449
Calibration curve: 0.000252685 * x^2 + 0.902177 * x + -0.0231466
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



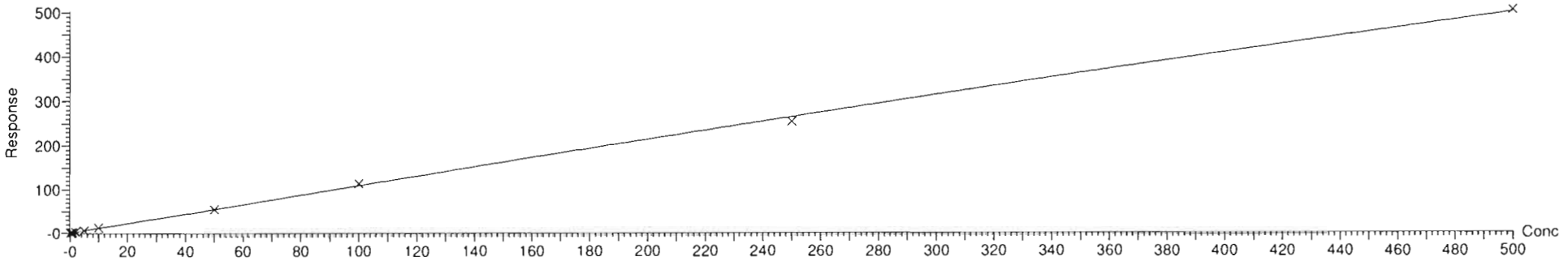
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999587
Calibration curve: 8.1805e-005 * x^2 + 0.939758 * x
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



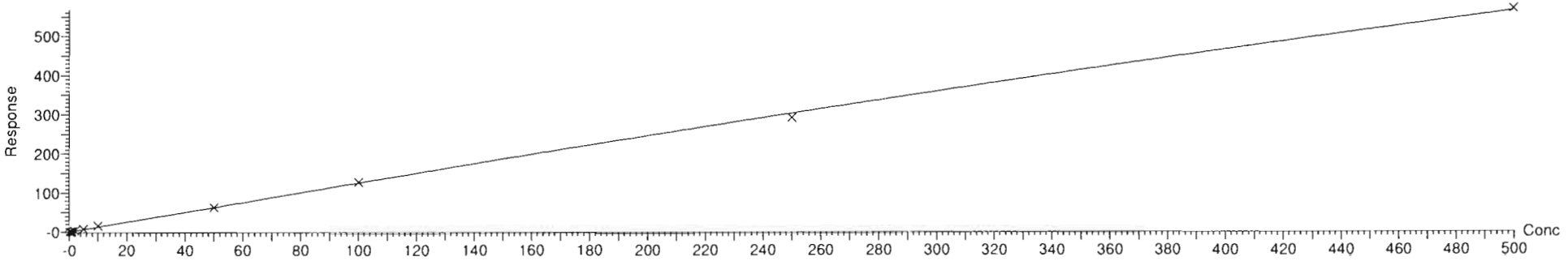
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999061
Calibration curve: -0.000223444 * x^2 + 1.11295 * x + 0.0911483
Response type: Internal Std (Ref 73), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



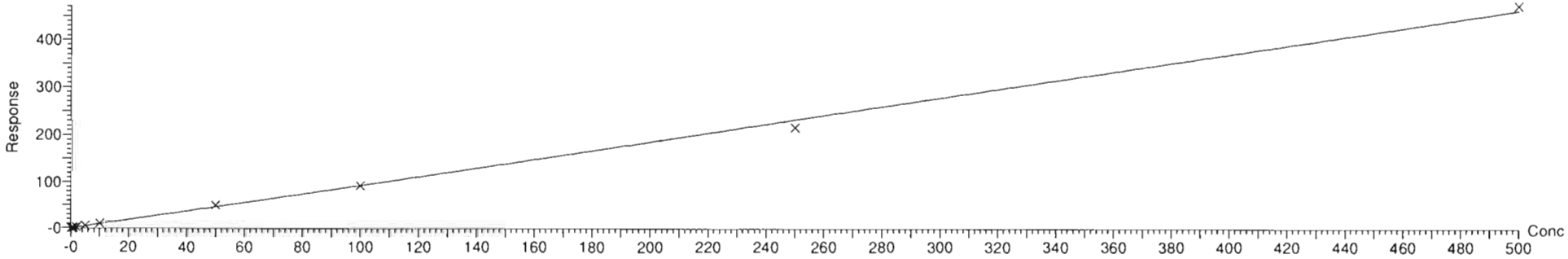
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998241
Calibration curve: -0.000329705 * x^2 + 1.29152 * x + 0.0541173
Response type: Internal Std (Ref 75), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



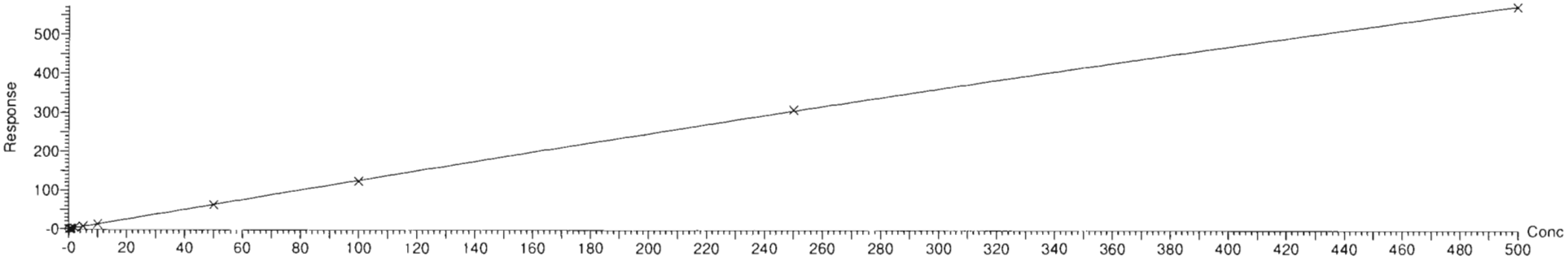
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:36:55 Pacific Standard Time

Compound name: PFNS
Correlation coefficient: r = 0.998843, r^2 = 0.997686
Calibration curve: 0.925171 * x + 0.00150863
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 = 0.999797
Calibration curve: -0.000281991 * x^2 + 1.29029 * x + 0.141953
Response type: Internal Std (Ref 77), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



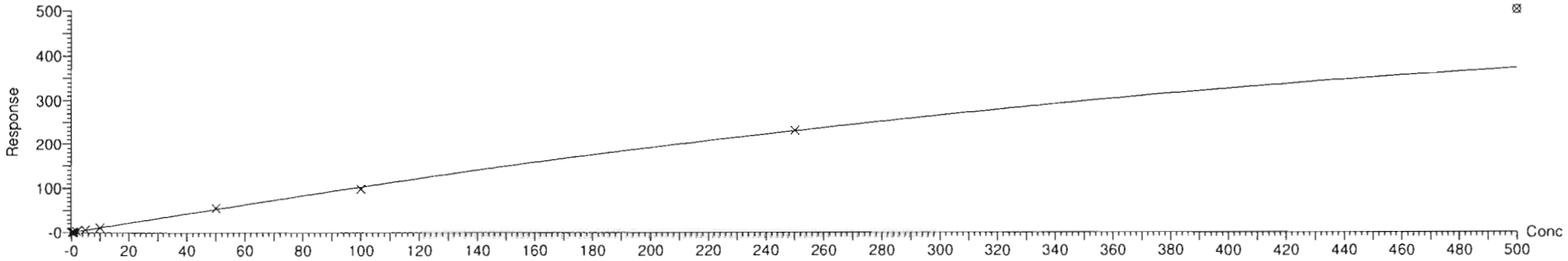
Vista Analytical Laboratory Q1

Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

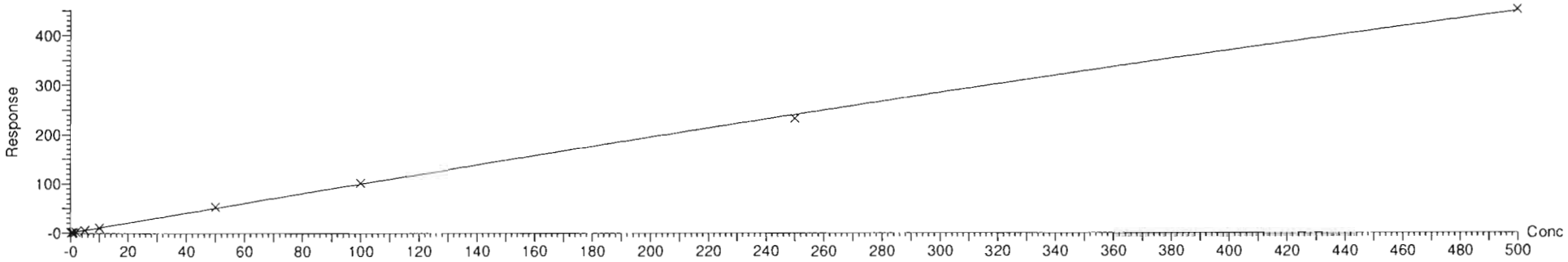
Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Method: D:\PFAS5.PRO\MethDB\NEW_PFAS_80C_022820.mdb 29 Feb 2020 10:29:57
Calibration: D:\PFAS5.PRO\CurveDB\C18_VAL-PFAS_Q5_02-28-20.cdb 29 Feb 2020 10:27:53

Compound name: L-EtFOSAA
Coefficient of Determination: R^2 = 0.998538
Calibration curve: -0.000703582 * x^2 + 1.0956 * x + -0.0674174
Response type: Internal Std (Ref 81), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



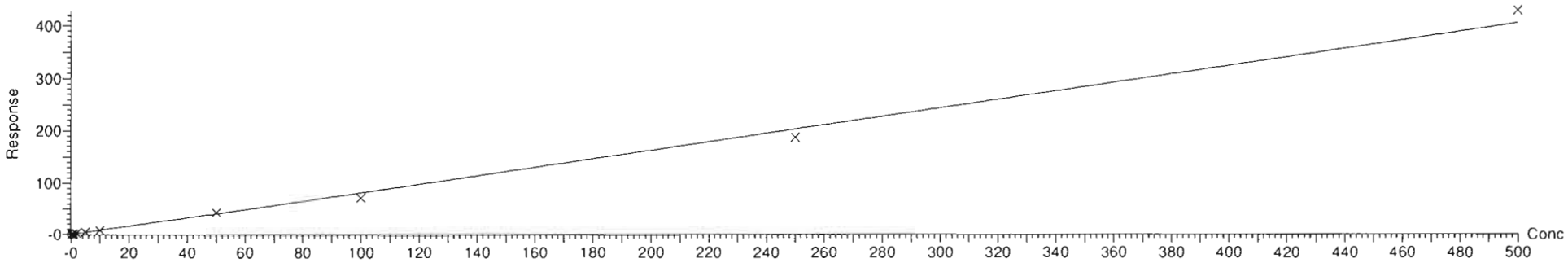
Compound name: PFUdA
Coefficient of Determination: R^2 = 0.999396
Calibration curve: -0.00024686 * x^2 + 1.02132 * x + 0.0388613
Response type: Internal Std (Ref 79), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



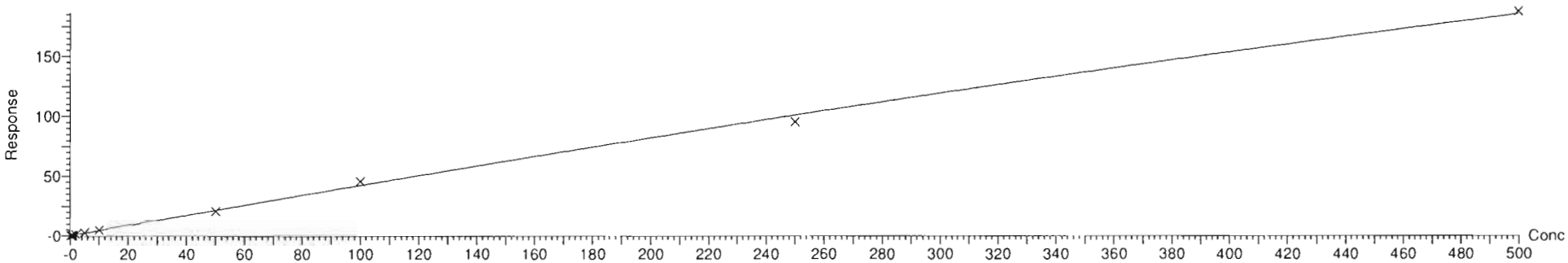
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
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Compound name: PFDS
Correlation coefficient: r = 0.997073, r^2 = 0.994155
Calibration curve: 0.810357 * x + 0.0107457
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



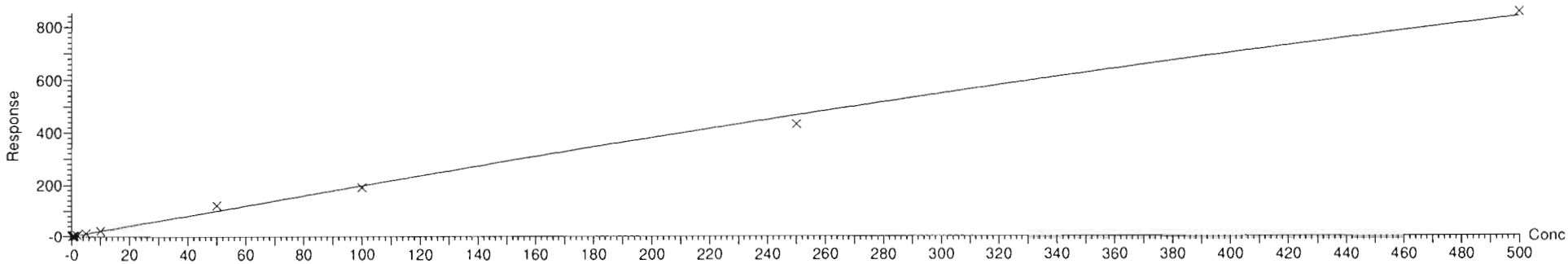
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.997770
Calibration curve: -0.000131372 * x^2 + 0.43548 * x + 0.0298851
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



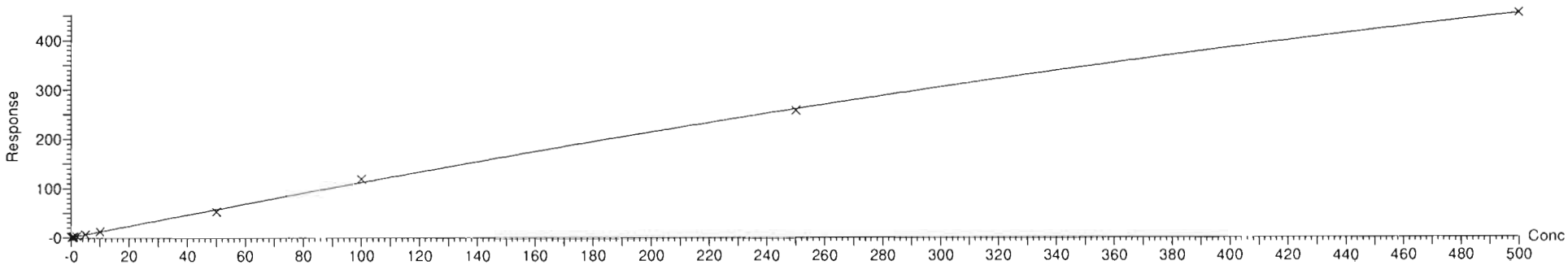
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.994215
Calibration curve: -0.000732966 * x^2 + 2.04332 * x + -0.0206719
Response type: Internal Std (Ref 85), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



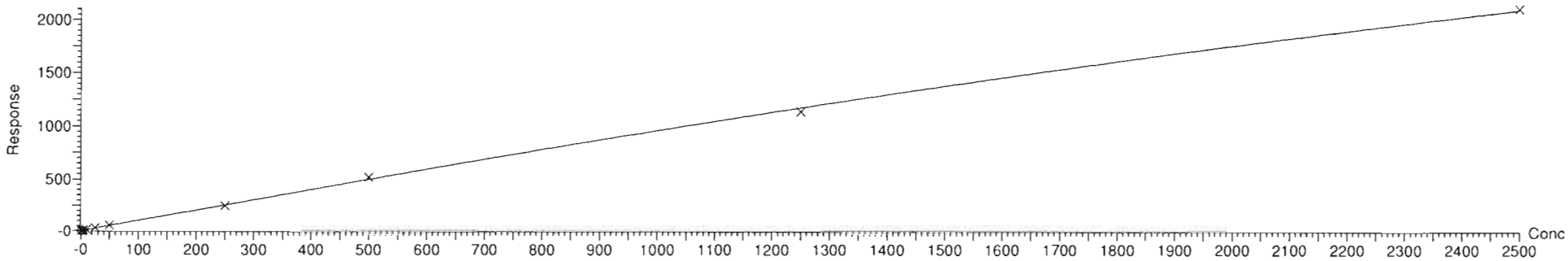
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998870
Calibration curve: -0.000532708 * x^2 + 1.17293 * x + 0.0264657
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



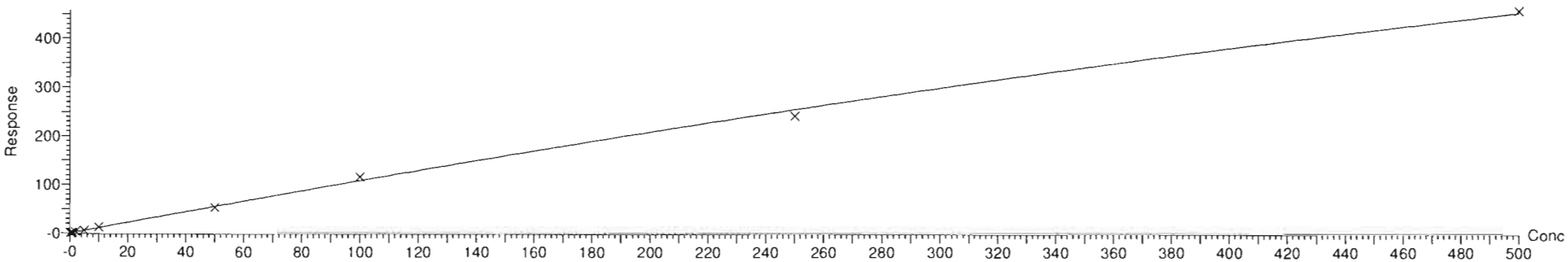
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999025
Calibration curve: -8.12207e-005 * x^2 + 1.04177 * x + 0.809124
Response type: Internal Std (Ref 87), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



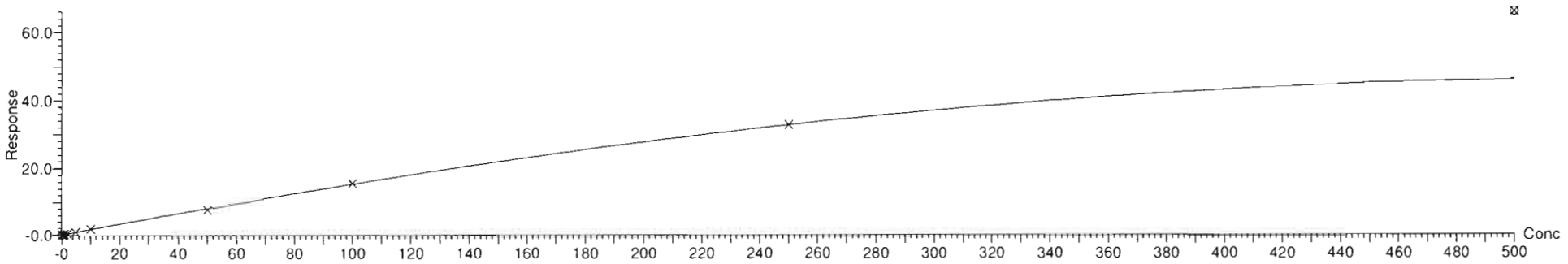
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.997881
Calibration curve: -0.000454632 * x^2 + 1.13495 * x + 0.102846
Response type: Internal Std (Ref 83), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



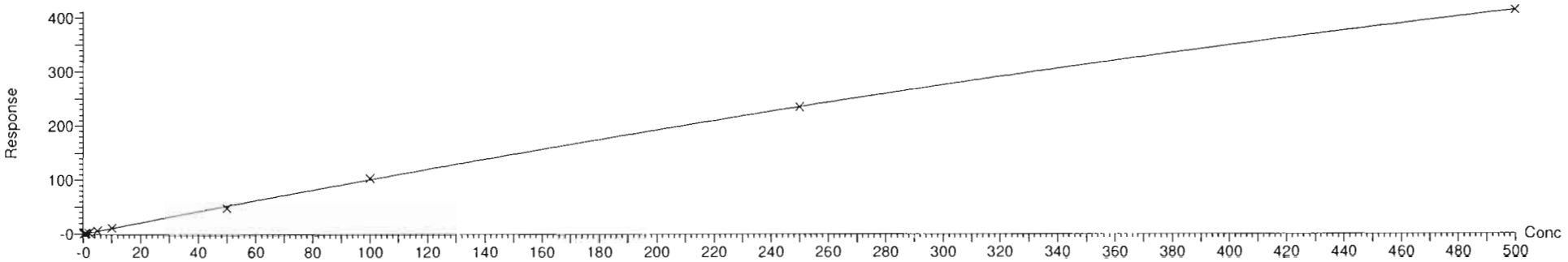
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Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999053
Calibration curve: -0.000154395 * x^2 + 0.16939 * x + 0.00789247
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



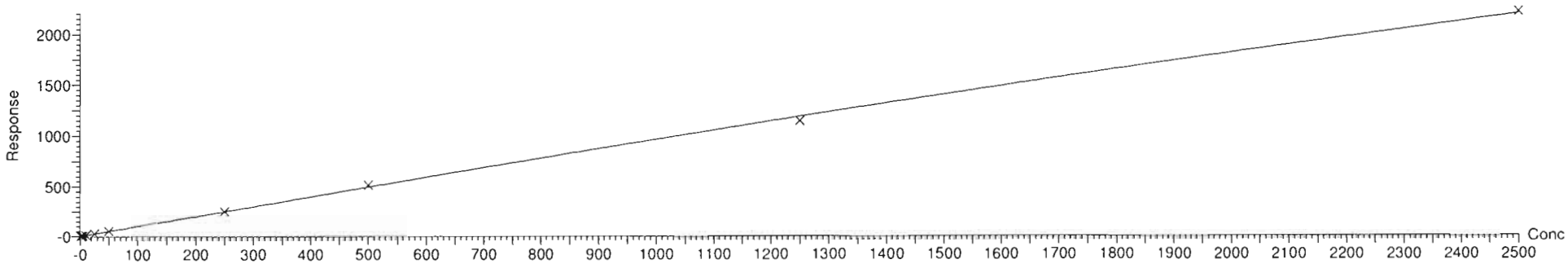
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999107
Calibration curve: -0.00044468 * x^2 + 1.04827 * x + 0.0538161
Response type: Internal Std (Ref 89), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



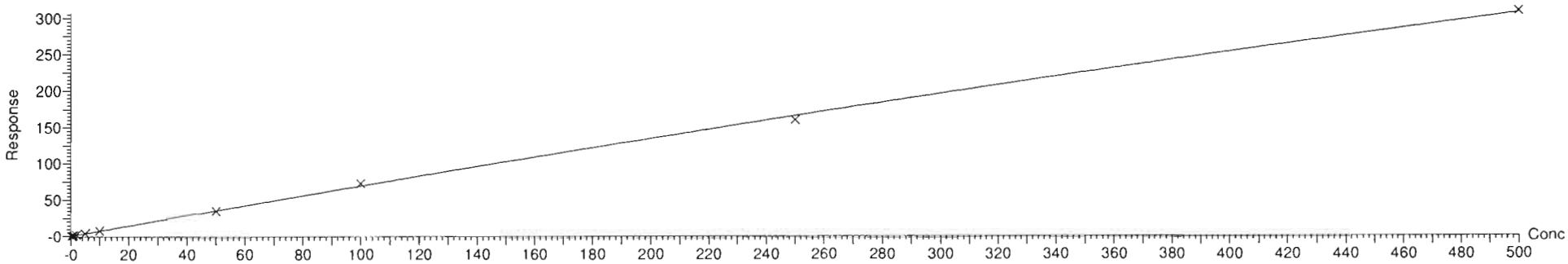
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999287
Calibration curve: -5.59093e-005 * x^2 + 1.0186 * x + -0.0169663
Response type: Internal Std (Ref 91), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



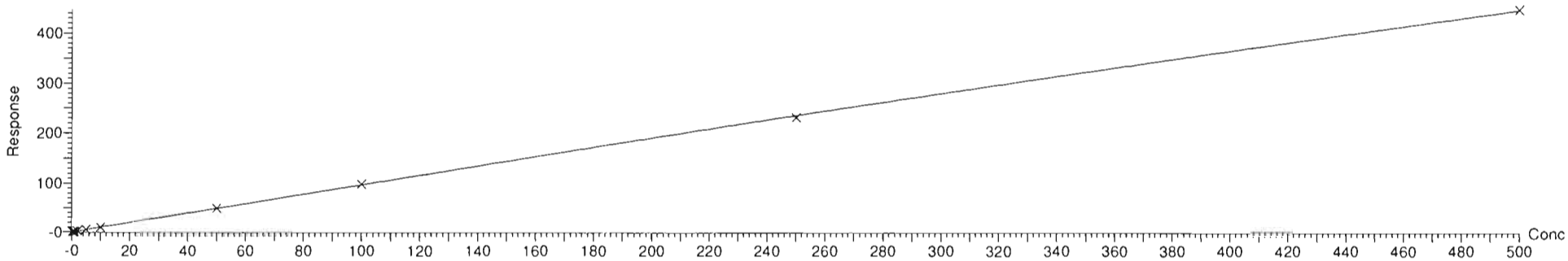
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999194
Calibration curve: -0.000191695 * x^2 + 0.708349 * x + 0.140307
Response type: Internal Std (Ref 93), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



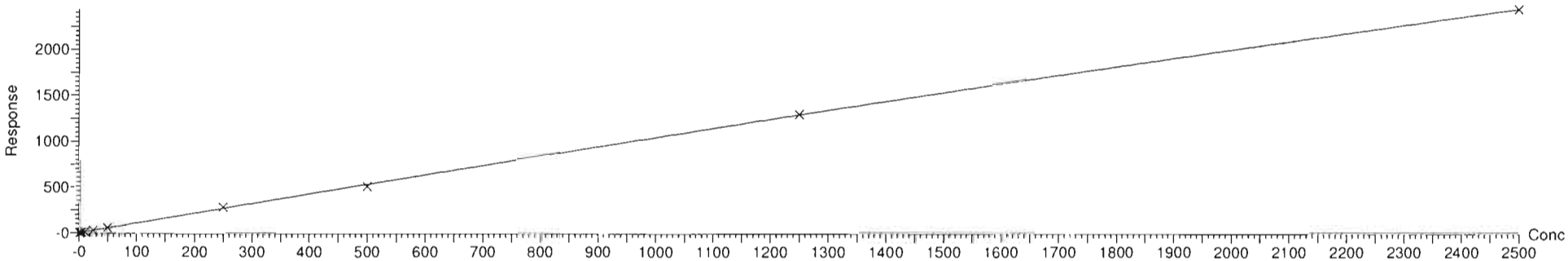
Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Compound name: PFODA
Coefficient of Determination: R^2 = 0.999807
Calibration curve: -0.000198865 * x^2 + 0.992712 * x + 0.0256061
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 = 0.999509
Calibration curve: -4.41238e-005 * x^2 + 1.08829 * x + 0.219461
Response type: Internal Std (Ref 95), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

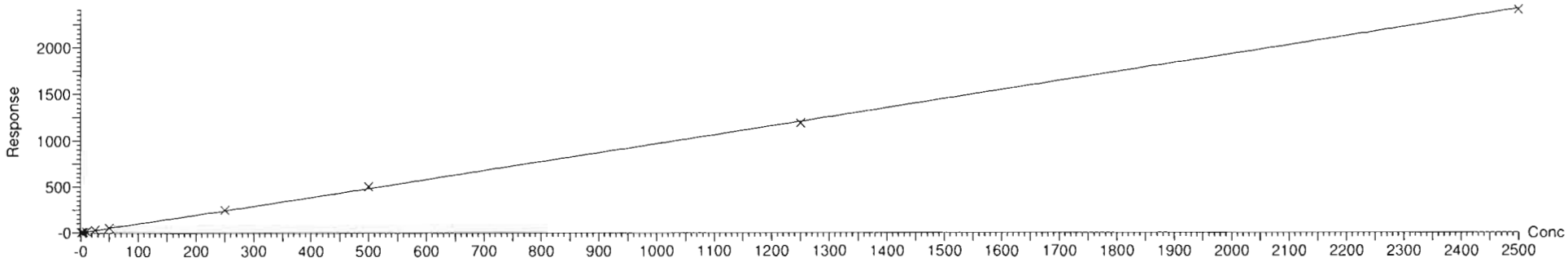


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Dataset: D:\PFAS5.PRO\RESULTS\200228P1\200228P1-CRV.qld

Last Altered: Saturday, February 29, 2020 10:30:03 Pacific Standard Time
Printed: Saturday, February 29, 2020 10:37:27 Pacific Standard Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999753, r^2 = 0.999505
Calibration curve: 0.964785 * x + 0.495135
Response type: Internal Std (Ref 97), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



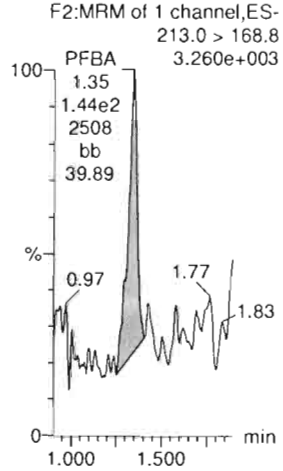
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Printed: Saturday, February 29, 2020 09:20:23 Pacific Standard Time

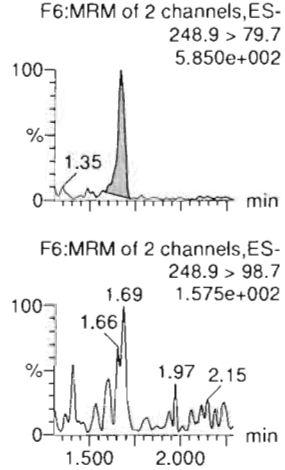
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Calibration: 29 Feb 2020 09:19:58

Name: 200228P2-3, Date: 28-Feb-2020, Time: 13:06:47, ID: ST200228P2-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

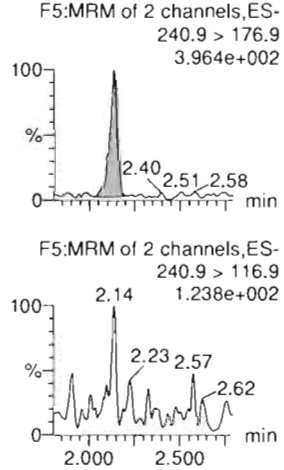
PFBA



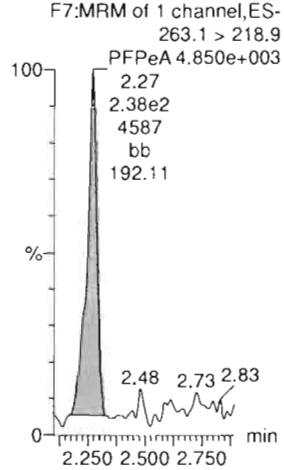
PFPrS



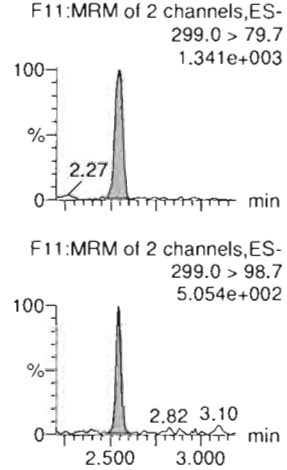
3:3 FTCA



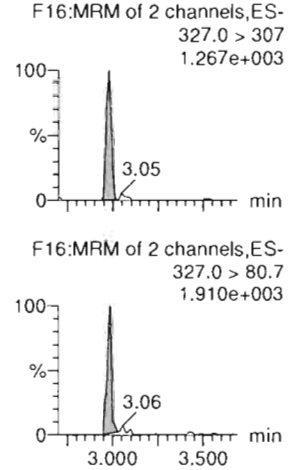
PFPeA



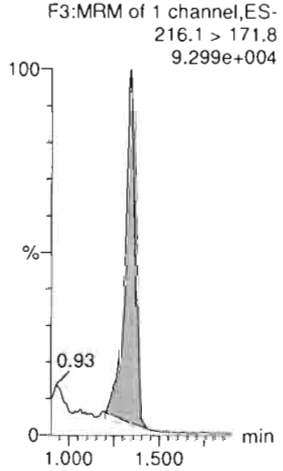
PFBS



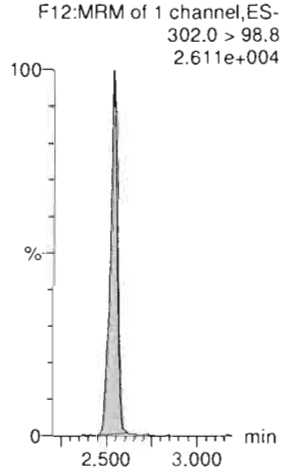
4:2 FTS



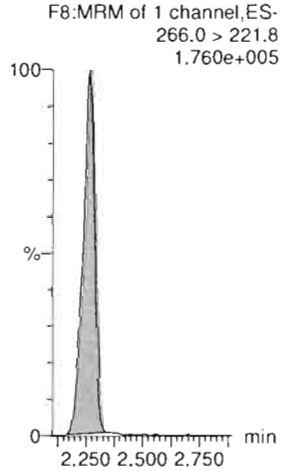
13C3-PFBA-EIS



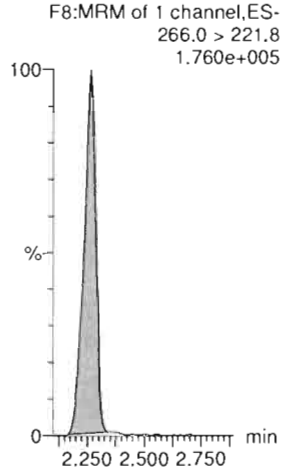
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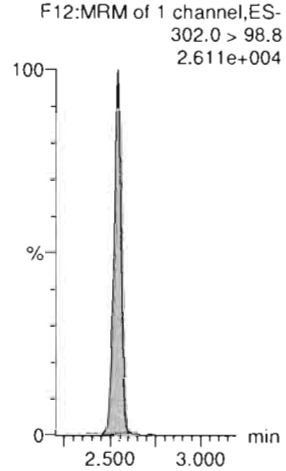
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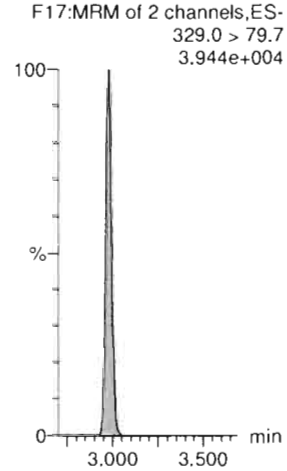
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

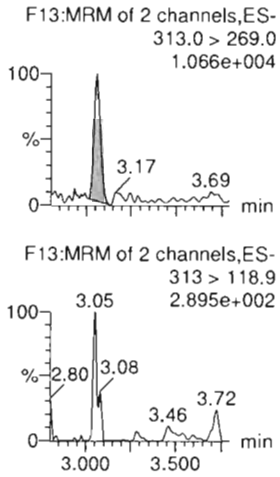


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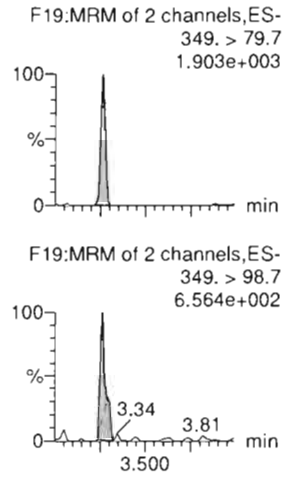
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Name: 200228P2-3, Date: 28-Feb-2020, Time: 13:06:47, ID: ST200228P2-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

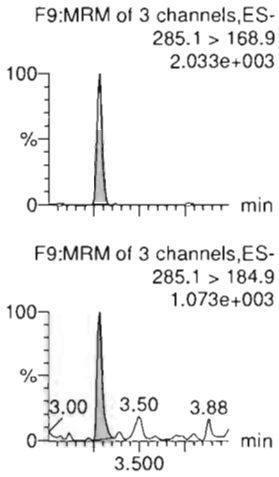
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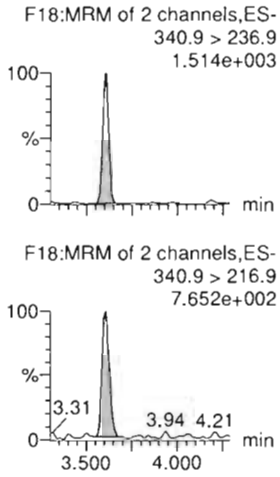
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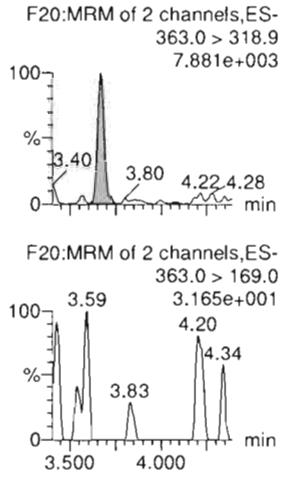
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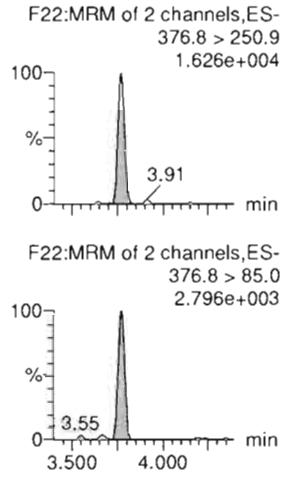
5:3 FTCA



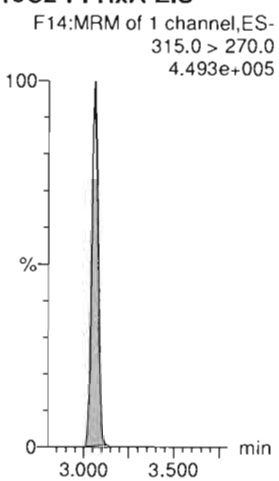
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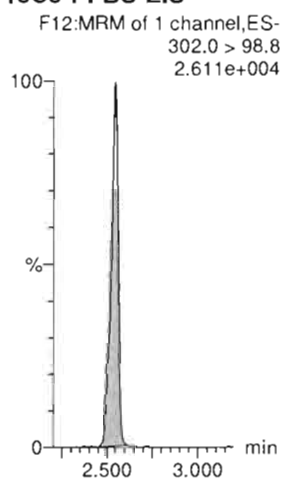
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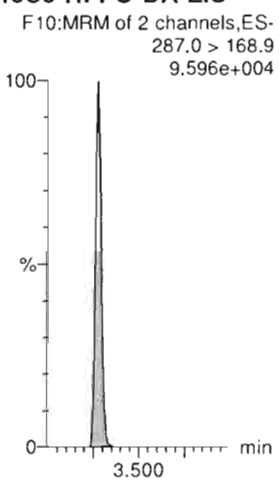
13C2-PFHxA-EIS



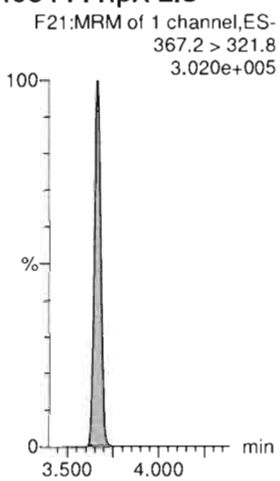
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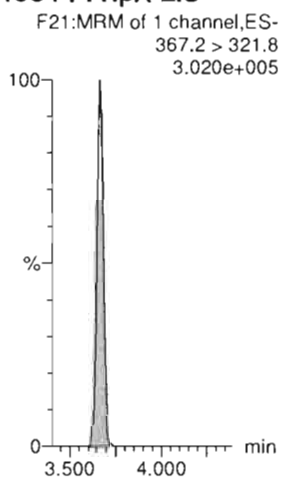
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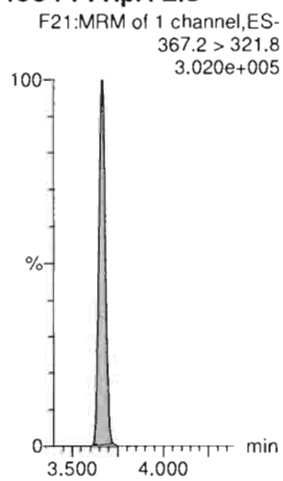
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

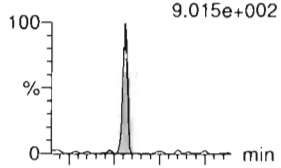


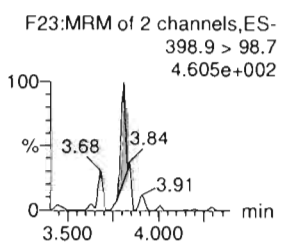
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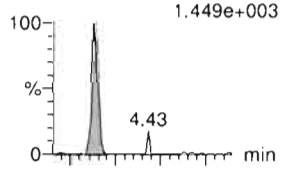
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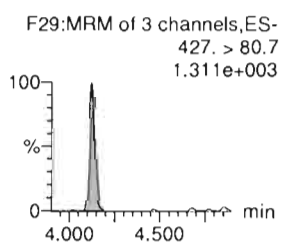
L-PFHxS



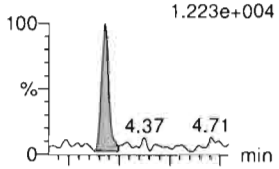


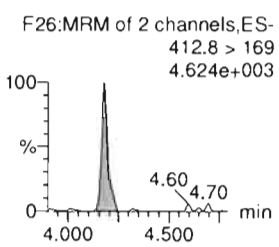
6:2 FTS



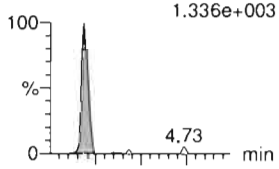


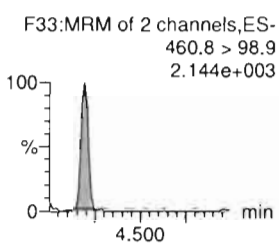
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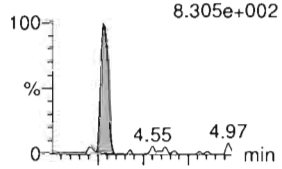


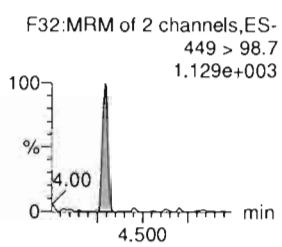
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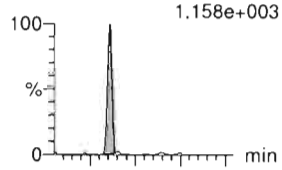


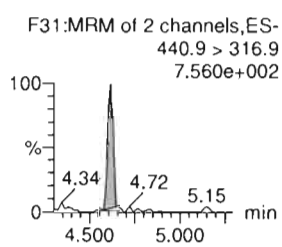
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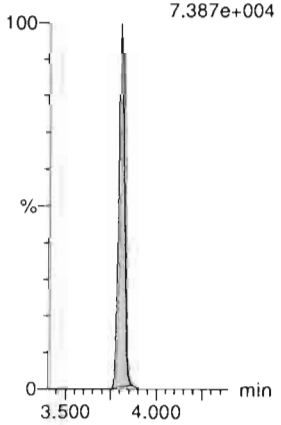


7:3 FTCA

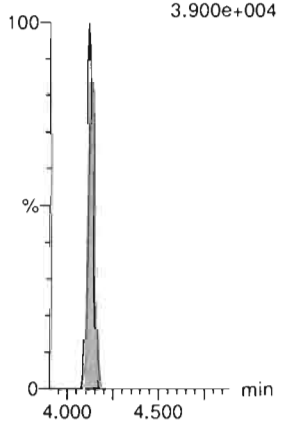




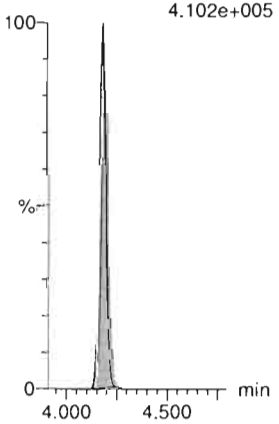
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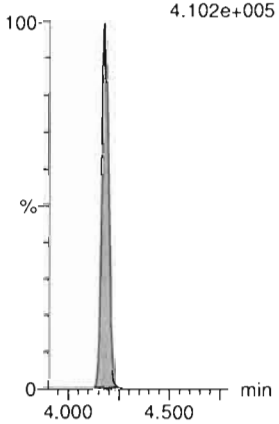
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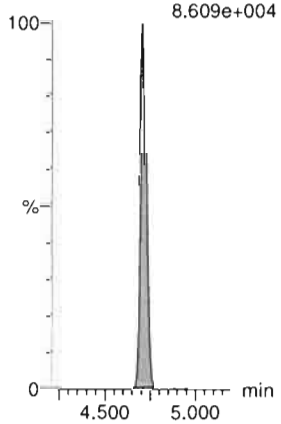
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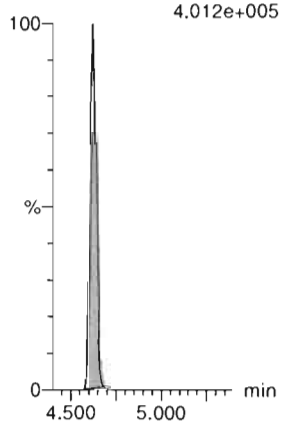
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13C8-PFOS-EIS



13C5-PFNA-EIS

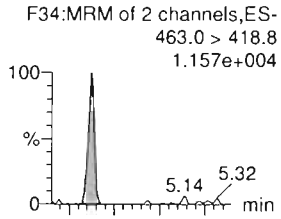


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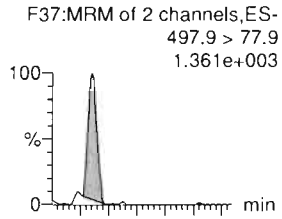
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Name: 200228P2-3, Date: 28-Feb-2020, Time: 13:06:47, ID: ST200228P2-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

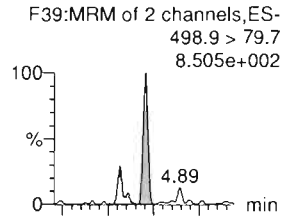
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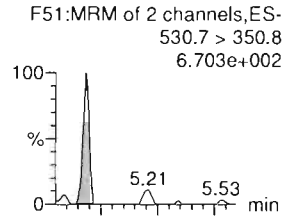
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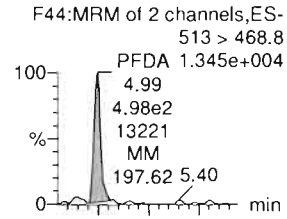
L-PFOS



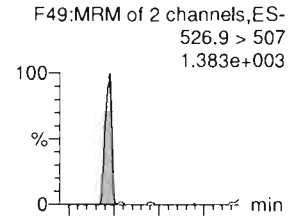
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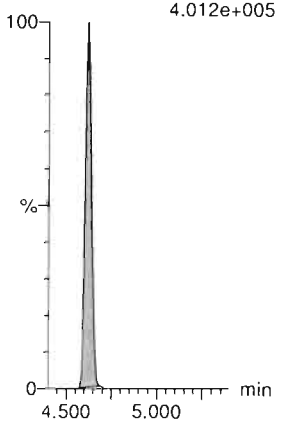
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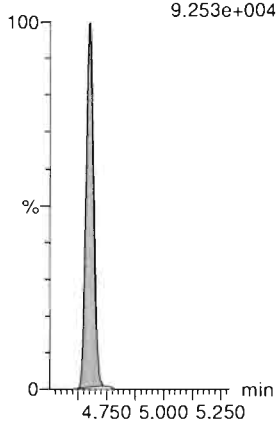
8:2 FTS



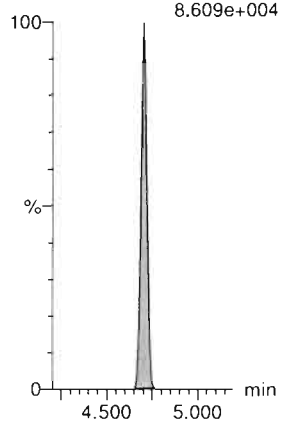
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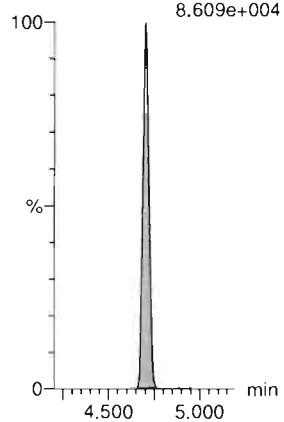
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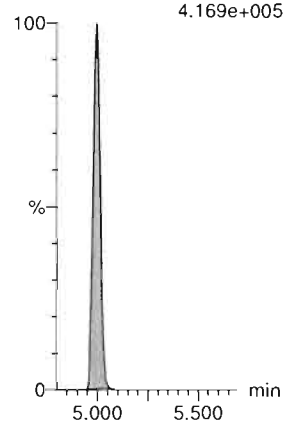
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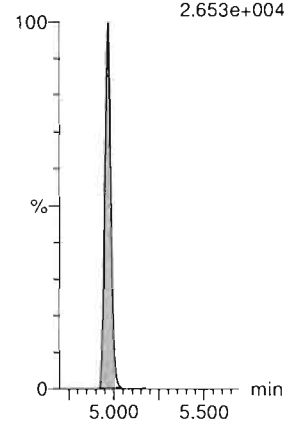
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

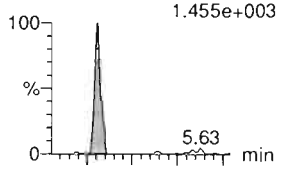


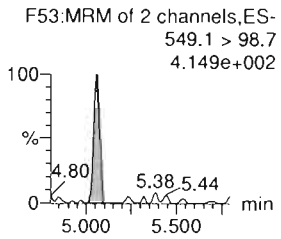
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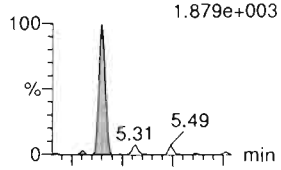
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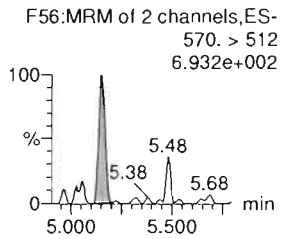
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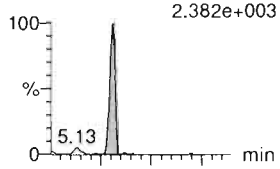


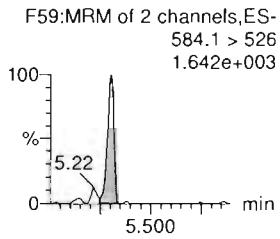
L-MeFOSAA



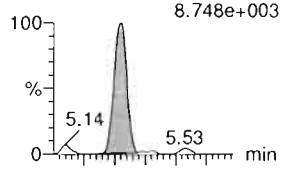


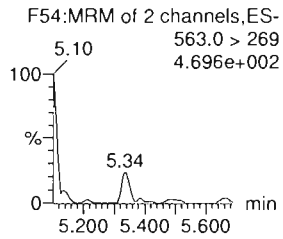
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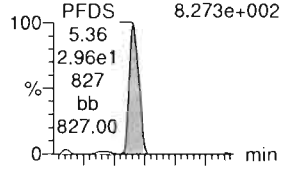


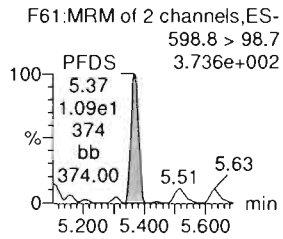
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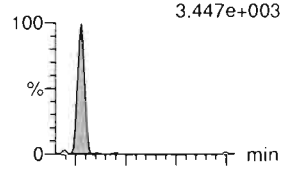


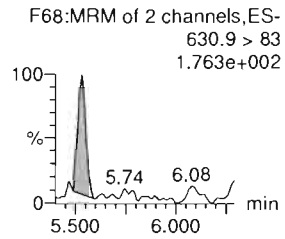
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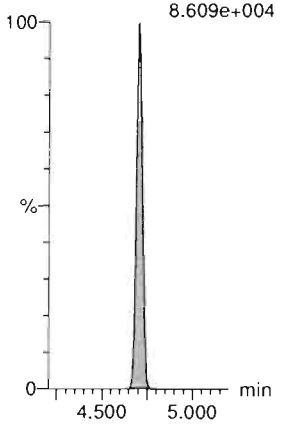


11Cl-PF30UdS

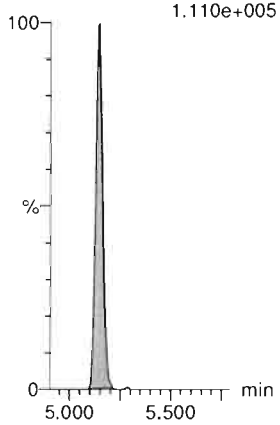




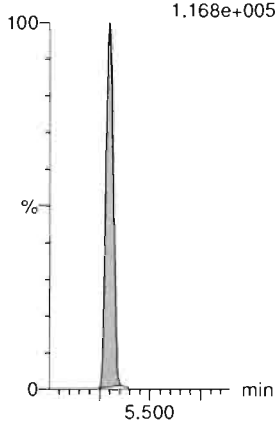
13C8-PFOS-EIS



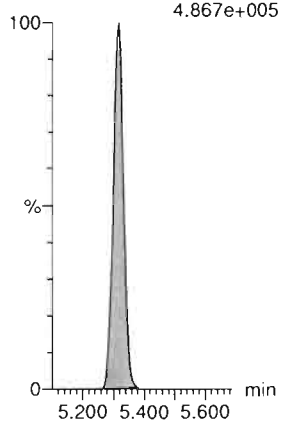
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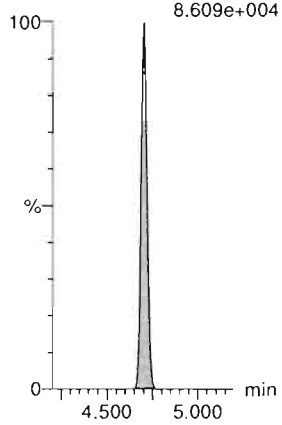
d5-N-EtFOSAA-EIS



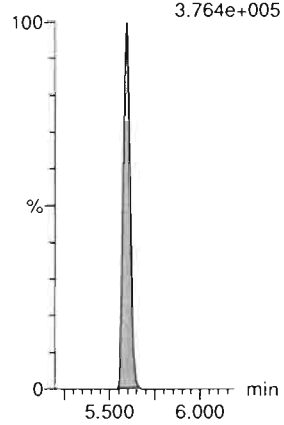
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

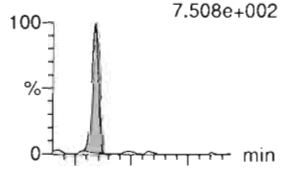


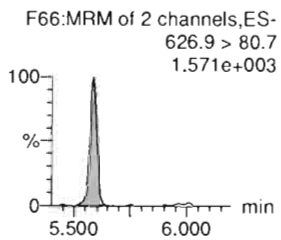
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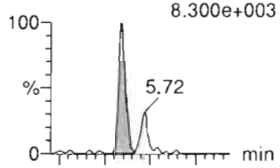
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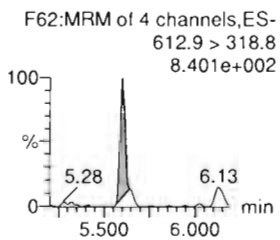
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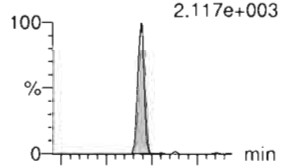


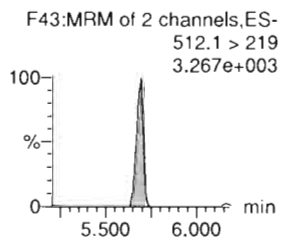
PFDoA



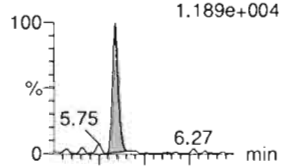


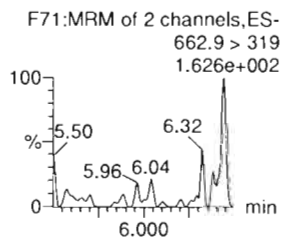
N-MeFOSA



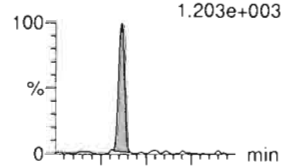


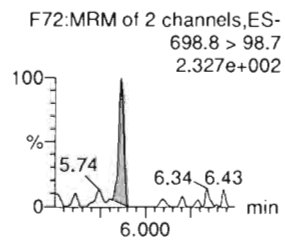
PFTrDA



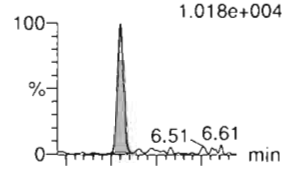


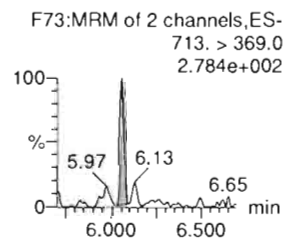
PFDoS



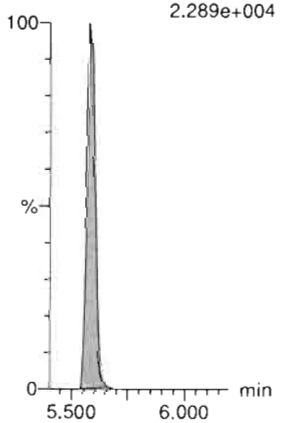


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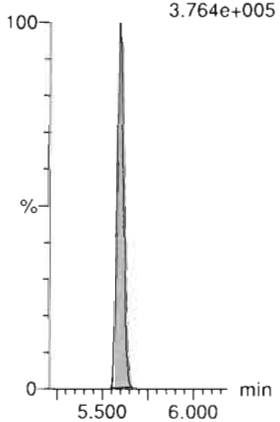




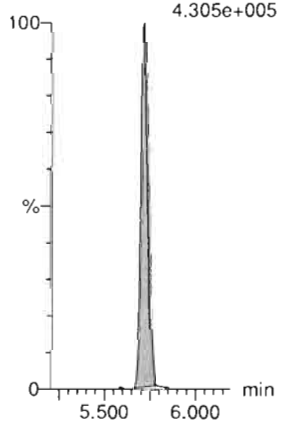
13C2-10:2 FTS-EIS



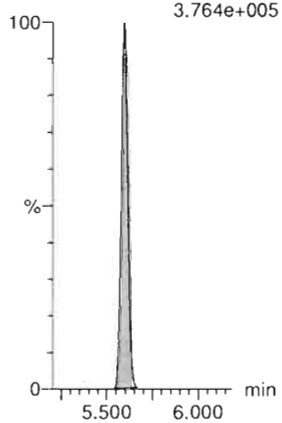
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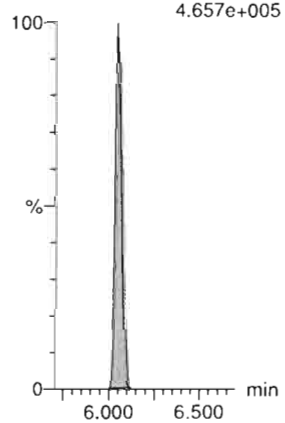
d3-N-MeFOSA-EIS



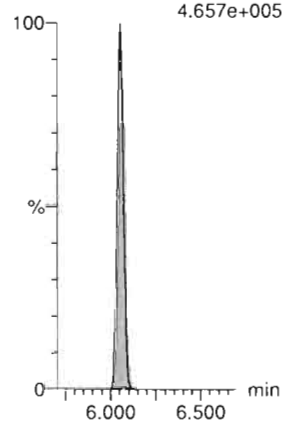
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

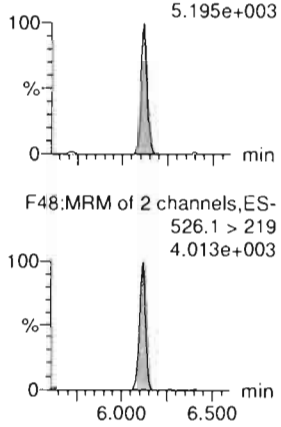


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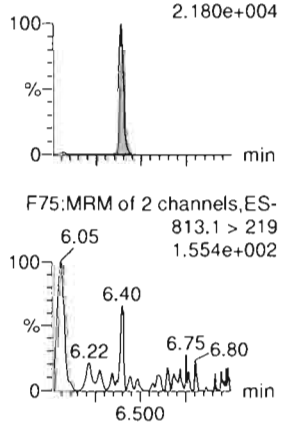
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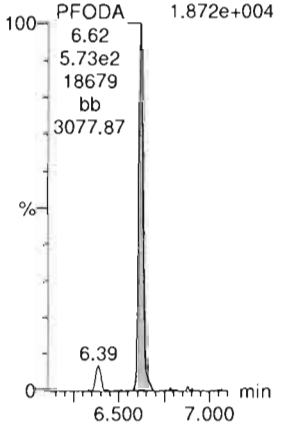
N-EtFOSA



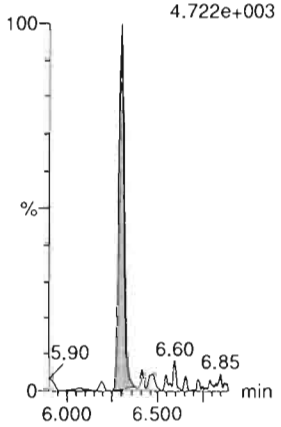
PFHxDA



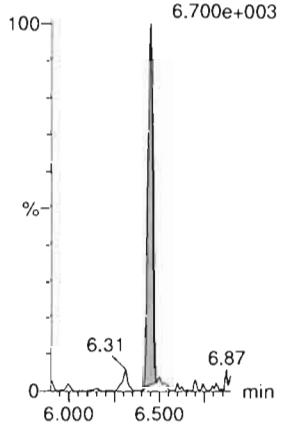
PFODA



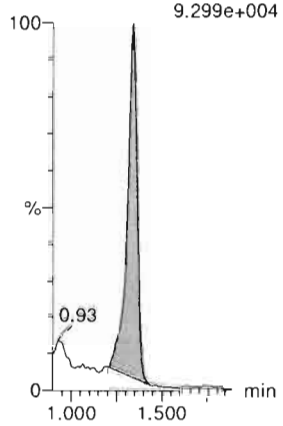
N-MeFOSE



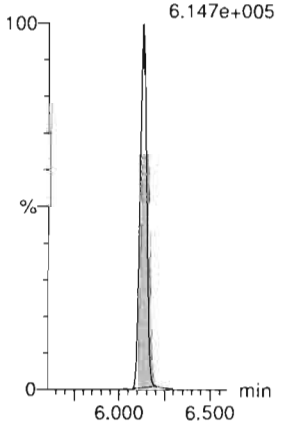
N-EtFOSE



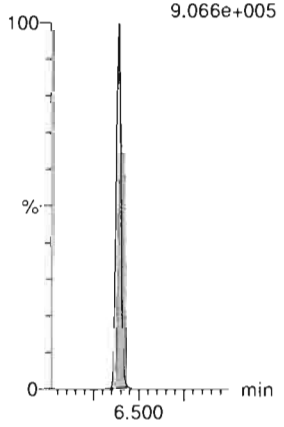
13C3-PFBA-RSD



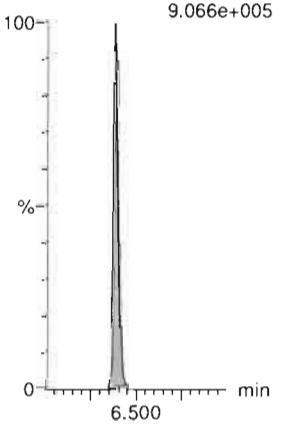
d5-N-ETFOSA-EIS



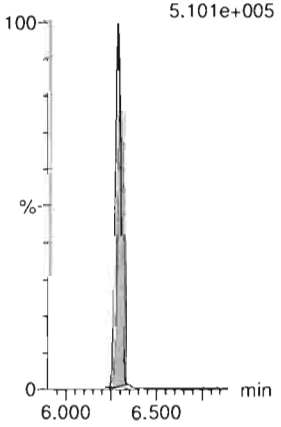
13C2-PFHxDA-EIS



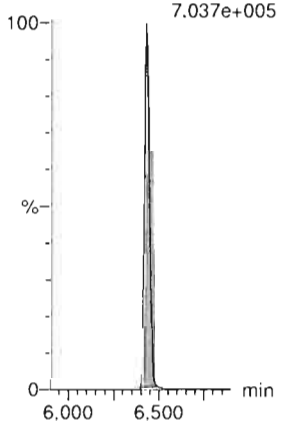
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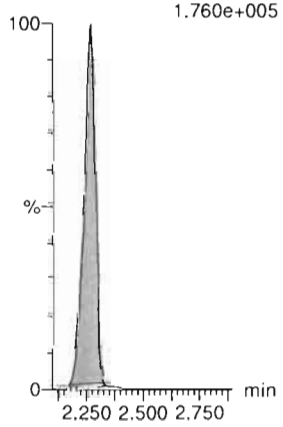
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d9-N-EtFOSE-EIS



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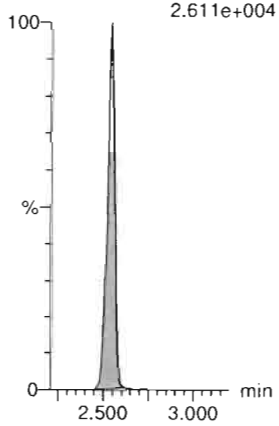


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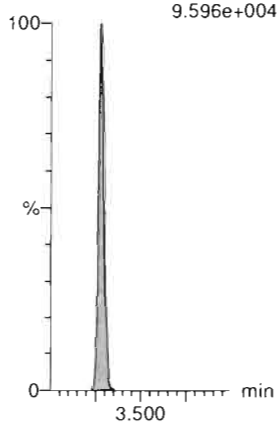
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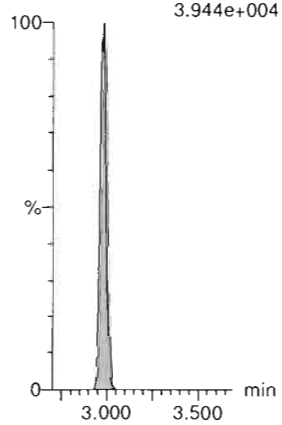
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.611e+004



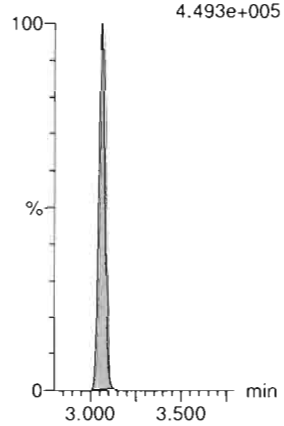
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.596e+004



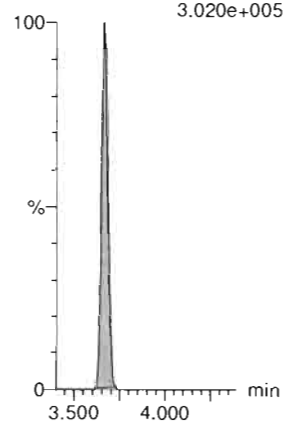
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.944e+004



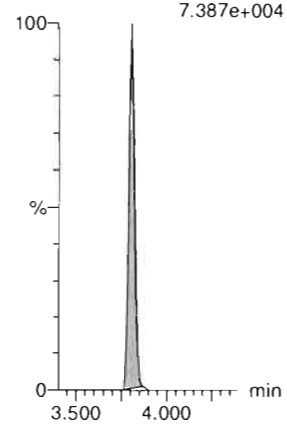
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F14:MRM of 1 channel,ES-
315.0 > 270.0
4.493e+005



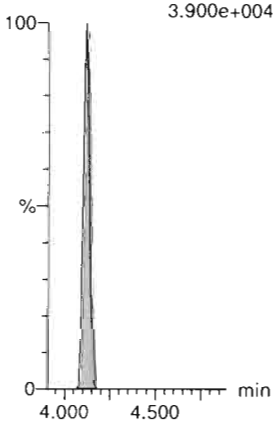
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.020e+005



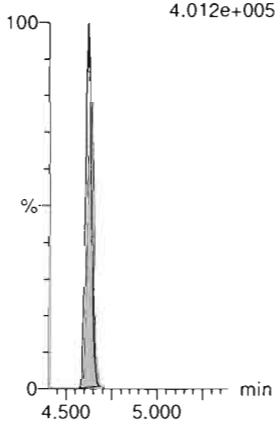
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.387e+004



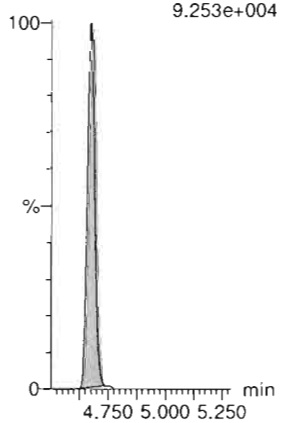
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.900e+004



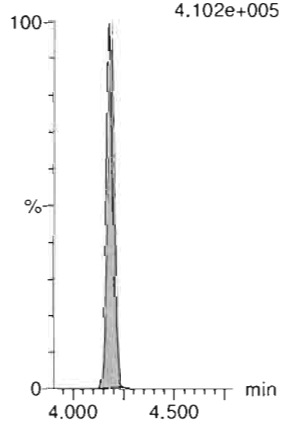
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.012e+005



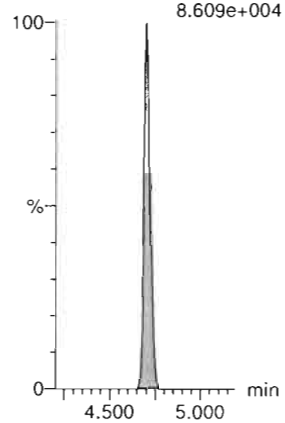
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.253e+004



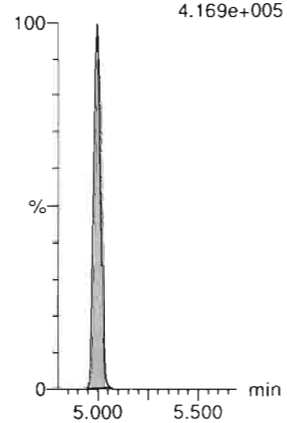
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.102e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.609e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.169e+005

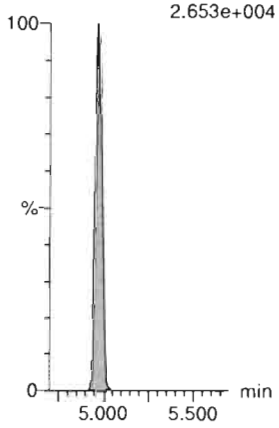


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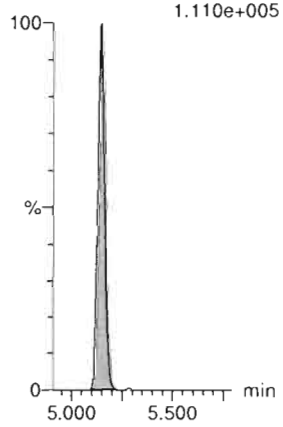
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Name: 200228P2-3, Date: 28-Feb-2020, Time: 13:06:47, ID: ST200228P2-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

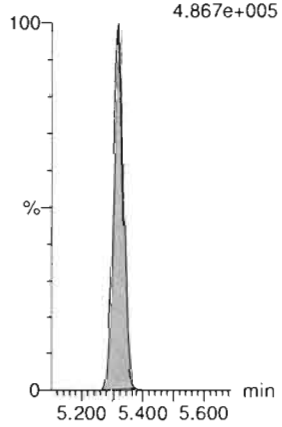
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.653e+004



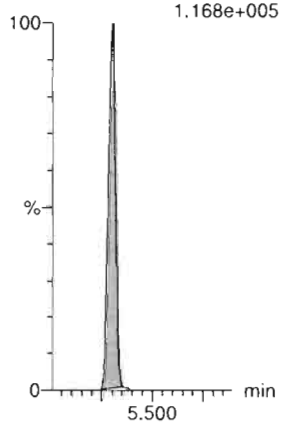
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.110e+005



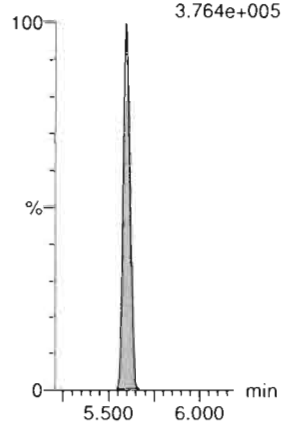
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F55:MRM of 1 channel,ES-
565 > 519.8
4.867e+005



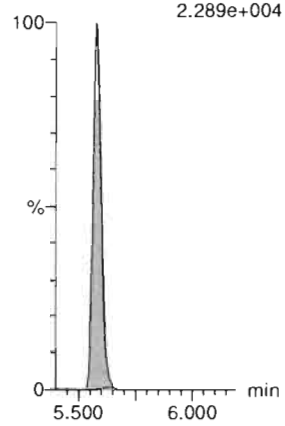
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F60:MRM of 1 channel,ES-
589.3 > 419
1.168e+005



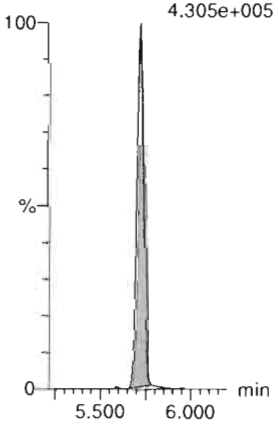
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.764e+005



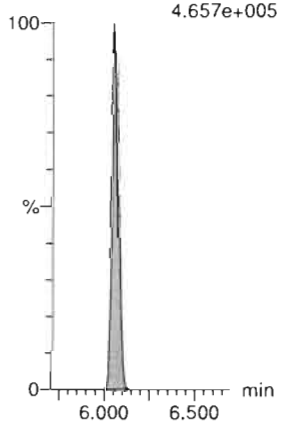
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.289e+004



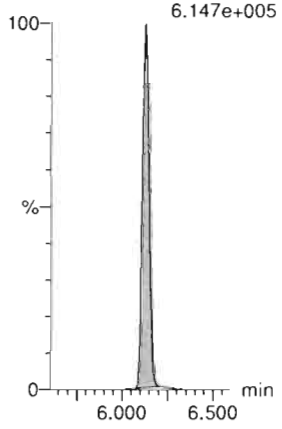
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.305e+005



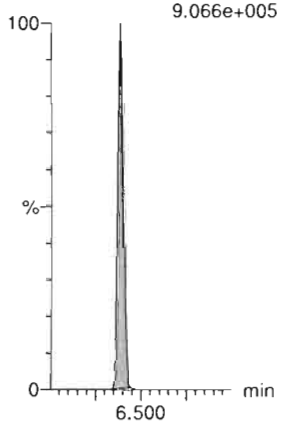
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.657e+005



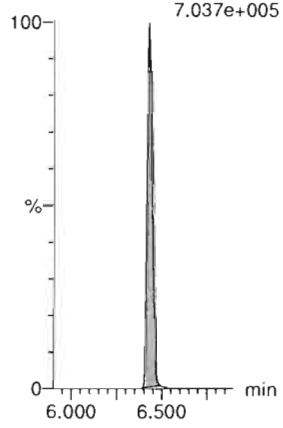
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.147e+005



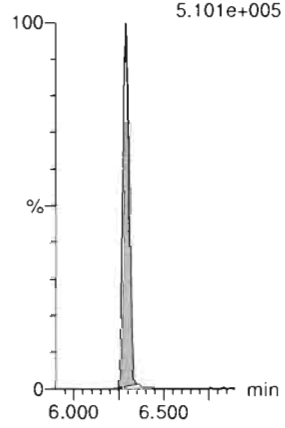
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.066e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.037e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.101e+005

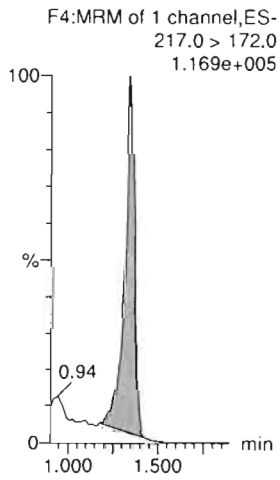


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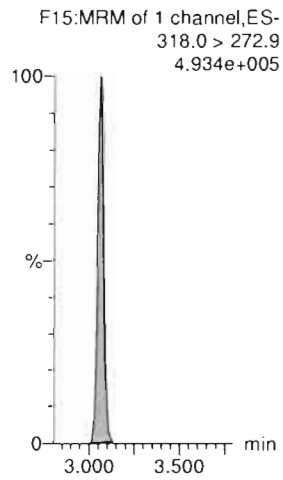
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Name: 200228P2-3, Date: 28-Feb-2020, Time: 13:06:47, ID: ST200228P2-1 PFC CS-2 20B1102, Description: PFC CS-2 20B1102

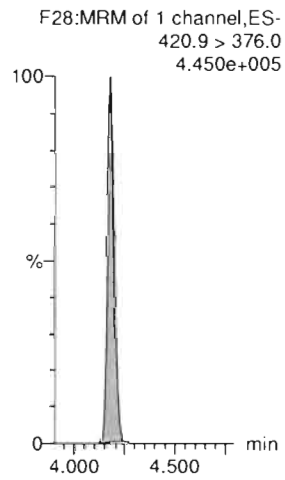
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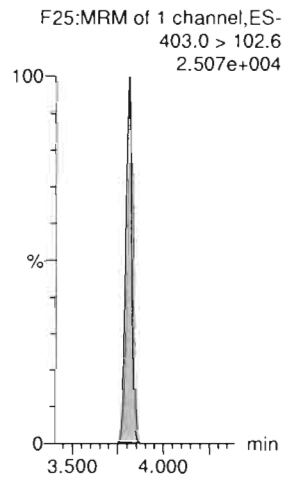
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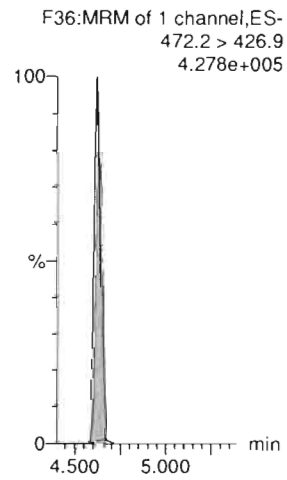
13C8-PFOA



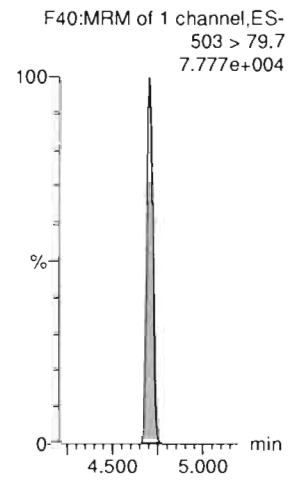
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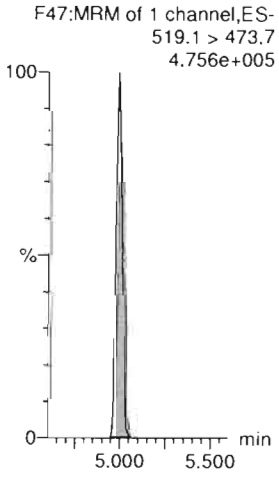
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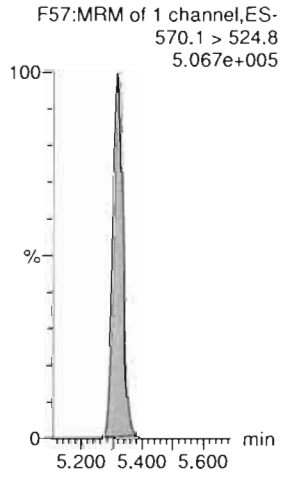
13C4-PFOS



13C6-PFDA



13C7-PFUdA

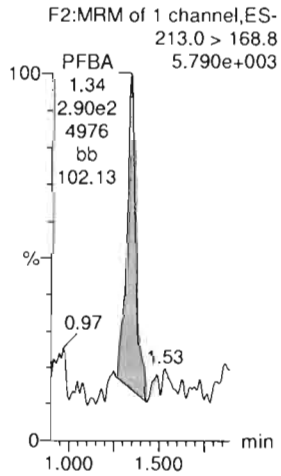


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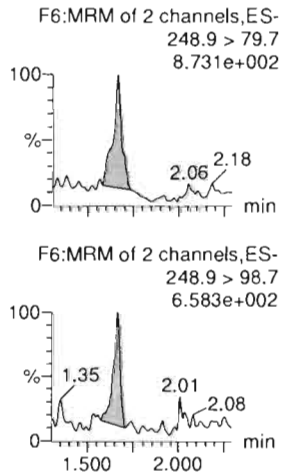
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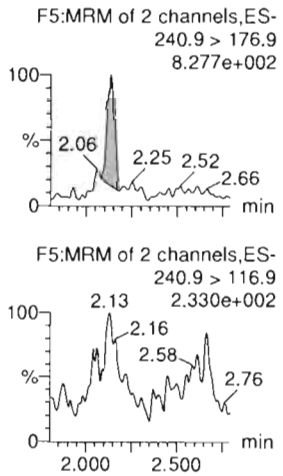
PFBA



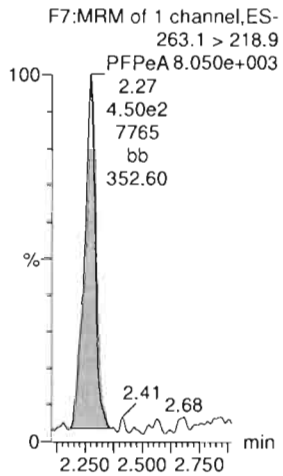
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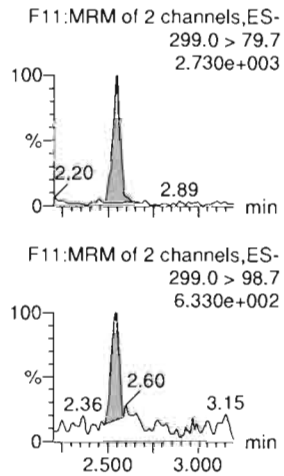
3:3 FTCA



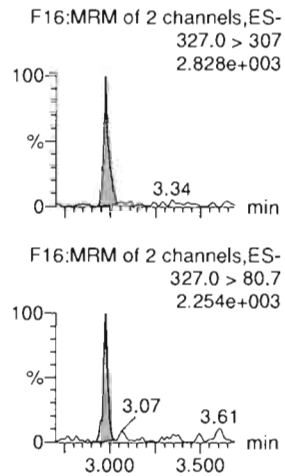
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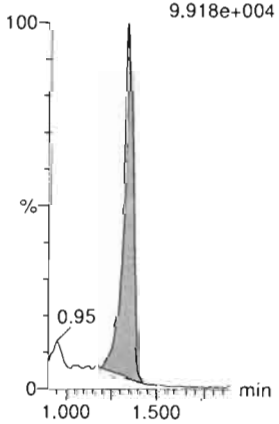
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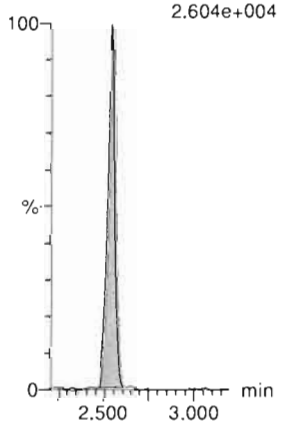
4:2 FTS



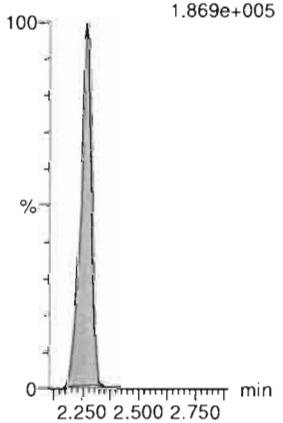
13C3-PFBA-EIS



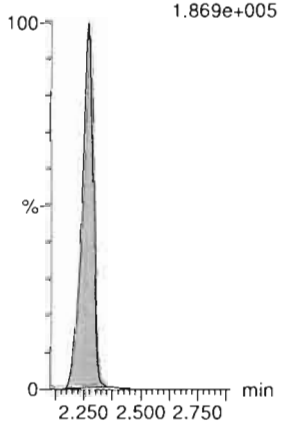
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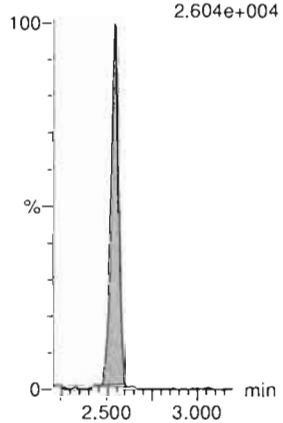
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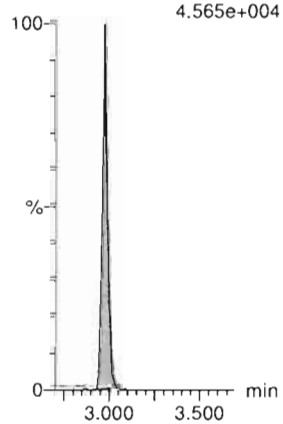
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

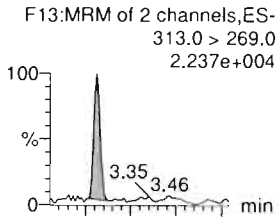


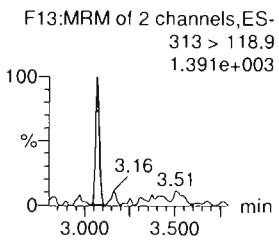
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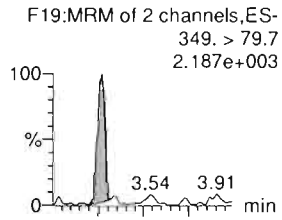
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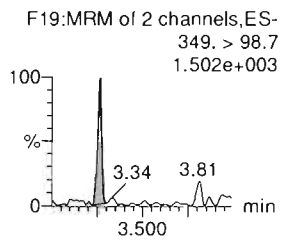
PFHxA



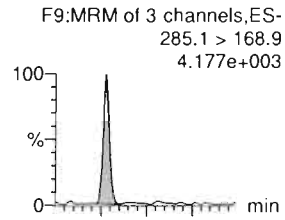


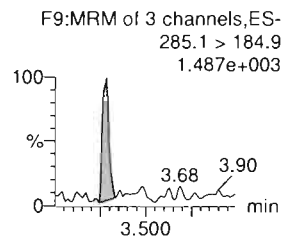
PFPeS



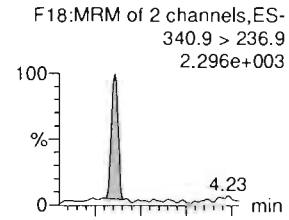


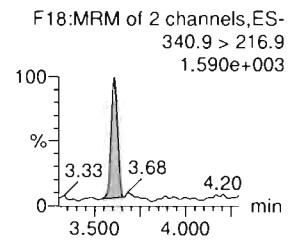
HFPO-DA



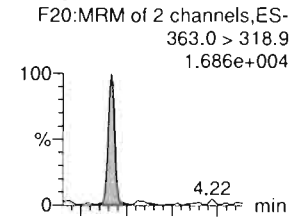


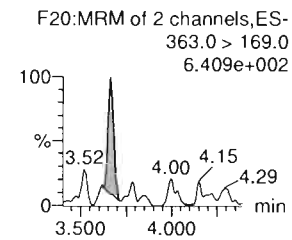
5:3 FTCA



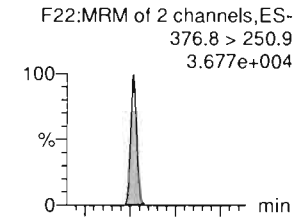


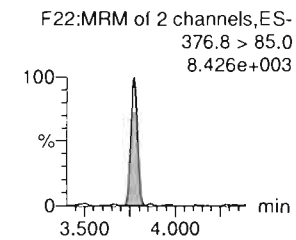
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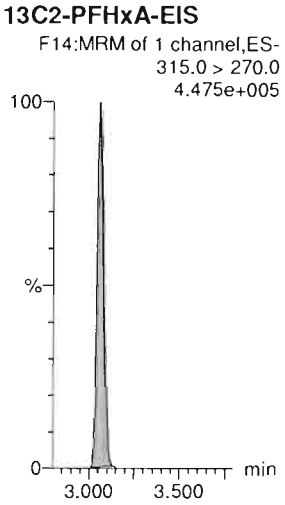


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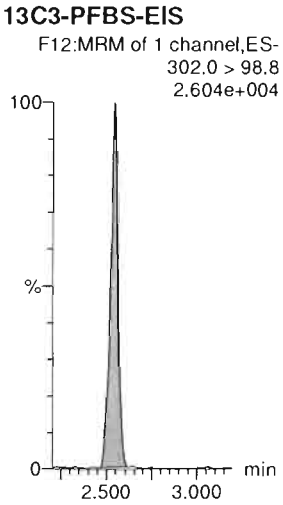




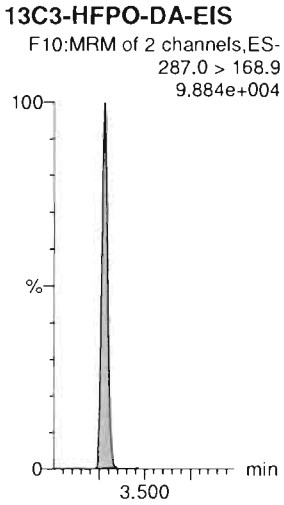
13C2-PFHxA-EIS



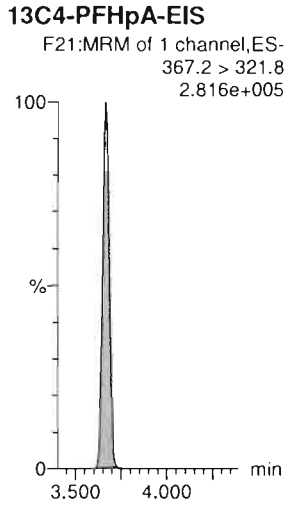
13C3-PFBS-EIS



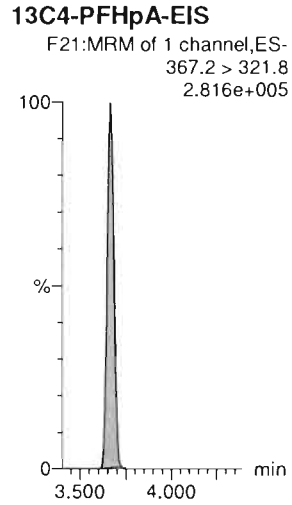
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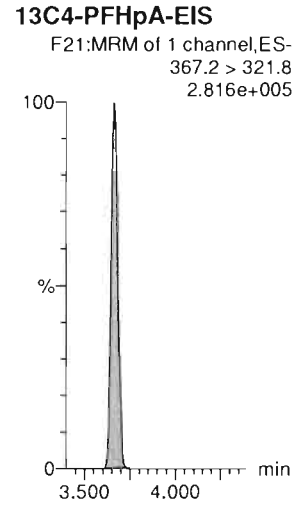
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

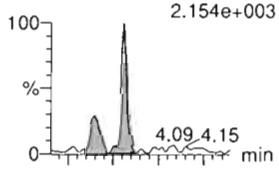


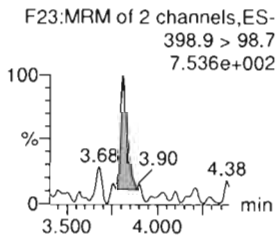
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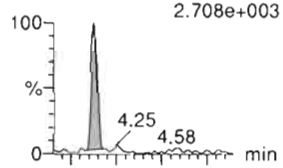
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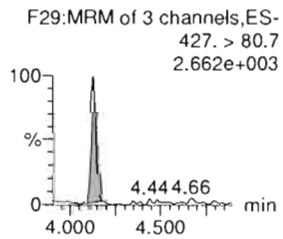
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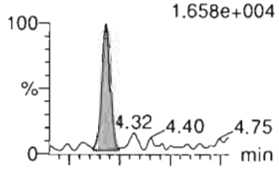


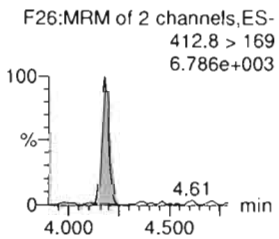
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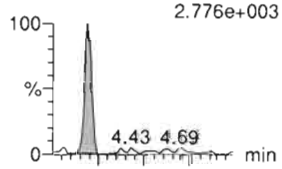


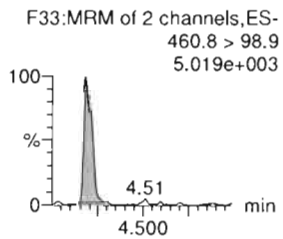
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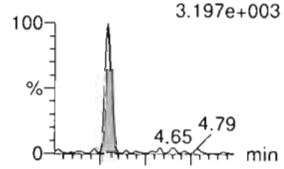


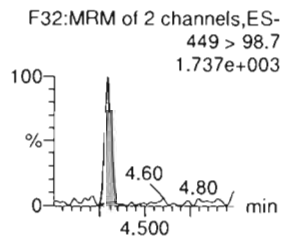
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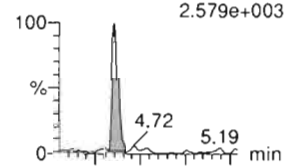


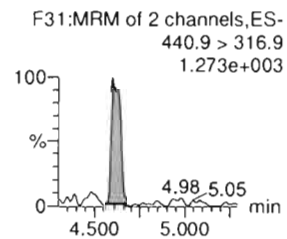
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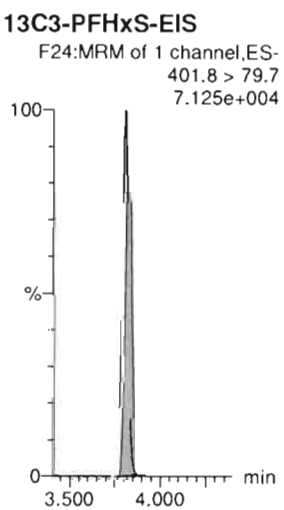


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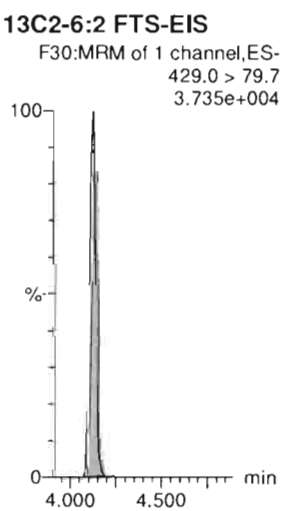




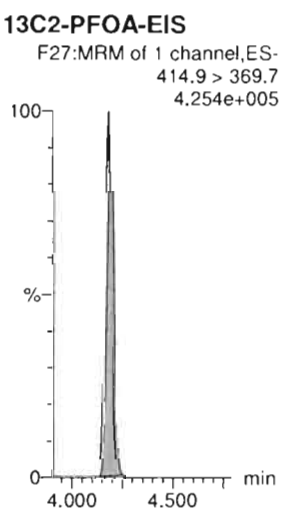
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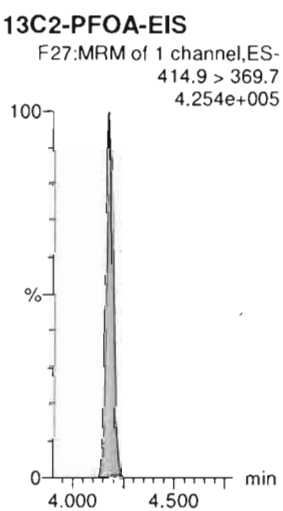
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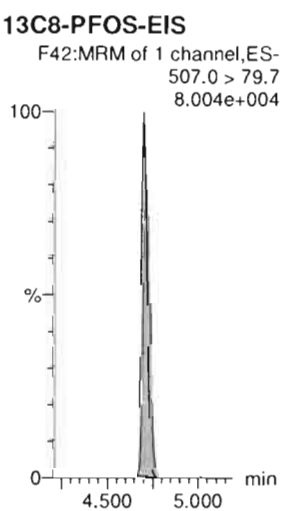
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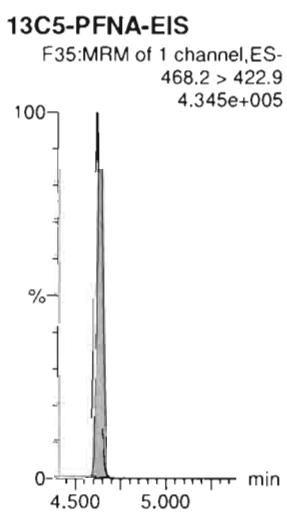
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13C8-PFOS-EIS



13C5-PFNA-EIS

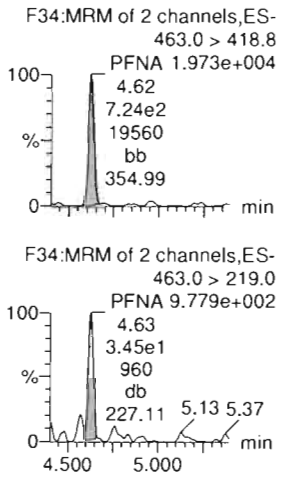


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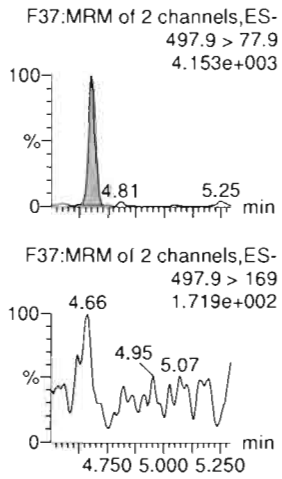
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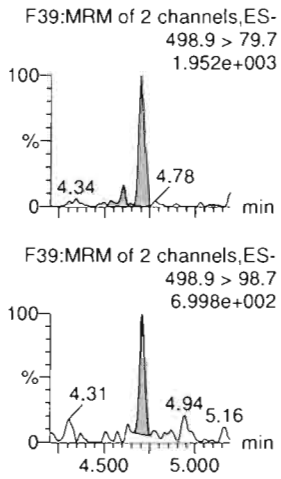
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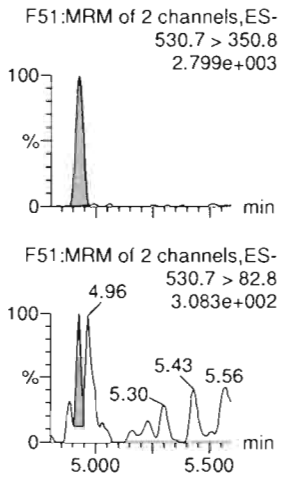
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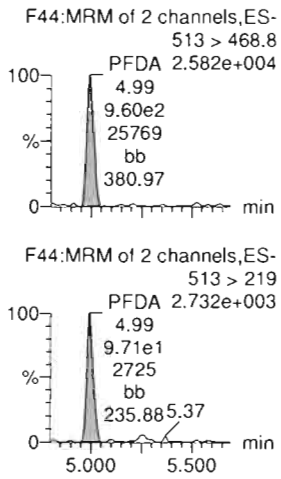
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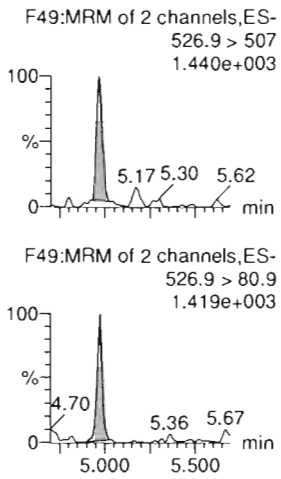
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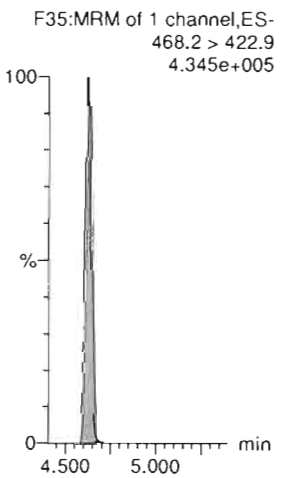
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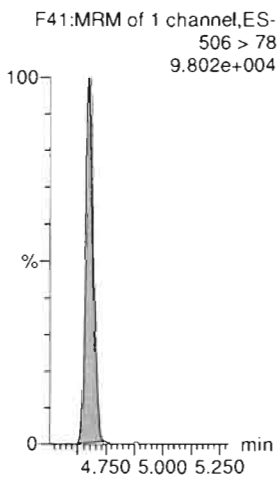
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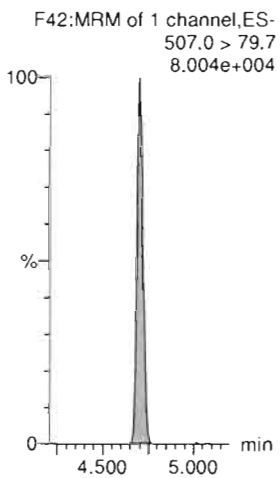
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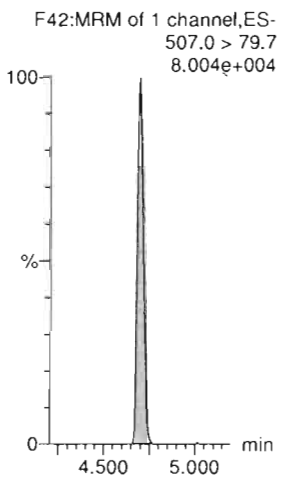
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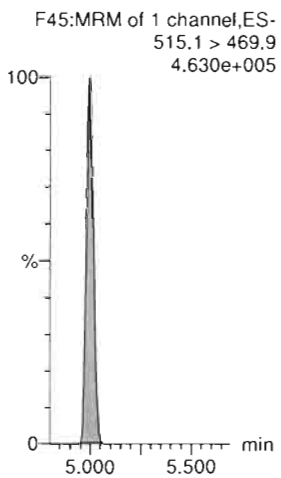
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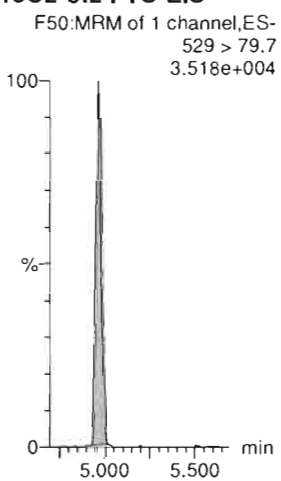
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13C2-PFDA-EIS



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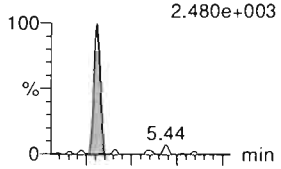


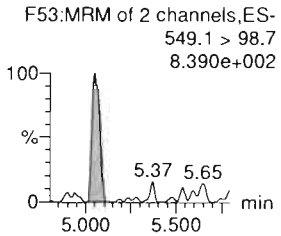
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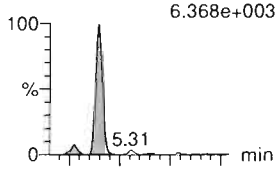
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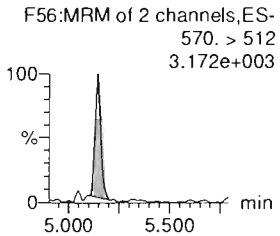
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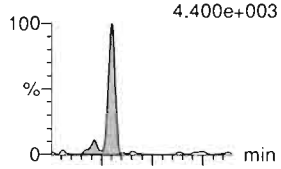


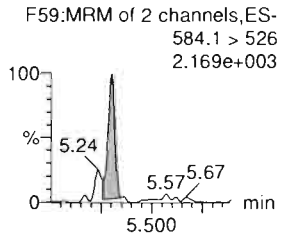
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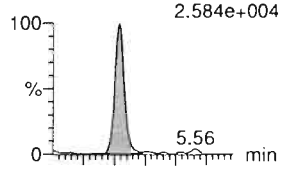


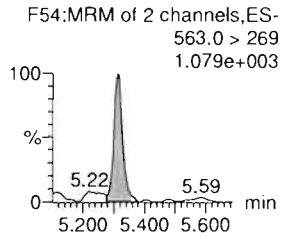
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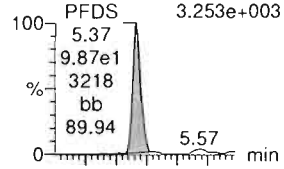


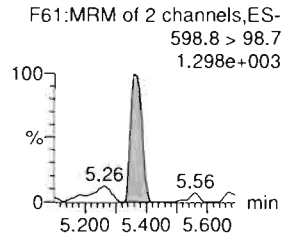
PFUdA



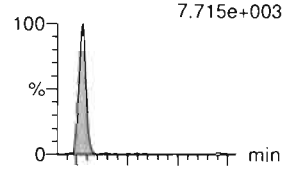


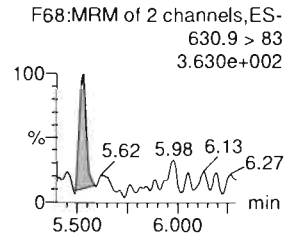
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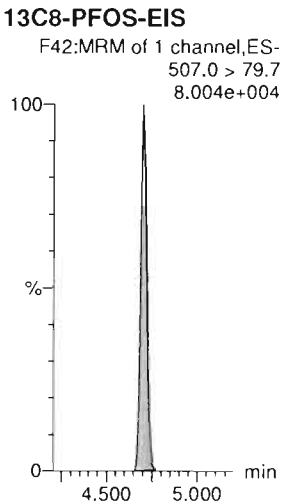


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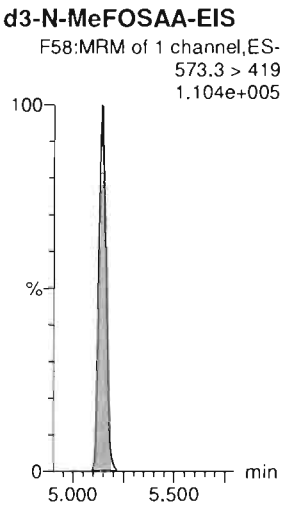




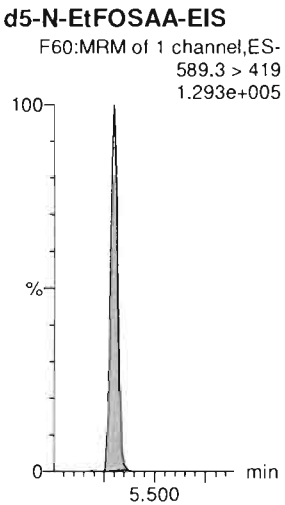
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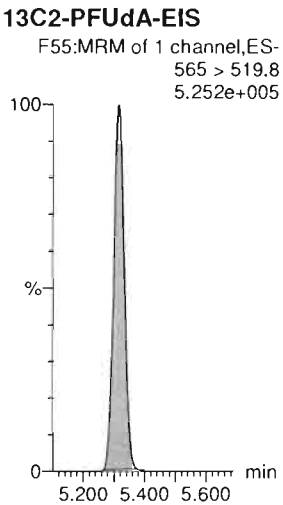
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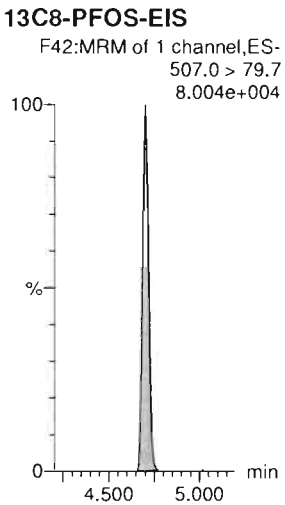
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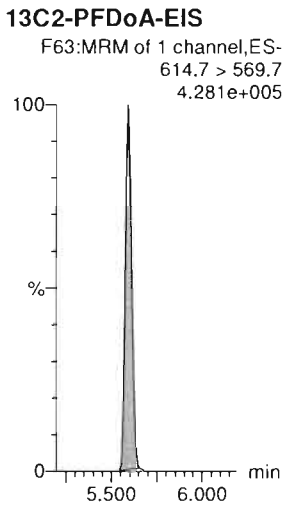
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13C8-PFOS-EIS



13C2-PFDoA-EIS

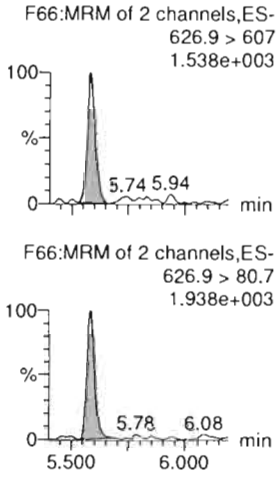


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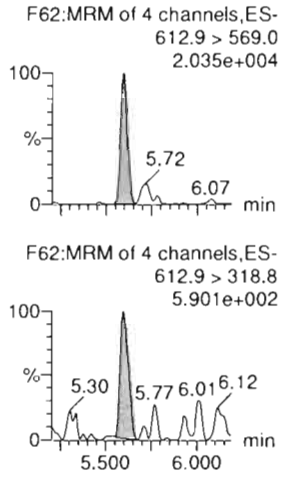
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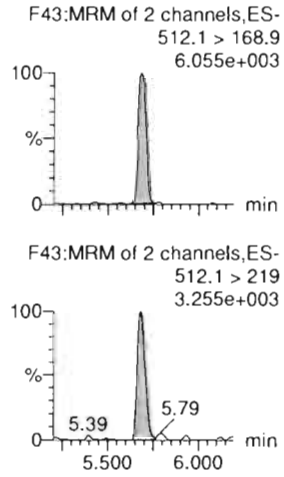
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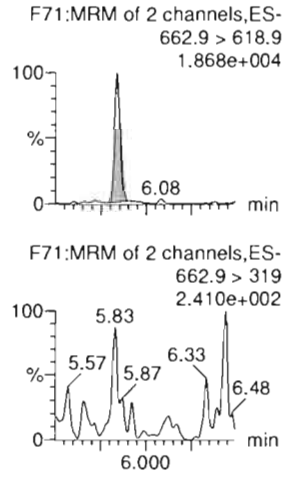
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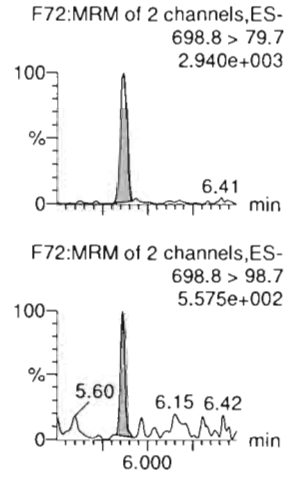
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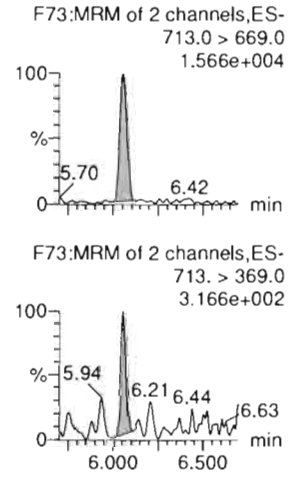
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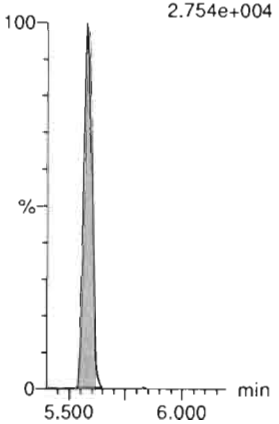
PFDoS



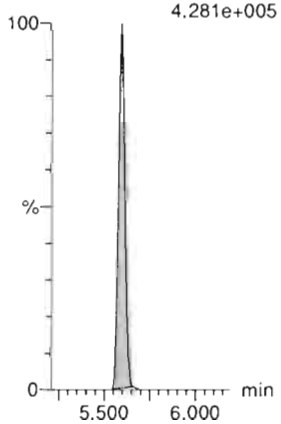
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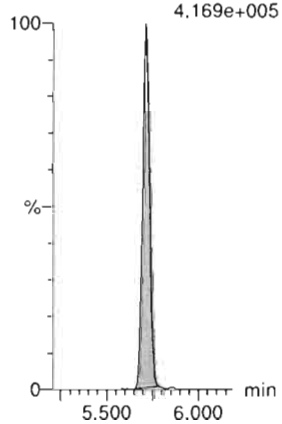
13C2-10:2 FTS-EIS



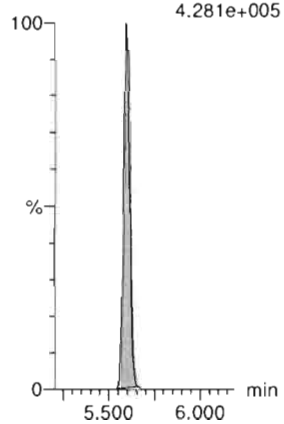
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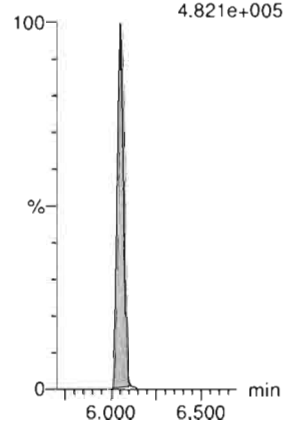
d3-N-MeFOSA-EIS



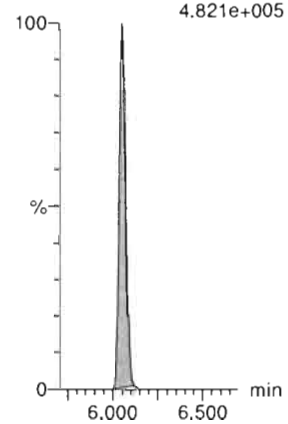
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

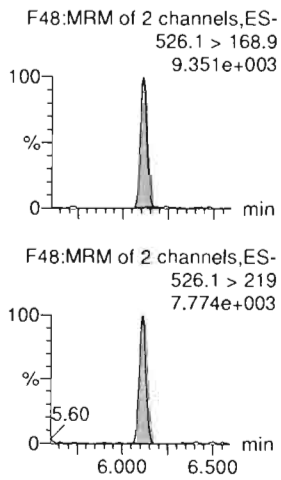


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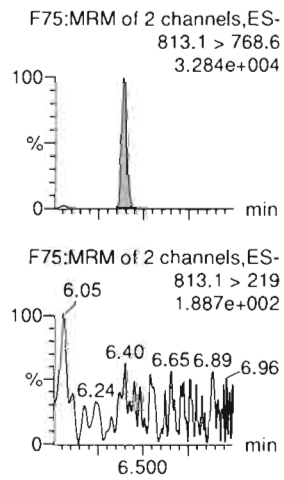
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Name: 200228P2-4, Date: 28-Feb-2020, Time: 13:17:15, ID: ST200228P2-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

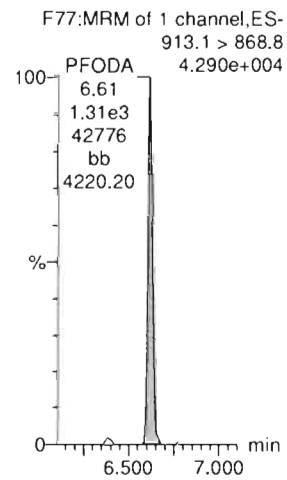
N-EtFOSA



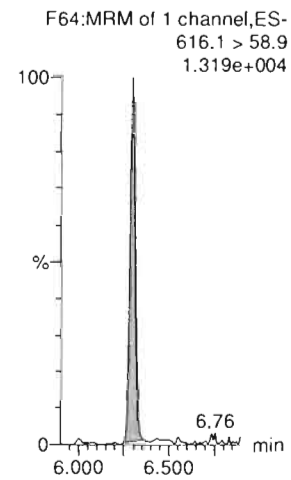
PFHxDA



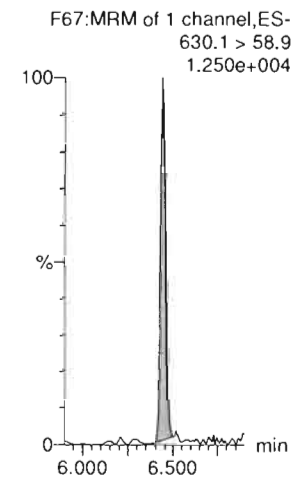
PFODA



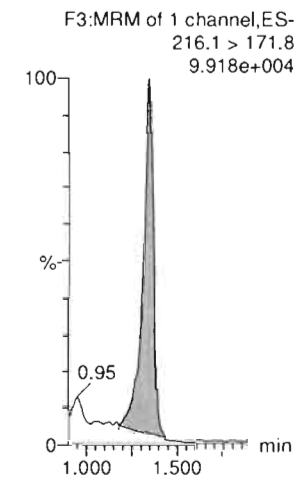
N-MeFOSE



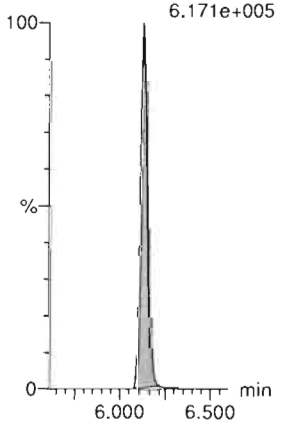
N-EtFOSE



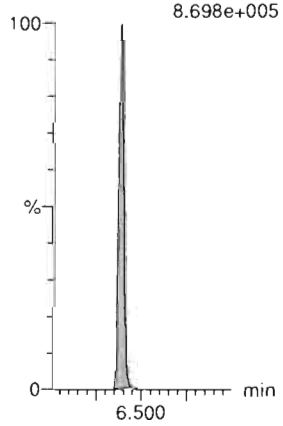
13C3-PFBA-RSD



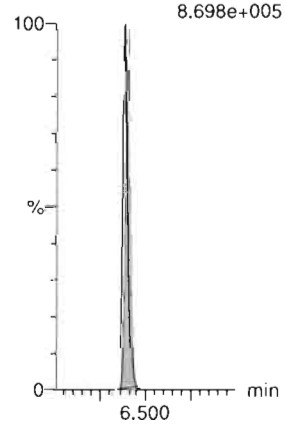
d5-N-ETFOSA-EIS



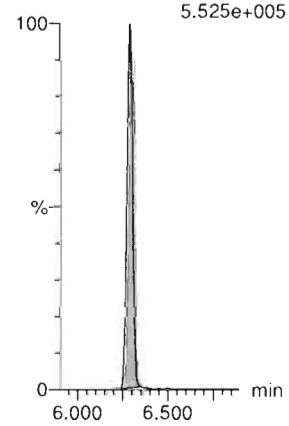
13C2-PFHxDA-EIS



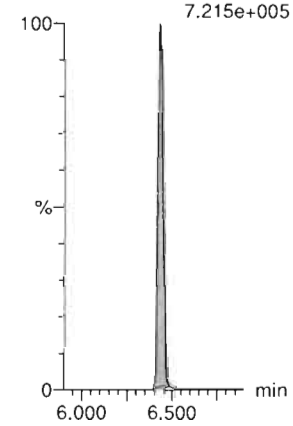
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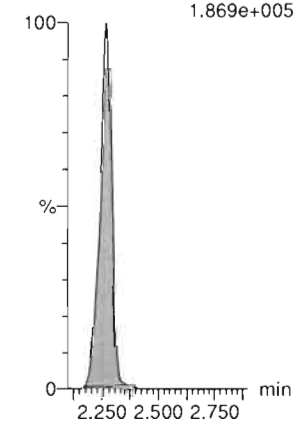
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

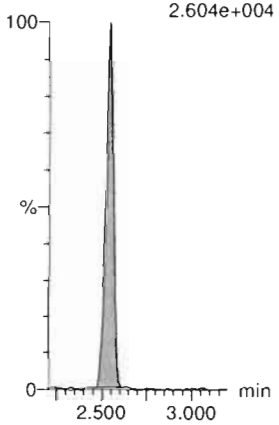


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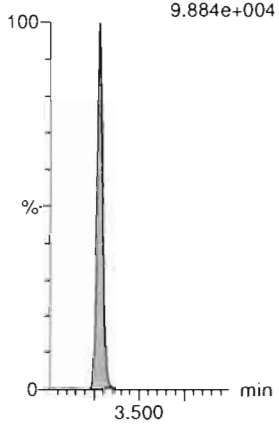
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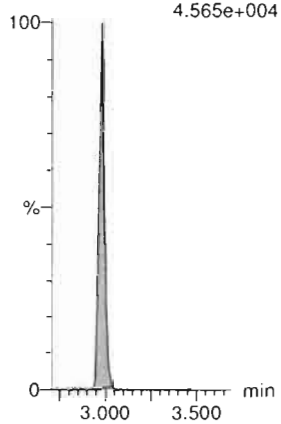
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.604e+004



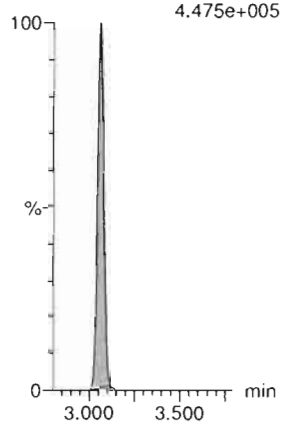
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.884e+004



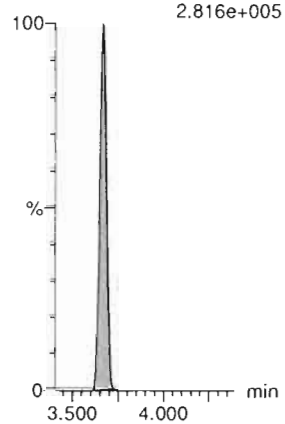
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.565e+004



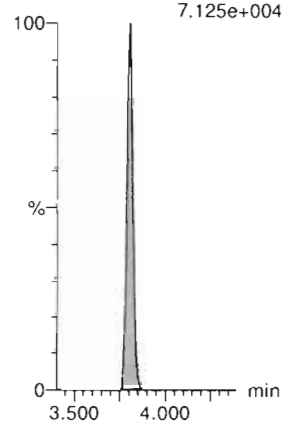
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.475e+005



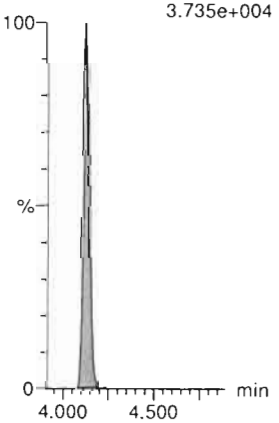
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.816e+005



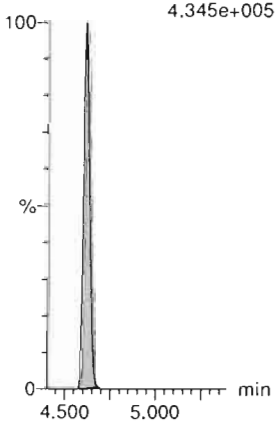
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.125e+004



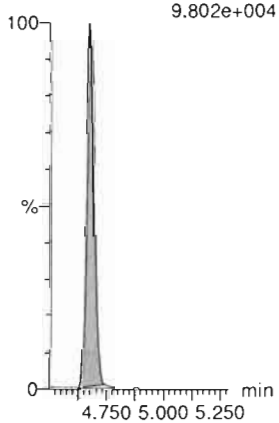
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.735e+004



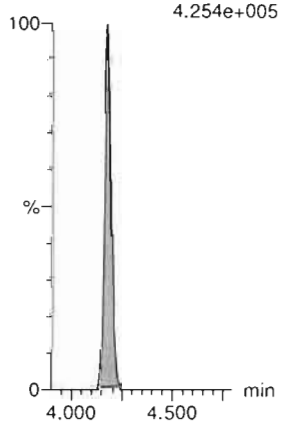
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.345e+005



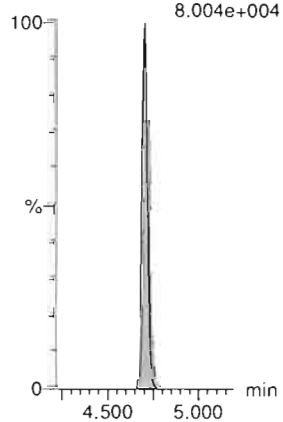
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.802e+004



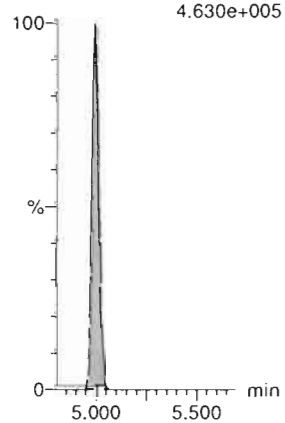
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.254e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.004e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.630e+005

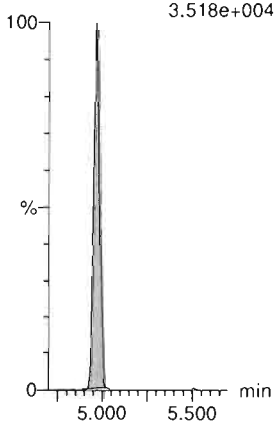


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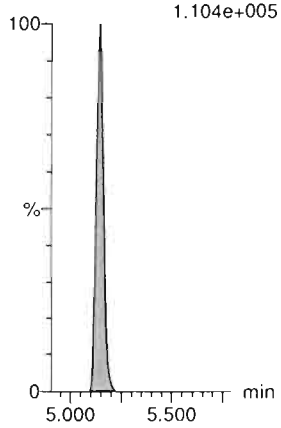
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Name: 200228P2-4, Date: 28-Feb-2020, Time: 13:17:15, ID: ST200228P2-2 PFC CS-1 20B1103, Description: PFC CS-1 20B1103

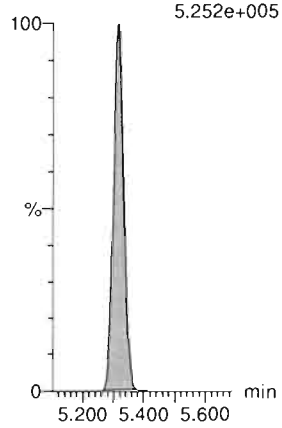
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.518e+004



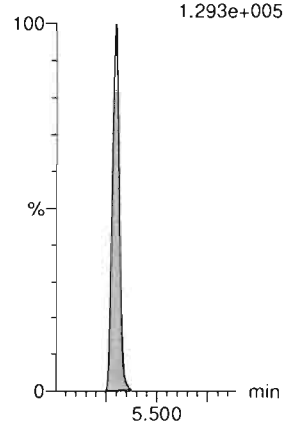
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.104e+005



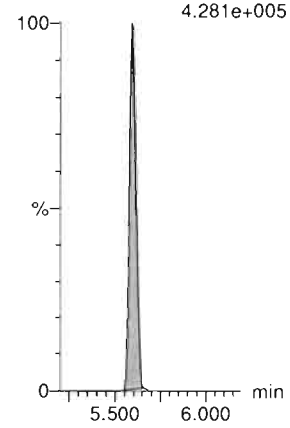
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.252e+005



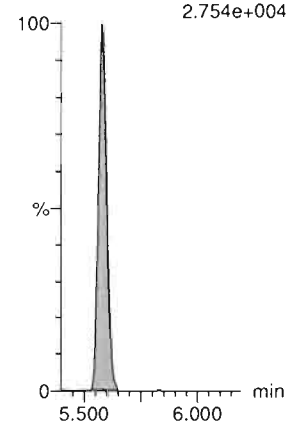
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.293e+005



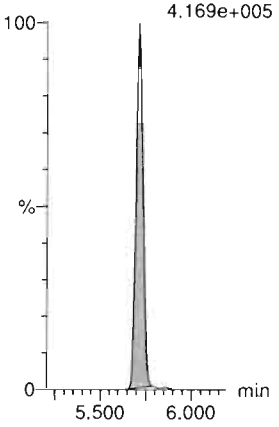
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.281e+005



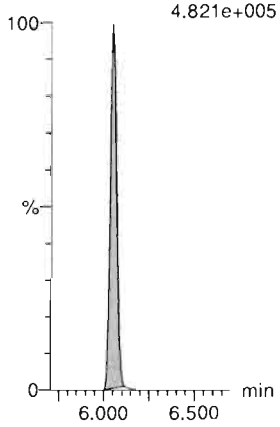
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.754e+004



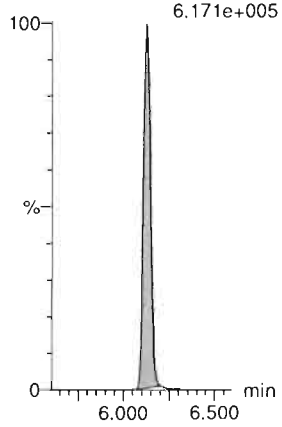
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.169e+005



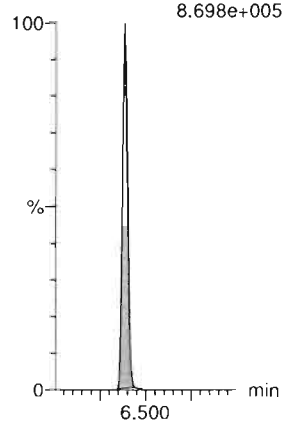
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.821e+005



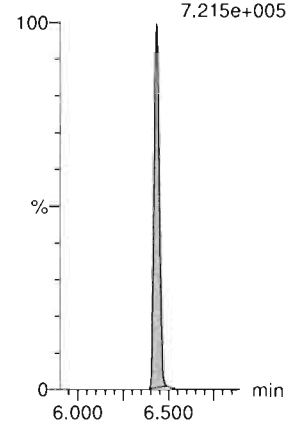
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.171e+005



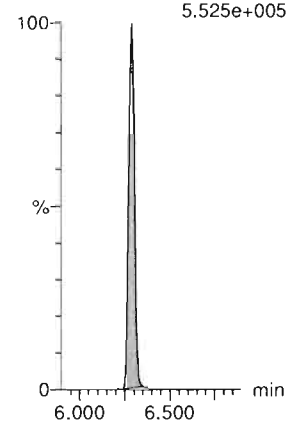
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.698e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.215e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.525e+005

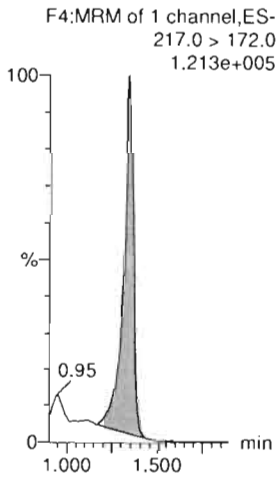


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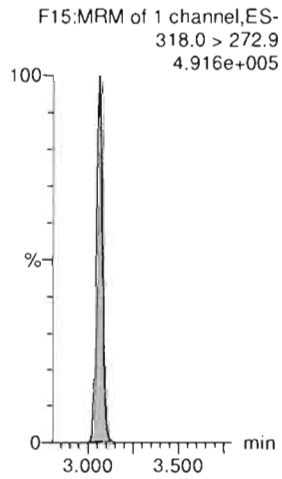
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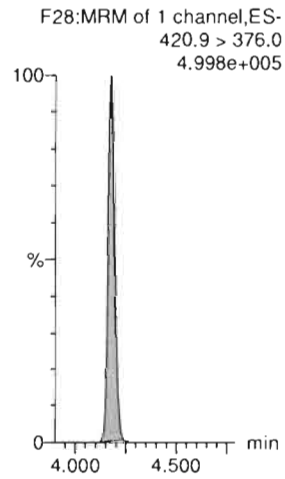
13C4-PFBA



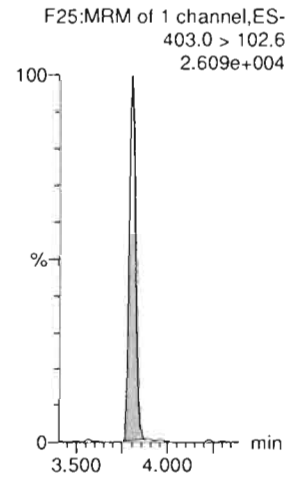
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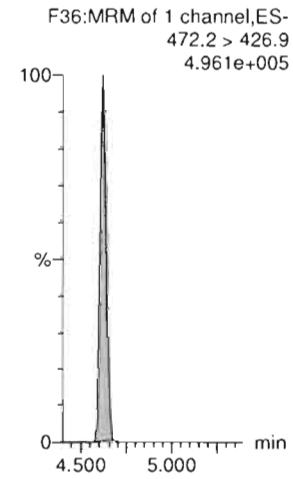
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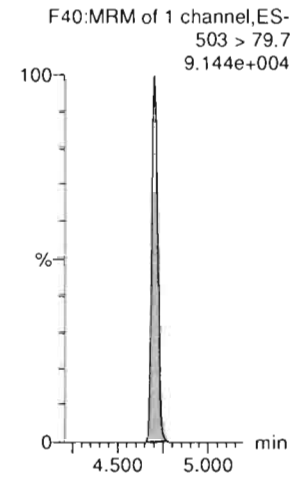
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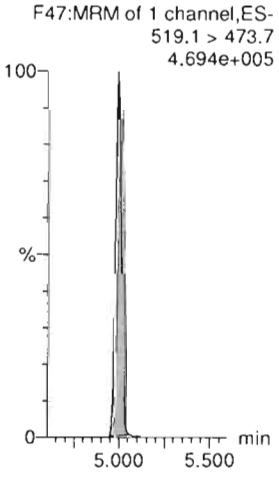
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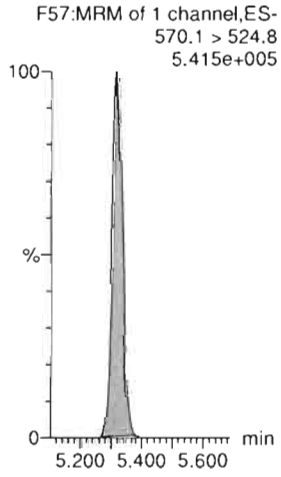
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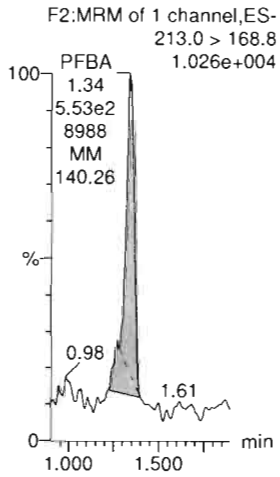


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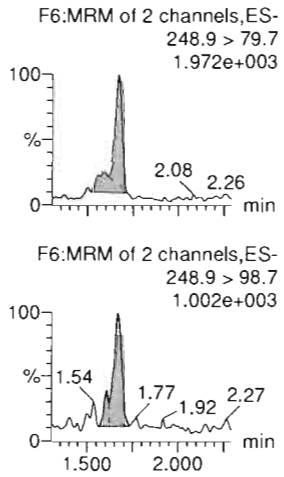
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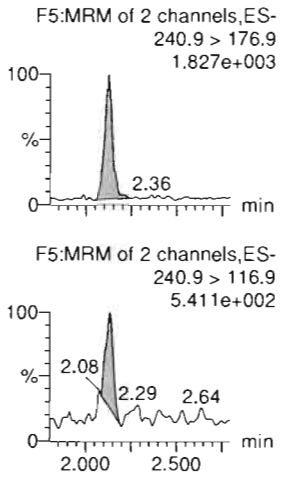
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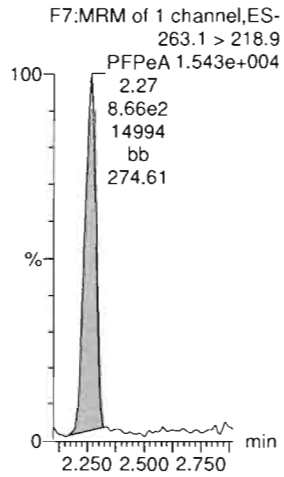
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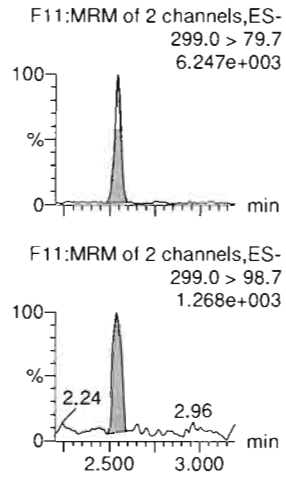
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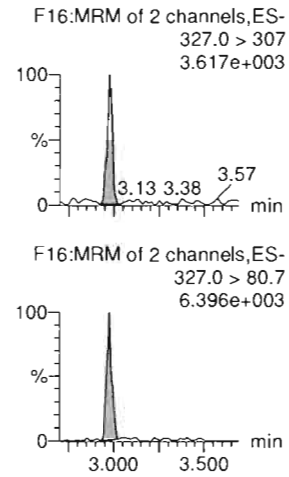
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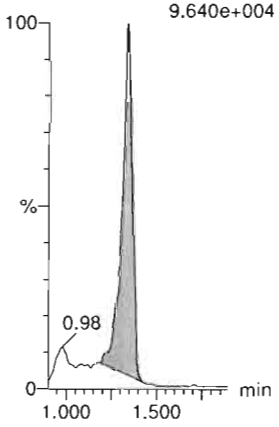
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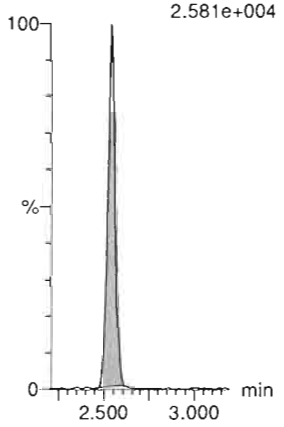
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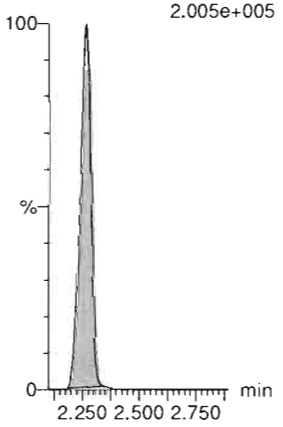
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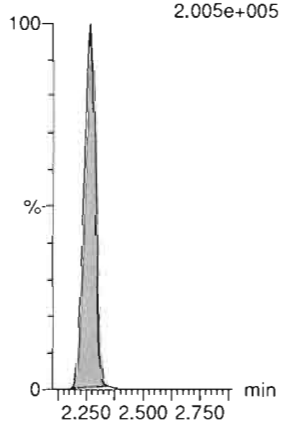
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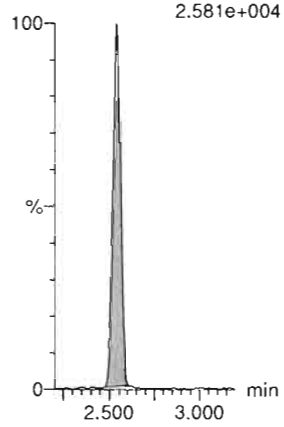
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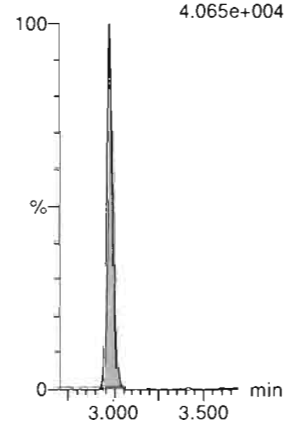
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

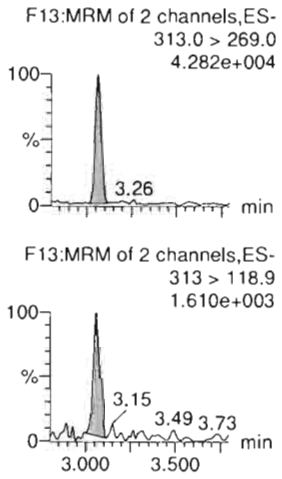


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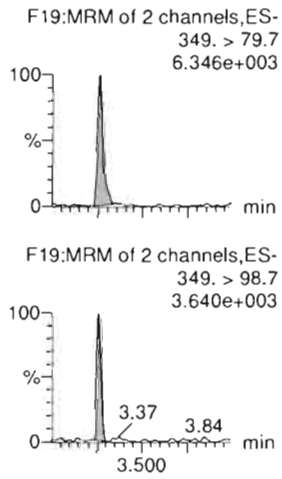
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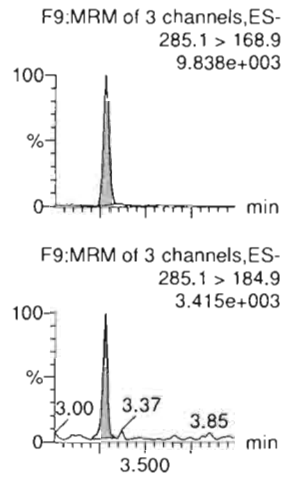
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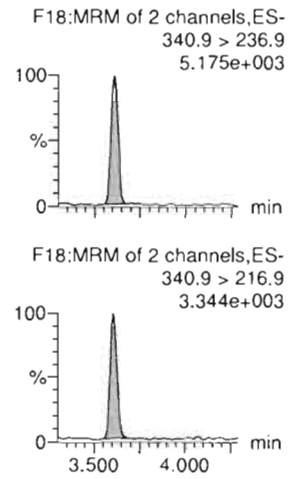
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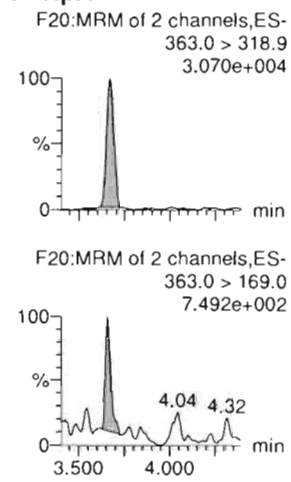
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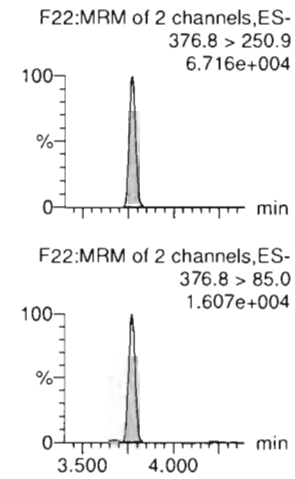
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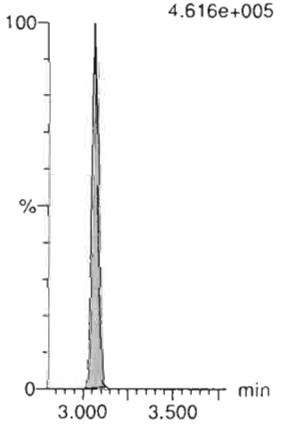
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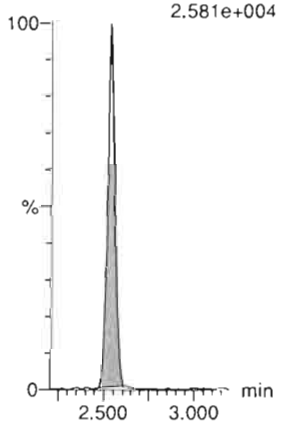
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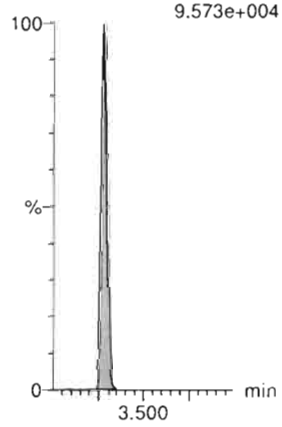
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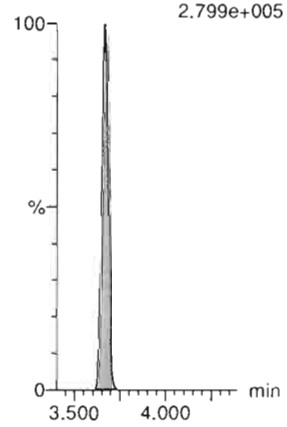
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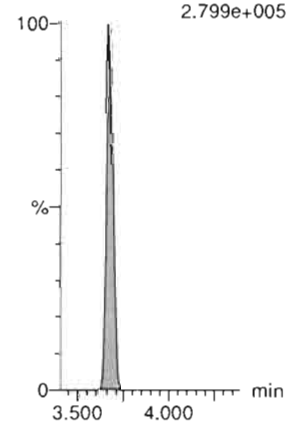
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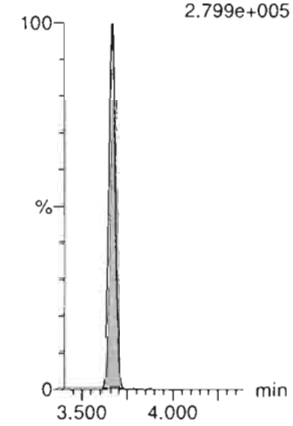
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13C4-PFHpA-EIS



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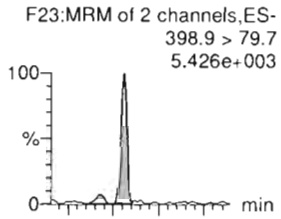


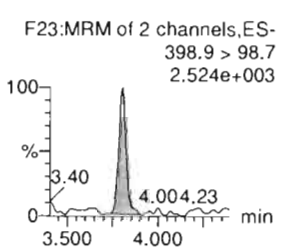
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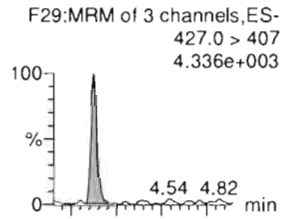
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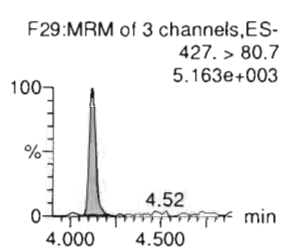
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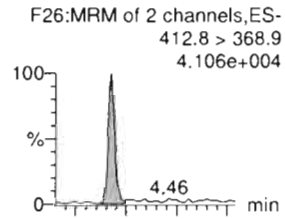


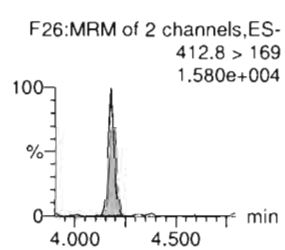
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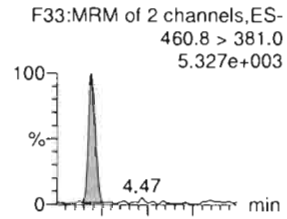


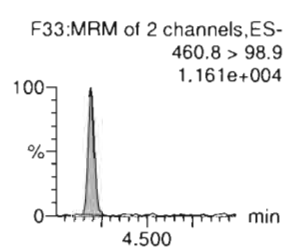
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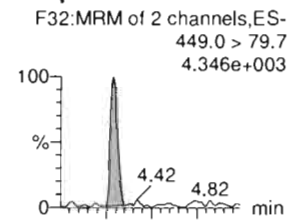


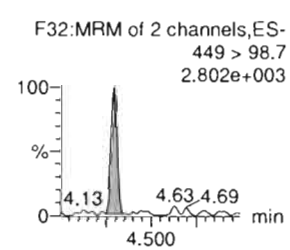
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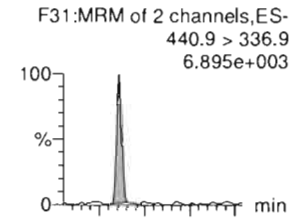


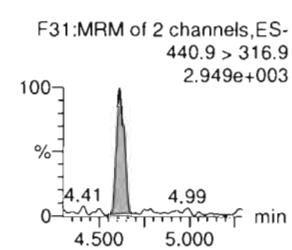
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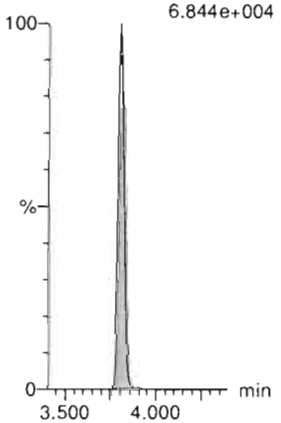


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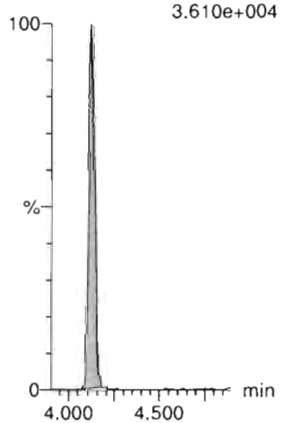




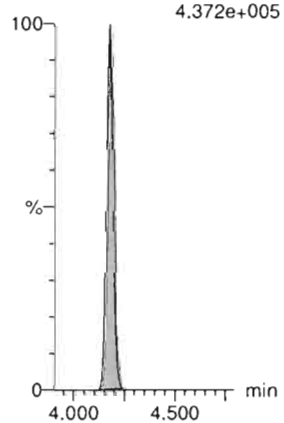
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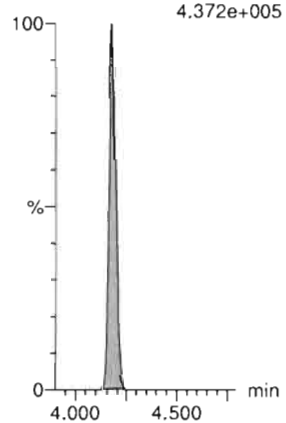
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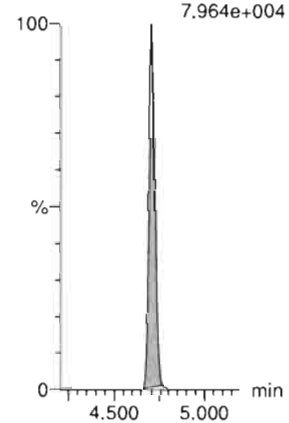
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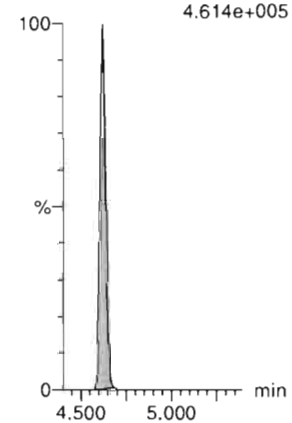
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13C8-PFOS-EIS



13C5-PFNA-EIS

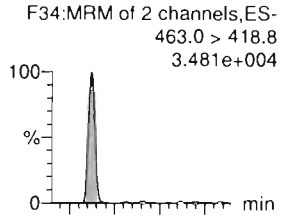


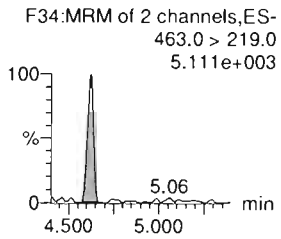
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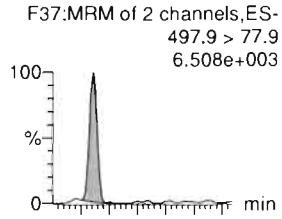
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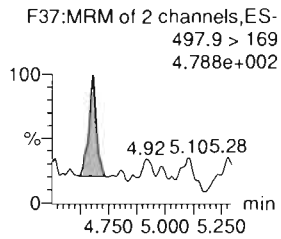
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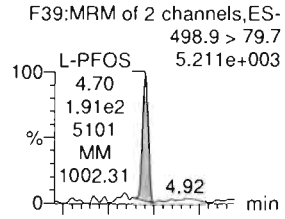


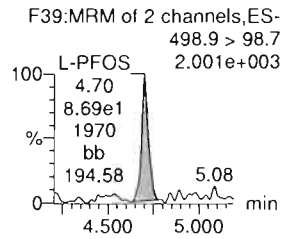
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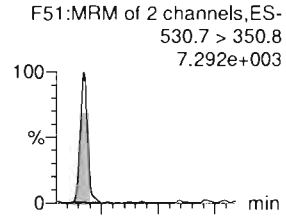


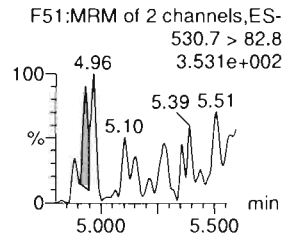
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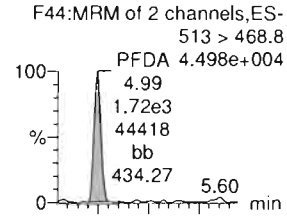


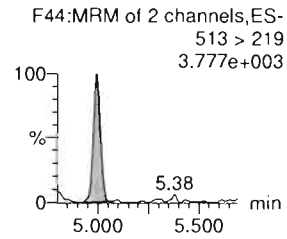
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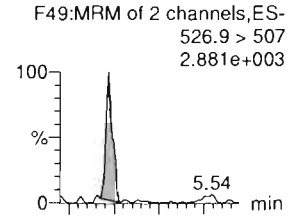


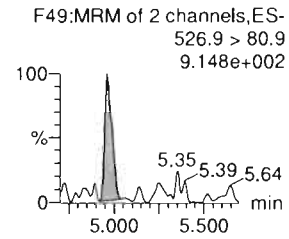
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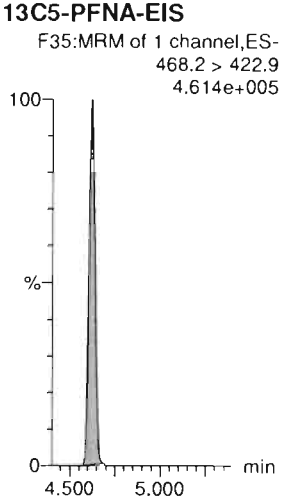


8:2 FTS

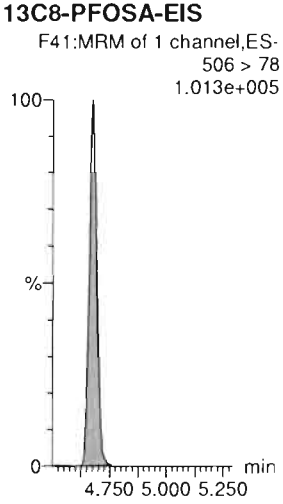




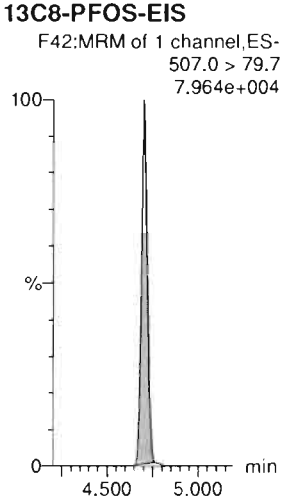
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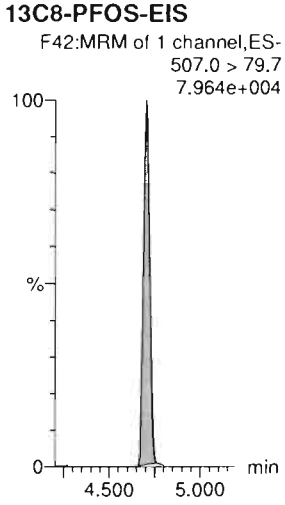
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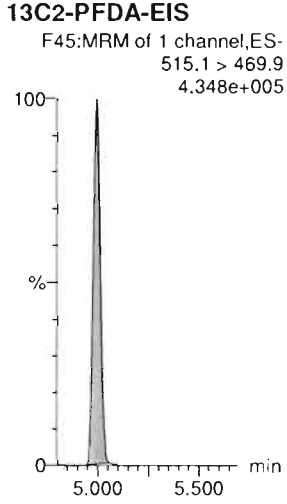
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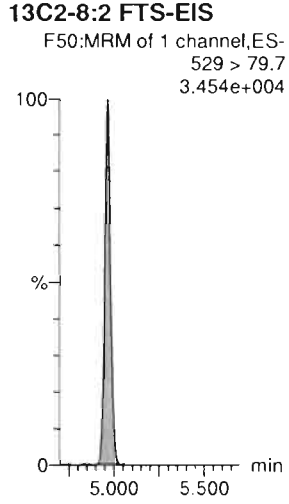
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

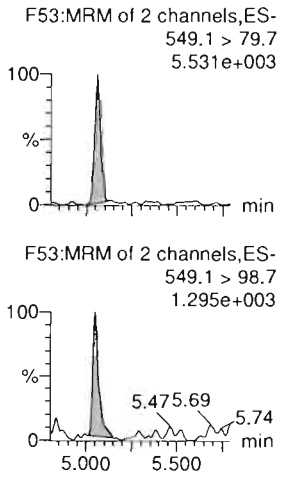


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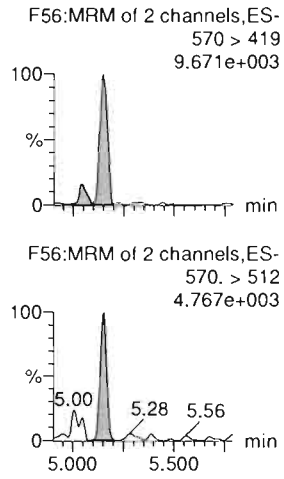
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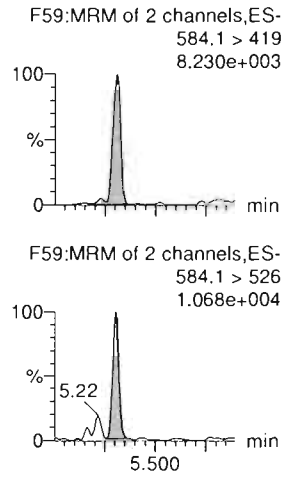
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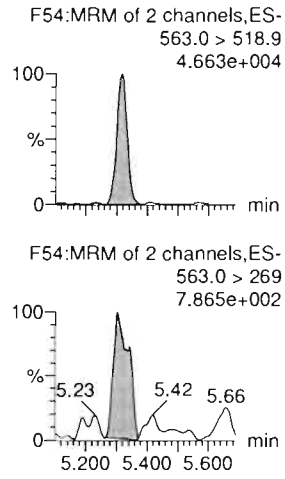
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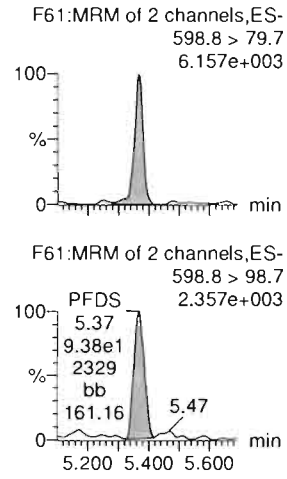
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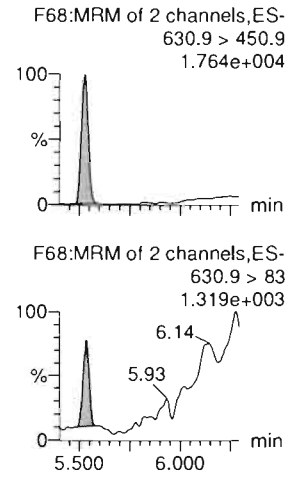
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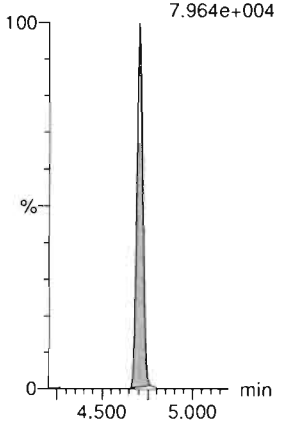
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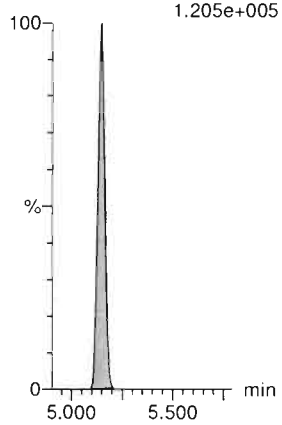
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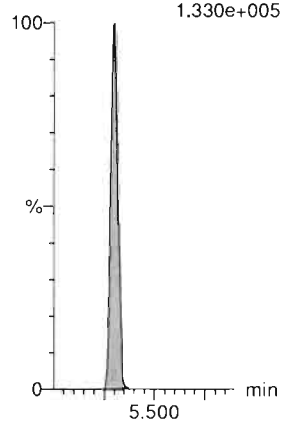
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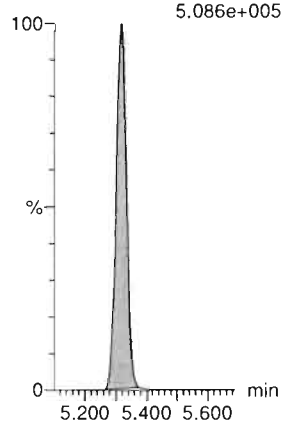
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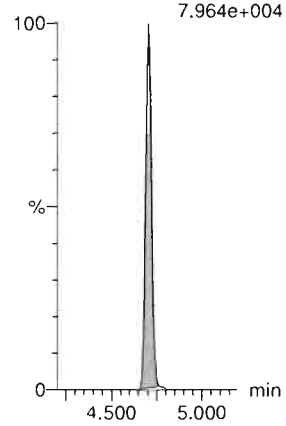
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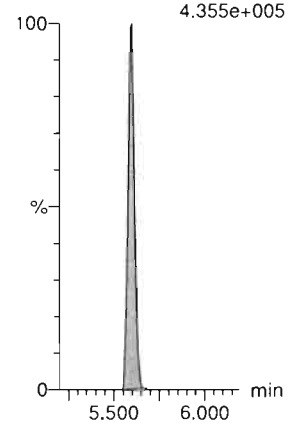
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13C8-PFOS-EIS



13C2-PFDoA-EIS

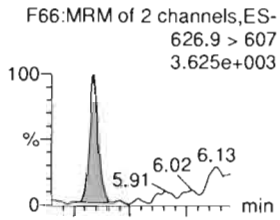


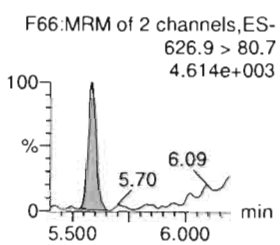
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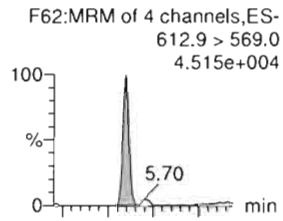
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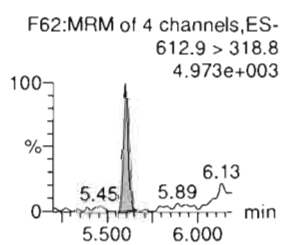
10:2 FTS



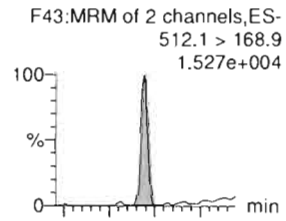


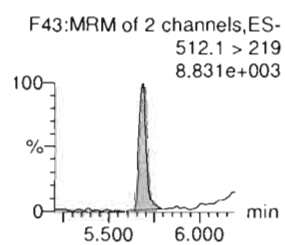
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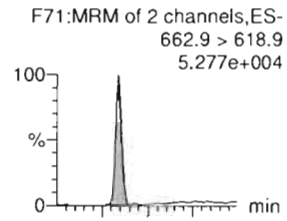


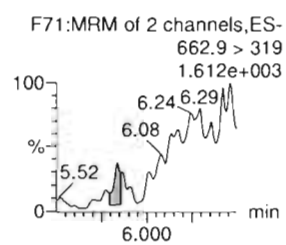
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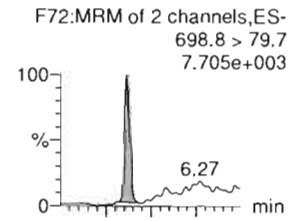


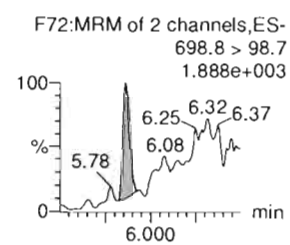
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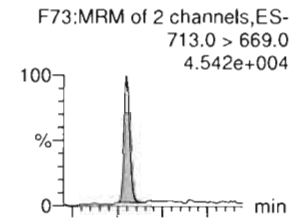


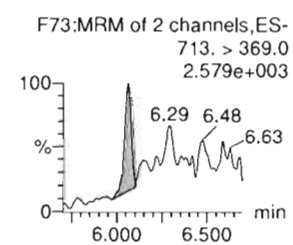
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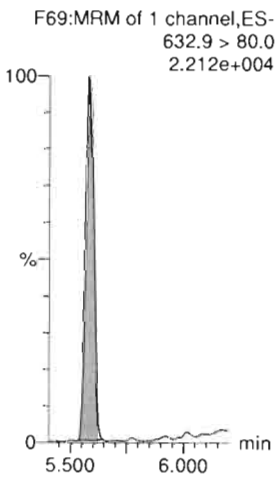


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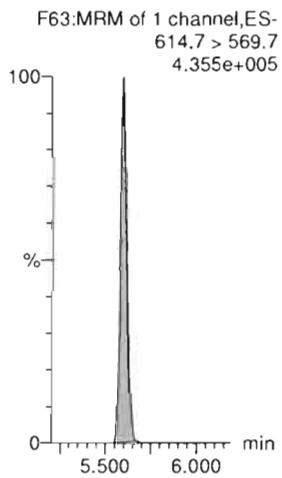




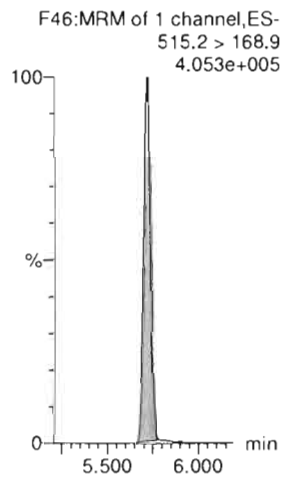
13C2-10:2 FTS-EIS



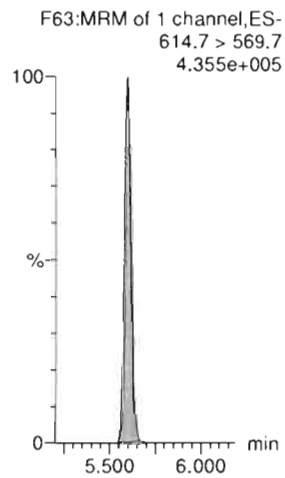
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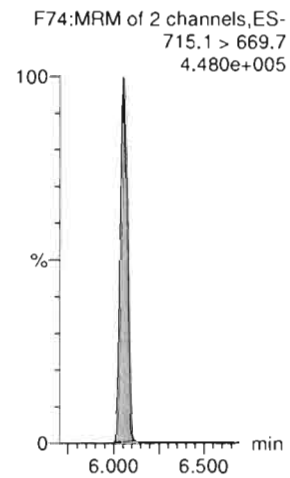
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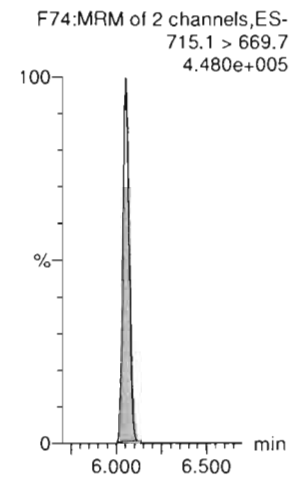
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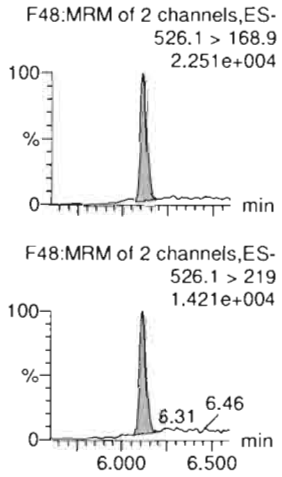


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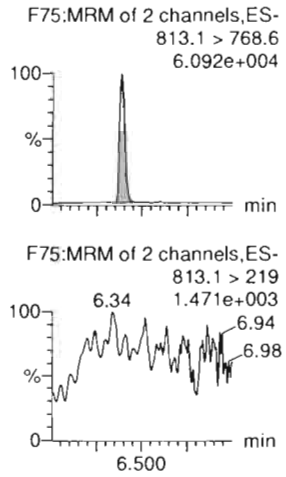
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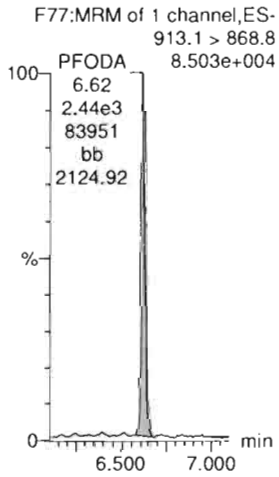
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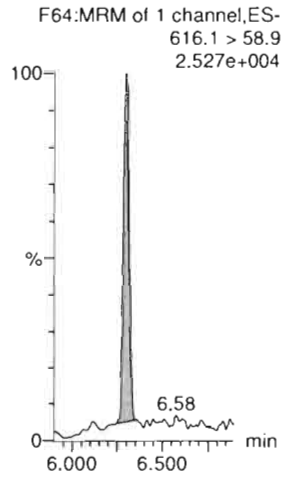
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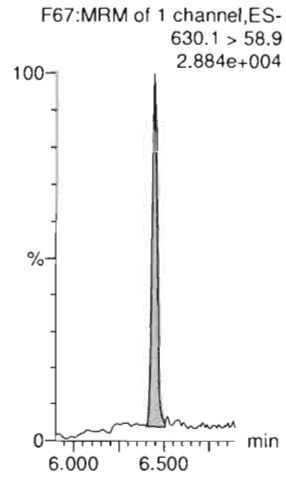
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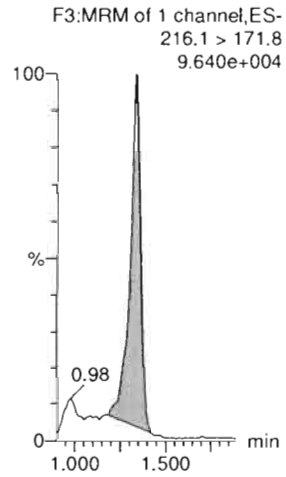
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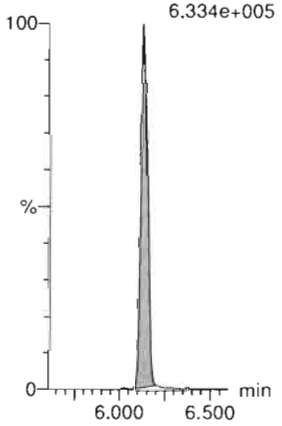
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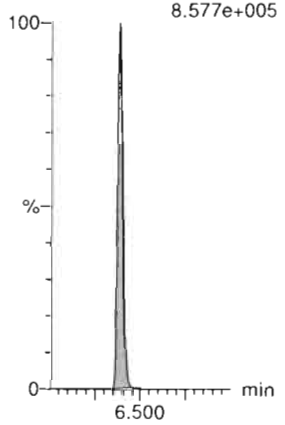
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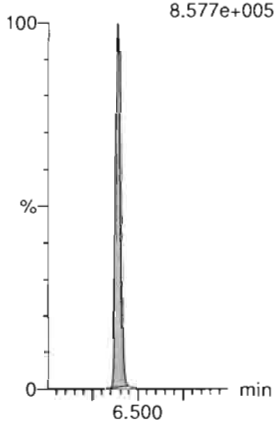
d5-N-ETFOSA-EIS



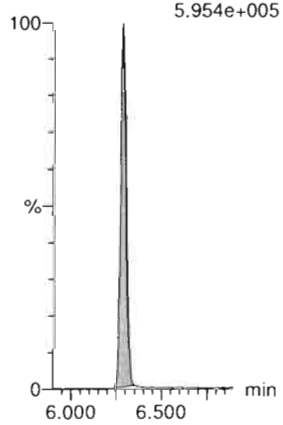
13C2-PFHxDA-EIS



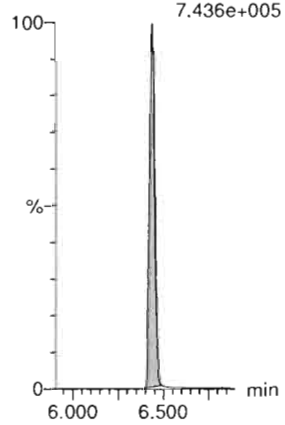
13C2-PFHxDA-EIS



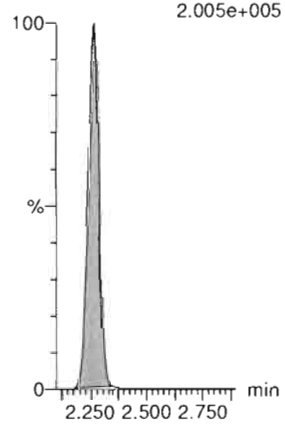
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

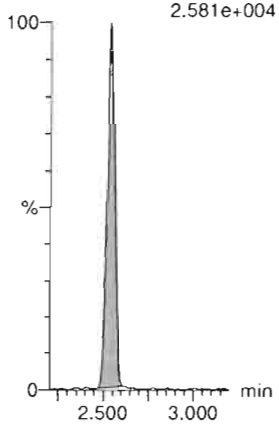


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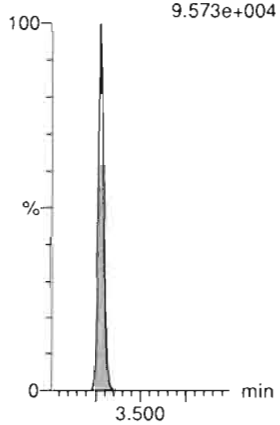
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Name: 200228P2-5, Date: 28-Feb-2020, Time: 13:27:47, ID: ST200228P2-3 PFC CS0 20B1104, Description: PFC CS0 20B1104

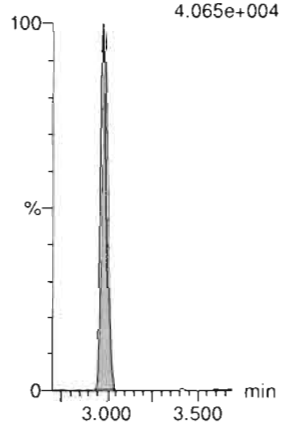
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.581e+004



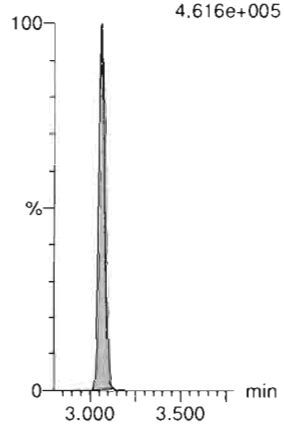
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
9.573e+004



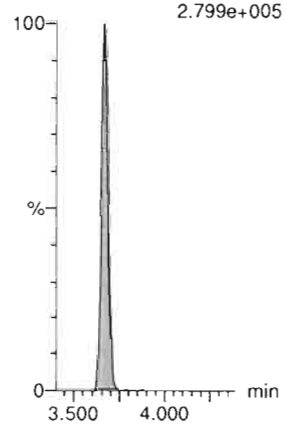
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.065e+004



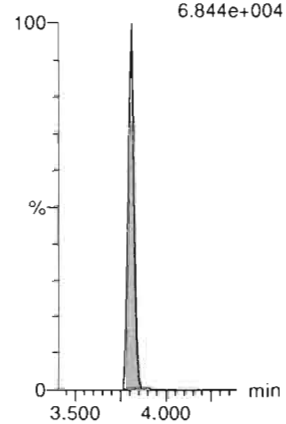
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.616e+005



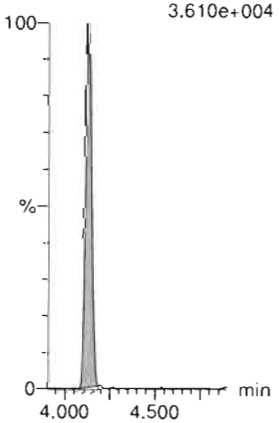
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.799e+005



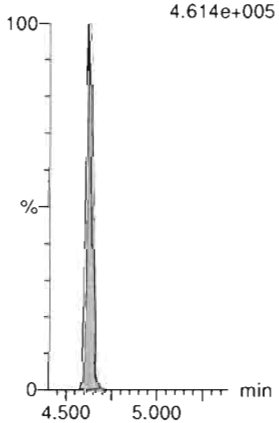
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.844e+004



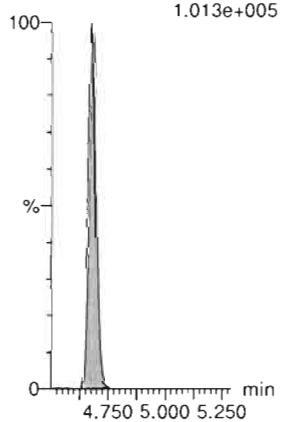
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.610e+004



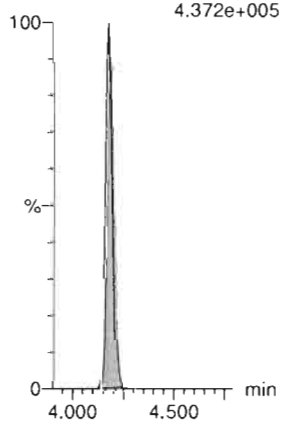
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.614e+005



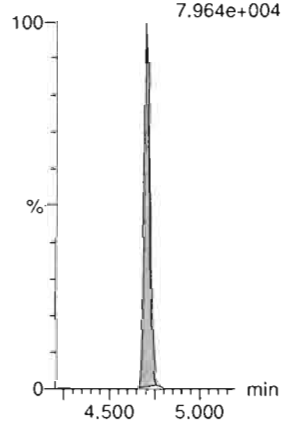
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.013e+005



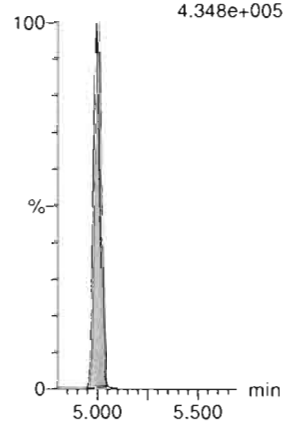
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.372e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.964e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.348e+005

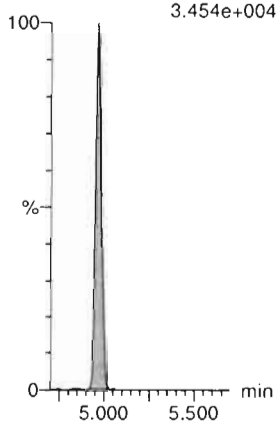


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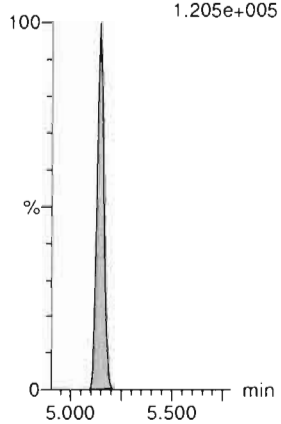
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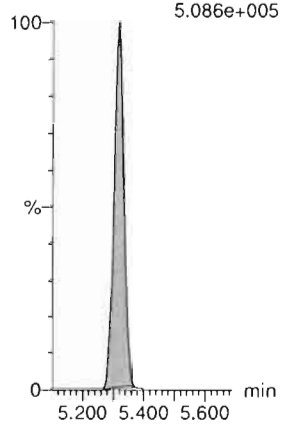
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.454e+004



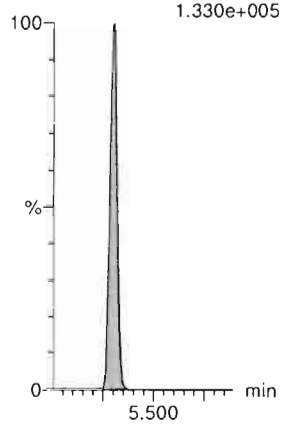
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.205e+005



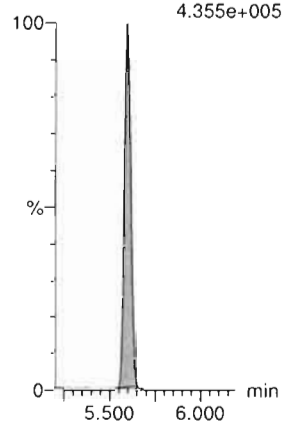
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.086e+005



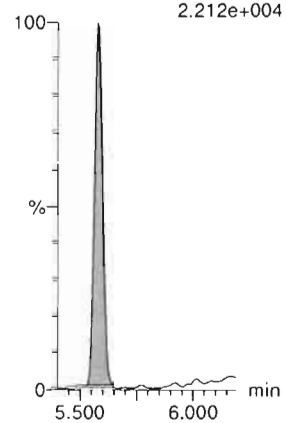
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.330e+005



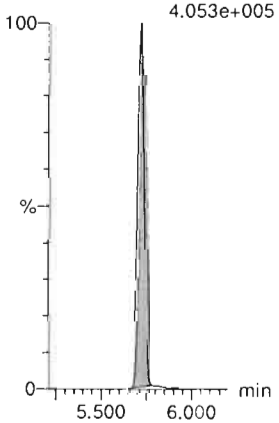
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.355e+005



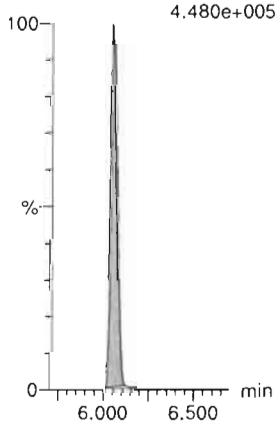
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.212e+004



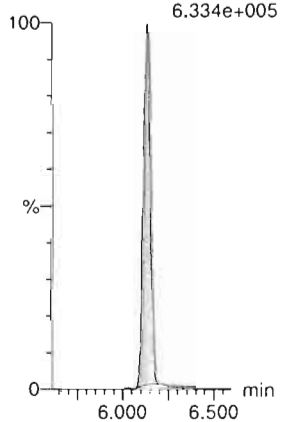
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.053e+005



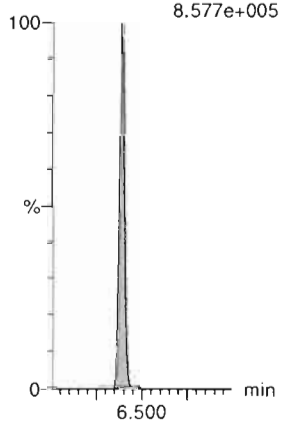
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.480e+005



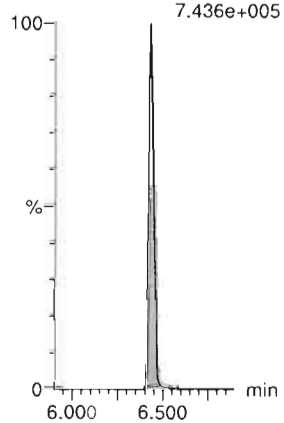
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.334e+005



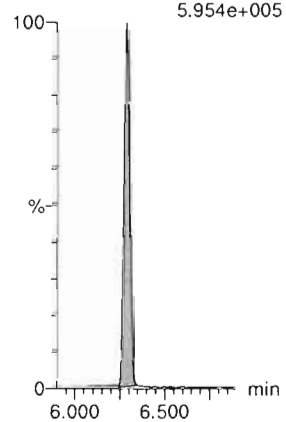
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.577e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.436e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.954e+005

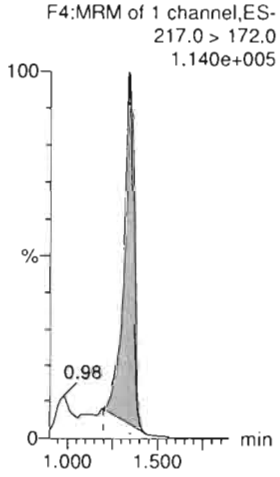


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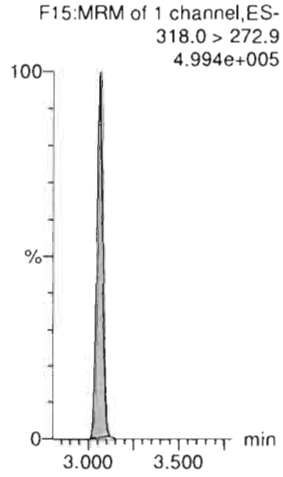
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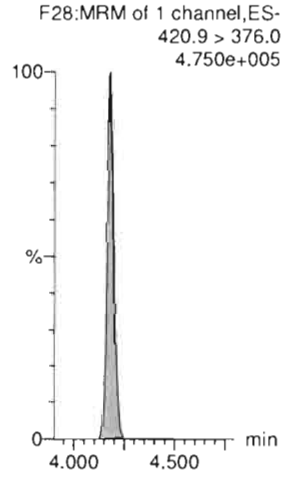
13C4-PFBA



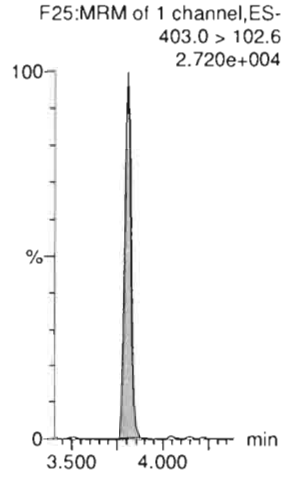
13C5-PFHxA



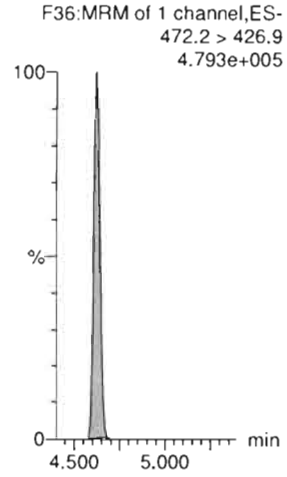
13C8-PFOA



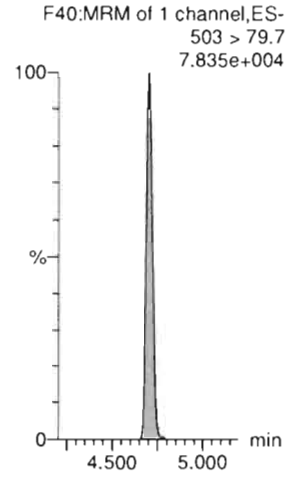
18O2-PFHxS



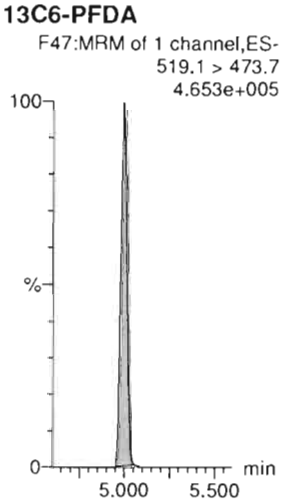
13C9-PFNA



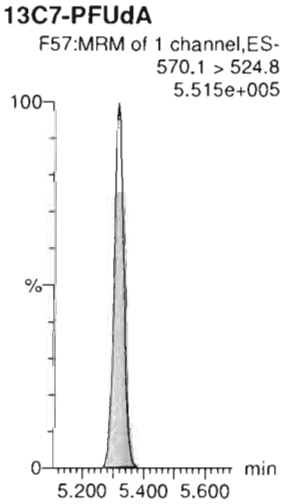
13C4-PFOS



13C6-PFDA



13C7-PFUdA

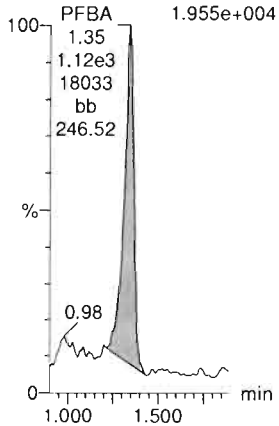


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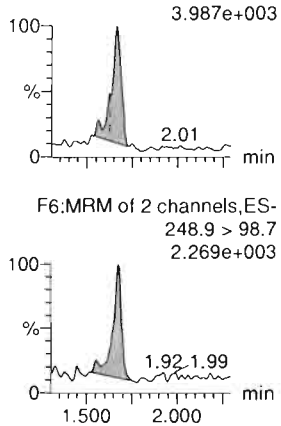
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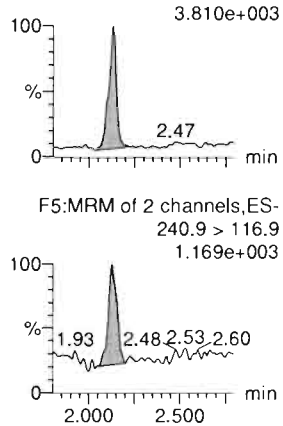
PFBA



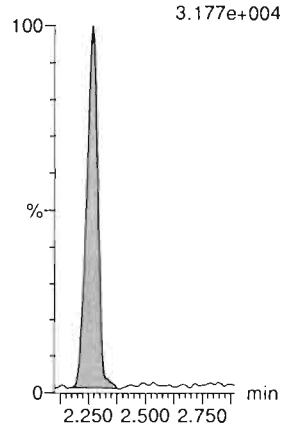
PFPrS



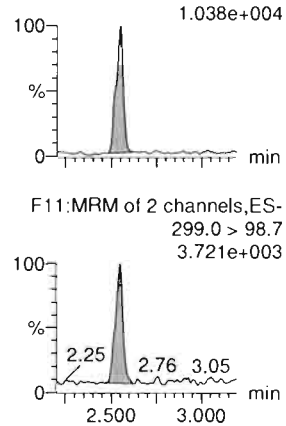
3:3 FTCA



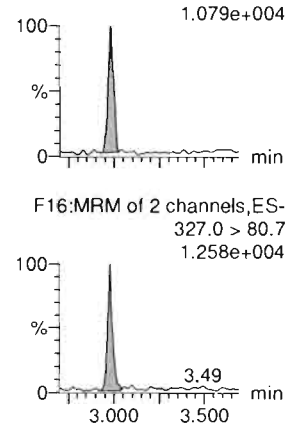
PFPeA



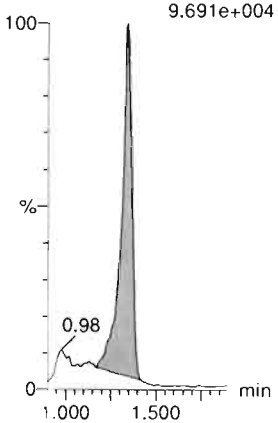
PFBS



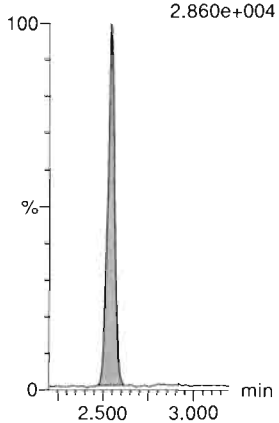
4:2 FTS



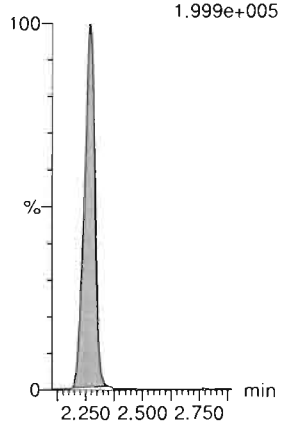
13C3-PFBA-EIS



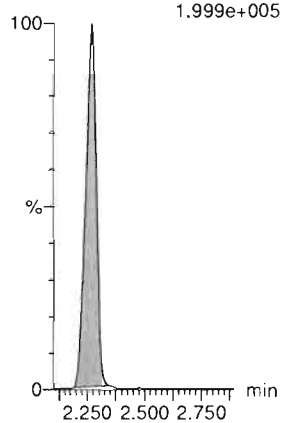
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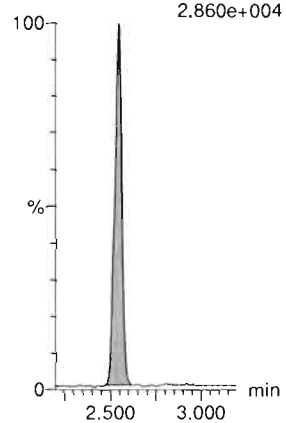
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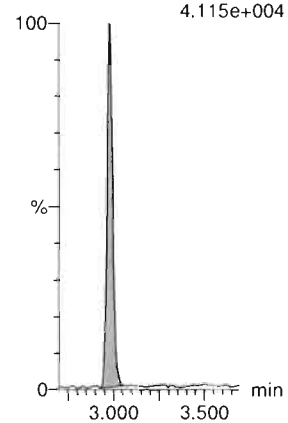
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

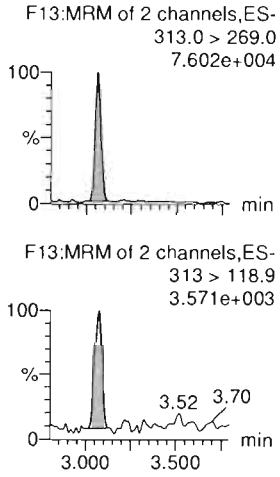


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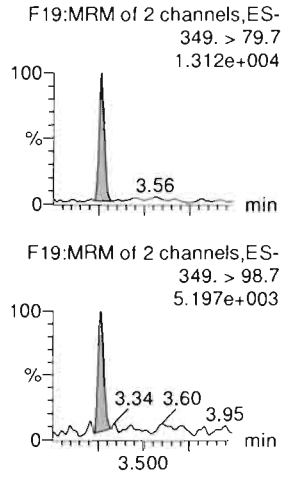
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Name: 200228P2-6, Date: 28-Feb-2020, Time: 13:38:16, ID: ST200228P2-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

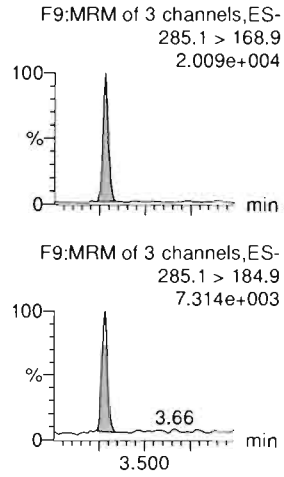
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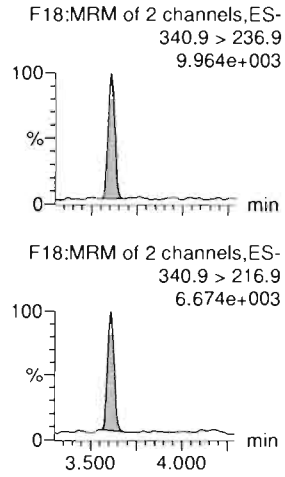
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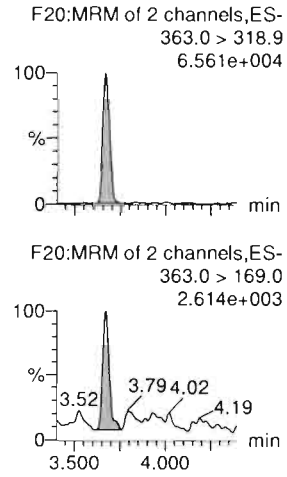
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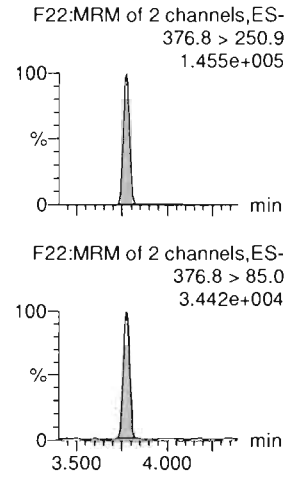
5:3 FTCA



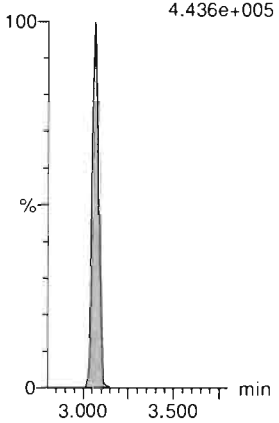
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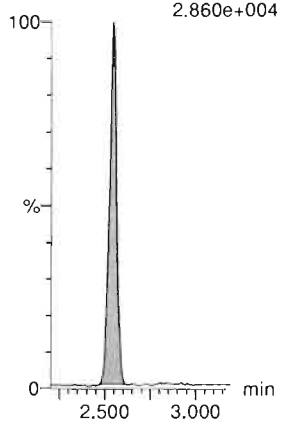
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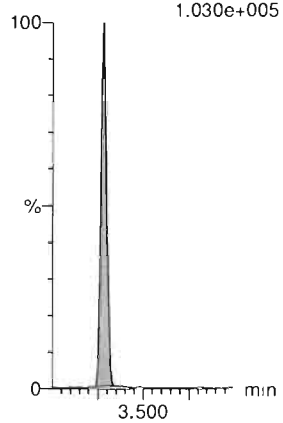
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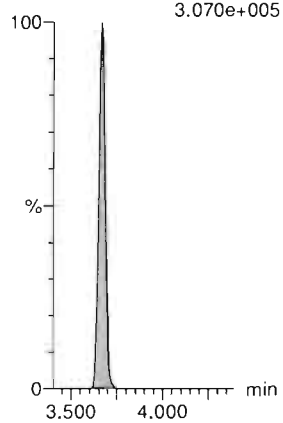
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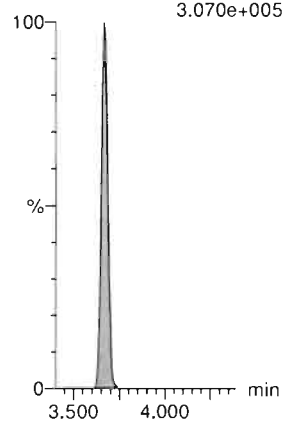
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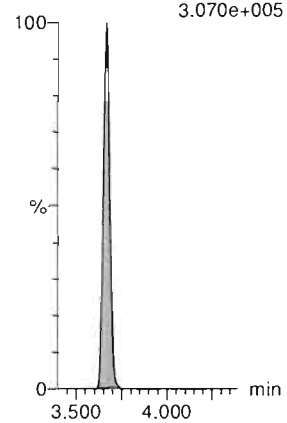
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13C4-PFHpA-EIS



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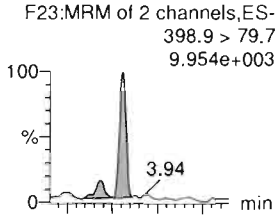


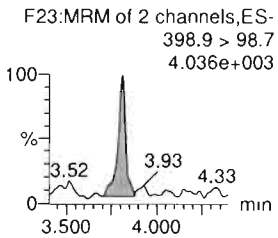
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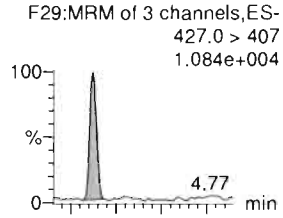
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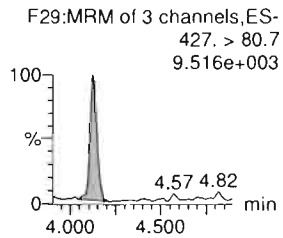
L-PFHxS



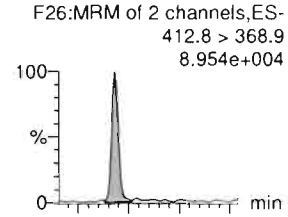


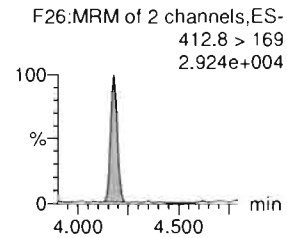
6:2 FTS



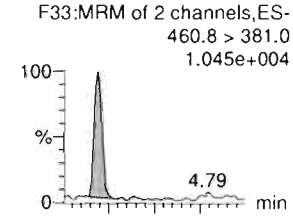


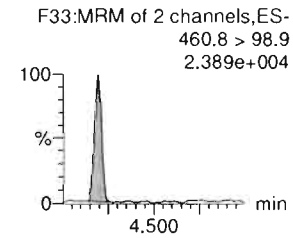
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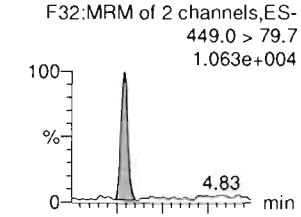


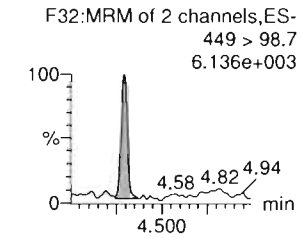
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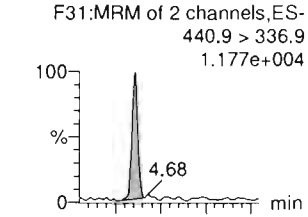


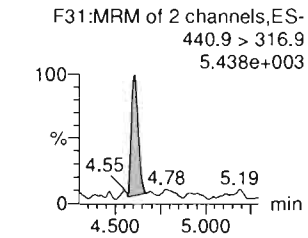
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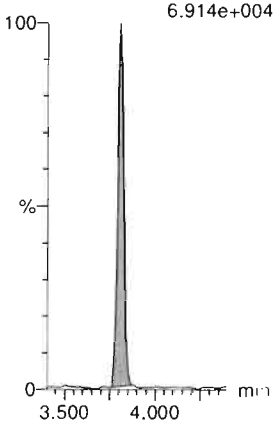


7:3 FTCA

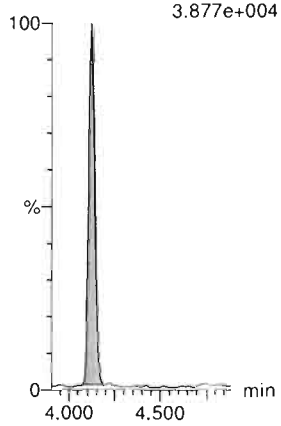




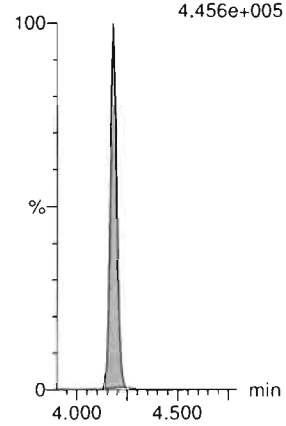
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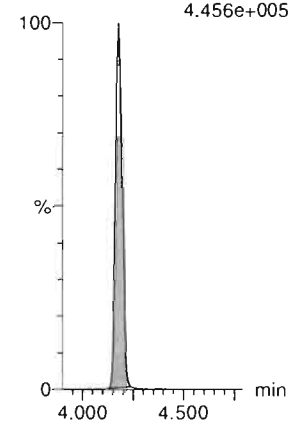
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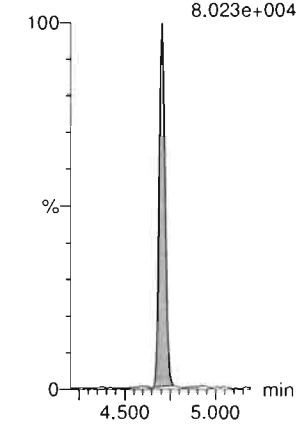
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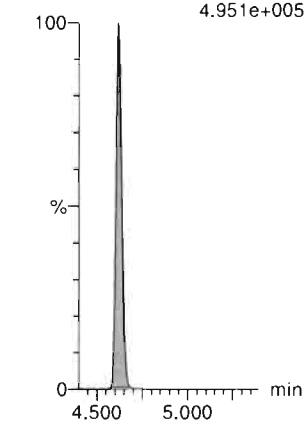
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13C8-PFOS-EIS



13C5-PFNA-EIS

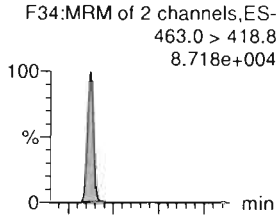


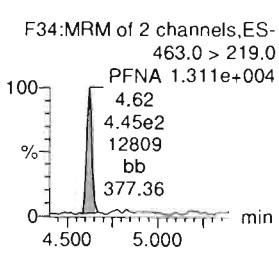
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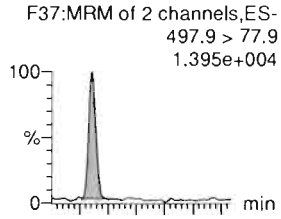
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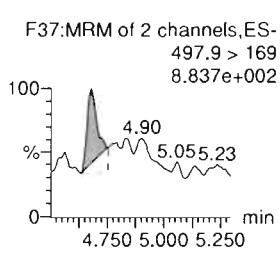
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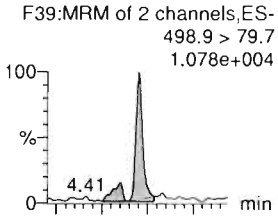


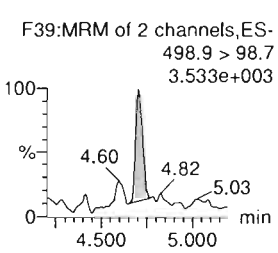
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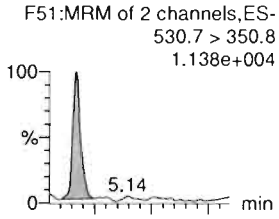


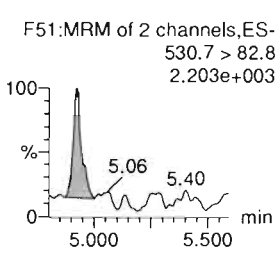
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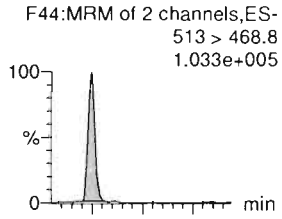


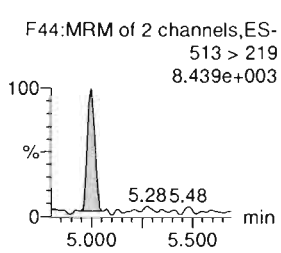
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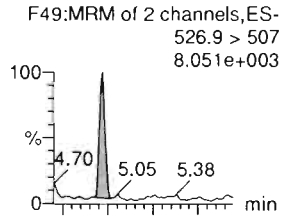


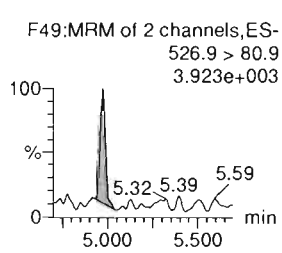
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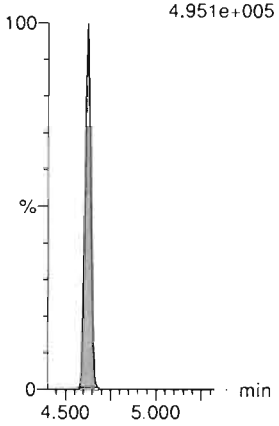


8:2 FTS

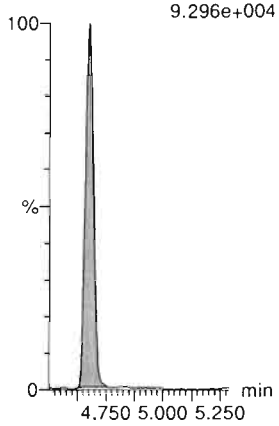




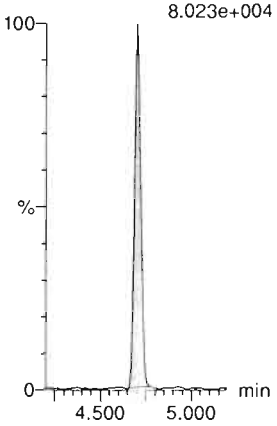
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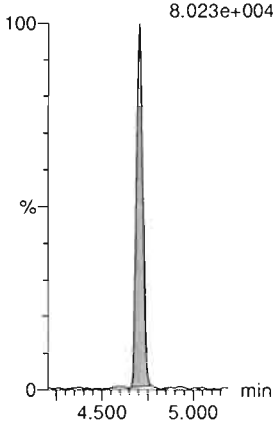
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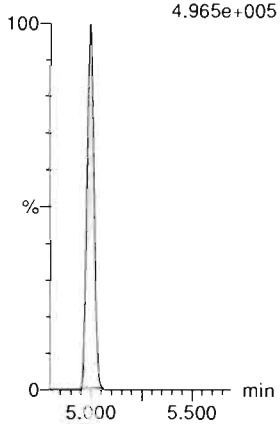
13C8-PFOS-EIS



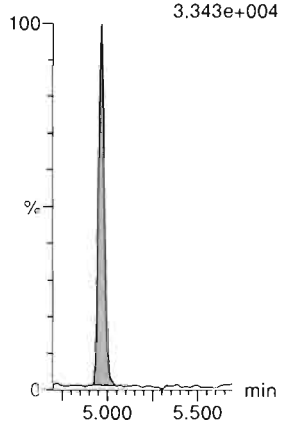
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

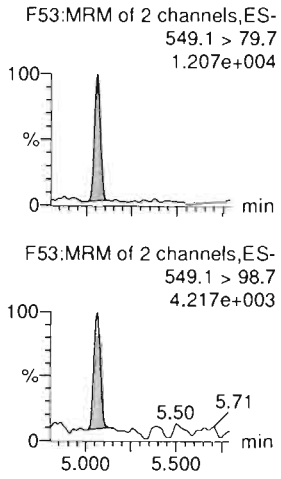


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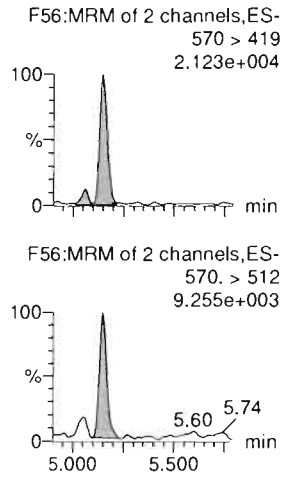
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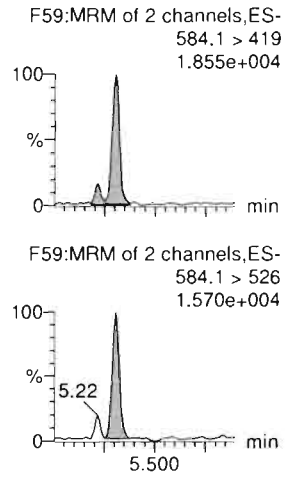
PFNS



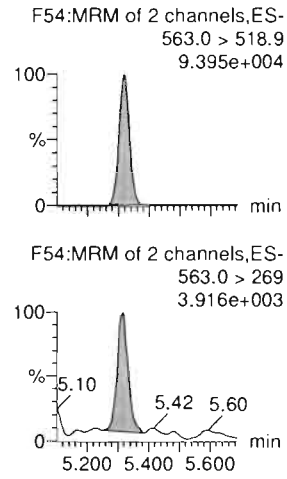
L-MeFOSAA



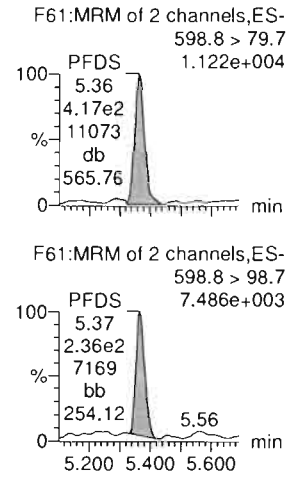
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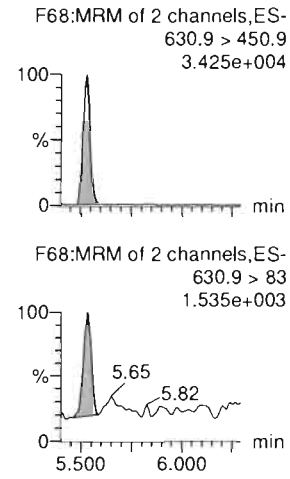
PFUdA



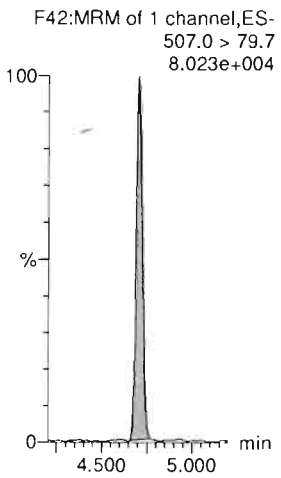
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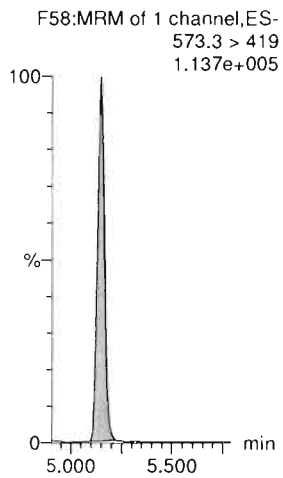
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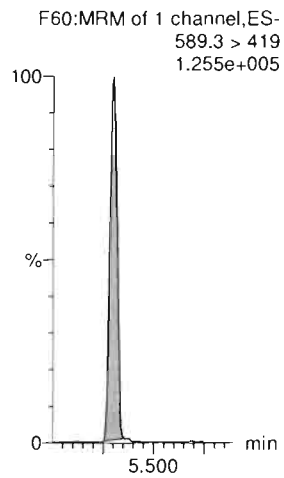
13C8-PFOS-EIS



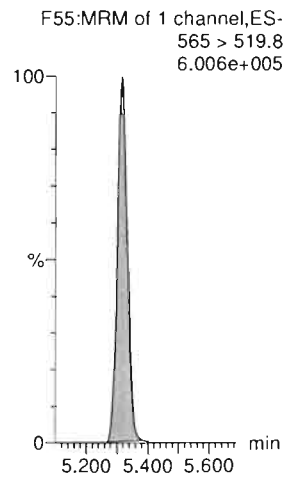
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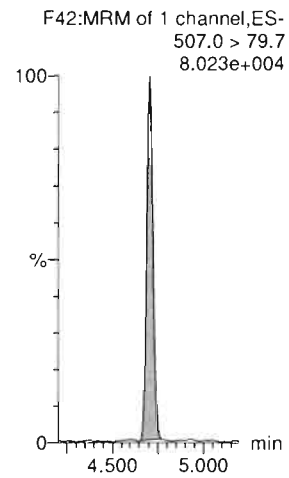
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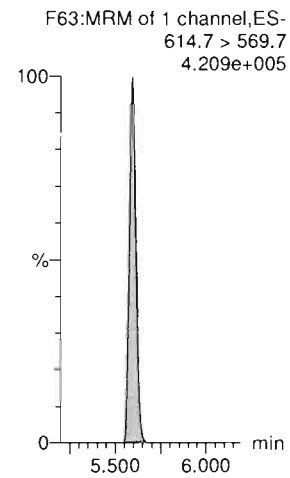
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

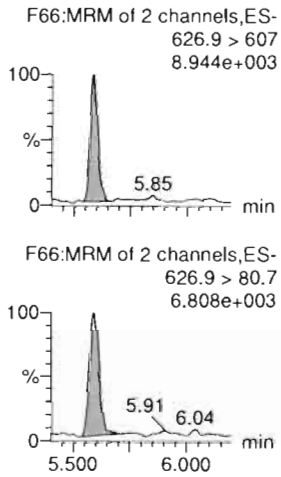


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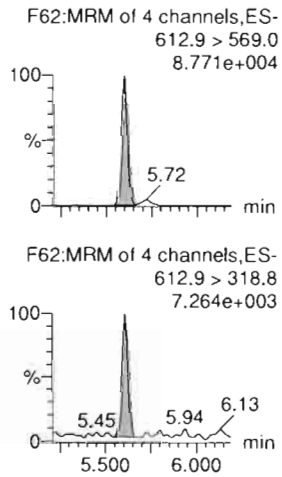
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Name: 200228P2-6, Date: 28-Feb-2020, Time: 13:38:16, ID: ST200228P2-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

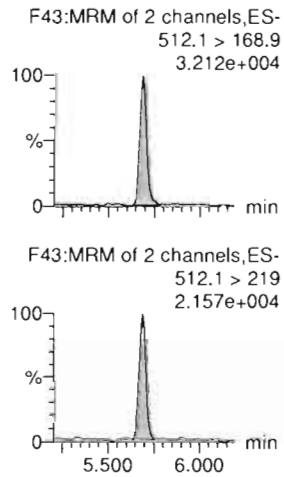
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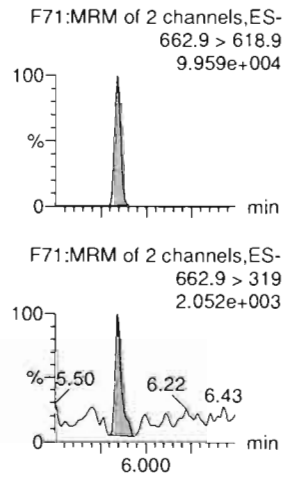
PFDoA



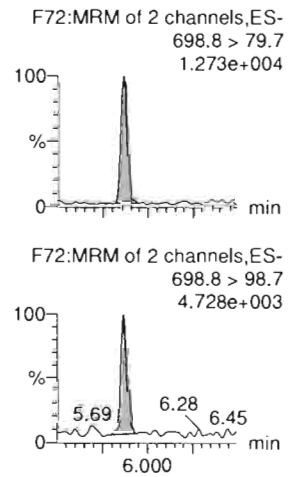
N-MeFOSA



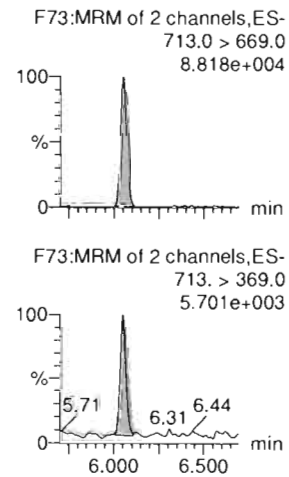
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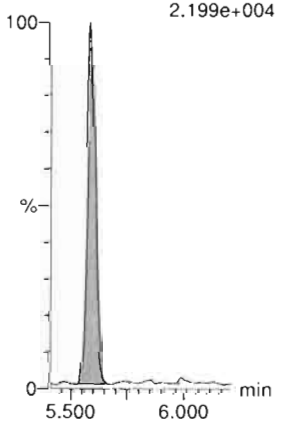
PFDoS



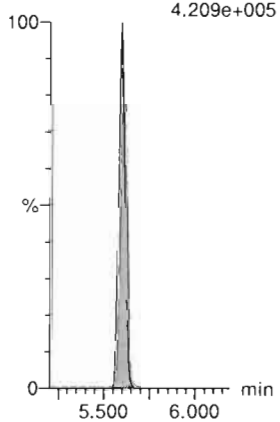
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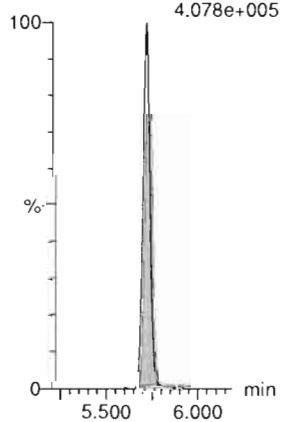
13C2-10:2 FTS-EIS



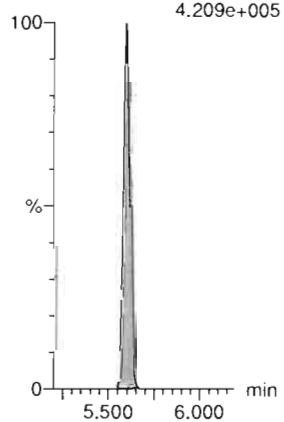
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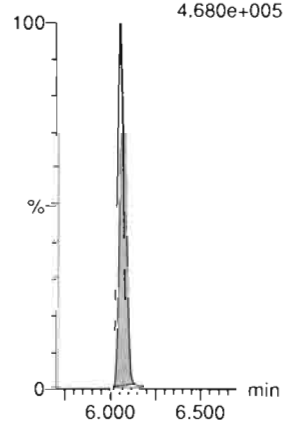
d3-N-MeFOSA-EIS



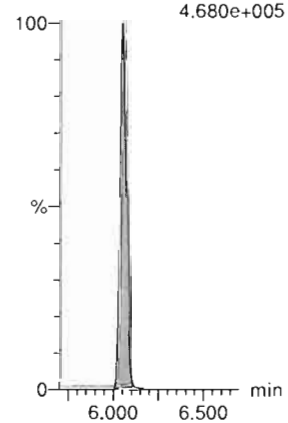
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

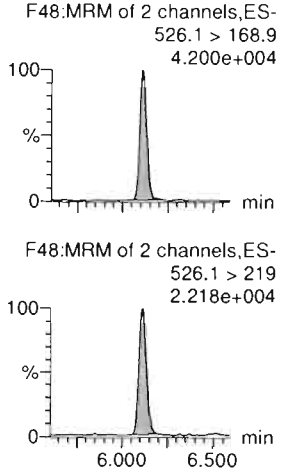


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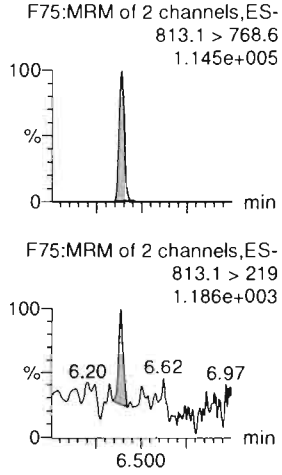
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Name: 200228P2-6, Date: 28-Feb-2020, Time: 13:38:16, ID: ST200228P2-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

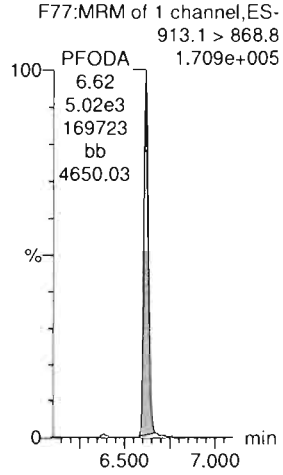
N-EtFOSA



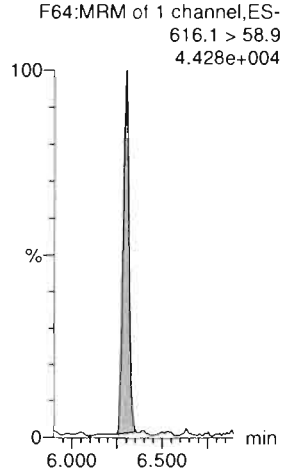
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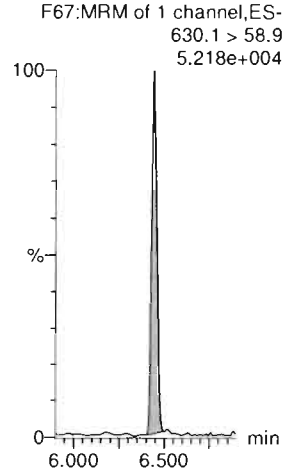
PFODA



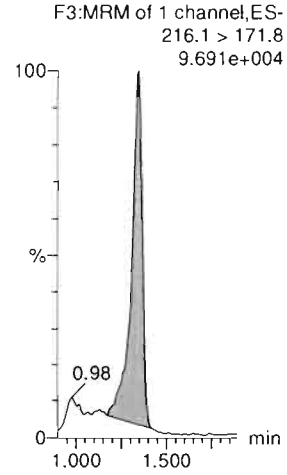
N-MeFOSE



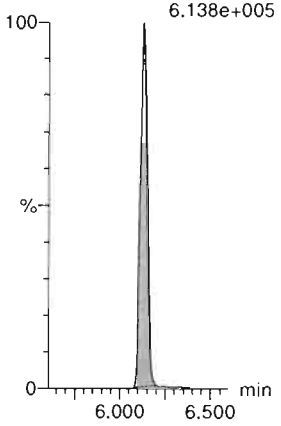
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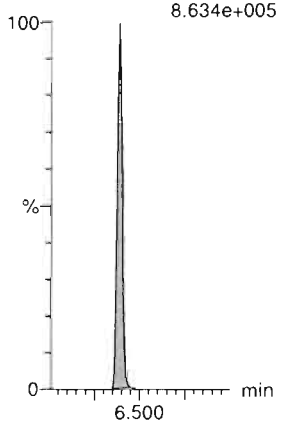
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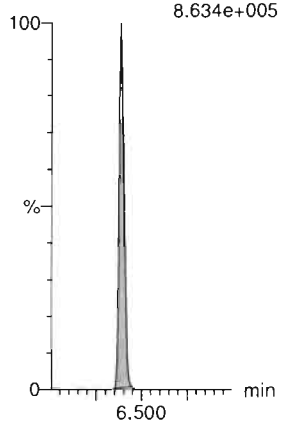
d5-N-ETFOSA-EIS



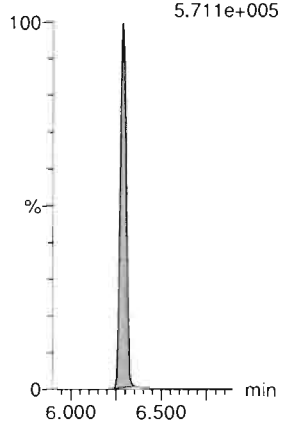
13C2-PFHxDA-EIS



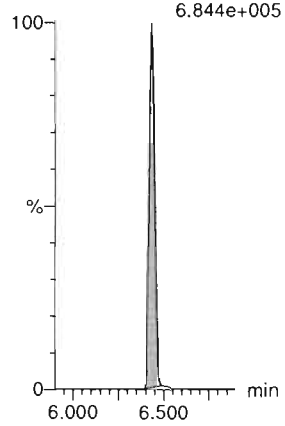
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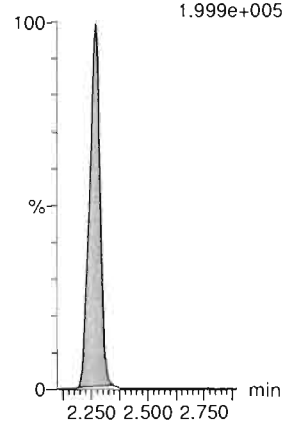
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

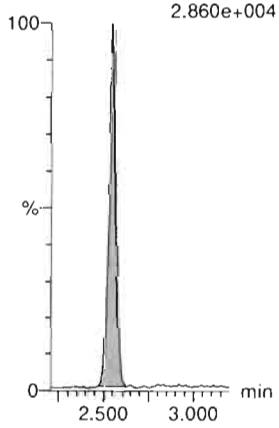


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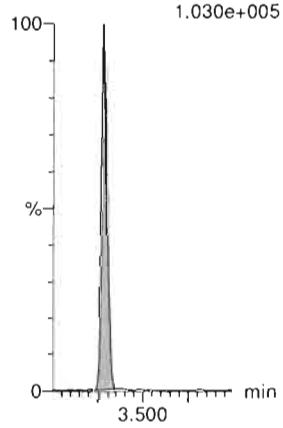
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Name: 200228P2-6, Date: 28-Feb-2020, Time: 13:38:16, ID: ST200228P2-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

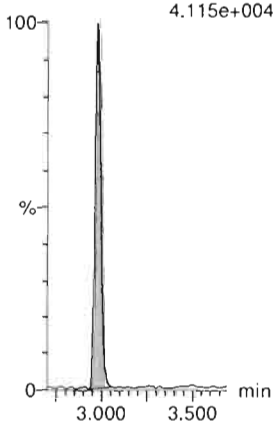
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.860e+004



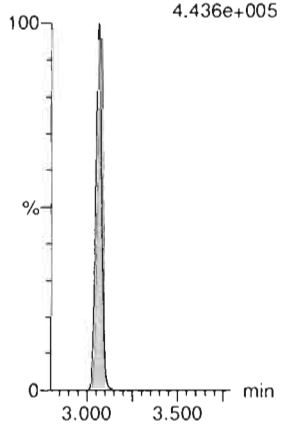
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.030e+005



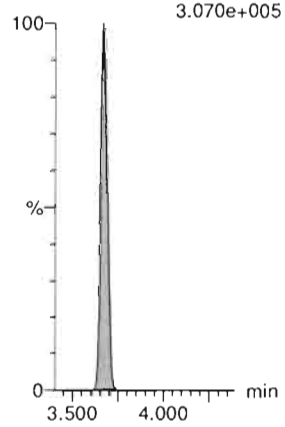
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.115e+004



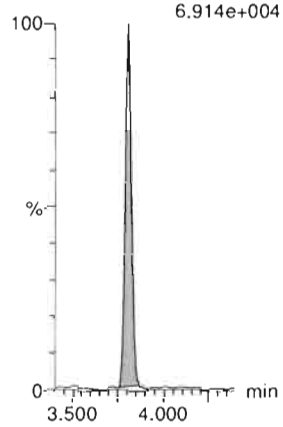
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F14:MRM of 1 channel,ES-
315.0 > 270.0
4.436e+005



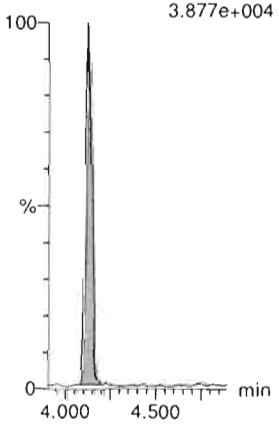
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.070e+005



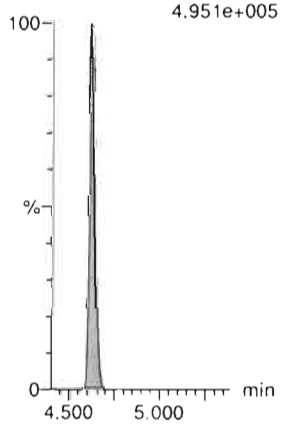
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.914e+004



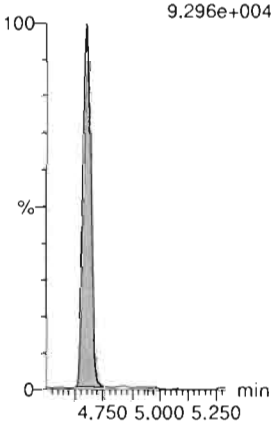
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.877e+004



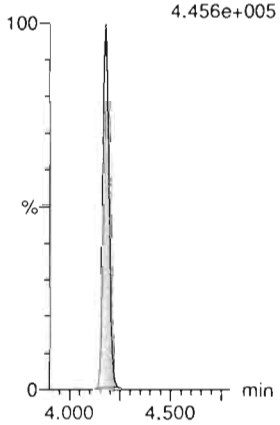
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.951e+005



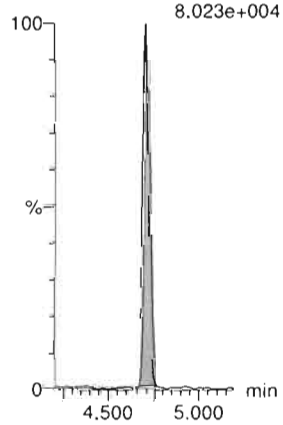
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.296e+004



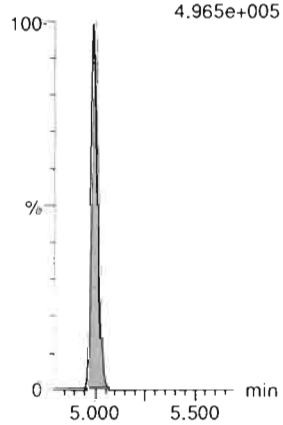
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.456e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.023e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.965e+005

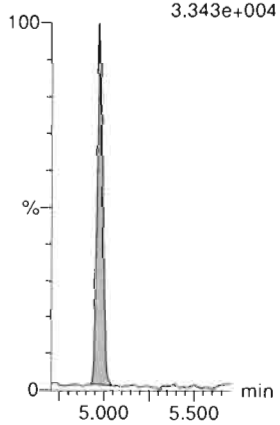


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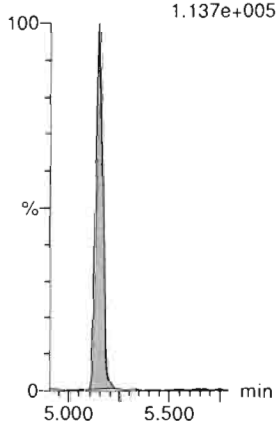
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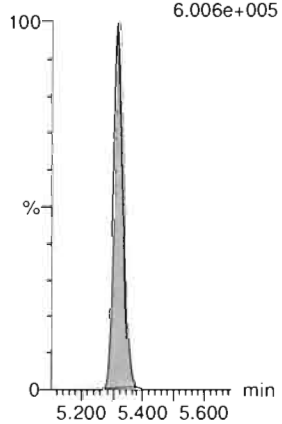
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.343e+004



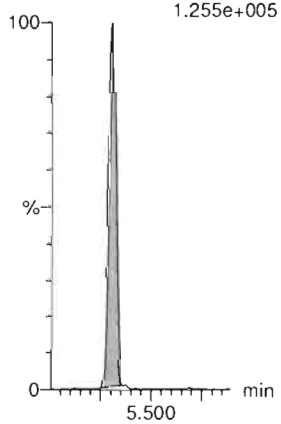
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.137e+005



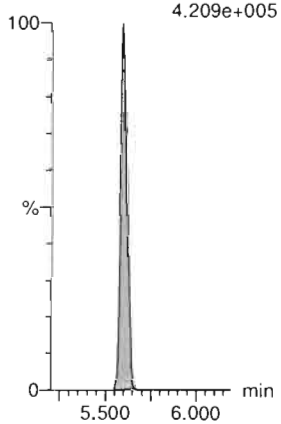
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F55:MRM of 1 channel,ES-
565 > 519.8
6.006e+005



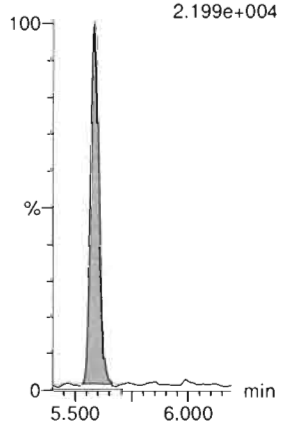
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.255e+005



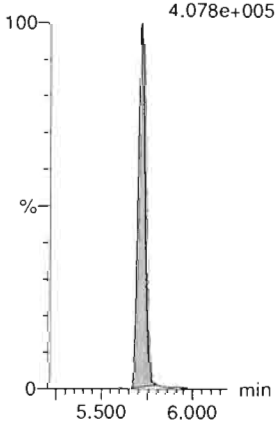
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.209e+005



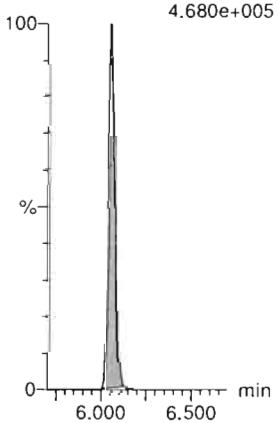
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.199e+004



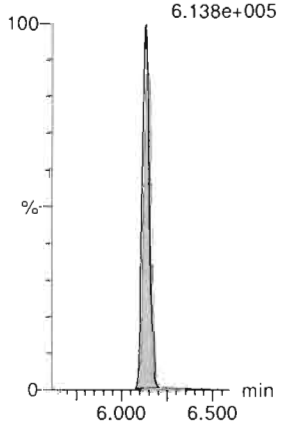
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.078e+005



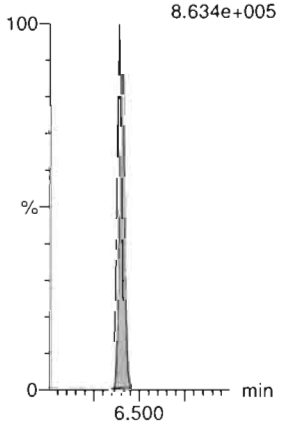
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.680e+005



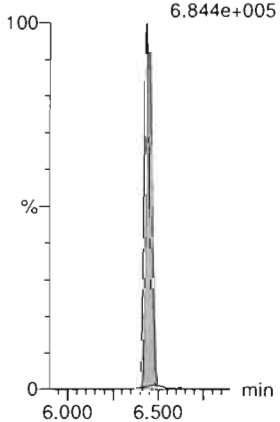
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.138e+005



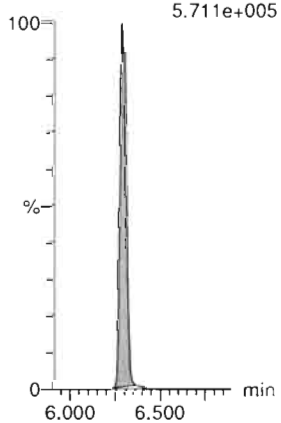
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.634e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.844e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.711e+005

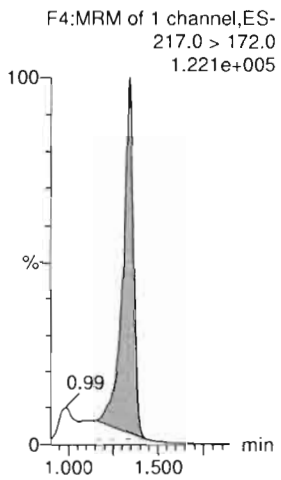


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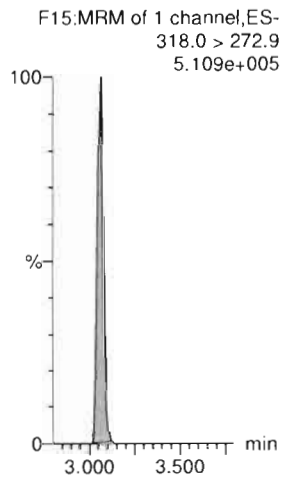
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Name: 200228P2-6, Date: 28-Feb-2020, Time: 13:38:16, ID: ST200228P2-4 PFC CS1 20B1105, Description: PFC CS1 20B1105

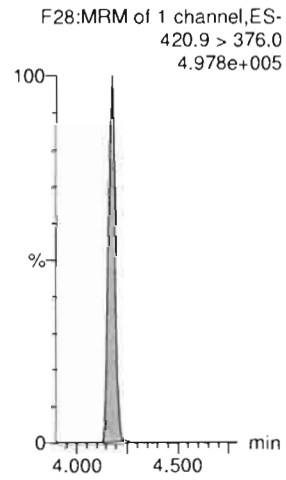
13C4-PFBA



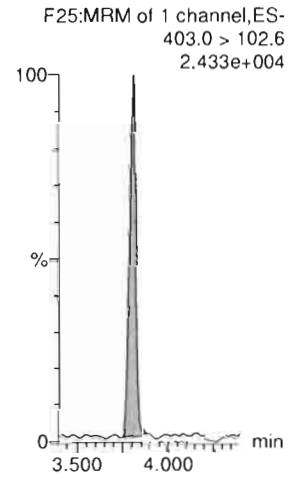
13C5-PFHxA



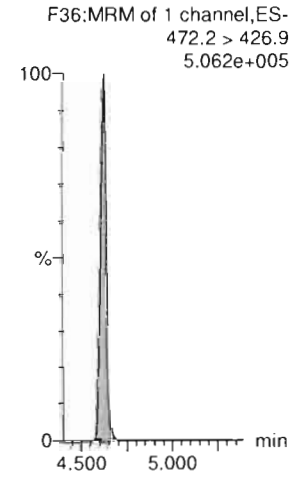
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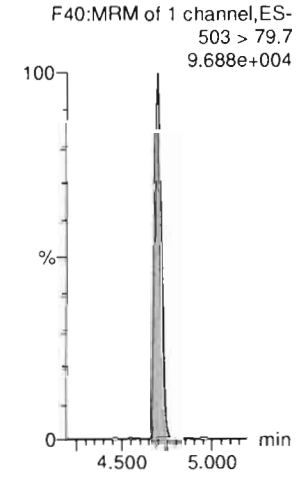
18O2-PFHxS



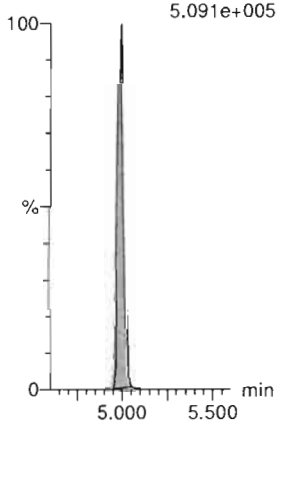
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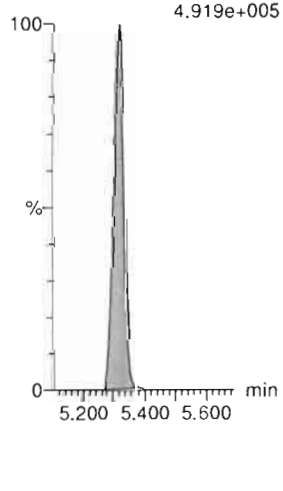
13C4-PFOS



13C6-PFDA



13C7-PFUdA

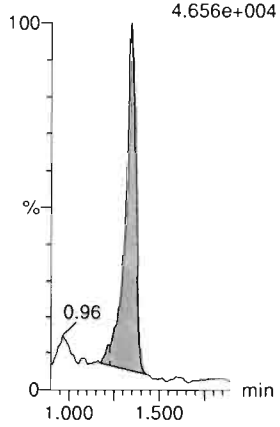


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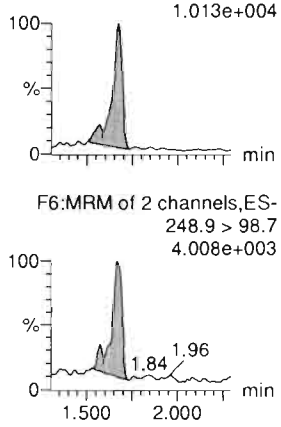
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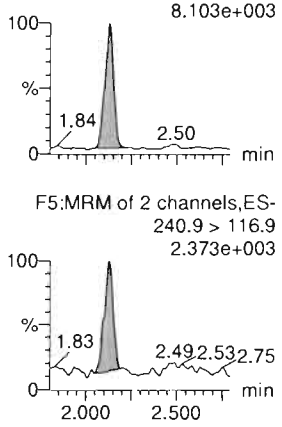
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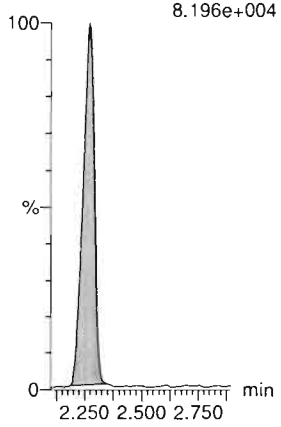
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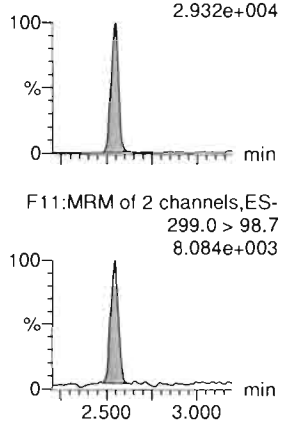
3:3 FTCA



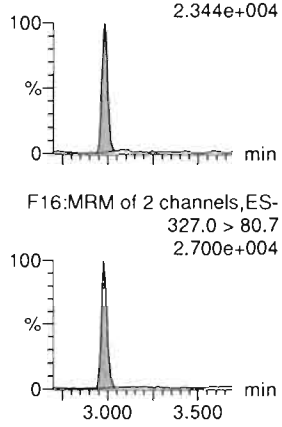
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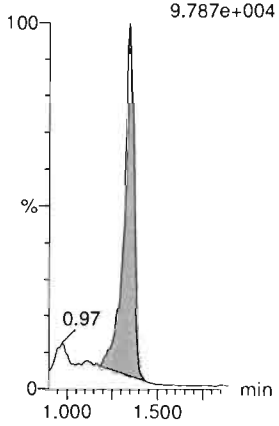
PFBS



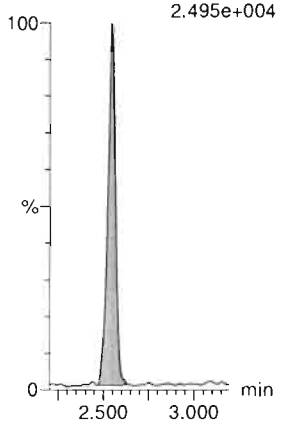
4:2 FTS



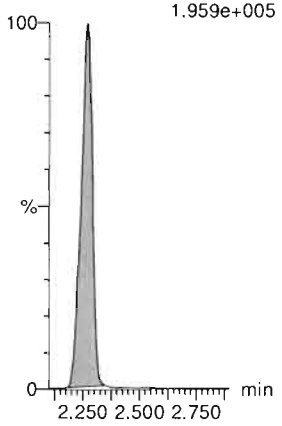
13C3-PFBA-EIS



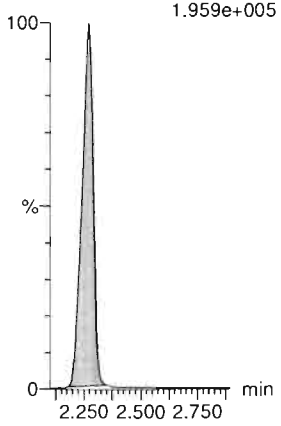
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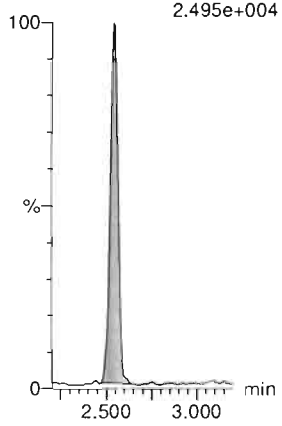
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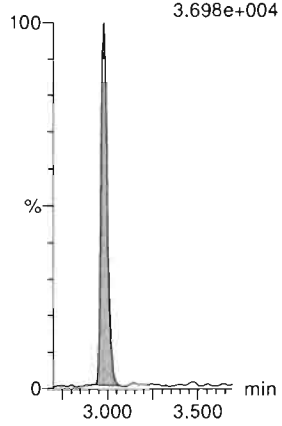
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

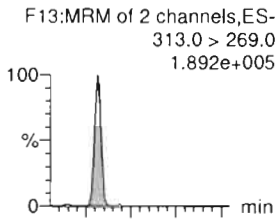


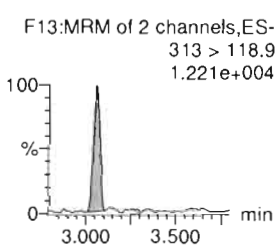
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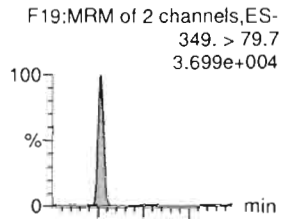
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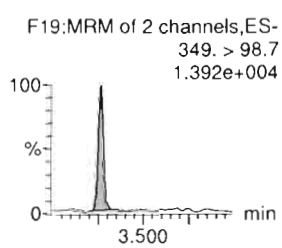
PFHxA



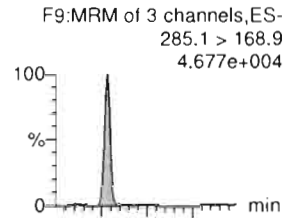


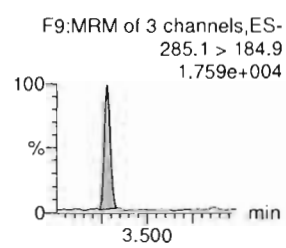
PFPeS



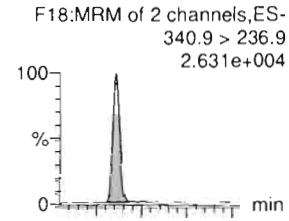


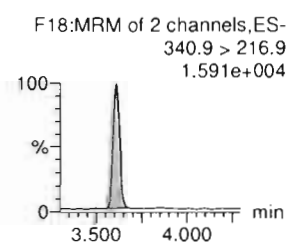
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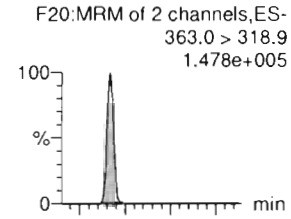


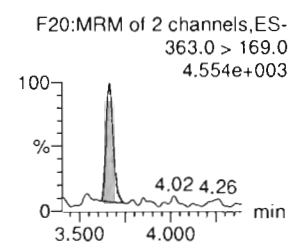
5:3 FTCA



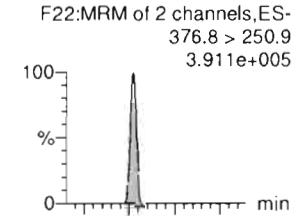


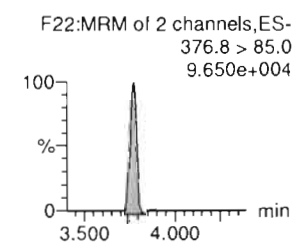
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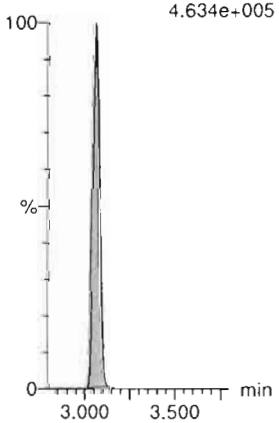


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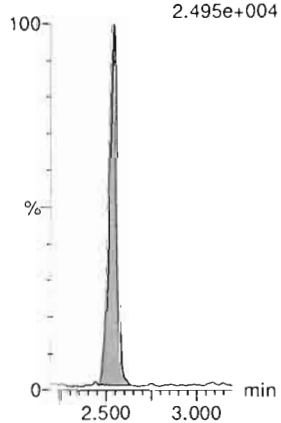




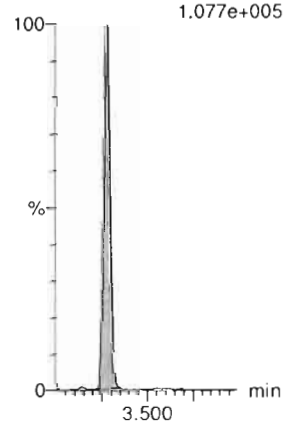
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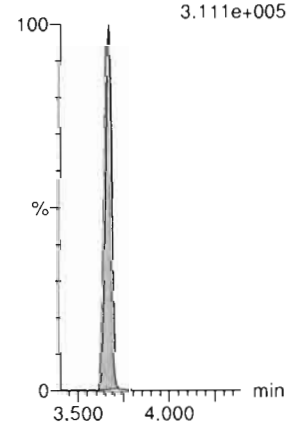
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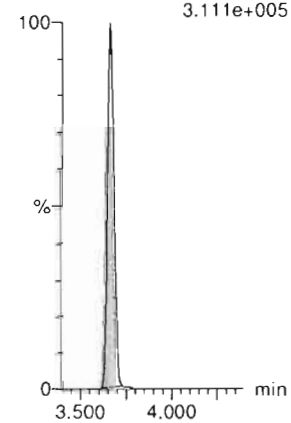
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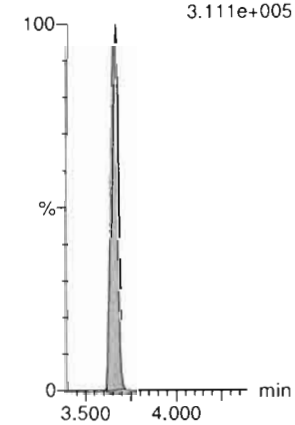
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

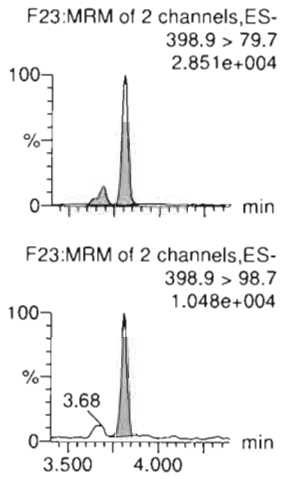


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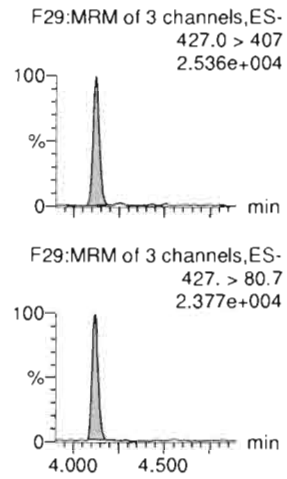
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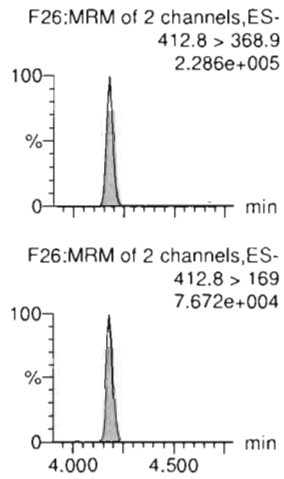
L-PFHxS



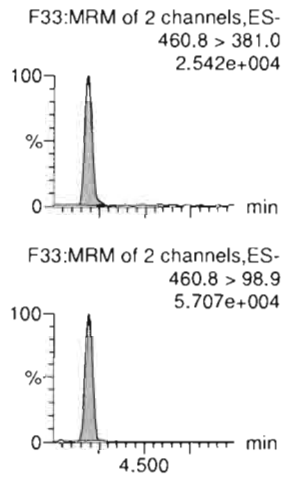
6:2 FTS



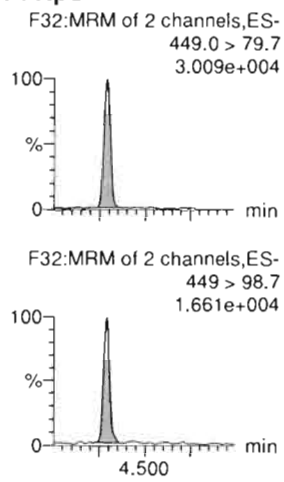
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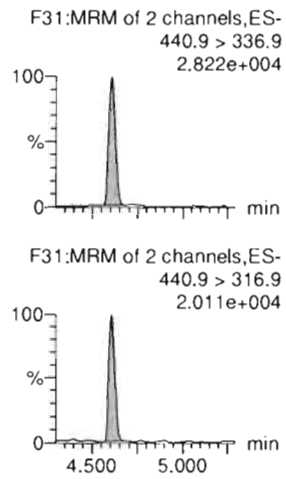
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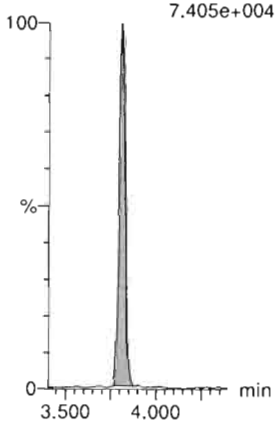
PFHpS



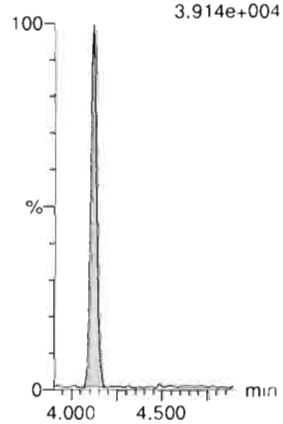
7:3 FTCA



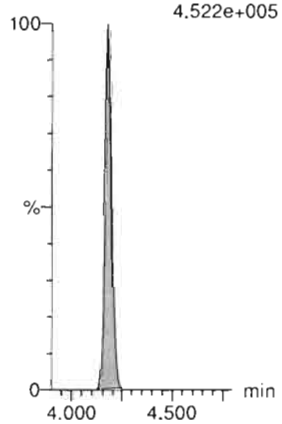
13C3-PFHxS-EIS



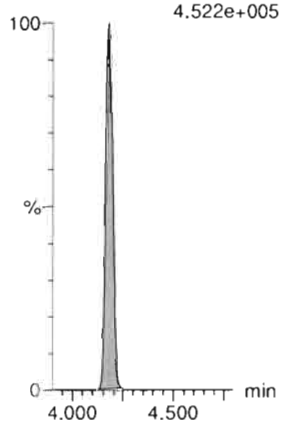
13C2-6:2 FTS-EIS



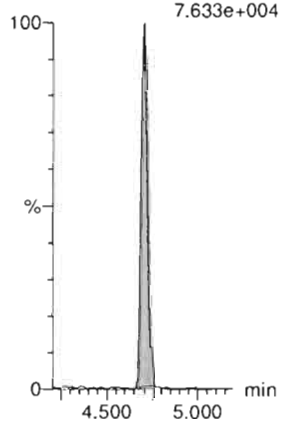
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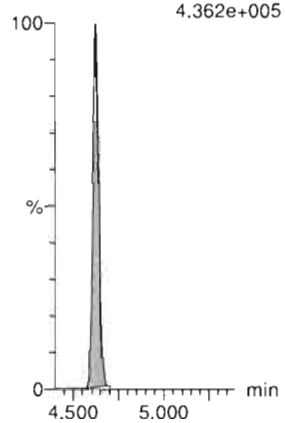
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

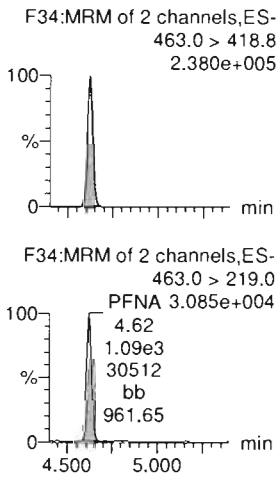


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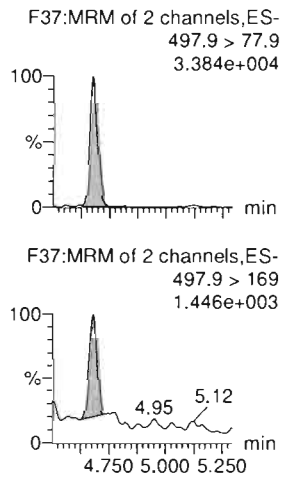
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

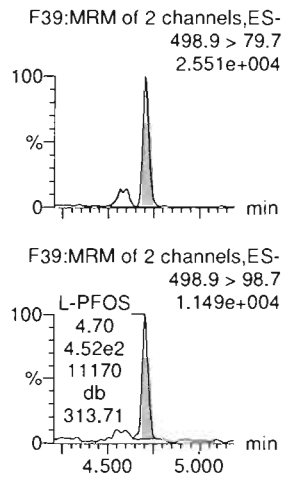
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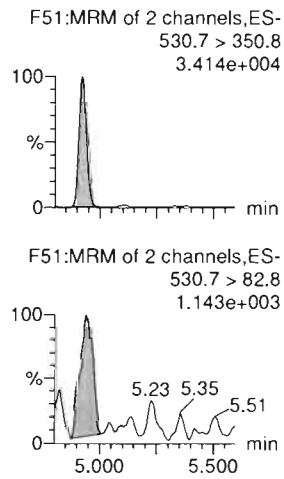
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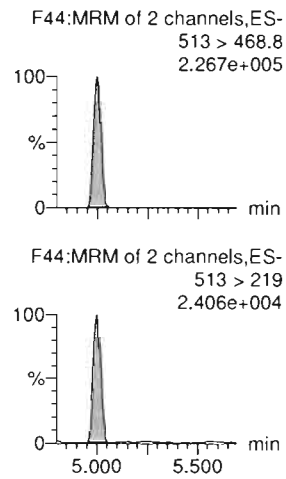
L-PFOS



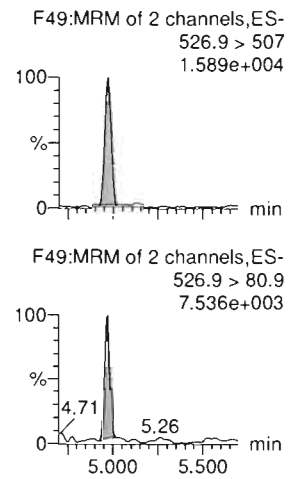
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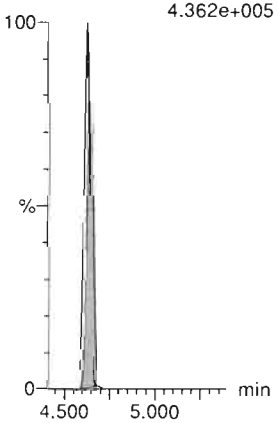
PFDA



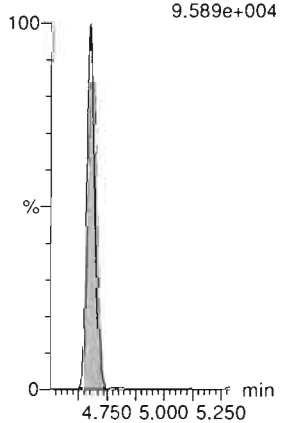
8:2 FTS



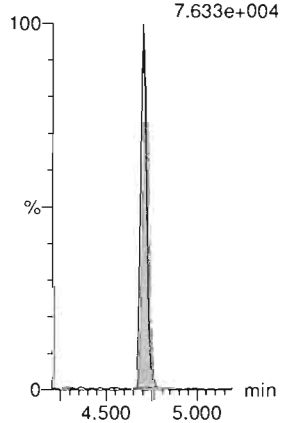
13C5-PFNA-EIS



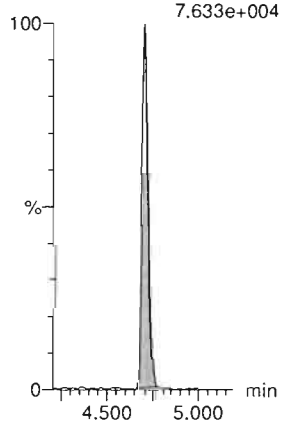
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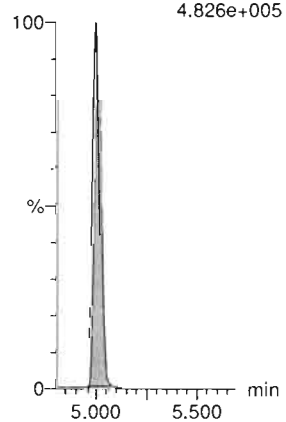
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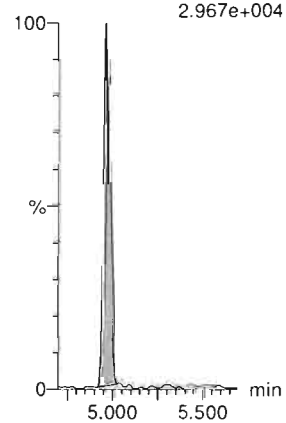
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

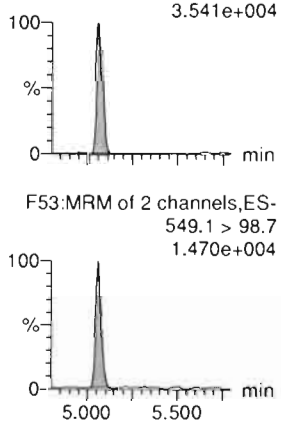


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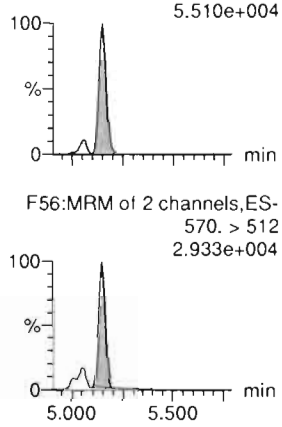
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

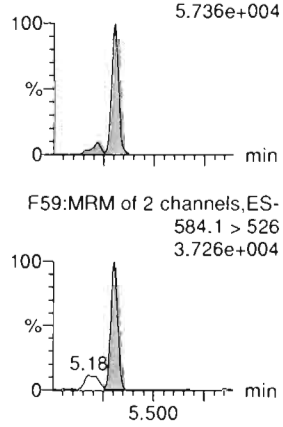
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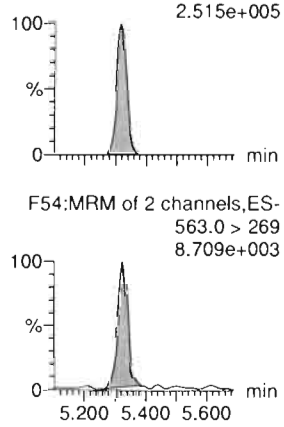
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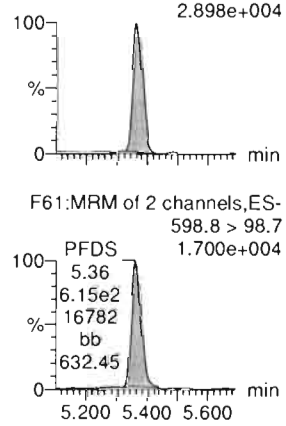
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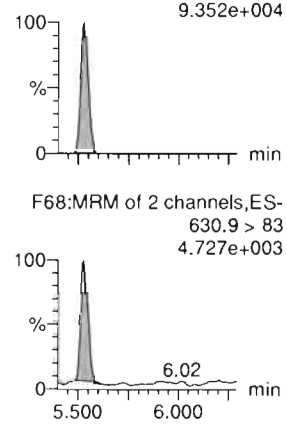
PFUdA



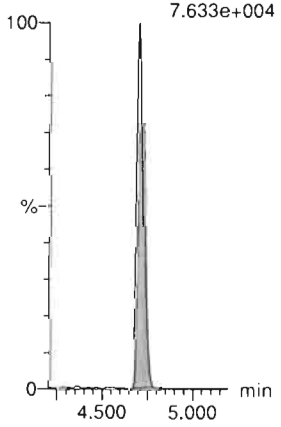
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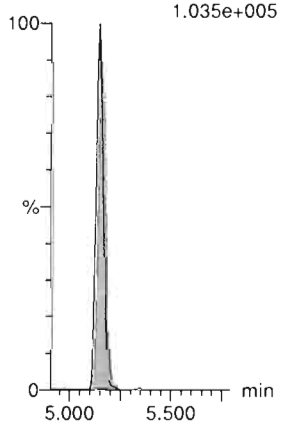
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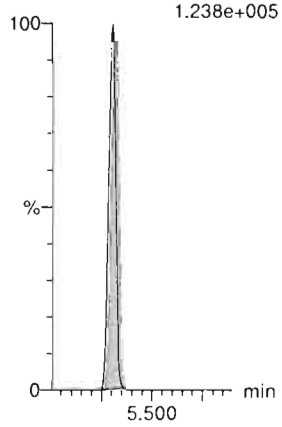
13C8-PFOS-EIS



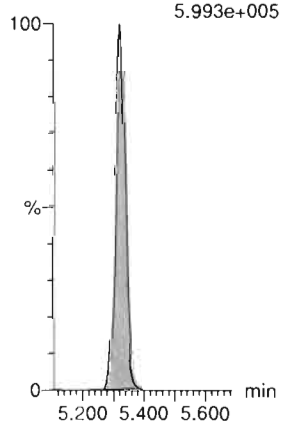
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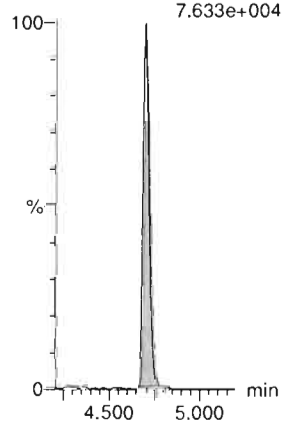
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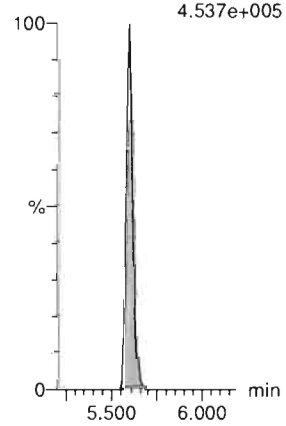
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

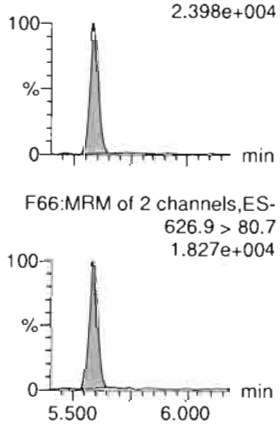


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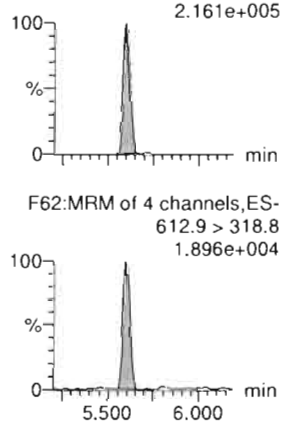
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

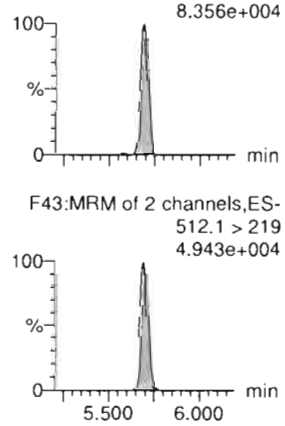
10:2 FTS



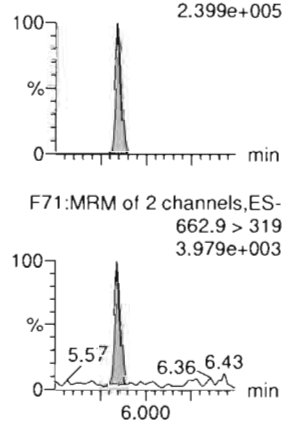
PFDoA



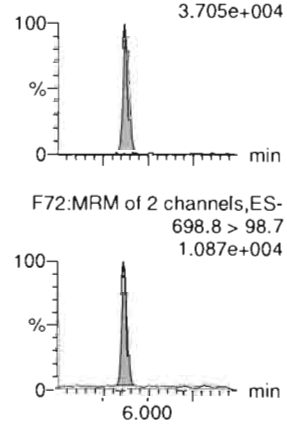
N-MeFOSA



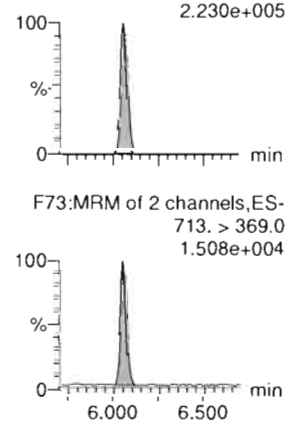
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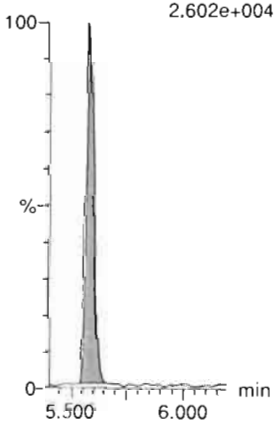
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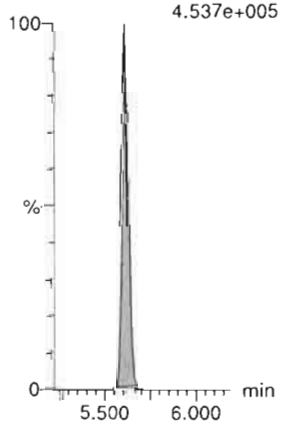
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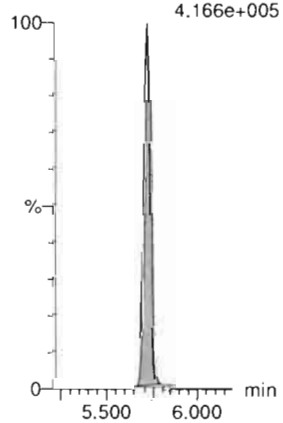
13C2-10:2 FTS-EIS



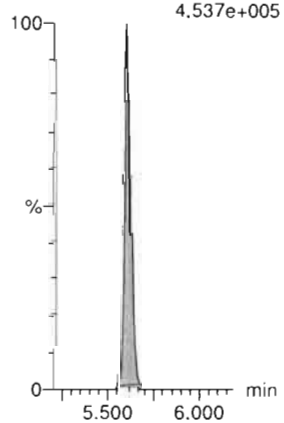
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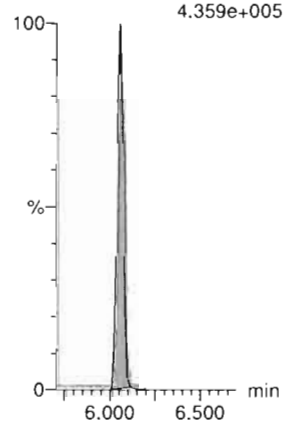
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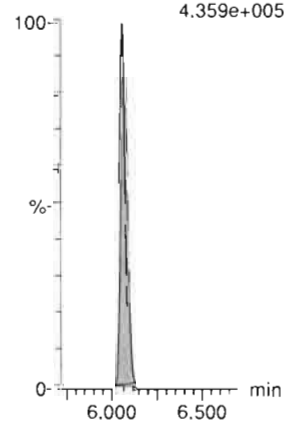
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13C2-PFTeDA-EIS



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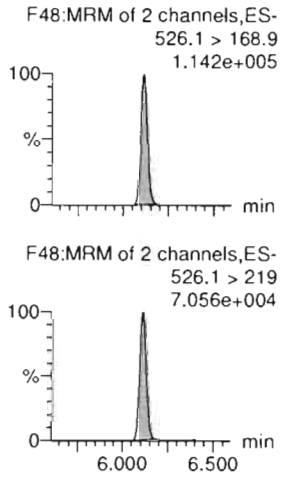


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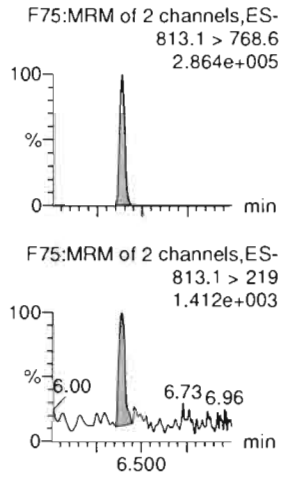
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

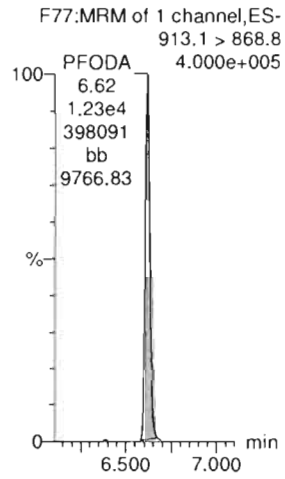
N-EtFOSA



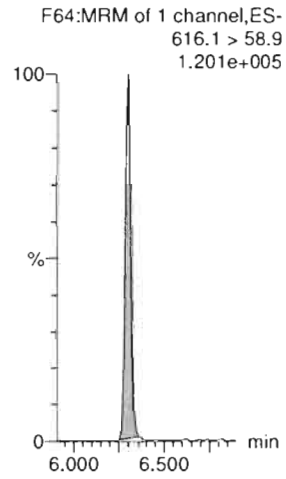
PFHxDA



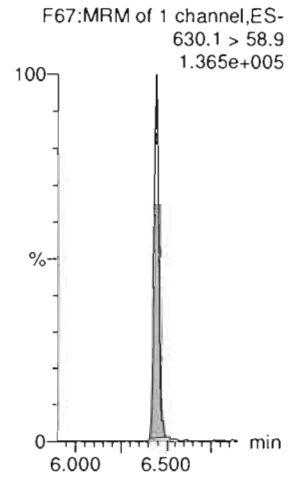
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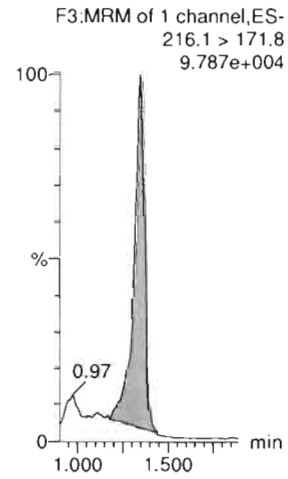
N-MeFOSE



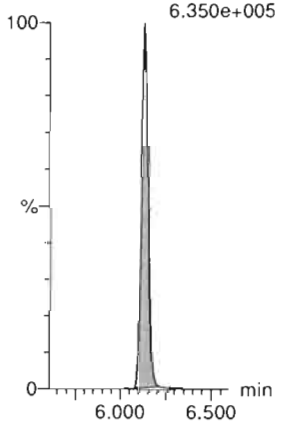
N-EtFOSE



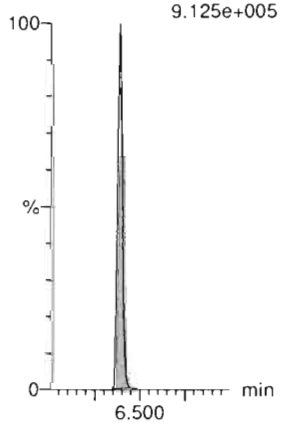
13C3-PFBA-RSD



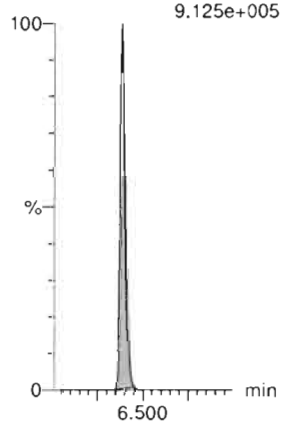
d5-N-ETFOSA-EIS



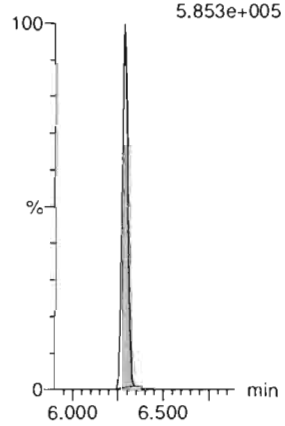
13C2-PFHxDA-EIS



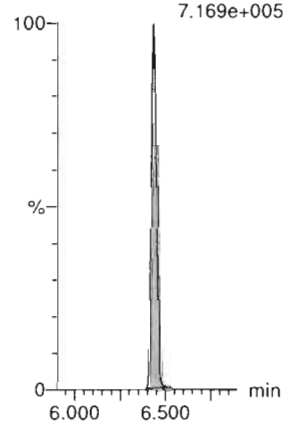
13C2-PFHxDA-EIS



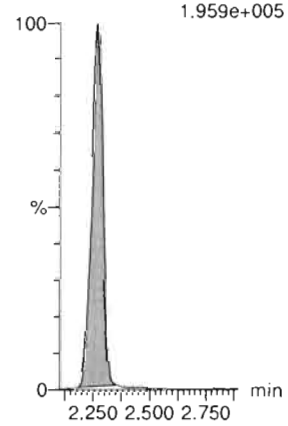
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

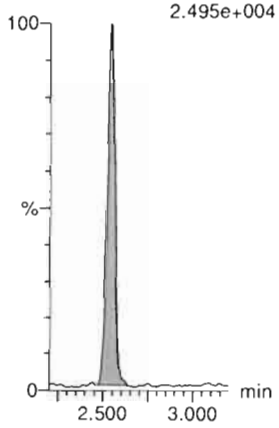


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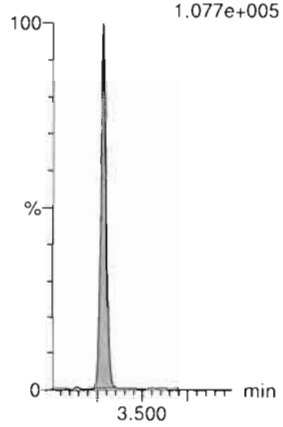
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

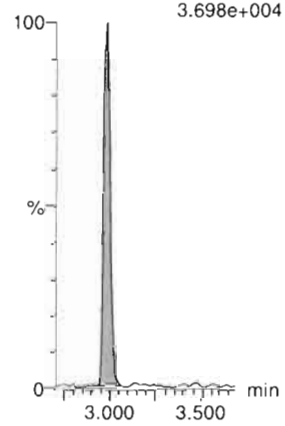
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.495e+004



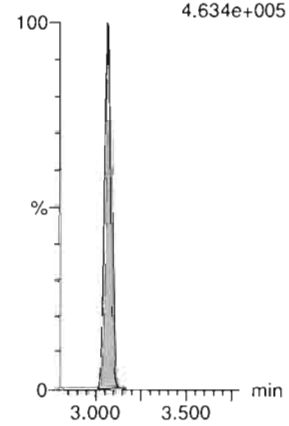
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.077e+005



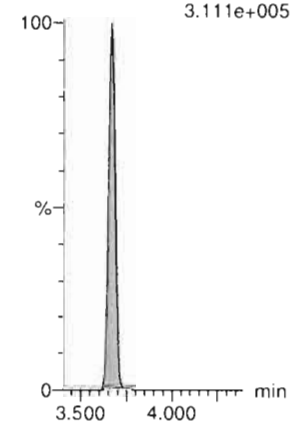
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.698e+004



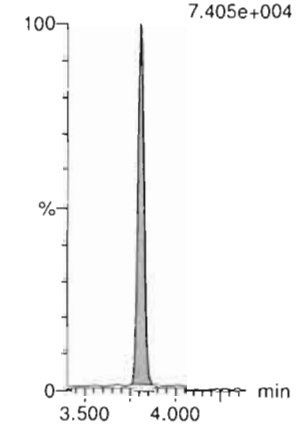
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.634e+005



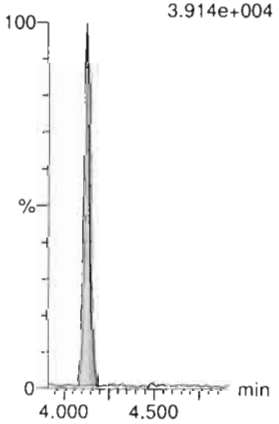
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.111e+005



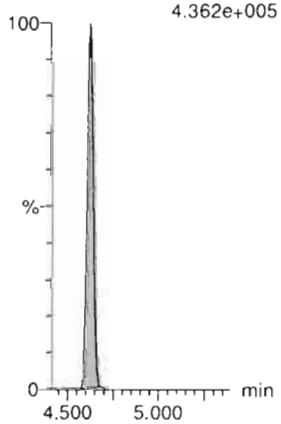
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.405e+004



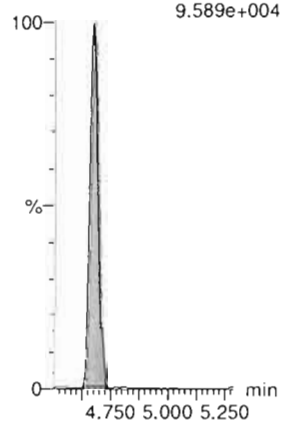
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.914e+004



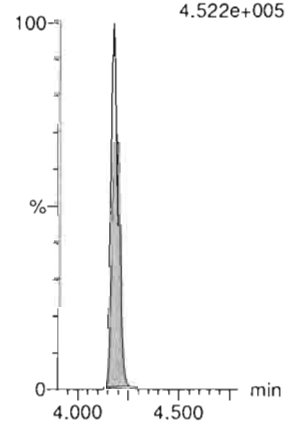
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.362e+005



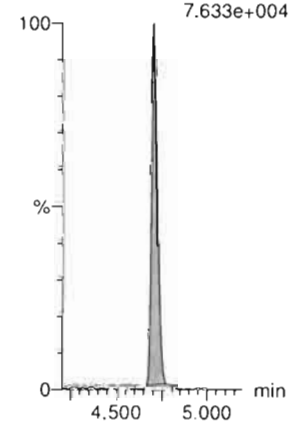
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.589e+004



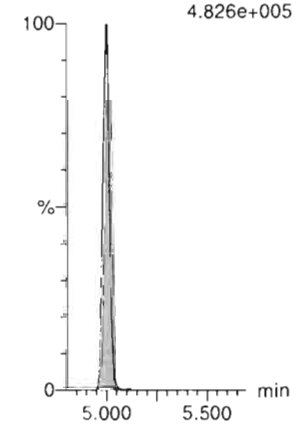
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.522e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.633e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.826e+005

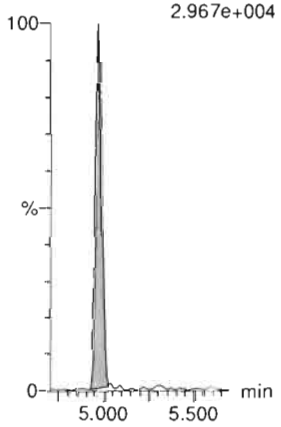


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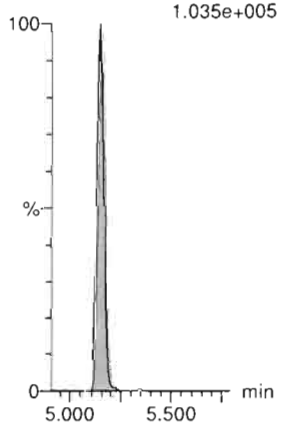
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

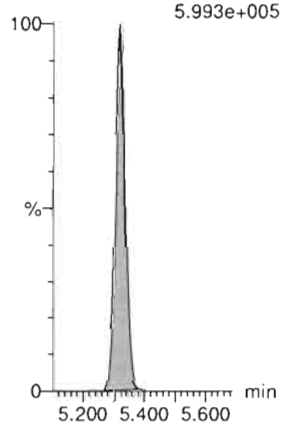
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.967e+004



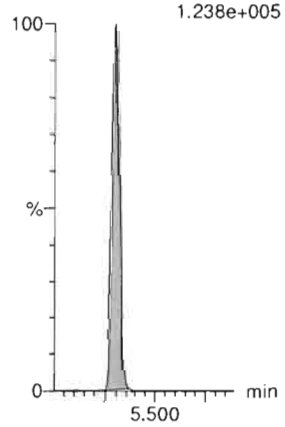
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.035e+005



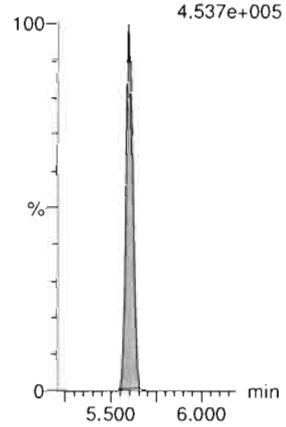
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.993e+005



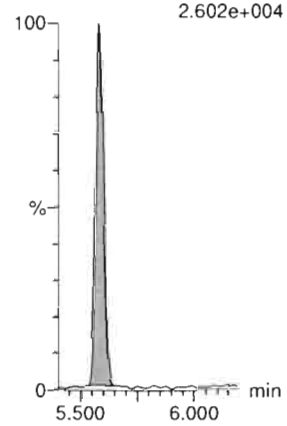
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.238e+005



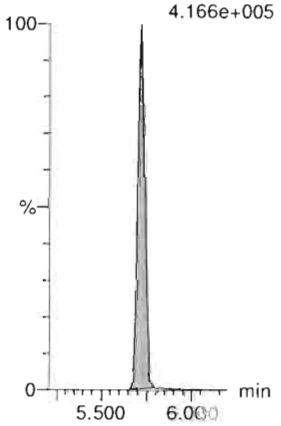
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.537e+005



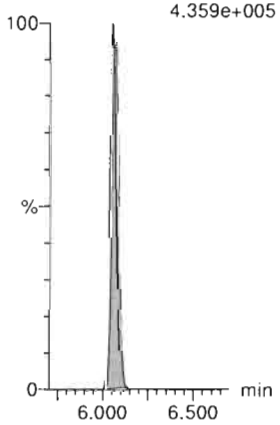
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.602e+004



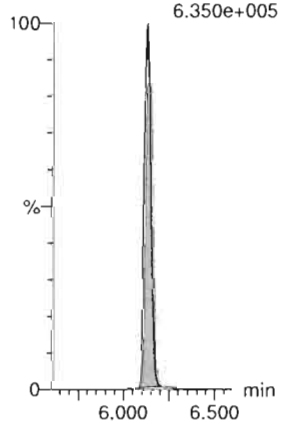
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.166e+005



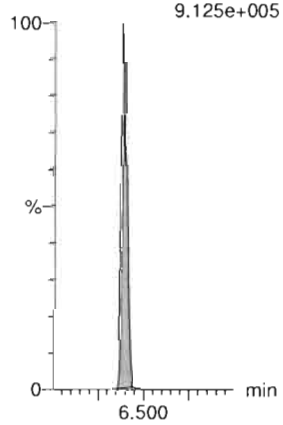
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.359e+005



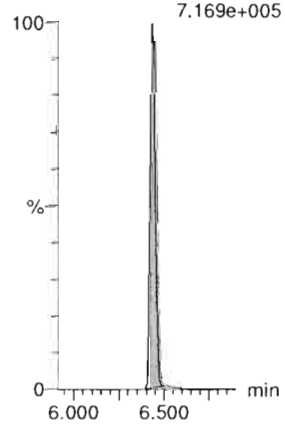
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.350e+005



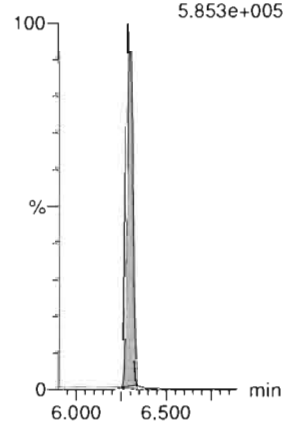
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.125e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.169e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.853e+005

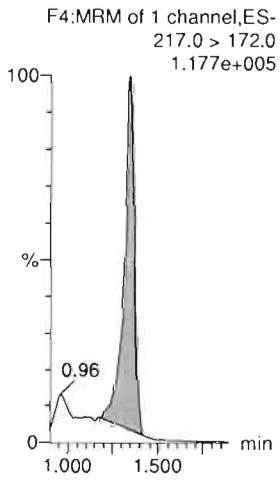


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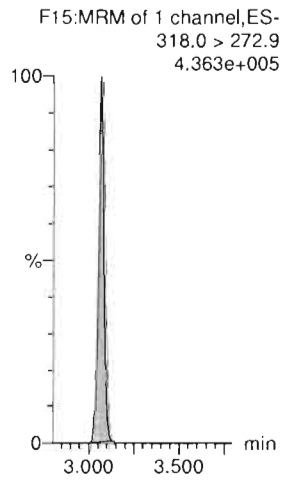
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Name: 200228P2-7, Date: 28-Feb-2020, Time: 13:48:48, ID: ST200228P2-5 PFC CS2 20B1106, Description: PFC CS2 20B1106

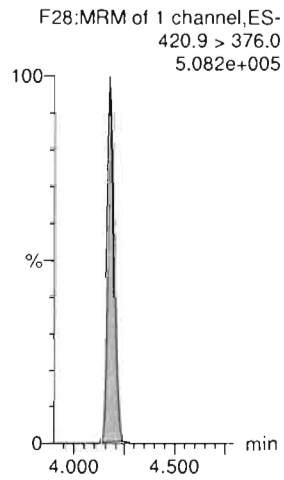
13C4-PFBA



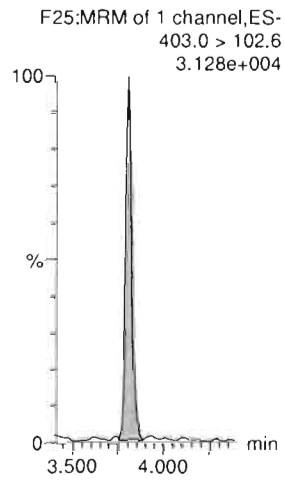
13C5-PFHxA



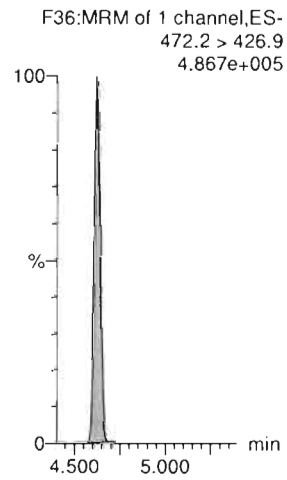
13C8-PFOA



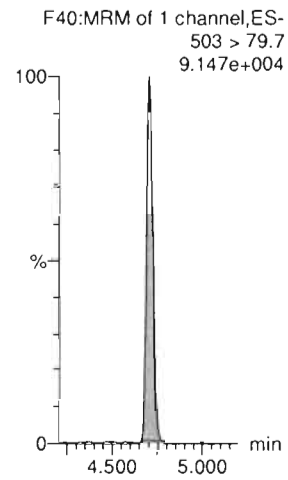
18O2-PFHxS



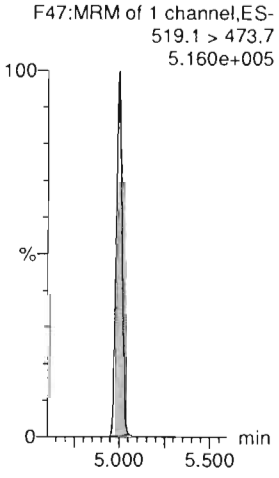
13C9-PFNA



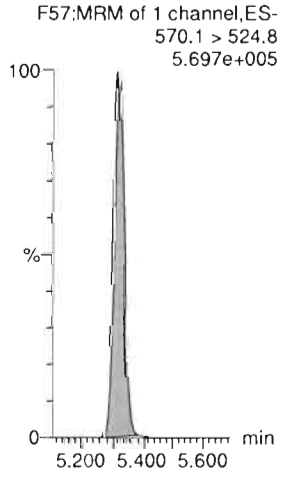
13C4-PFOS



13C6-PFDA



13C7-PFUdA

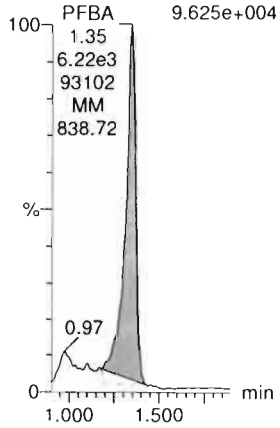


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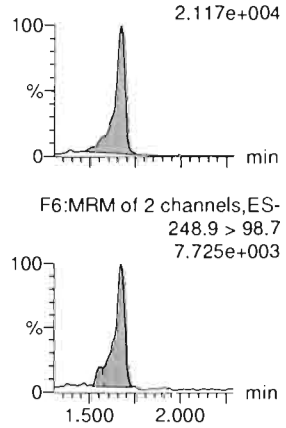
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Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

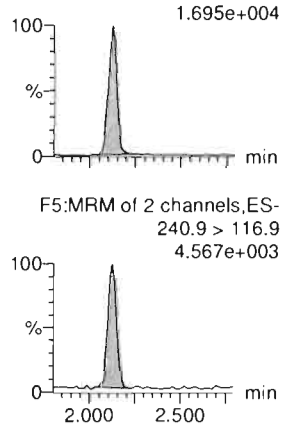
PFBA



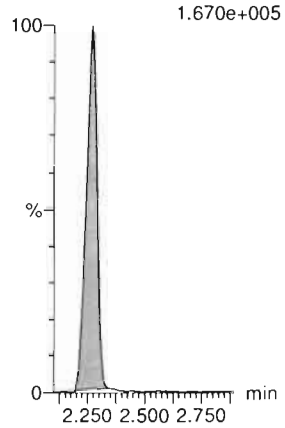
PFPrS



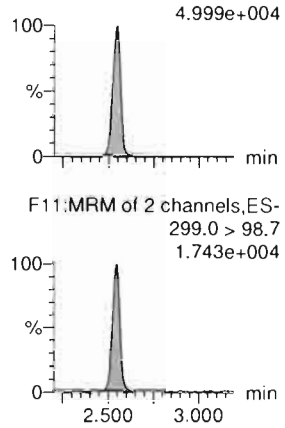
3:3 FTCA



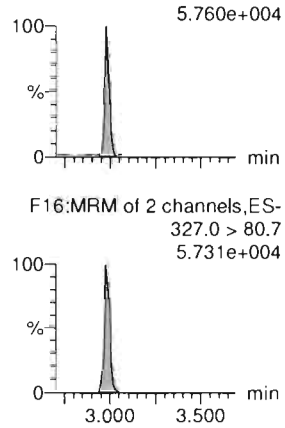
PFPeA



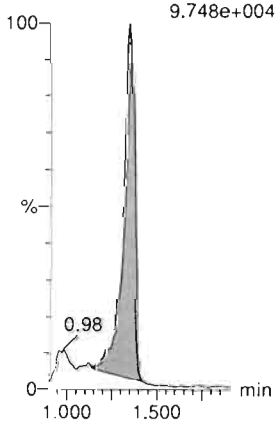
PFBS



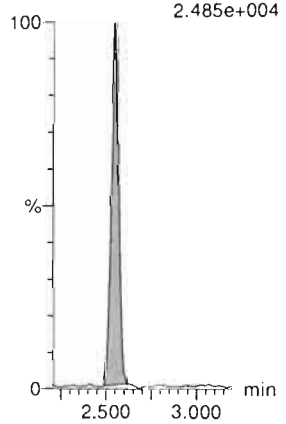
4:2 FTS



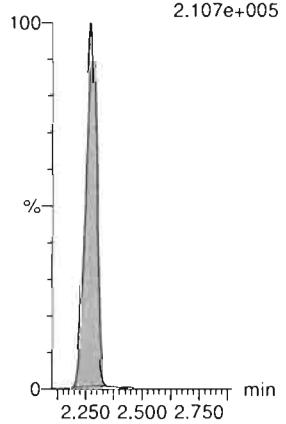
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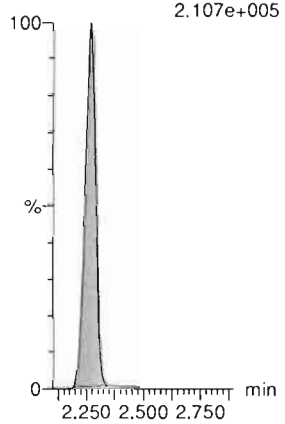
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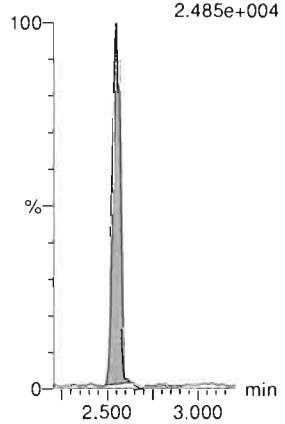
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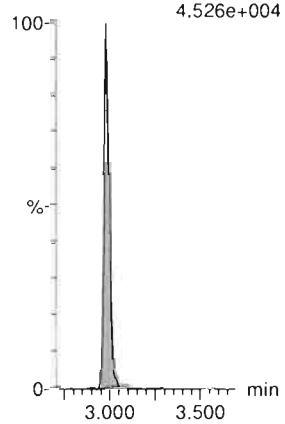
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

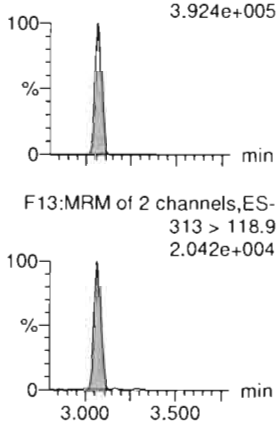


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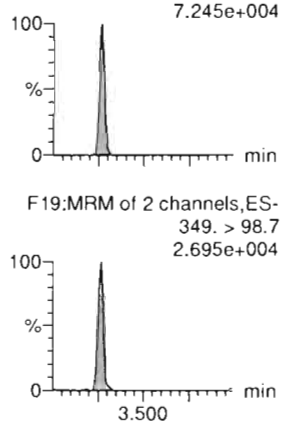
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Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

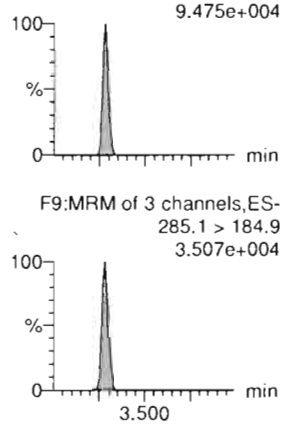
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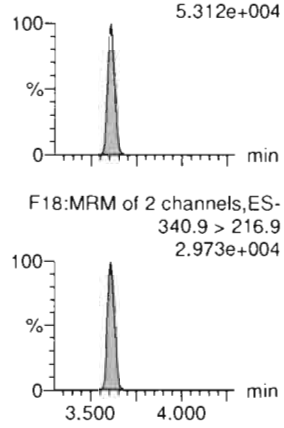
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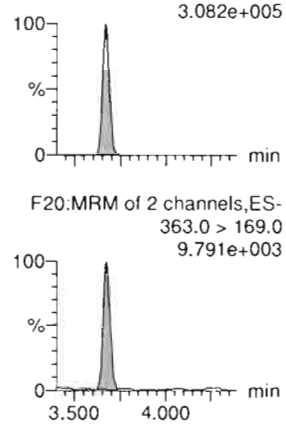
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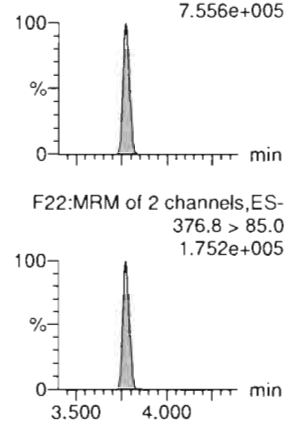
5:3 FTCA



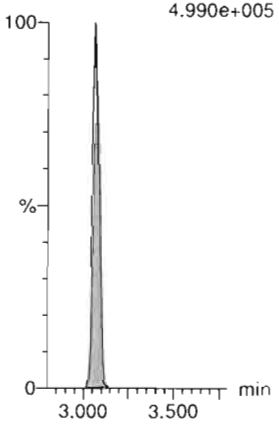
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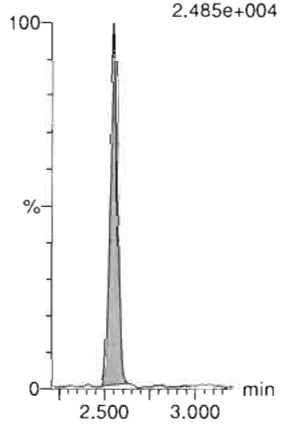
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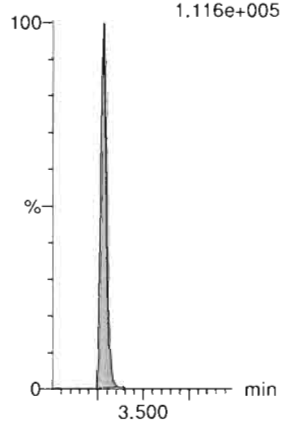
13C2-PFHxA-EIS



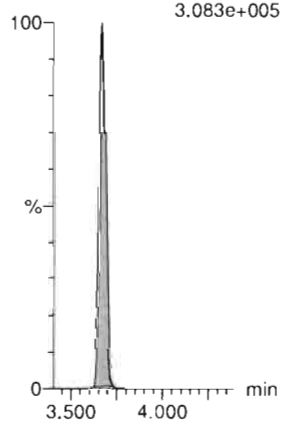
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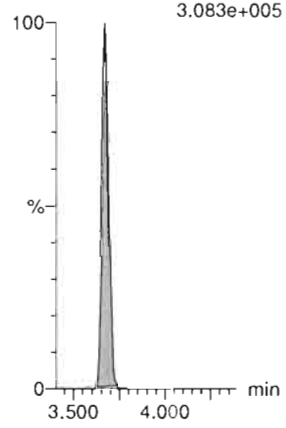
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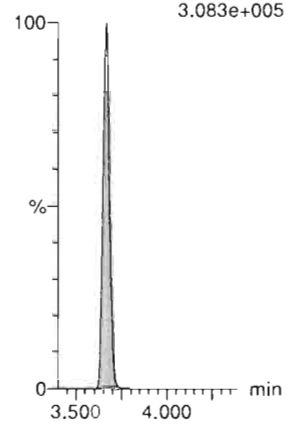
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

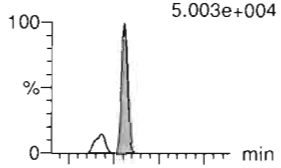


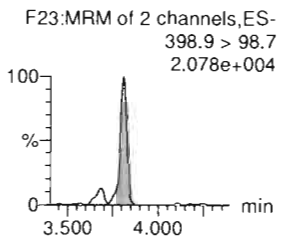
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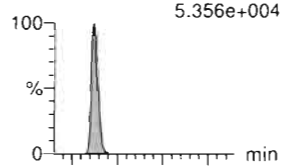
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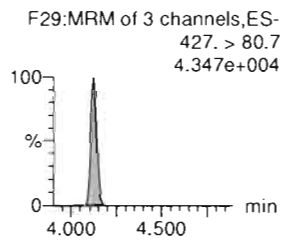
L-PFHxS



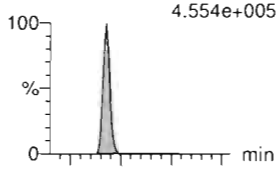


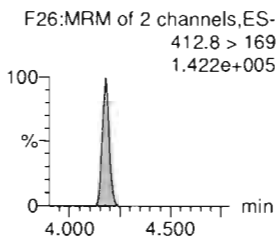
6:2 FTS



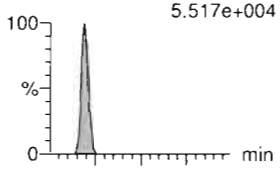


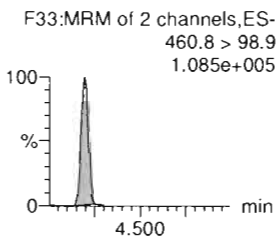
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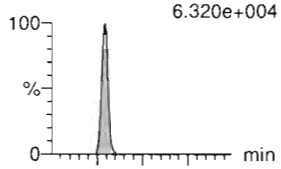


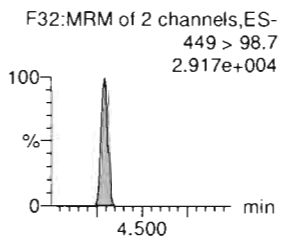
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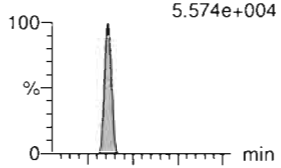


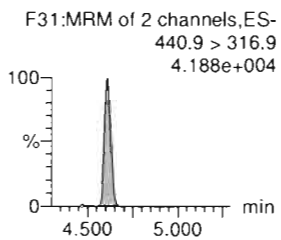
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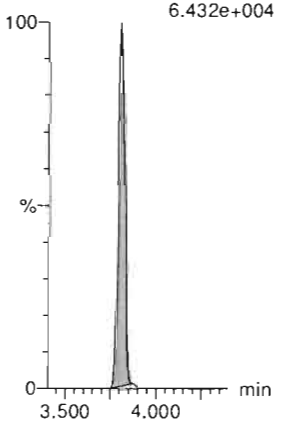


7:3 FTCA

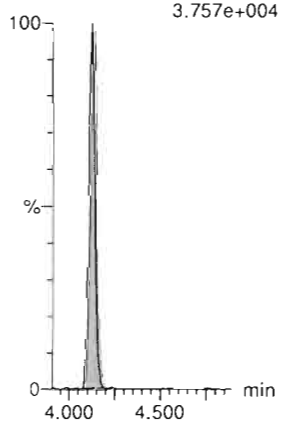




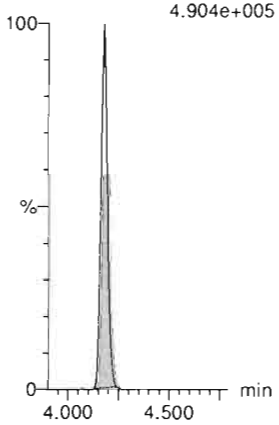
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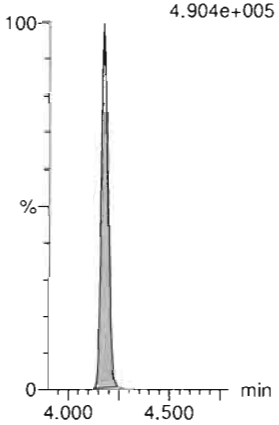
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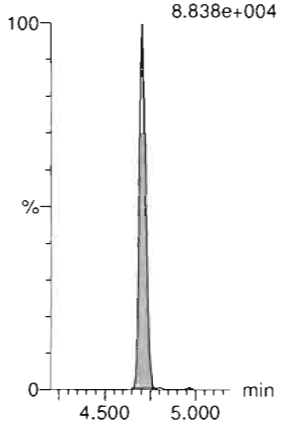
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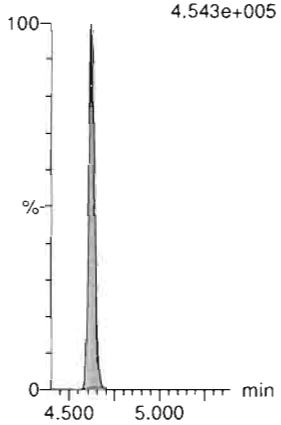
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13C8-PFOS-EIS



13C5-PFNA-EIS

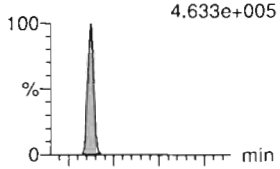


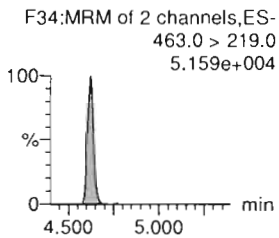
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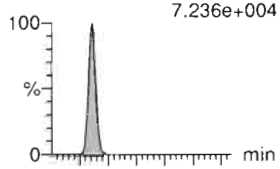
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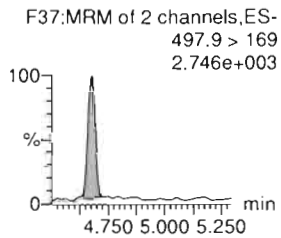
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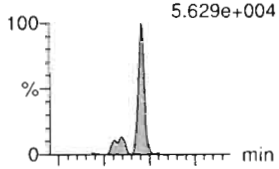


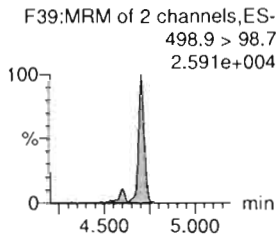
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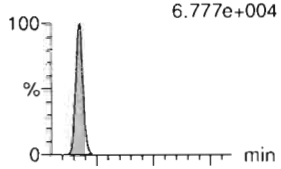


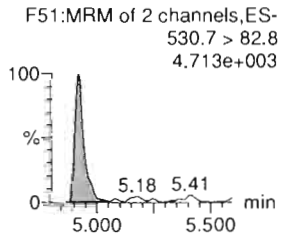
L-PFOS



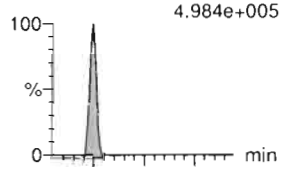


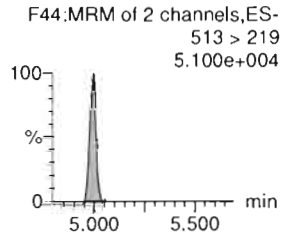
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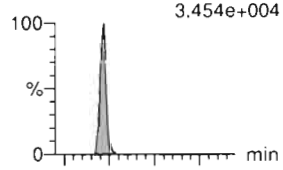


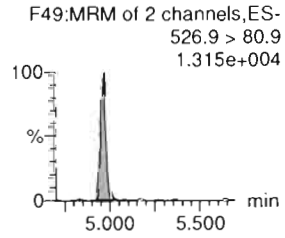
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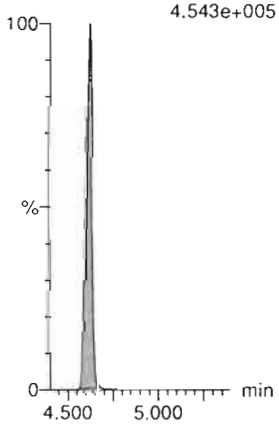


8:2 FTS

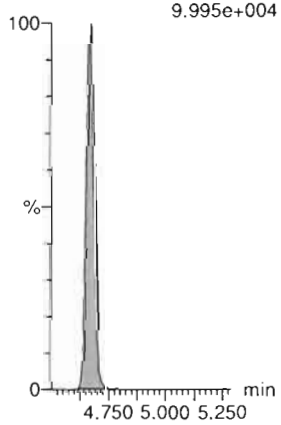




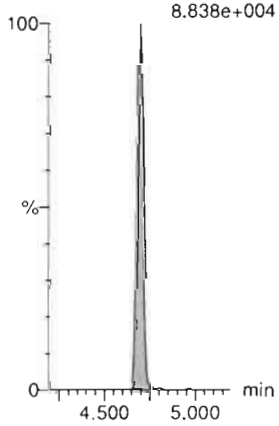
13C5-PFNA-EIS



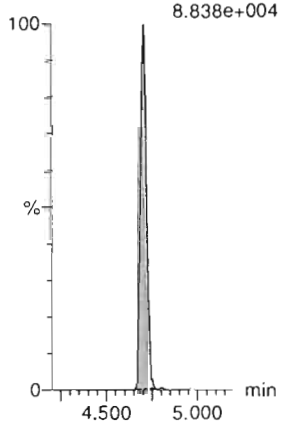
13C8-PFOSA-EIS



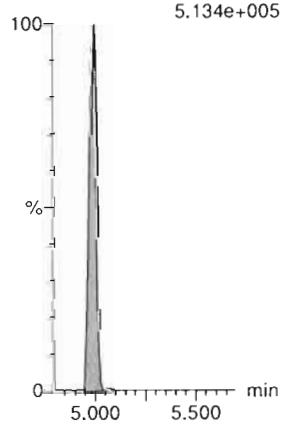
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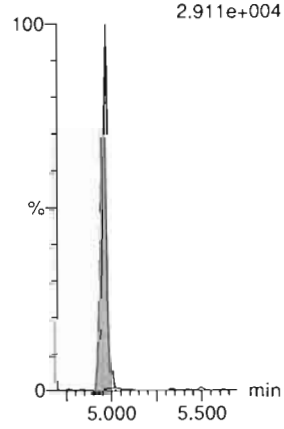
13C8-PFOS-EIS



13C2-PFDA-EIS



13C2-8:2 FTS-EIS

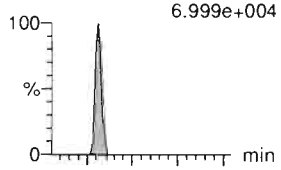


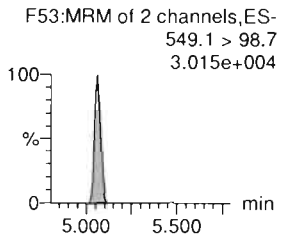
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Printed: Saturday, February 29, 2020 09:20:23 Pacific Standard Time

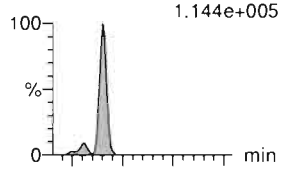
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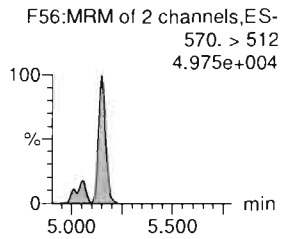
PFNS



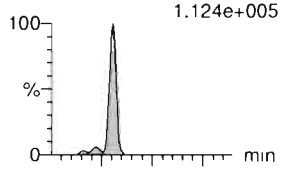


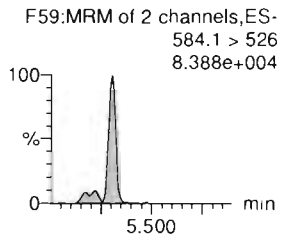
L-MeFOSAA



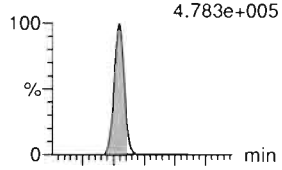


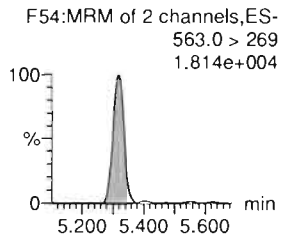
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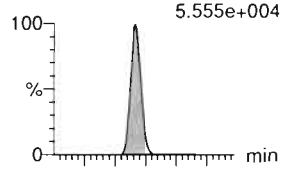


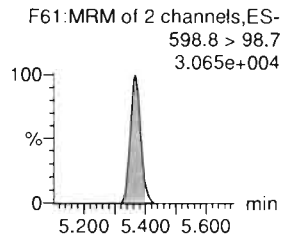
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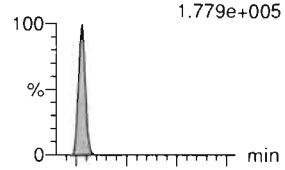


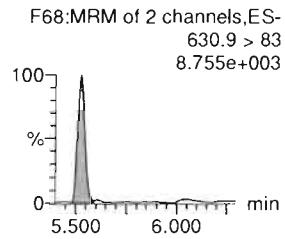
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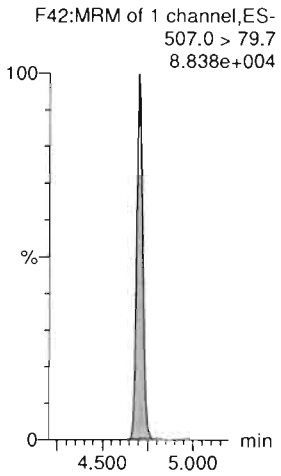


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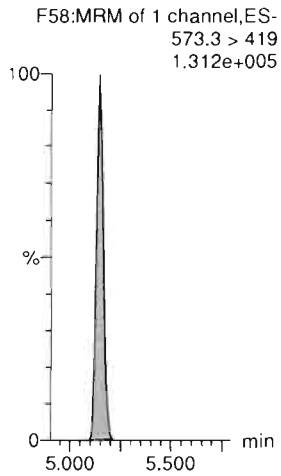




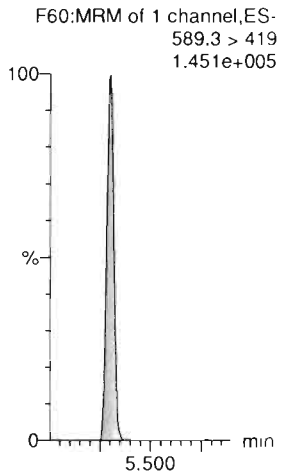
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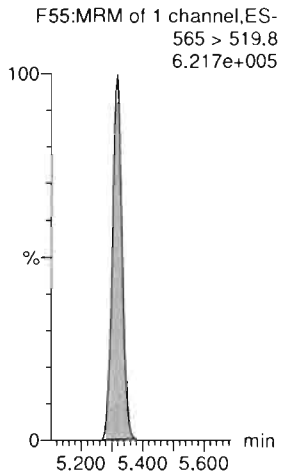
d3-N-MeFOSAA-EIS



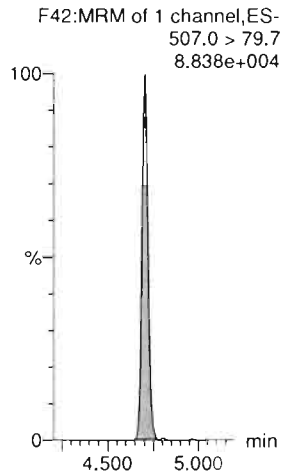
d5-N-EtFOSAA-EIS



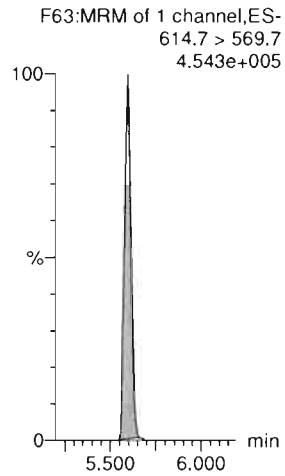
13C2-PFUdA-EIS



13C8-PFOS-EIS



13C2-PFDoA-EIS

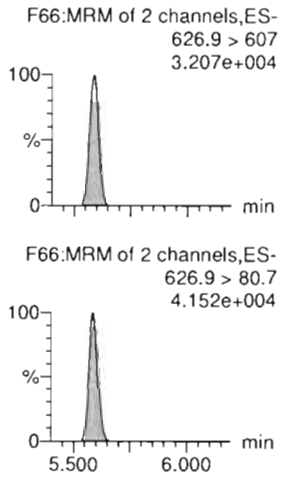


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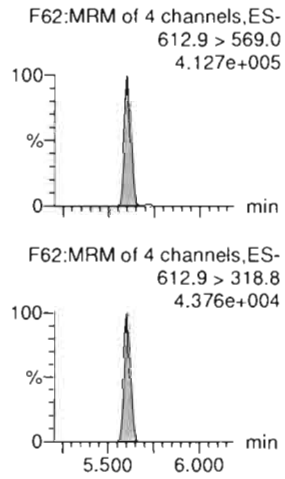
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Printed: Saturday, February 29, 2020 09:20:23 Pacific Standard Time

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

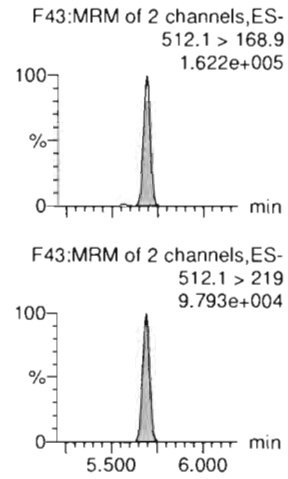
10:2 FTS



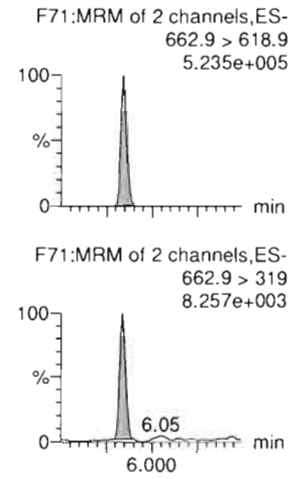
PFDoA



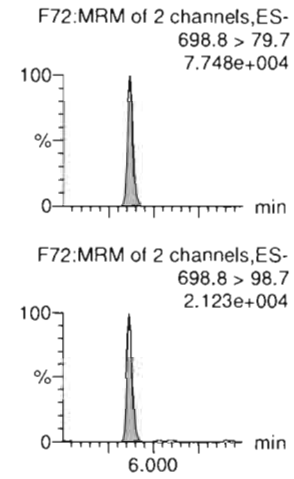
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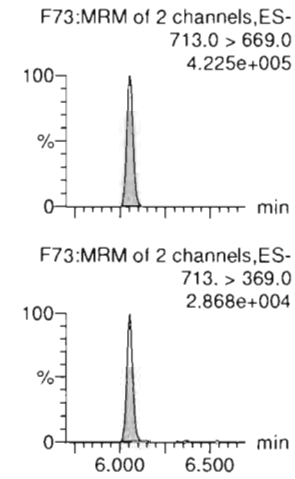
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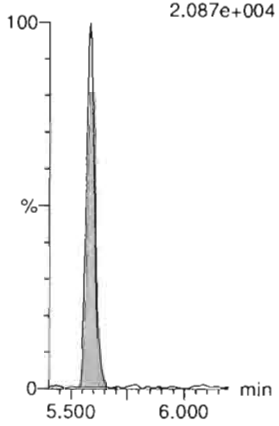
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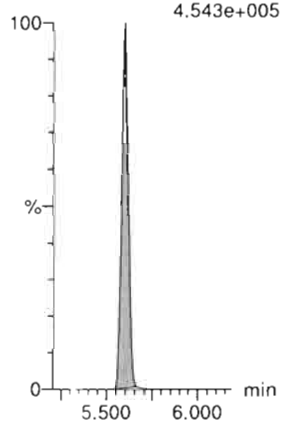
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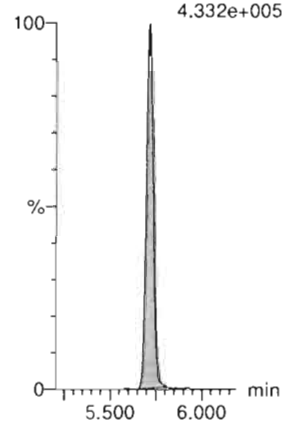
13C2-10:2 FTS-EIS



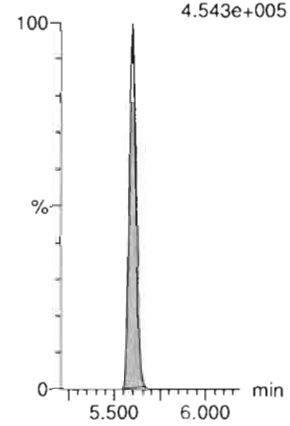
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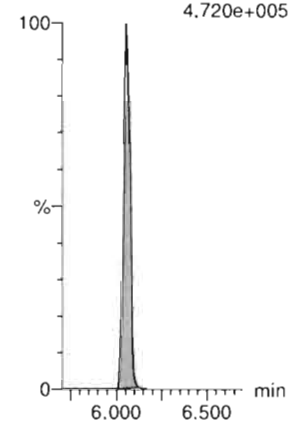
d3-N-MeFOSA-EIS



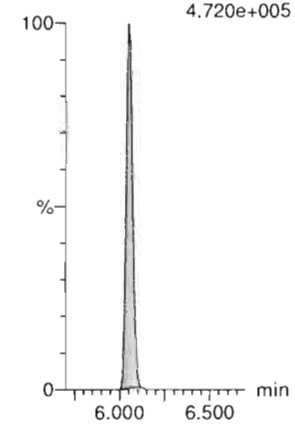
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

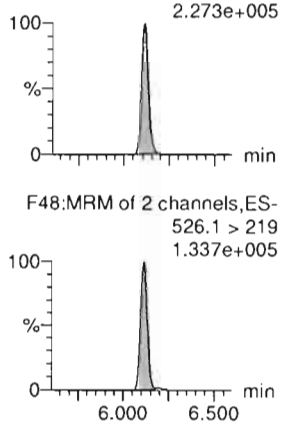


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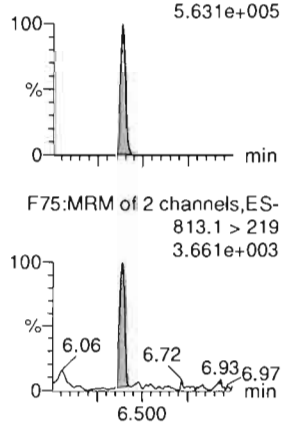
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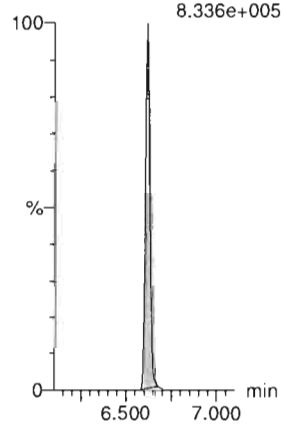
N-EtFOSA



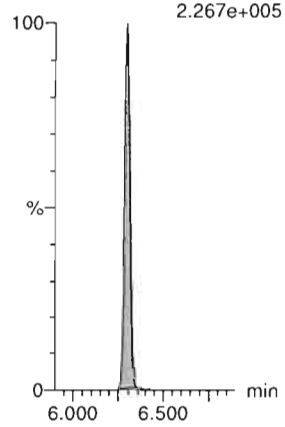
PFHxDA



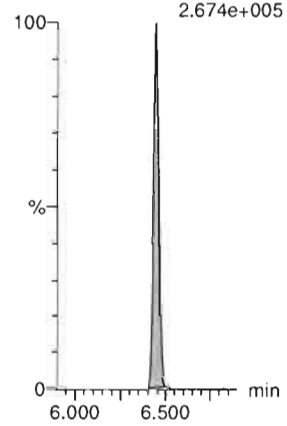
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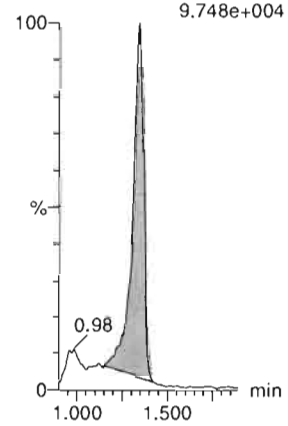
N-MeFOSE



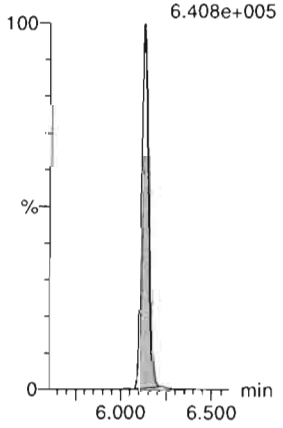
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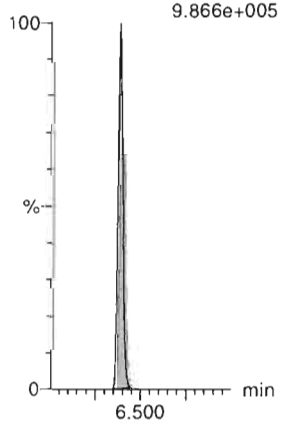
13C3-PFBA-RSD



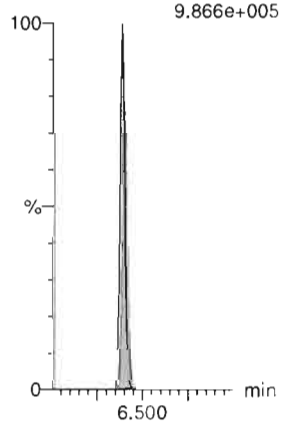
d5-N-ETFOSA-EIS



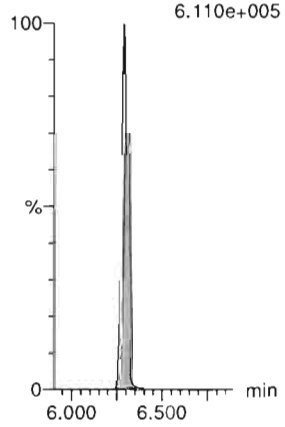
13C2-PFHxDA-EIS



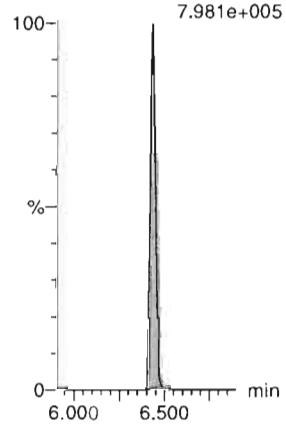
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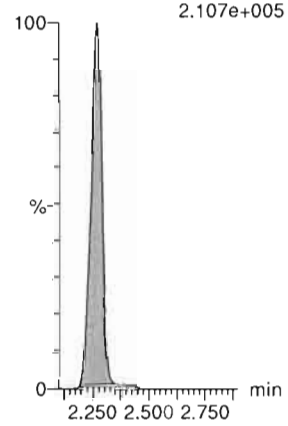
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

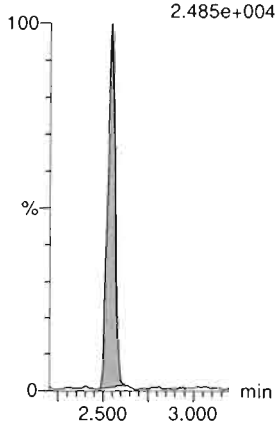


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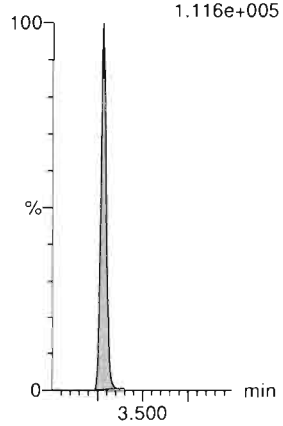
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Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

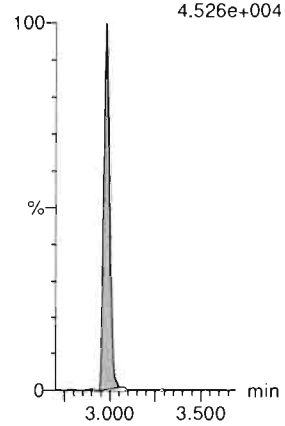
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.485e+004



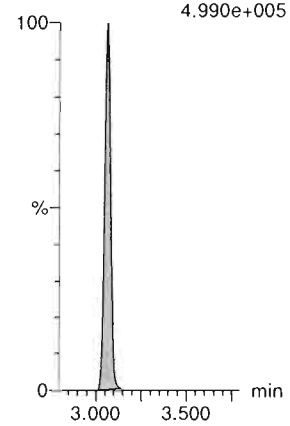
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.116e+005



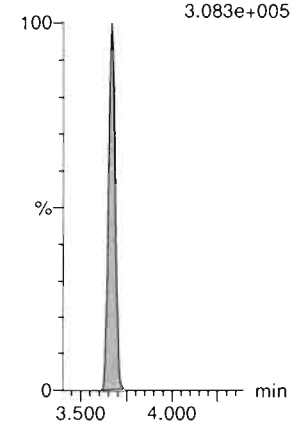
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.526e+004



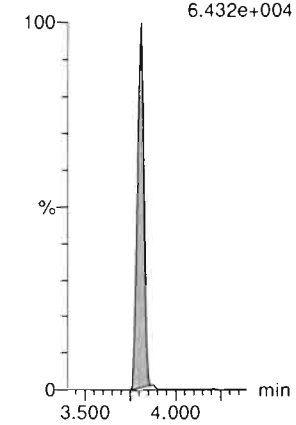
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.990e+005



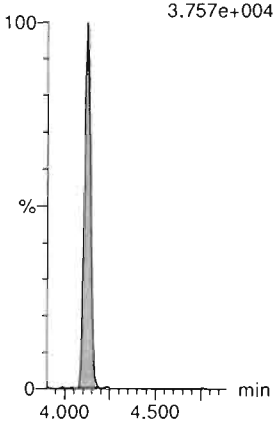
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.083e+005



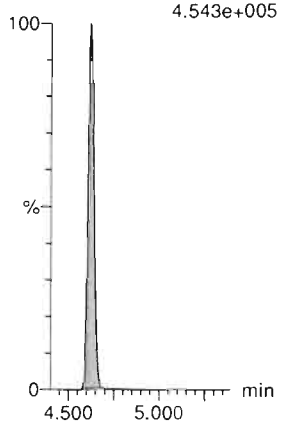
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.432e+004



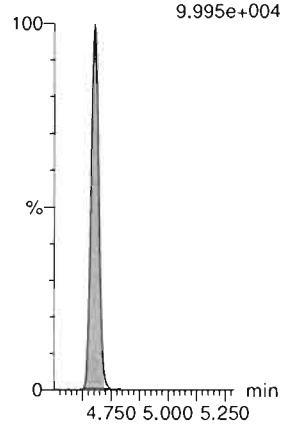
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.757e+004



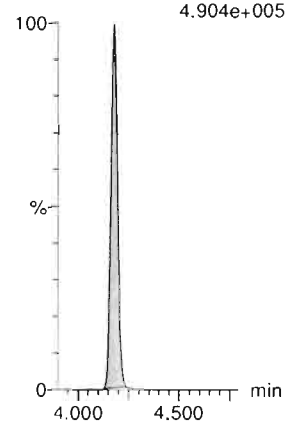
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.543e+005



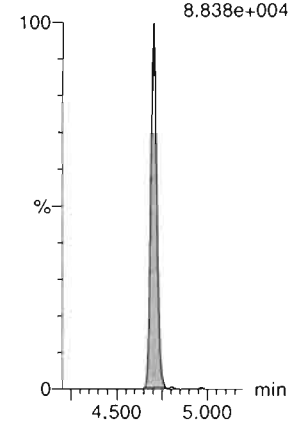
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.995e+004



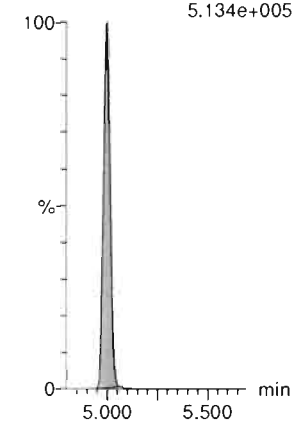
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.904e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.838e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.134e+005

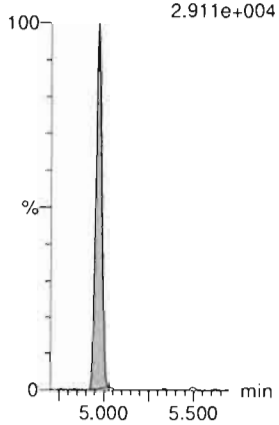


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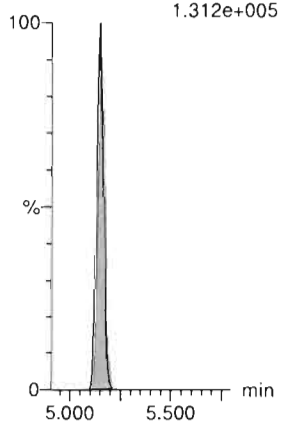
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Printed: Saturday, February 29, 2020 09:20:23 Pacific Standard Time

Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

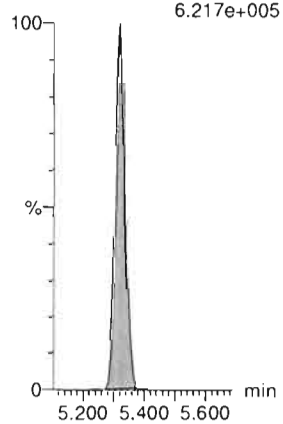
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.911e+004



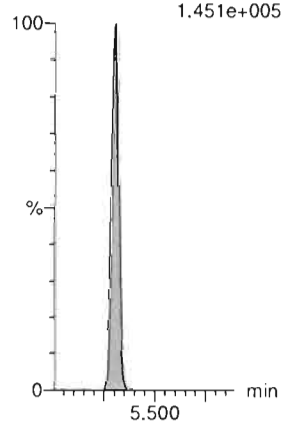
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.312e+005



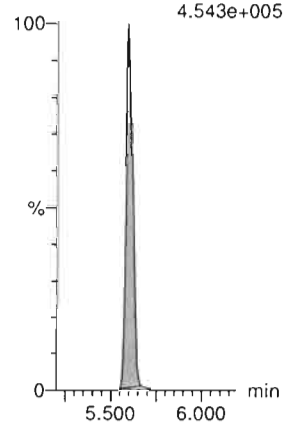
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F55:MRM of 1 channel,ES-
565 > 519.8
6.217e+005



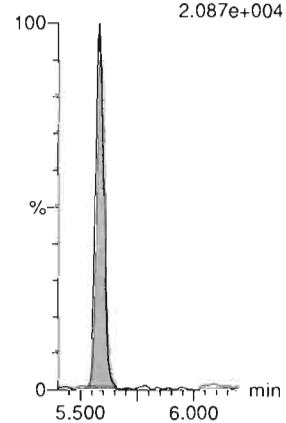
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.451e+005



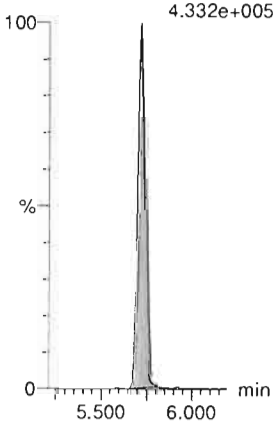
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.543e+005



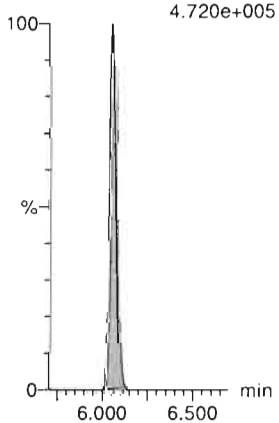
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.087e+004



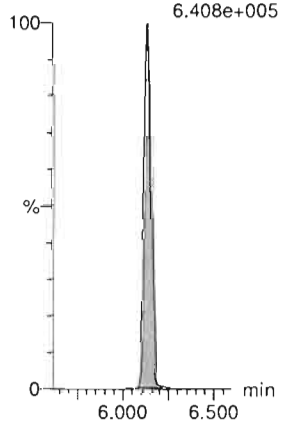
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.332e+005



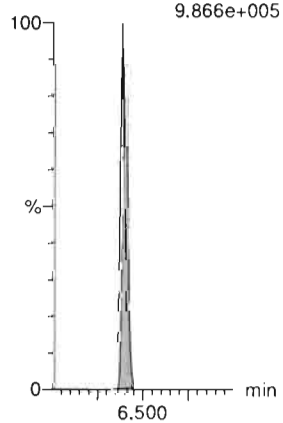
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.720e+005



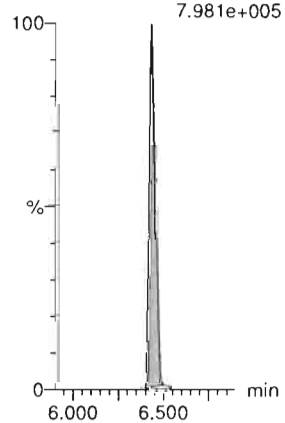
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F52:MRM of 1 channel,ES-
531.1 > 168.9
6.408e+005



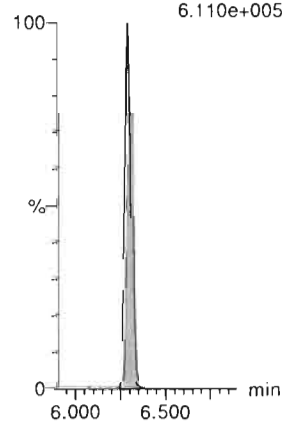
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.866e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.981e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.110e+005

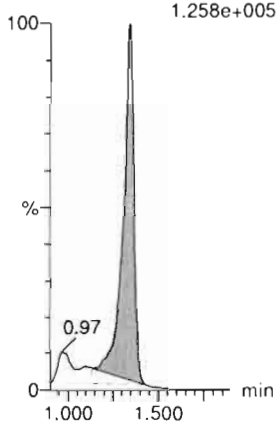


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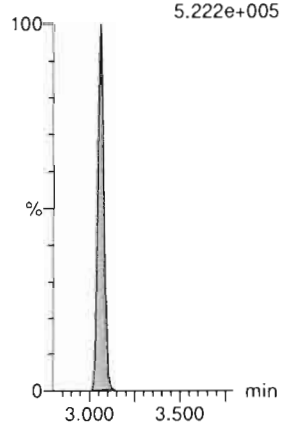
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Name: 200228P2-8, Date: 28-Feb-2020, Time: 13:59:16, ID: ST200228P2-6 PFC CS3 20B1107, Description: PFC CS3 20B1107

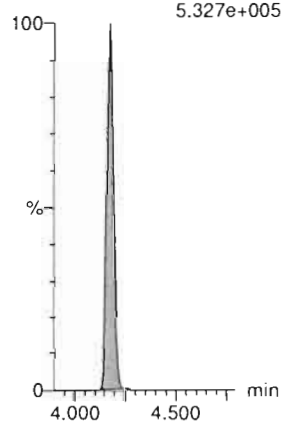
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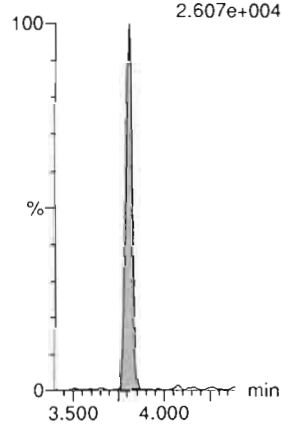
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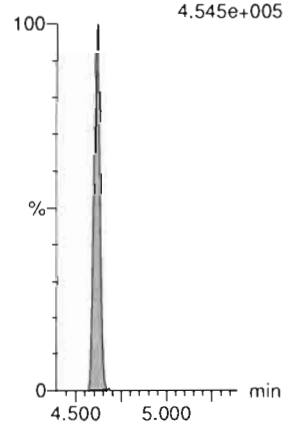
13C8-PFOA



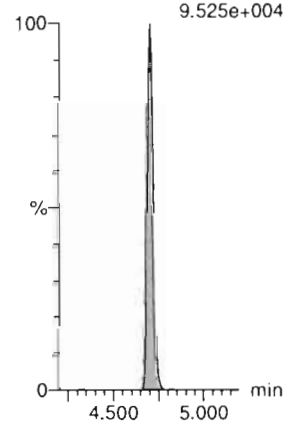
18O2-PFHxS



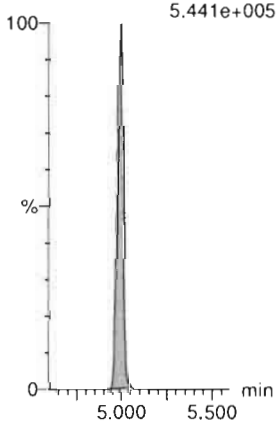
13C9-PFNA



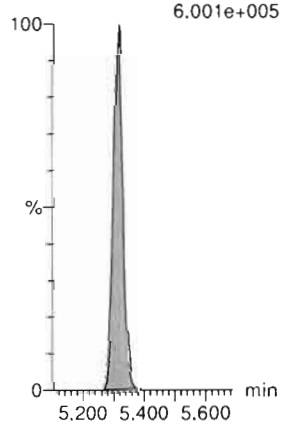
13C4-PFOS



13C6-PFDA



13C7-PFUdA

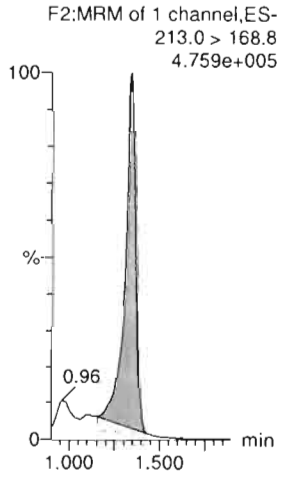


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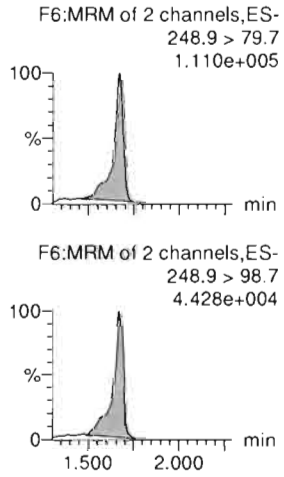
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Name: 200228P2-9, Date: 28-Feb-2020, Time: 14:09:48, ID: ST200228P2-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

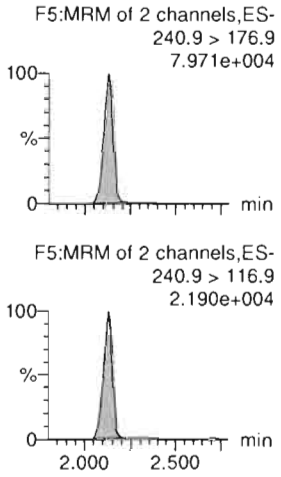
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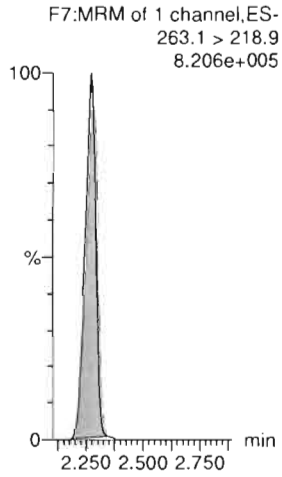
PFPrS



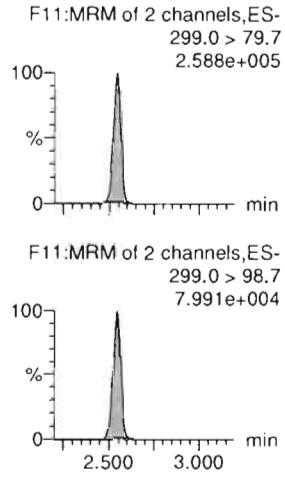
3:3 FTCA



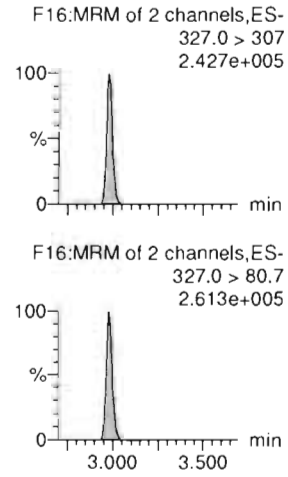
PFPeA



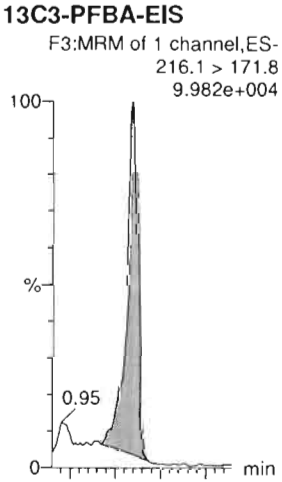
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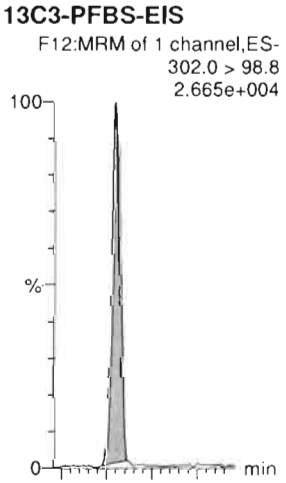
4:2 FTS



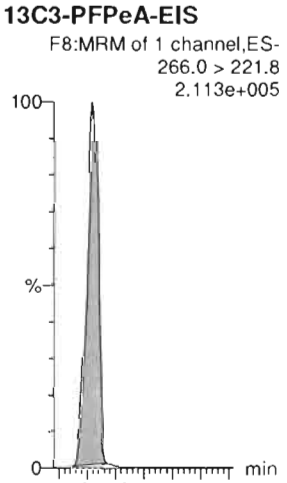
13C3-PFBA-EIS



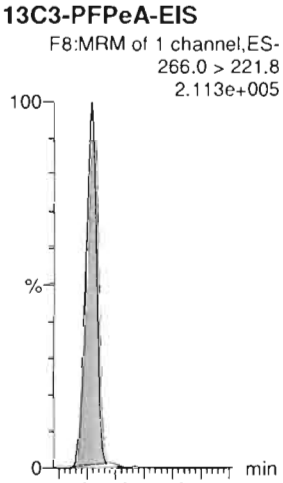
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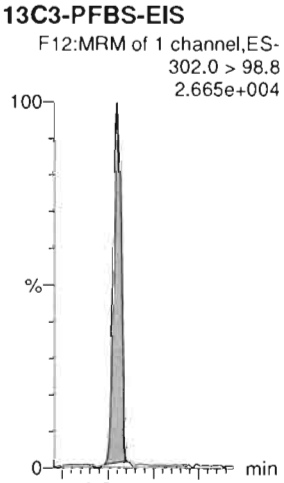
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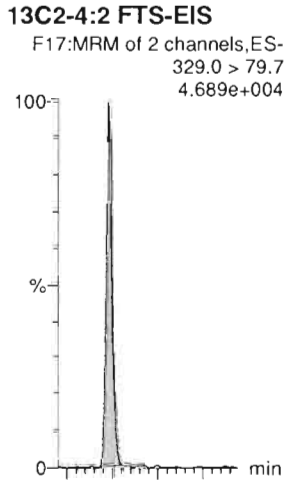
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

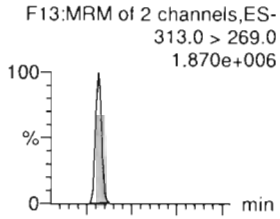


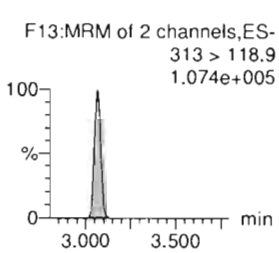
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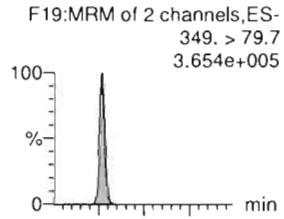
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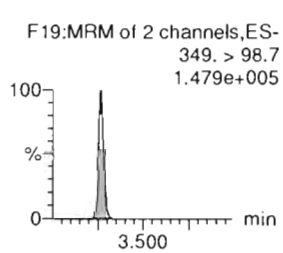
PFHxA



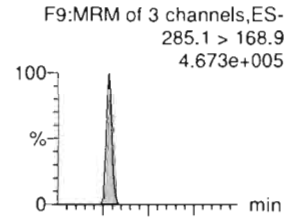


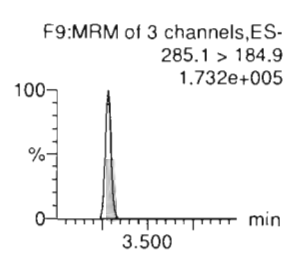
PFPeS



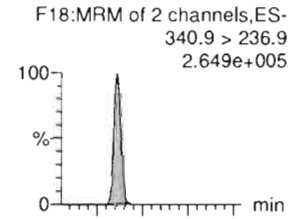


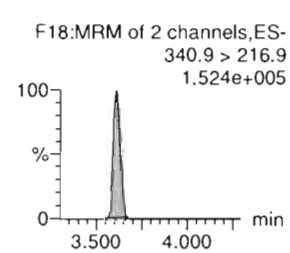
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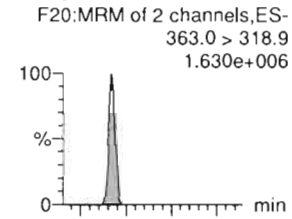


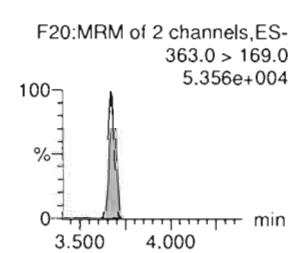
5:3 FTCA



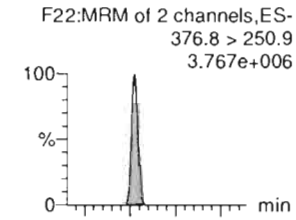


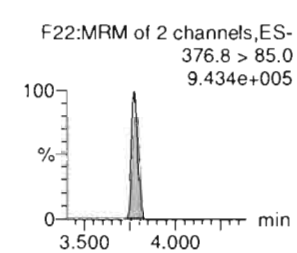
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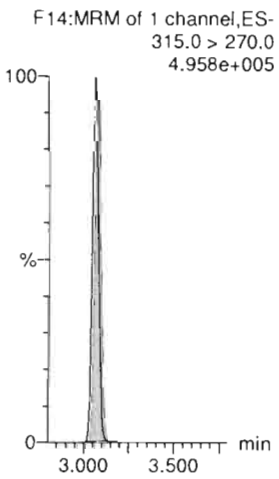


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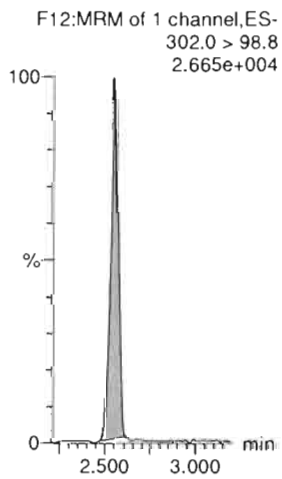




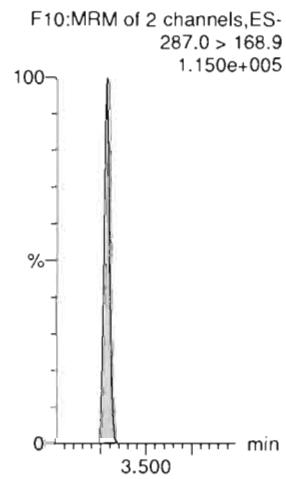
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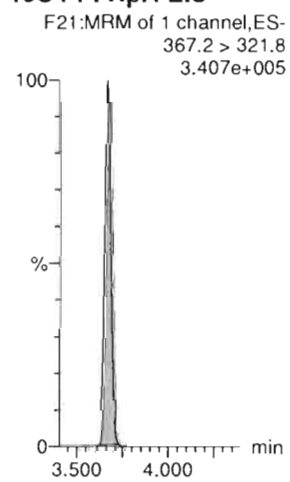
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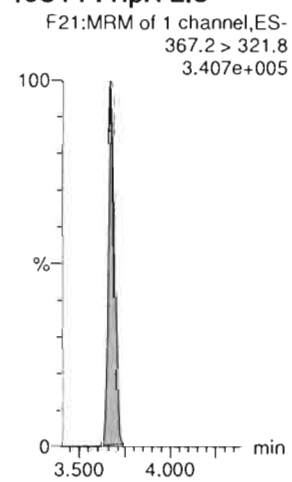
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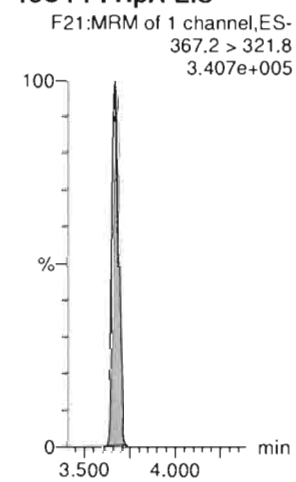
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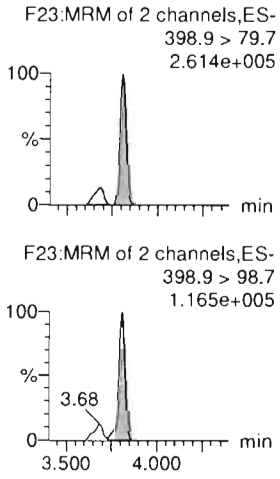


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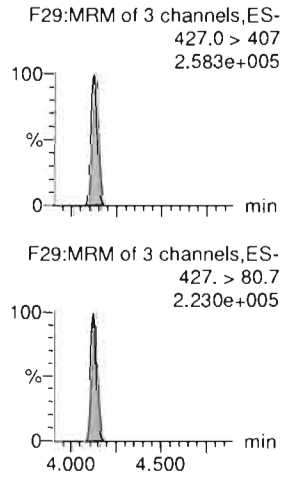
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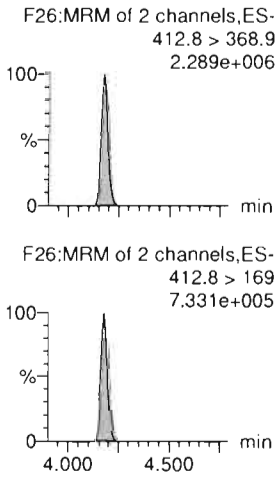
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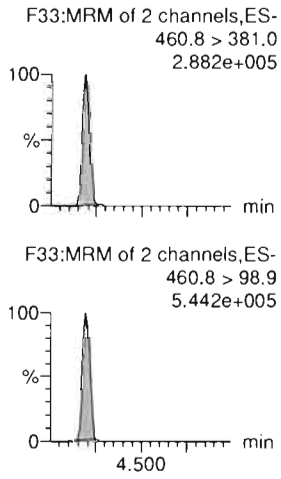
6:2 FTS



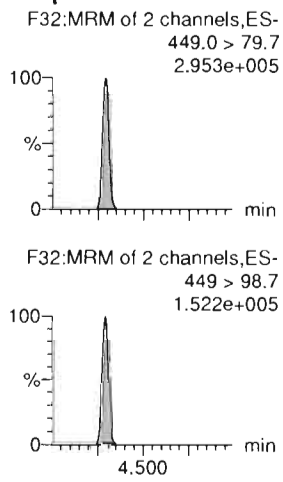
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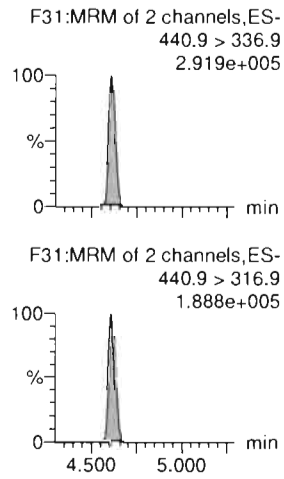
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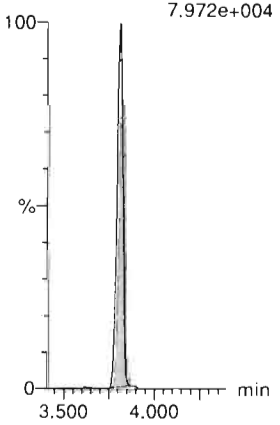
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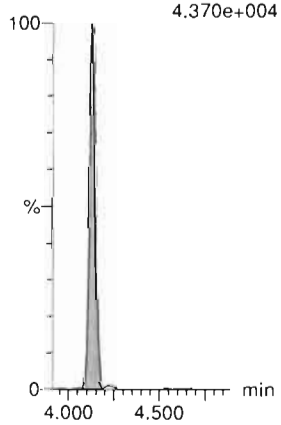
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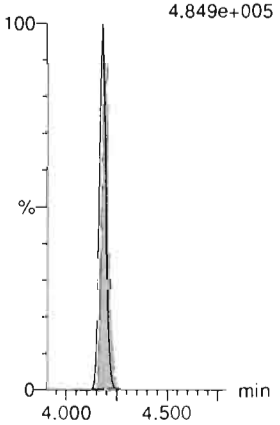
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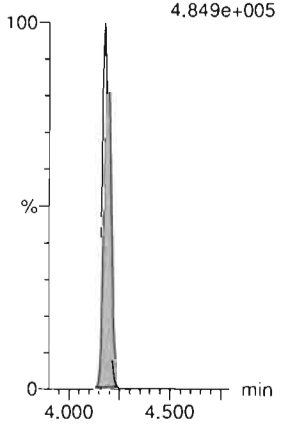
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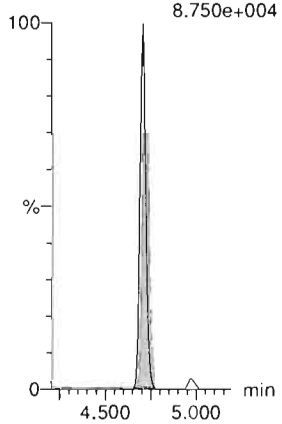
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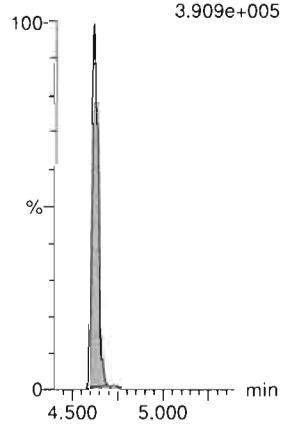
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13C8-PFOS-EIS



13C5-PFNA-EIS

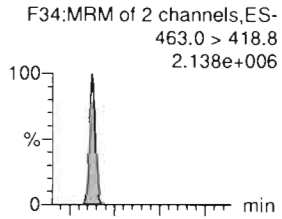


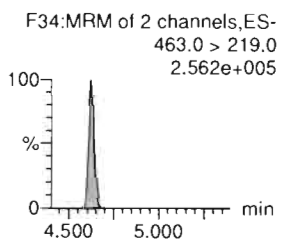
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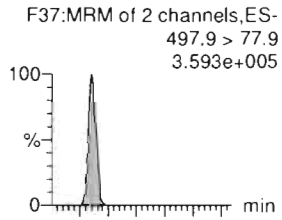
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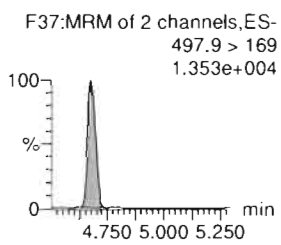
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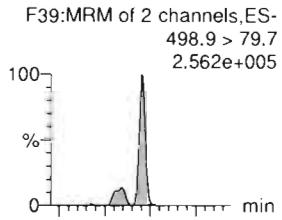


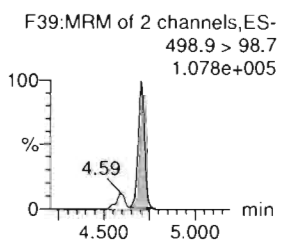
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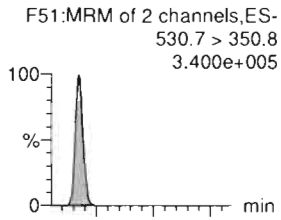


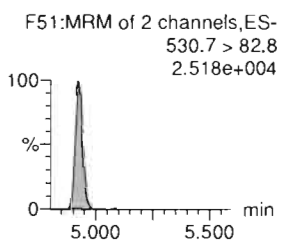
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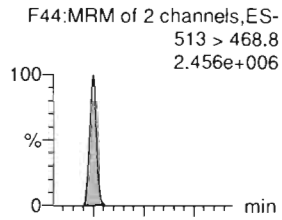


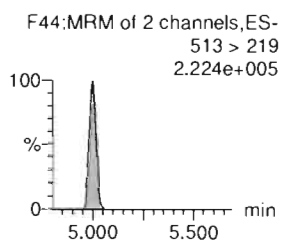
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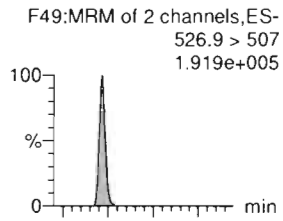


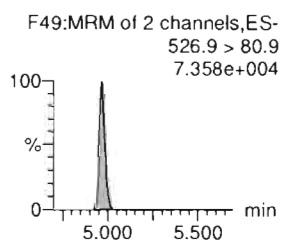
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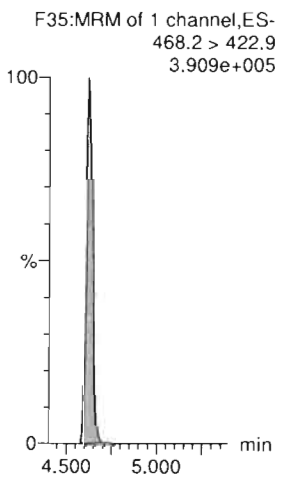


8:2 FTS

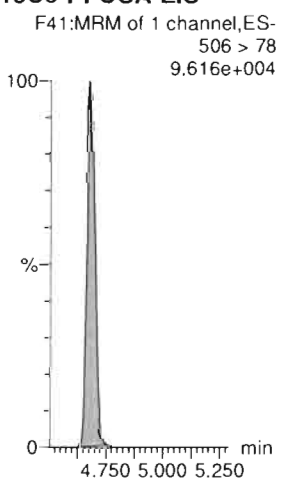




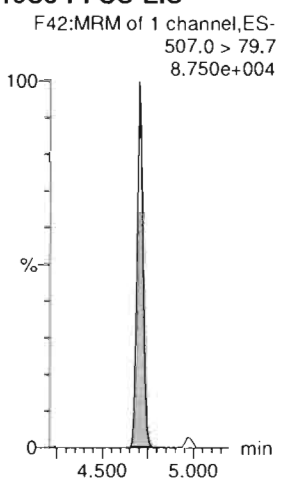
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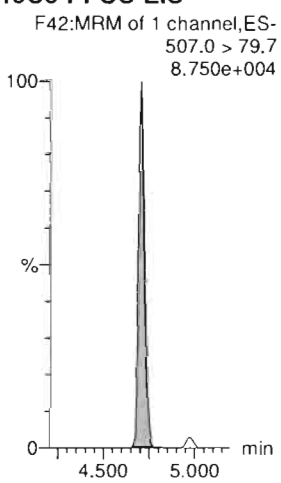
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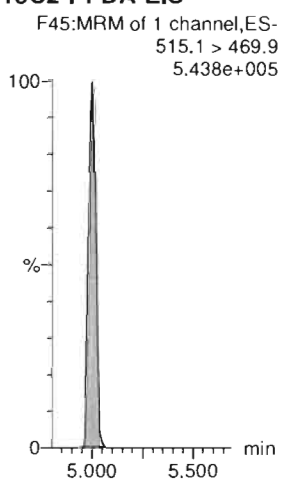
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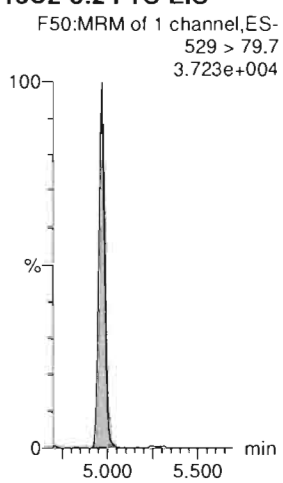
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

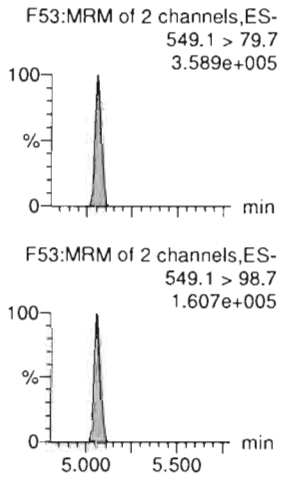


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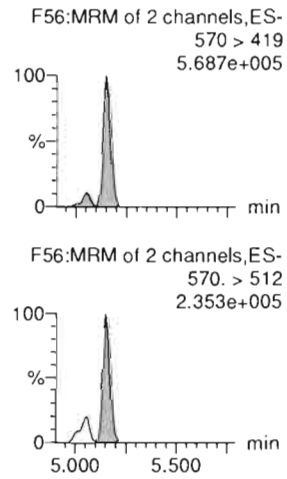
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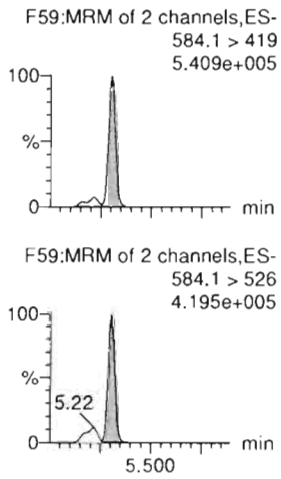
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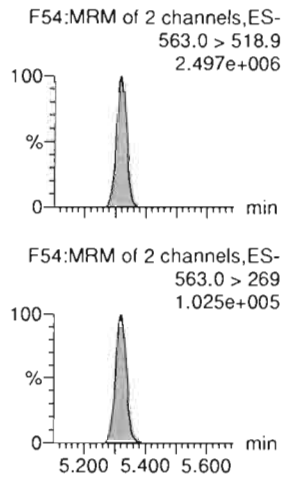
L-MeFOSAA



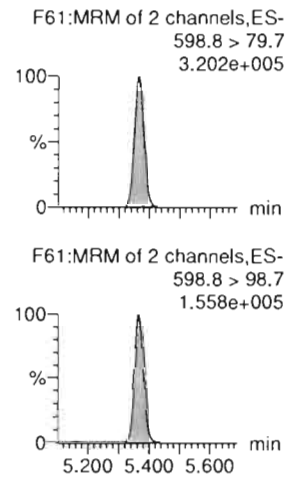
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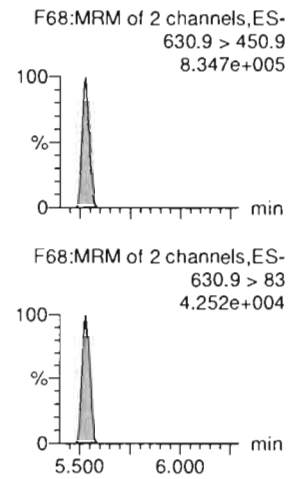
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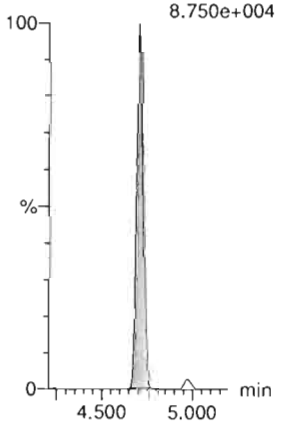
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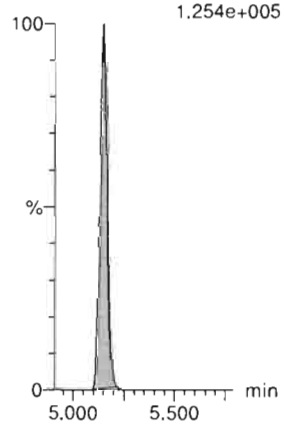
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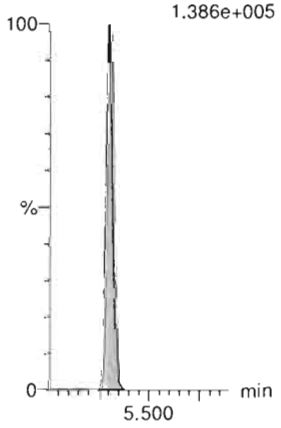
13C8-PFOS-EIS



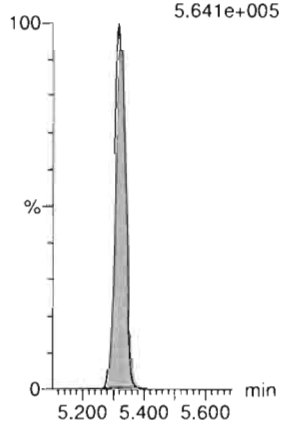
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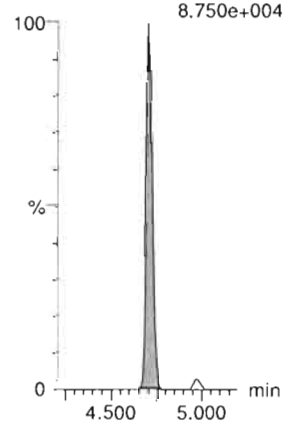
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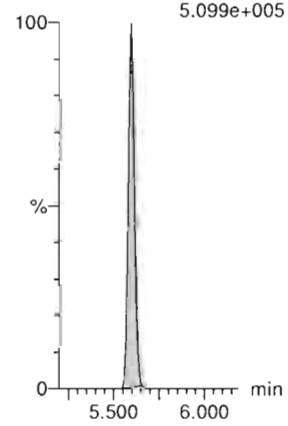
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13C8-PFOS-EIS



13C2-PFDoA-EIS

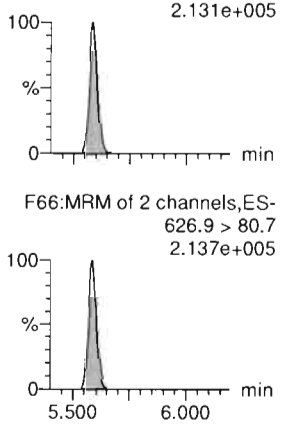


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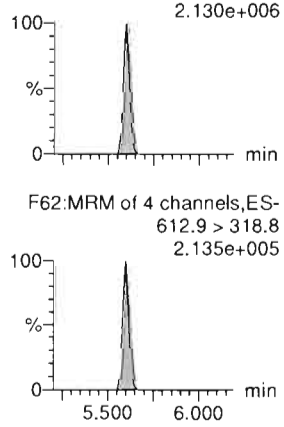
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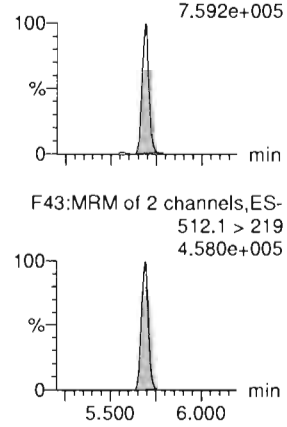
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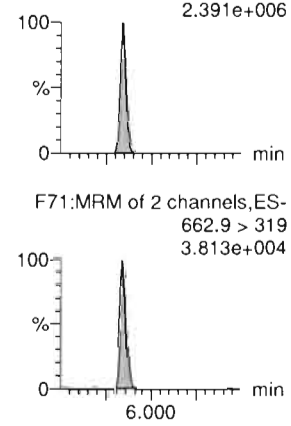
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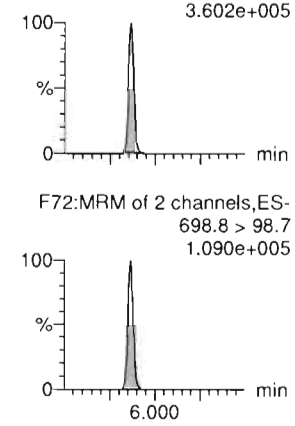
N-MeFOSA



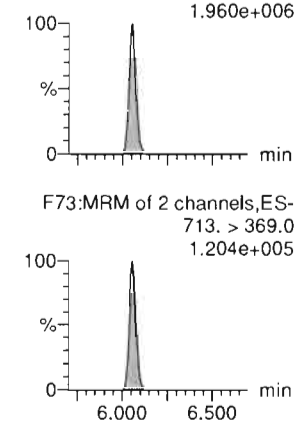
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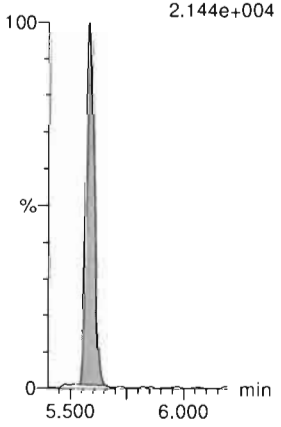
PFDoS



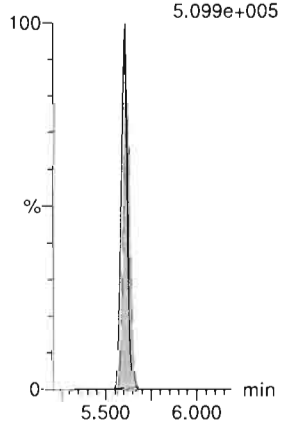
PFTeDA



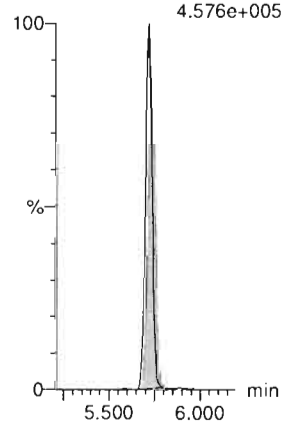
13C2-10:2 FTS-EIS



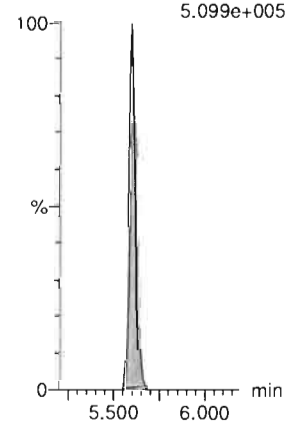
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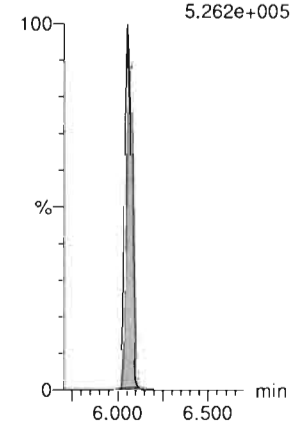
d3-N-MeFOSA-EIS



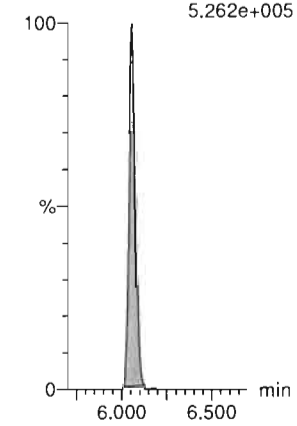
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

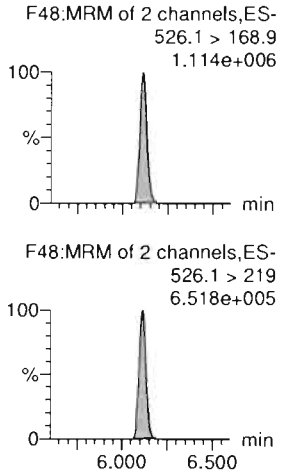


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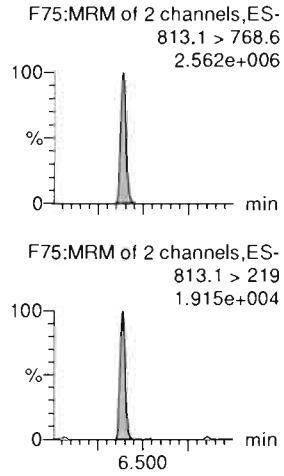
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Name: 200228P2-9, Date: 28-Feb-2020, Time: 14:09:48, ID: ST200228P2-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

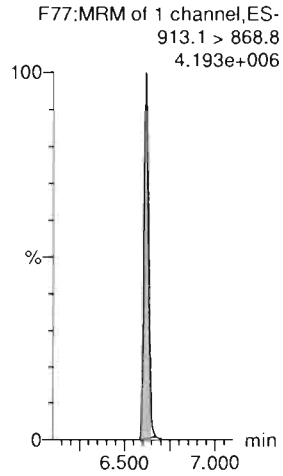
N-EtFOSA



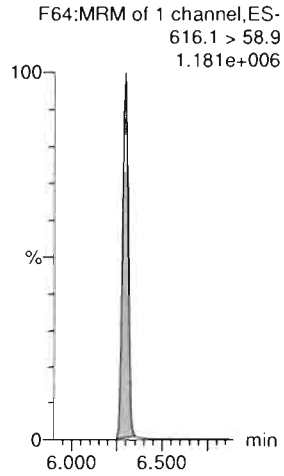
PFHxDA



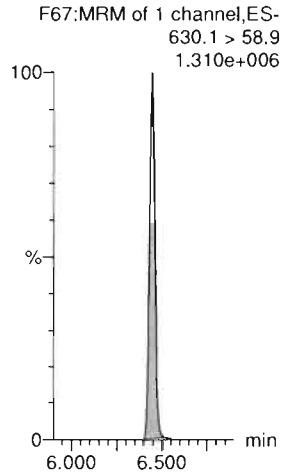
PFODA



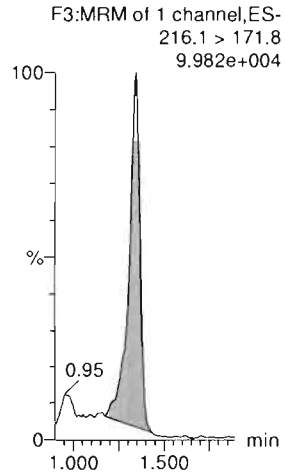
N-MeFOSE



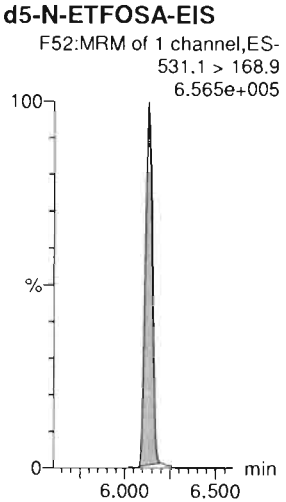
N-EtFOSE



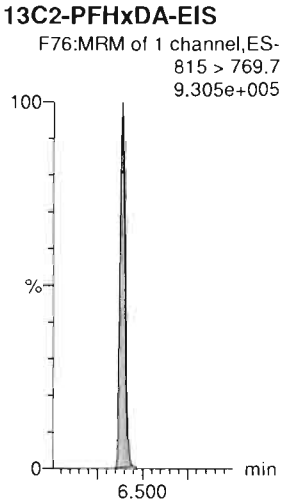
13C3-PFBA-RSD



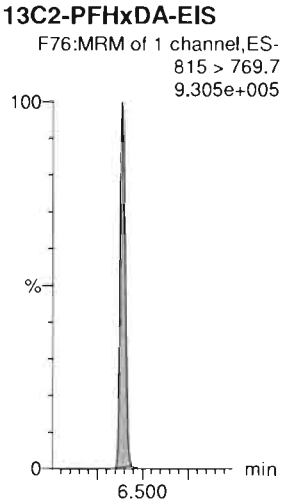
d5-N-ETFOSA-EIS



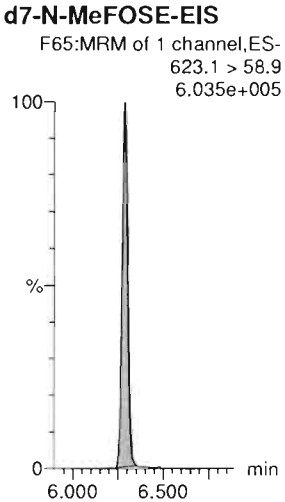
13C2-PFHxDA-EIS



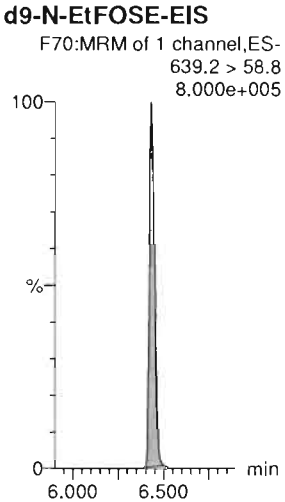
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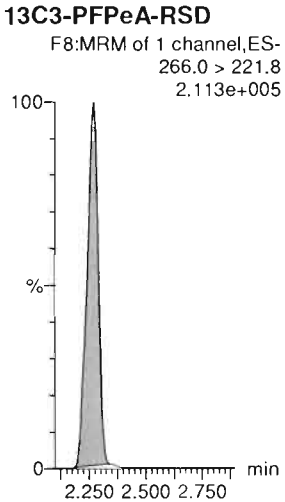
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

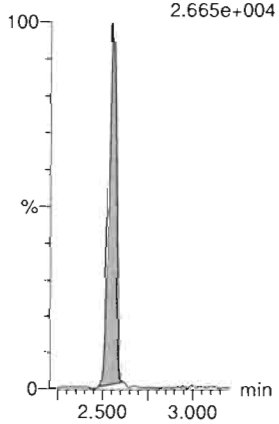


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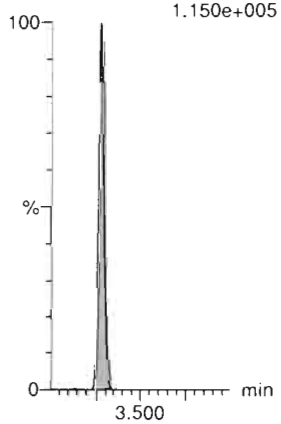
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Name: 200228P2-9, Date: 28-Feb-2020, Time: 14:09:48, ID: ST200228P2-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

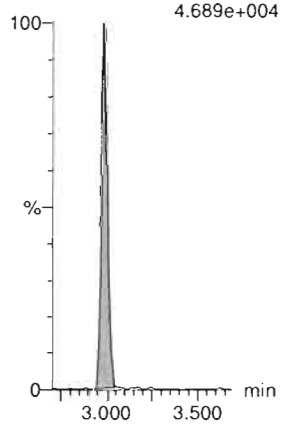
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.665e+004



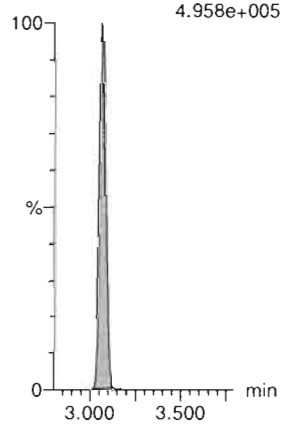
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.150e+005



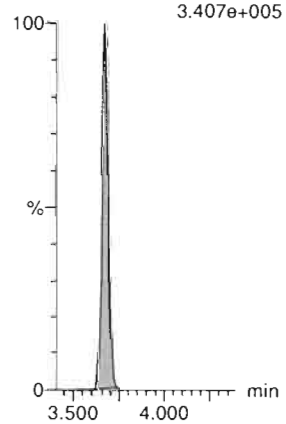
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.689e+004



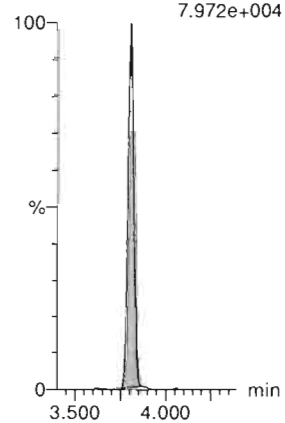
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.958e+005



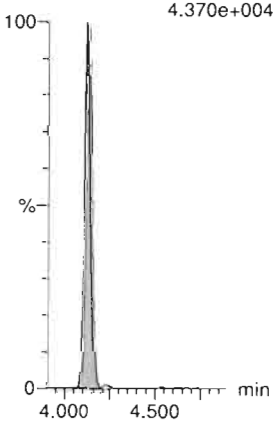
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.407e+005



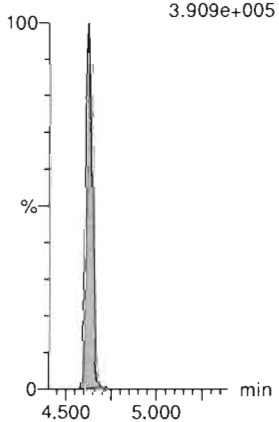
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
7.972e+004



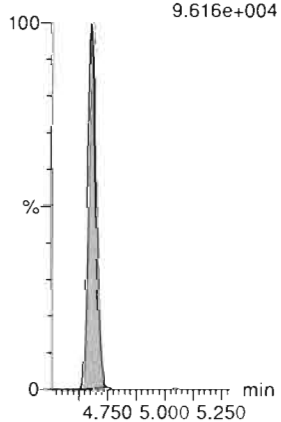
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
4.370e+004



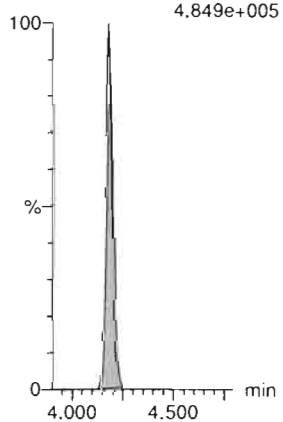
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.909e+005



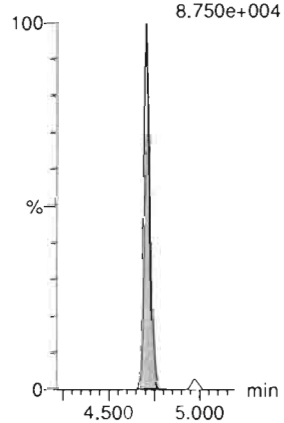
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.616e+004



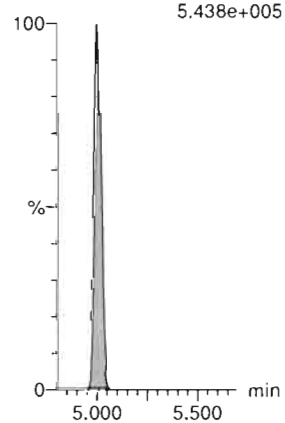
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.849e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.750e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
5.438e+005

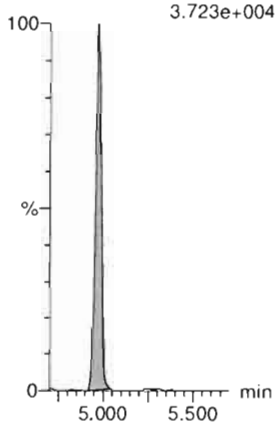


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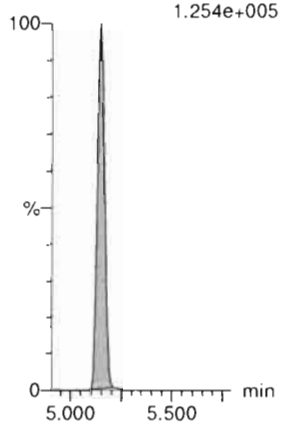
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Name: 200228P2-9, Date: 28-Feb-2020, Time: 14:09:48, ID: ST200228P2-7 PFC CS4 20B1108, Description: PFC CS4 20B1108

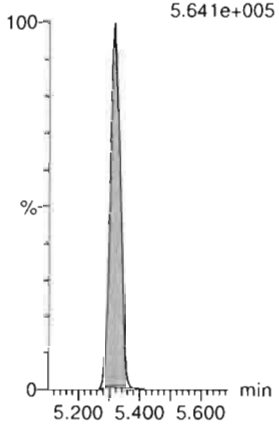
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.723e+004



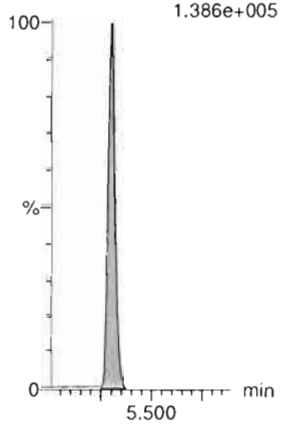
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.254e+005



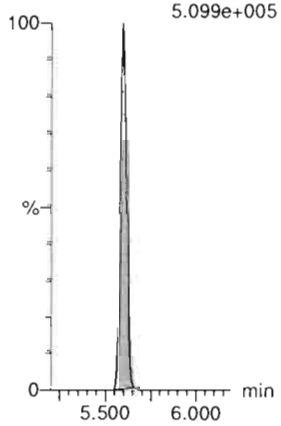
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.641e+005



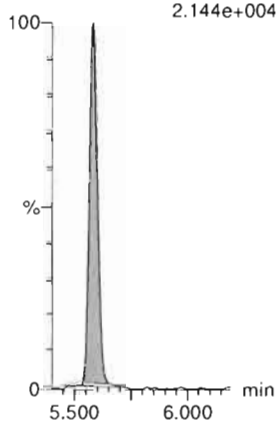
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.386e+005



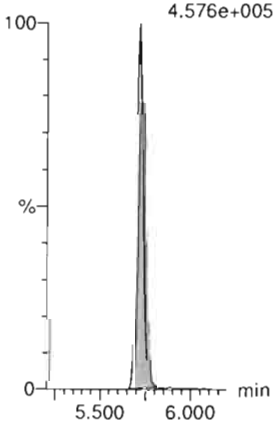
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.099e+005



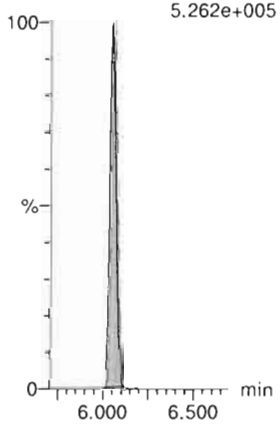
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.144e+004



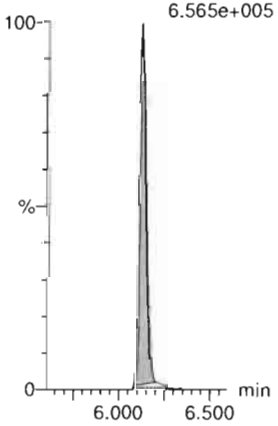
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.576e+005



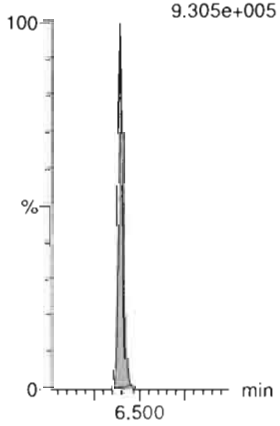
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
5.262e+005



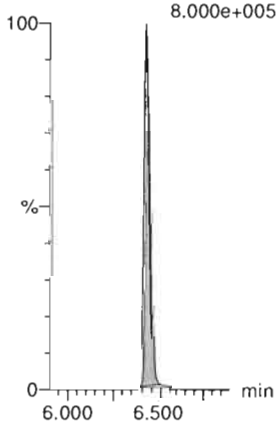
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.565e+005



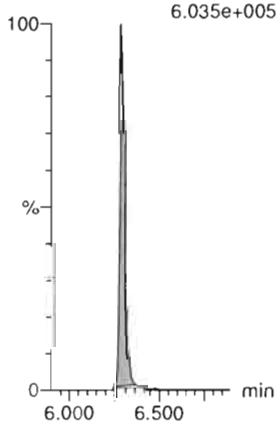
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
9.305e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
8.000e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.035e+005

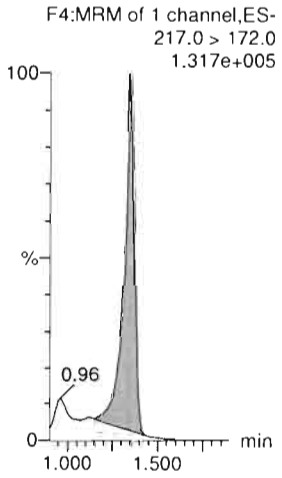


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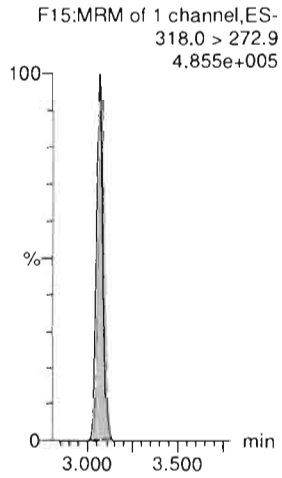
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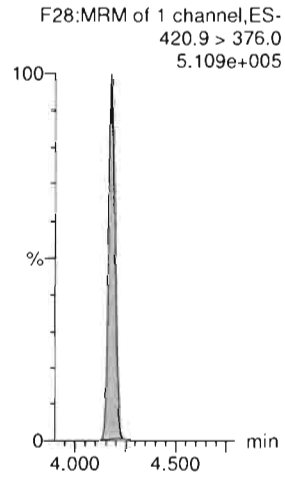
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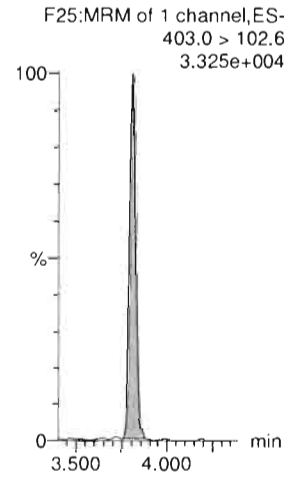
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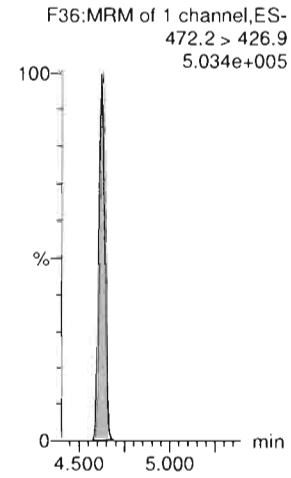
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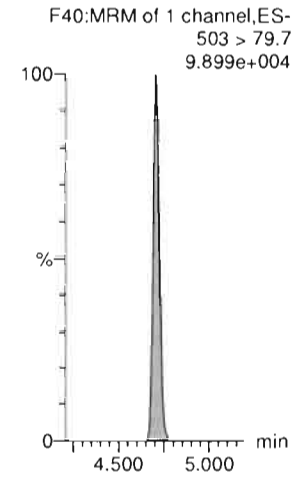
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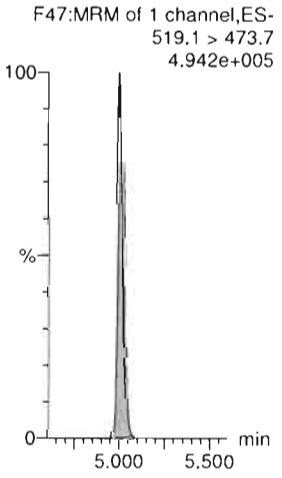
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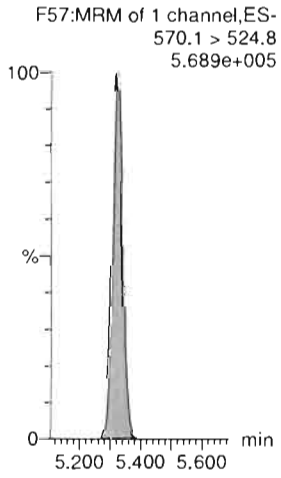
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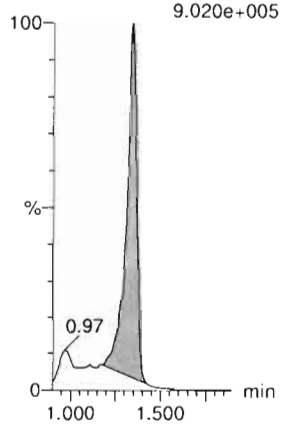


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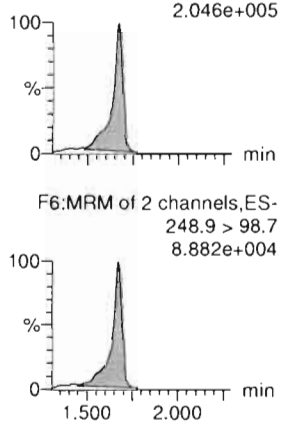
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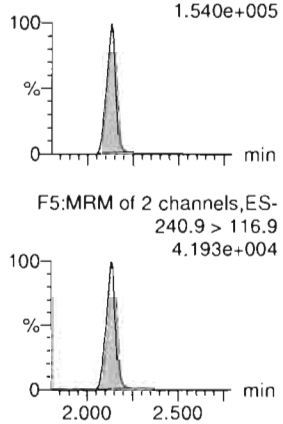
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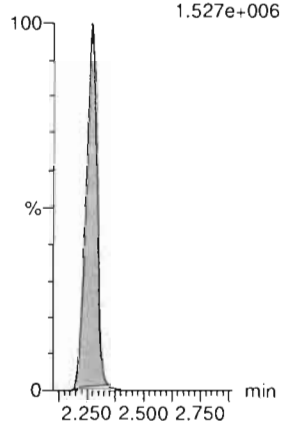
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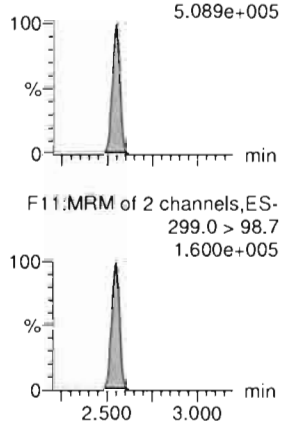
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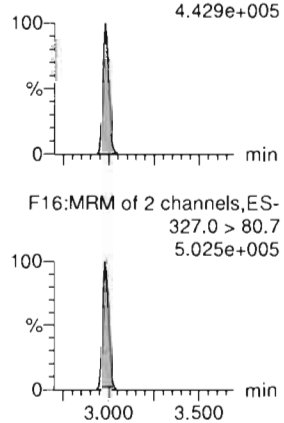
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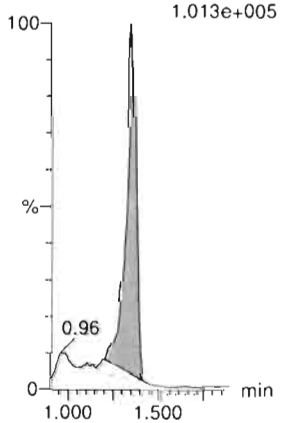
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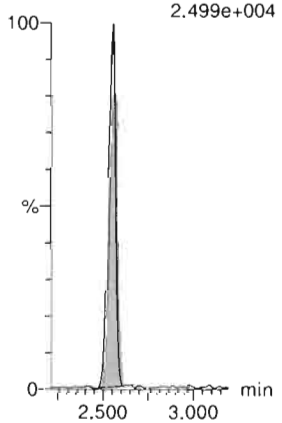
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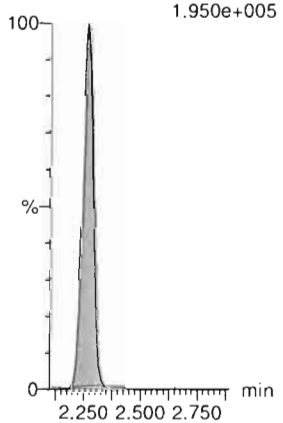
13C3-PFBA-EIS



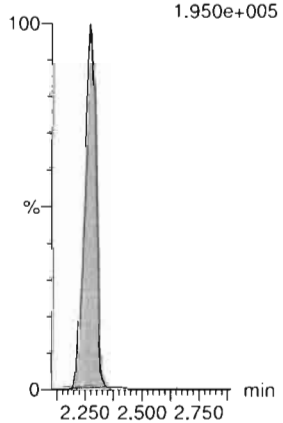
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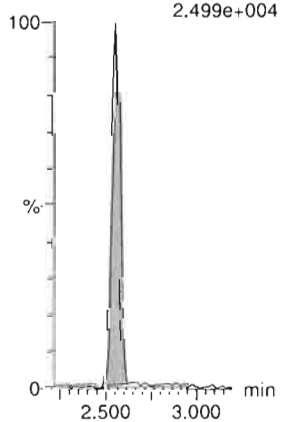
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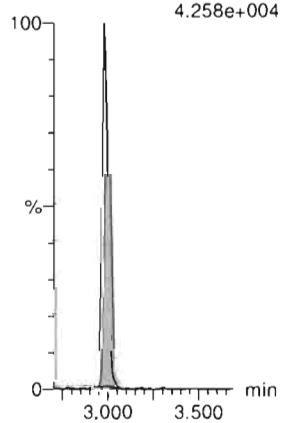
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

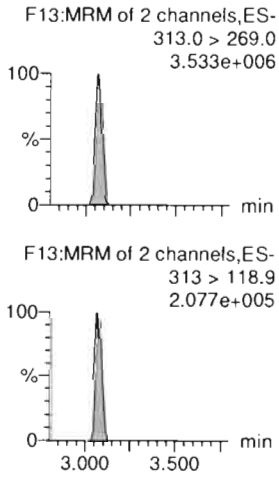


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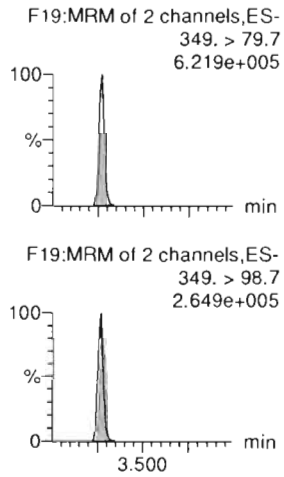
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Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

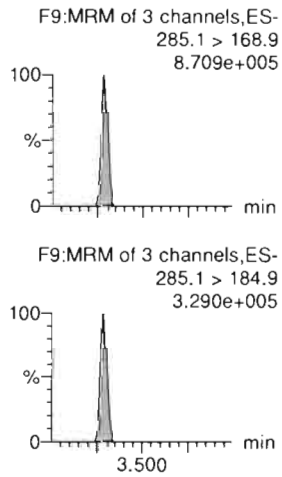
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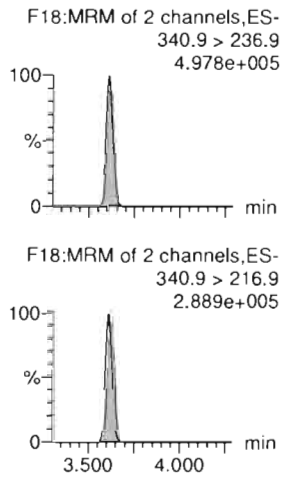
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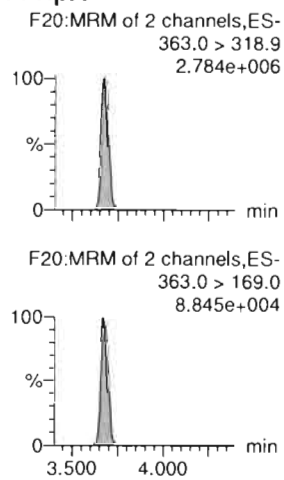
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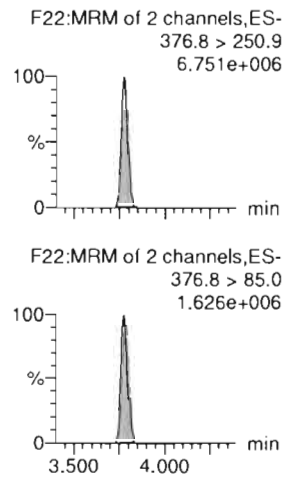
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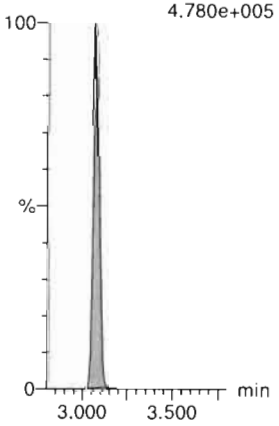
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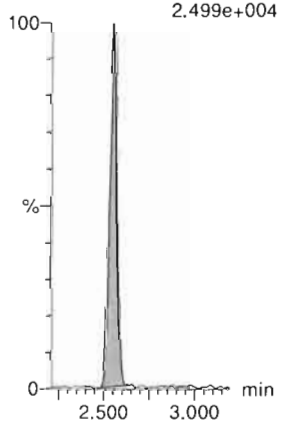
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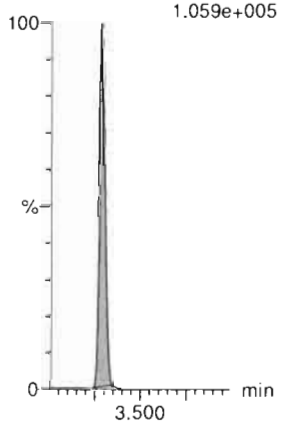
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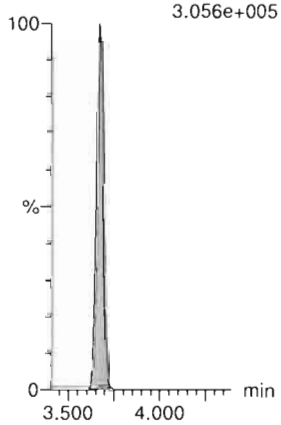
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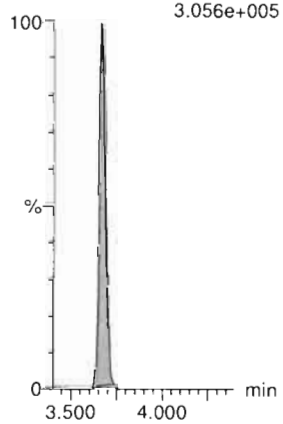
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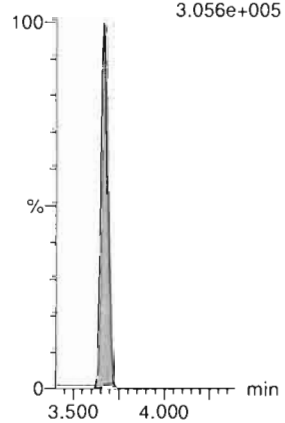
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

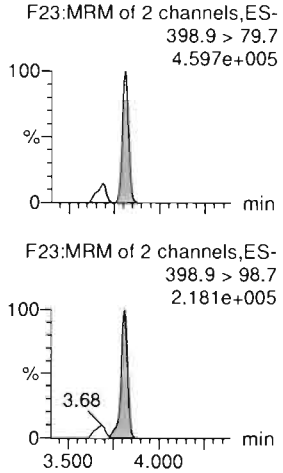


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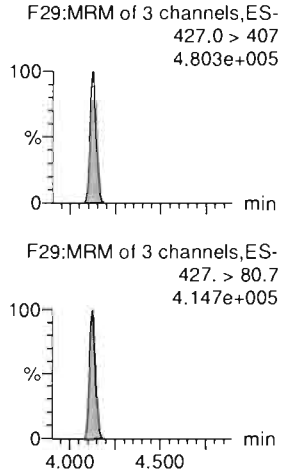
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Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

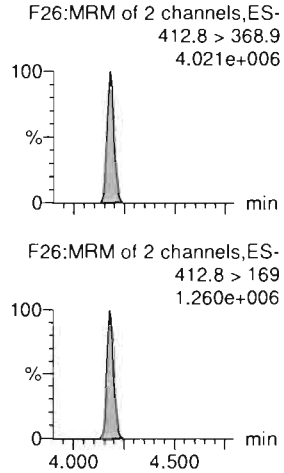
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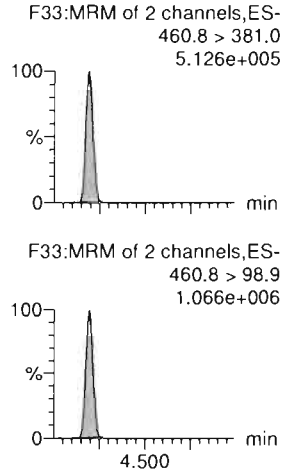
6:2 FTS



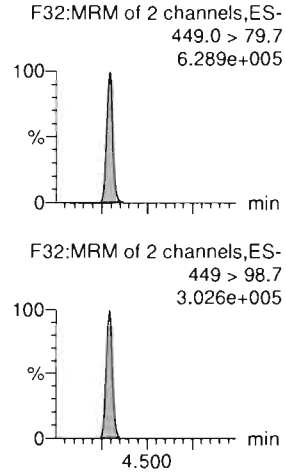
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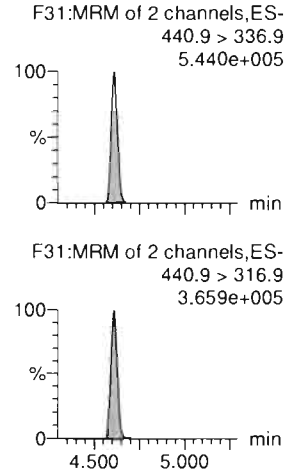
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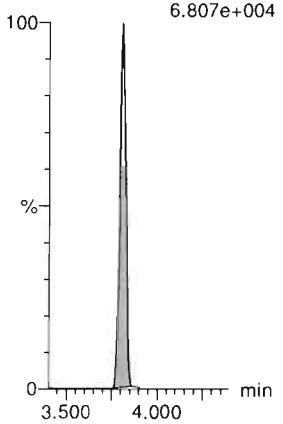
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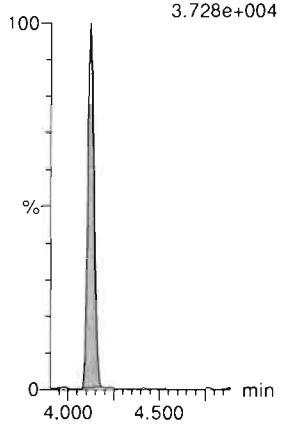
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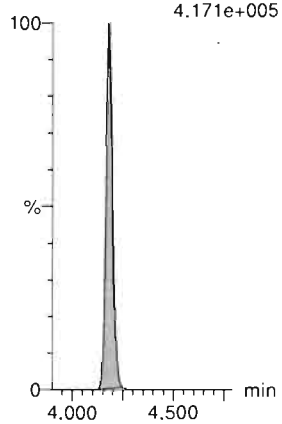
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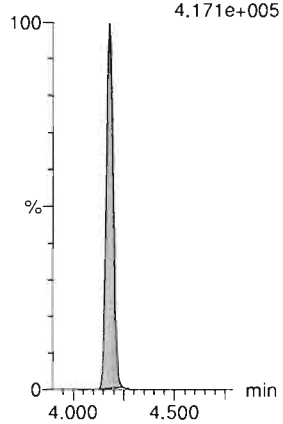
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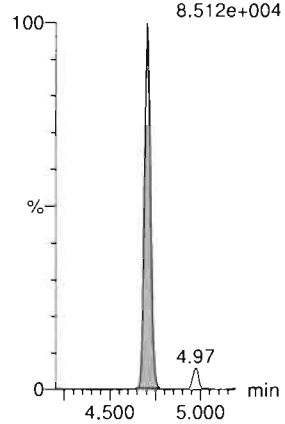
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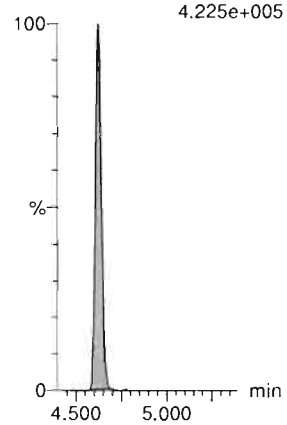
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13C8-PFOS-EIS



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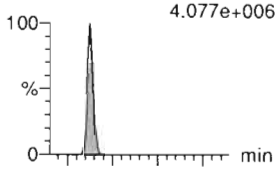


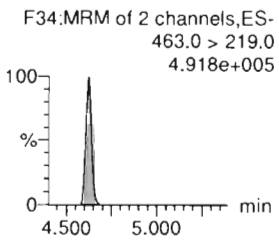
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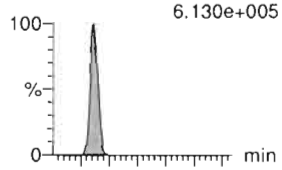
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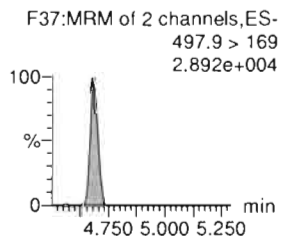
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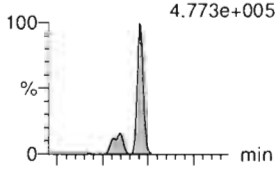


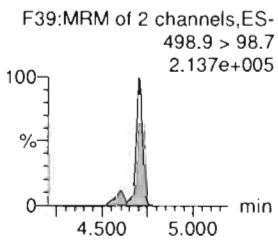
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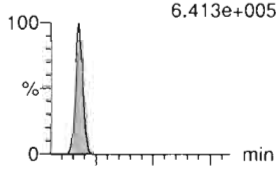


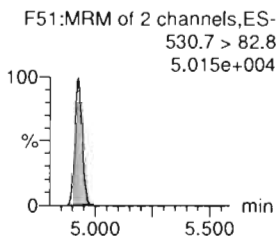
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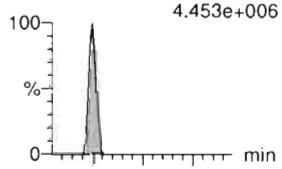


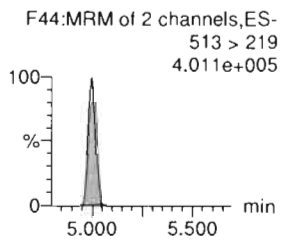
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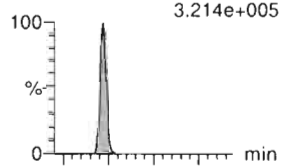


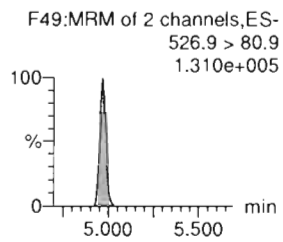
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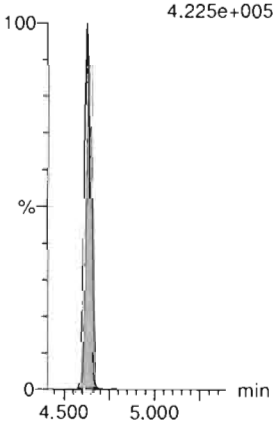


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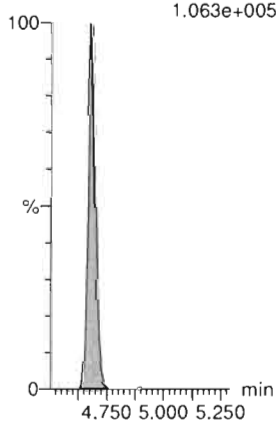




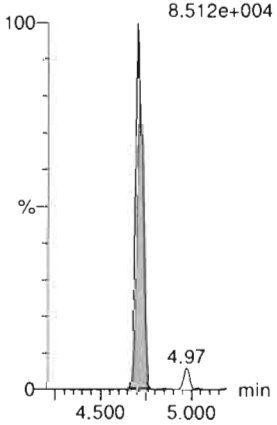
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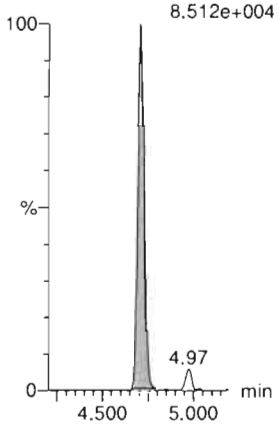
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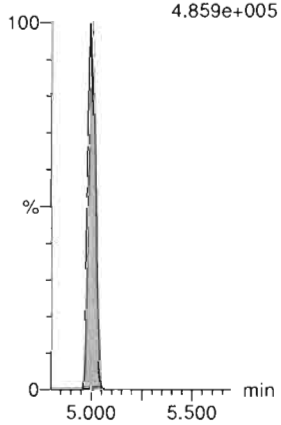
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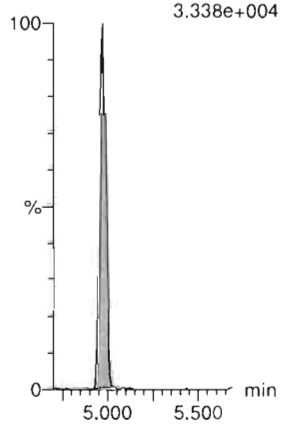
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

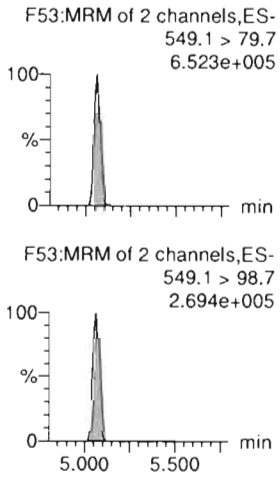


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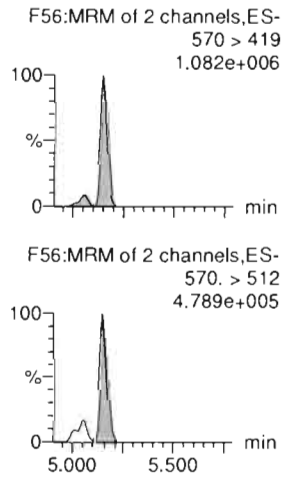
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Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

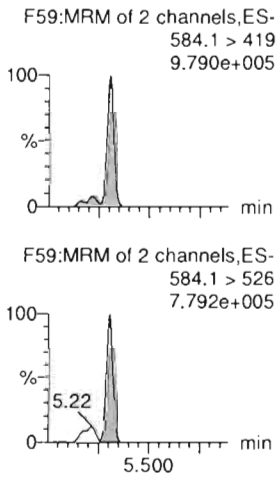
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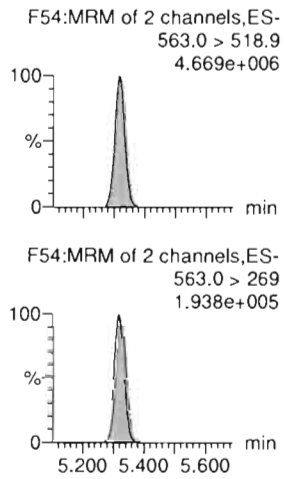
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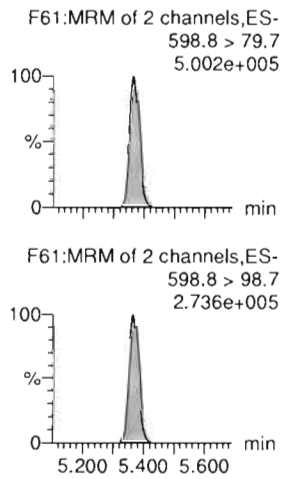
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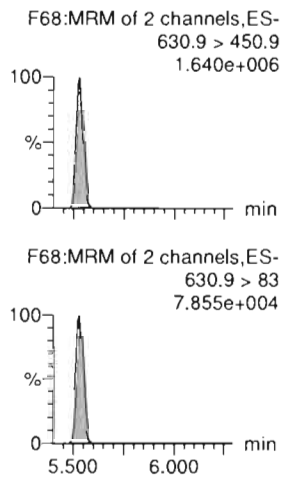
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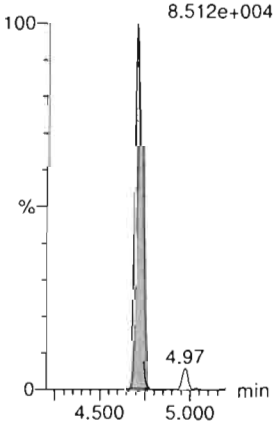
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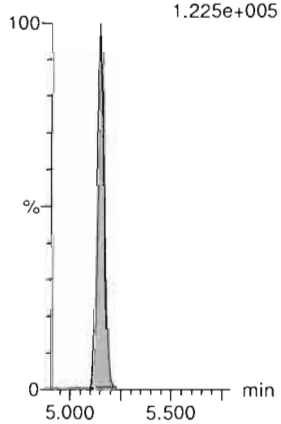
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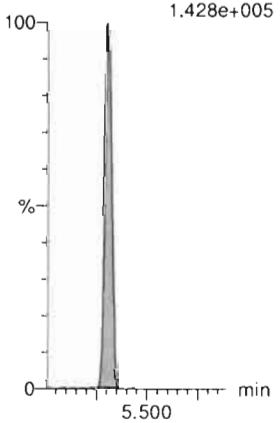
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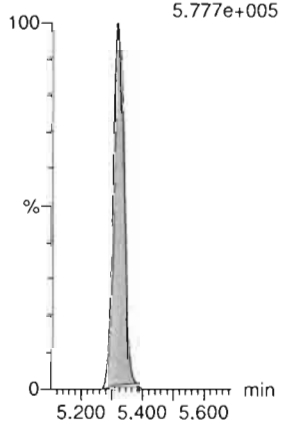
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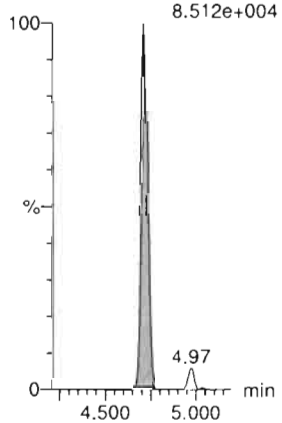
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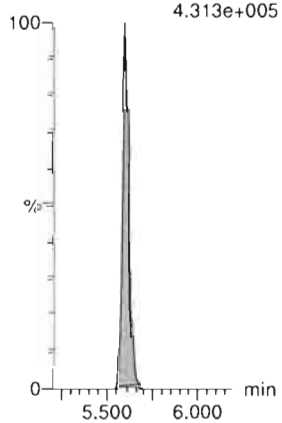
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13C8-PFOS-EIS



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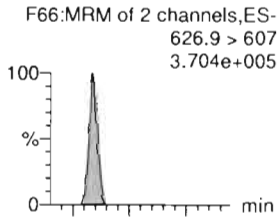


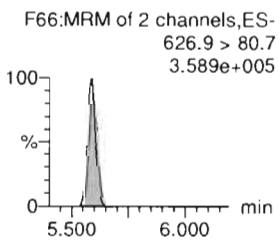
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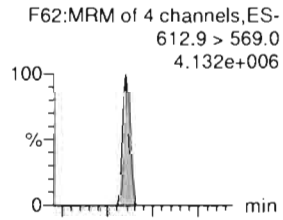
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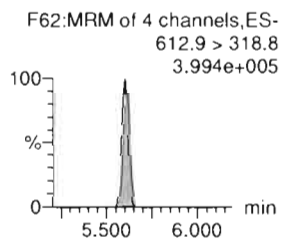
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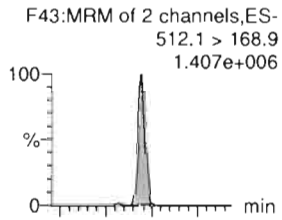


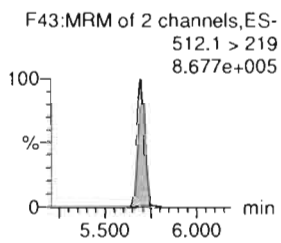
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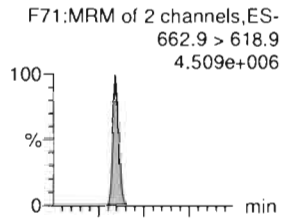


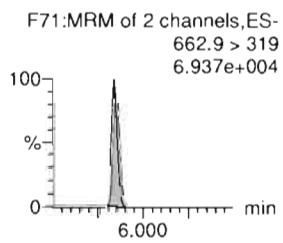
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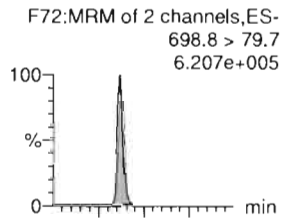


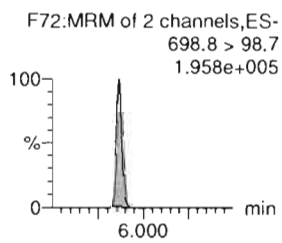
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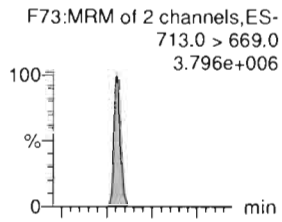


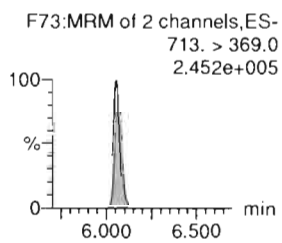
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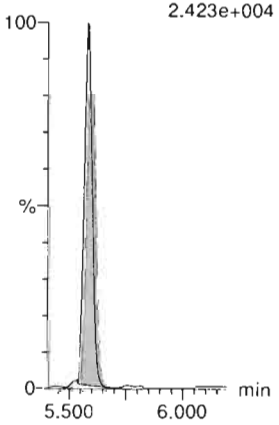


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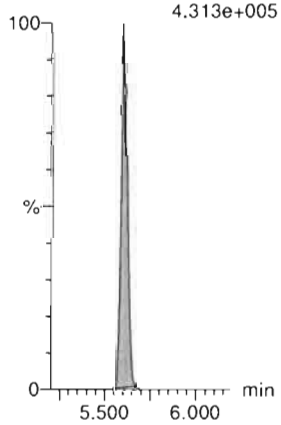




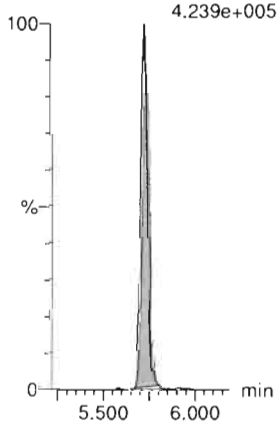
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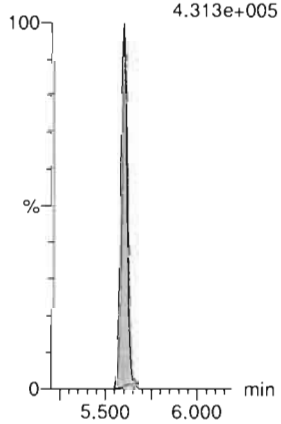
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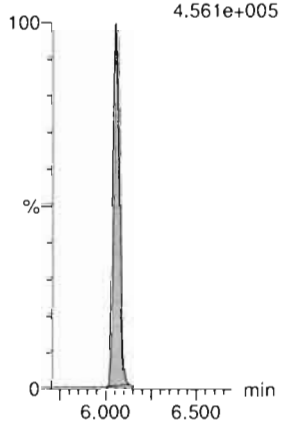
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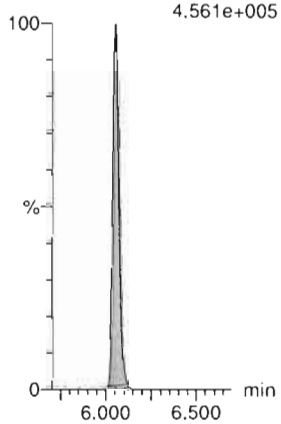
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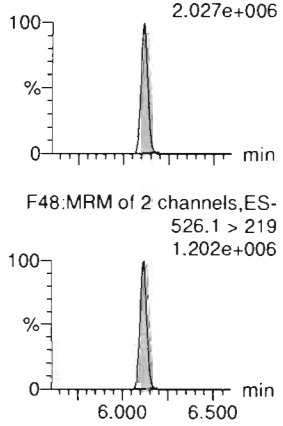


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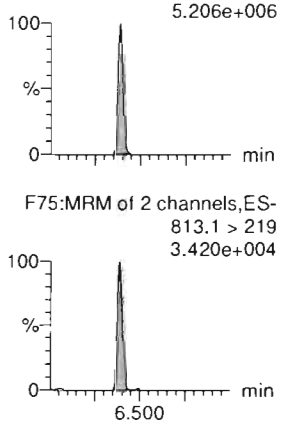
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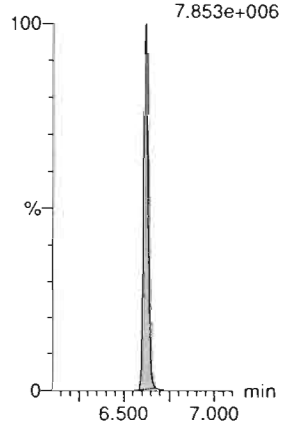
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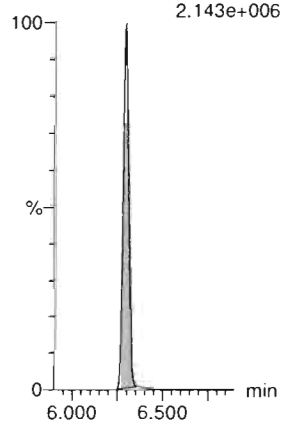
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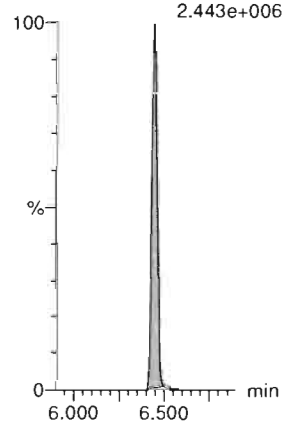
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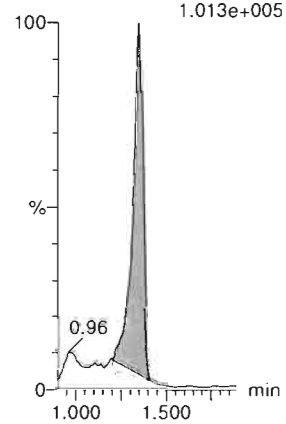
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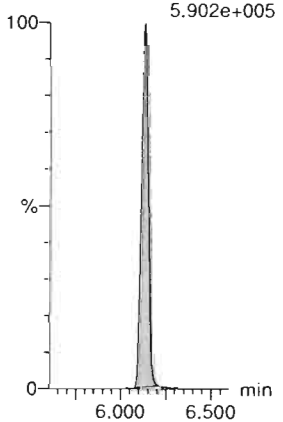
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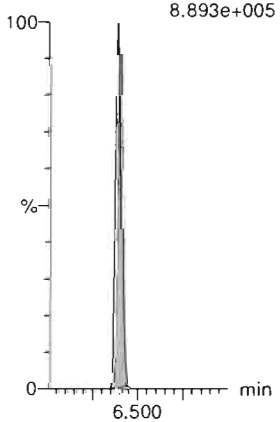
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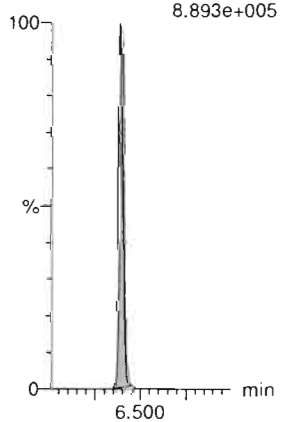
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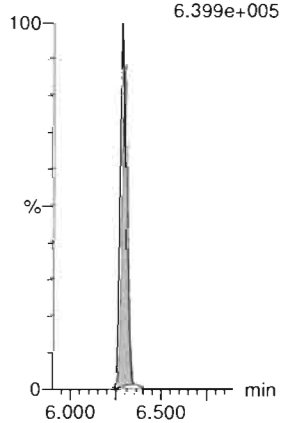
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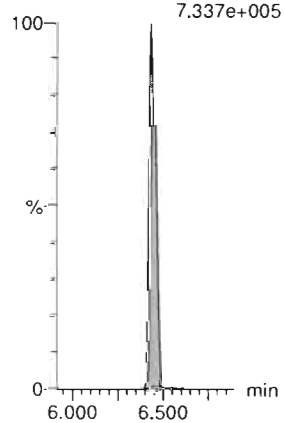
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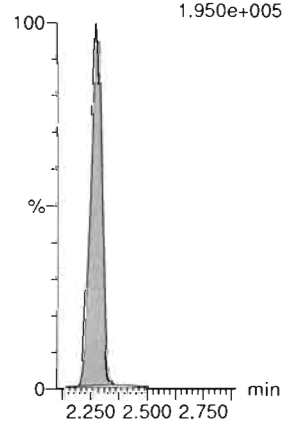
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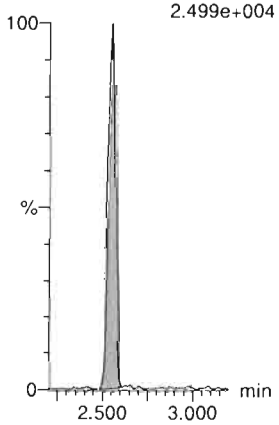


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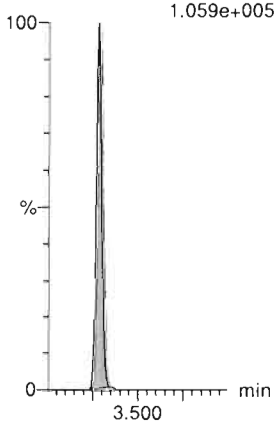
Last Altered: Saturday, February 29, 2020 09:19:58 Pacific Standard Time
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Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

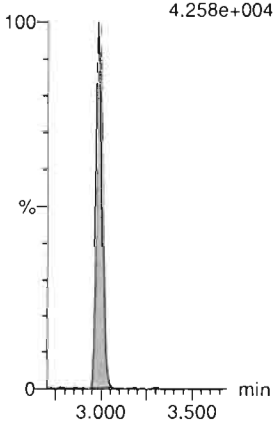
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.499e+004



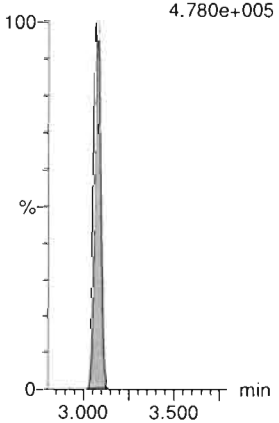
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.059e+005



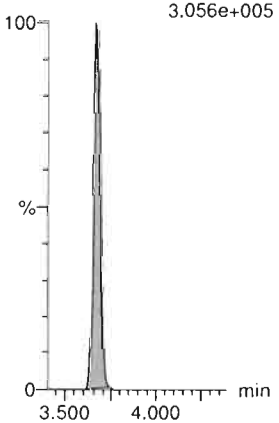
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.258e+004



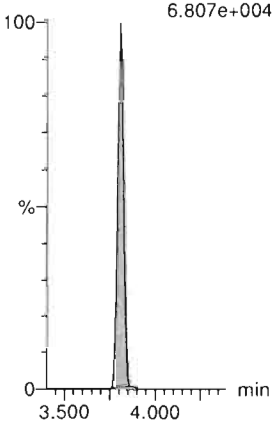
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.780e+005



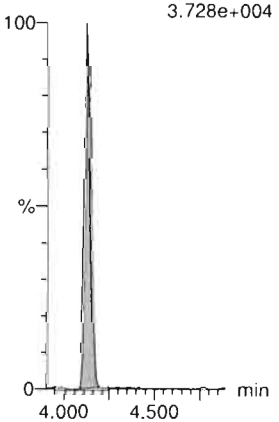
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.056e+005



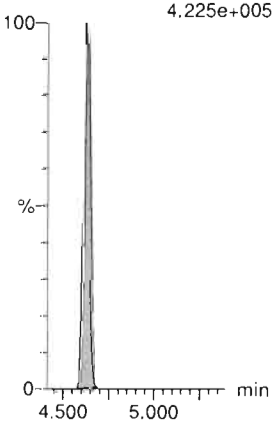
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.807e+004



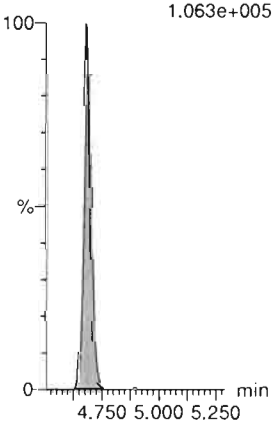
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.728e+004



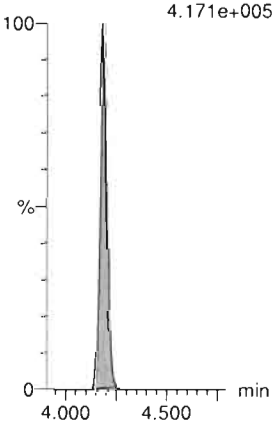
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.225e+005



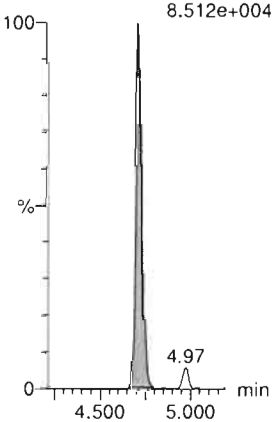
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.063e+005



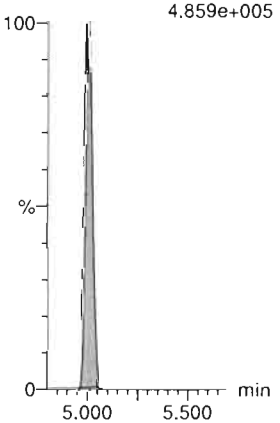
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.171e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.512e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.859e+005

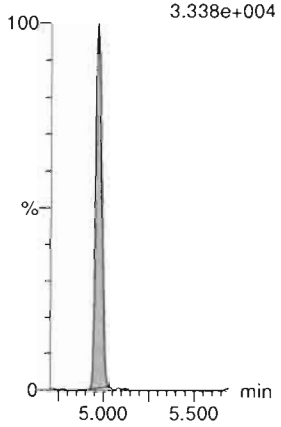


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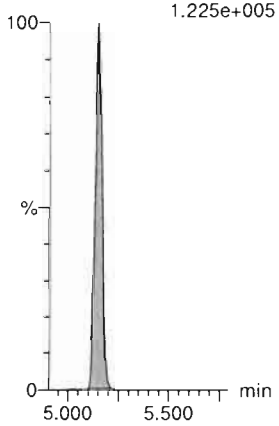
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Printed: Saturday, February 29, 2020 09:20:23 Pacific Standard Time

Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

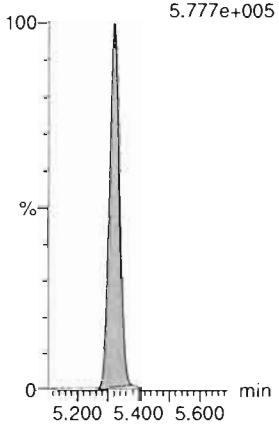
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.338e+004



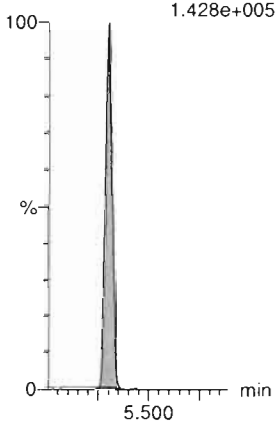
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.225e+005



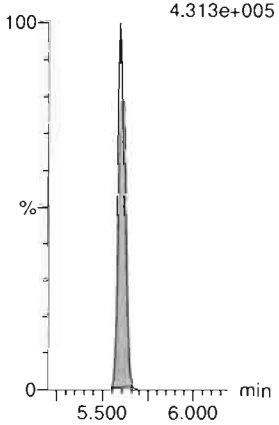
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F55:MRM of 1 channel,ES-
565 > 519.8
5.777e+005



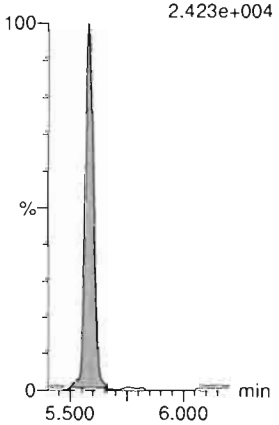
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.428e+005



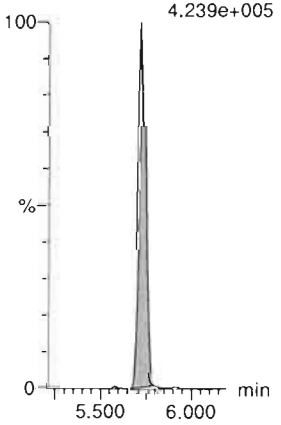
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.313e+005



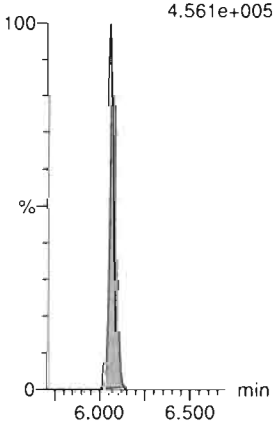
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.423e+004



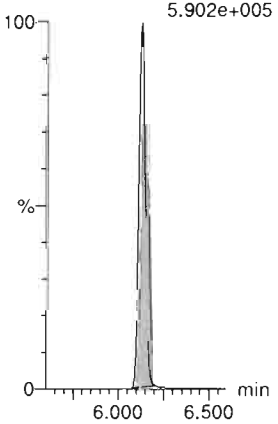
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.239e+005



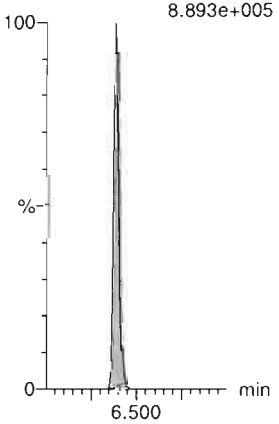
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.561e+005



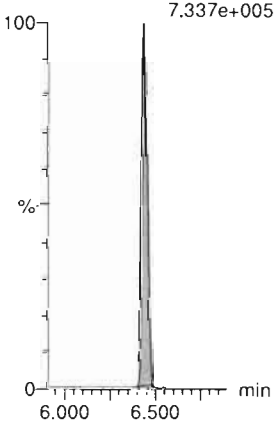
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.902e+005



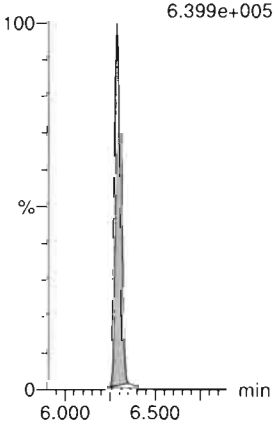
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.893e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.337e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.399e+005

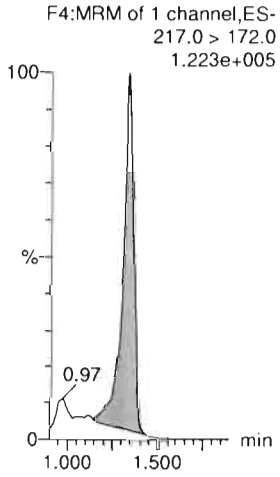


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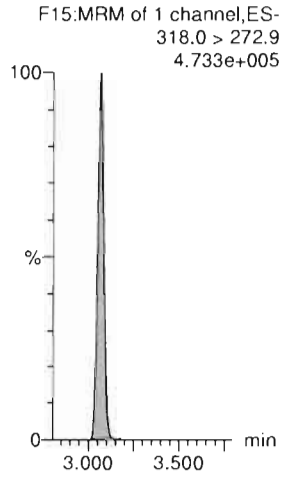
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Name: 200228P2-10, Date: 28-Feb-2020, Time: 14:20:17, ID: ST200228P2-8 PFC CS5 20B1109, Description: PFC CS5 20B1109

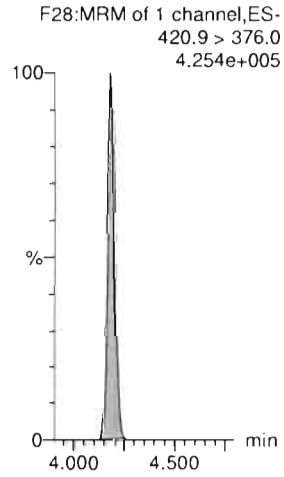
13C4-PFBA



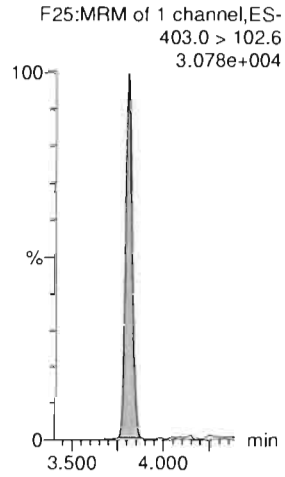
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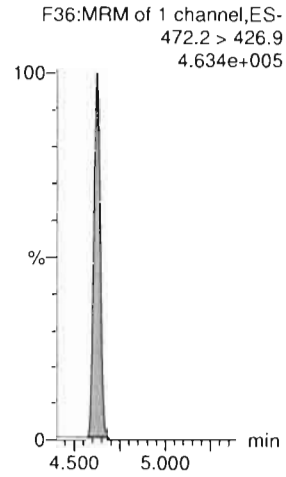
13C8-PFOA



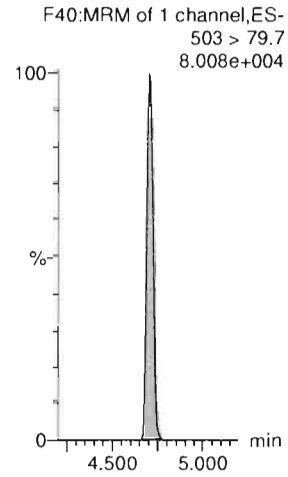
18O2-PFHxS



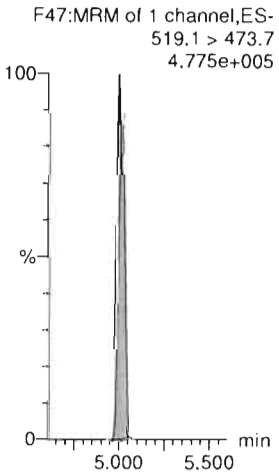
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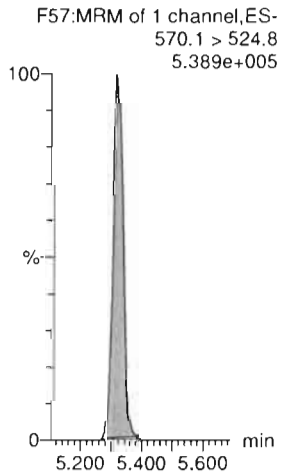
13C4-PFOS



13C6-PFDA



13C7-PFUdA

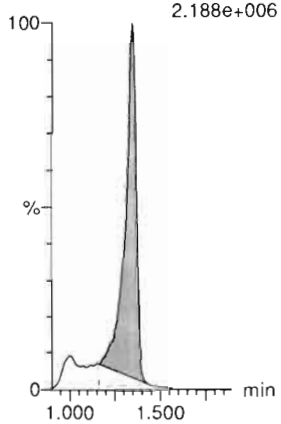


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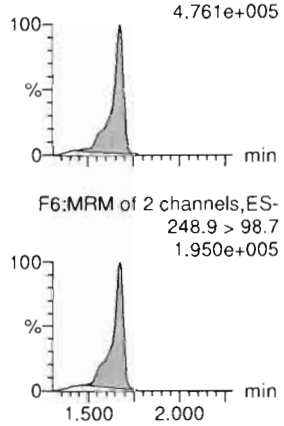
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Name: 200228P2-11, Date: 28-Feb-2020, Time: 14:30:48, ID: ST200228P2-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

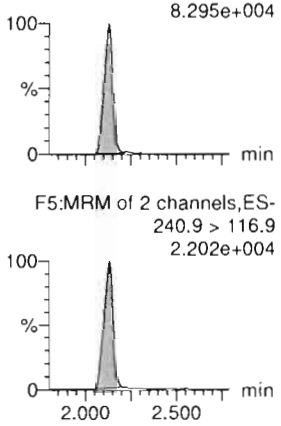
PFBA



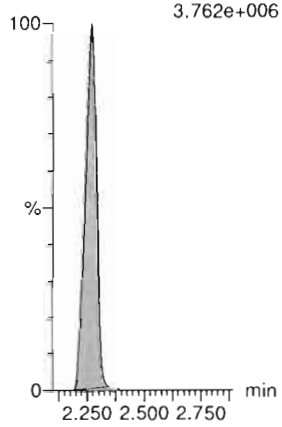
PFPrS



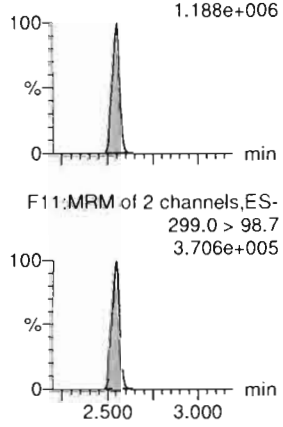
3:3 FTCA



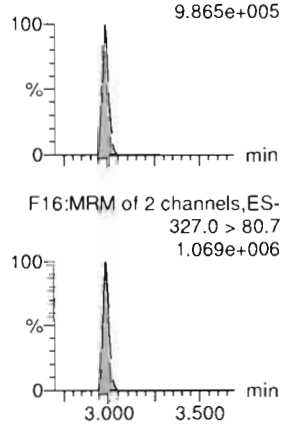
PFPeA



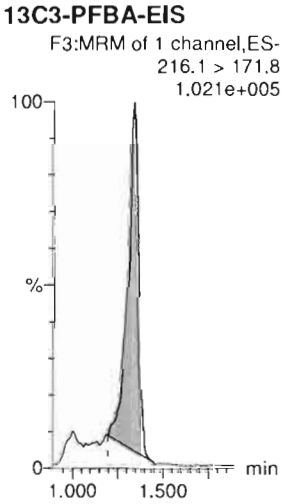
PFBS



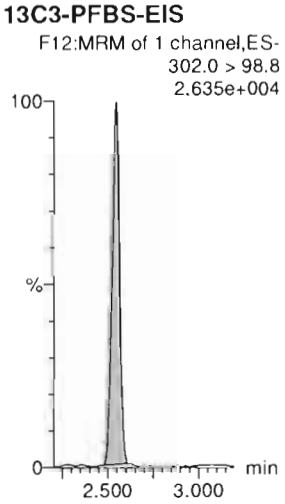
4:2 FTS



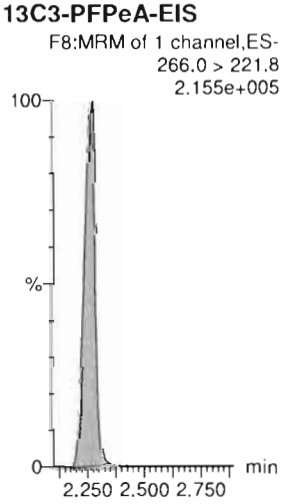
13C3-PFBA-EIS



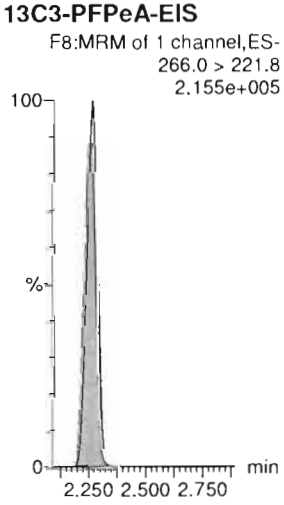
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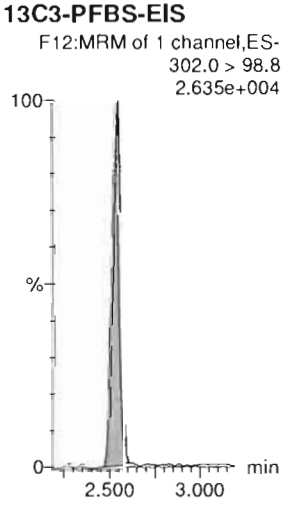
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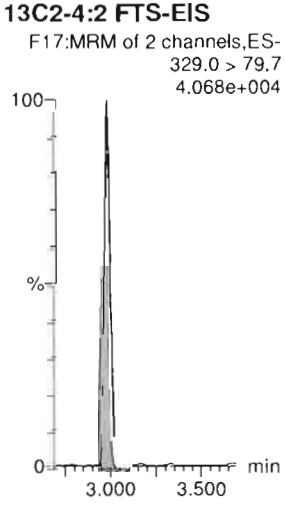
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

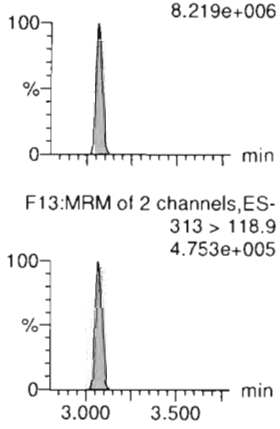


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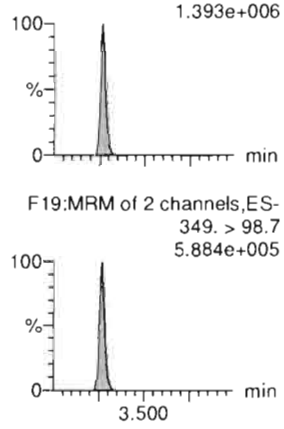
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Name: 200228P2-11, Date: 28-Feb-2020, Time: 14:30:48, ID: ST200228P2-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

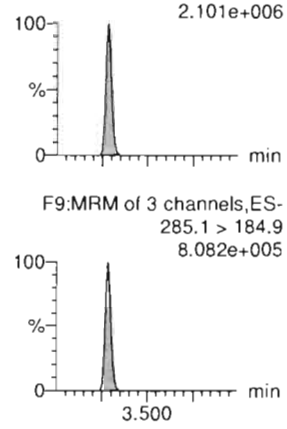
PFHxA



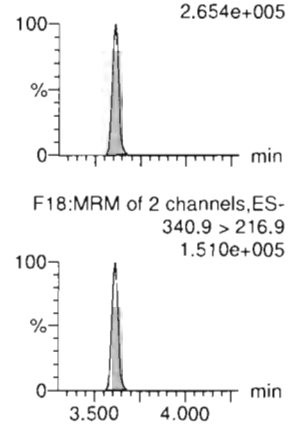
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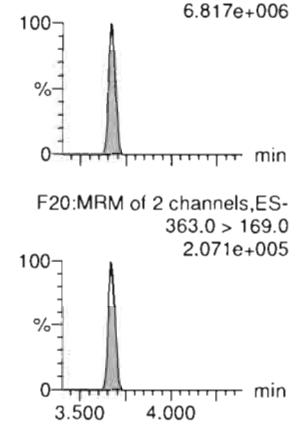
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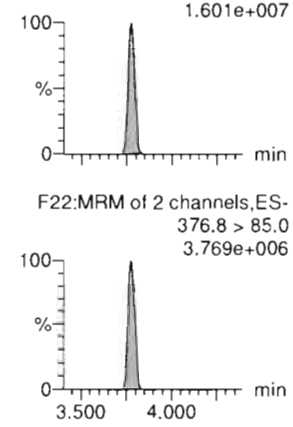
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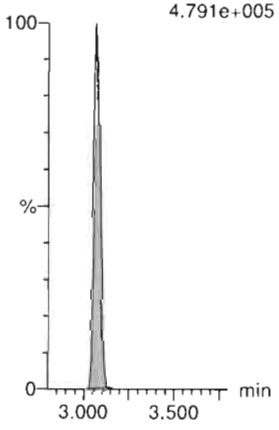
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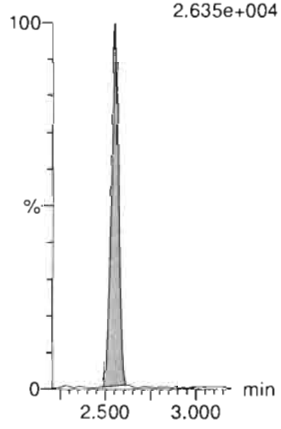
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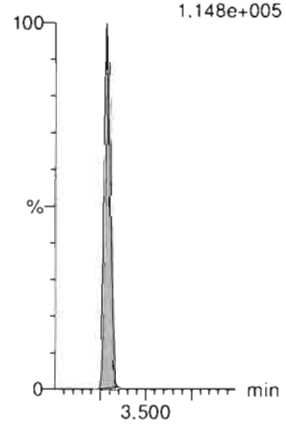
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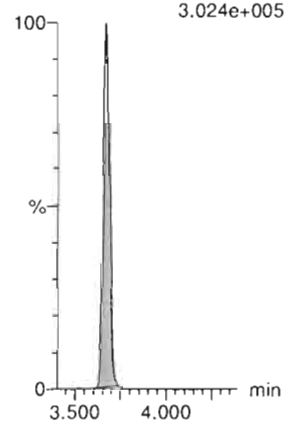
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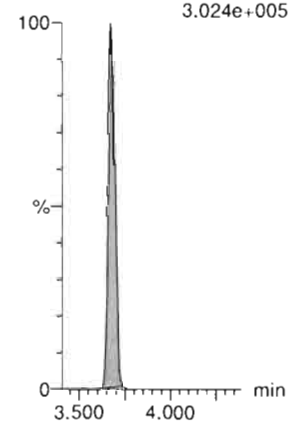
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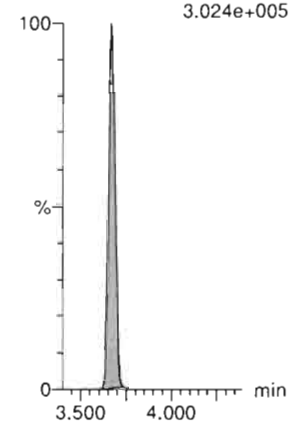
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13C4-PFHpA-EIS



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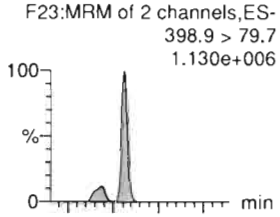


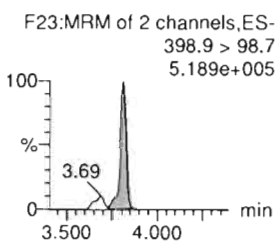
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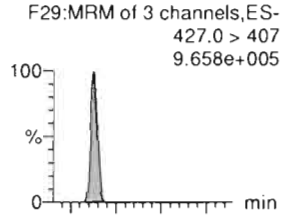
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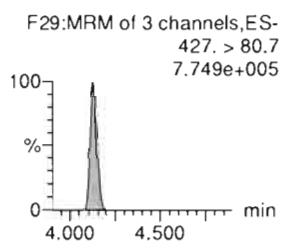
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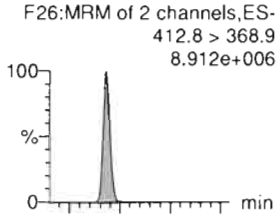


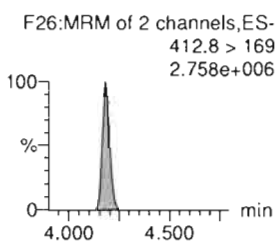
6:2 FTS



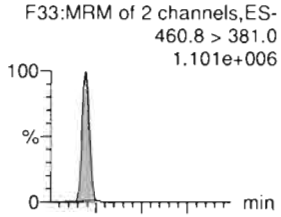


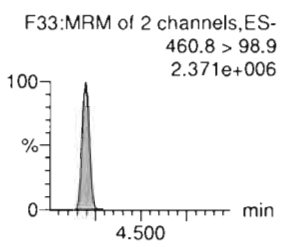
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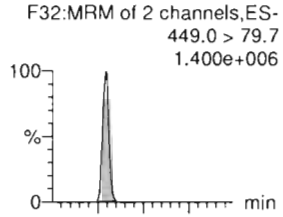


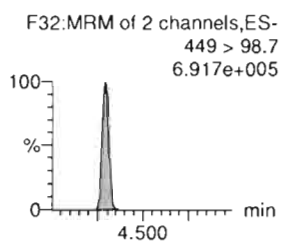
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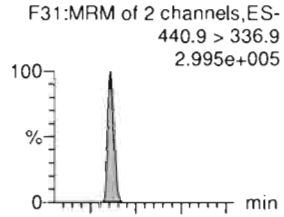


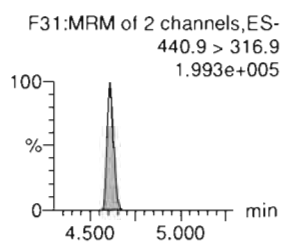
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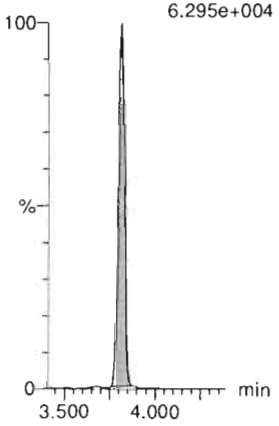


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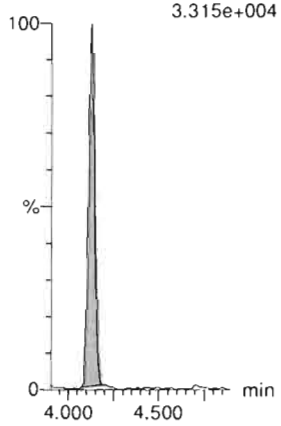




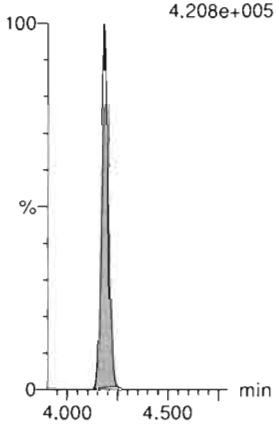
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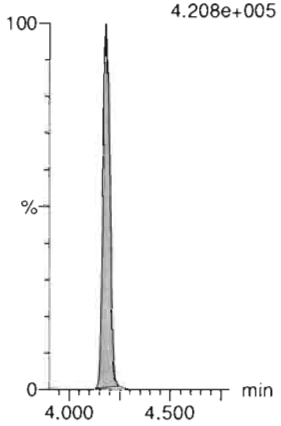
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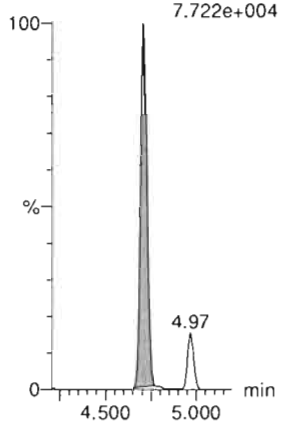
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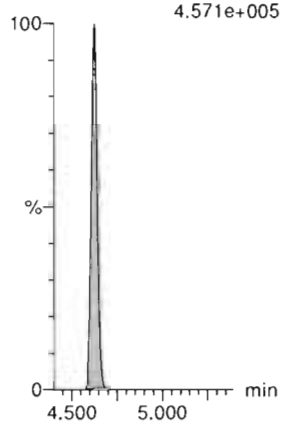
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13C8-PFOS-EIS



13C5-PFNA-EIS

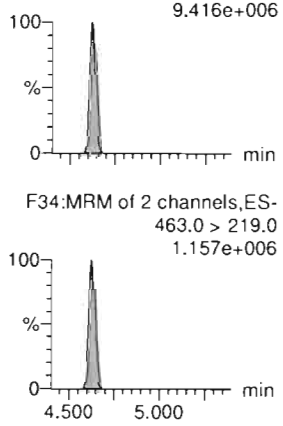


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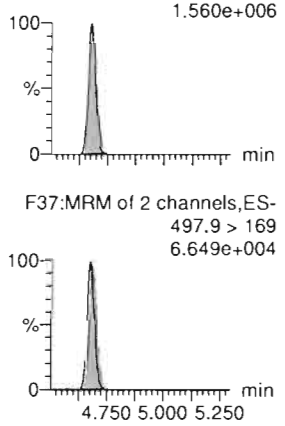
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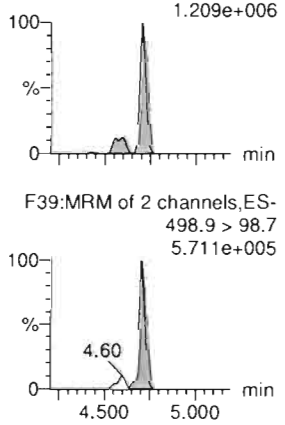
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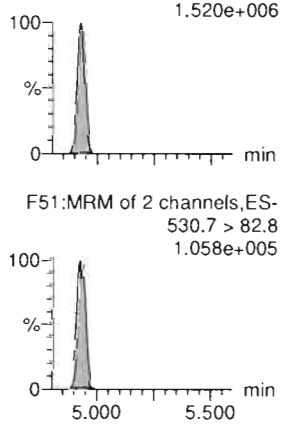
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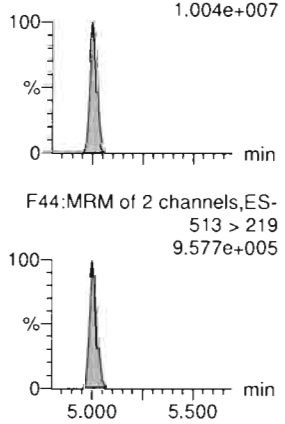
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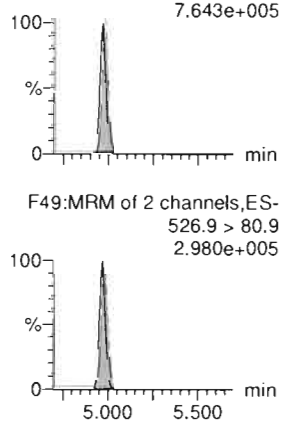
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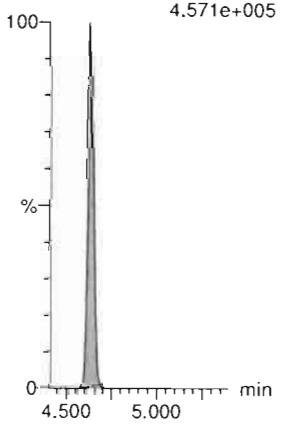
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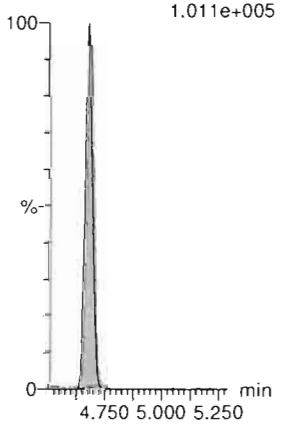
8:2 FTS



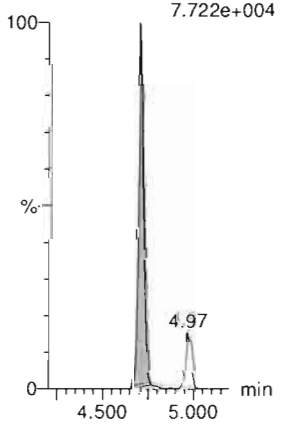
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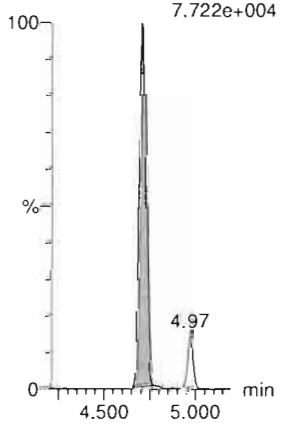
13C8-PFOSA-EIS



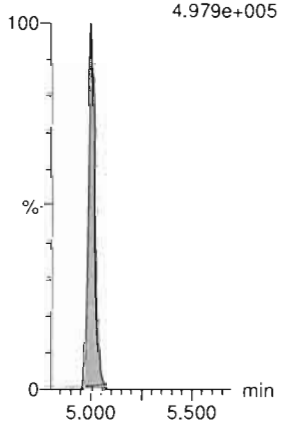
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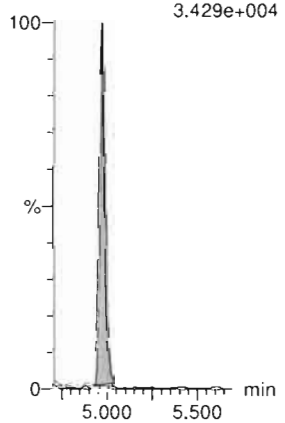
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

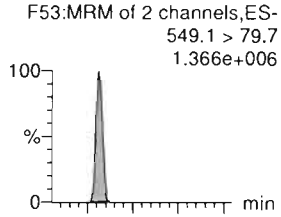


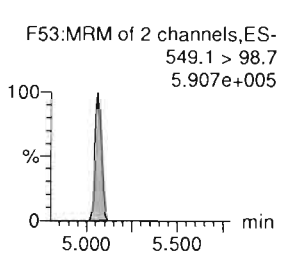
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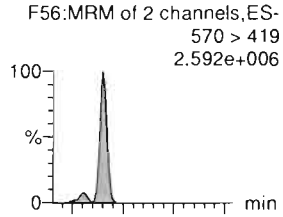
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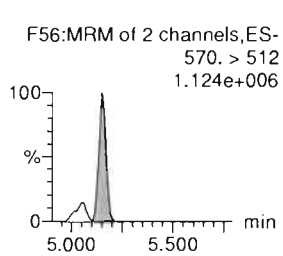
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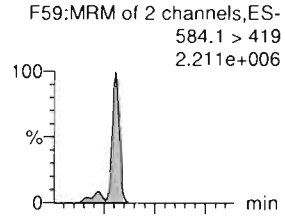


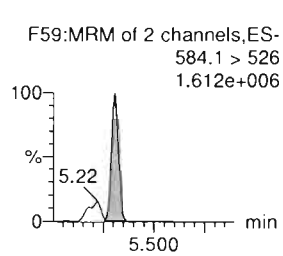
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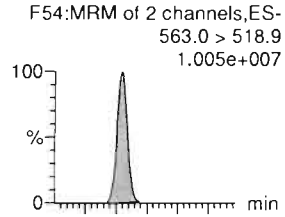


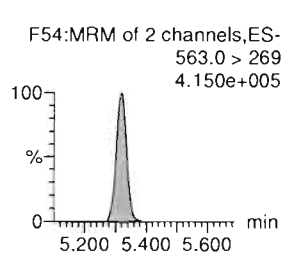
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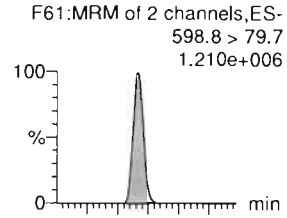


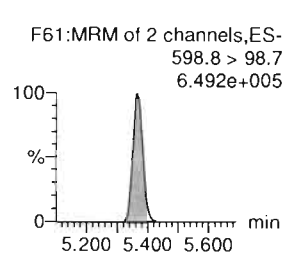
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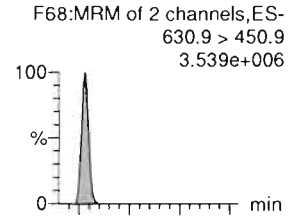


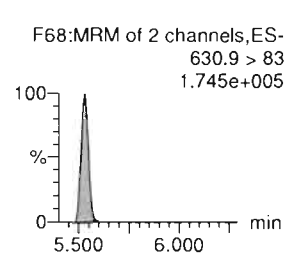
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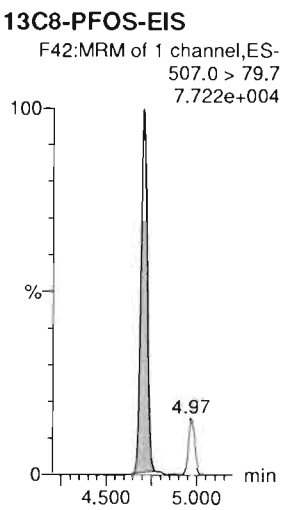


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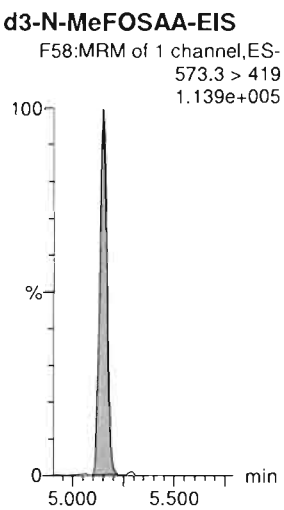




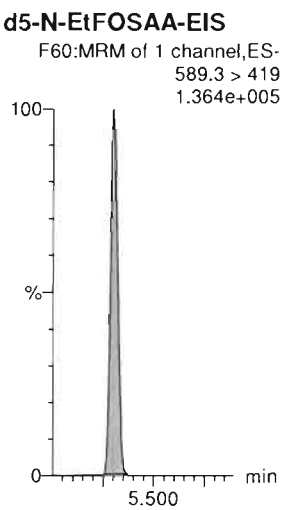
13C8-PFOS-EIS



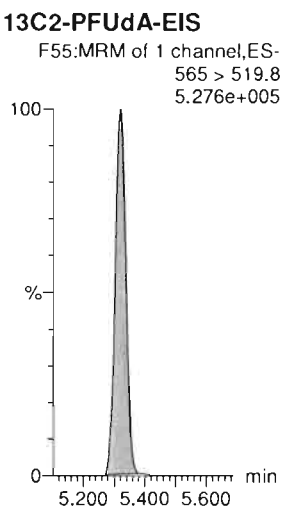
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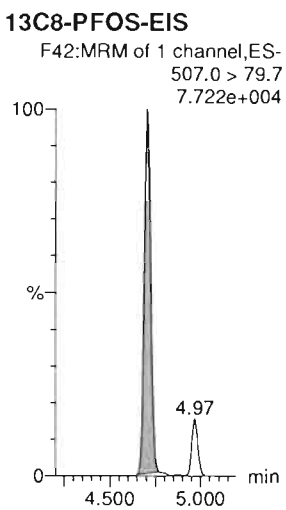
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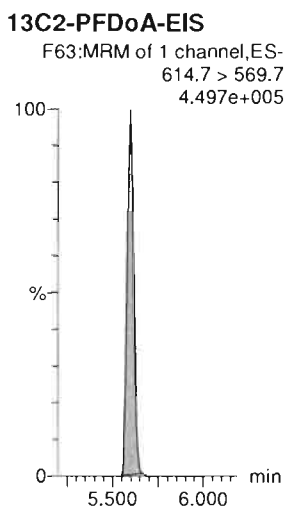
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13C8-PFOS-EIS



13C2-PFDoA-EIS

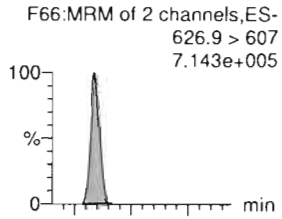


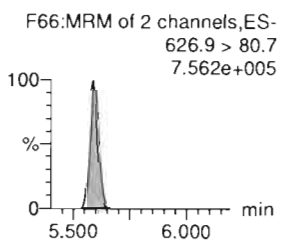
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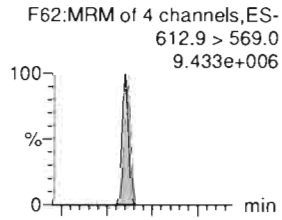
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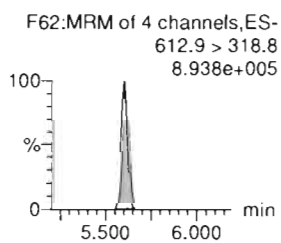
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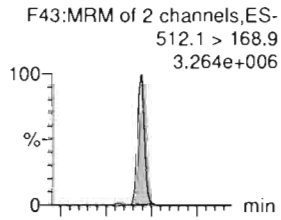


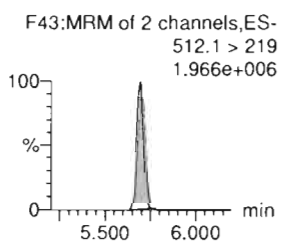
PFDoA



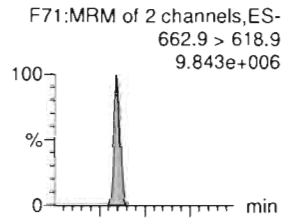


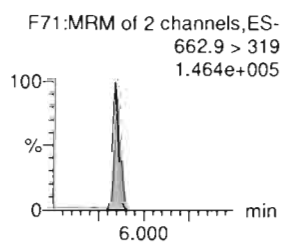
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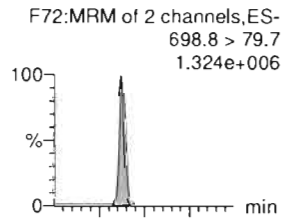


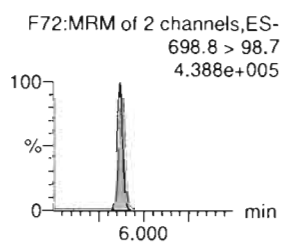
PFTrDA



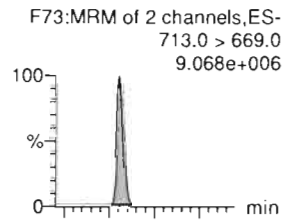


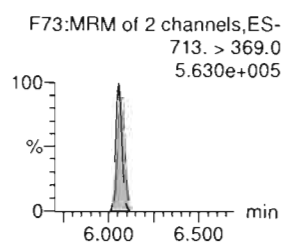
PFDoS



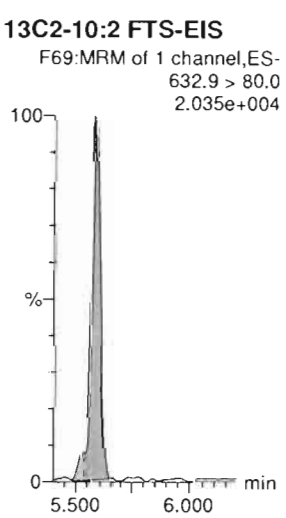


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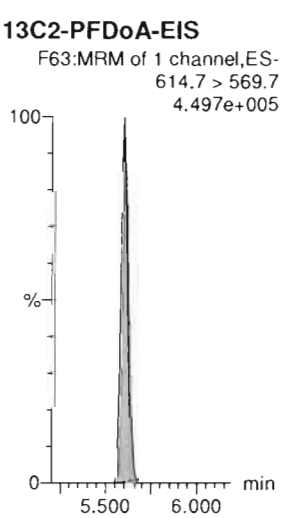




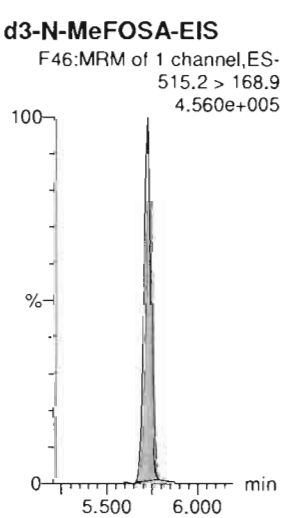
13C2-10:2 FTS-EIS



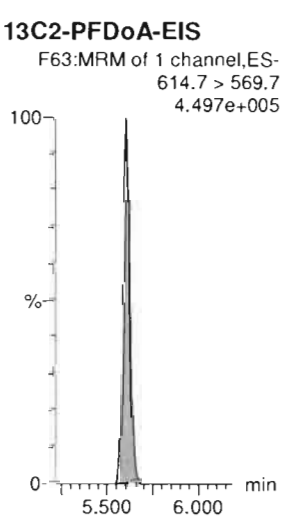
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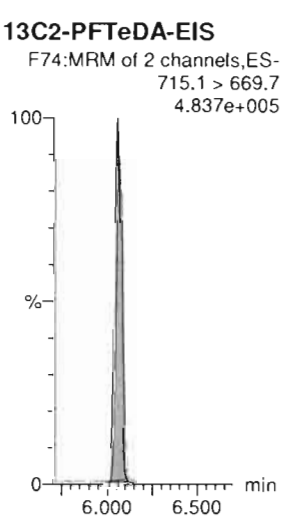
d3-N-MeFOSA-EIS



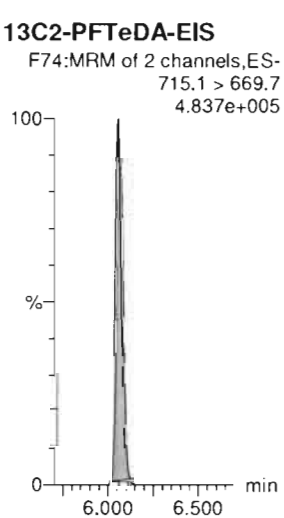
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

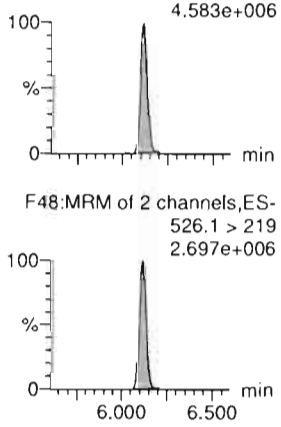


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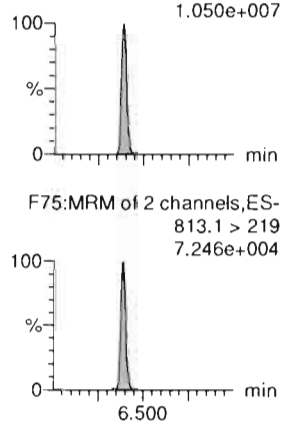
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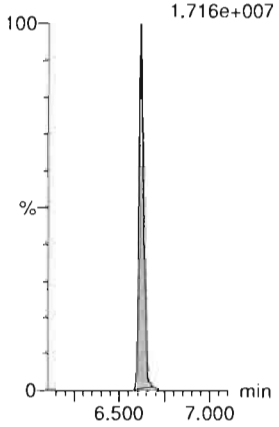
N-EtFOSA



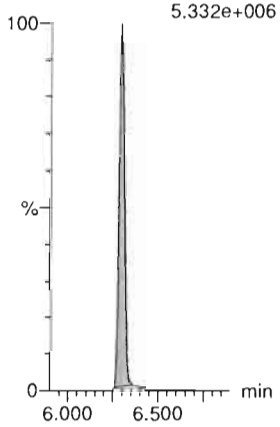
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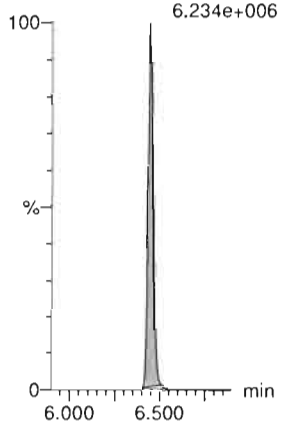
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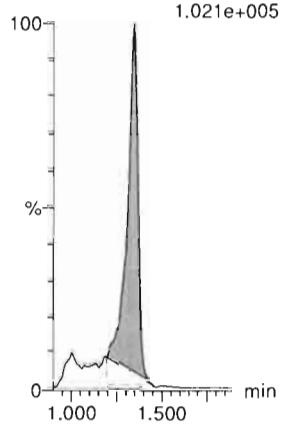
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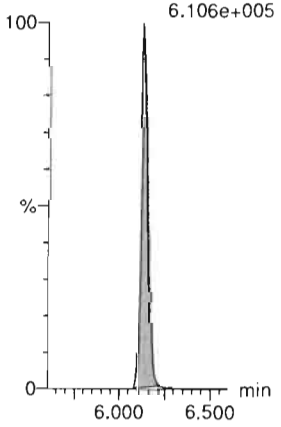
N-EtFOSE



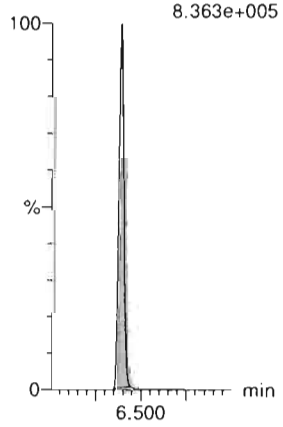
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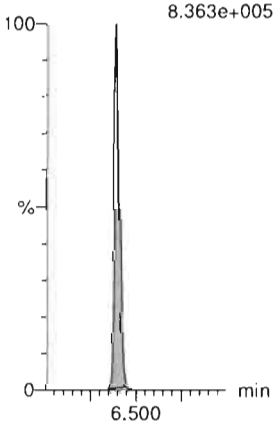
d5-N-ETFOSA-EIS



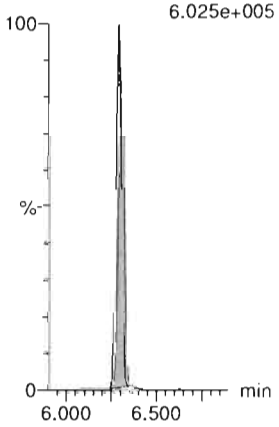
13C2-PFHxDA-EIS



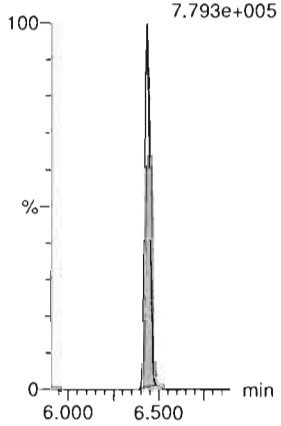
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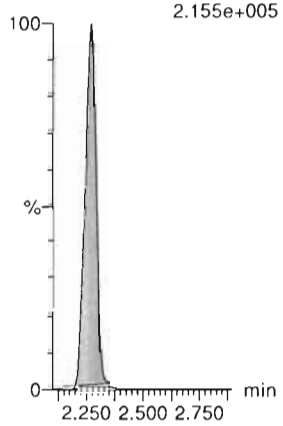
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d9-N-EtFOSE-EIS



13C3-PFPeA-RSD

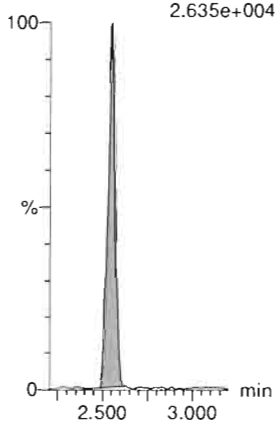


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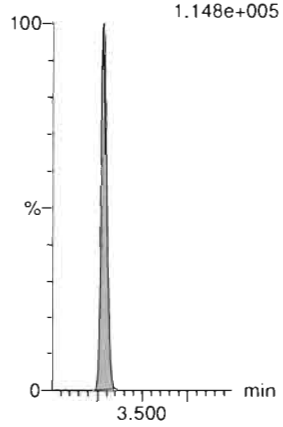
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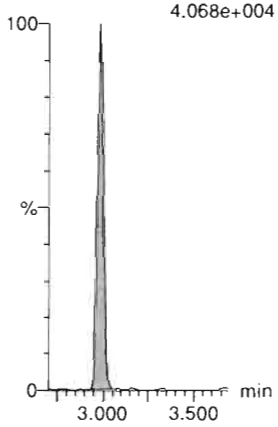
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.635e+004



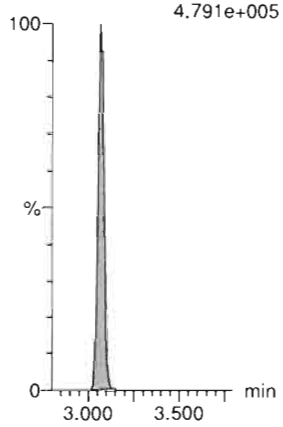
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.148e+005



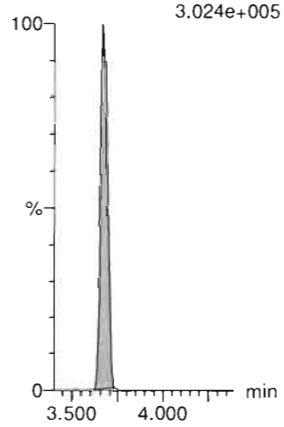
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.068e+004



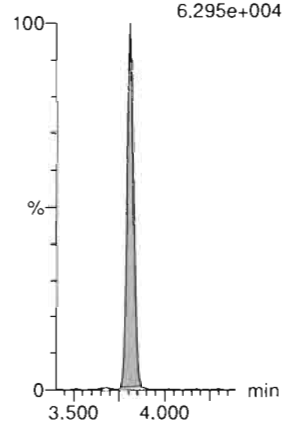
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F14:MRM of 1 channel,ES-
315.0 > 270.0
4.791e+005



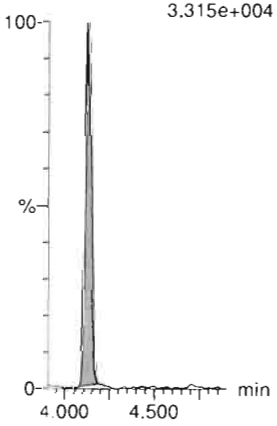
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F21:MRM of 1 channel,ES-
367.2 > 321.8
3.024e+005



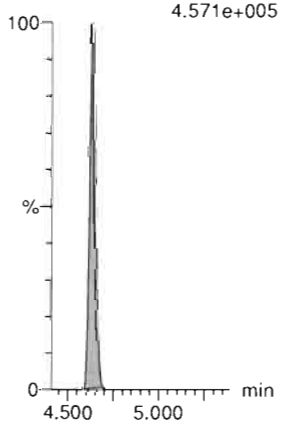
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.295e+004



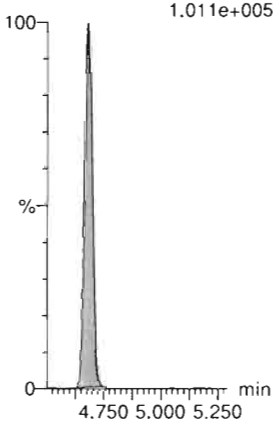
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.315e+004



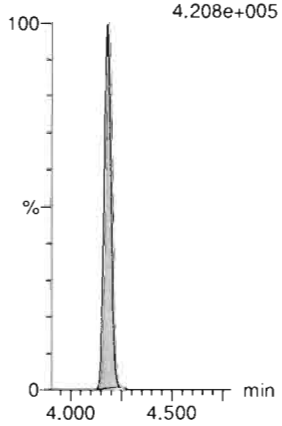
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.571e+005



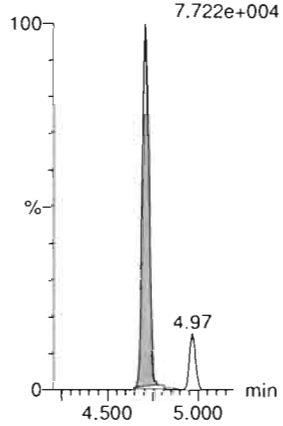
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.011e+005



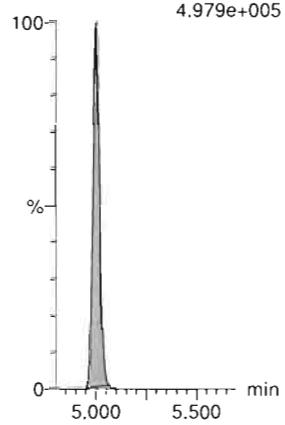
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.208e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
7.722e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.979e+005

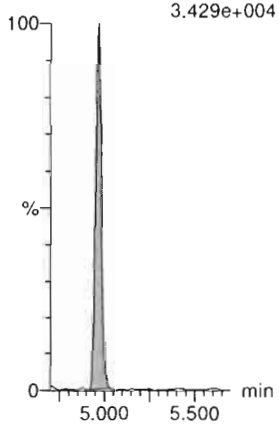


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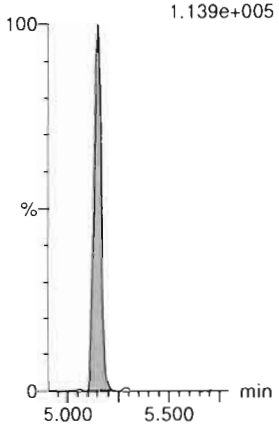
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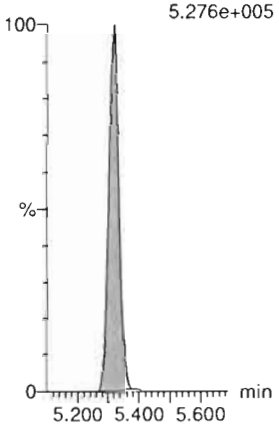
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.429e+004



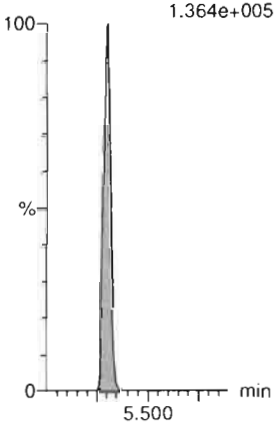
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.139e+005



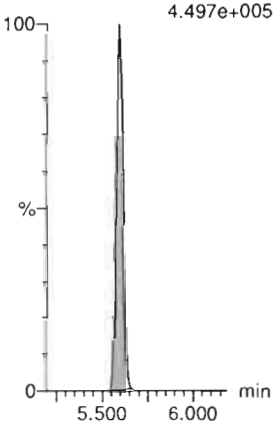
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F55:MRM of 1 channel,ES-
565 > 519.8
5.276e+005



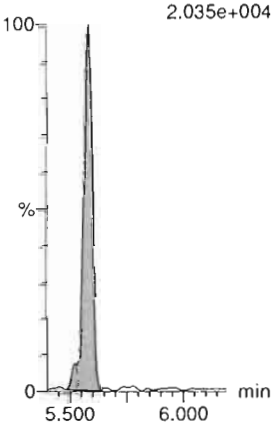
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F60:MRM of 1 channel,ES-
589.3 > 419
1.364e+005



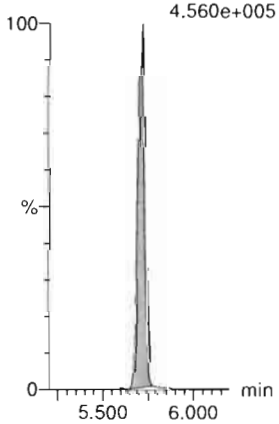
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F63:MRM of 1 channel,ES-
614.7 > 569.7
4.497e+005



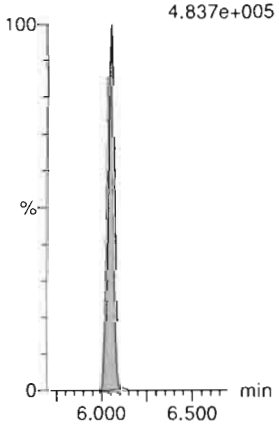
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.035e+004



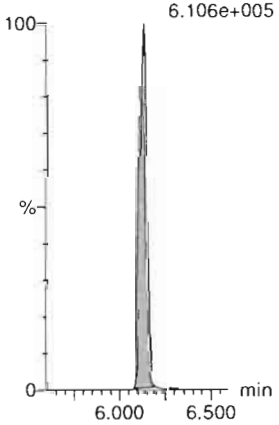
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F46:MRM of 1 channel,ES-
515.2 > 168.9
4.560e+005



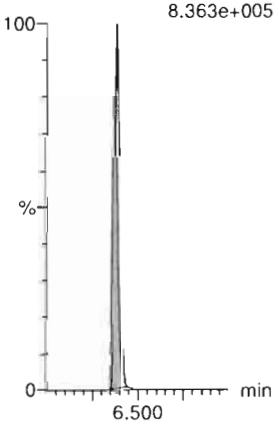
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.837e+005



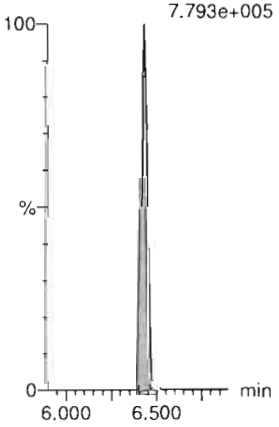
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F52:MRM of 1 channel,ES-
531.1 > 168.9
6.106e+005



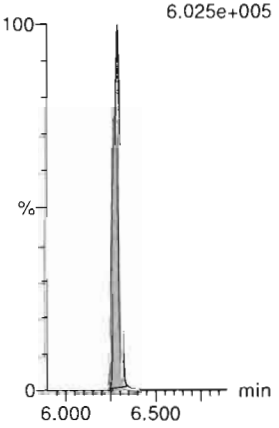
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.363e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.793e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
6.025e+005

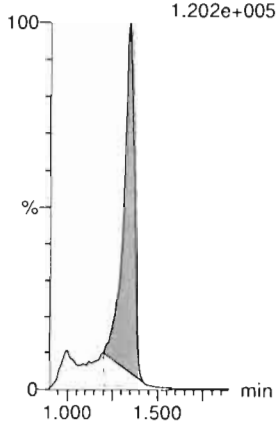


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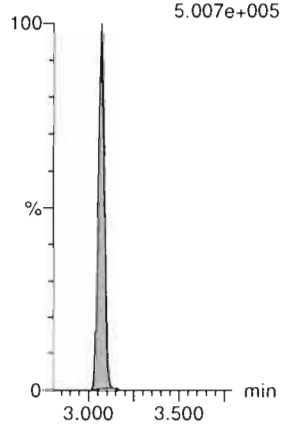
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Name: 200228P2-11, Date: 28-Feb-2020, Time: 14:30:48, ID: ST200228P2-9 PFC CS6 20B1110, Description: PFC CS6 20B1110

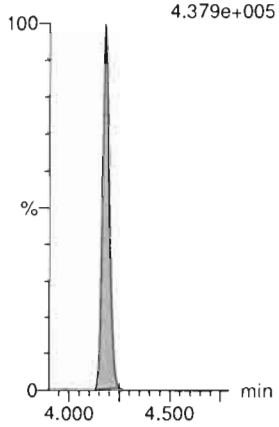
13C4-PFBA



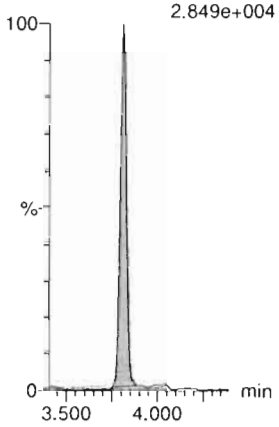
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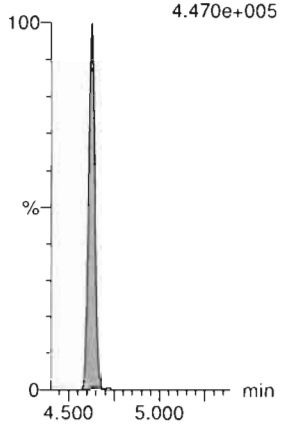
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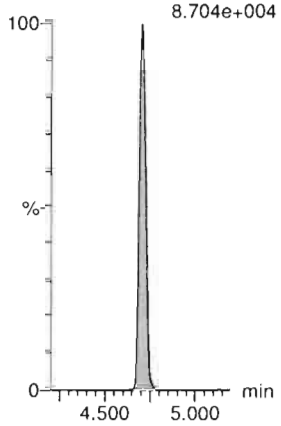
18O2-PFHxS



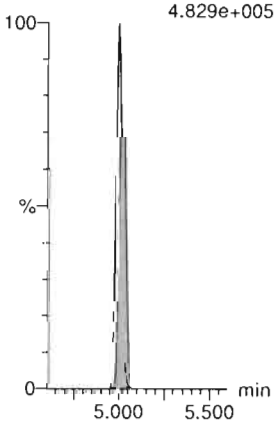
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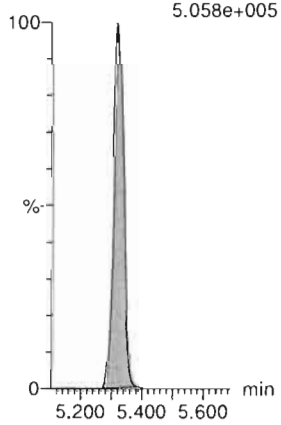
13C4-PFOS



13C6-PFDA



13C7-PFUdA

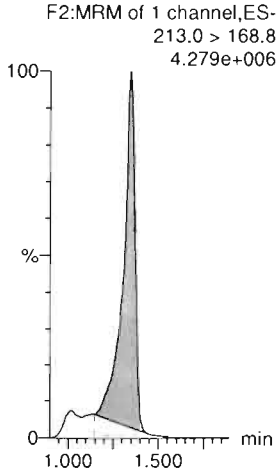


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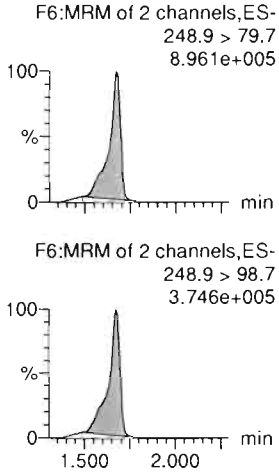
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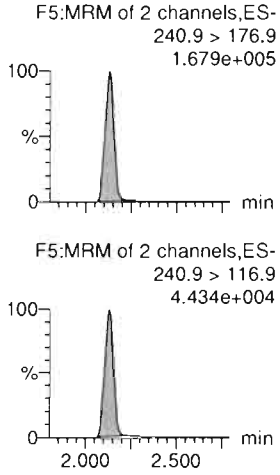
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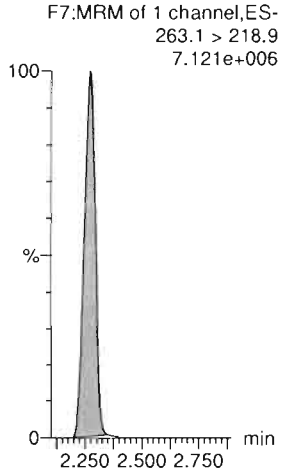
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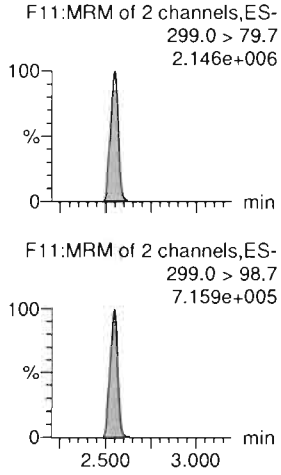
3:3 FTCA



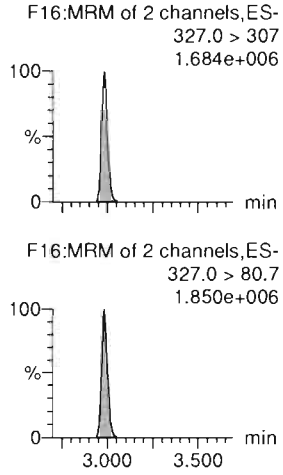
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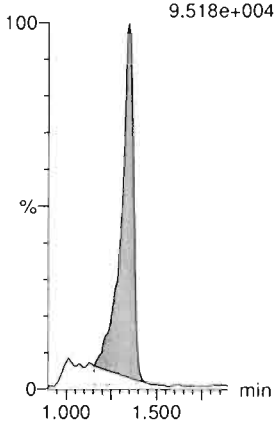
PFBS



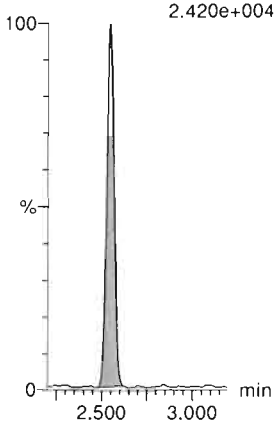
4:2 FTS



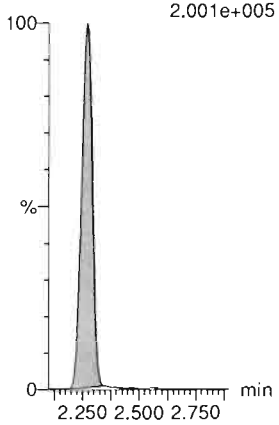
13C3-PFBA-EIS



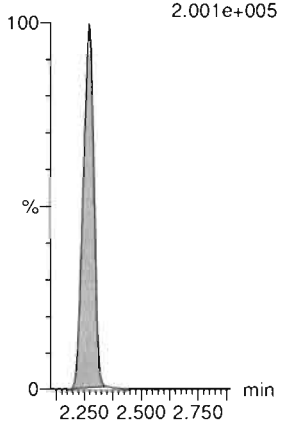
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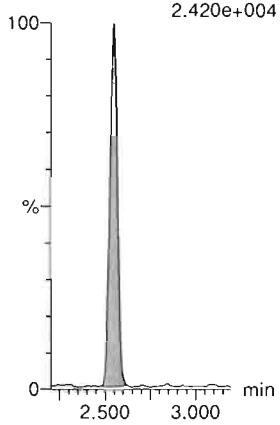
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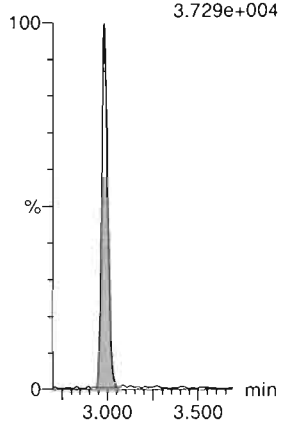
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

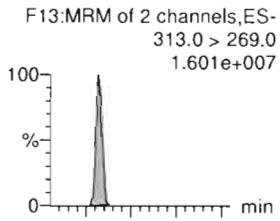


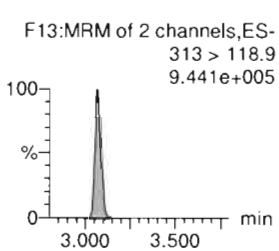
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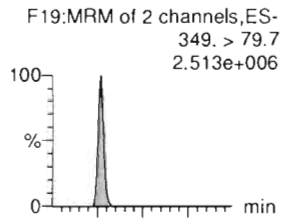
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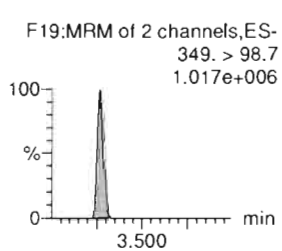
PFHxA



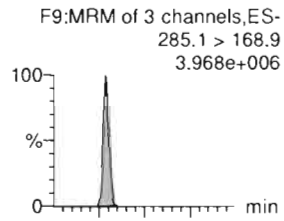


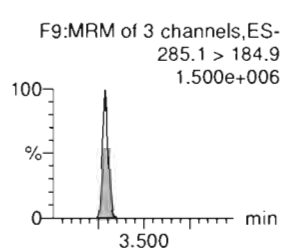
PFPeS



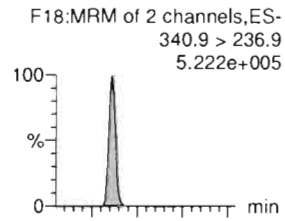


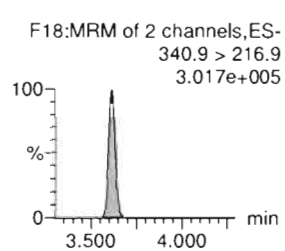
HFPO-DA



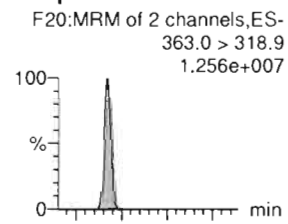


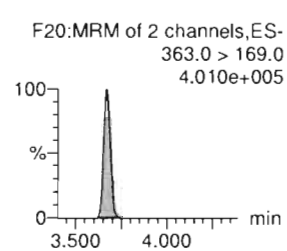
5:3 FTCA



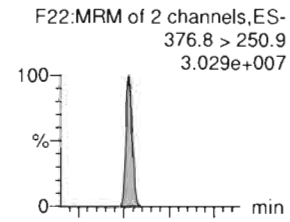


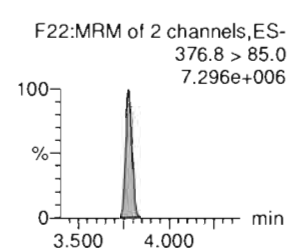
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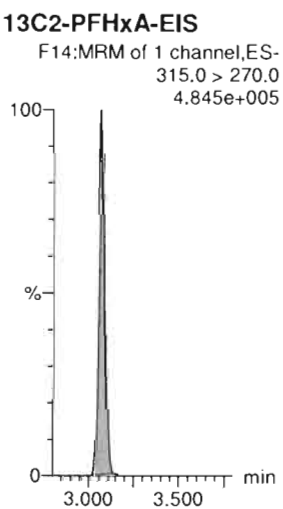


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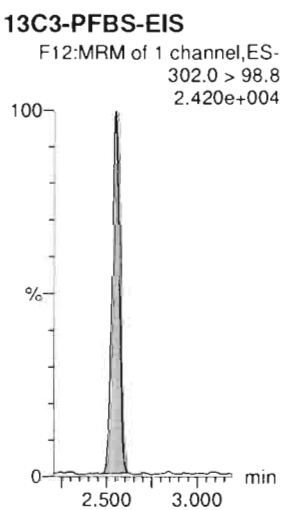




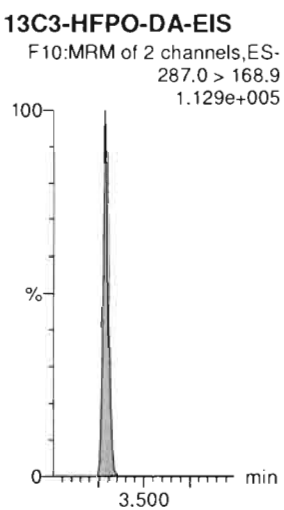
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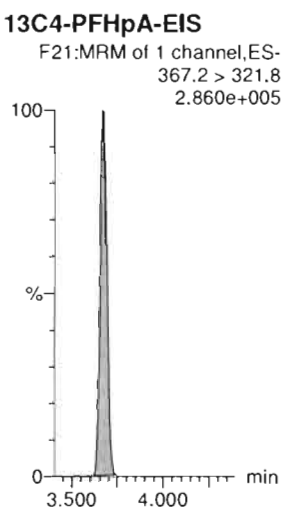
13C3-PFBS-EIS



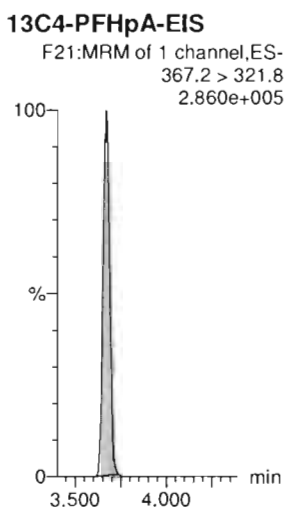
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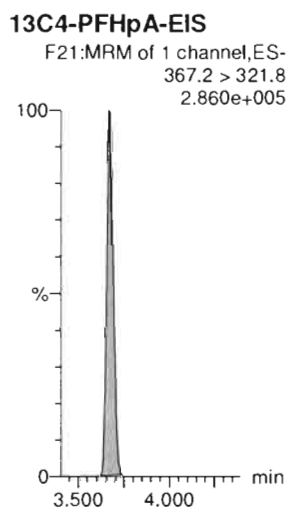
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13C4-PFHpA-EIS



13C4-PFHpA-EIS

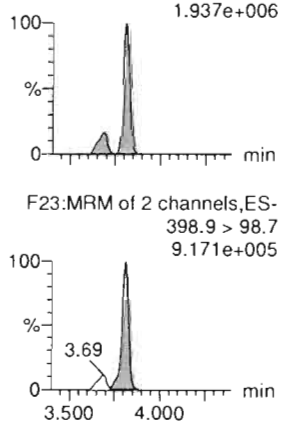


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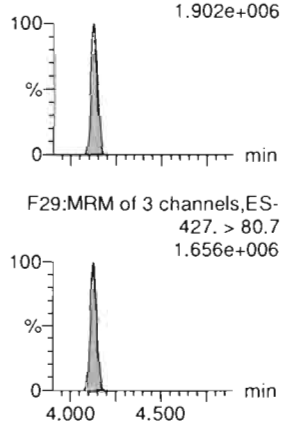
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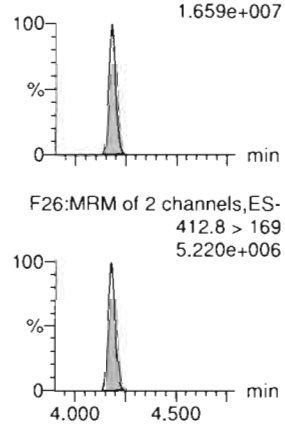
L-PFHxS



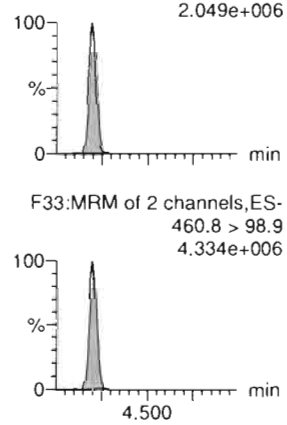
6:2 FTS



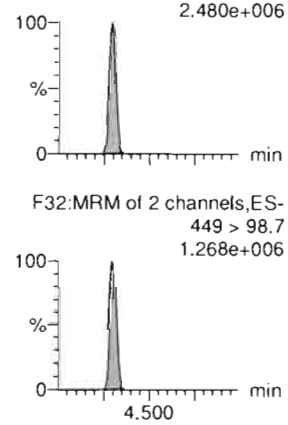
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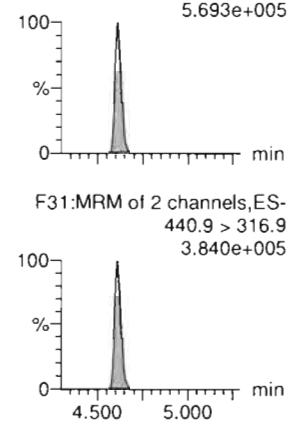
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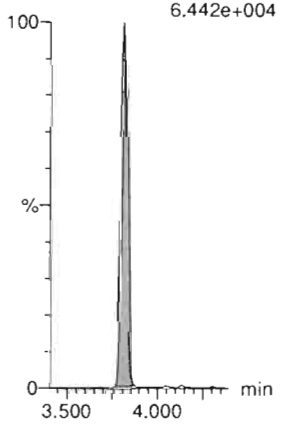
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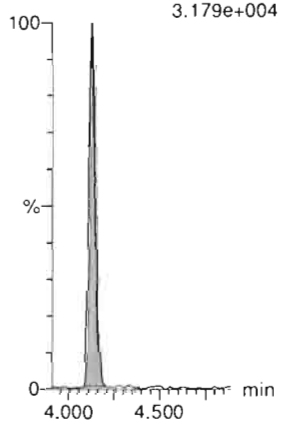
7:3 FTCA



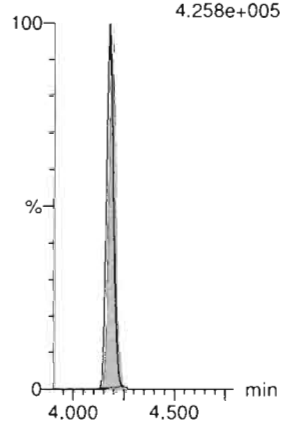
13C3-PFHxS-EIS



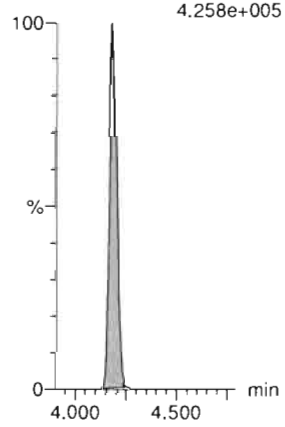
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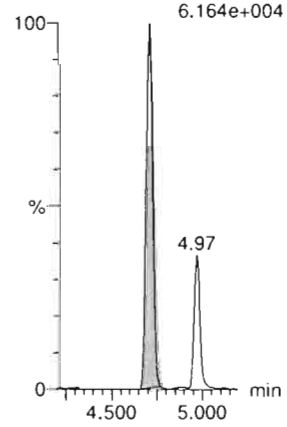
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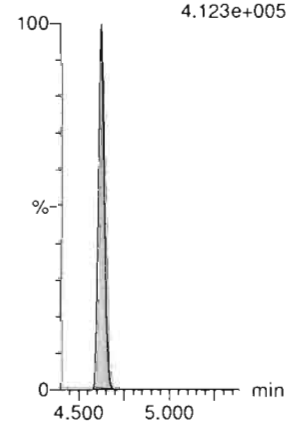
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

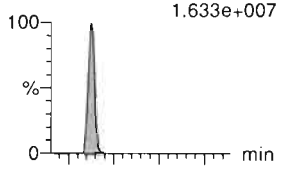


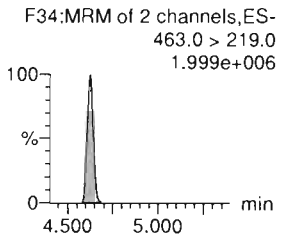
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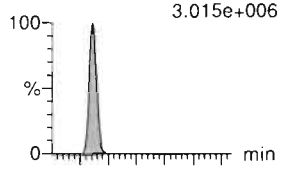
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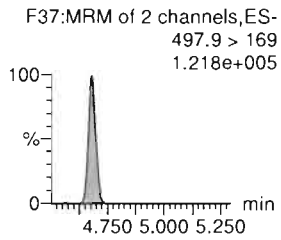
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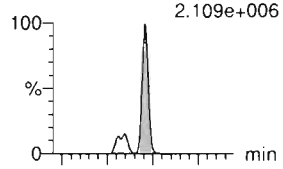


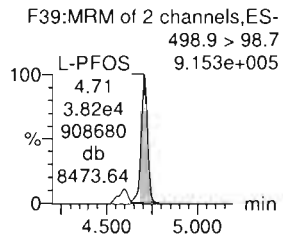
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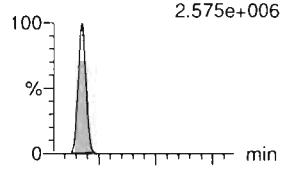


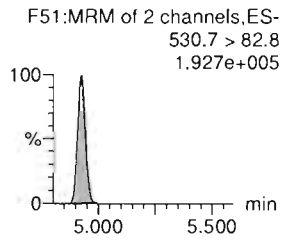
L-PFOS



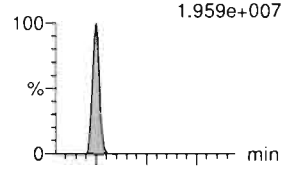


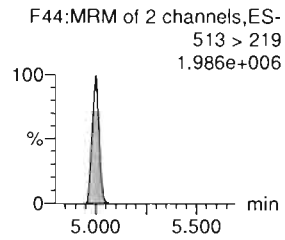
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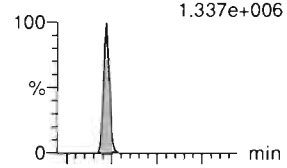


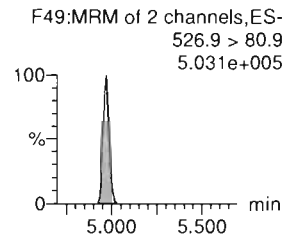
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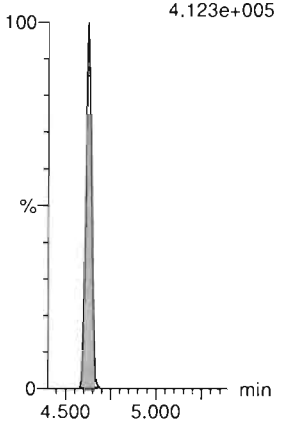


8:2 FTS

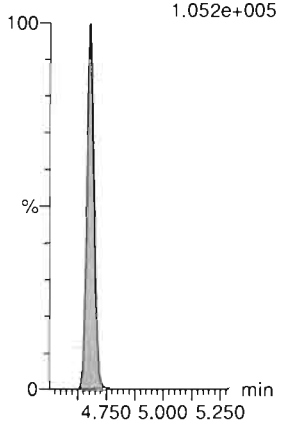




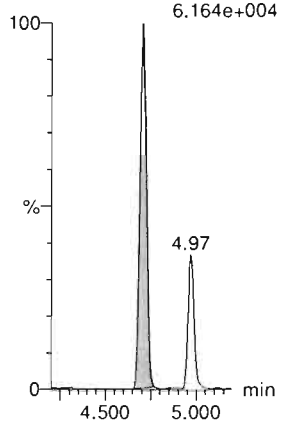
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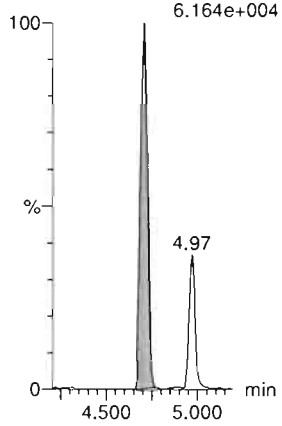
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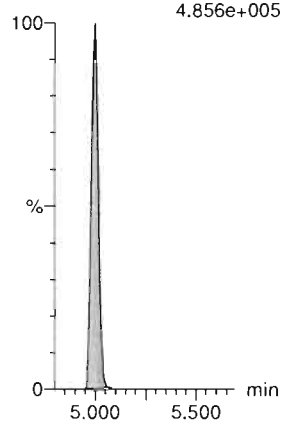
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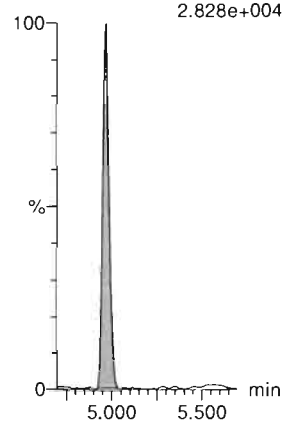
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

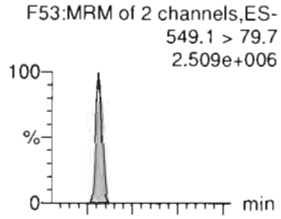


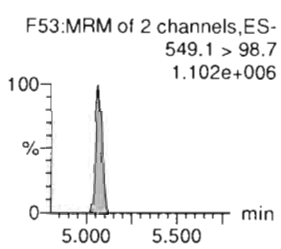
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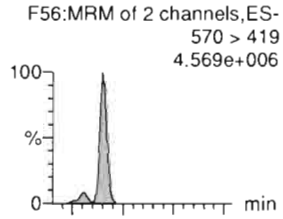
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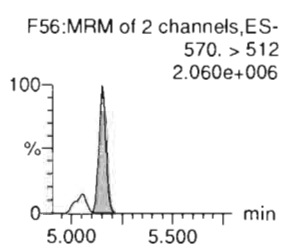
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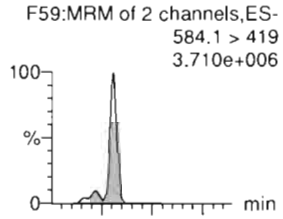


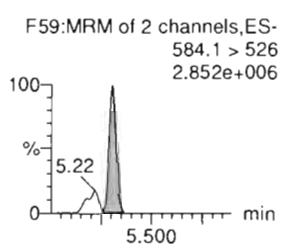
L-MeFOSAA



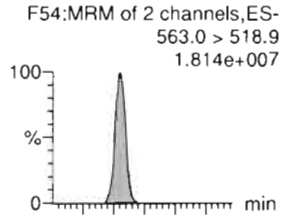


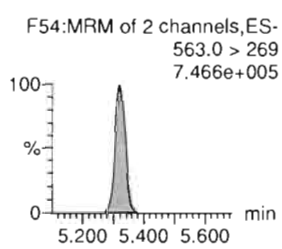
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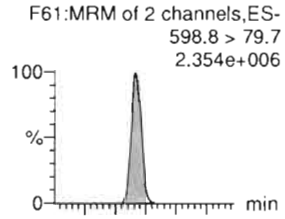


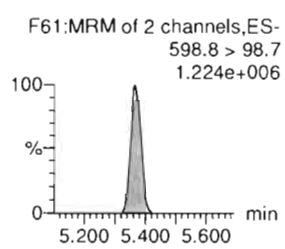
PFUdA



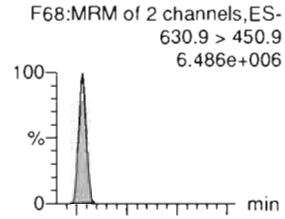


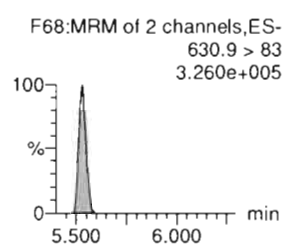
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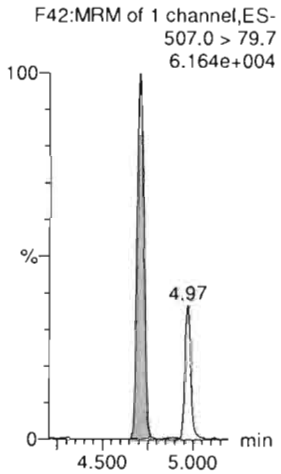


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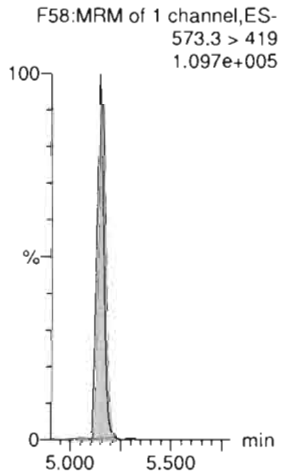




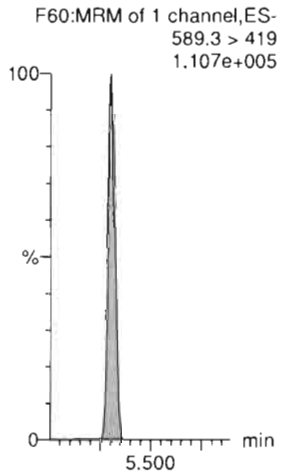
13C8-PFOS-EIS



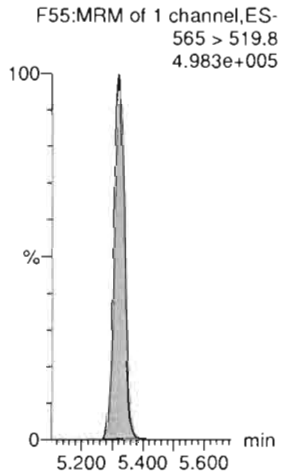
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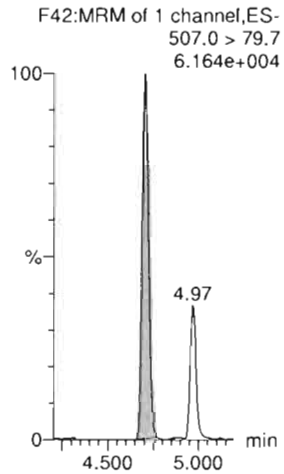
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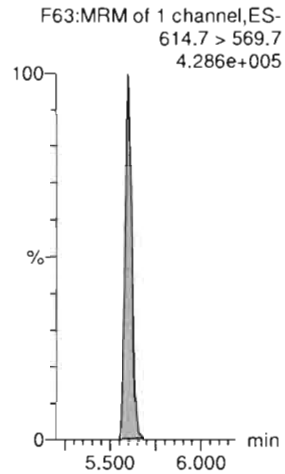
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13C8-PFOS-EIS



13C2-PFDoA-EIS

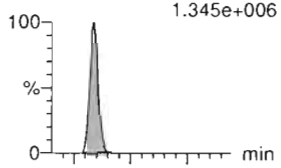


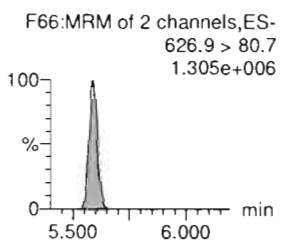
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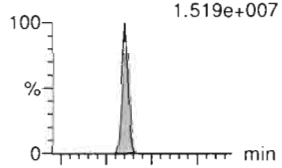
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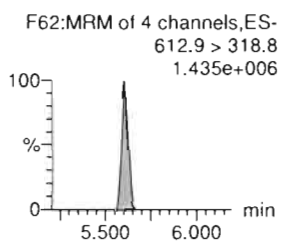
10:2 FTS



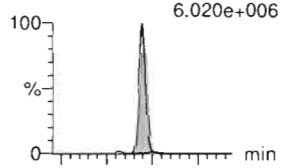


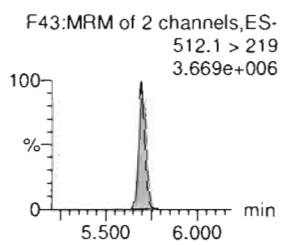
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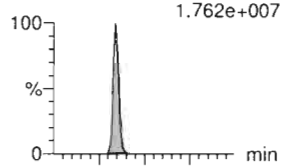


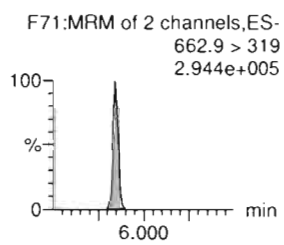
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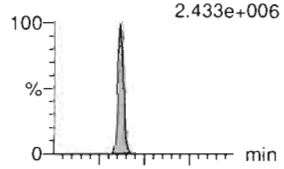


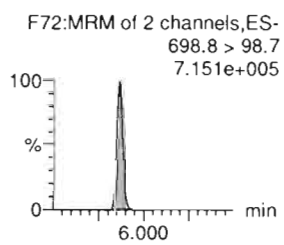
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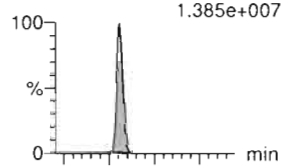


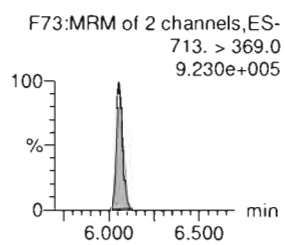
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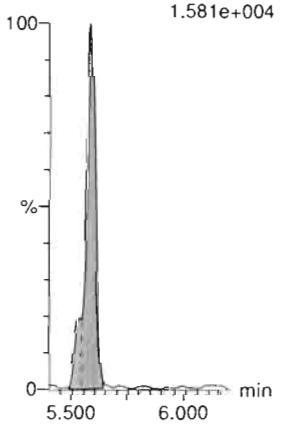


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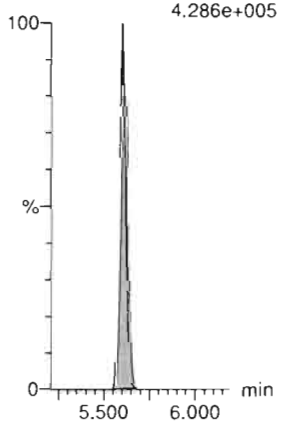




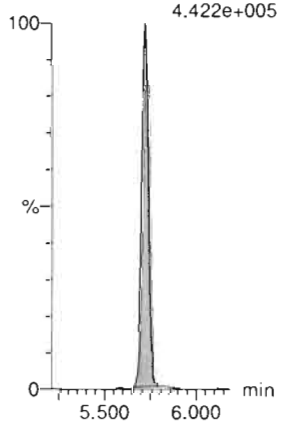
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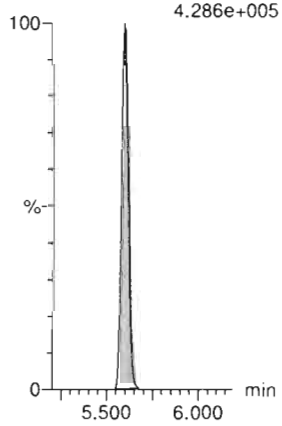
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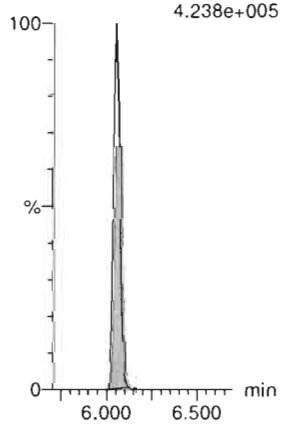
d3-N-MeFOSA-EIS



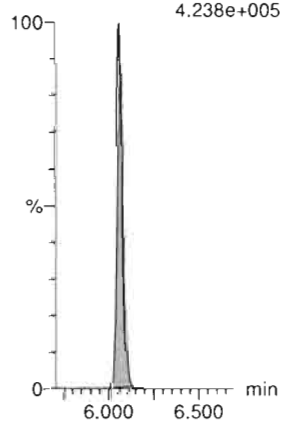
13C2-PFDoA-EIS



13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

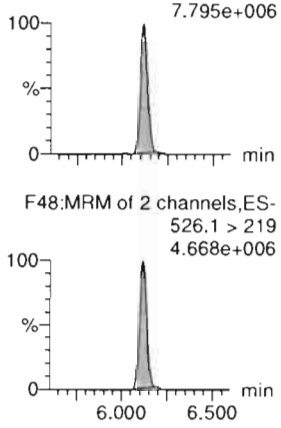


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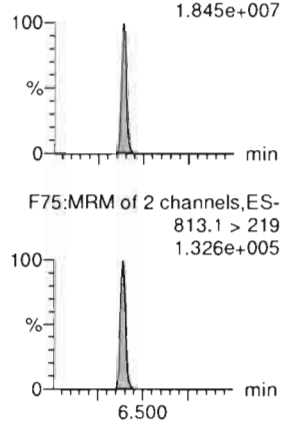
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Name: 200228P2-12, Date: 28-Feb-2020, Time: 14:41:18, ID: ST200228P2-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

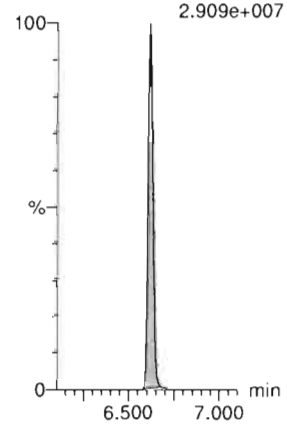
N-EtFOSA



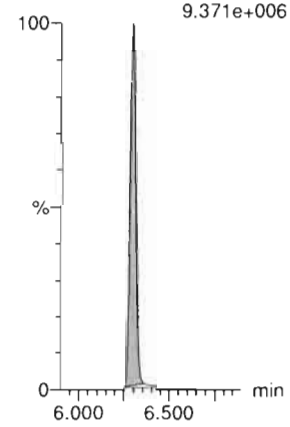
PFHxDA



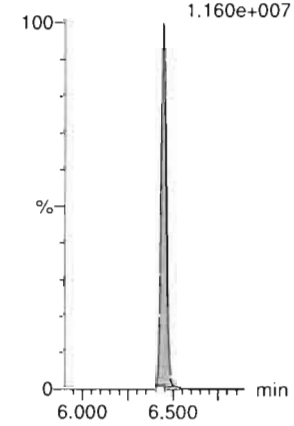
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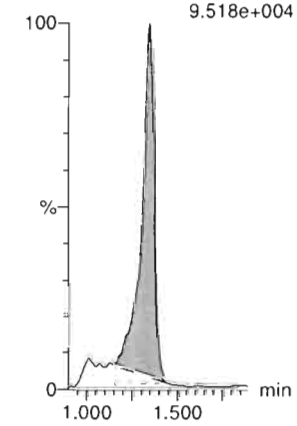
N-MeFOSE



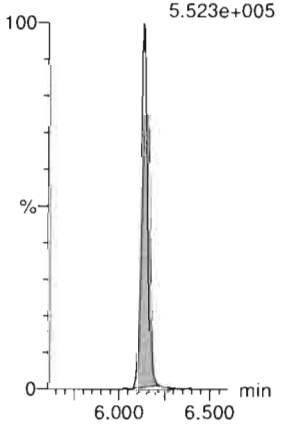
N-EtFOSE



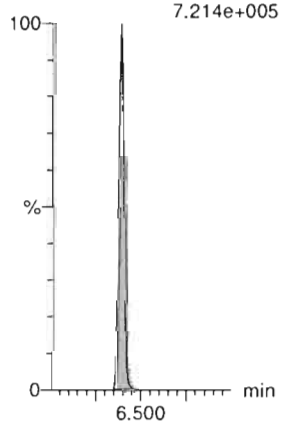
13C3-PFBA-RSD



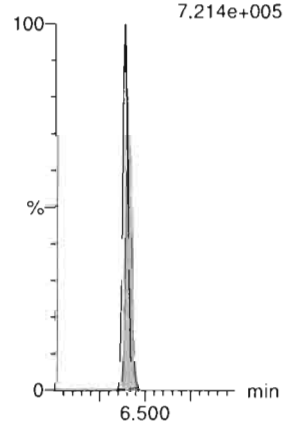
d5-N-ETFOSA-EIS



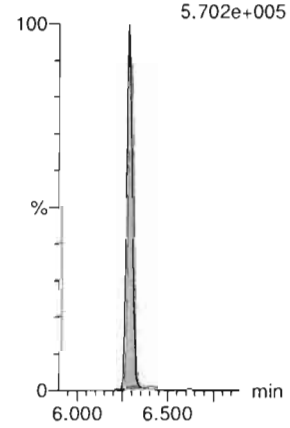
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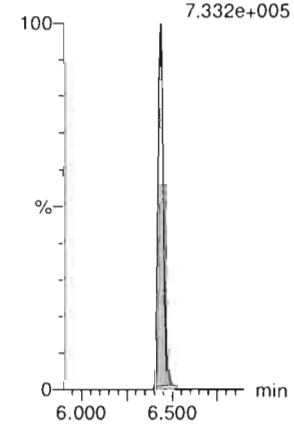
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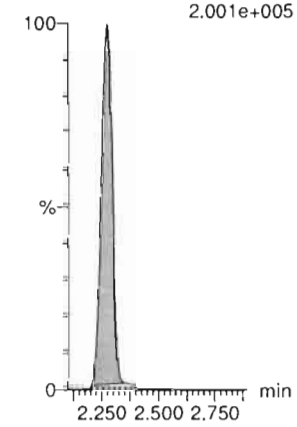
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



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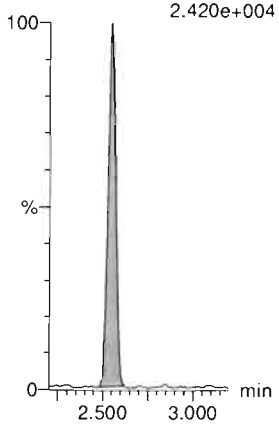


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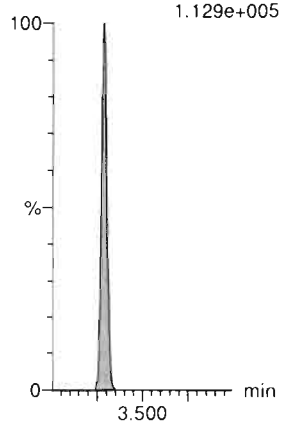
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Name: 200228P2-12, Date: 28-Feb-2020, Time: 14:41:18, ID: ST200228P2-10 PFC CS7 20B1111, Description: PFC CS7 20B1111

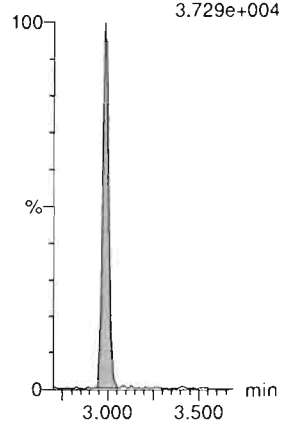
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.420e+004



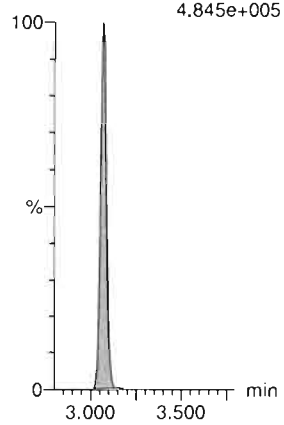
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.129e+005



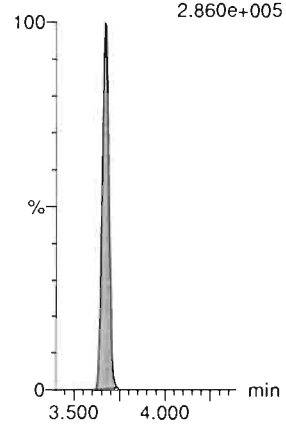
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
3.729e+004



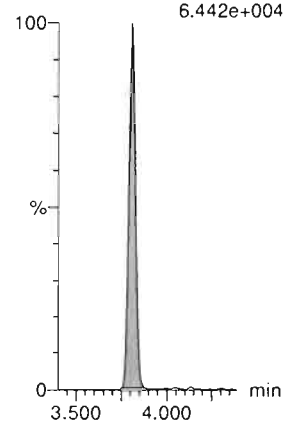
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.845e+005



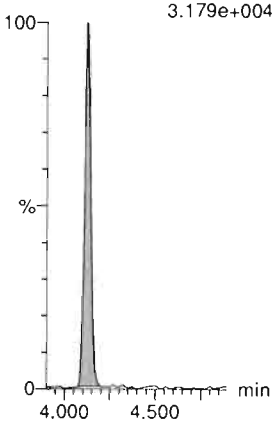
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.860e+005



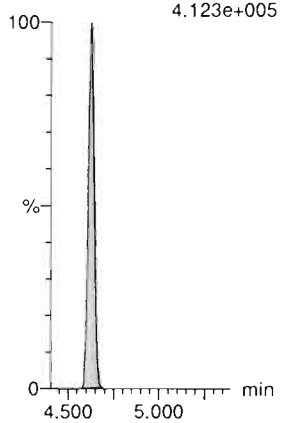
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.442e+004



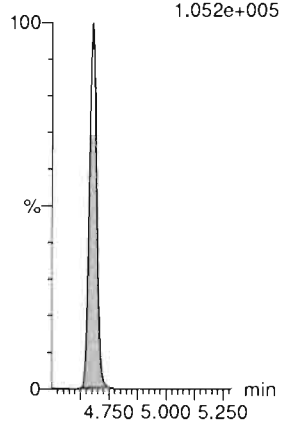
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.179e+004



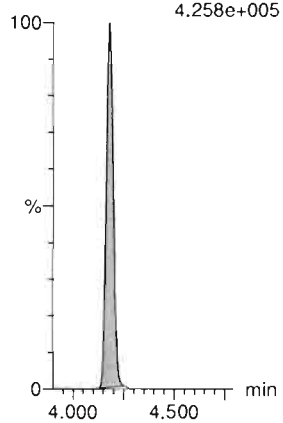
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.123e+005



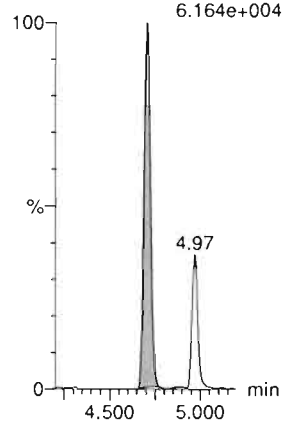
13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
1.052e+005



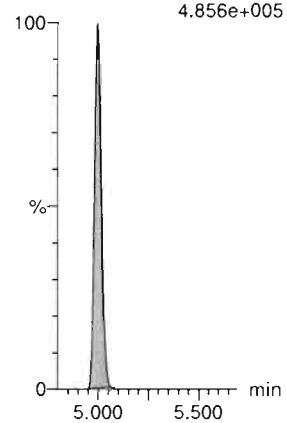
13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.258e+005



13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
6.164e+004



13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.856e+005

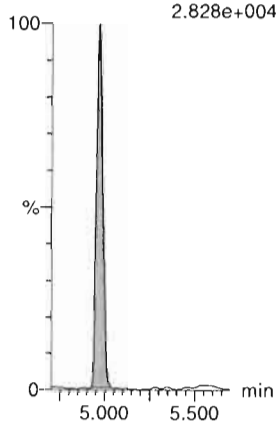


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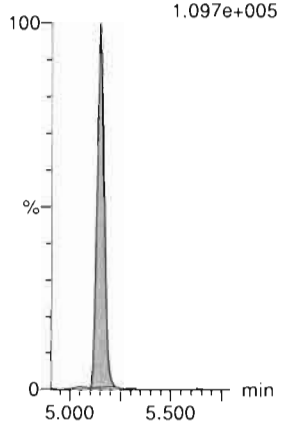
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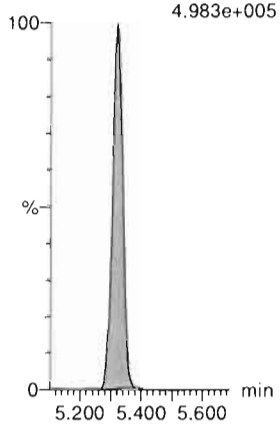
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.828e+004



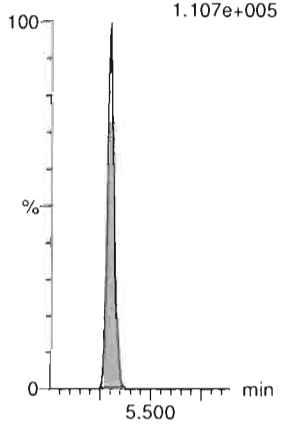
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.097e+005



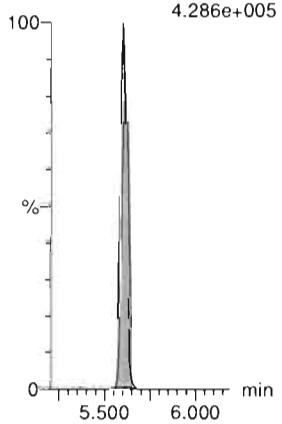
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
4.983e+005



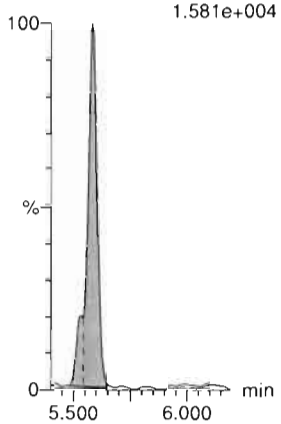
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.107e+005



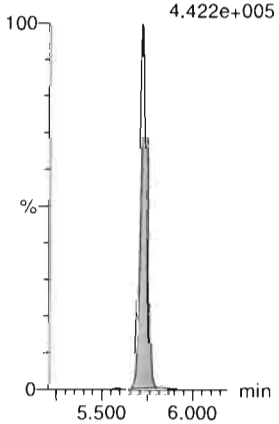
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.286e+005



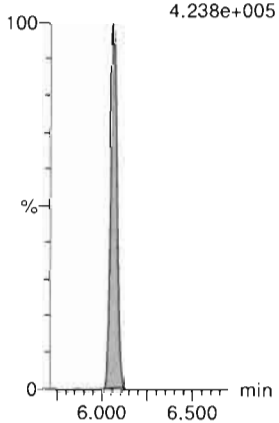
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
1.581e+004



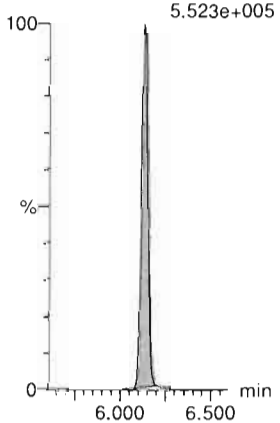
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.422e+005



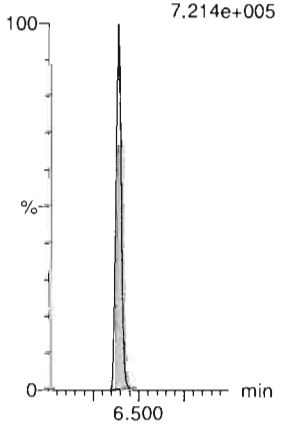
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F74:MRM of 2 channels,ES-
715.1 > 669.7
4.238e+005



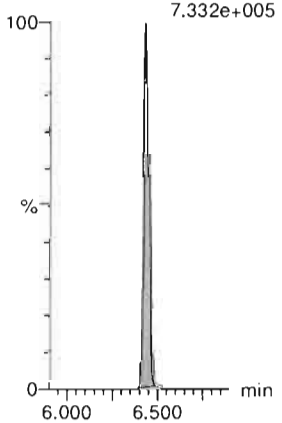
d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.523e+005



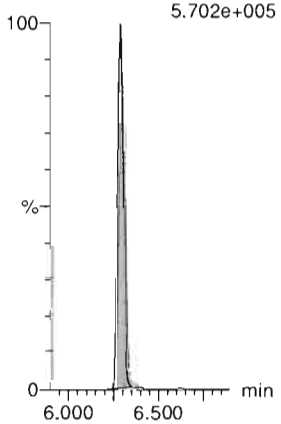
13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
7.214e+005



d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
7.332e+005



d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.702e+005

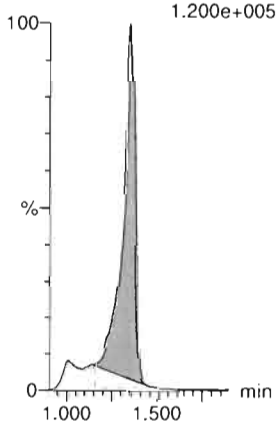


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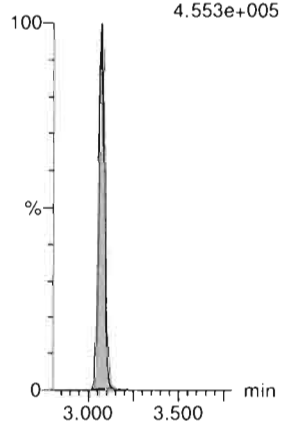
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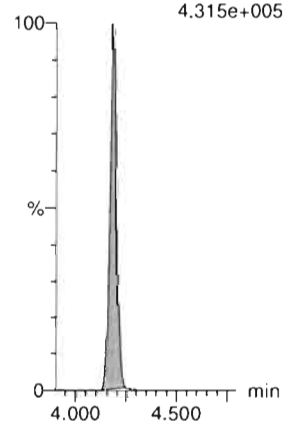
13C4-PFBA



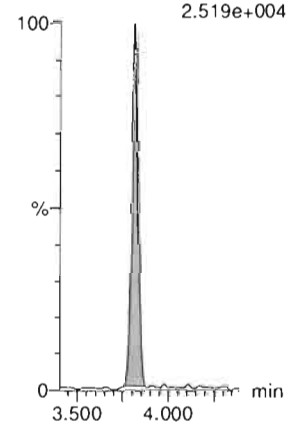
13C5-PFHxA



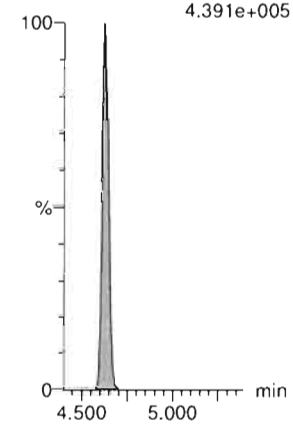
13C8-PFOA



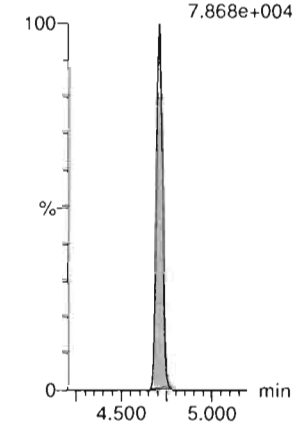
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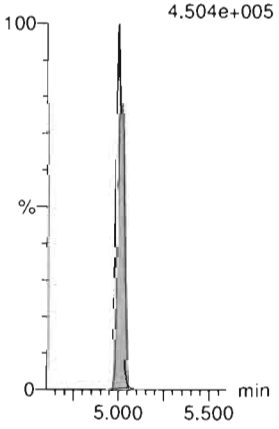
13C9-PFNA



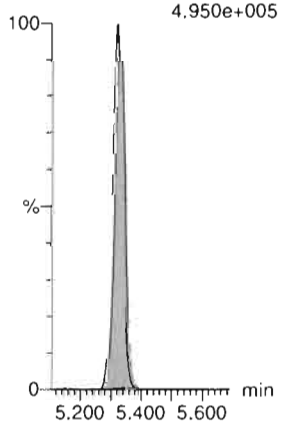
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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VJM 2/29/2020

(A) not in ICV

Name: 200228P2-14, Date: 28-Feb-2020, Time: 15:02:18, ID: ICV200228P2-1 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	5713.362	6306.565	1.00	1.35	11.324	10.000	10.2	101.6	NO		
2	2	PFPrS	248.9 > 79.7		1191.958	1.00			10.000		(A)	NO		YES
3	3	3:3 FTCA	240.9 > 176.9		10586.499	1.00			10.000		↓	NO		YES
4	4	PFPeA	263.1 > 218.9	8771.021	10586.499	1.00	2.28	10.356	10.000	11.0	109.9	NO		
5	5	PFBS	299.0 > 79.7	2125.063	1191.958	1.00	2.55	22.285	8.840	9.52	107.7	NO	3.059	NO
6	6	4:2 FTS	327.0 > 307	1521.217	1672.055	1.00	2.99	11.372	9.360	8.75	93.5	NO	0.833	NO
7	47	13C3-PFBA-EIS	216.1 > 171.8	6306.565		1.00	1.35	6306.565	12.500	11.7	93.8	NO		
8	51	13C3-PFBS-EIS	302.0 > 98.8	1191.958		1.00	2.55	1191.958	12.500	12.4	99.5	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	10586.499		1.00	2.28	10586.499	12.500	11.3	90.6	NO		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	10586.499		1.00	2.28	10586.499	12.500	11.3	90.6	NO		
11	51	13C3-PFBS-EIS	302.0 > 98.8	1191.958		1.00	2.55	1191.958	12.500	12.4	99.5	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1672.055		1.00	2.99	1672.055	12.500	12.6	100.8	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	14191.963	17652.342	1.00	3.07	10.050	10.000	11.4	114.0	NO	15.648	NO
15	8	PFPeS	349.>79.7	2284.800	1191.958	1.00	3.27	23.961	9.360	11.3	120.3	NO	2.408	NO
16	9	HFPO-DA	285.1 > 168.9	3214.207	3662.065	1.00	3.29	10.971	10.000	10.7	107.1	NO	2.690	NO
17	10	5:3 FTCA	340.9 > 236.9		13006.940	1.00			10.000			NO		YES
18	11	PFHpA	363.0 > 318.9	12919.545	13006.940	1.00	3.67	12.416	10.000	10.5	105.4	NO	40.465	YES
19	12	ADONA	376.8 > 250.9	27559.961	13006.940	1.00	3.78	26.486	10.000	10.1	101.3	NO	3.928	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	17652.342		1.00	3.07	17652.342	12.500	11.1	89.2	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	1191.958		1.00	2.55	1191.958	12.500	12.4	99.5	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	3662.065		1.00	3.29	3662.065	12.500	11.4	91.5	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13006.940		1.00	3.67	13006.940	12.500	12.5	99.7	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13006.940		1.00	3.67	13006.940	12.500	12.5	99.7	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13006.940		1.00	3.67	13006.940	12.500	12.5	99.7	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7	2154.354	2666.442	1.00	3.81	10.099	9.120	9.06	99.3	NO	2.597	NO
28	15	6:2 FTS	427.0 > 407	2019.568	1396.995	1.00	4.13	18.071	9.480	11.5	121.3	NO	1.193	NO
29	16	L-PFOA	412.8 > 368.9	16782.971	17016.531	1.00	4.19	12.328	10.000	10.2	102.4	NO	3.164	NO
30	18	PFecHS	460.8 > 381.0		17016.531	1.00			10.000			NO		YES
31	19	PFHpS	449.0 > 79.7	2484.653	3133.020	1.00	4.30	9.913	9.480	11.1	116.8	NO	2.075	NO
32	20	7:3 FTCA	440.9 > 336.9		16439.645	1.00			10.000			NO		YES
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2666.442		1.00	3.82	2666.442	12.500	12.6	101.1	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1396.995		1.00	4.13	1396.995	12.500	11.4	91.3	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	17016.531		1.00	4.19	17016.531	12.500	11.2	89.5	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	17016.531		1.00	4.19	17016.531	12.500	11.2	89.5	NO		

VJM 02/28/20

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Name: 200228P2-14, Date: 28-Feb-2020, Time: 15:02:18, ID: ICV200228P2-1 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	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	16439.645		1.00	4.62	16439.645	12.500	11.8	94.1	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	16751.174	16439.645	1.00	4.62	12.737	10.000	12.0	119.6	NO	8.659	NO
41	22	PFOSA	497.9 > 77.9	2369.061	3826.356	1.00	4.68	7.739	10.000	9.56	95.6	NO	27.741	NO
42	23	L-PFOS	498.9 > 79.7	2307.943	3133.020	1.00	4.71	9.208	9.280	10.2	109.9	NO	2.171	NO
43	25	9Cl-PF30NS	530.7 > 350.8	2456.530	3133.020	1.00	4.93	9.801	9.280	10.4	112.3	NO	16.863	NO
44	26	PFDA	513 > 468.8	16878.637	18007.318	1.00	5.00	11.717	10.000	10.5	104.7	NO	10.259	NO
45	27	8:2 FTS	526.9 > 507	1474.184	1216.794	1.00	4.97	15.144	9.600	11.7	122.1	NO	3.066	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	16439.645		1.00	4.62	16439.645	12.500	11.8	94.1	NO		
47	67	13C8-PFOSA-EIS	506 > 78	3826.356		1.00	4.68	3826.356	12.500	12.1	97.1	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	18007.318		1.00	5.00	18007.318	12.500	11.5	91.8	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1216.794		1.00	4.97	1216.794	12.500	14.1	112.7	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	2283.647	3133.020	1.00	5.07	9.111	9.600	9.85	102.6	NO	2.453	NO
54	29	L-MeFOSAA	570 > 419	4801.958	4737.077	1.00	5.15	12.671	10.000	9.73	97.3	NO	2.193	NO
55	31	L-EtFOSAA	584.1 > 419	4683.428	5385.876	1.00	5.31	10.870	10.000	10.0	100.5	NO	1.247	NO
56	33	PFUdA	563.0 > 518.9	17131.482	20525.344	1.00	5.32	10.433	10.000	10.2	102.0	NO	29.375	NO
57	34	PFDS	598.8 > 79.7	2277.069	3133.020	1.00	5.37	9.085	9.600	11.2	116.6	NO	1.766	NO
58	35	11Cl-PF30UdS	630.9 > 450.9	6057.757	16907.936	1.00	5.53	4.478	9.440	10.2	108.5	NO	21.146	NO
59	71	13C8-PFOS-EIS	507.0 > 79.7	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4737.077		1.00	5.15	4737.077	12.500	11.3	90.1	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5385.876		1.00	5.31	5385.876	12.500	11.3	90.3	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20525.344		1.00	5.32	20525.344	12.500	11.3	90.7	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	16907.936		1.00	5.60	16907.936	12.500	11.2	90.0	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607		953.192	1.00			10.000		(A)	NO		YES
67	37	PFDoA	612.9 > 569.0	15659.586	16907.936	1.00	5.60	11.577	10.000	9.89	98.9	NO	12.323	NO
68	38	N-MeFOSA	512.1 > 168.9		16967.213	1.00			9.600		(A)	NO		YES
69	39	PFTrDA	662.9 > 618.9	17000.330	16907.936	1.00	5.85	12.568	10.000	11.0	110.3	NO	52.186	NO
70	40	PFDoS	698.8 > 79.7		17386.932	1.00			10.000		(A)	NO		YES
71	41	PFTeDA	713.0 > 669.0	16327.019	17386.932	1.00	6.06	11.738	10.000	11.2	112.0	NO	17.686	NO
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	953.192		1.00	5.59	953.192	12.500	13.3	106.5	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	16907.936		1.00	5.60	16907.936	12.500	11.2	90.0	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	16967.213		1.00	5.72	16967.213	149.200	134	89.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	16907.936		1.00	5.60	16907.936	12.500	11.2	90.0	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	17386.932		1.00	6.06	17386.932	12.500	11.0	88.3	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	17386.932		1.00	6.06	17386.932	12.500	11.0	88.3	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9		25801.750	1.00			9.600			NO		YES
80	43	PFHxDA	813.1 > 768.6		25334.709	1.00			10.000			NO		YES
81	44	PFODA	913.1 > 868.8		25334.709	1.00			10.000			NO		
82	45	N-MeFOSE	616.1 > 58.9		20400.309	1.00			9.600			NO		
83	46	N-EtFOSE	630.1 > 58.9		23907.336	1.00			9.600			NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	25801.750		1.00	6.13	25801.750	149.200	138	92.4	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	25334.709		1.00	6.39	25334.709	12.500	9.80	78.4	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	25334.709		1.00	6.39	25334.709	12.500	9.80	78.4	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	20400.309		1.00	6.29	20400.309	149.200	137	91.6	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	23907.336		1.00	6.44	23907.336	149.200	132	88.8	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3133.020		1.00	4.71	3133.020	12.500	11.5	91.9	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	6306.565	7212.117	1.00	1.35	10.931	12.500	13.6	108.8	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	10660.777	18650.850	1.00	2.28	7.145	12.500	12.3	98.3	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	1191.958	1136.216	1.00	2.55	13.113	12.500	11.9	95.0	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	3662.065	18650.850	1.00	3.29	2.454	12.500	12.3	98.5	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1657.999	1136.216	1.00	2.99	18.240	12.500	12.9	102.9	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	17652.342	18650.850	1.00	3.07	11.831	12.500	12.2	97.9	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13006.940	18650.850	1.00	3.67	8.717	12.500	13.1	104.6	NO		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2630.779	1136.216	1.00	3.82	28.942	12.500	11.7	93.5	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1396.995	3466.292	1.00	4.13	5.038	12.500	11.5	92.1	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	16439.645	18998.502	1.00	4.62	10.816	12.500	11.6	93.0	NO		
101	68	13C8-PFOSA-RSD	506 > 78	3826.356	20276.240	1.00	4.68	2.359	12.500	12.4	98.9	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	17016.531	19128.445	1.00	4.19	11.120	12.500	12.0	96.2	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3172.651	3466.292	1.00	4.71	11.441	12.500	12.3	98.6	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	18007.318	20151.943	1.00	5.00	11.170	12.500	11.3	90.7	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1216.794	3466.292	1.00	4.97	4.388	12.500	12.2	97.9	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4737.077	20276.240	1.00	5.15	2.920	12.500	12.4	99.0	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20525.344	20276.240	1.00	5.32	12.654	12.500	12.3	98.4	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	5385.876	20276.240	1.00	5.31	3.320	12.500	12.8	102.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	16907.936	20151.943	1.00	5.60	10.488	12.500	11.0	87.6	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	953.192	3466.292	1.00	5.59	3.437	12.500	12.1	97.0	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	16967.213	20276.240	1.00	5.72	10.460	149.200	136	91.4	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	17386.932	20276.240	1.00	6.06	10.719	12.500	11.3	90.5	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	25801.750	20276.240	1.00	6.13	15.906	149.200	144	96.7	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	25334.709	20276.240	1.00	6.39	15.618	12.500	10.8	86.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	20400.309	20276.240	1.00	6.29	12.576	149.200	143	96.0	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	24440.137	20276.240	1.00	6.44	15.067	149.200	144	96.8	NO		
119	99	13C4-PFBA	217.0 > 172.0	7212.117	7212.117	1.00	1.35	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	18650.850	18650.850	1.00	3.07	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	19128.445	19128.445	1.00	4.19	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1136.216	1136.216	1.00	3.82	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	18998.502	18998.502	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3466.292	3466.292	1.00	4.71	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	20151.943	20151.943	1.00	5.00	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20276.240	20276.240	1.00	5.32	12.500	12.500	12.5	100.0	NO		

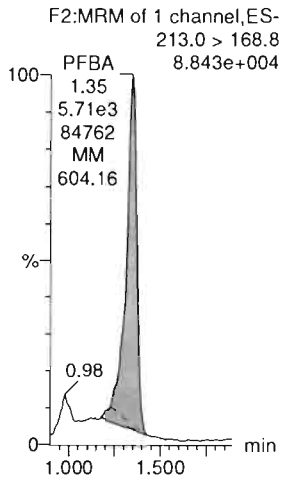
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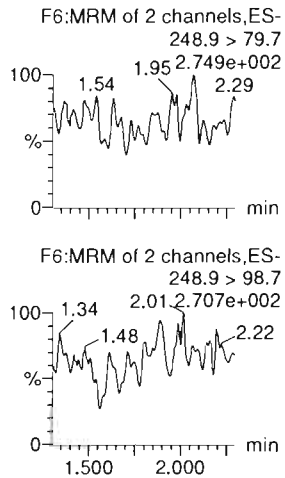
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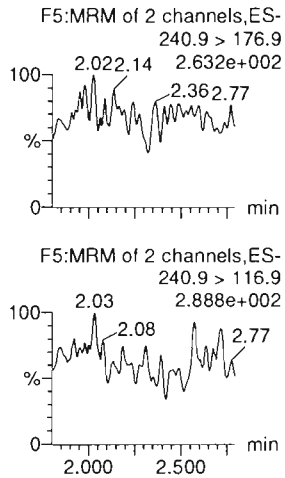
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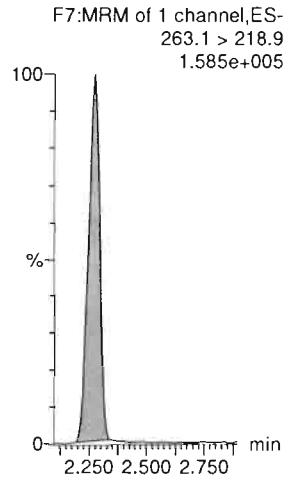
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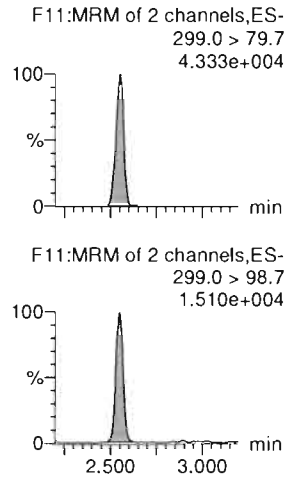
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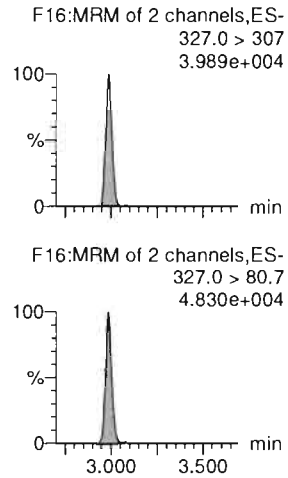
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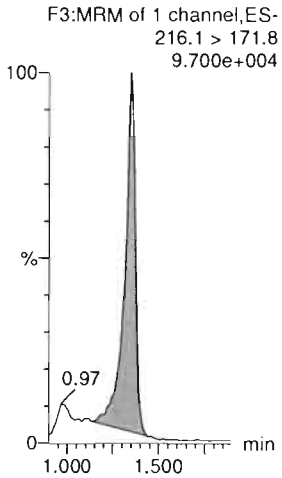
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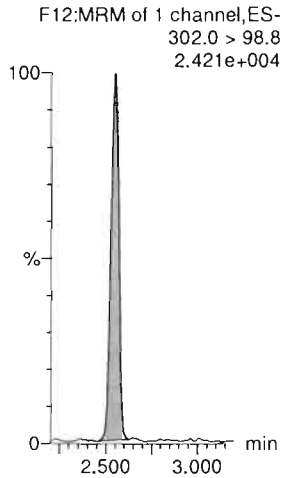
4:2 FTS



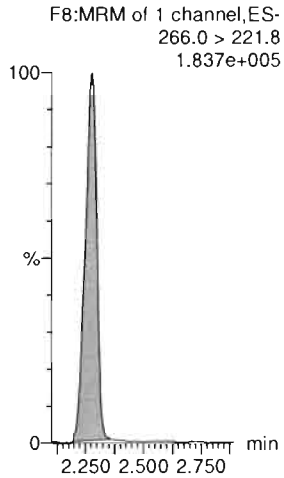
13C3-PFBA-EIS



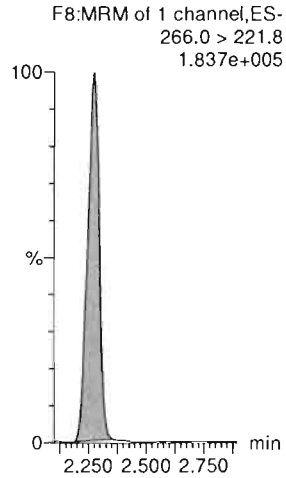
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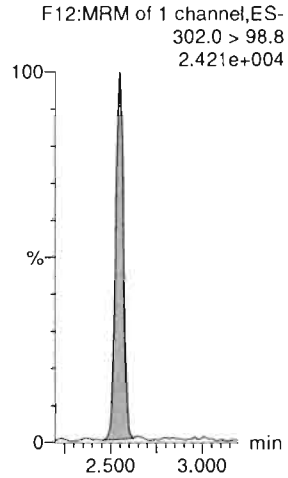
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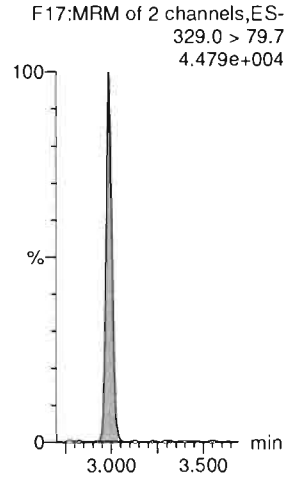
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13C3-PFBS-EIS



13C2-4:2 FTS-EIS

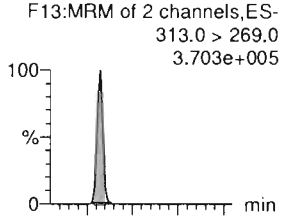


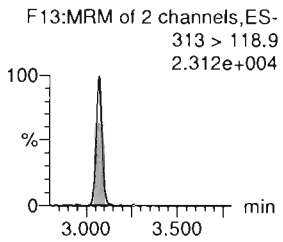
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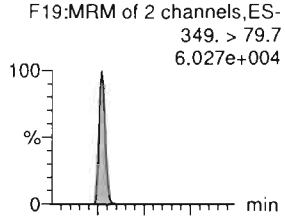
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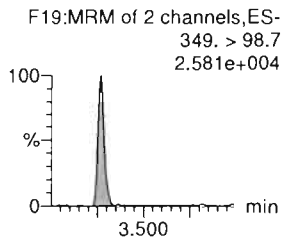
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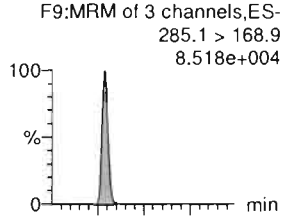


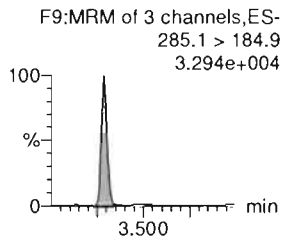
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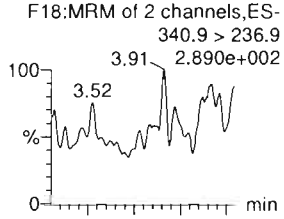


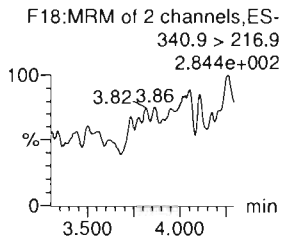
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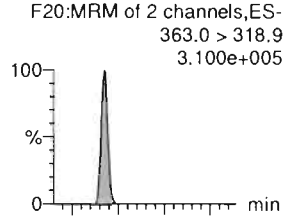


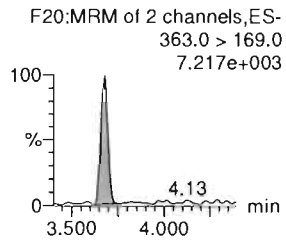
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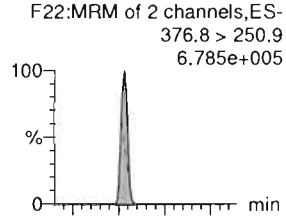


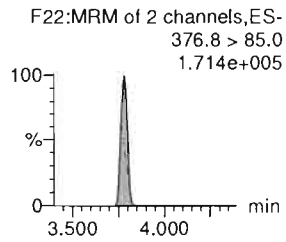
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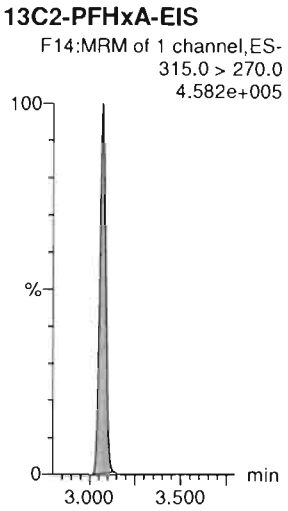


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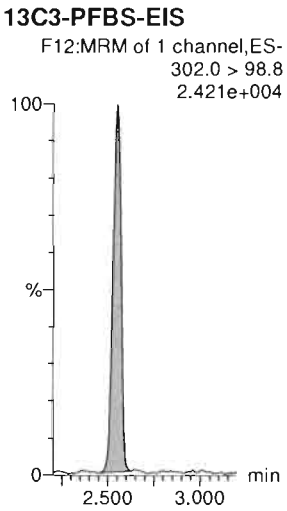




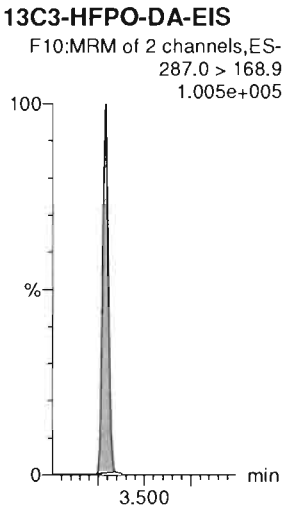
13C2-PFHxA-EIS



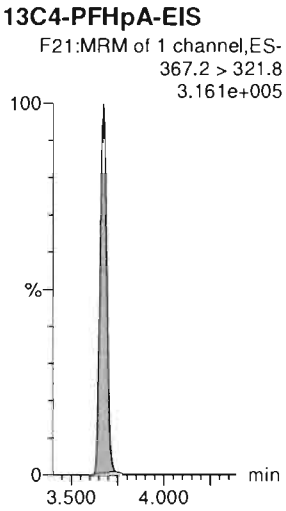
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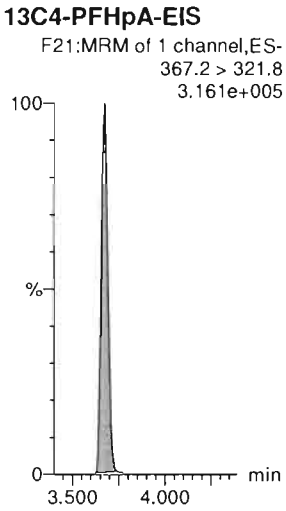
13C3-HFPO-DA-EIS



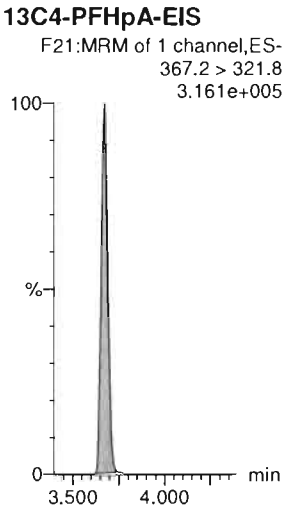
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

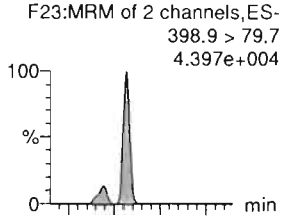


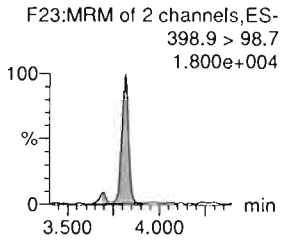
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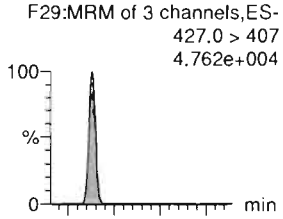
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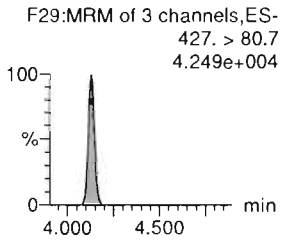
L-PFHxS



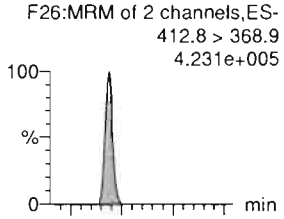


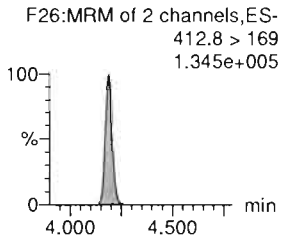
6:2 FTS



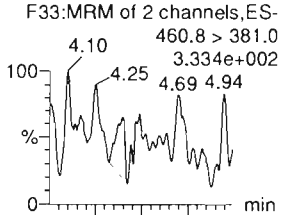


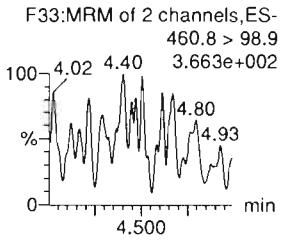
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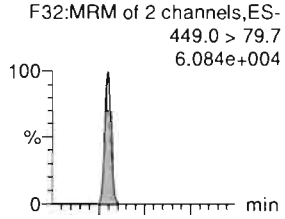


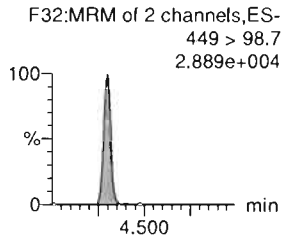
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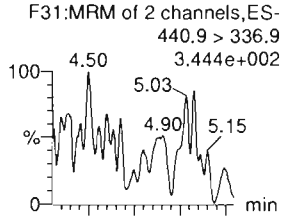


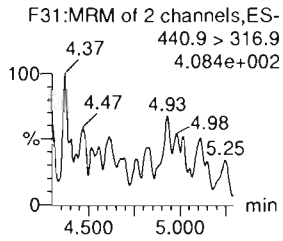
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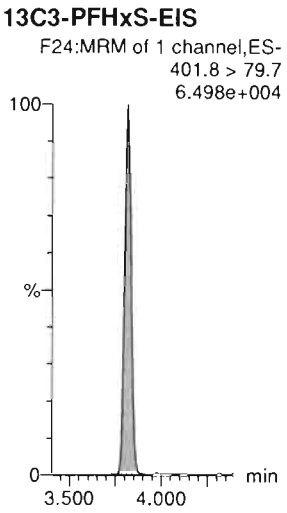


7:3 FTCA

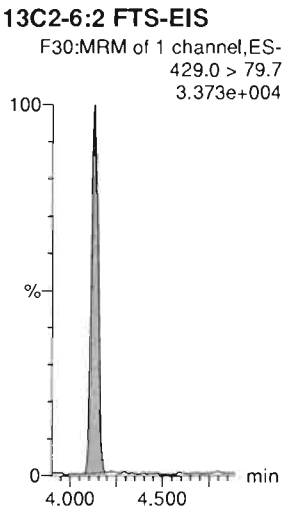




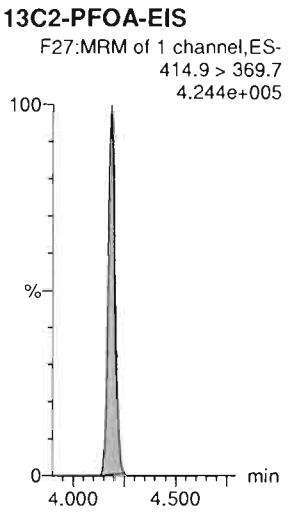
13C3-PFHxS-EIS



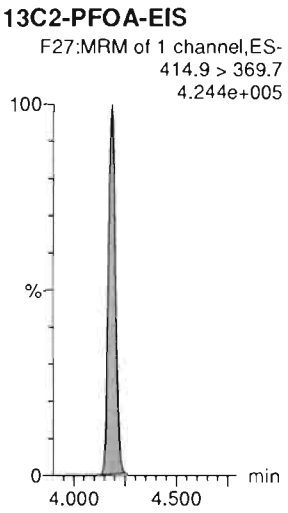
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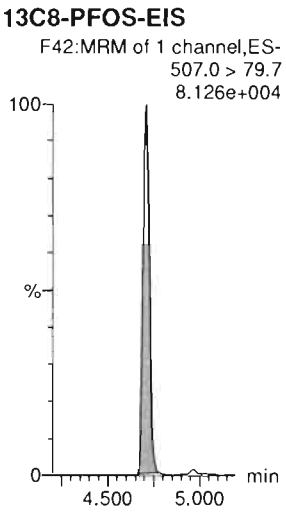
13C2-PFOA-EIS



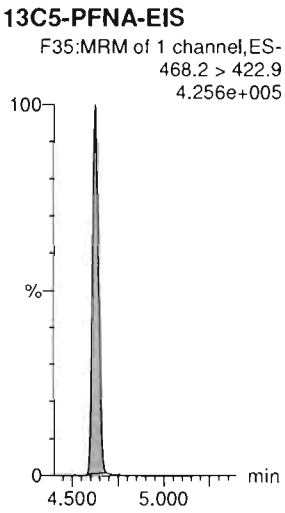
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13C8-PFOS-EIS



13C5-PFNA-EIS

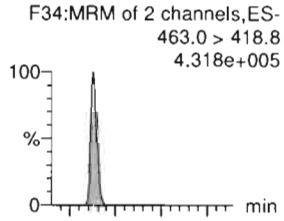


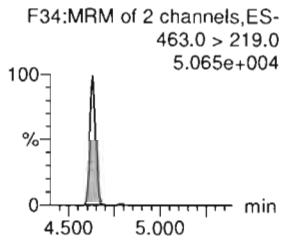
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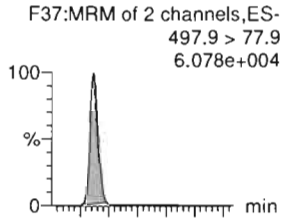
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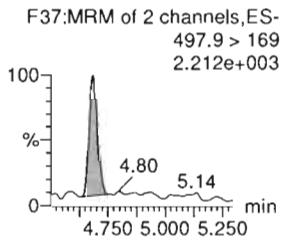
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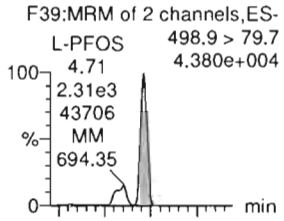


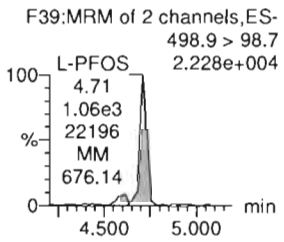
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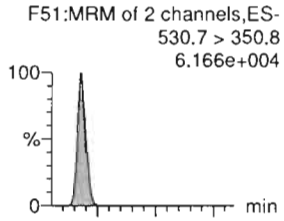


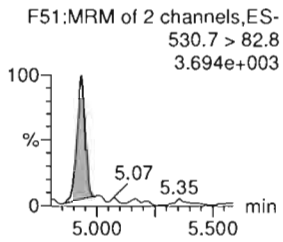
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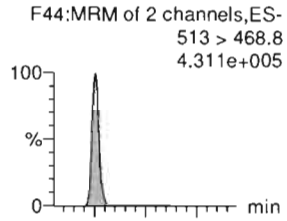


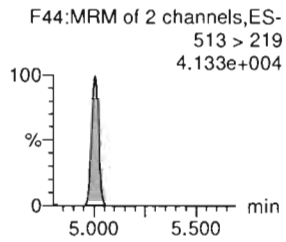
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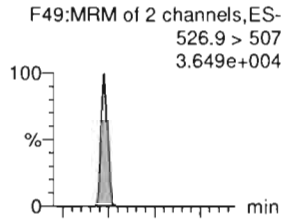


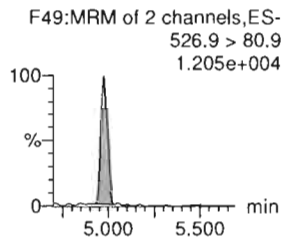
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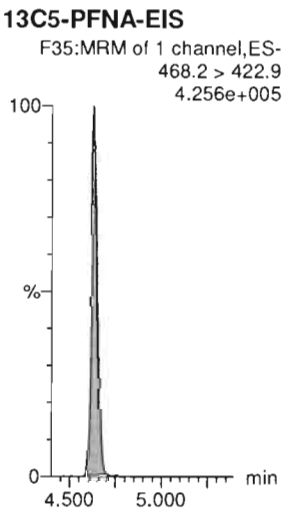


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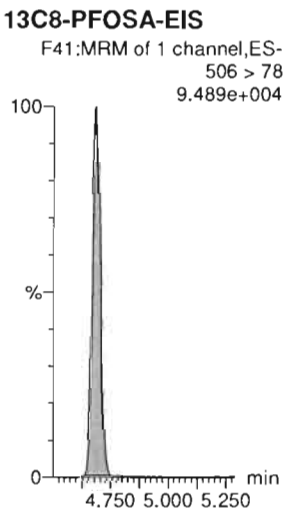




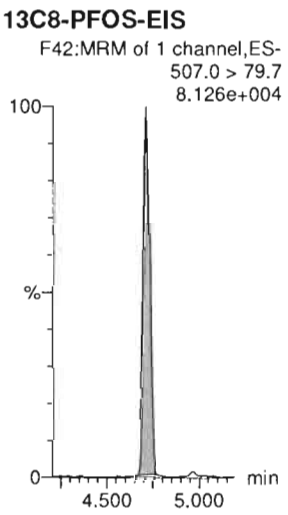
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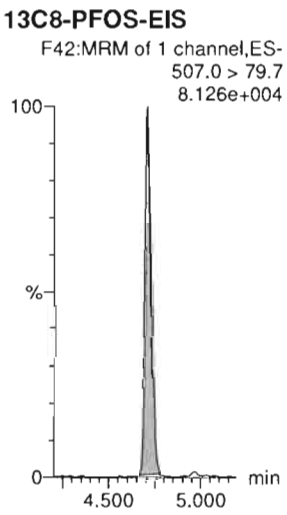
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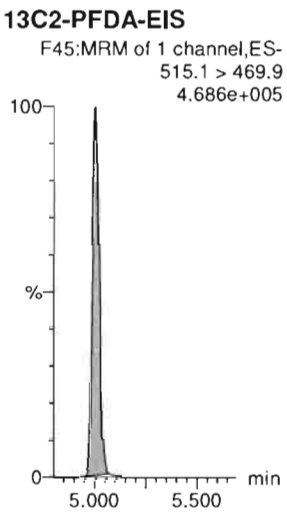
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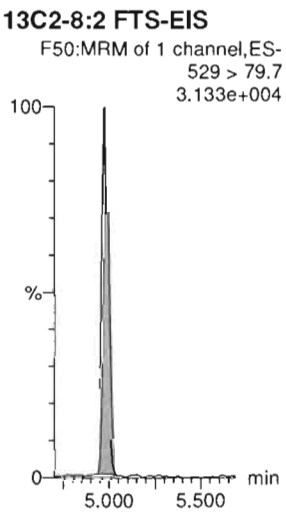
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13C2-PFDA-EIS



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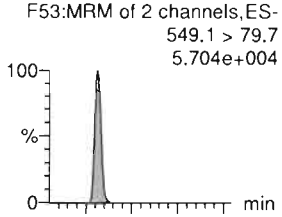


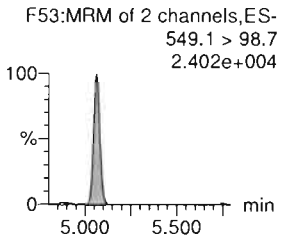
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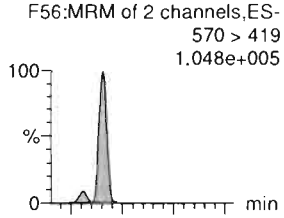
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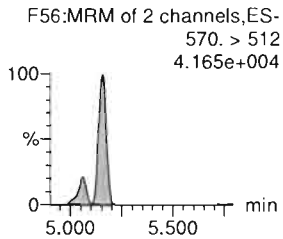
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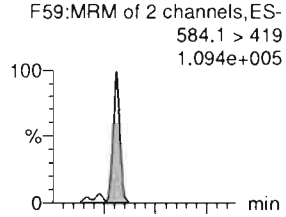


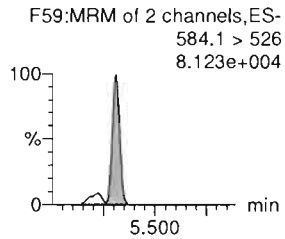
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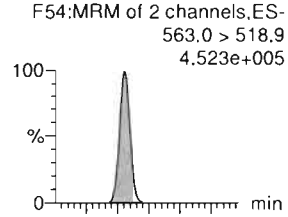


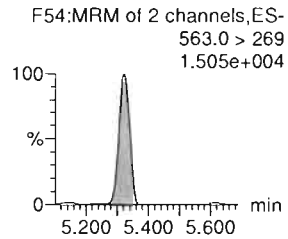
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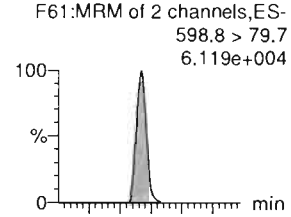


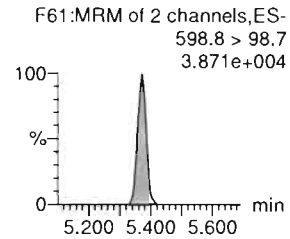
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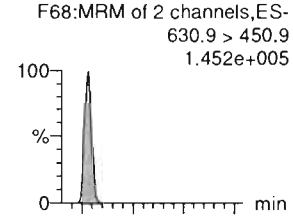


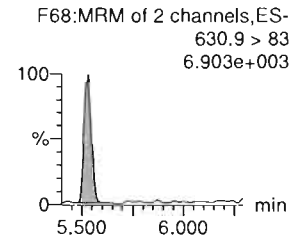
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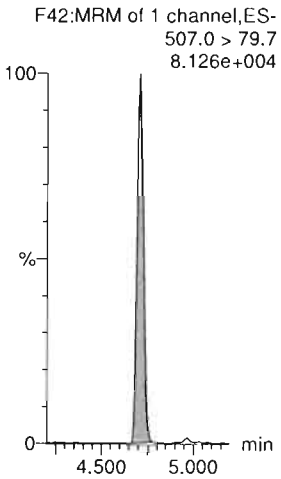


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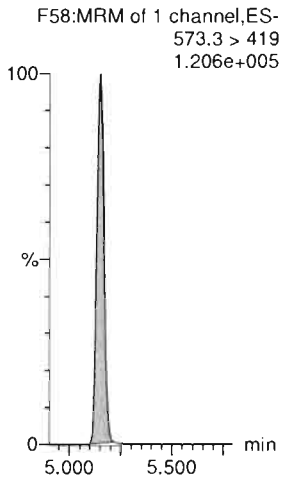




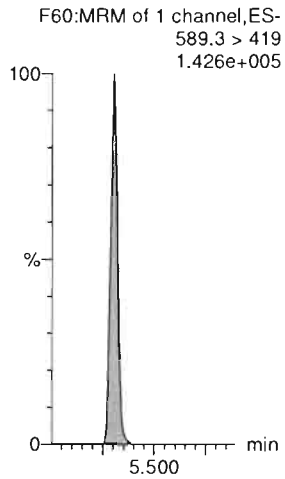
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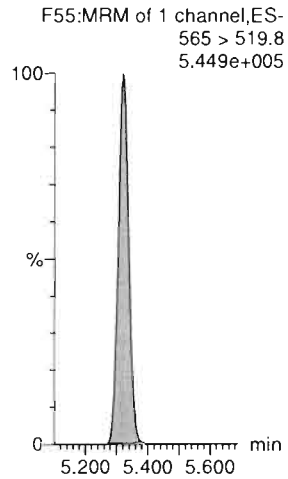
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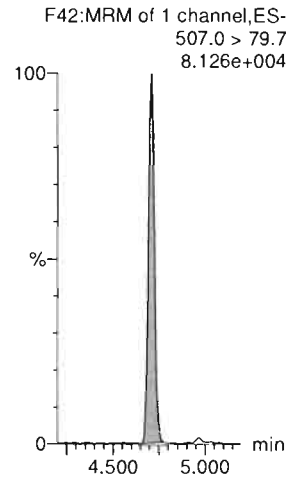
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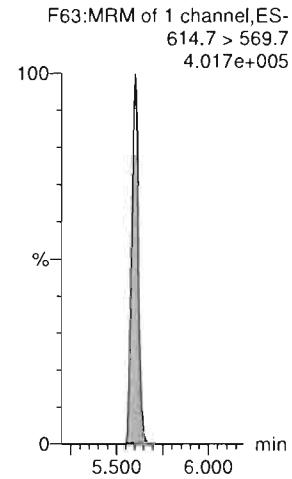
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13C8-PFOS-EIS



13C2-PFDoA-EIS

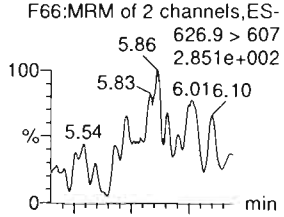


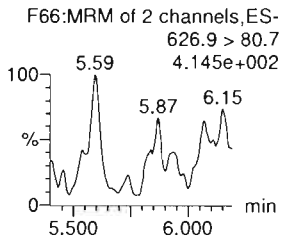
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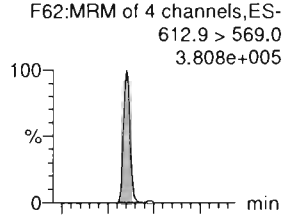
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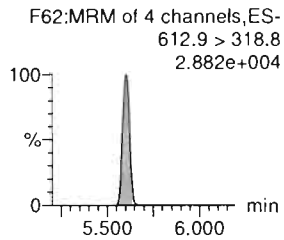
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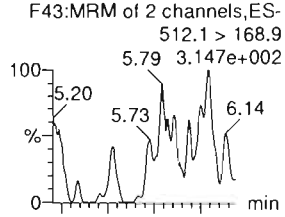


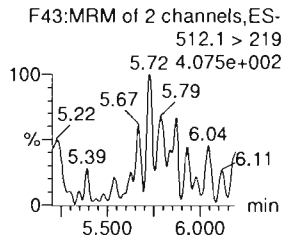
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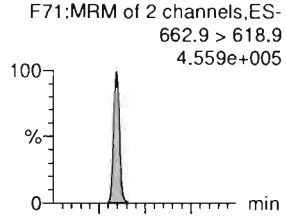


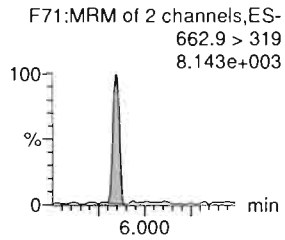
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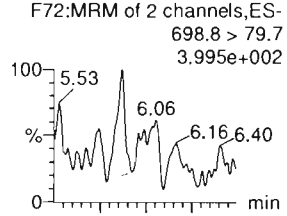


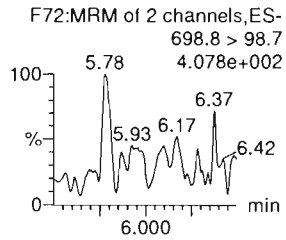
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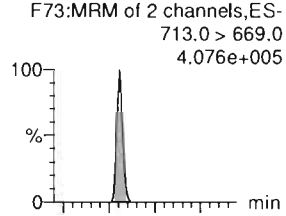


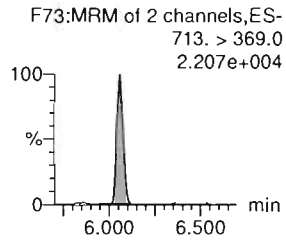
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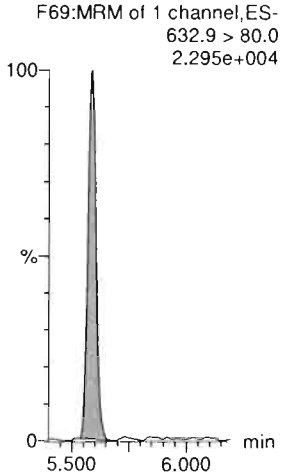


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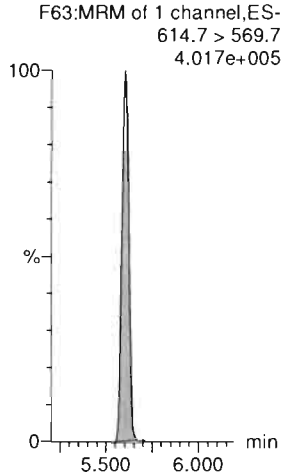




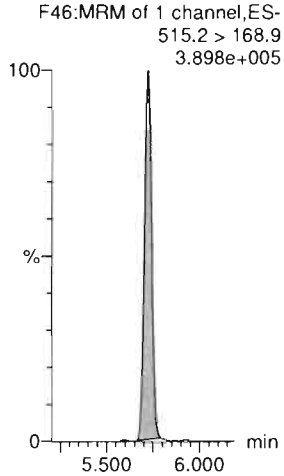
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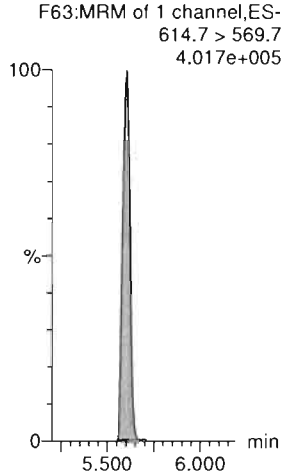
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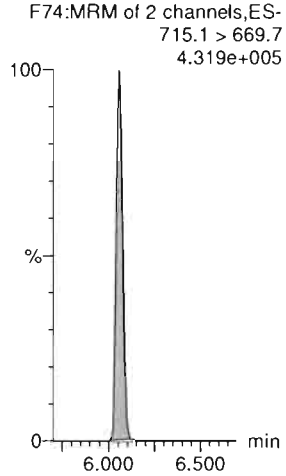
d3-N-MeFOSA-EIS



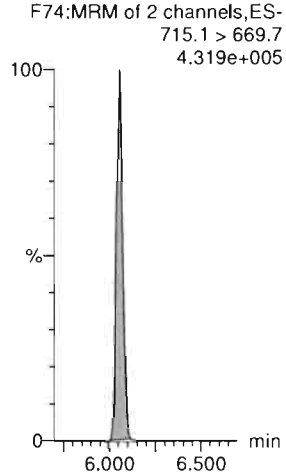
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

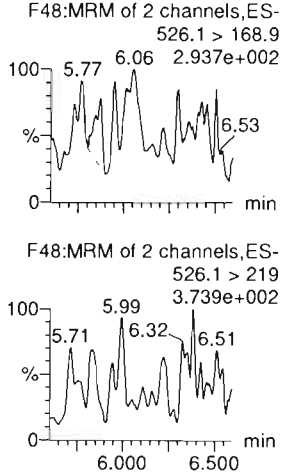


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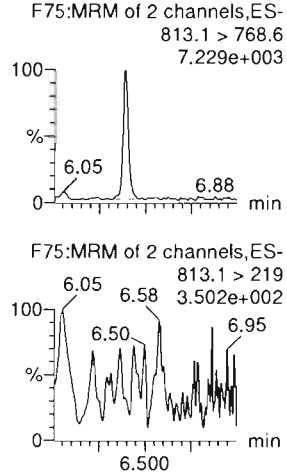
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Name: 200228P2-14, Date: 28-Feb-2020, Time: 15:02:18, ID: ICV200228P2-1 PFC ICV 20B1112, Description: PFC ICV 20B1112

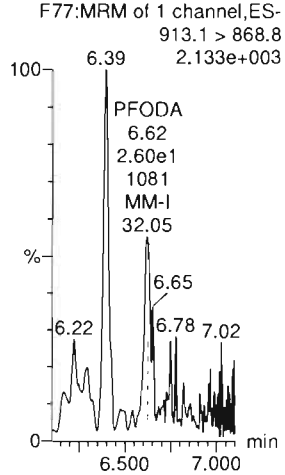
N-EtFOSA



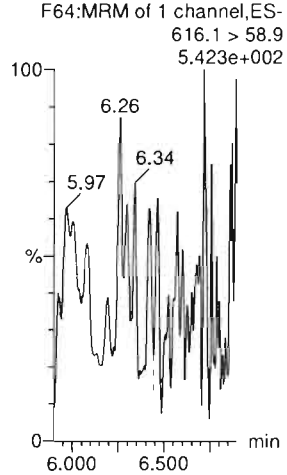
PFHxDA



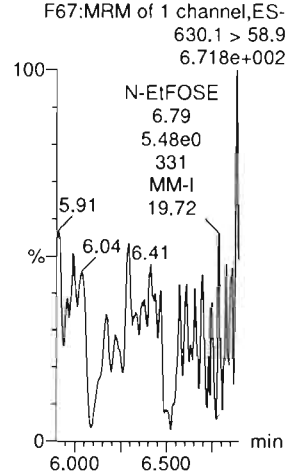
PFODA



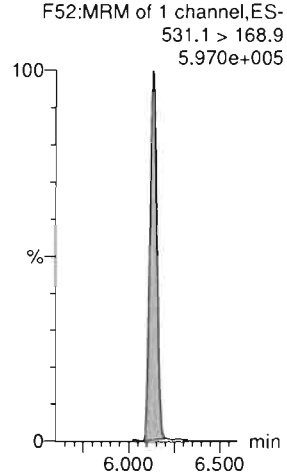
N-MeFOSE



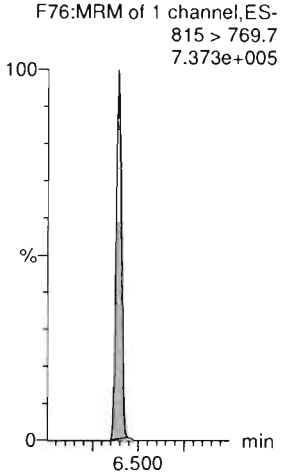
N-EtFOSE



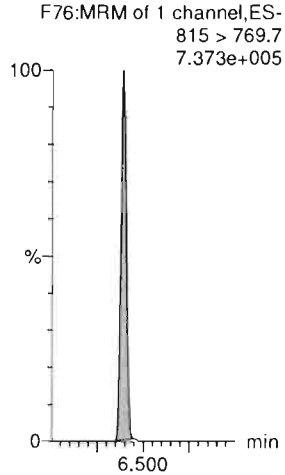
d5-N-ETFOSA-EIS



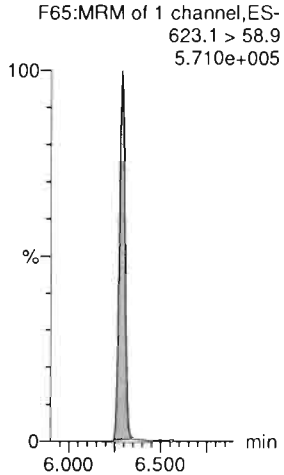
13C2-PFHxDA-EIS



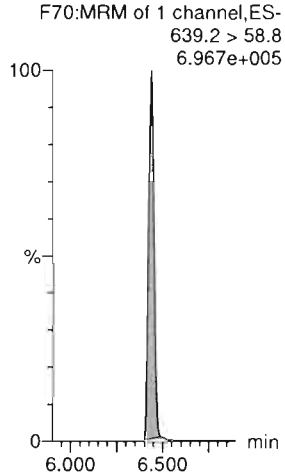
13C2-PFHxDA-EIS



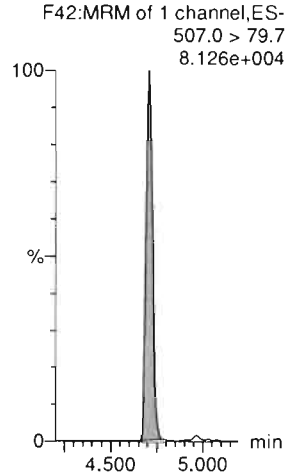
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

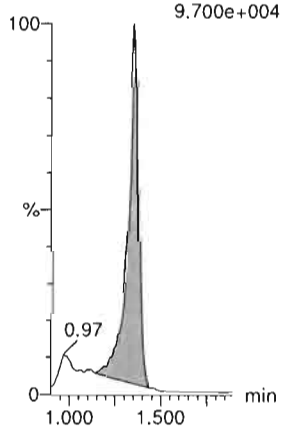


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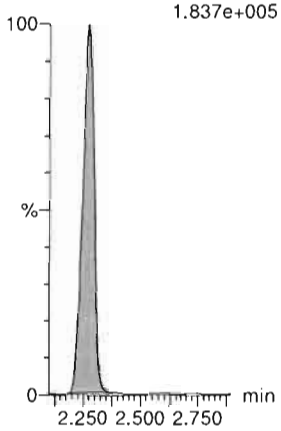
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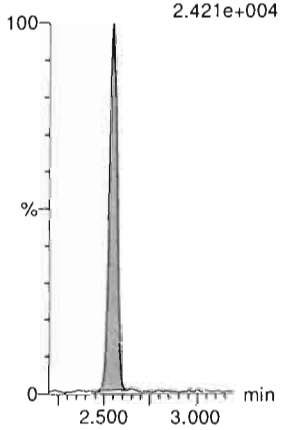
13C3-PFBA-RSD
F3:MRM of 1 channel,ES-
216.1 > 171.8
9.700e+004



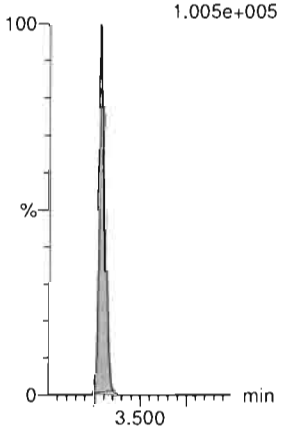
13C3-PFPeA-RSD
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.837e+005



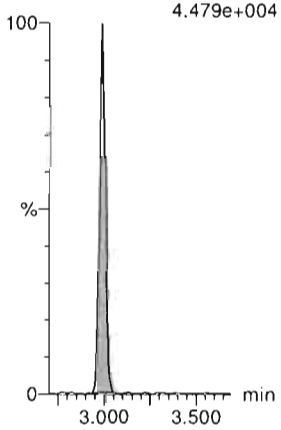
13C3-PFBS-RSD
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.421e+004



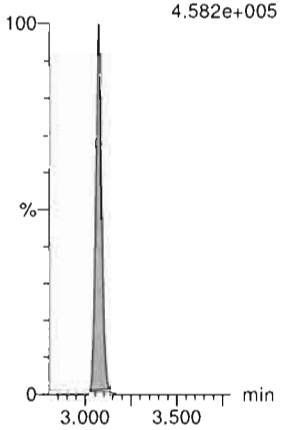
13C3-HFPO-DA-RSD
F10:MRM of 2 channels,ES-
287.0 > 168.9
1.005e+005



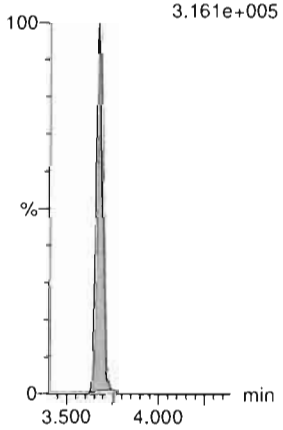
13C2-4:2 FTS-RSD
F17:MRM of 2 channels,ES-
329.0 > 79.7
4.479e+004



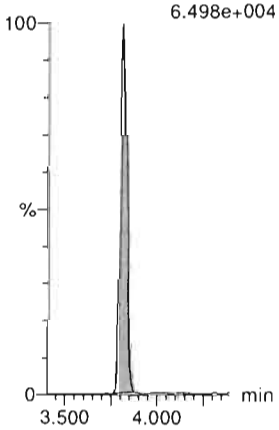
13C2-PFHxA-RSD
F14:MRM of 1 channel,ES-
315.0 > 270.0
4.582e+005



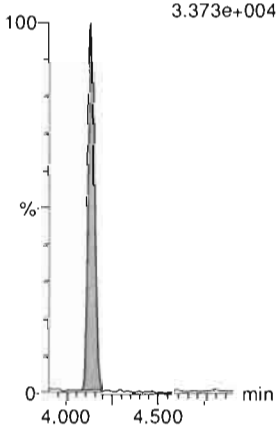
13C4-PFHpA-RSD
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.161e+005



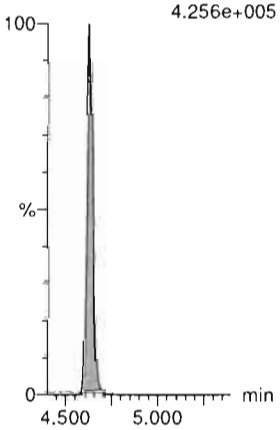
13C3-PFHxS-RSD
F24:MRM of 1 channel,ES-
401.8 > 79.7
6.498e+004



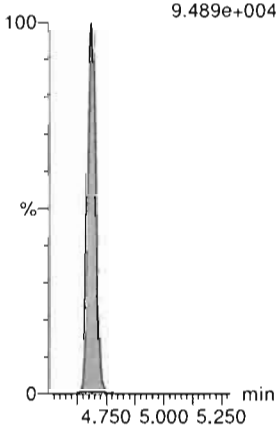
13C2-6:2 FTS-RSD
F30:MRM of 1 channel,ES-
429.0 > 79.7
3.373e+004



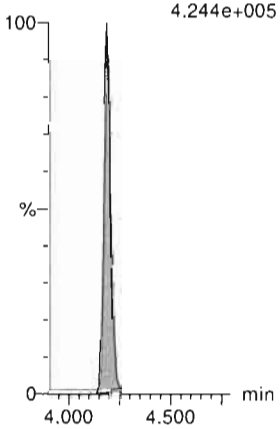
13C5-PFNA-RSD
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.256e+005



13C8-PFOSA-RSD
F41:MRM of 1 channel,ES-
506 > 78
9.489e+004



13C2-PFOA-RSD
F27:MRM of 1 channel,ES-
414.9 > 369.7
4.244e+005

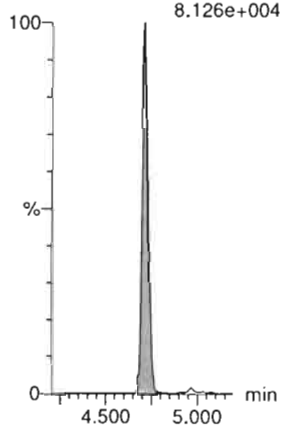


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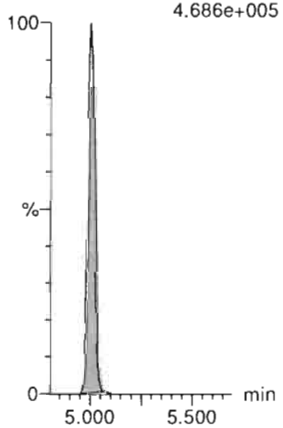
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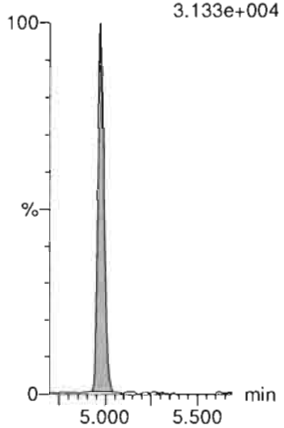
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.126e+004



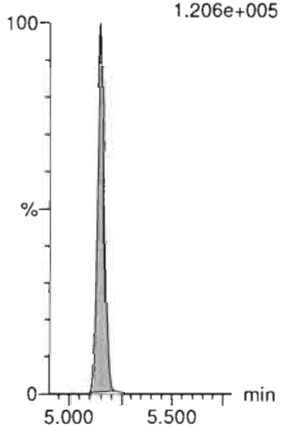
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.686e+005



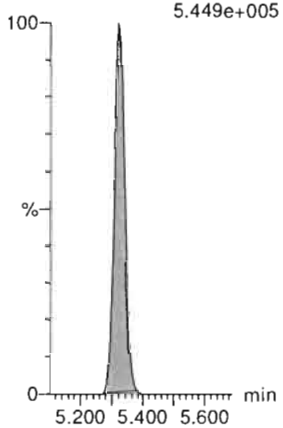
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
3.133e+004



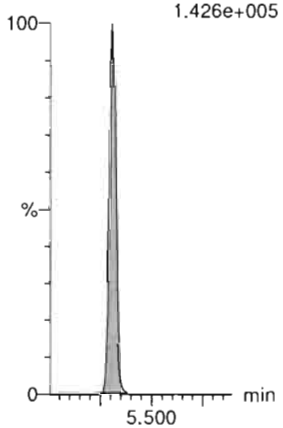
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.206e+005



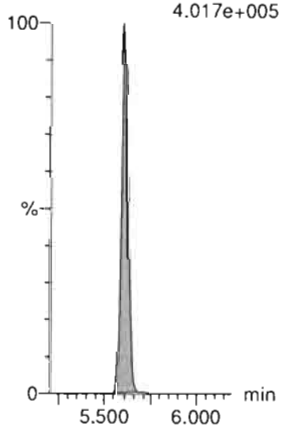
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.449e+005



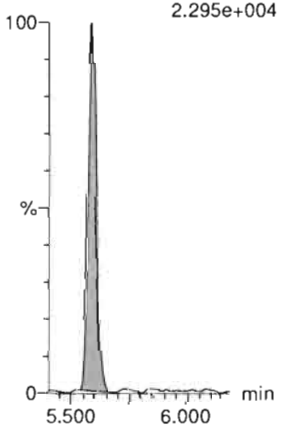
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.426e+005



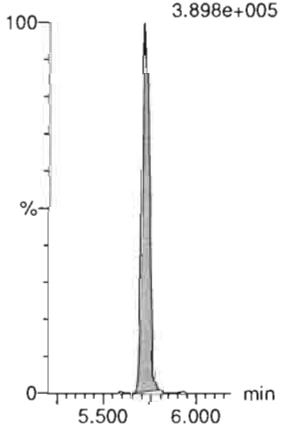
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.017e+005



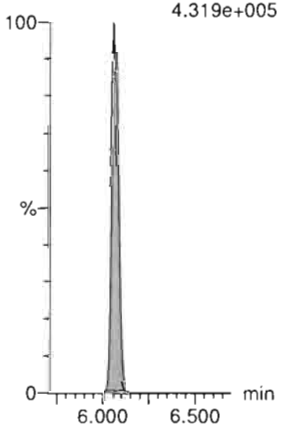
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.295e+004



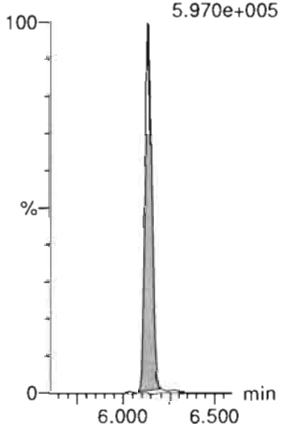
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
3.898e+005



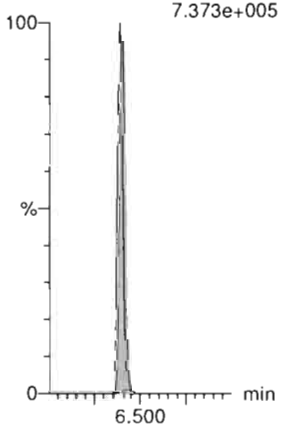
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.319e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
5.970e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
7.373e+005

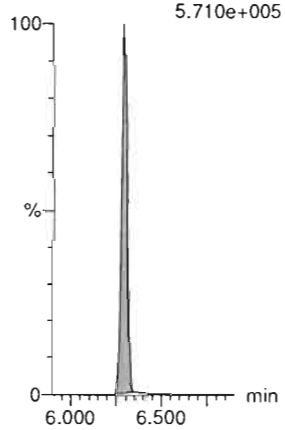


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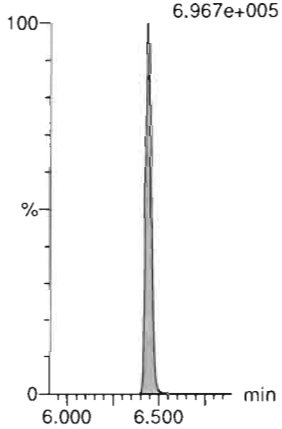
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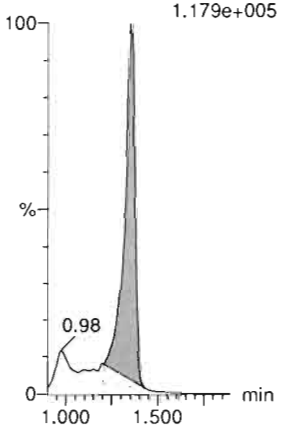
d7-N-MeFOSE-RSD
F65:MRM of 1 channel,ES-
623.1 > 58.9
5.710e+005



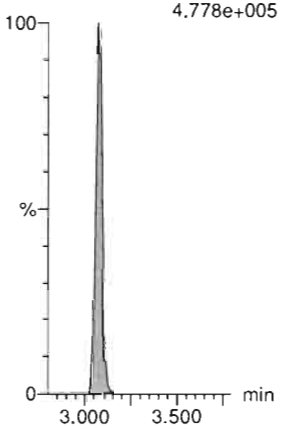
d9-N-EtFOSE-RSD
F70:MRM of 1 channel,ES-
639.2 > 58.8
6.967e+005



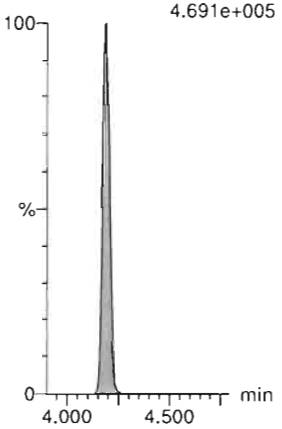
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
1.179e+005



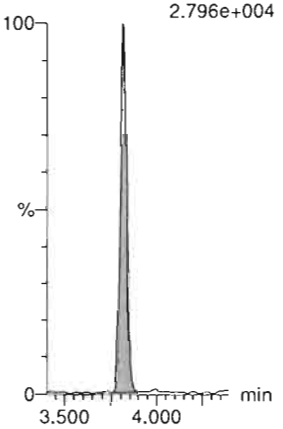
13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
4.778e+005



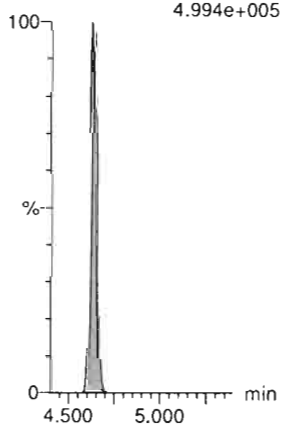
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
4.691e+005



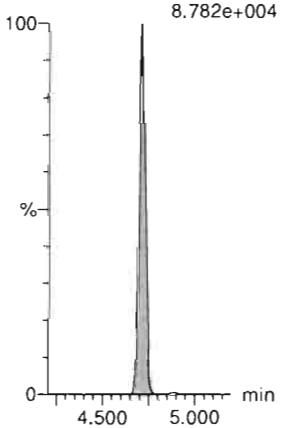
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
2.796e+004



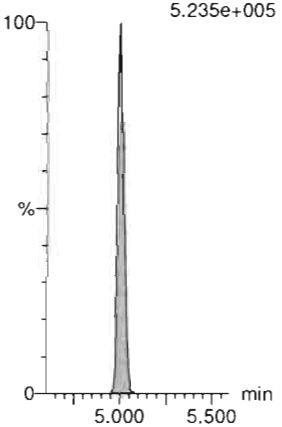
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.994e+005



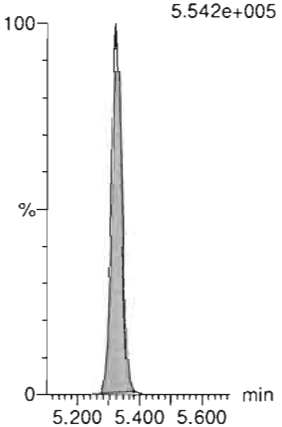
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.7
8.782e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.235e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.542e+005



Vista Analytical Laboratory

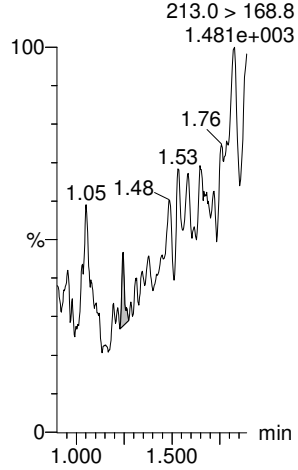
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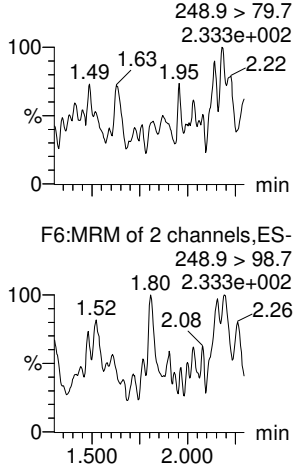
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Name: 200228P2-13, Date: 28-Feb-2020, Time: 14:51:49, ID: IB, Description: IB

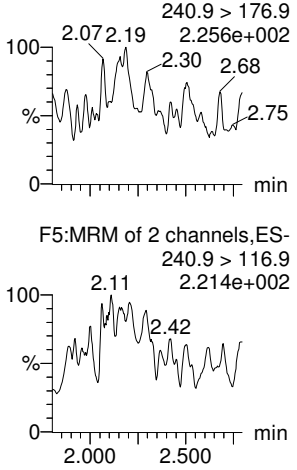
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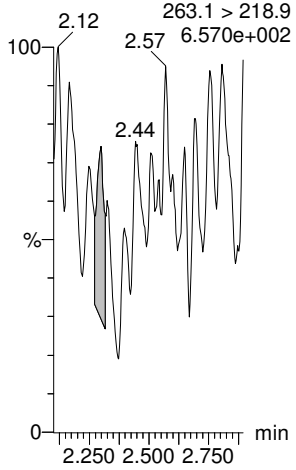
PFPrS



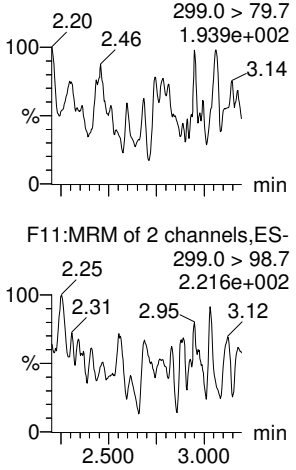
3:3 FTCA



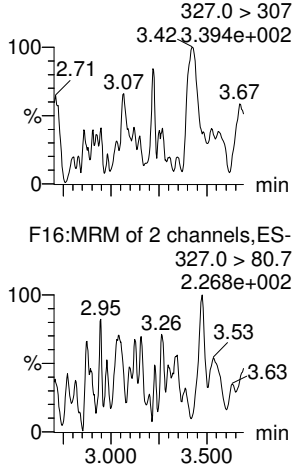
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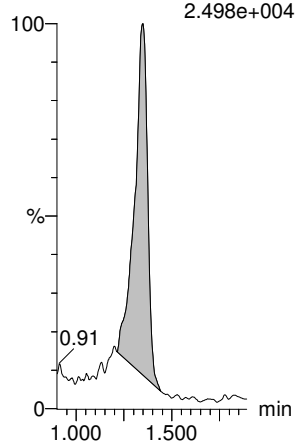
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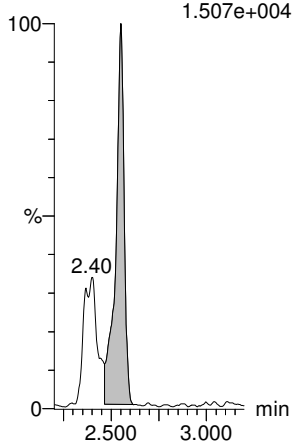
4:2 FTS



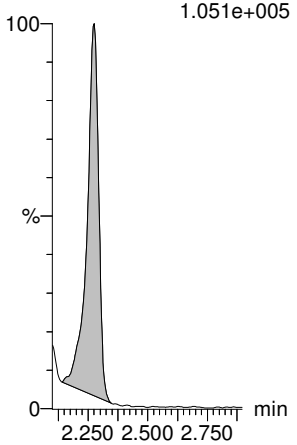
13C3-PFBA-EIS



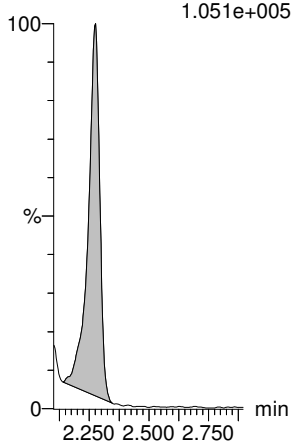
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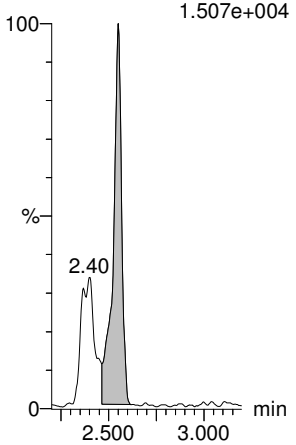
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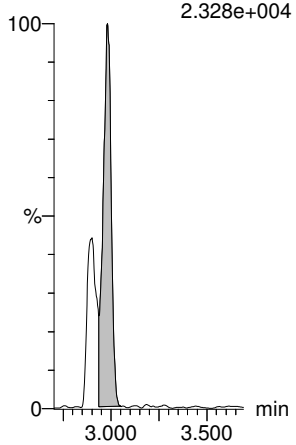
13C3-PFPeA-EIS



13C3-PFBS-EIS



13C2-4:2 FTS-EIS

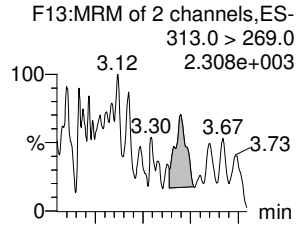


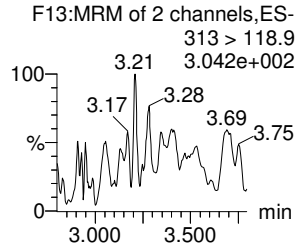
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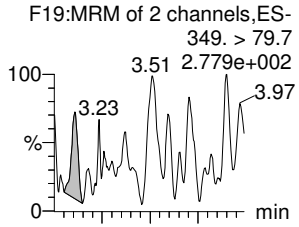
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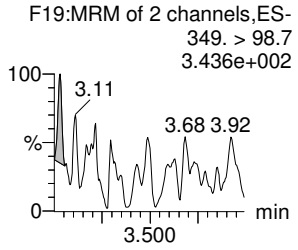
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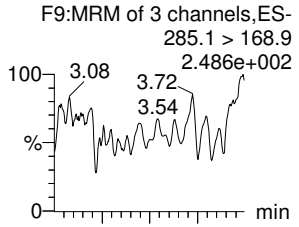


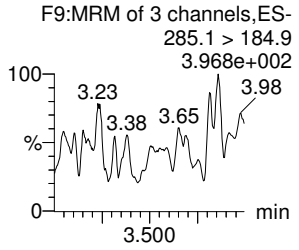
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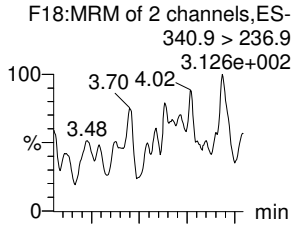


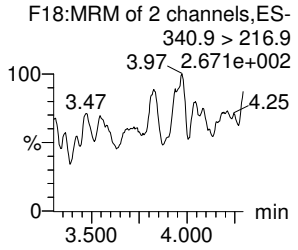
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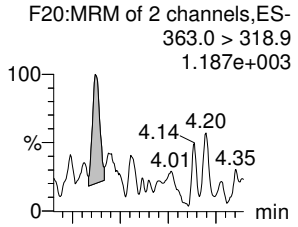


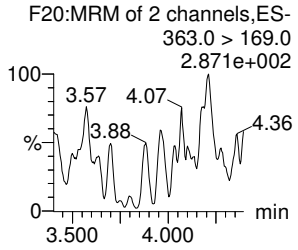
5:3 FTCA



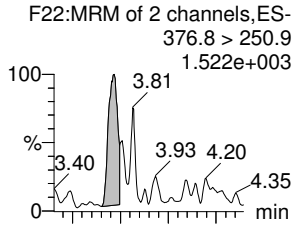


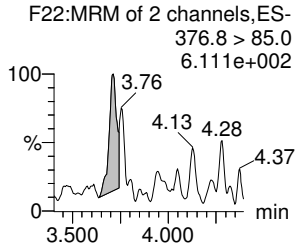
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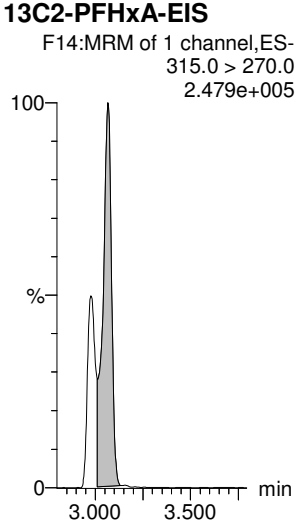


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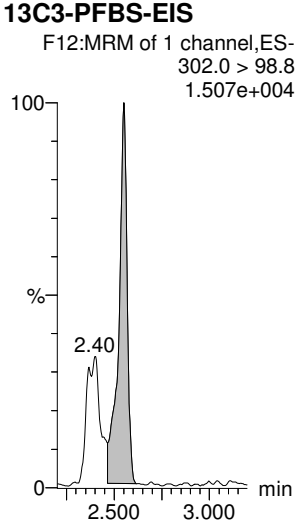




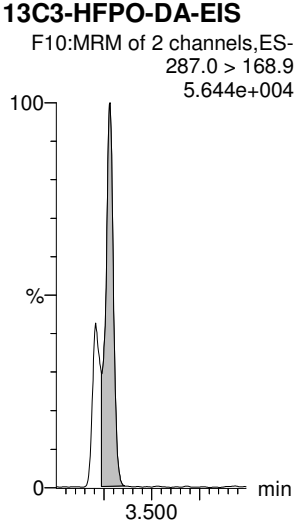
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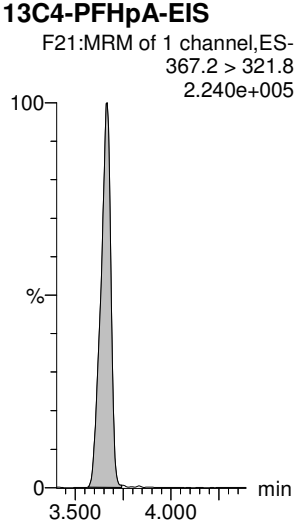
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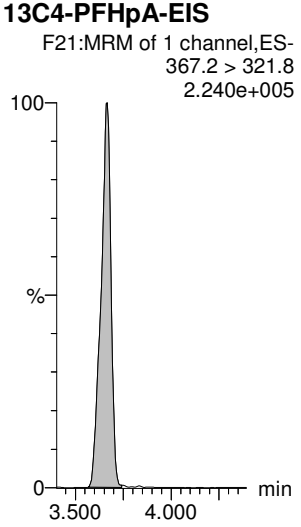
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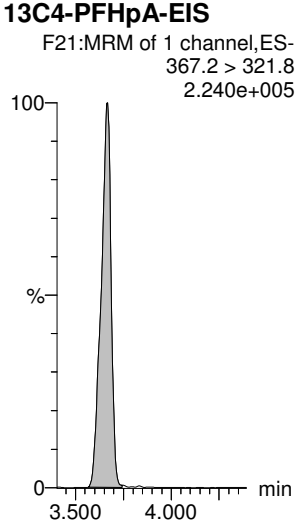
13C4-PFHpA-EIS



13C4-PFHpA-EIS



13C4-PFHpA-EIS

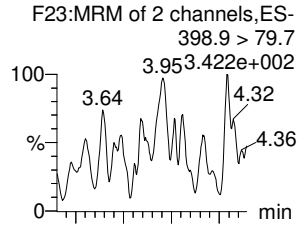


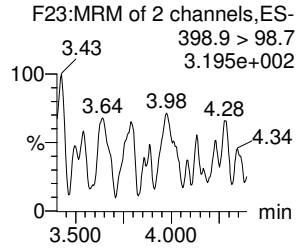
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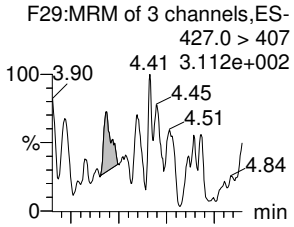
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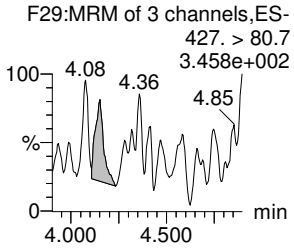
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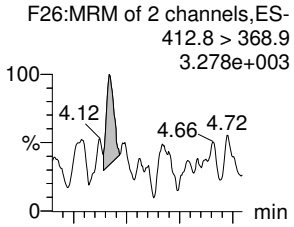


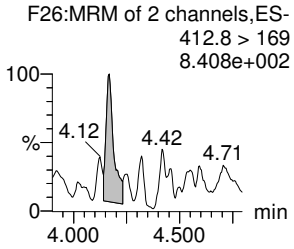
6:2 FTS



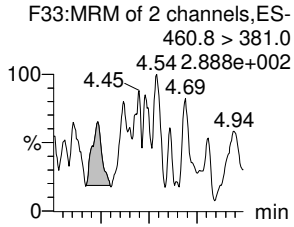


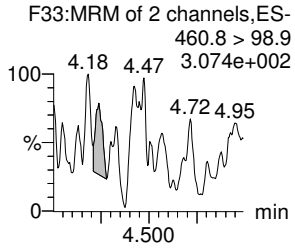
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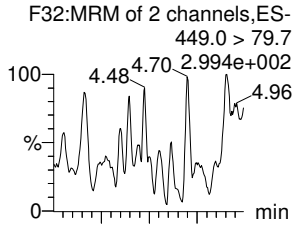


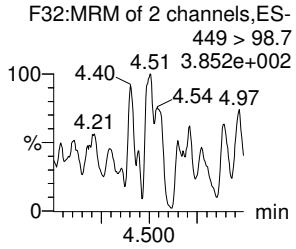
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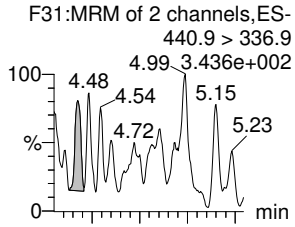


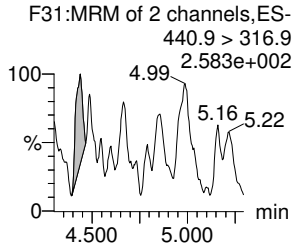
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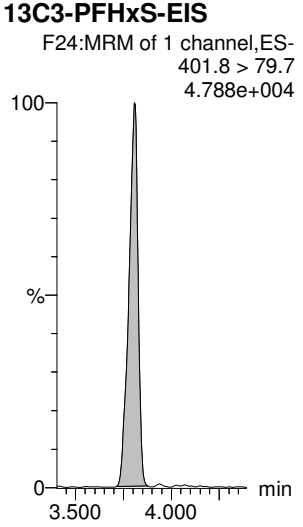


7:3 FTCA

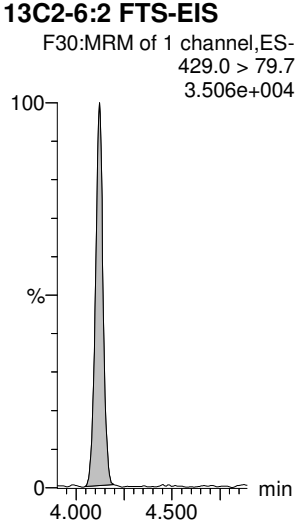




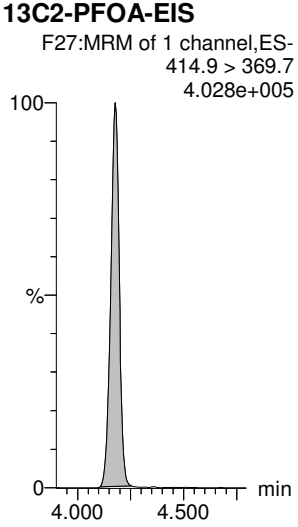
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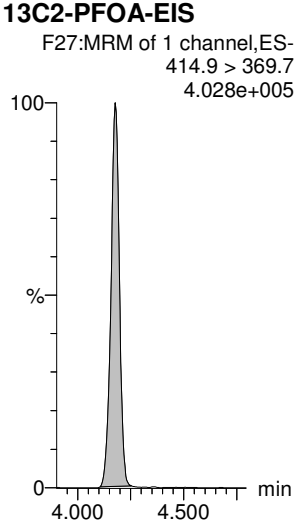
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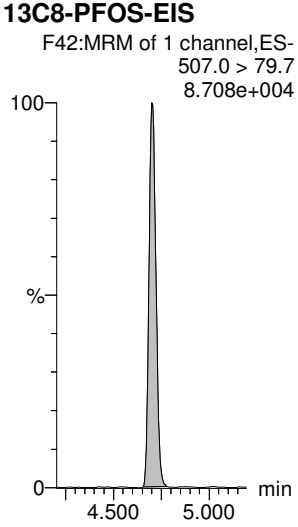
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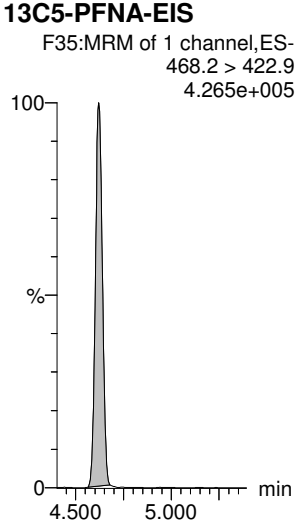
13C2-PFOA-EIS



13C8-PFOS-EIS



13C5-PFNA-EIS

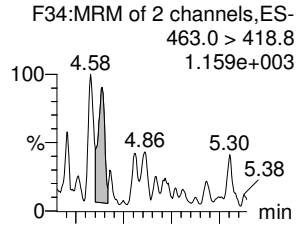


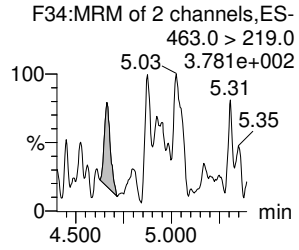
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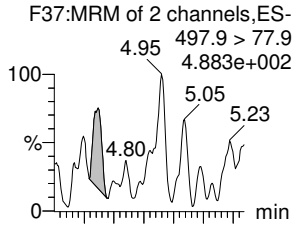
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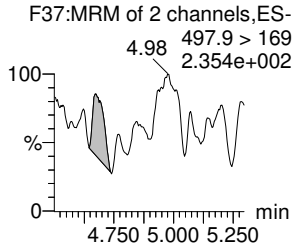
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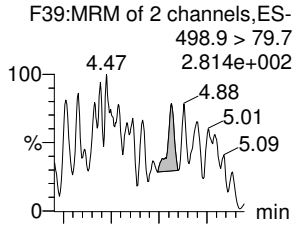


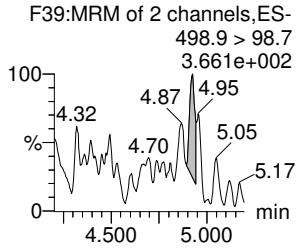
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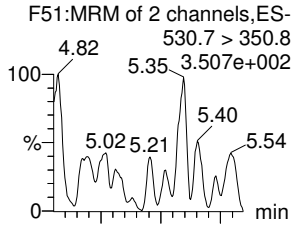


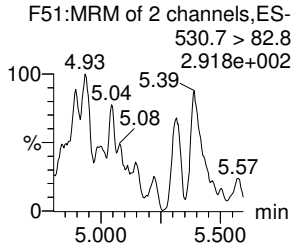
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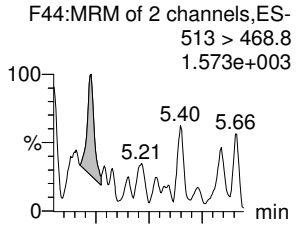


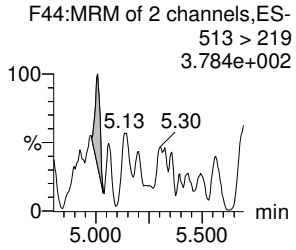
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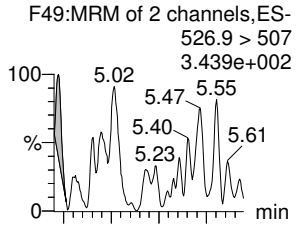


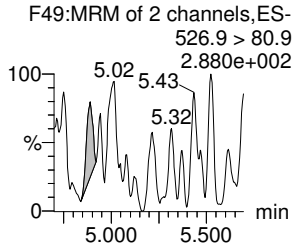
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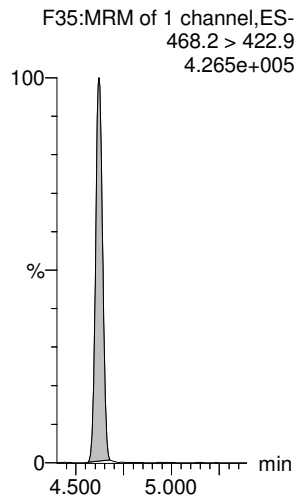


8:2 FTS

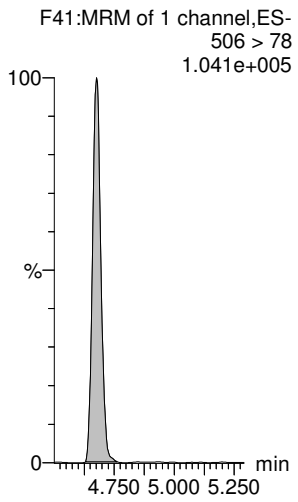




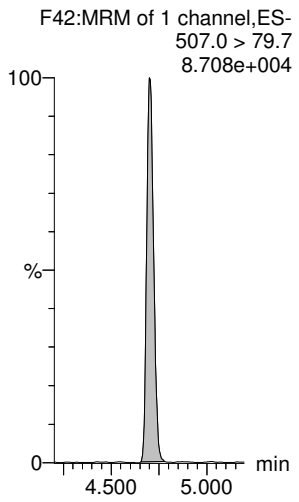
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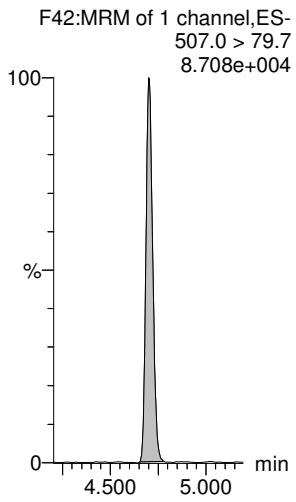
13C8-PFOSA-EIS



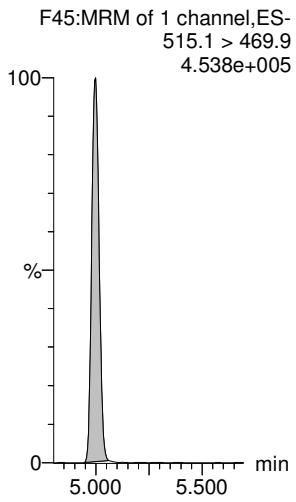
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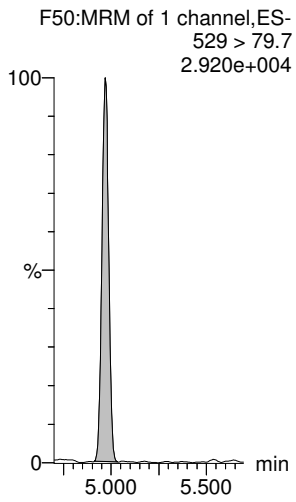
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13C2-PFDA-EIS



13C2-8:2 FTS-EIS

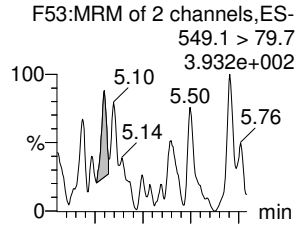


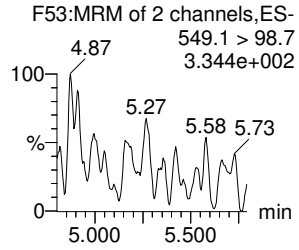
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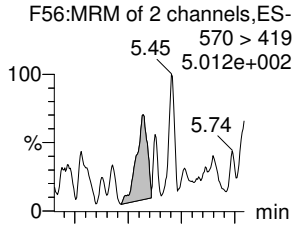
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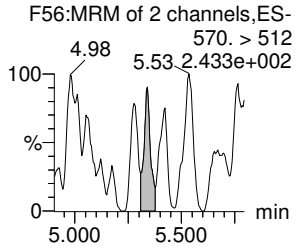
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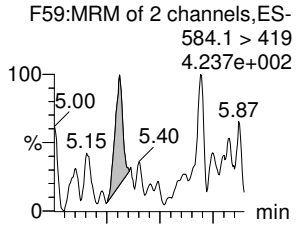


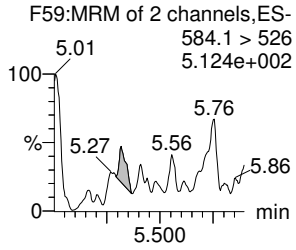
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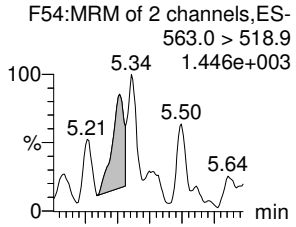


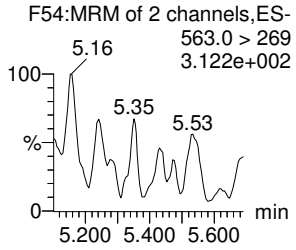
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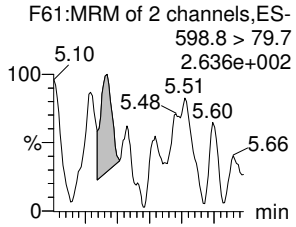


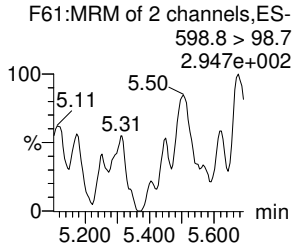
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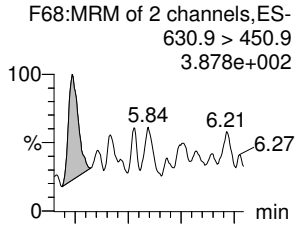


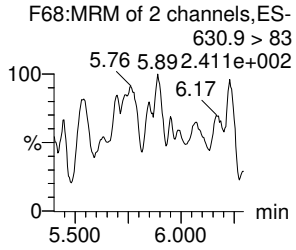
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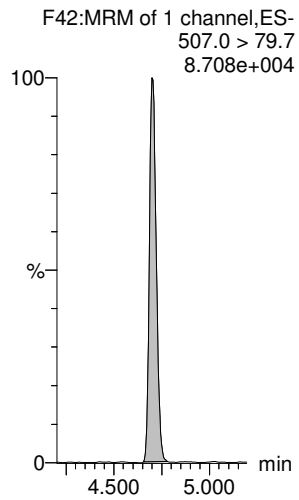


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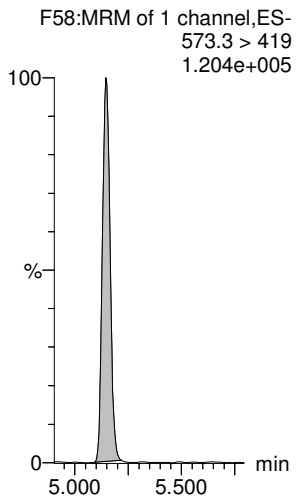




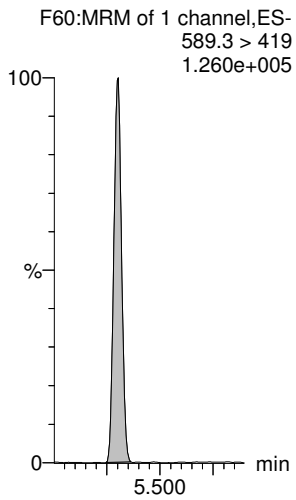
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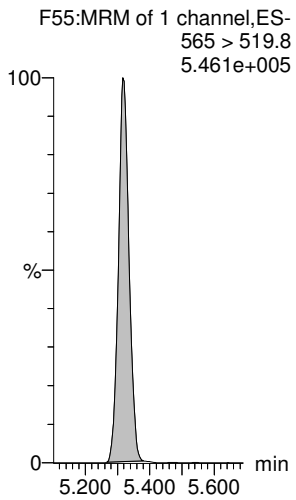
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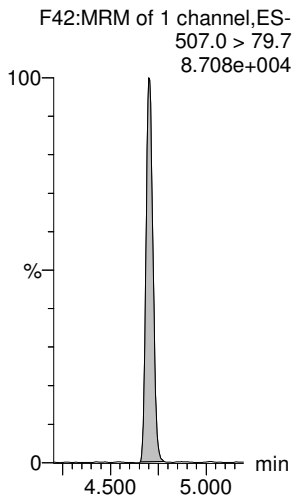
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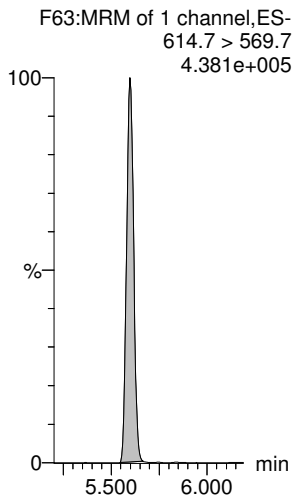
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13C8-PFOS-EIS



13C2-PFDoA-EIS

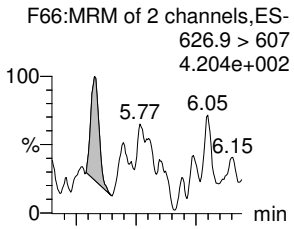


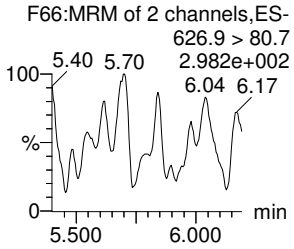
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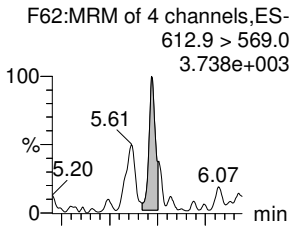
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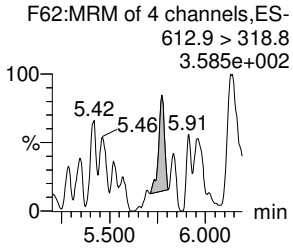
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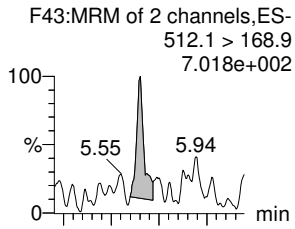


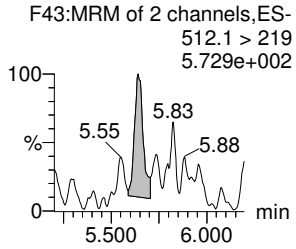
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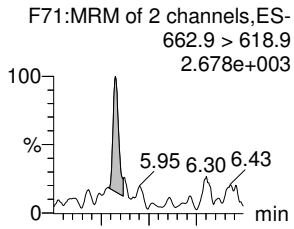


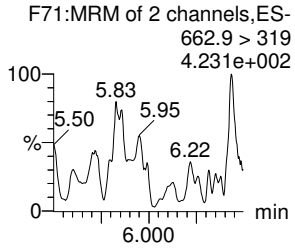
N-MeFOSA



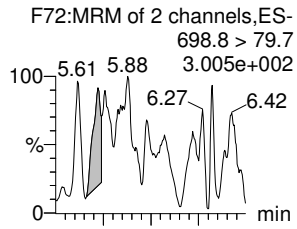


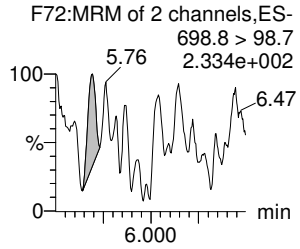
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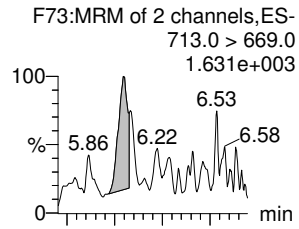


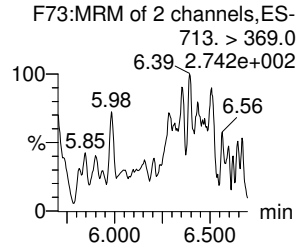
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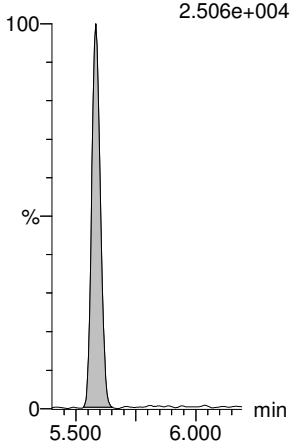


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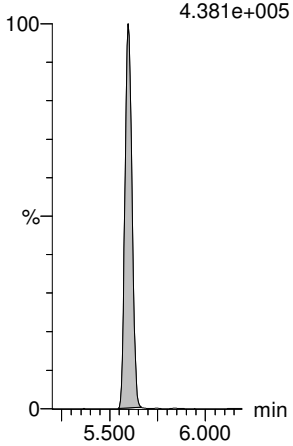




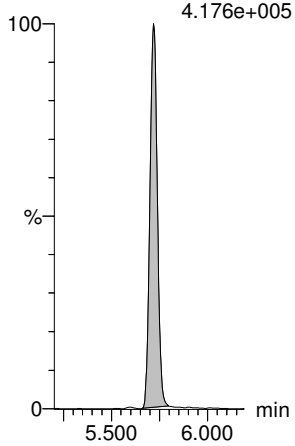
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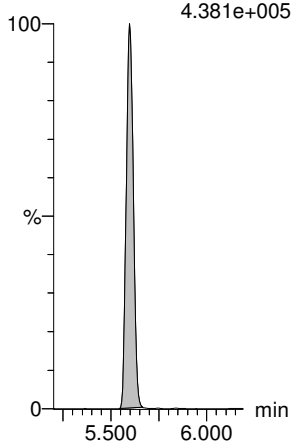
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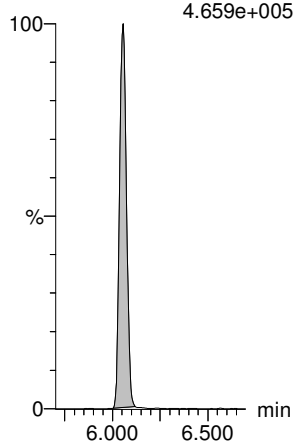
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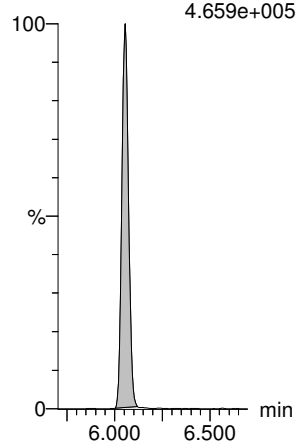
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13C2-PFTeDA-EIS



13C2-PFTeDA-EIS

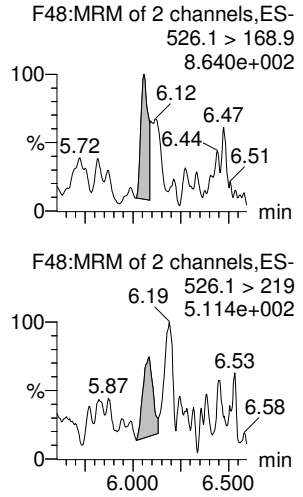


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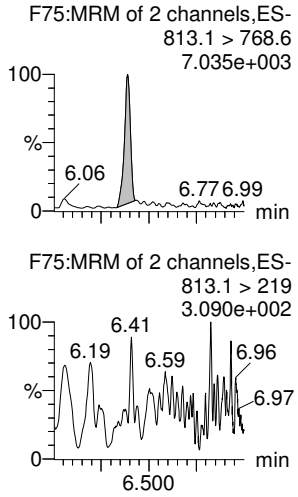
Last Altered: Saturday, February 29, 2020 11:01:47 Pacific Standard Time
Printed: Saturday, February 29, 2020 11:05:27 Pacific Standard Time

Name: 200228P2-13, Date: 28-Feb-2020, Time: 14:51:49, ID: IB, Description: IB

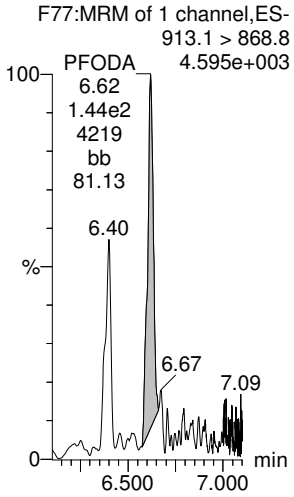
N-EtFOSA



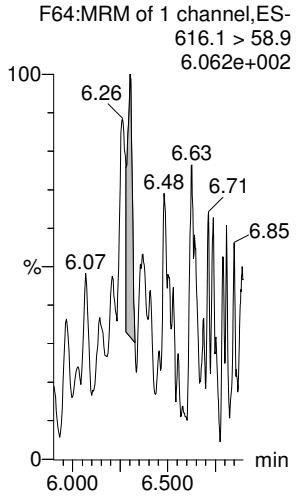
PFHxDA



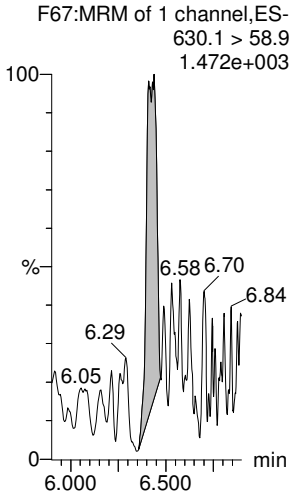
PFODA



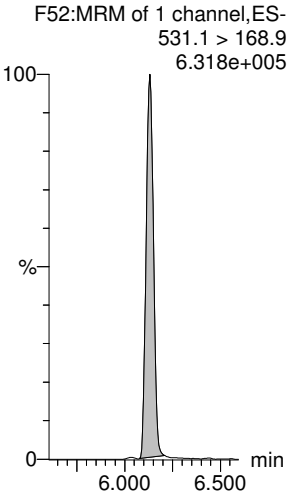
N-MeFOSE



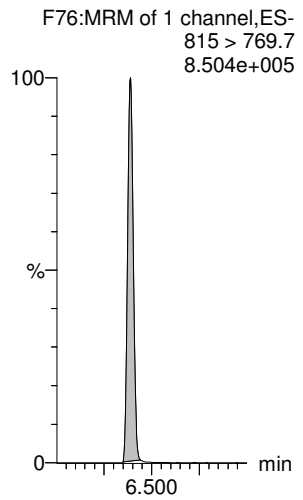
N-EtFOSE



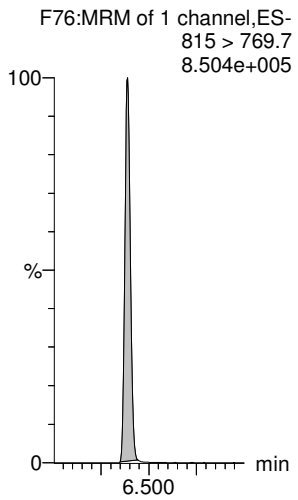
d5-N-ETFOSA-EIS



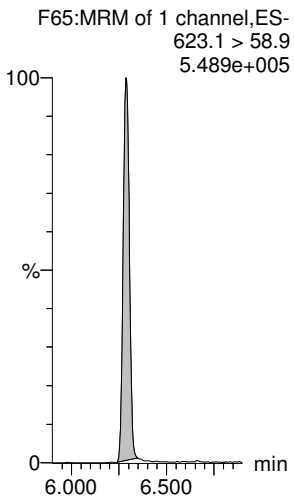
13C2-PFHxDA-EIS



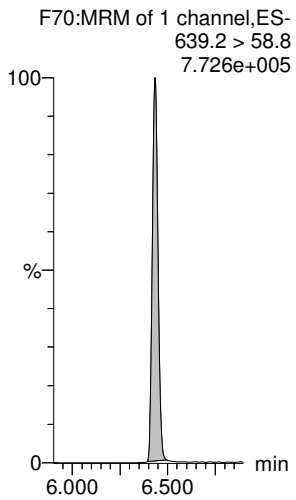
13C2-PFHxDA-EIS



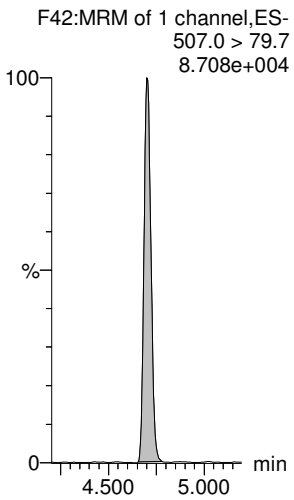
d7-N-MeFOSE-EIS



d9-N-EtFOSE-EIS



13C8-PFOS-EIS

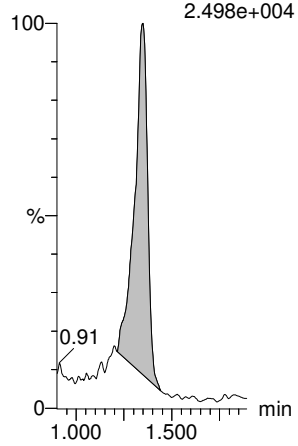


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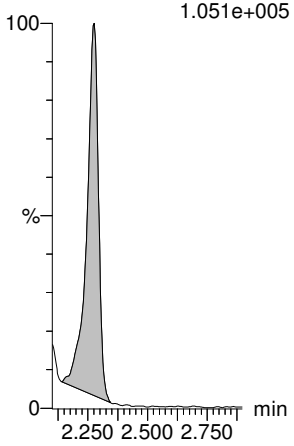
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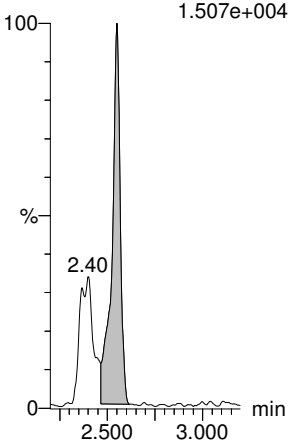
13C3-PFBA-RSD



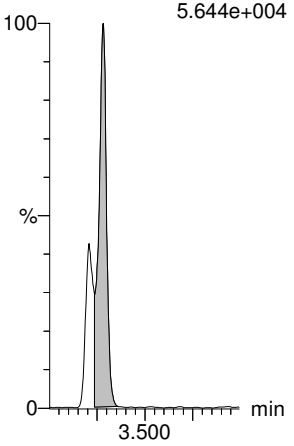
13C3-PFPeA-RSD



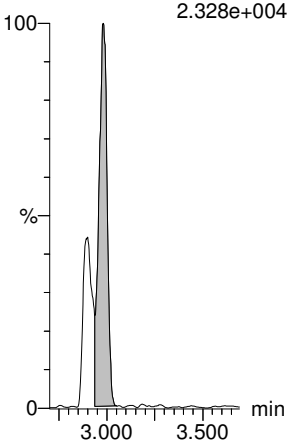
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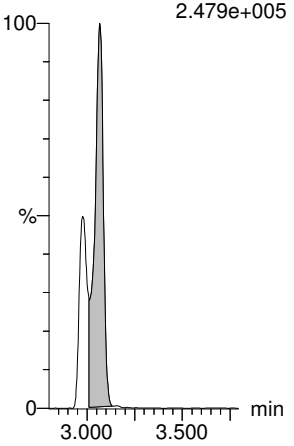
13C3-HFPO-DA-RSD



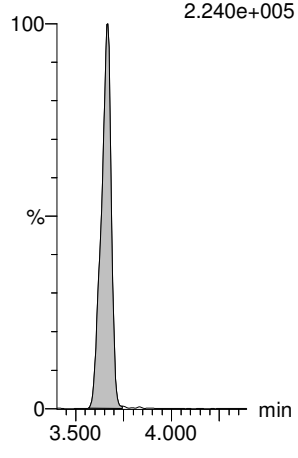
13C2-4:2 FTS-RSD



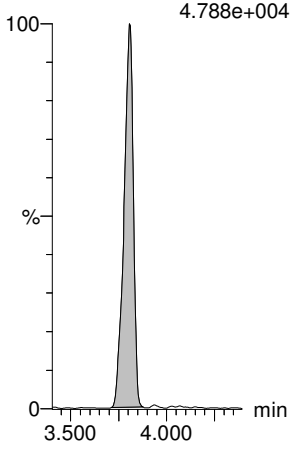
13C2-PFHxA-RSD



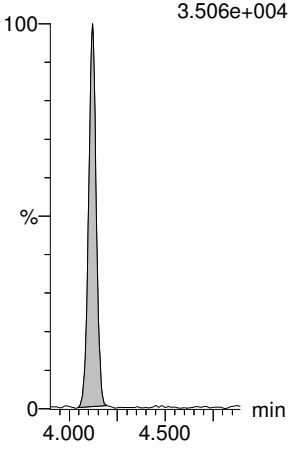
13C4-PFHpA-RSD



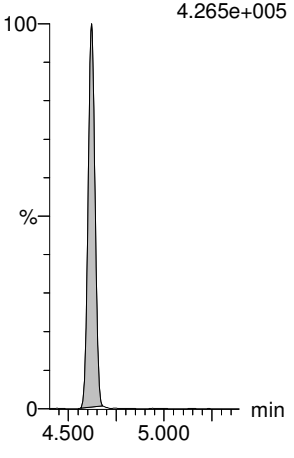
13C3-PFHxS-RSD



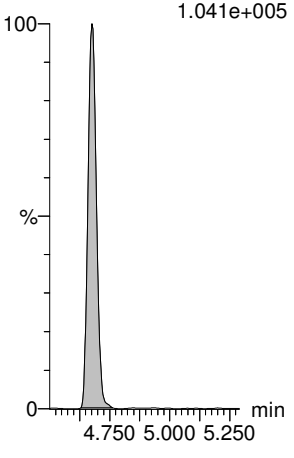
13C2-6:2 FTS-RSD



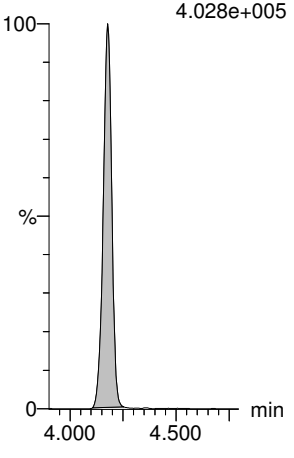
13C5-PFNA-RSD



13C8-PFOSA-RSD



13C2-PFOA-RSD

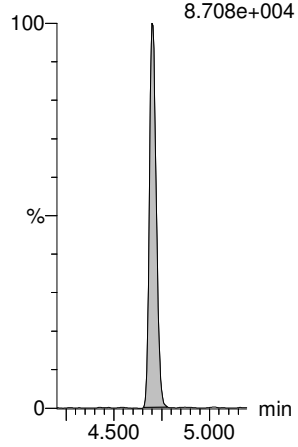


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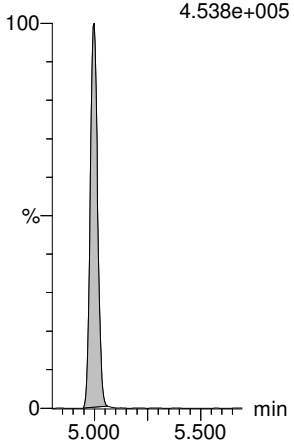
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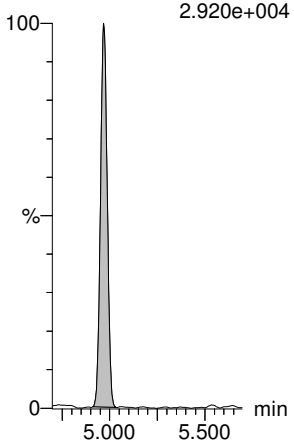
13C8-PFOS-RSD
F42:MRM of 1 channel,ES-
507.0 > 79.7
8.708e+004



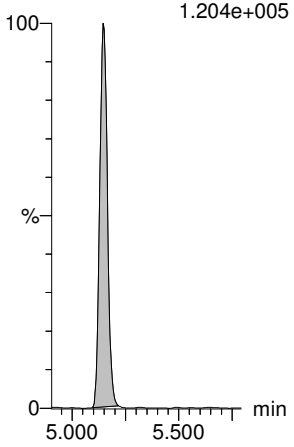
13C2-PFDA-RSD
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.538e+005



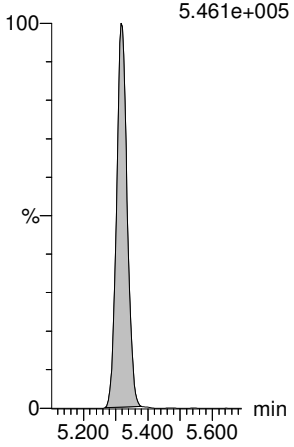
13C2-8:2 FTS-RSD
F50:MRM of 1 channel,ES-
529 > 79.7
2.920e+004



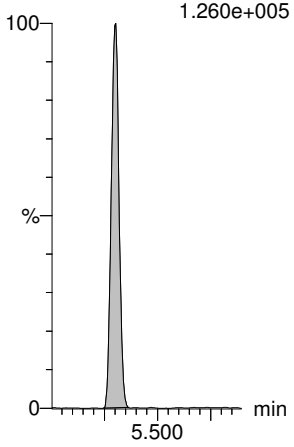
d3-N-MeFOSAA-RSD
F58:MRM of 1 channel,ES-
573.3 > 419
1.204e+005



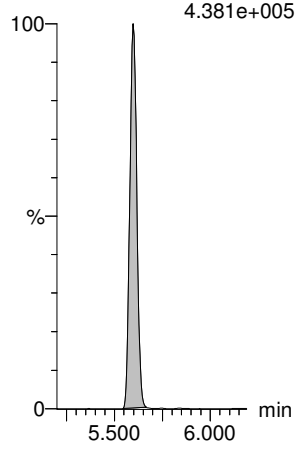
13C2-PFUdA-RSD
F55:MRM of 1 channel,ES-
565 > 519.8
5.461e+005



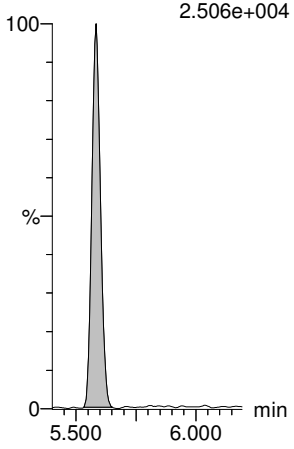
d5-N-EtFOSAA-RSD
F60:MRM of 1 channel,ES-
589.3 > 419
1.260e+005



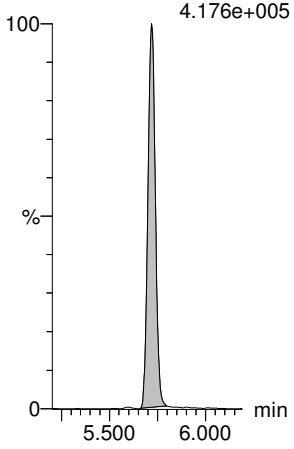
13C2-PFDoA-RSD
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.381e+005



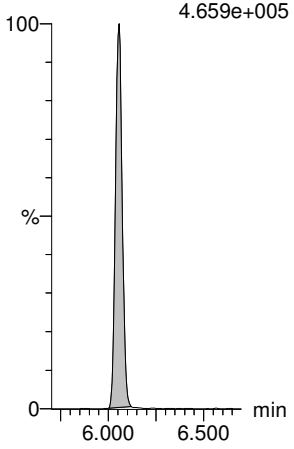
13C2-10:2 FTS-RSD
F69:MRM of 1 channel,ES-
632.9 > 80.0
2.506e+004



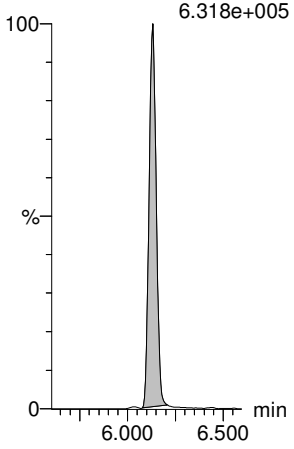
d3-N-MeFOSA-RSD
F46:MRM of 1 channel,ES-
515.2 > 168.9
4.176e+005



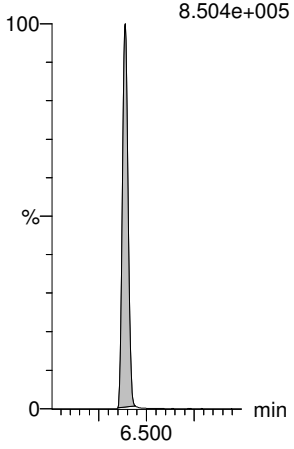
13C2-PFTeDA-RSD
F74:MRM of 2 channels,ES-
715.1 > 669.7
4.659e+005



d5-N-ETFOSA-RSD
F52:MRM of 1 channel,ES-
531.1 > 168.9
6.318e+005



13C2-PFHxDA-RSD
F76:MRM of 1 channel,ES-
815 > 769.7
8.504e+005

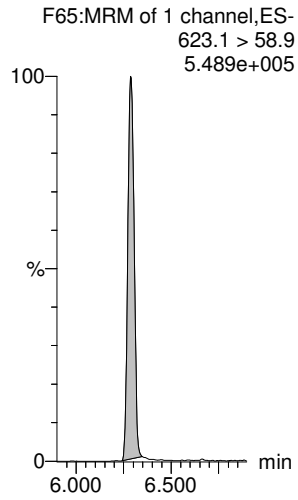


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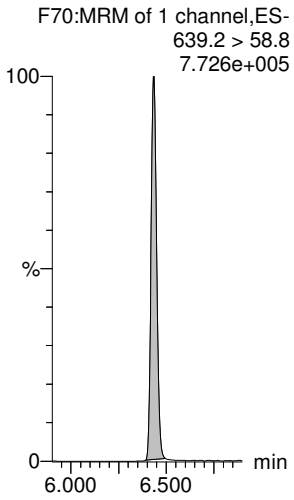
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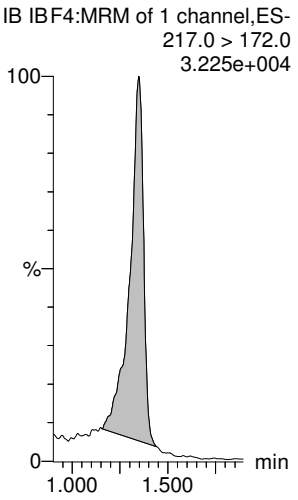
d7-N-MeFOSE-RSD



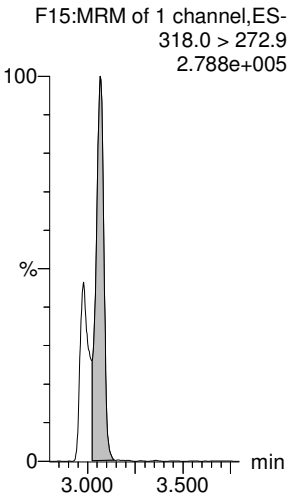
d9-N-EtFOSE-RSD



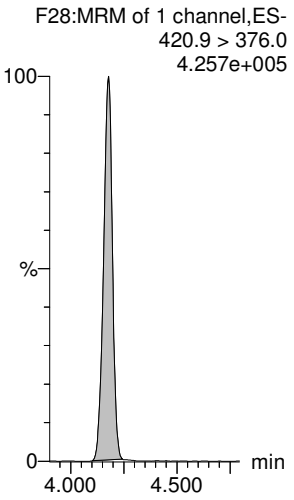
13C4-PFBA



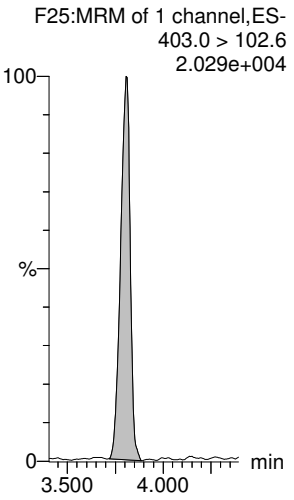
13C5-PFHxA



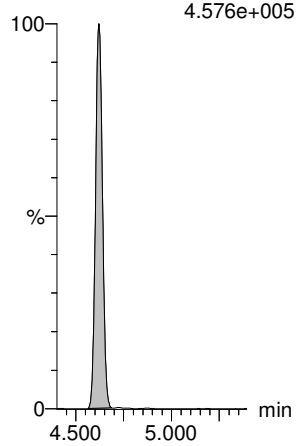
13C8-PFOA



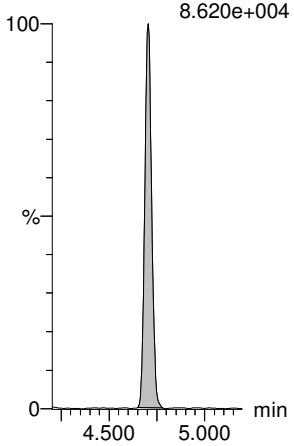
18O2-PFHxS



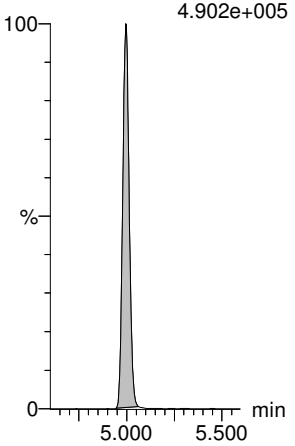
13C9-PFNA



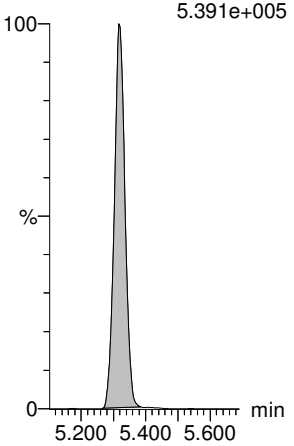
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Untitled

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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	5.015	1782.178	1.00	1.24	0.035				NO		
2	2	PFPrS	248.9 > 79.7		740.304	1.00						NO		YES
3	3	3:3 FTCA	240.9 > 176.9		5750.177	1.00						NO		YES
4	4	PFPeA	263.1 > 218.9	10.206	5750.177	1.00	2.30	0.022				NO		
5	5	PFBS	299.0 > 79.7		740.304	1.00						NO		YES
6	6	4:2 FTS	327.0 > 307		1126.016	1.00						NO		YES
7	47	13C3-PFBA-EIS	216.1 > 171.8	1782.178		1.00	1.35	1782.178	12.500	3.31	26.5	YES		
8	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
9	49	13C3-PFPeA-EIS	266.0 > 221.8	5750.177		1.00	2.28	5750.177	12.500	6.15	49.2	YES		
10	49	13C3-PFPeA-EIS	266.0 > 221.8	5750.177		1.00	2.28	5750.177	12.500	6.15	49.2	YES		
11	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
12	55	13C2-4:2 FTS-EIS	329.0 >79.7	1126.016		1.00	2.98	1126.016	12.500	8.48	67.9	NO		
13	-1													
14	7	PFHxA	313.0 > 269.0	83.727	12825.148	1.00	3.45	0.082				NO		YES
15	8	PFPeS	349.>79.7	6.891	740.304	1.00	3.11	0.116				NO	1.266	NO
16	9	HFPO-DA	285.1 > 168.9		2589.484	1.00						NO		YES
17	10	5:3 FTCA	340.9 > 236.9		13378.766	1.00						NO		YES
18	11	PFHpA	363.0 > 318.9	41.243	13378.766	1.00	3.62	0.039				NO		YES
19	12	ADONA	376.8 > 250.9	79.272	13378.766	1.00	3.72	0.074				NO	3.419	NO
20	57	13C2-PFHxA-EIS	315.0 > 270.0	12825.148		1.00	3.07	12825.148	12.500	8.10	64.8	NO		
21	51	13C3-PFBS-EIS	302.0 > 98.8	740.304		1.00	2.55	740.304	12.500	7.72	61.8	NO		
22	53	13C3-HFPO-DA-EIS	287.0 > 168.9	2589.484		1.00	3.28	2589.484	12.500	8.09	64.7	NO		
23	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
24	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
25	59	13C4-PFHpA-EIS	367.2 > 321.8	13378.766		1.00	3.67	13378.766	12.500	12.8	102.6	NO		
26	-1													
27	13	L-PFHxS	398.9 > 79.7		2635.958	1.00						NO		YES
28	15	6:2 FTS	427.0 > 407	5.891	1575.977	1.00	4.19	0.047				NO	0.559	YES
29	16	L-PFOA	412.8 > 368.9	85.615	18192.574	1.00	4.17	0.059				NO	2.641	NO
30	18	PFecHS	460.8 > 381.0	7.885	18192.574	1.00	4.23	0.005		0.0411		NO	1.152	YES
31	19	PFHpS	449.0 > 79.7		3555.921	1.00						NO		YES
32	20	7:3 FTCA	440.9 > 336.9	7.956	17837.137	1.00	4.42	0.006		0.170		NO	1.092	NO
33	61	13C3-PFHxS-EIS	401.8 > 79.7	2635.958		1.00	3.81	2635.958	12.500	12.5	100.0	NO		
34	63	13C2-6:2 FTS-EIS	429.0 >79.7	1575.977		1.00	4.12	1575.977	12.500	12.9	103.0	NO		
35	69	13C2-PFOA-EIS	414.9 > 369.7	18192.574		1.00	4.18	18192.574	12.500	12.0	95.7	NO		
36	69	13C2-PFOA-EIS	414.9 > 369.7	18192.574		1.00	4.18	18192.574	12.500	12.0	95.7	NO		

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Name: 200228P2-13, Date: 28-Feb-2020, Time: 14:51:49, 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	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
38	65	13C5-PFNA-EIS	468.2 > 422.9	17837.137		1.00	4.62	17837.137	12.500	12.8	102.1	NO		
39	-1													
40	21	PFNA	463.0 > 418.8	39.889	17837.137	1.00	4.64	0.028				NO	4.725	NO
41	22	PFOSA	497.9 > 77.9	11.734	4148.417	1.00	4.68	0.035				NO	2.003	YES
42	23	L-PFOS	498.9 > 79.7	5.464	3555.921	1.00	4.82	0.019		0.0469		NO	0.670	YES
43	25	9Cl-PF30NS	530.7 > 350.8		3555.921	1.00						NO		YES
44	26	PFDA	513 > 468.8	44.669	17897.027	1.00	4.98	0.031				NO	7.086	NO
45	27	8:2 FTS	526.9 > 507	6.191	1193.054	1.00	4.72	0.065		0.00832		NO	1.026	YES
46	65	13C5-PFNA-EIS	468.2 > 422.9	17837.137		1.00	4.62	17837.137	12.500	12.8	102.1	NO		
47	67	13C8-PFOSA-EIS	506 > 78	4148.417		1.00	4.68	4148.417	12.500	13.2	105.3	NO		
48	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
49	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
50	73	13C2-PFDA-EIS	515.1 > 469.9	17897.027		1.00	5.00	17897.027	12.500	11.4	91.3	NO		
51	75	13C2-8:2 FTS-EIS	529 > 79.7	1193.054		1.00	4.97	1193.054	12.500	13.8	110.5	NO		
52	-1													
53	28	PFNS	549.1 > 79.7	7.344	3555.921	1.00	5.05	0.026		0.0263		NO		YES
54	29	L-MeFOSAA	570 > 419	18.215	4927.294	1.00	5.32	0.046				NO	2.369	NO
55	31	L-EtFOSAA	584.1 > 419	14.159	5275.209	1.00	5.31	0.034		0.0922		NO	2.828	YES
56	33	PFUdA	563.0 > 518.9	41.826	20550.580	1.00	5.31	0.025				NO		YES
57	34	PFDS	598.8 > 79.7	7.570	3555.921	1.00	5.27	0.027		0.0196		NO		YES
58	35	11Cl-PF30UdS	630.9 > 450.9	15.881	18249.848	1.00	5.49	0.011				NO		YES
59	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
60	77	d3-N-MeFOSAA-EIS	573.3 > 419	4927.294		1.00	5.14	4927.294	12.500	11.7	93.7	NO		
61	81	d5-N-EtFOSAA-EIS	589.3 > 419	5275.209		1.00	5.30	5275.209	12.500	11.1	88.5	NO		
62	79	13C2-PFUdA-EIS	565 > 519.8	20550.580		1.00	5.32	20550.580	12.500	11.3	90.8	NO		
63	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
64	83	13C2-PFDoA-EIS	614.7 > 569.7	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
65	-1													
66	36	10:2 FTS	626.9 > 607	12.419	1020.376	1.00	5.58	0.152		0.0846		NO		YES
67	37	PFDoA	612.9 > 569.0	140.161	18249.848	1.00	5.72	0.096		0.0593		NO	15.754	YES
68	38	N-MeFOSA	512.1 > 168.9	27.066	18102.660	1.00	5.65	0.223				NO	1.022	NO
69	39	PFTrDA	662.9 > 618.9	75.651	18249.848	1.00	5.82	0.052				NO		YES
70	40	PFDoS	698.8 > 79.7	9.840	18944.115	1.00	5.72	0.006				NO	1.325	NO
71	41	PFTeDA	713.0 > 669.0	75.225	18944.115	1.00	6.05	0.050				NO		YES
72	85	13C2-10:2 FTS-EIS	632.9 > 80.0	1020.376		1.00	5.58	1020.376	12.500	14.3	114.0	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	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
74	87	d3-N-MeFOSA-EIS	515.2 > 168.9	18102.660		1.00	5.72	18102.660	149.200	143	95.9	NO		
75	83	13C2-PFDoA-EIS	614.7 > 569.7	18249.848		1.00	5.60	18249.848	12.500	12.1	97.1	NO		
76	89	13C2-PFTeDA-EIS	715.1 > 669.7	18944.115		1.00	6.06	18944.115	12.500	12.0	96.2	NO		
77	89	13C2-PFTeDA-EIS	715.1 > 669.7	18944.115		1.00	6.06	18944.115	12.500	12.0	96.2	NO		
78	-1													
79	42	N-EtFOSA	526.1 > 168.9	33.433	27158.578	1.00	6.06	0.184		0.197		NO	1.862	NO
80	43	PFHxDA	813.1 > 768.6	242.782	28228.824	1.00	6.39	0.108				NO		YES
81	44	PFODA	913.1 > 868.8	143.659	28228.824	1.00	6.62	0.064		0.0383		NO		
82	45	N-MeFOSE	616.1 > 58.9	11.728	20182.398	1.00	6.30	0.087				NO		
83	46	N-EtFOSE	630.1 > 58.9	76.697	25715.291	1.00	6.44	0.445				NO		
84	91	d5-N-ETFOSA-EIS	531.1 > 168.9	27158.578		1.00	6.13	27158.578	149.200	145	97.3	NO		
85	93	13C2-PFHxDA-EIS	815 > 769.7	28228.824		1.00	6.39	28228.824	12.500	10.9	87.3	NO		
86	93	13C2-PFHxDA-EIS	815 > 769.7	28228.824		1.00	6.39	28228.824	12.500	10.9	87.3	NO		
87	95	d7-N-MeFOSE-EIS	623.1 > 58.9	20182.398		1.00	6.29	20182.398	149.200	135	90.6	NO		
88	97	d9-N-EtFOSE-EIS	639.2 > 58.8	25715.291		1.00	6.43	25715.291	149.200	142	95.5	NO		
89	71	13C8-PFOS-EIS	507.0 > 79.7	3555.921		1.00	4.70	3555.921	12.500	13.0	104.3	NO		
90	-1													
91	48	13C3-PFBA-RSD	216.1 > 171.8	1782.178	2511.324	1.00	1.35	8.871	12.500	11.0	88.3	NO		
92	50	13C3-PFPeA-RSD	266.0 > 221.8	5750.177	12951.961	1.00	2.28	5.550	12.500	9.55	76.4	NO		
93	52	13C3-PFBS-RSD	302.0 > 98.8	740.304	1163.393	1.00	2.55	7.954	12.500	7.20	57.6	NO		
94	54	13C3-HFPO-DA-RSD	287.0 > 168.9	2589.484	12951.961	1.00	3.28	2.499	12.500	12.5	100.3	NO		
95	56	13C2-4:2 FTS-RSD	329.0 >79.7	1126.016	1163.393	1.00	2.98	12.098	12.500	8.53	68.3	NO		
96	58	13C2-PFHxA-RSD	315.0 > 270.0	12825.148	12951.961	1.00	3.07	12.378	12.500	12.8	102.4	NO		
97	60	13C4-PFHpA-RSD	367.2 > 321.8	13378.766	12951.961	1.00	3.67	12.912	12.500	19.4	155.0	YES		
98	62	13C3-PFHxS-RSD	401.8 > 79.7	2635.958	1163.393	1.00	3.81	28.322	12.500	11.4	91.4	NO		
99	64	13C2-6:2 FTS-RSD	429.0 >79.7	1575.977	3581.447	1.00	4.12	5.500	12.500	12.6	100.6	NO		
100	66	13C5-PFNA-RSD	468.2 > 422.9	17837.137	19049.443	1.00	4.62	11.705	12.500	12.6	100.6	NO		
101	68	13C8-PFOSA-RSD	506 > 78	4148.417	20450.689	1.00	4.68	2.536	12.500	13.3	106.3	NO		
102	70	13C2-PFOA-RSD	414.9 > 369.7	18192.574	20122.490	1.00	4.18	11.301	12.500	12.2	97.8	NO		
103	-1													
104	72	13C8-PFOS-RSD	507.0 > 79.7	3555.921	3581.447	1.00	4.70	12.411	12.500	13.4	106.9	NO		
105	74	13C2-PFDA-RSD	515.1 > 469.9	17897.027	19159.363	1.00	5.00	11.676	12.500	11.9	94.8	NO		
106	76	13C2-8:2 FTS-RSD	529 > 79.7	1193.054	3581.447	1.00	4.97	4.164	12.500	11.6	92.9	NO		
107	78	d3-N-MeFOSAA-RSD	573.3 > 419	4927.294	20450.689	1.00	5.14	3.012	12.500	12.8	102.1	NO		
108	80	13C2-PFUdA-RSD	565 > 519.8	20550.580	20450.689	1.00	5.32	12.561	12.500	12.2	97.7	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	5275.209	20450.689	1.00	5.30	3.224	12.500	12.4	99.1	NO		
110	84	13C2-PFDoA-RSD	614.7 > 569.7	18249.848	19159.363	1.00	5.60	11.907	12.500	12.4	99.5	NO		
111	86	13C2-10:2 FTS-RSD	632.9 > 80.0	1020.376	3581.447	1.00	5.58	3.561	12.500	12.6	100.5	NO		
112	88	d3-N-MeFOSA-RSD	515.2 > 168.9	18102.660	20450.689	1.00	5.72	11.065	149.200	144	96.7	NO		
113	90	13C2-PFTeDA-RSD	715.1 > 669.7	18944.115	20450.689	1.00	6.06	11.579	12.500	12.2	97.8	NO		
114	92	d5-N-ETFOSA-RSD	531.1 > 168.9	27158.578	20450.689	1.00	6.13	16.600	149.200	151	100.9	NO		
115	94	13C2-PFHxDA-RSD	815 > 769.7	28228.824	20450.689	1.00	6.39	17.254	12.500	11.9	95.2	NO		
116	-1													
117	96	d7-N-MeFOSE-RSD	623.1 > 58.9	20182.398	20450.689	1.00	6.29	12.336	149.200	141	94.2	NO		
118	98	d9-N-EtFOSE-RSD	639.2 > 58.8	25715.291	20450.689	1.00	6.43	15.718	149.200	151	101.0	NO		
119	99	13C4-PFBA	217.0 > 172.0	2511.324	2511.324	1.00	1.35	12.500	12.500	12.5	100.0	NO		
120	1...	13C5-PFHxA	318.0 > 272.9	12951.961	12951.961	1.00	3.07	12.500	12.500	12.5	100.0	NO		
121	1...	13C8-PFOA	420.9 > 376.0	20122.490	20122.490	1.00	4.18	12.500	12.500	12.5	100.0	NO		
122	1...	18O2-PFHxS	403.0 > 102.6	1163.393	1163.393	1.00	3.81	12.500	12.500	12.5	100.0	NO		
123	1...	13C9-PFNA	472.2 > 426.9	19049.443	19049.443	1.00	4.62	12.500	12.500	12.5	100.0	NO		
124	1...	13C4-PFOS	503 > 79.7	3581.447	3581.447	1.00	4.70	12.500	12.500	12.5	100.0	NO		
125	1...	13C6-PFDA	519.1 > 473.7	19159.363	19159.363	1.00	4.99	12.500	12.500	12.5	100.0	NO		
126	1...	13C7-PFUdA	570.1 > 524.8	20450.689	20450.689	1.00	5.32	12.500	12.500	12.5	100.0	NO		

TUNE CHECKS

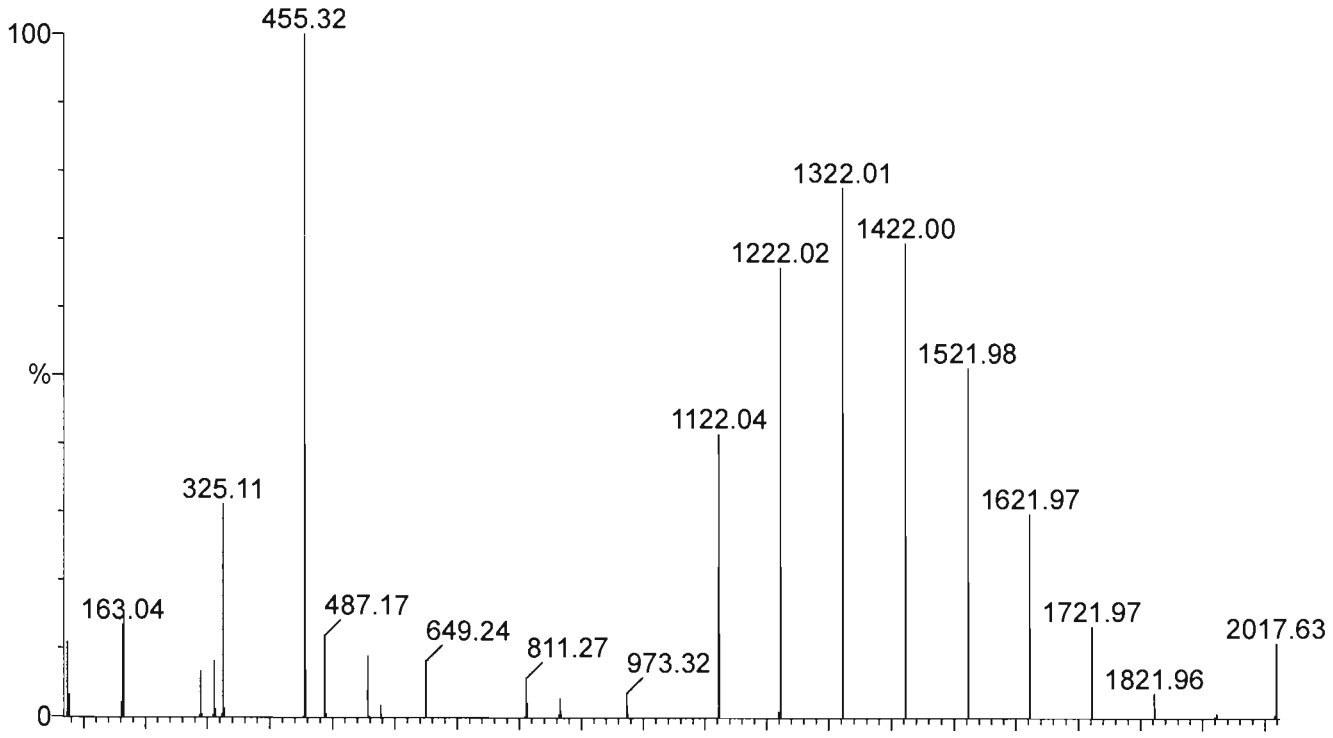
Calibration Verification Report - MS1 Static

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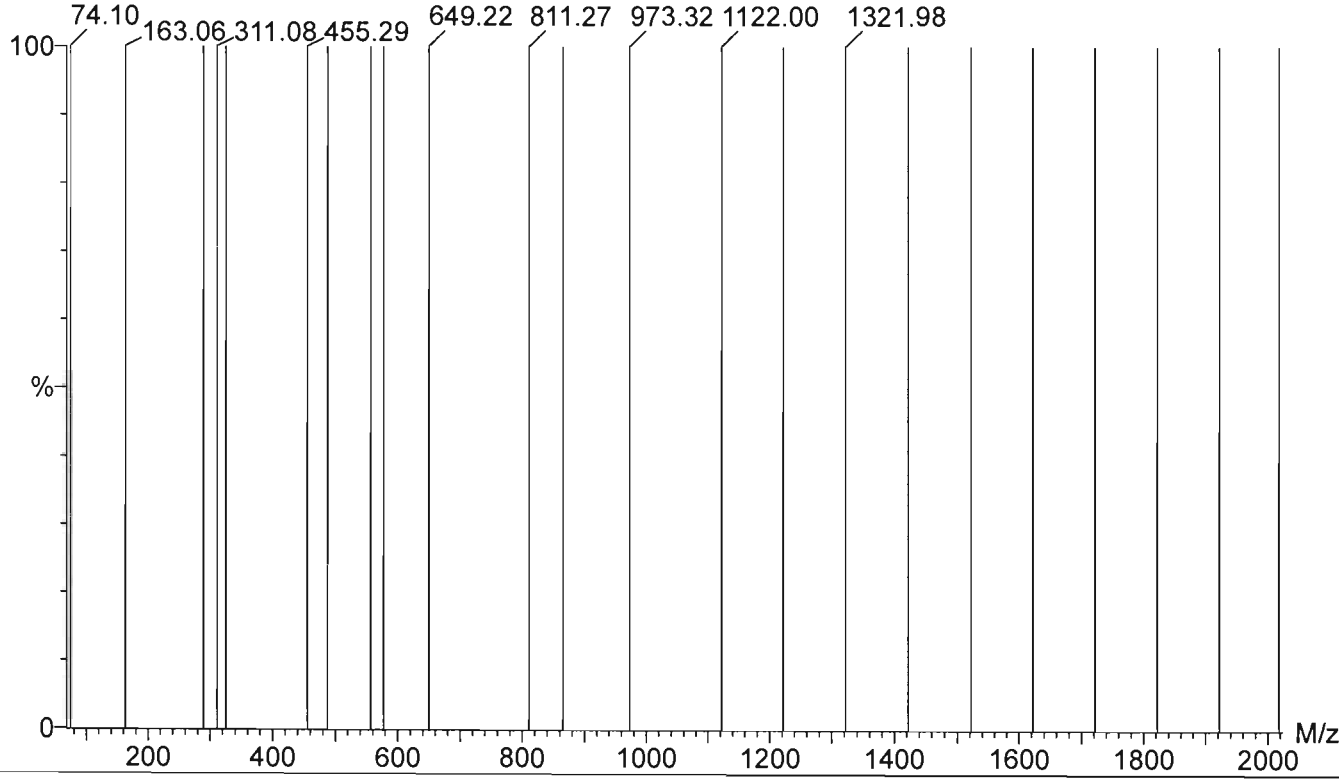
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22 matches of 23 tested references

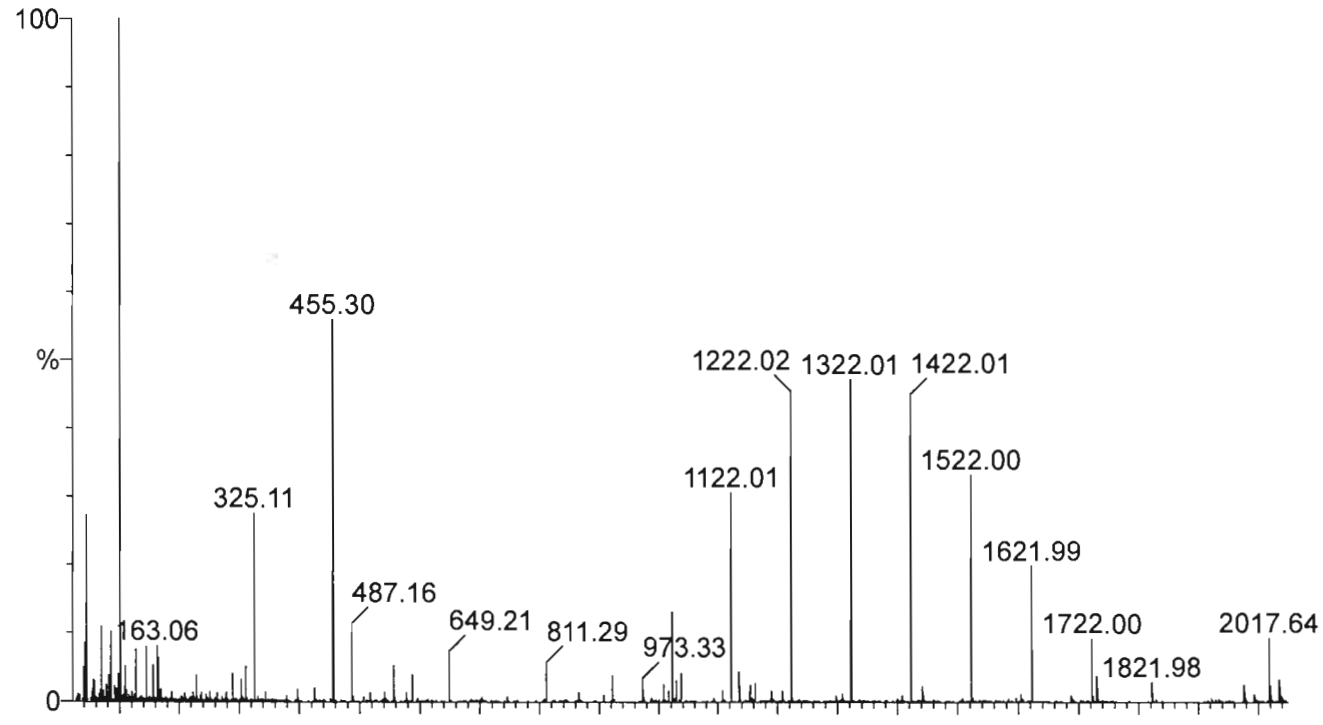


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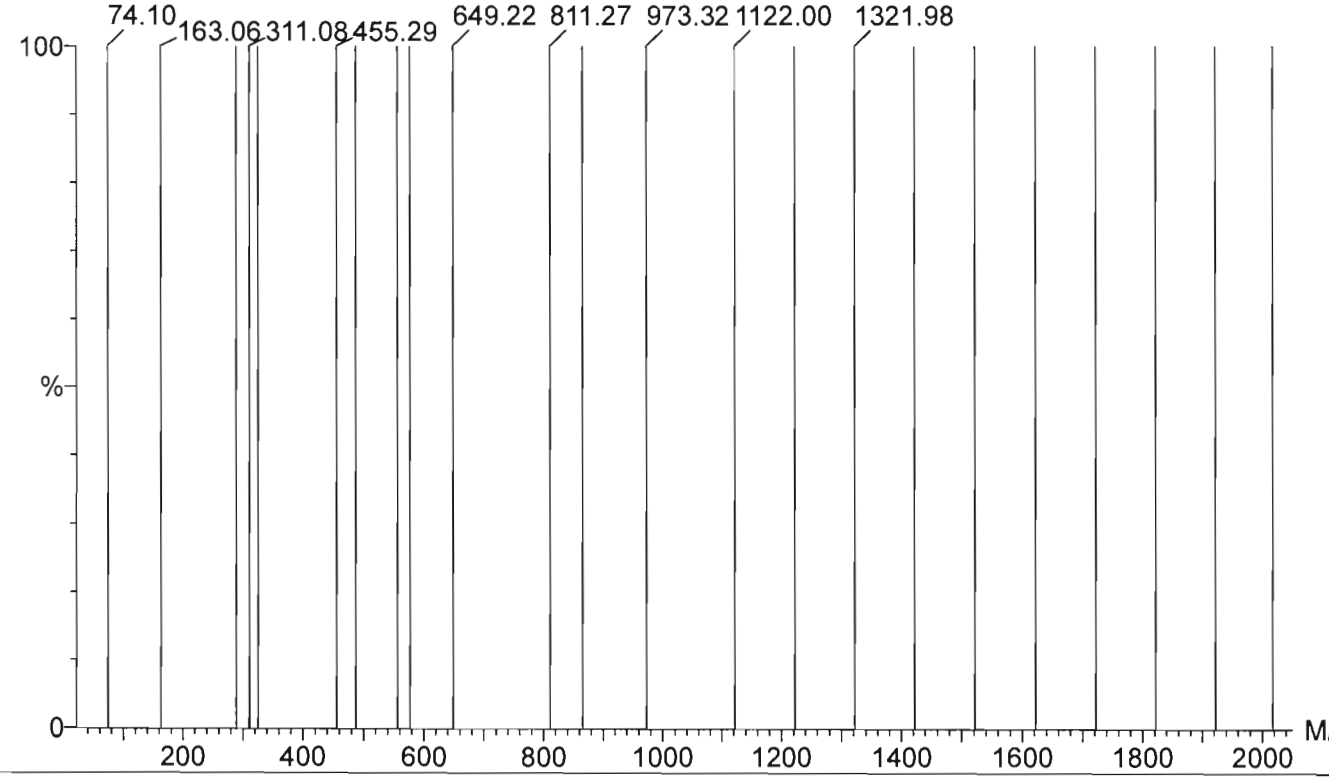
Mean residual = 0.0172 amu



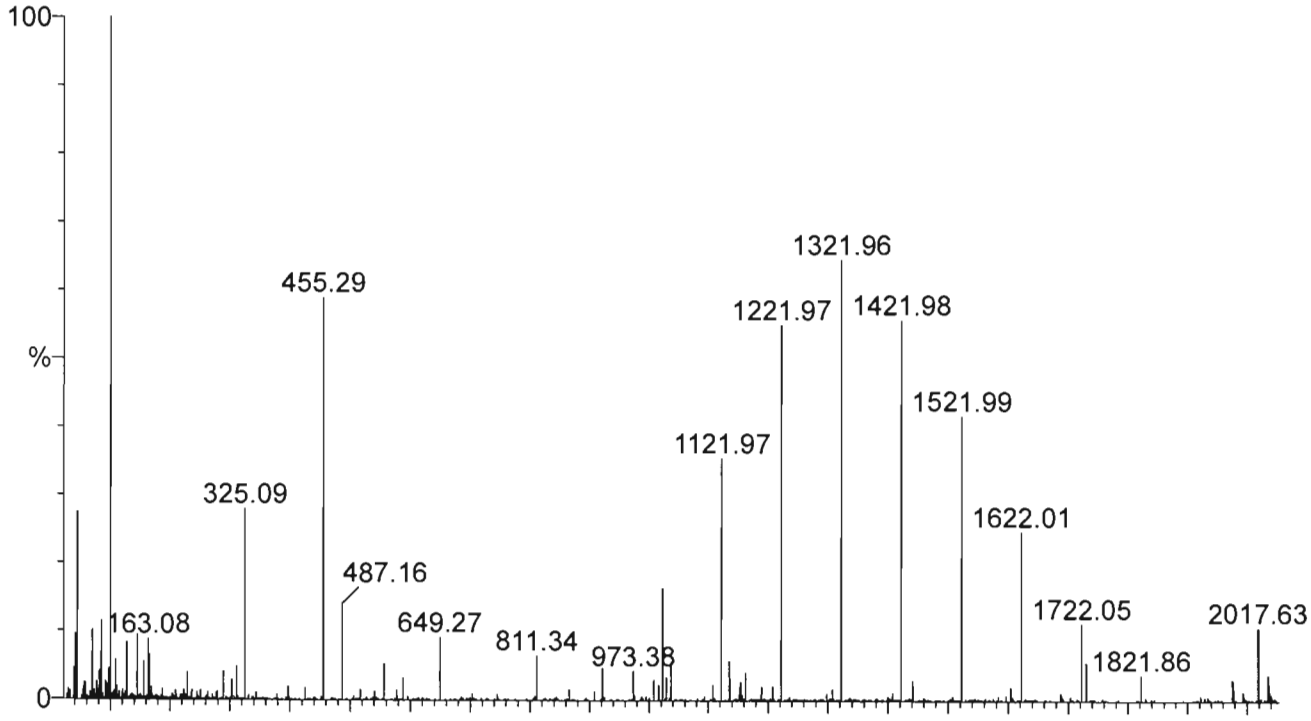
Data file: SCNMS1V - Calibrated 23 matches of 23 tested references



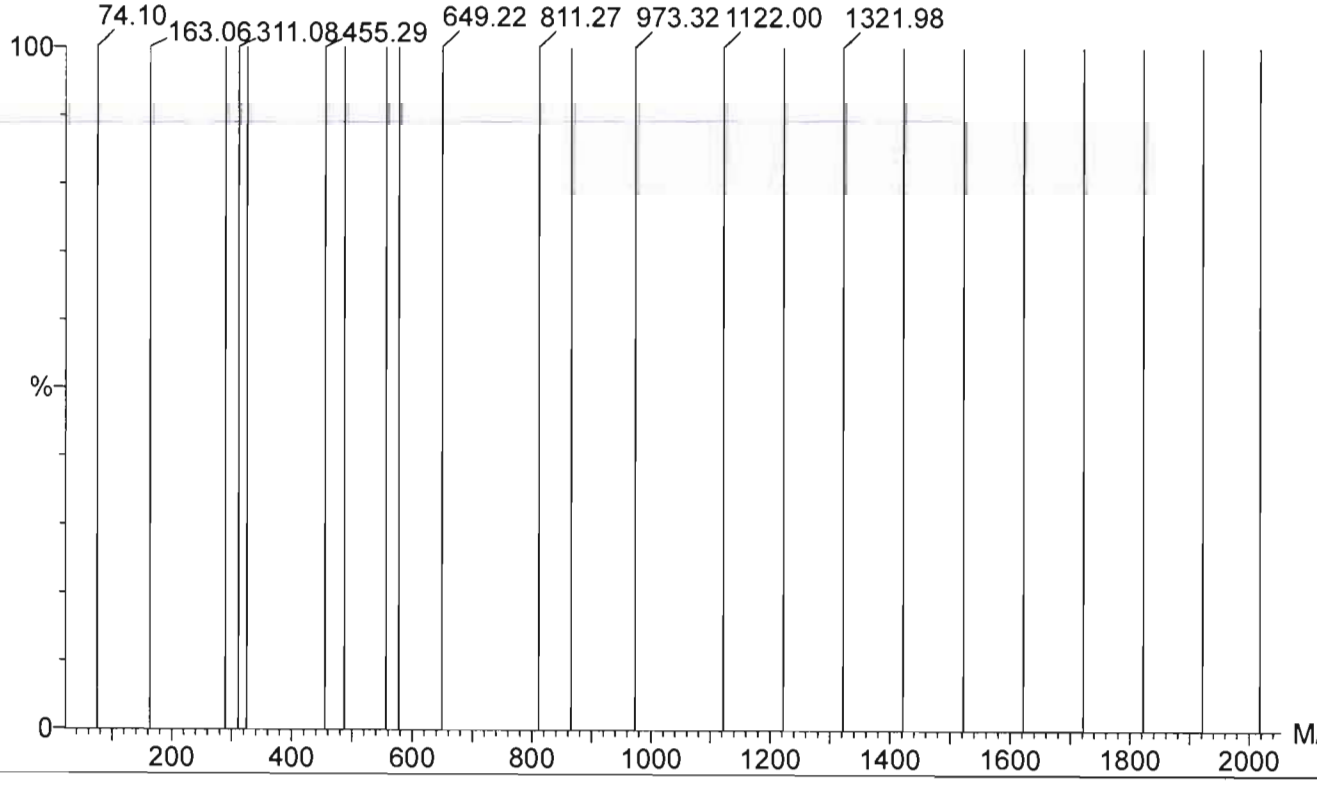
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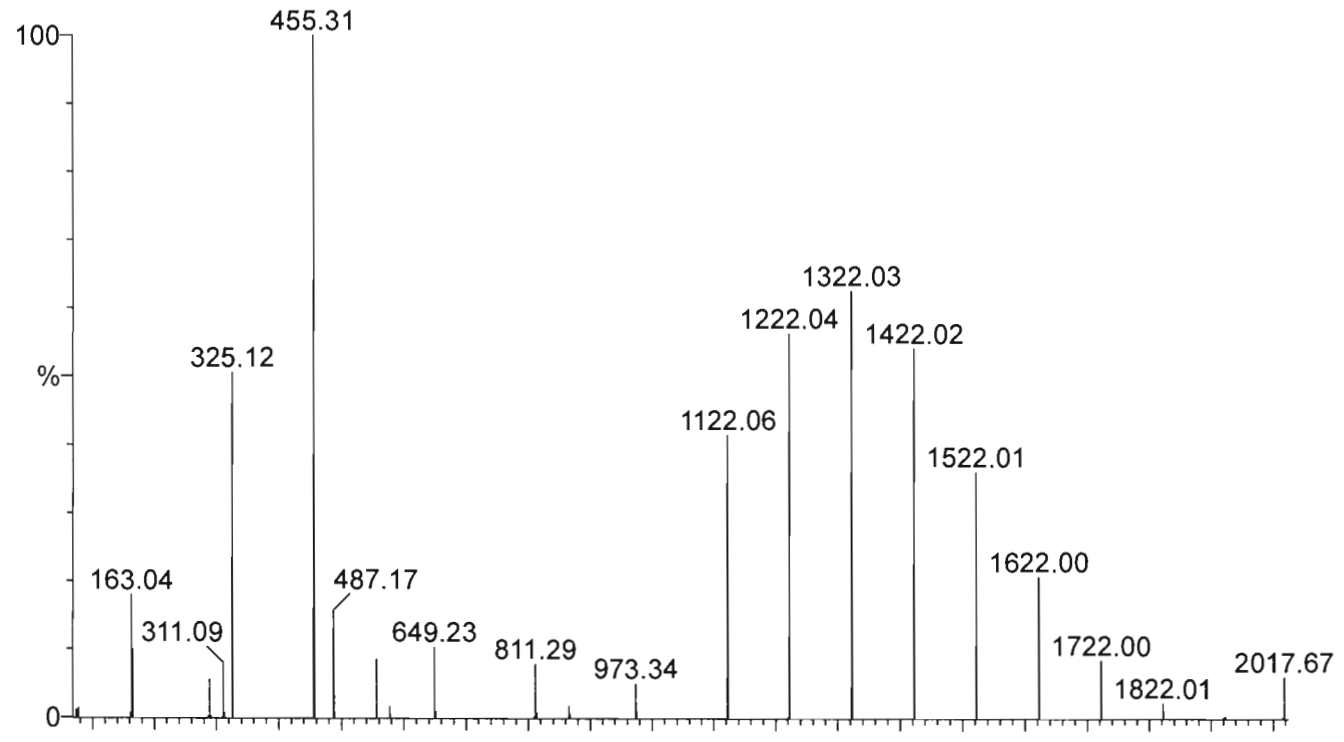
Data file: FASTMS1V - Calibrated 23 matches of 23 tested references



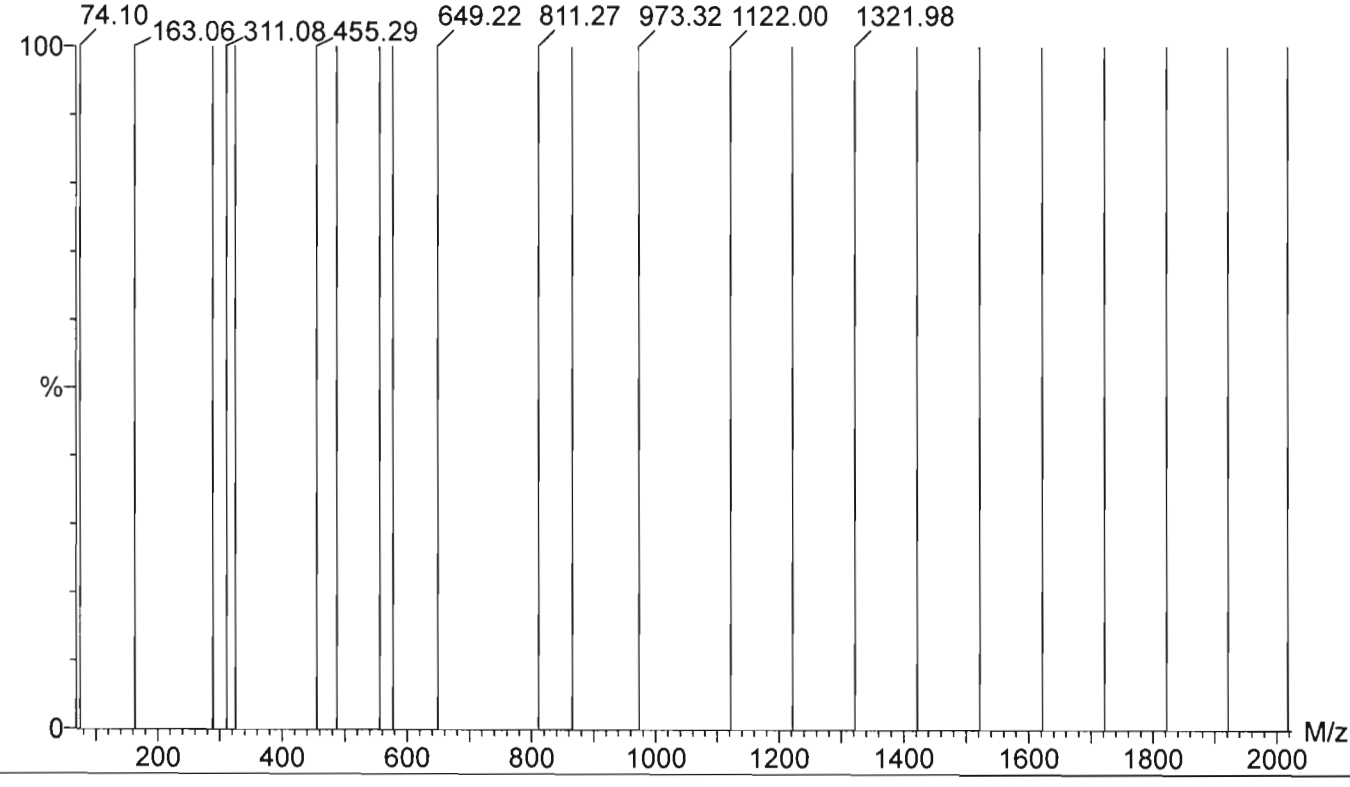
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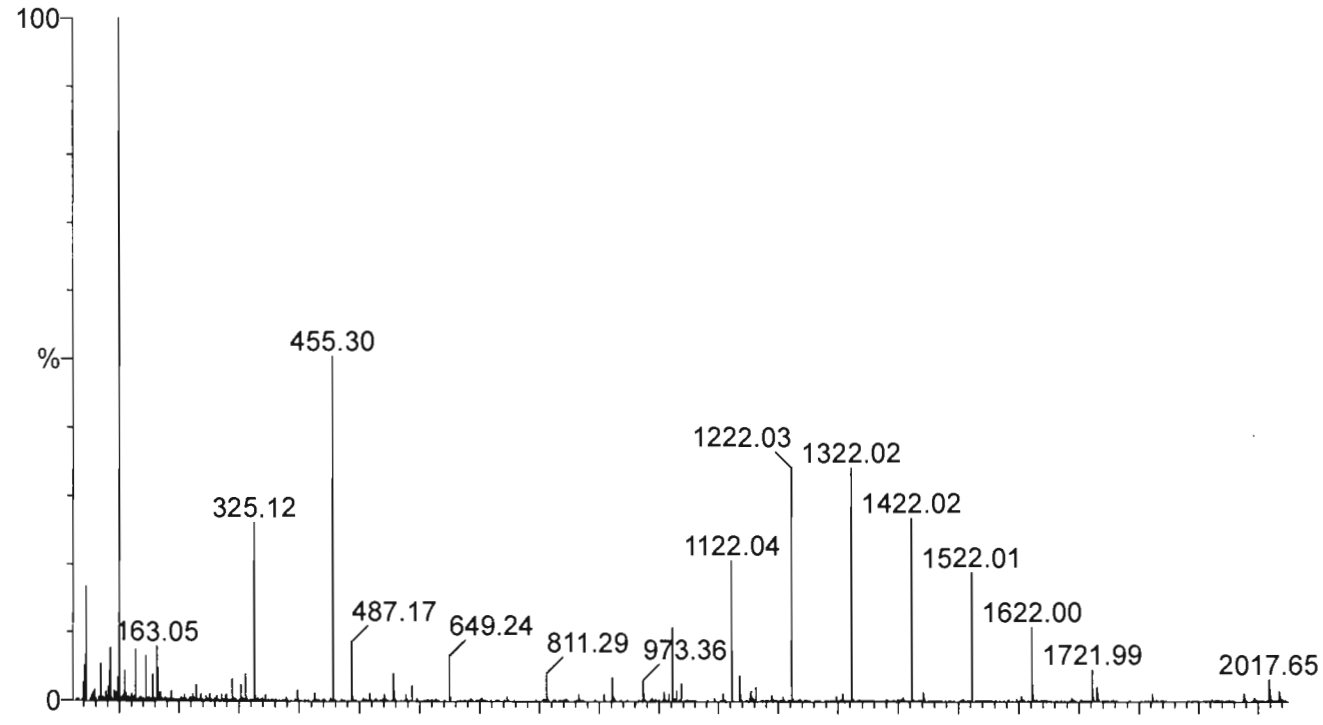
Data file: STATMS2V - Calibrated 22 matches of 23 tested references



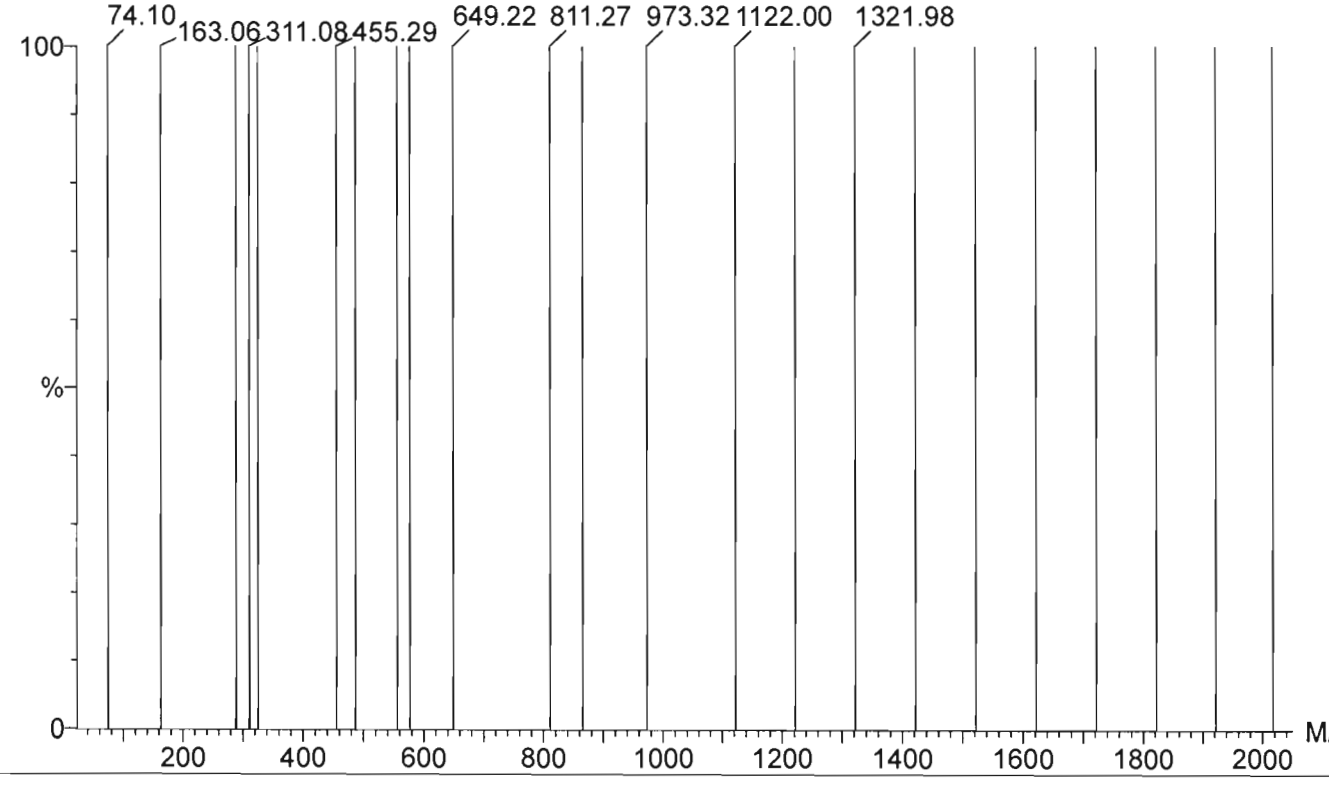
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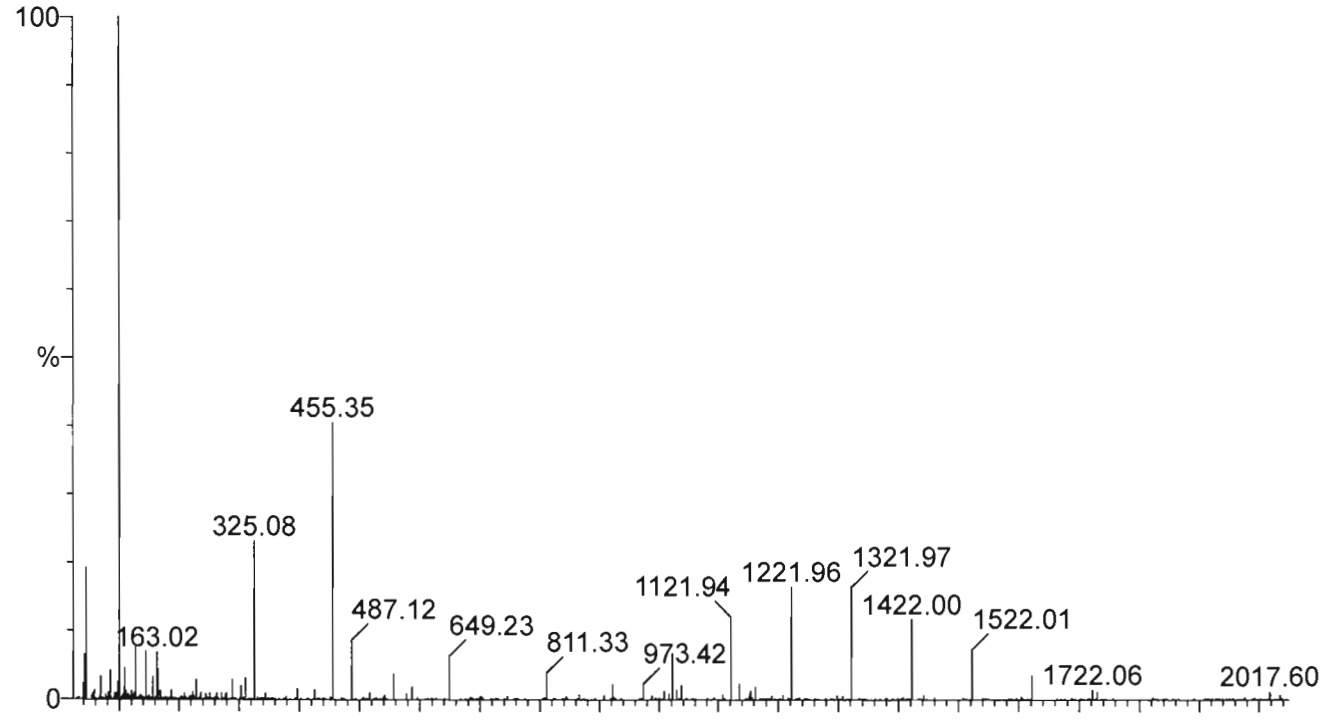
Data file: SCNMS2V - Calibrated 23 matches of 23 tested references



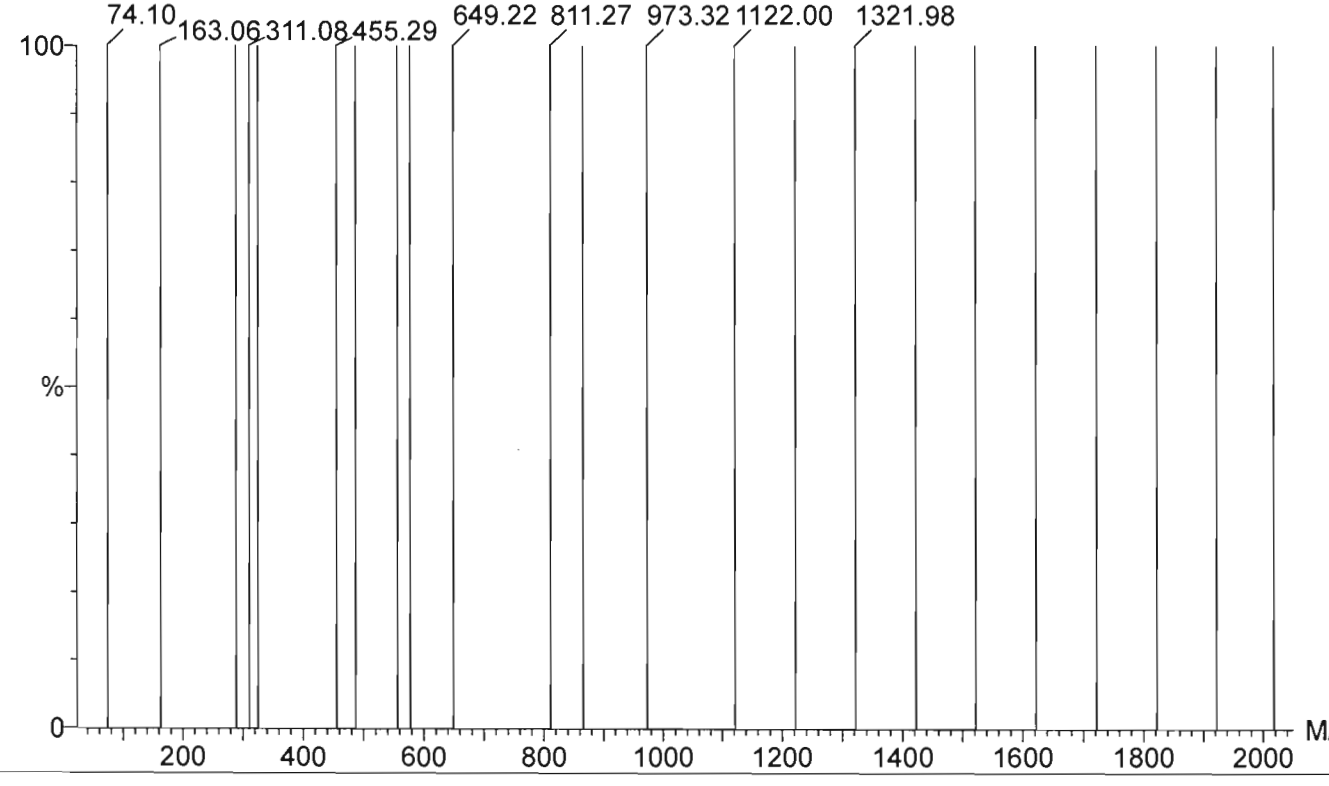
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0273 amu



Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0455 amu

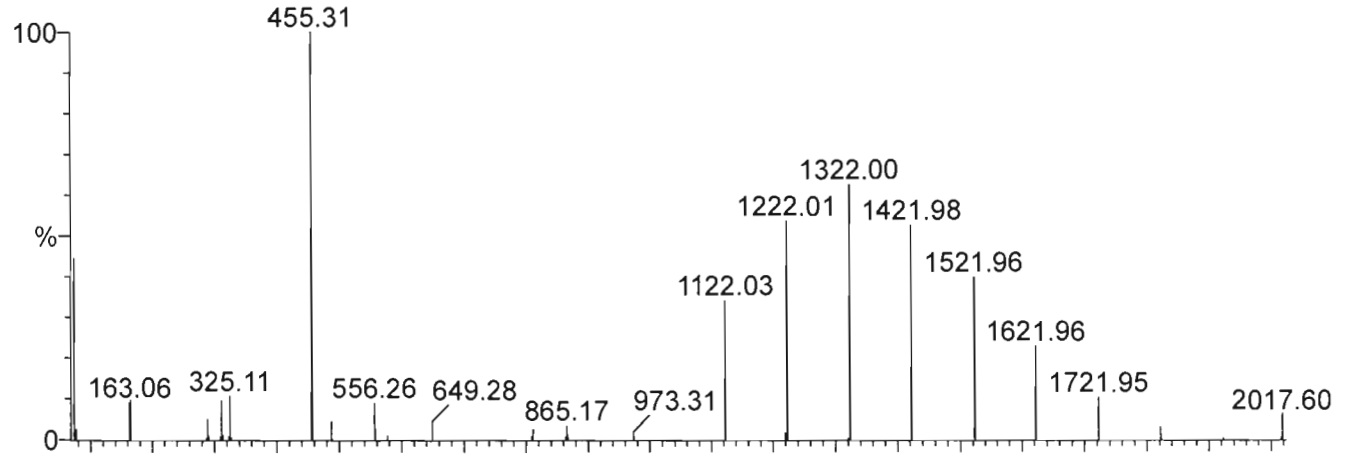


QSP Tune check 02/27/20 20200226

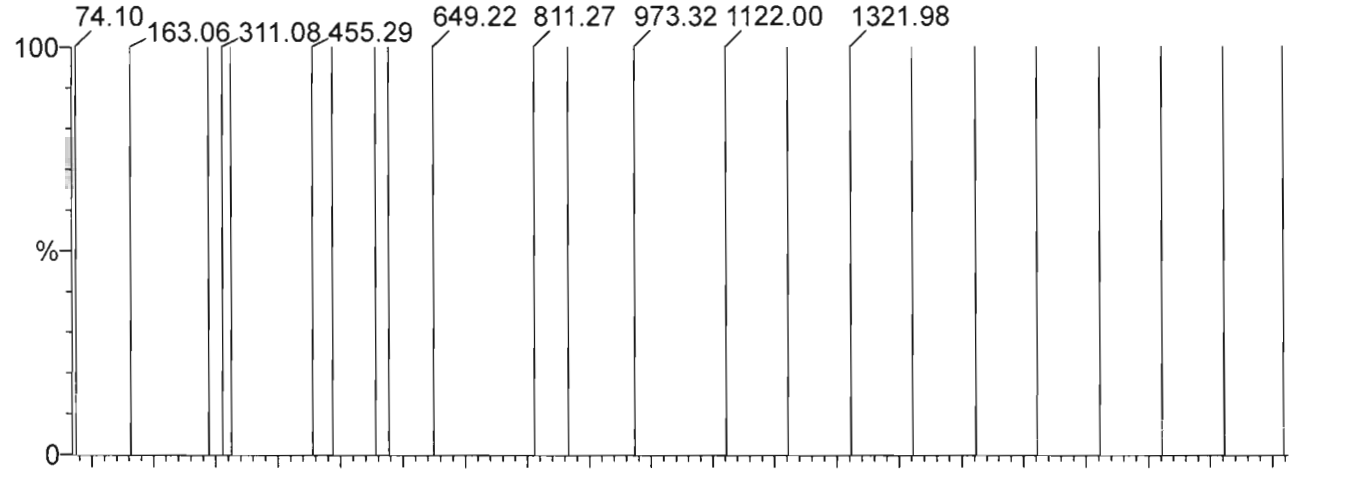
Calibration Report - MS1 Static

Printed: **Thu Feb 27 14:34:02 2020**

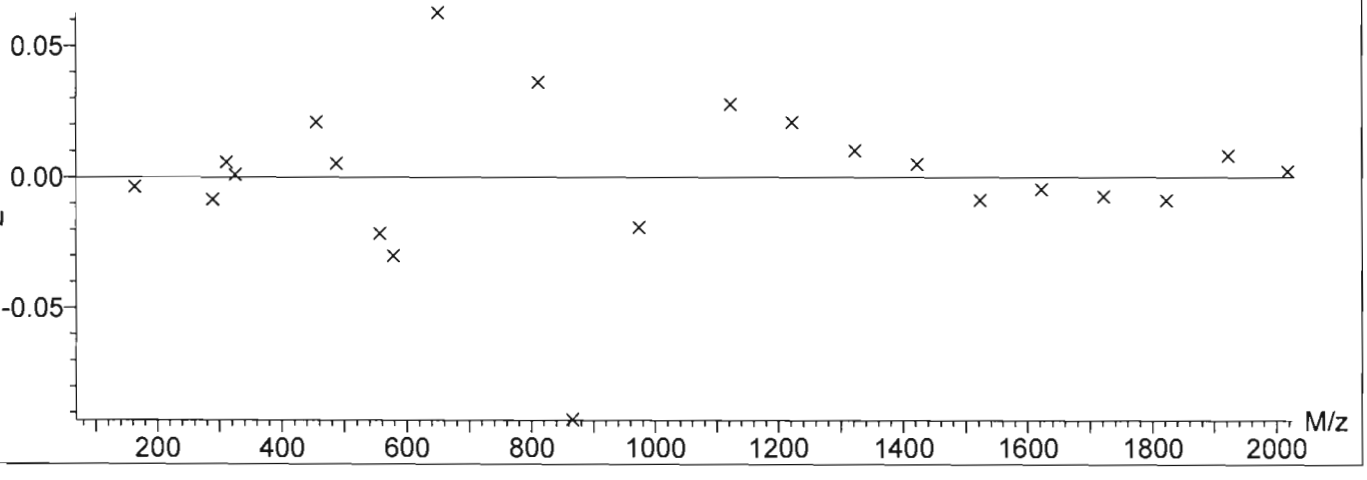
Data file: STATMS1 - Calibrated 22 matches of 23 tested references



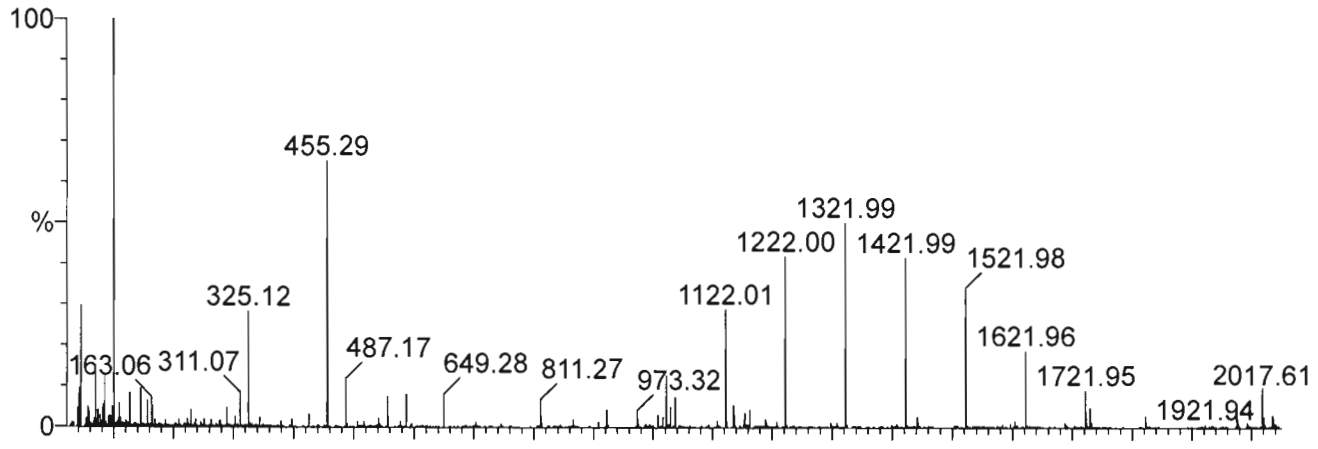
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0186 amu



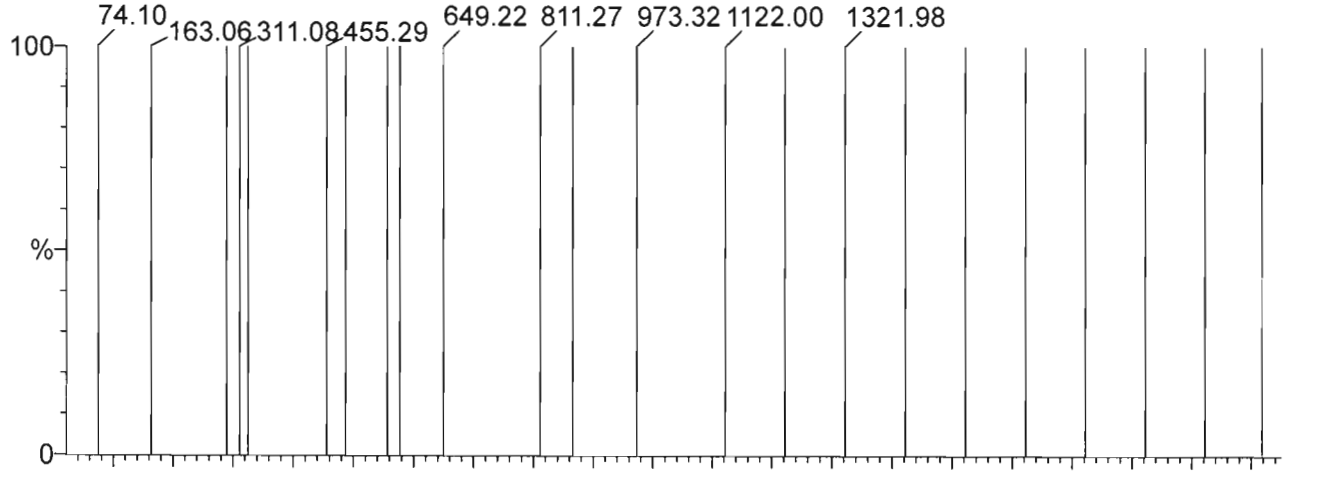
Residual Polynomial order = 4 RMS residual = 0.0284 amu



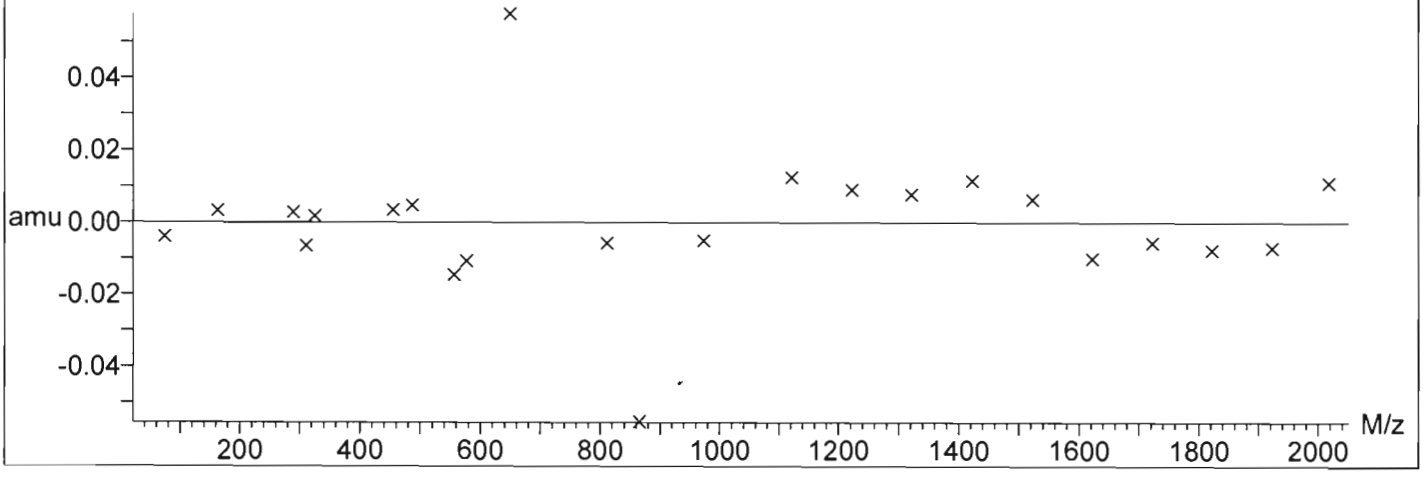
Data file: SCNMS1 - Calibrated 23 matches of 23 tested references



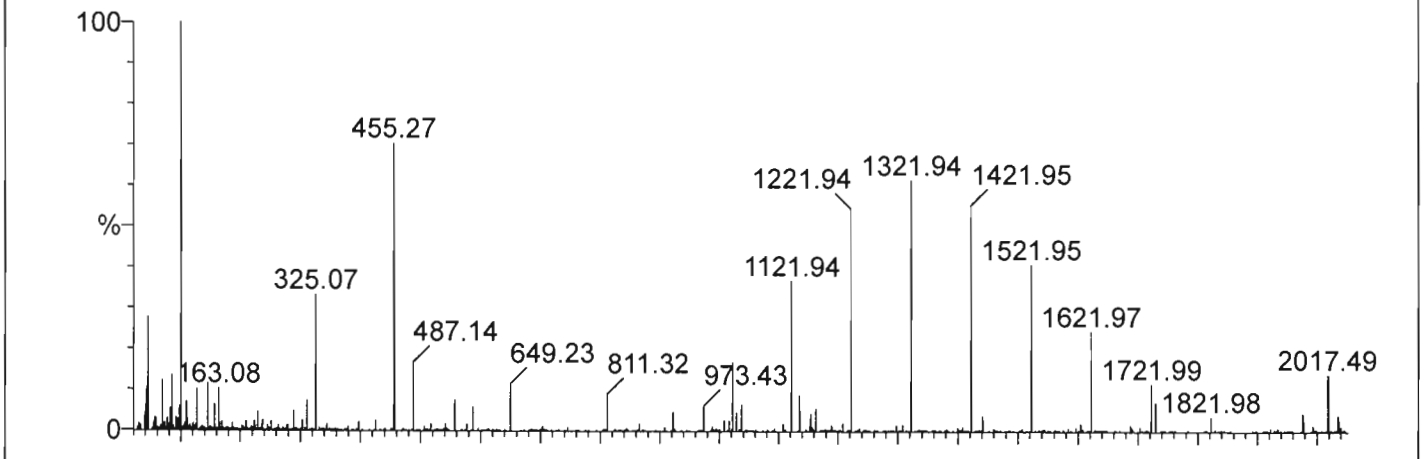
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0115 amu



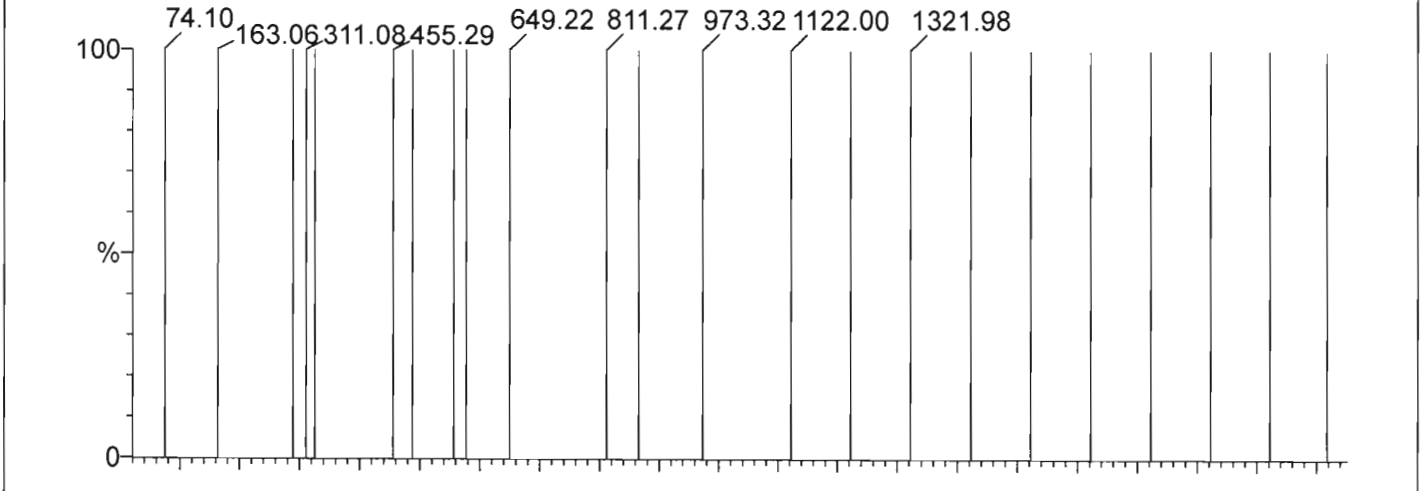
Residual Polynomial order = 4 RMS residual = 0.0183 amu



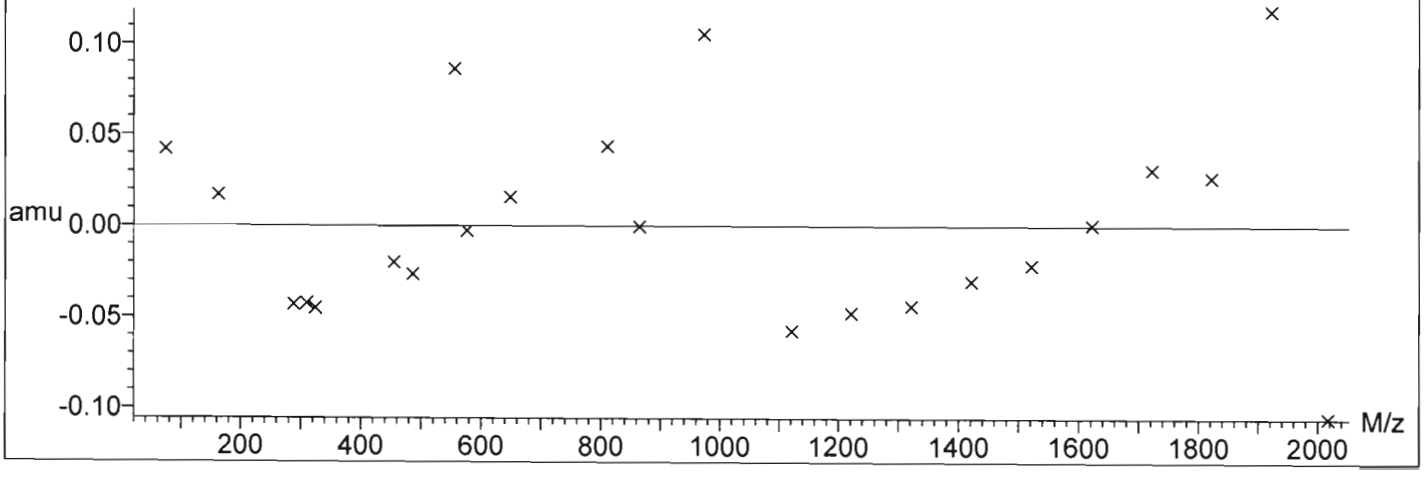
Data file: FASTMS1 - Calibrated 23 matches of 23 tested references



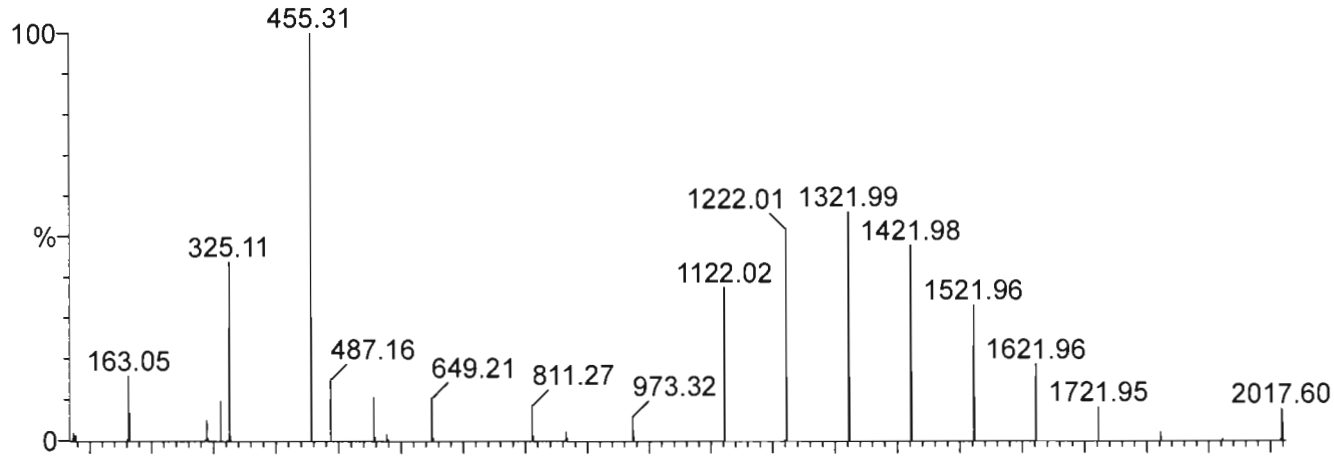
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0424 amu



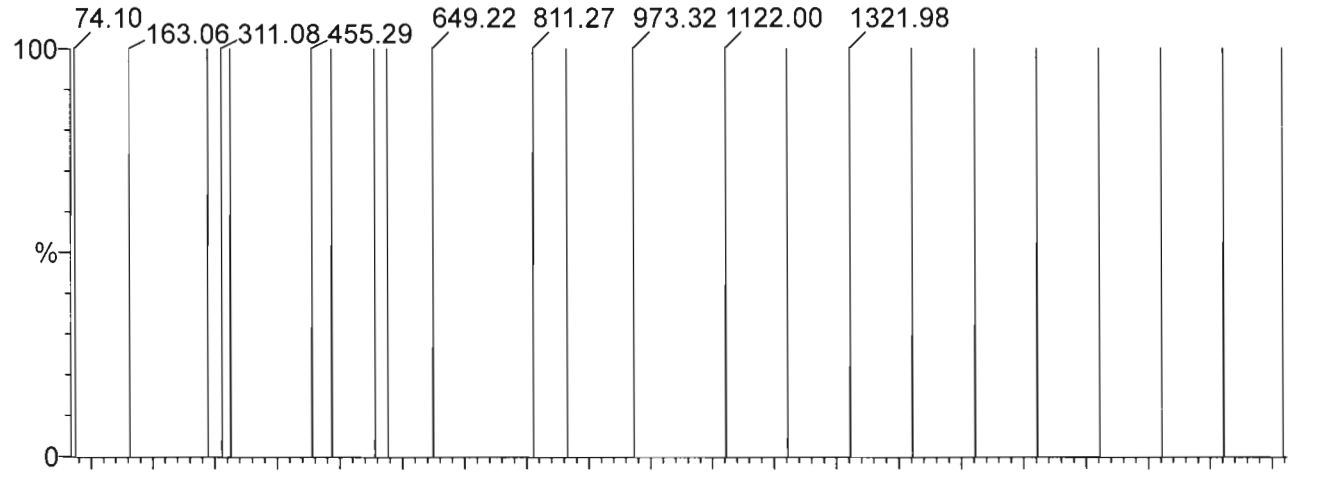
Residual Polynomial order = 4 RMS residual = 0.0533 amu



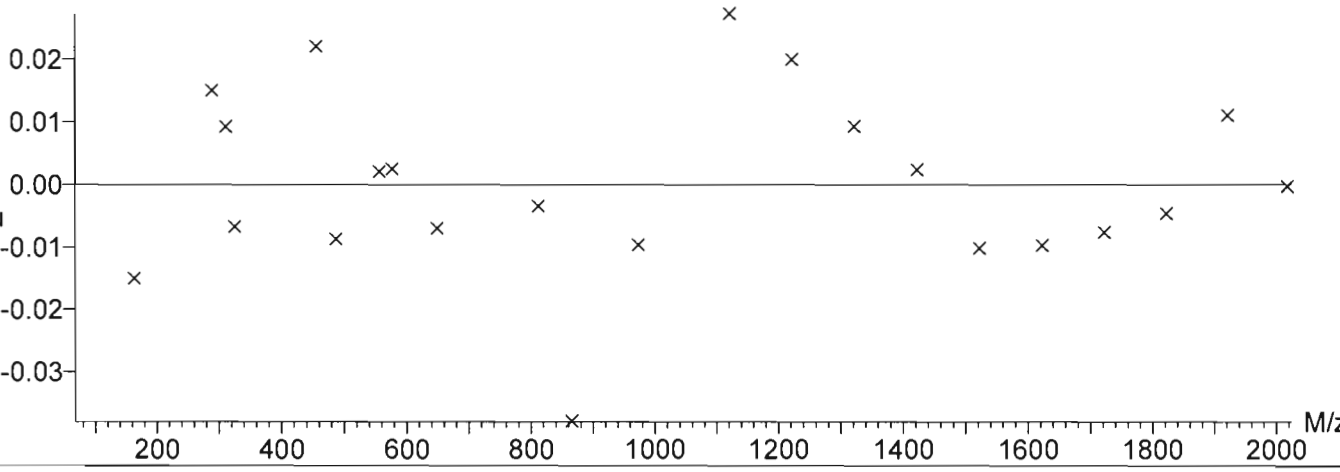
Data file: STATMS2 - Calibrated 22 matches of 23 tested references



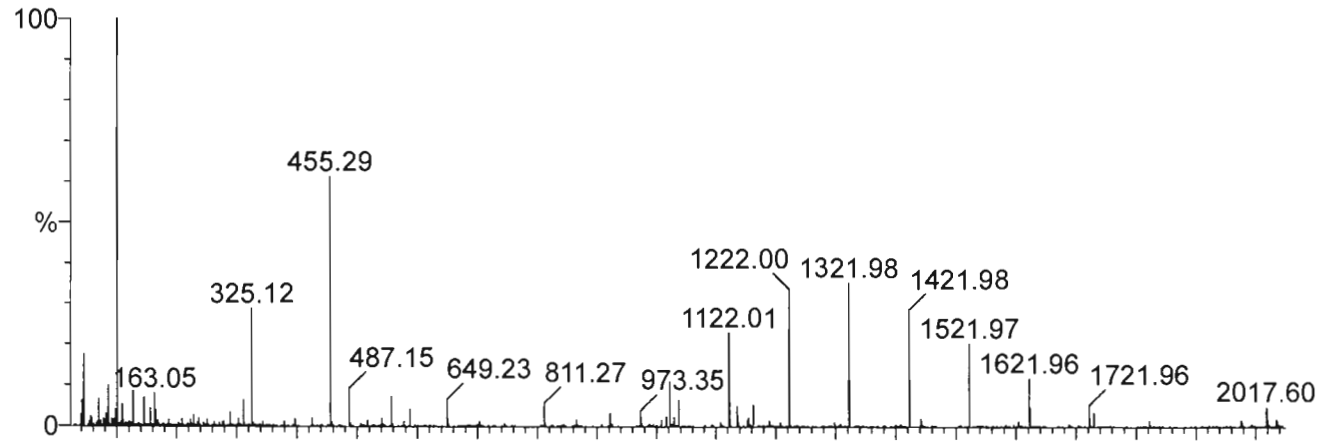
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.011 amu



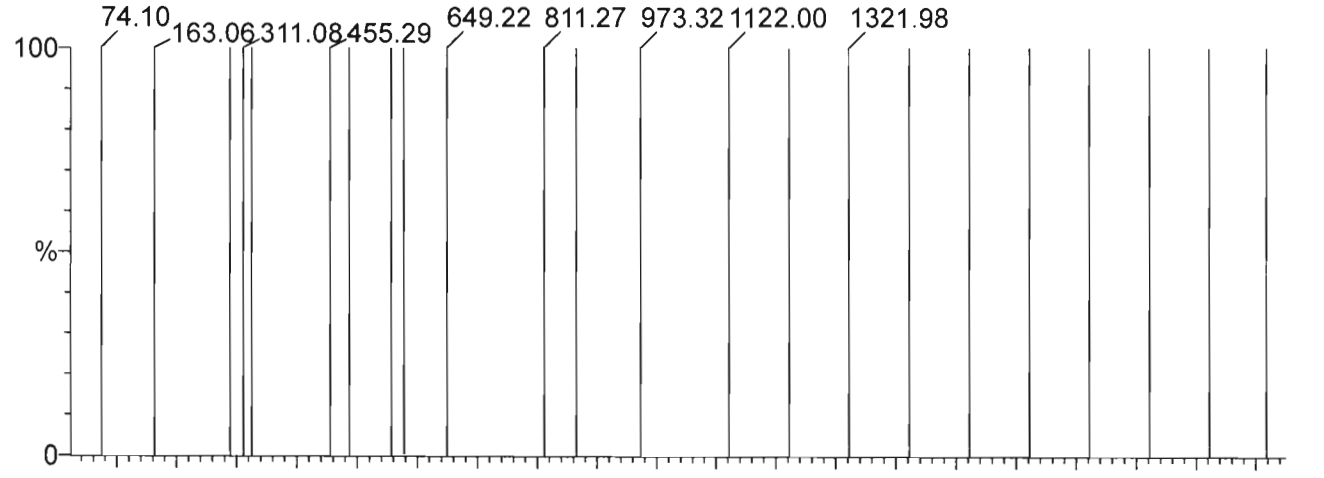
Residual Polynomial order = 4 RMS residual = 0.0141 amu



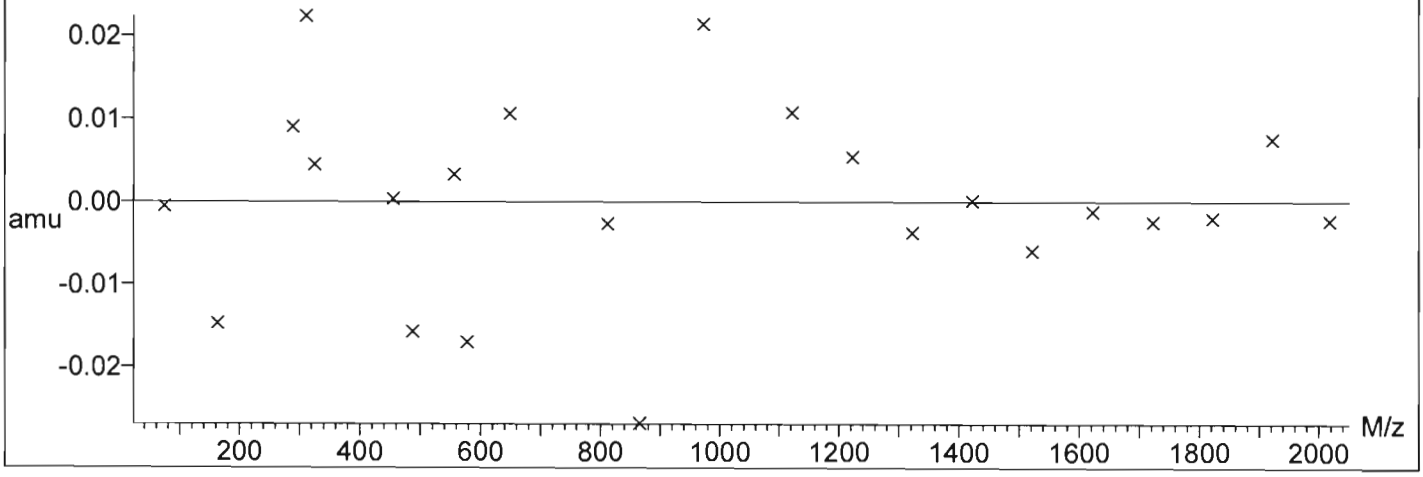
Data file: SCNMS2 - Calibrated 23 matches of 23 tested references



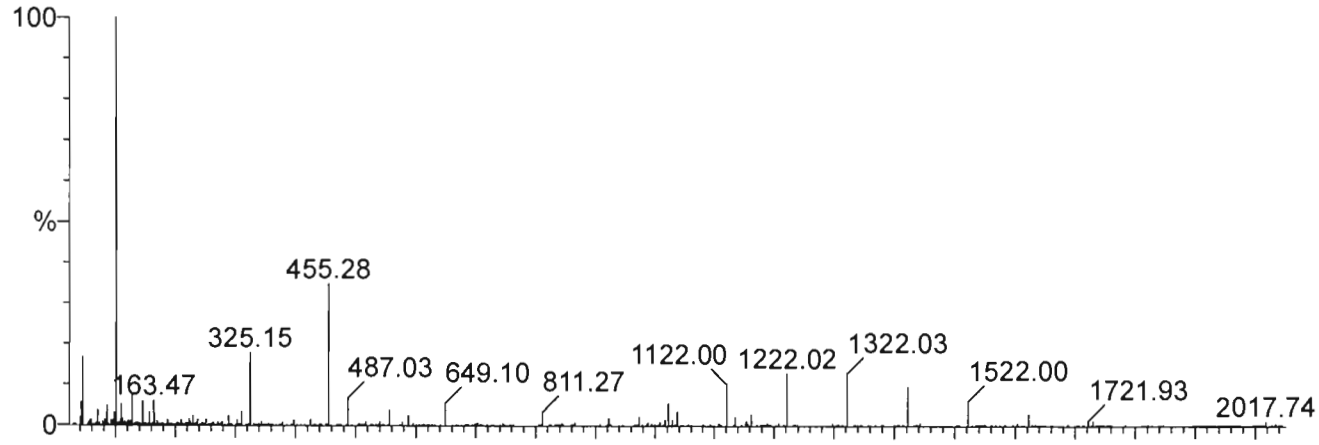
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.00829 amu



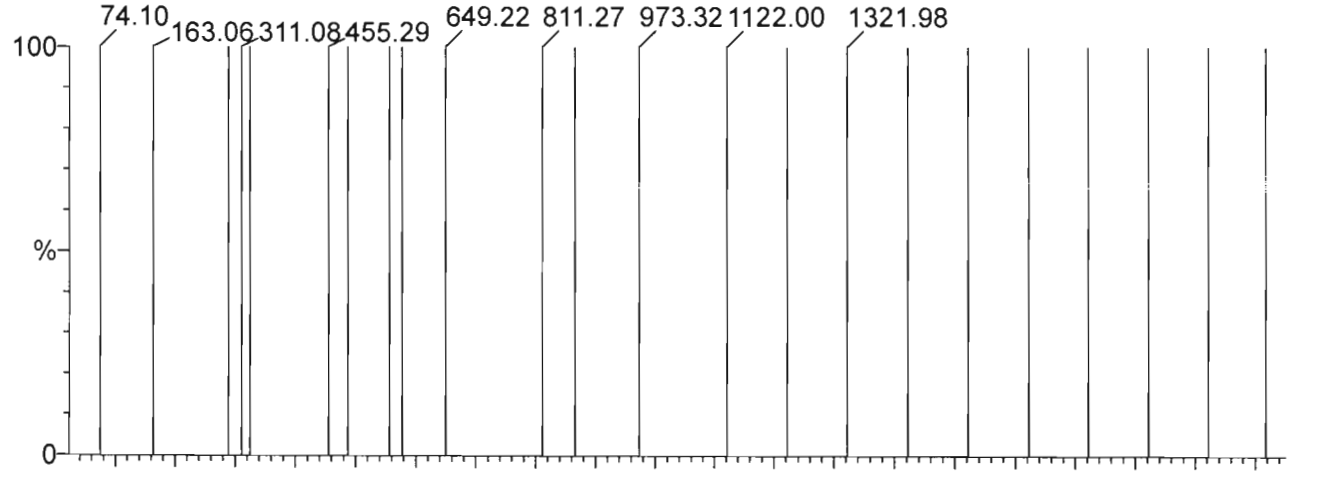
Residual Polynomial order = 4 RMS residual = 0.0113 amu



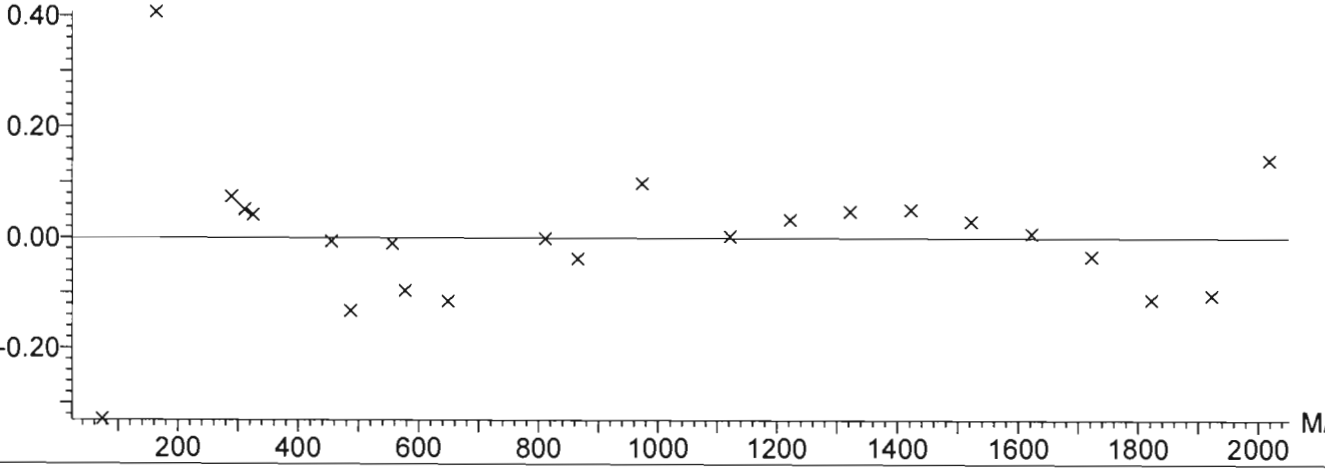
Data file: FASTMS2 - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0854 amu



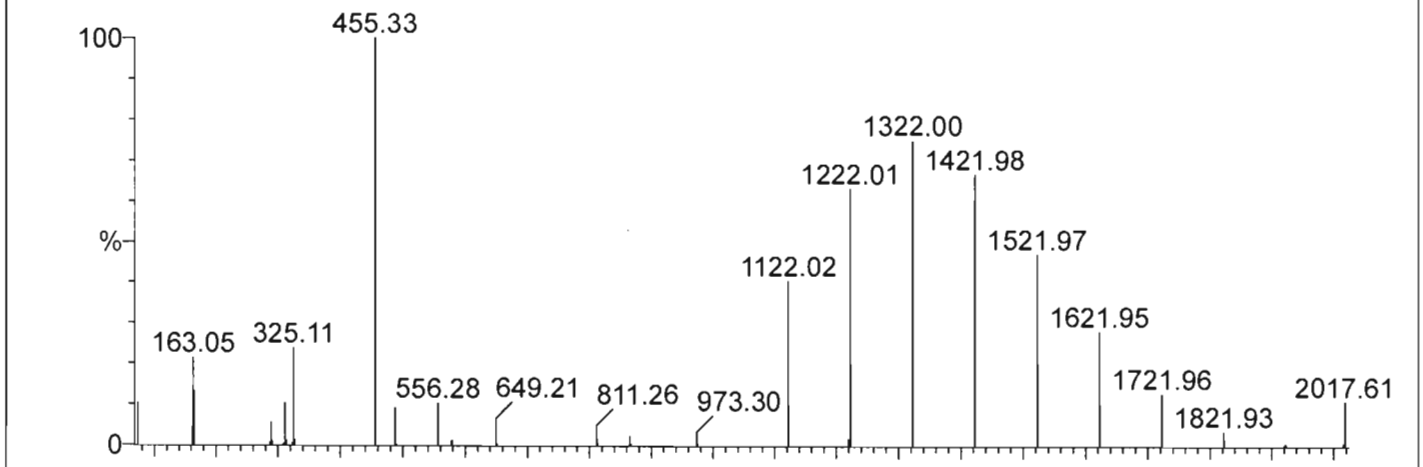
Residual Polynomial order = 4 RMS residual = 0.13 amu



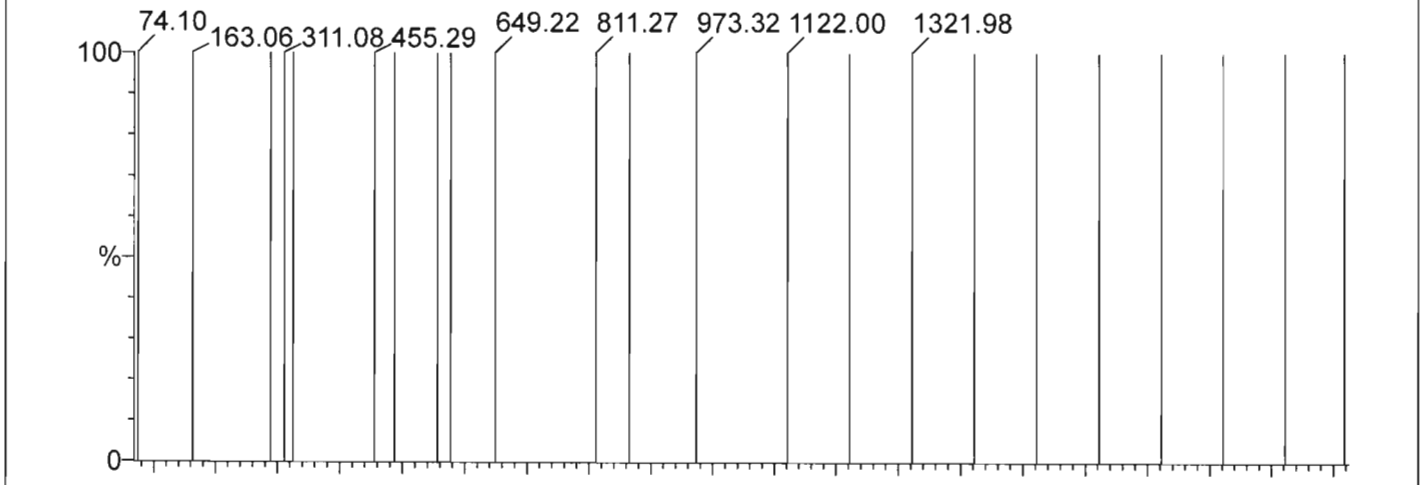
Calibration Report - MS1 Static

Printed: **Fri Feb 28 10:18:38 2020**

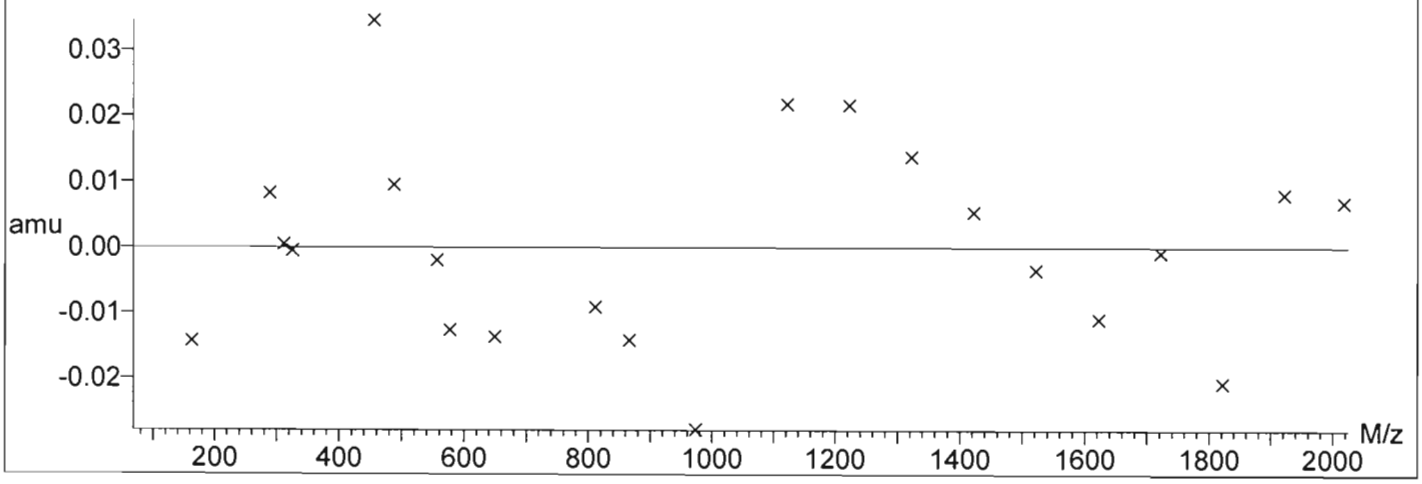
Data file: STATMS1 - Calibrated 22 matches of 23 tested references



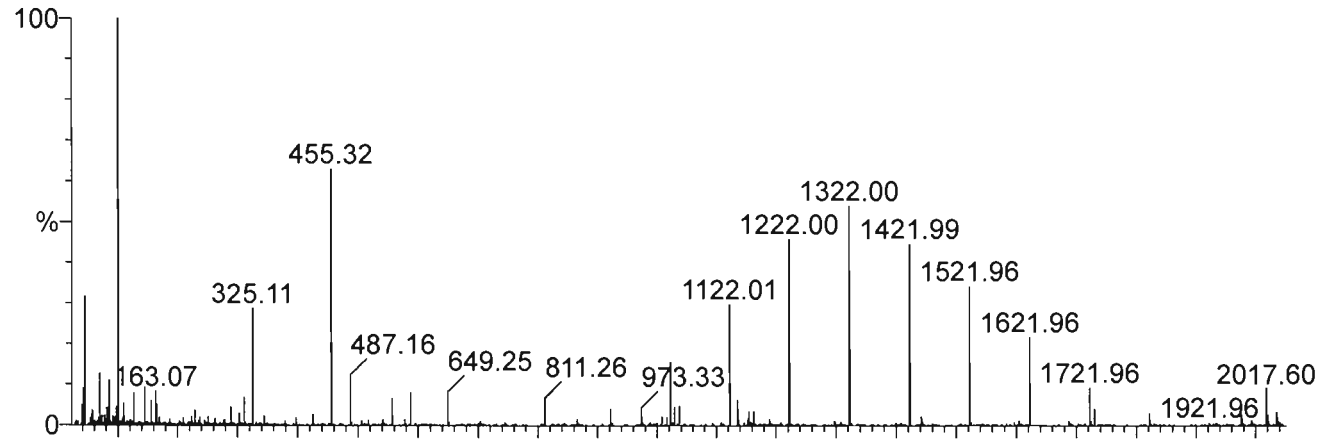
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0119 amu



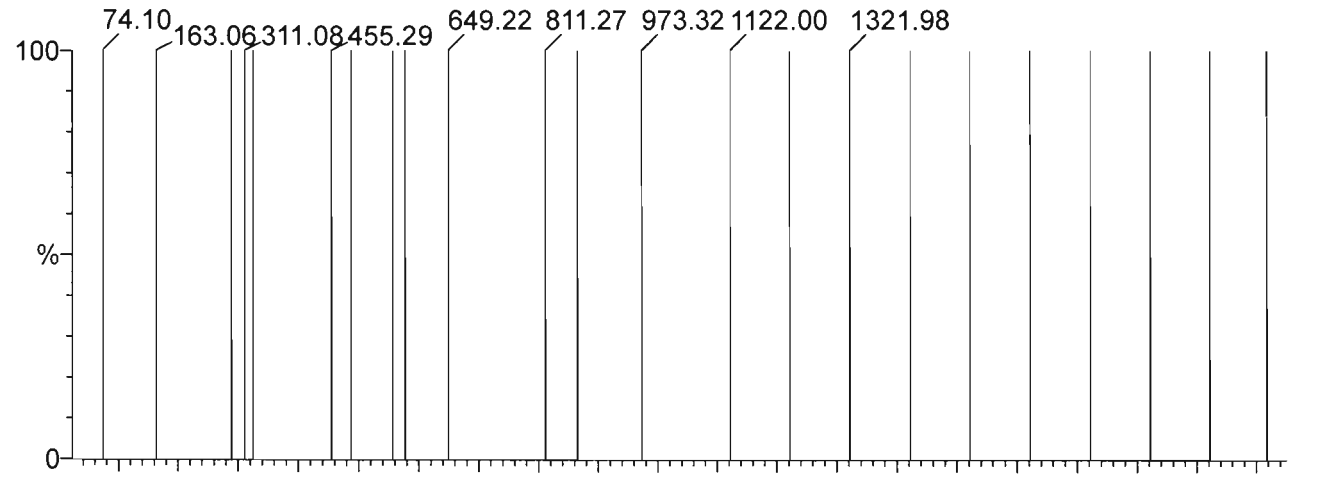
Residual Polynomial order = 4 RMS residual = 0.0148 amu



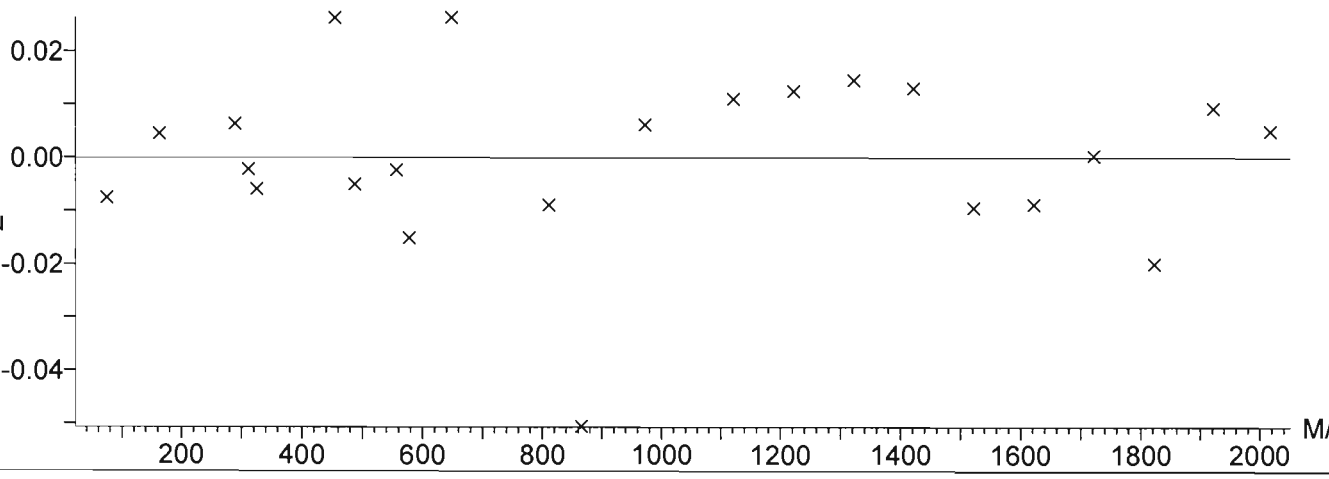
Data file: SCNMS1 - Calibrated 23 matches of 23 tested references



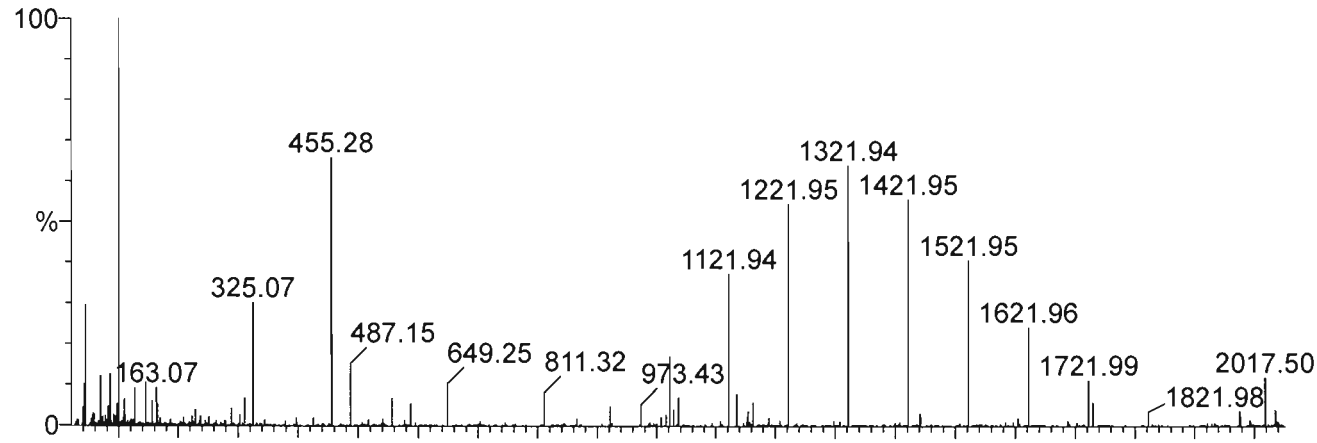
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0118 amu



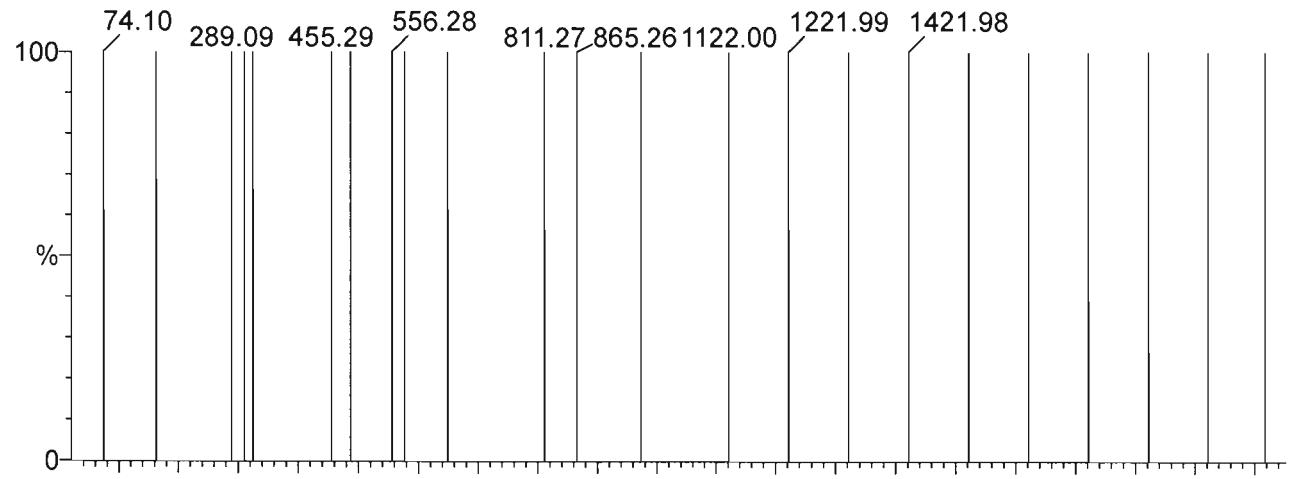
Residual Polynomial order = 4 RMS residual = 0.0159 amu



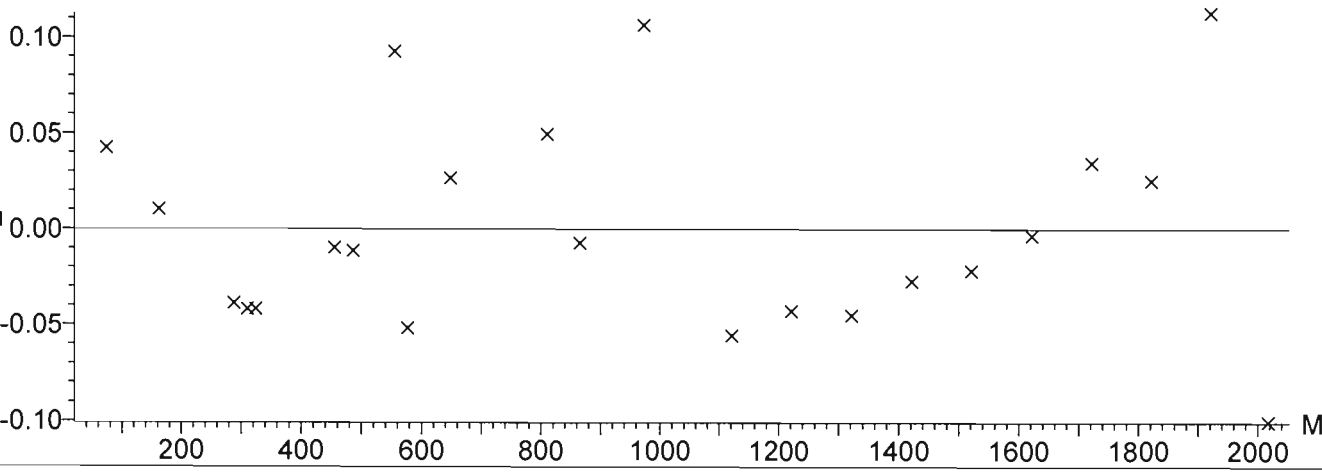
Data file: FASTMS1 - Calibrated 23 matches of 23 tested references



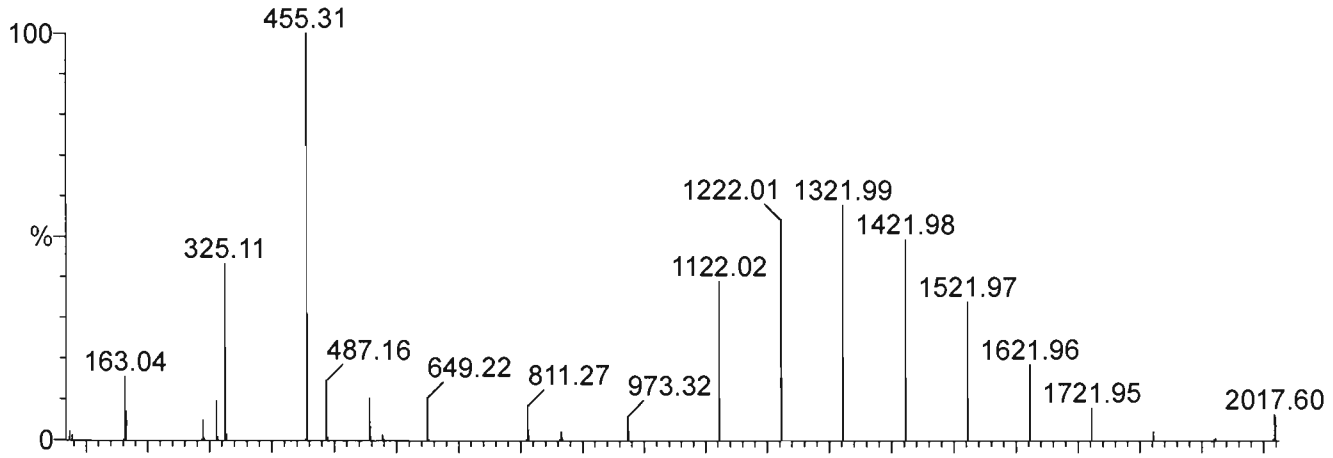
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0435 amu



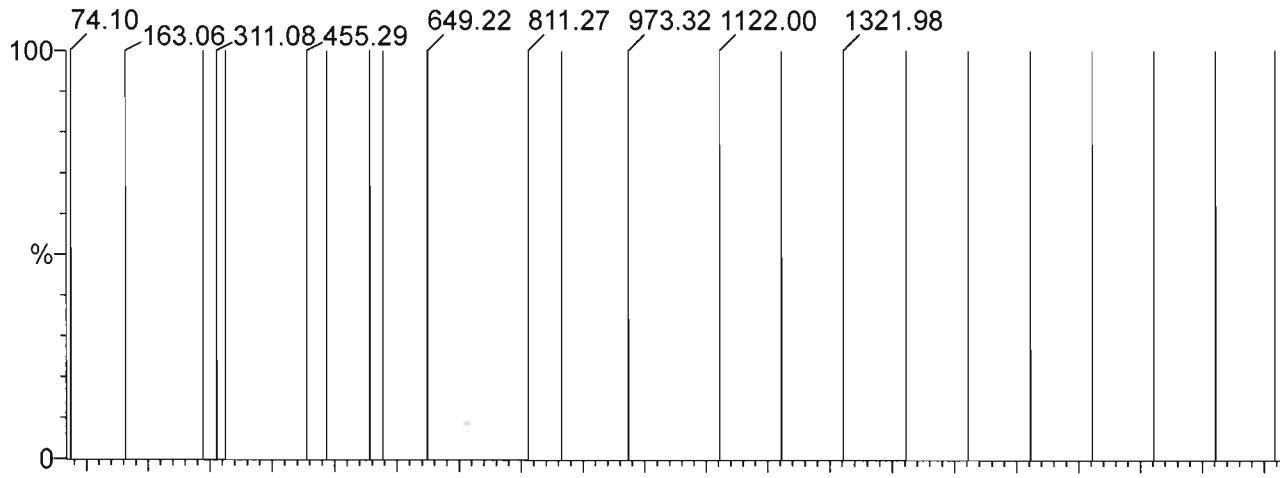
Residual Polynomial order = 4 RMS residual = 0.0535 amu



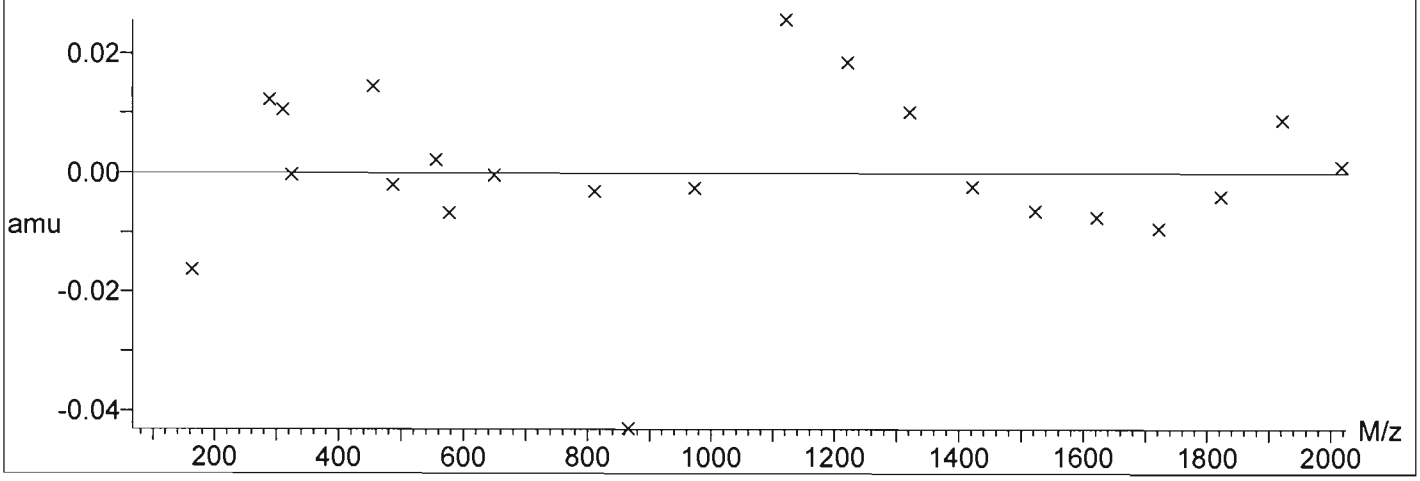
Data file: STATMS2 - Calibrated 22 matches of 23 tested references



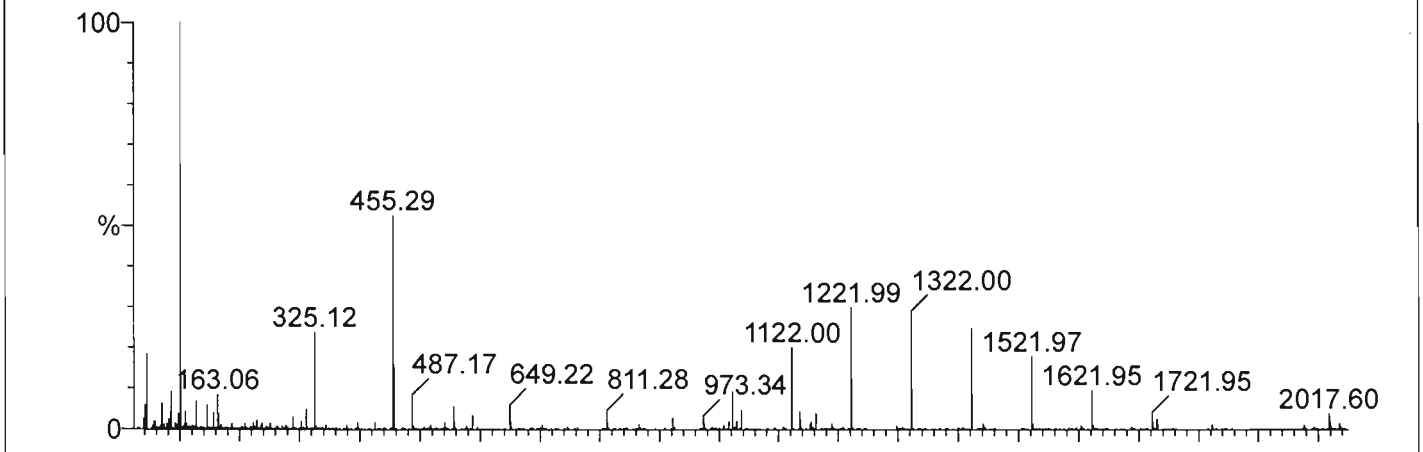
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0094 amu



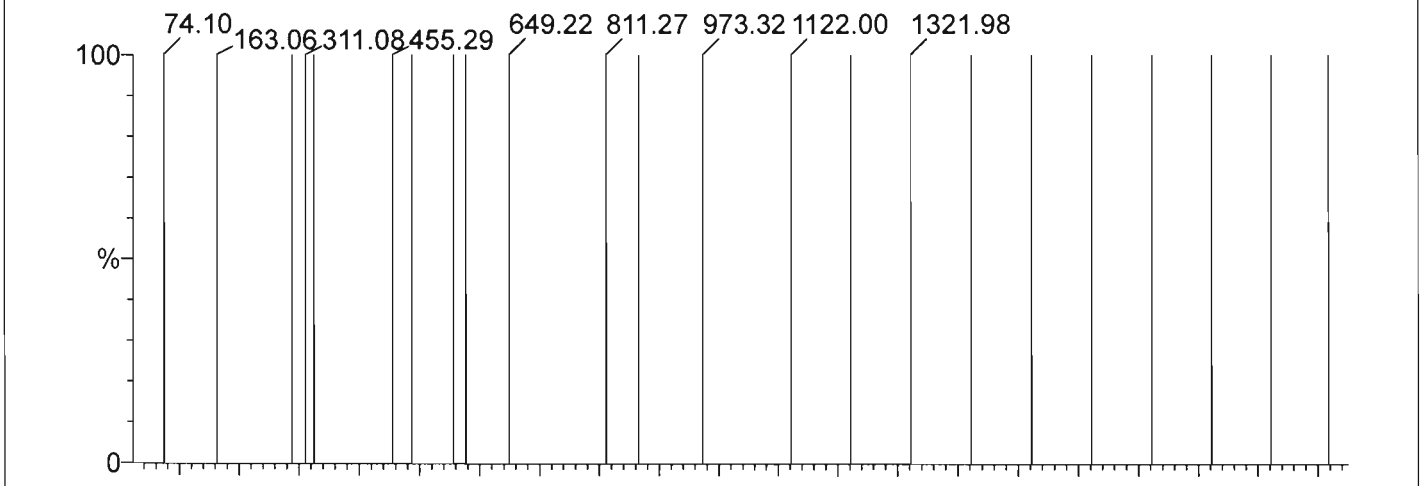
Residual Polynomial order = 4 RMS residual = 0.0135 amu



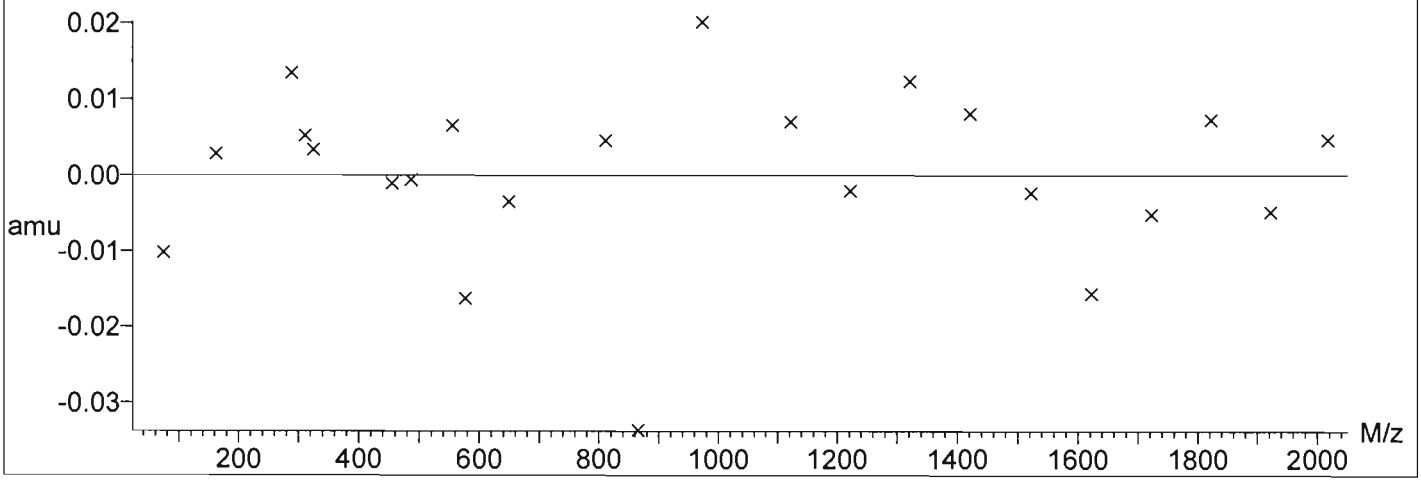
Data file: SCNMS2 - Calibrated 23 matches of 23 tested references



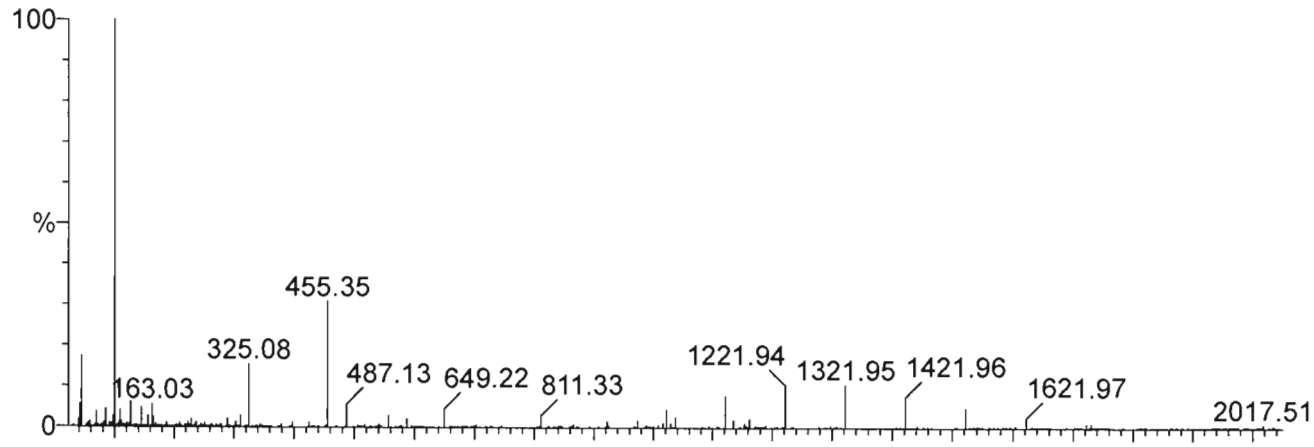
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.00829 amu



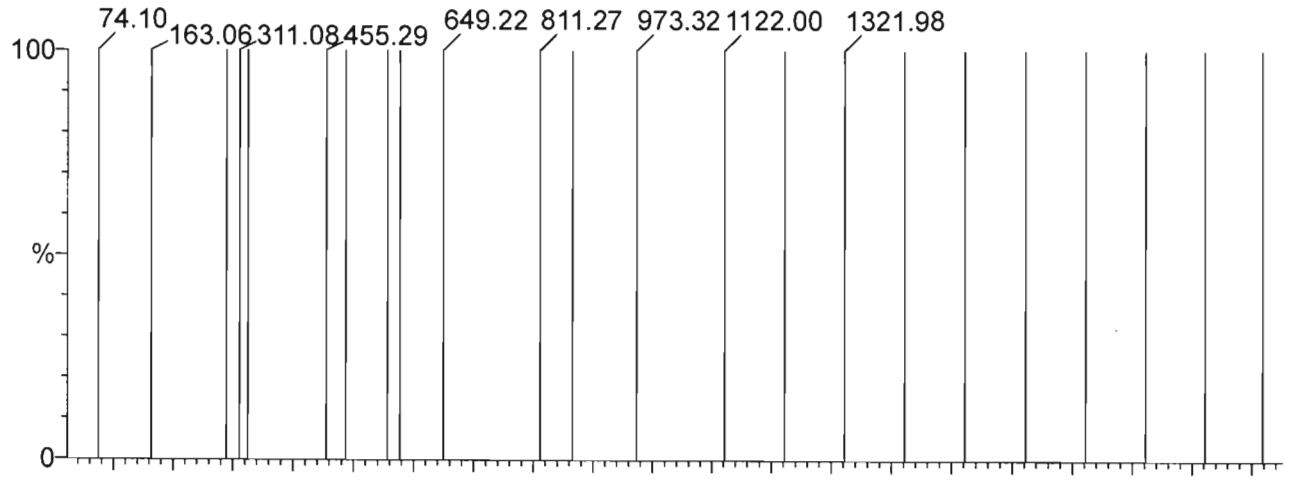
Residual Polynomial order = 4 RMS residual = 0.0111 amu



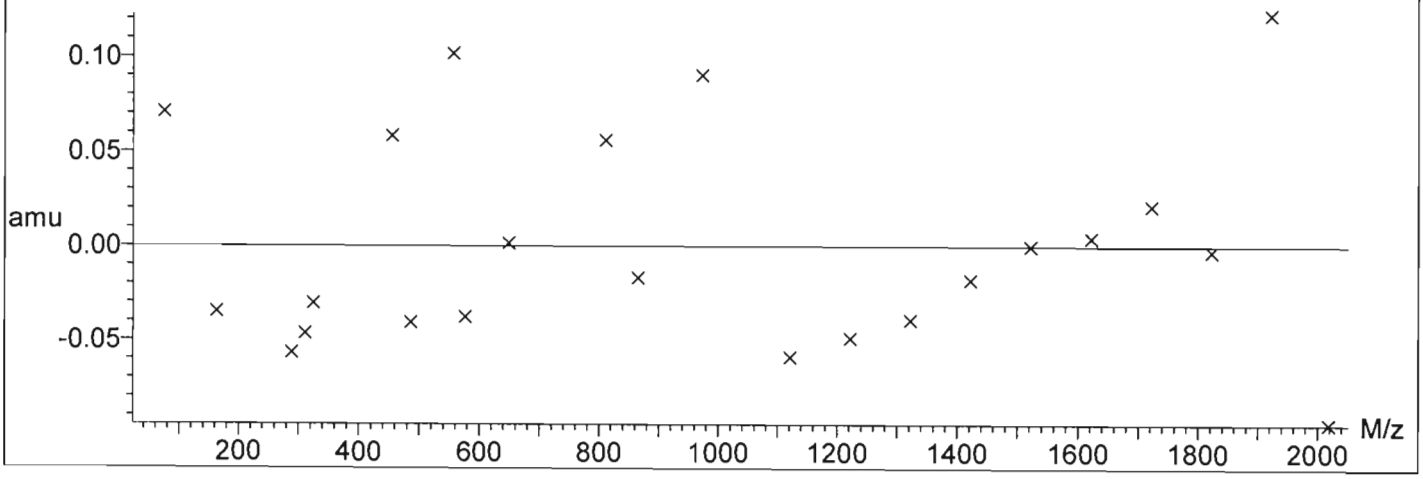
Data file: FASTMS2 - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0458 amu



Residual Polynomial order = 4 RMS residual = 0.0564 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

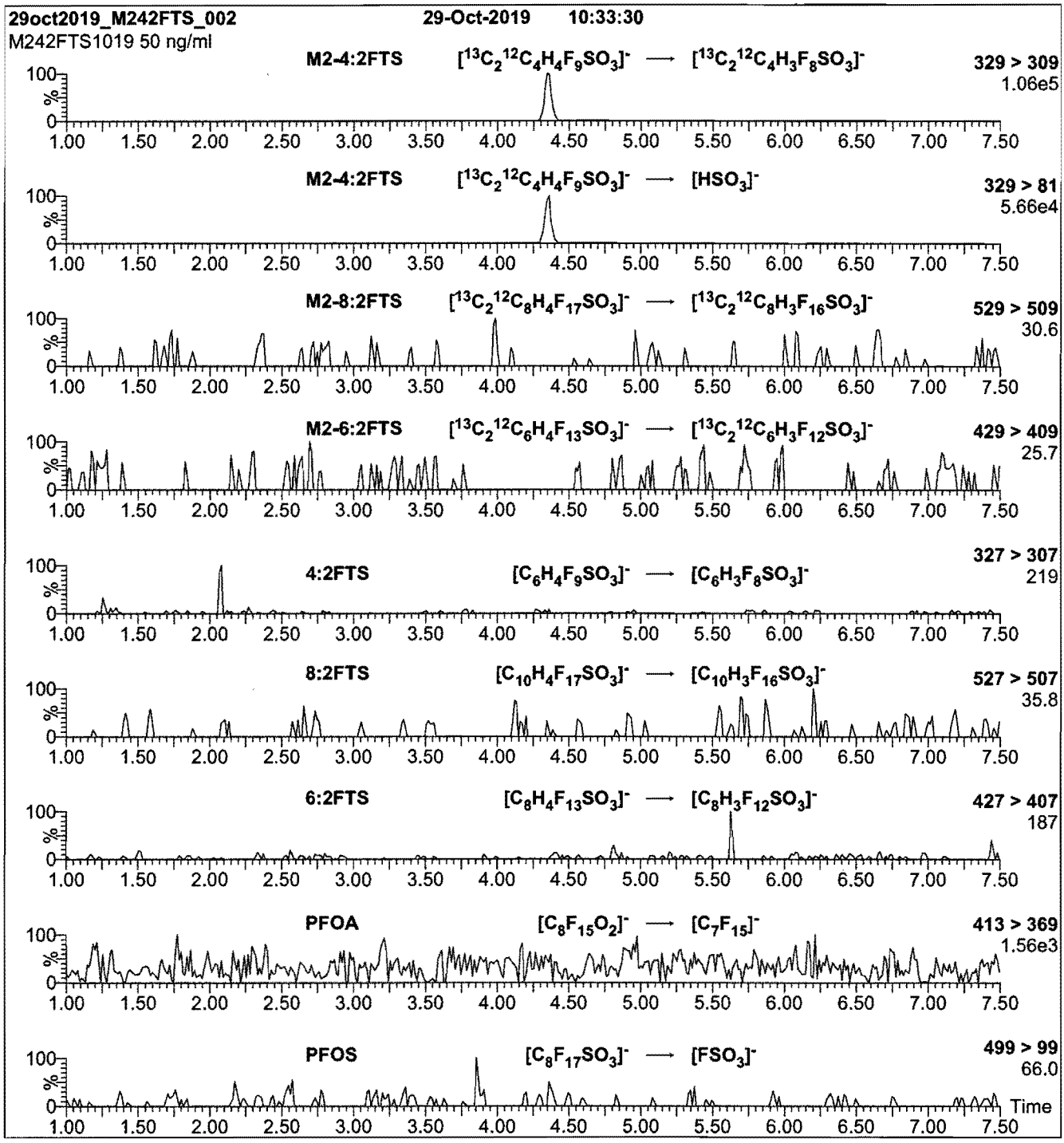
Sashi Sivendran-Basak, Ph.D., Quality Review

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

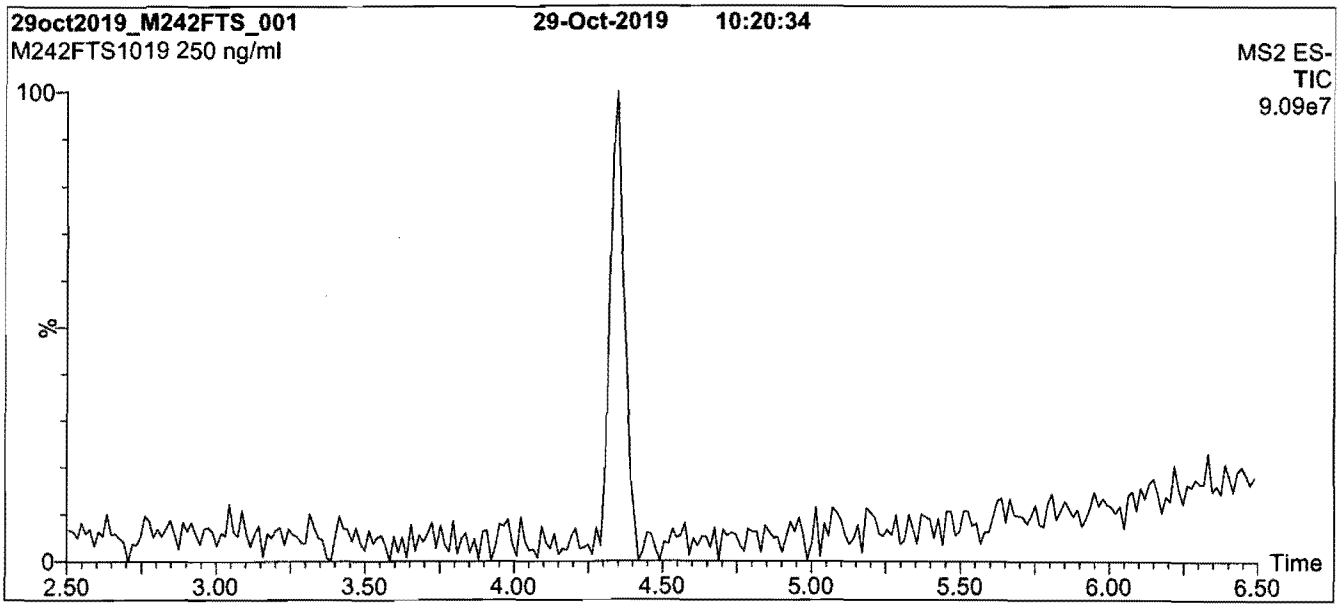
Flow: 300 µl/min

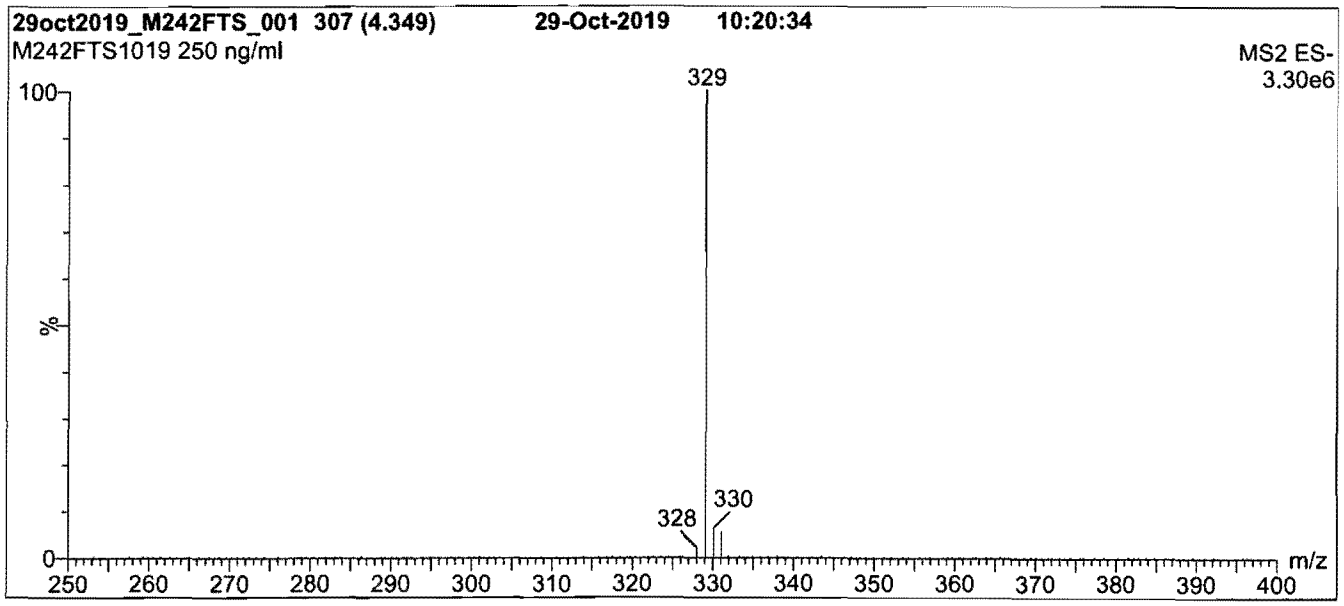
MS Parameters

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

19L0601

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

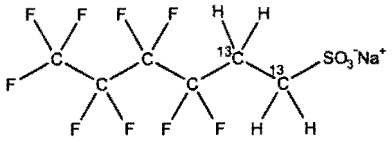
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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).

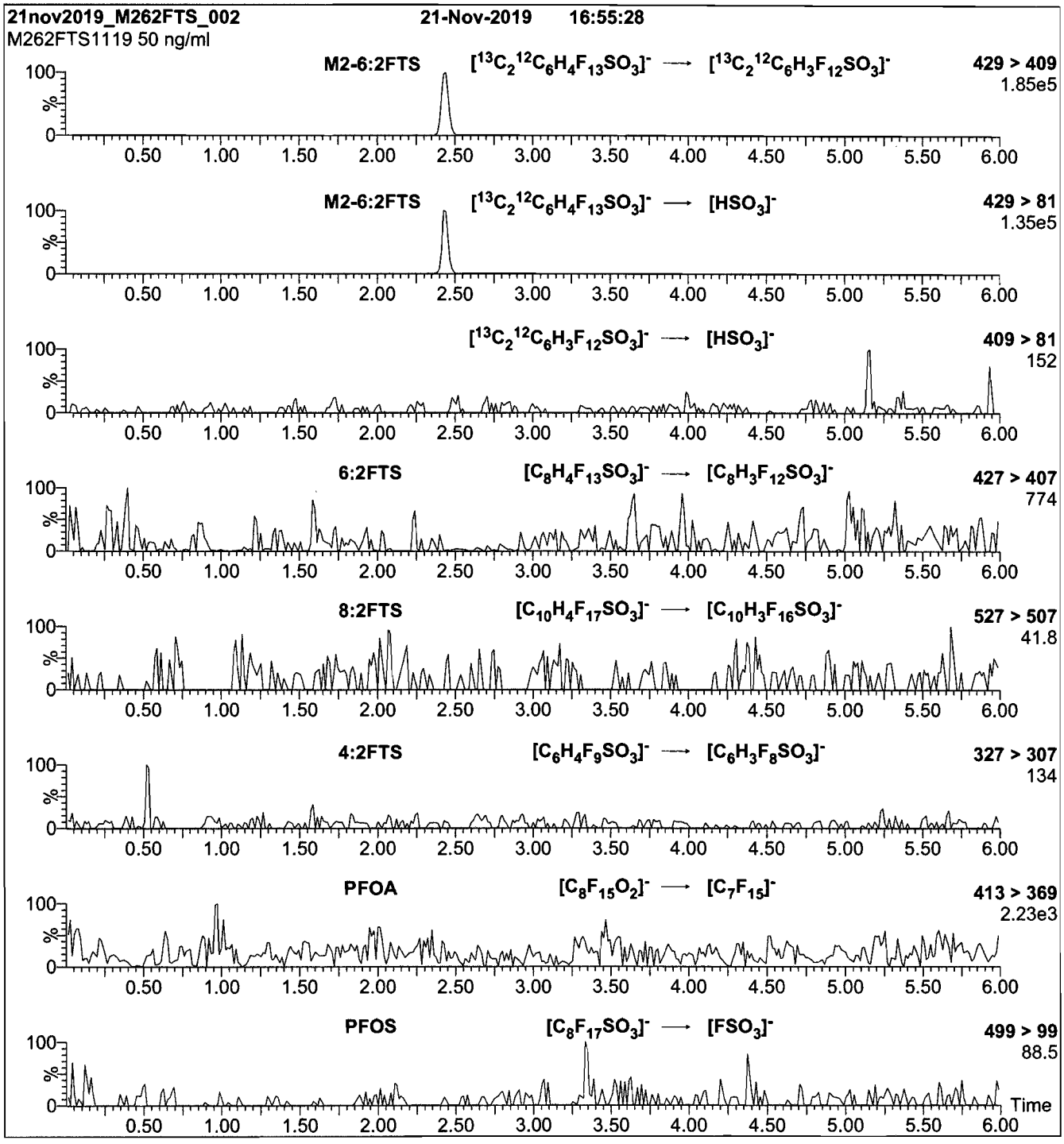
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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)

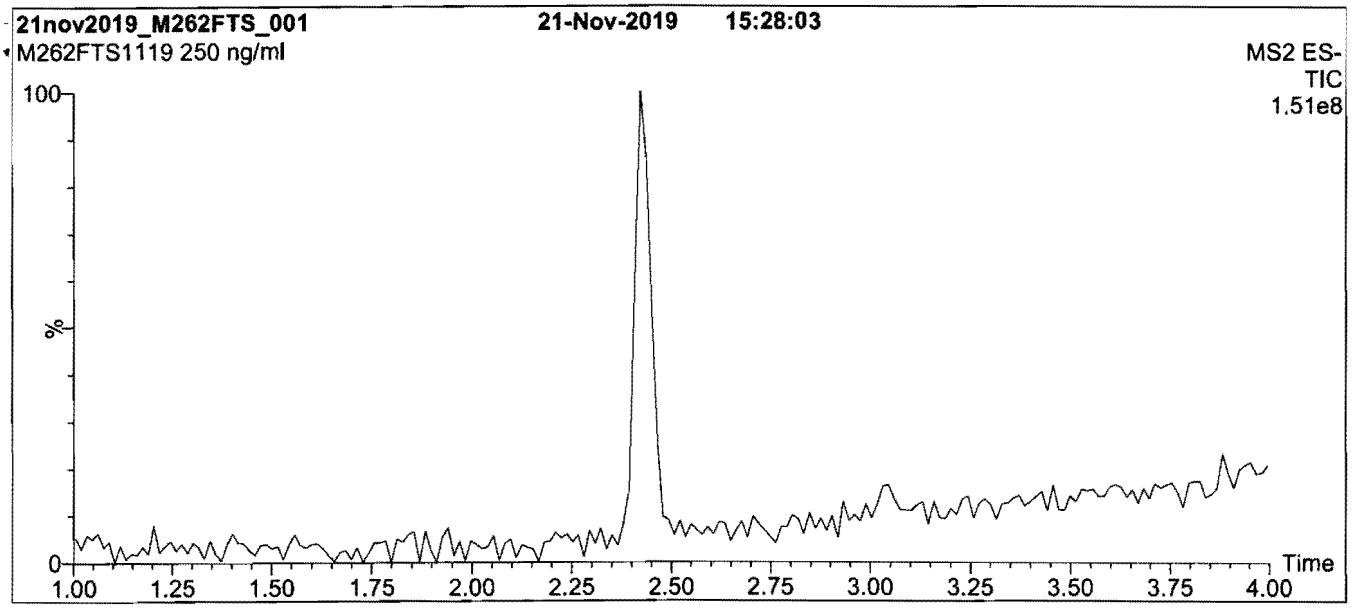
Mobile phase: Same as Figure 1

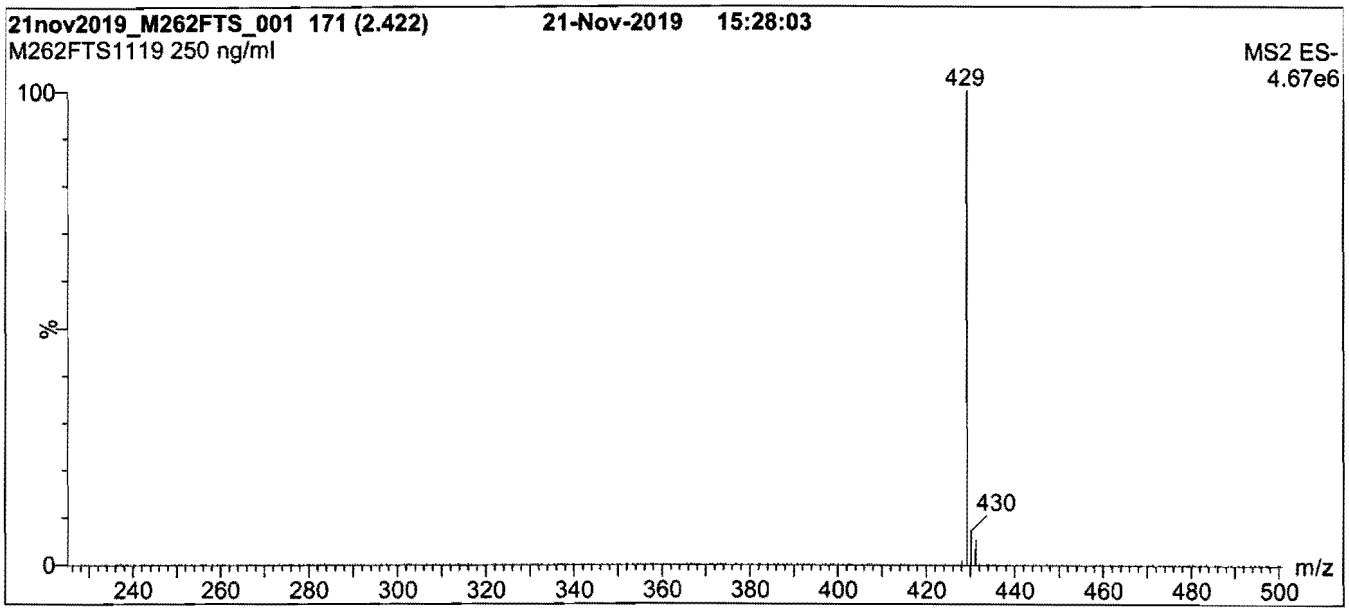
Flow: 300 µl/min

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.

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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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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

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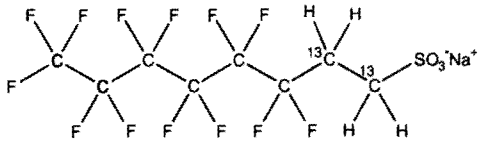
WELLINGTON LABORATORIES

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:

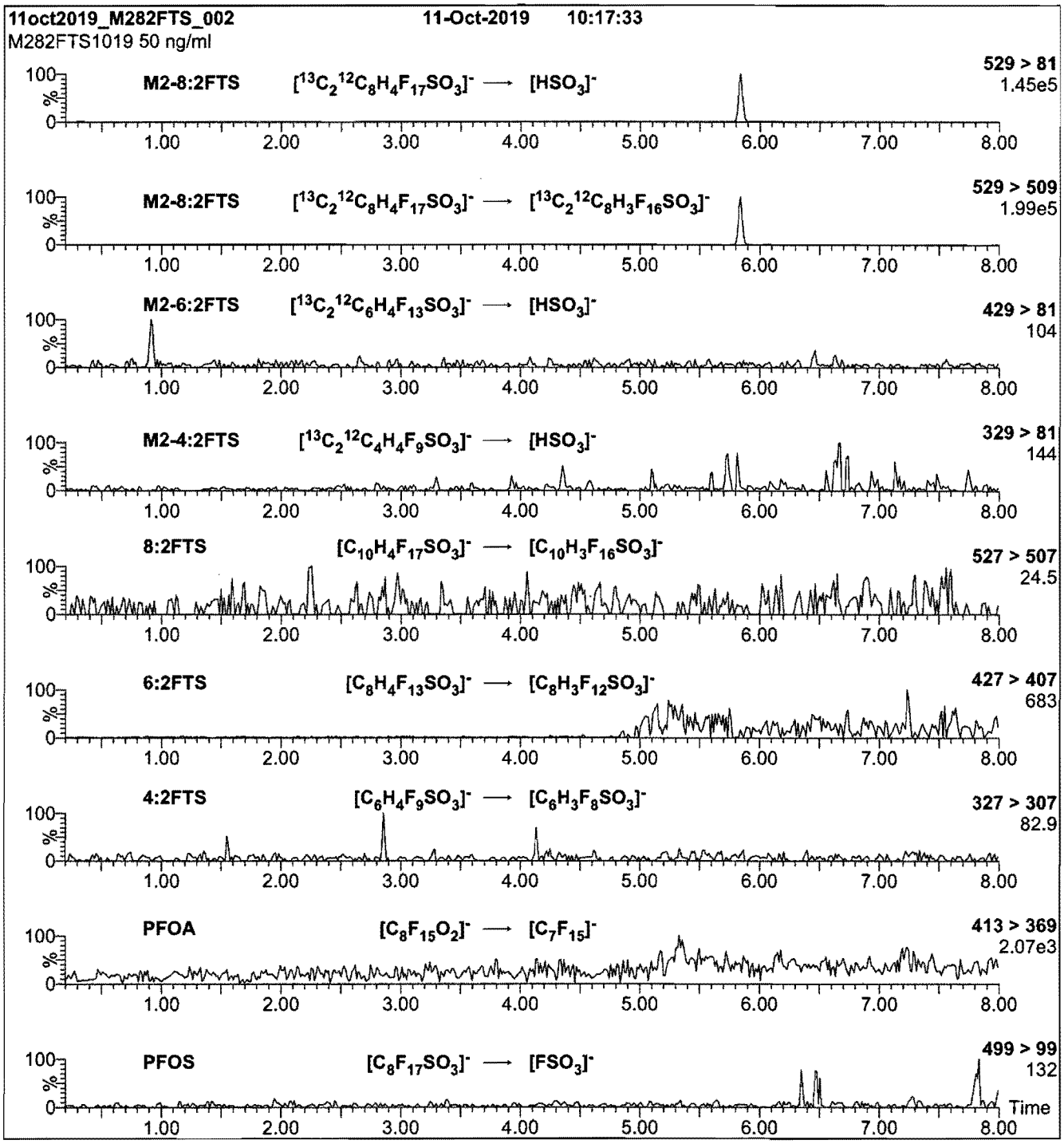
- See page 2 for further details.
- The native 6:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for 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)

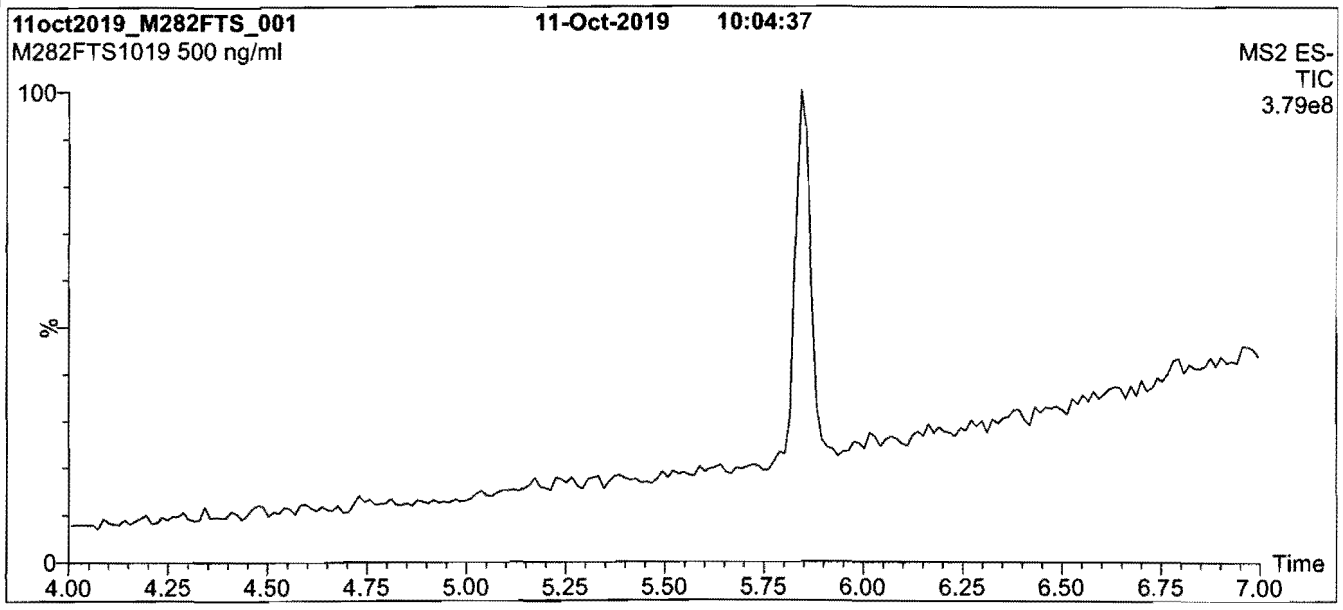
Mobile phase: Same as Figure 1

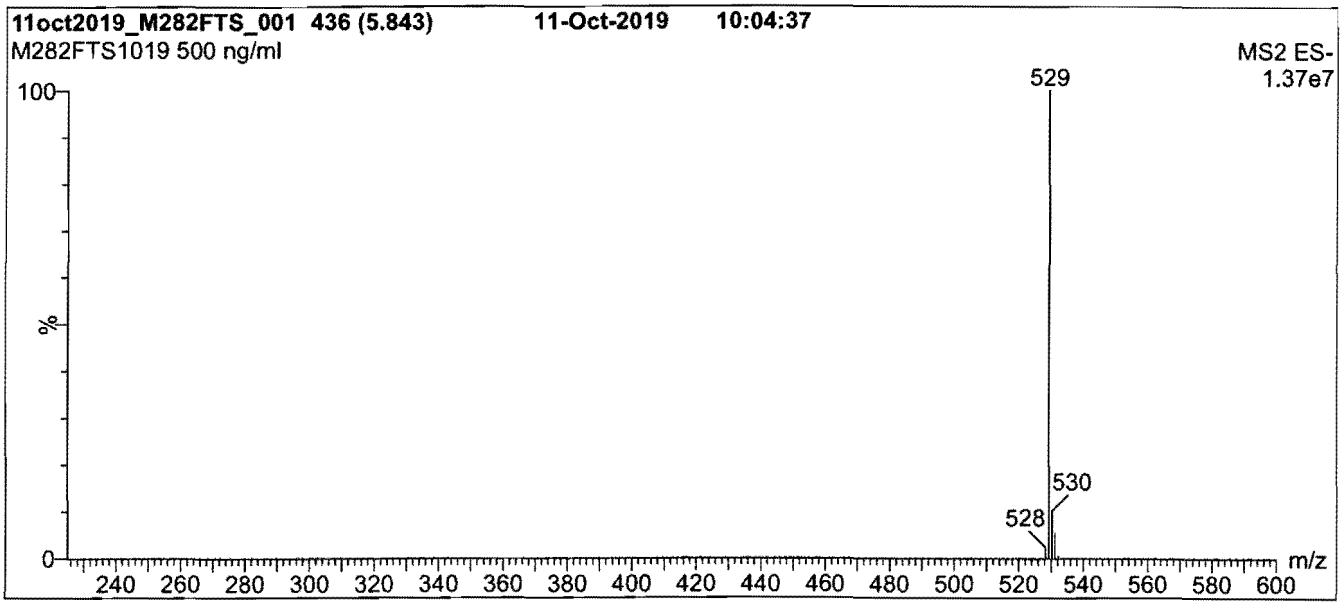
Flow: 300 µl/min

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

19L0603

INTENDED USE:

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HANDLING:

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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:

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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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19L0603

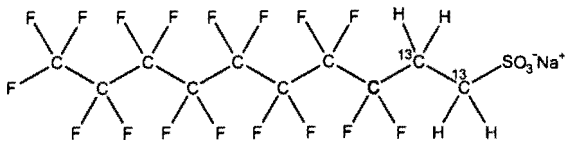
WELLINGTON LABORATORIES

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).

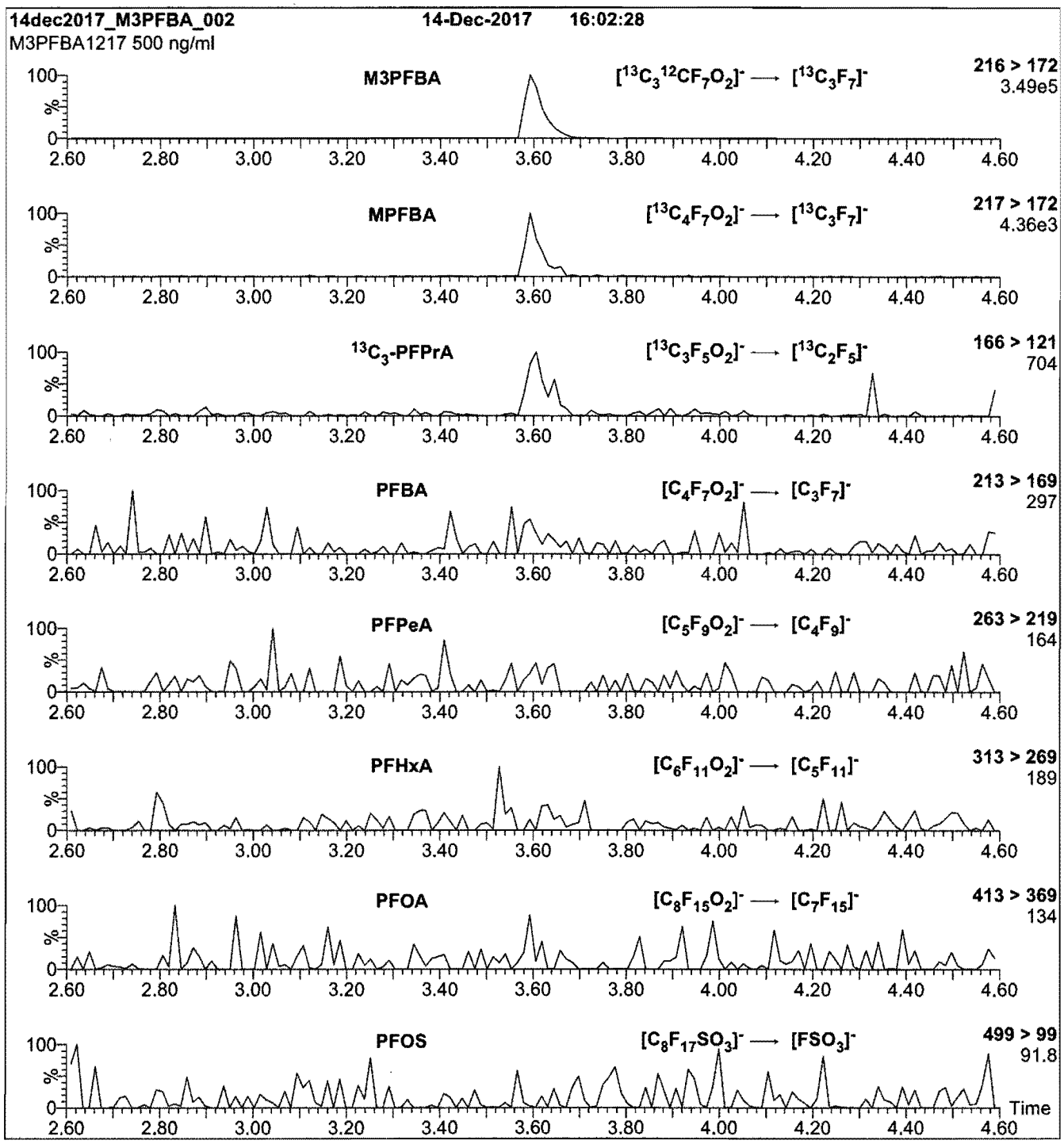
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Certified By: _____ **Date:** 10/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1920604

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)

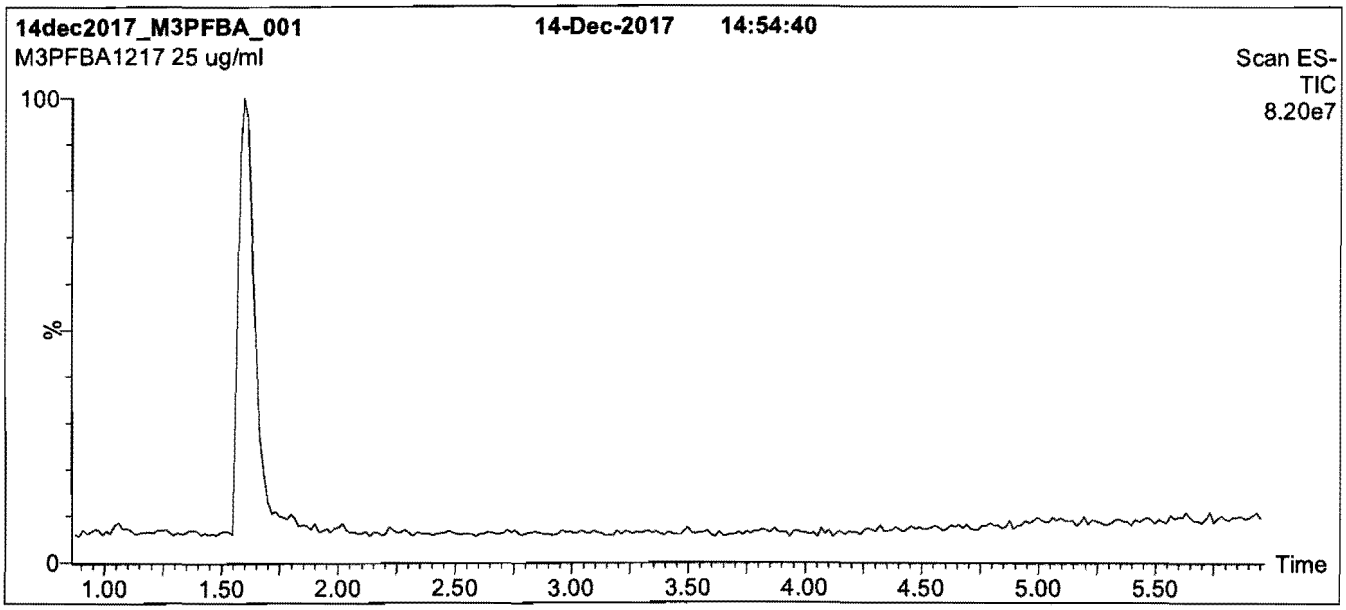
Flow: 300 µl/min

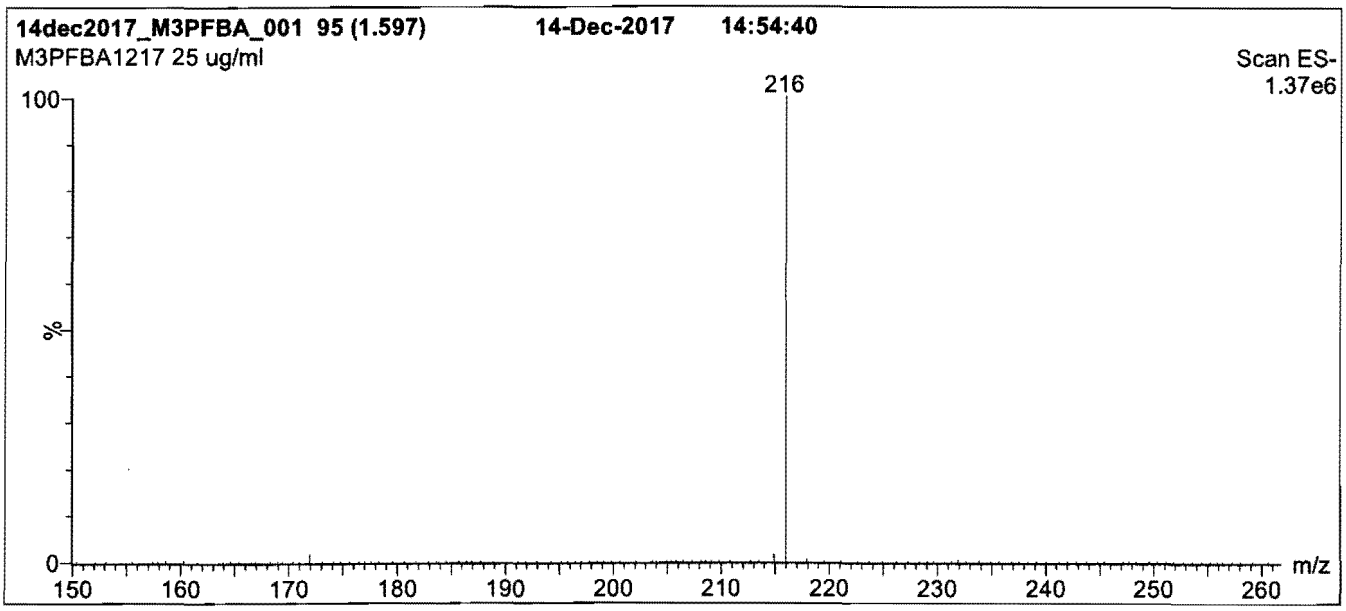
MS Parameters

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:

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.

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.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. 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 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. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

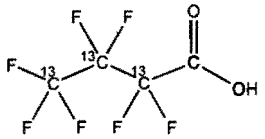
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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:

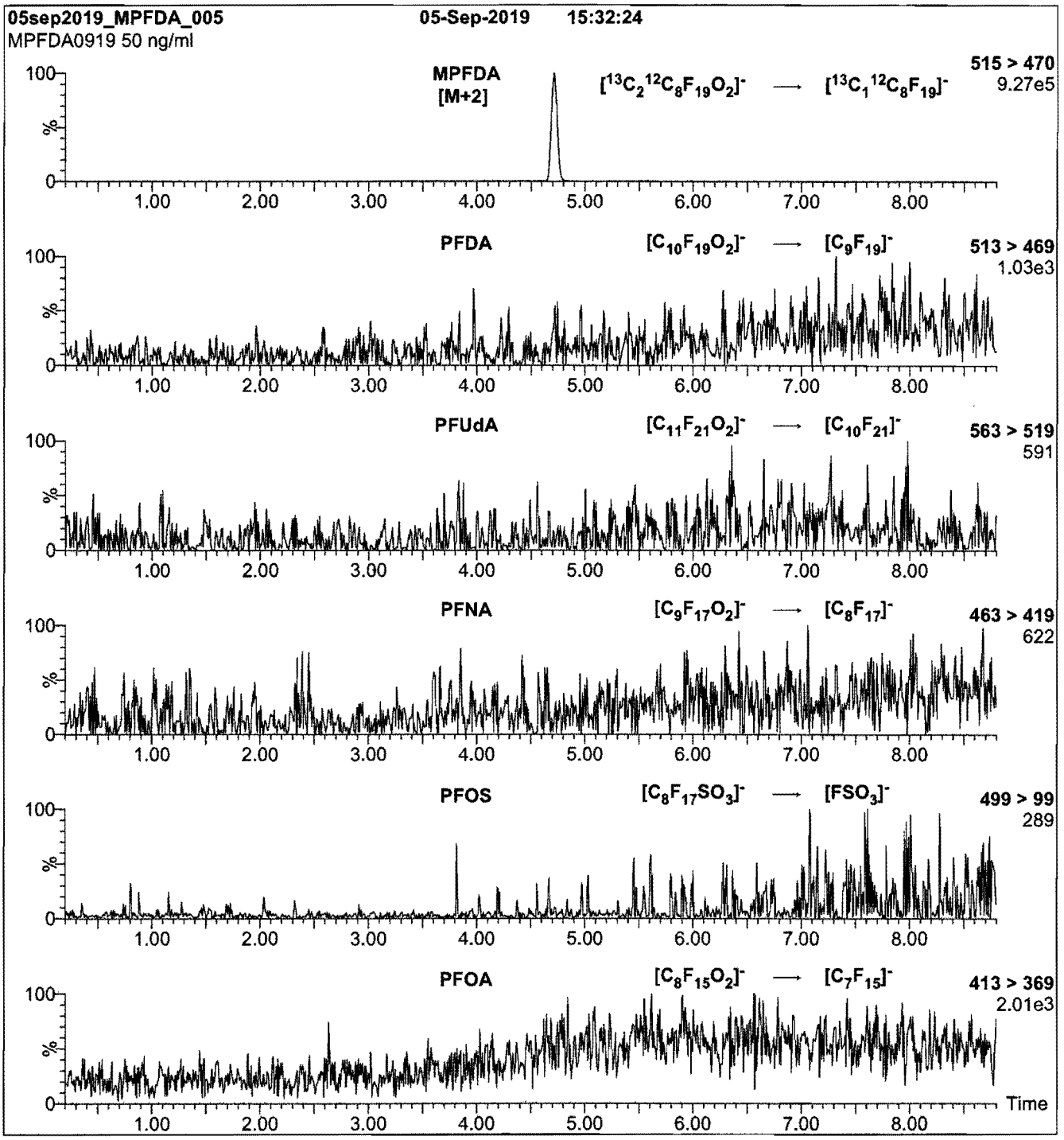
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-[$^{13}C_3$]propanoic acid and also contains ~ 1.0% of perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid due to the naturally occurring isotopic 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)

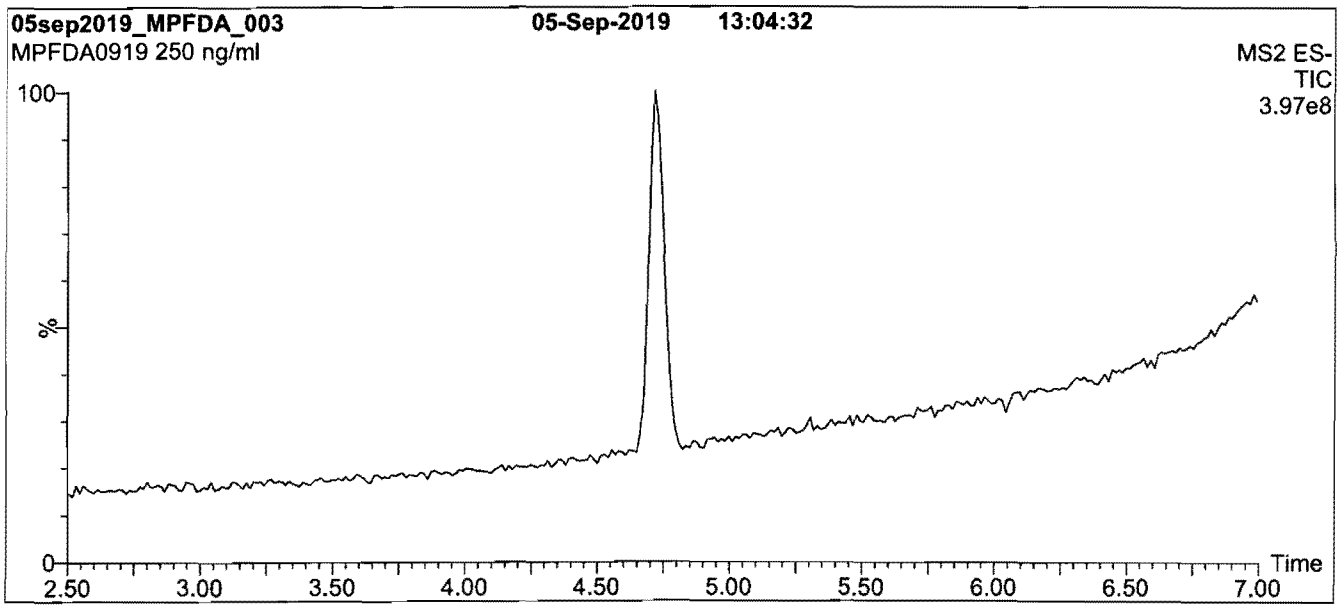
Mobile phase: Same as Figure 1

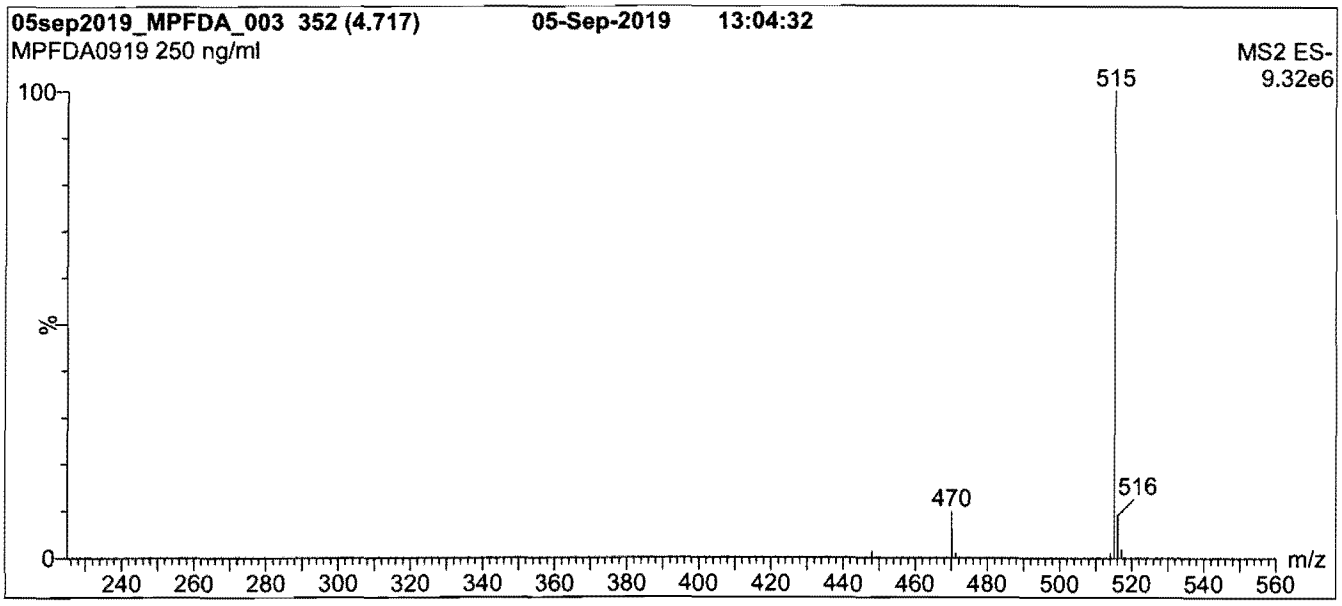
Flow: 300 µl/min

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

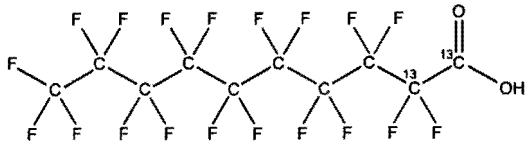
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19L0605

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.

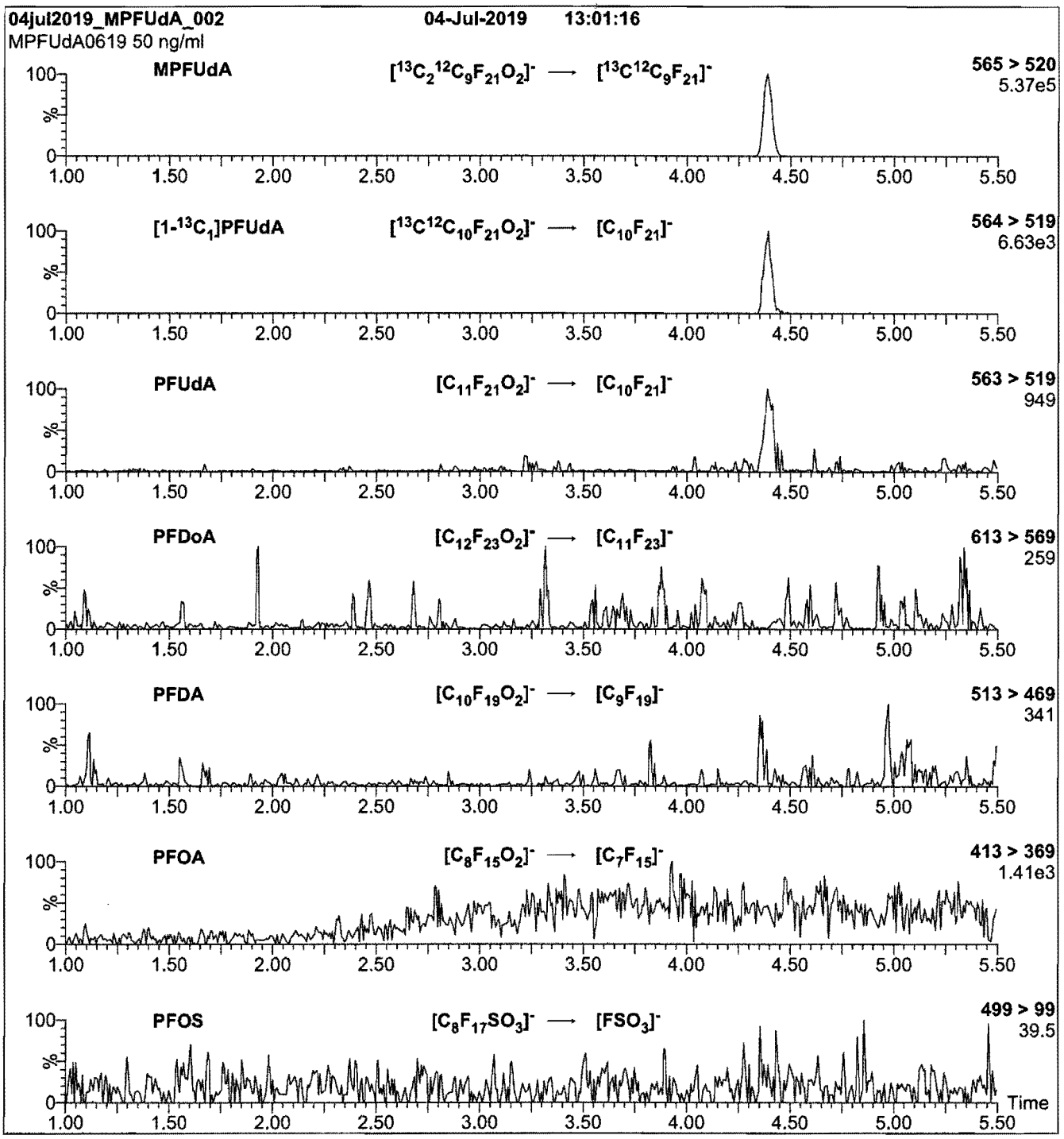
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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)

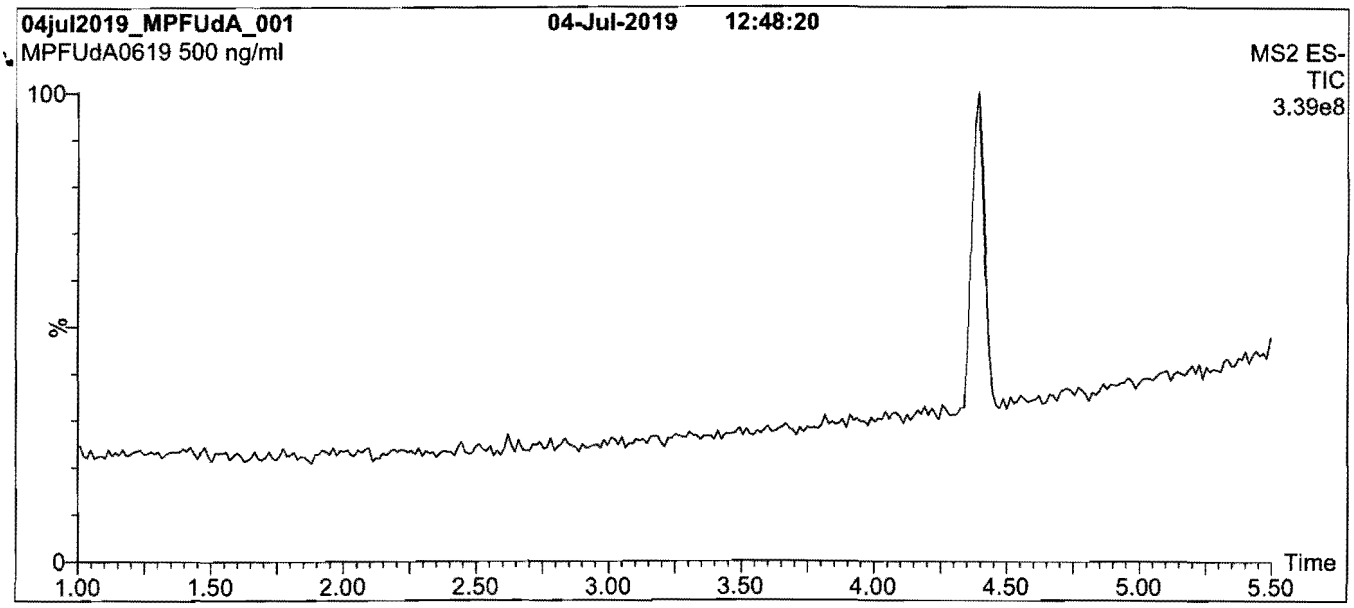
Mobile phase: Same as Figure 1

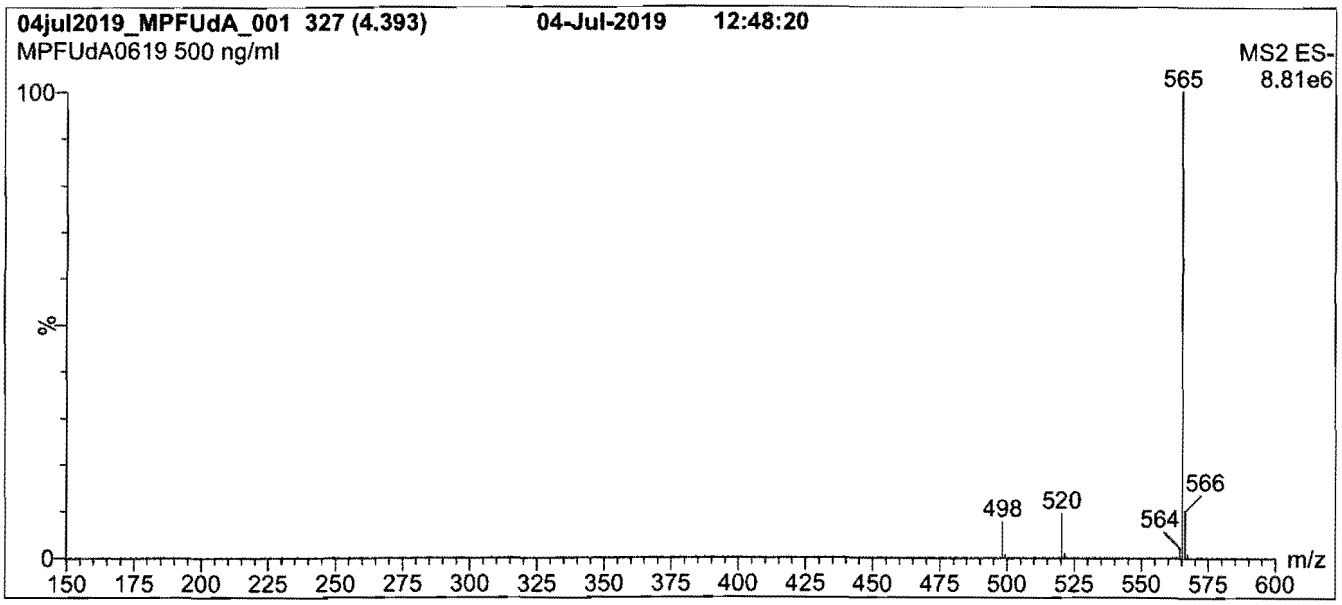
Flow: 300 µl/min

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:

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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

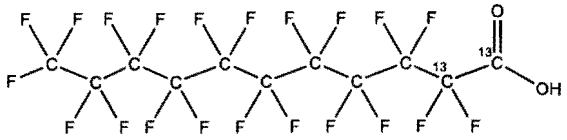
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19L0606

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.

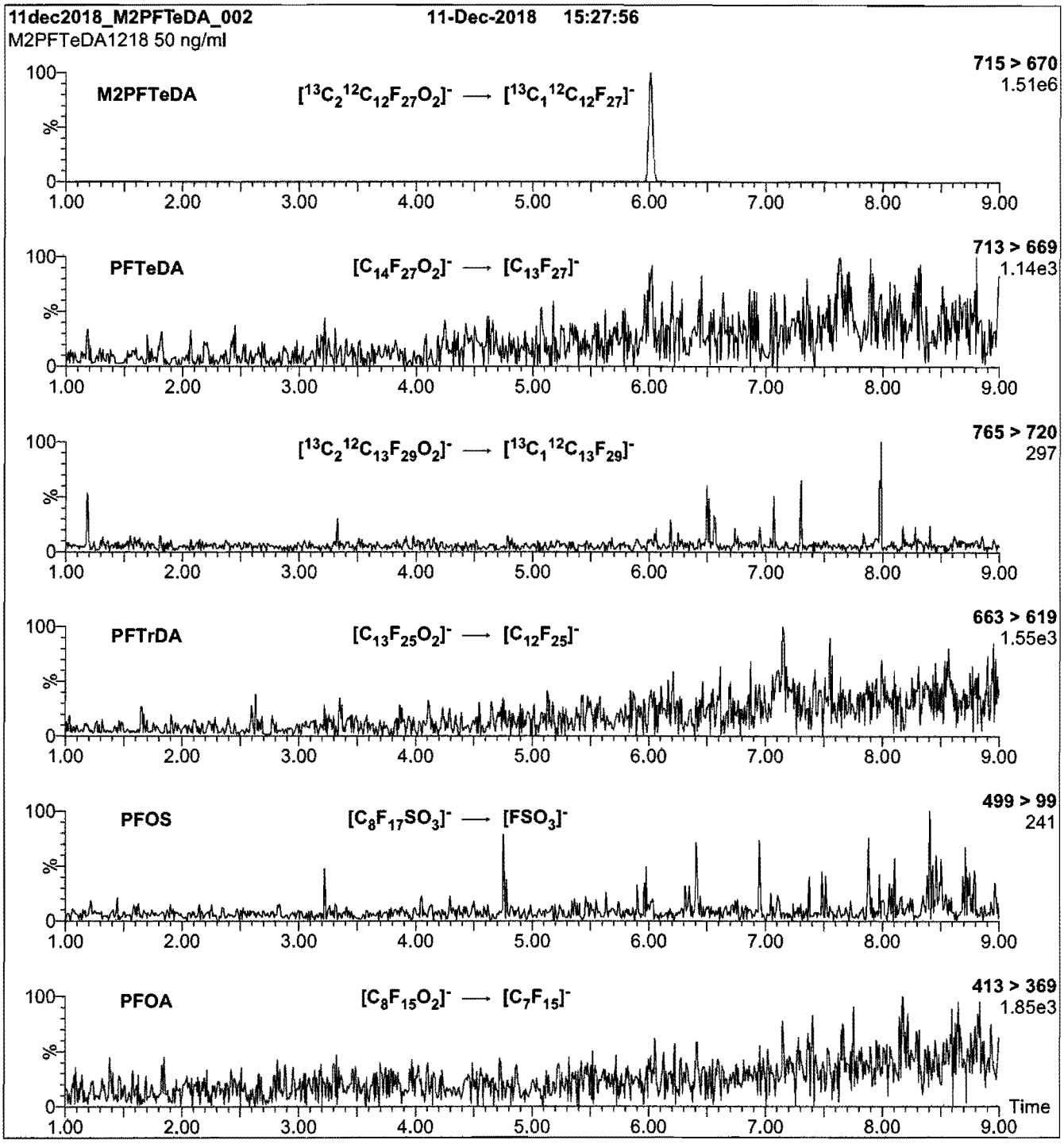
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

19L0607

Figure 2: **M2PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M2PFTeDA)

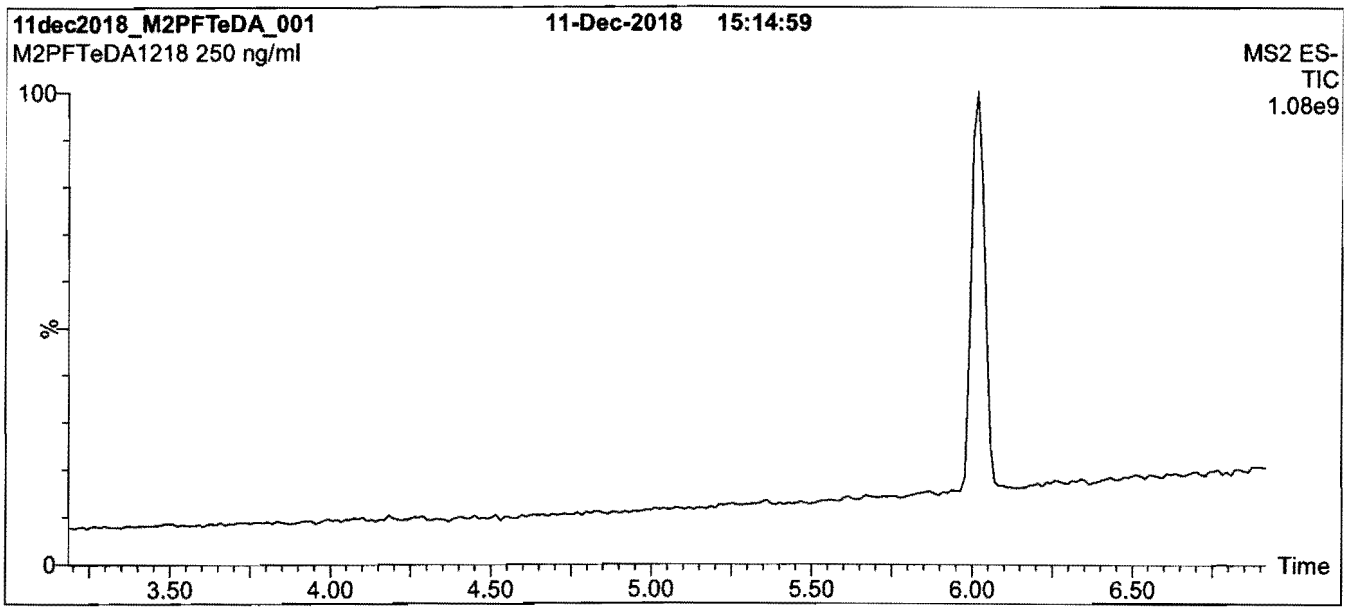
Mobile phase: Same as Figure 1

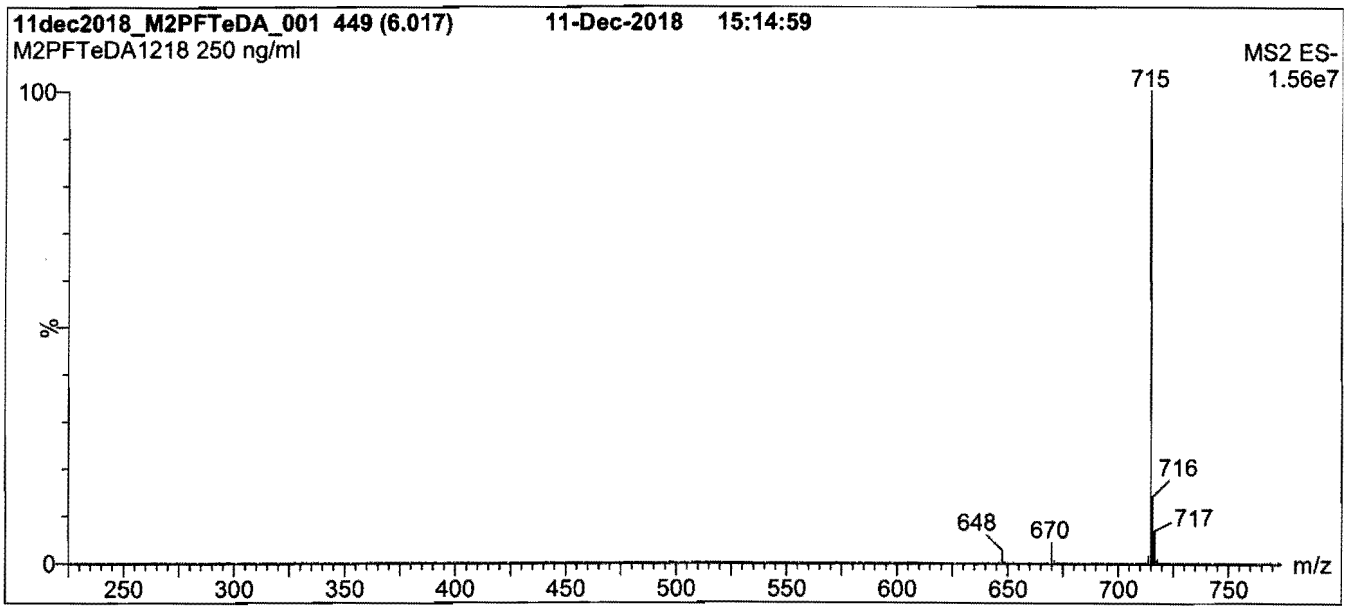
Flow: 300 µl/min

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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HANDLING:

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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 $x_1, x_2, \ldots x_n$ 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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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:

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

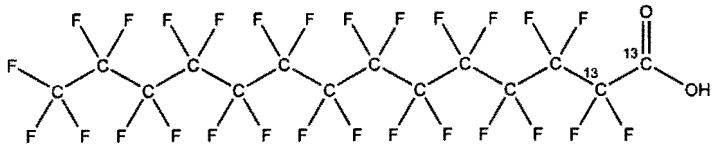
19L0607

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.

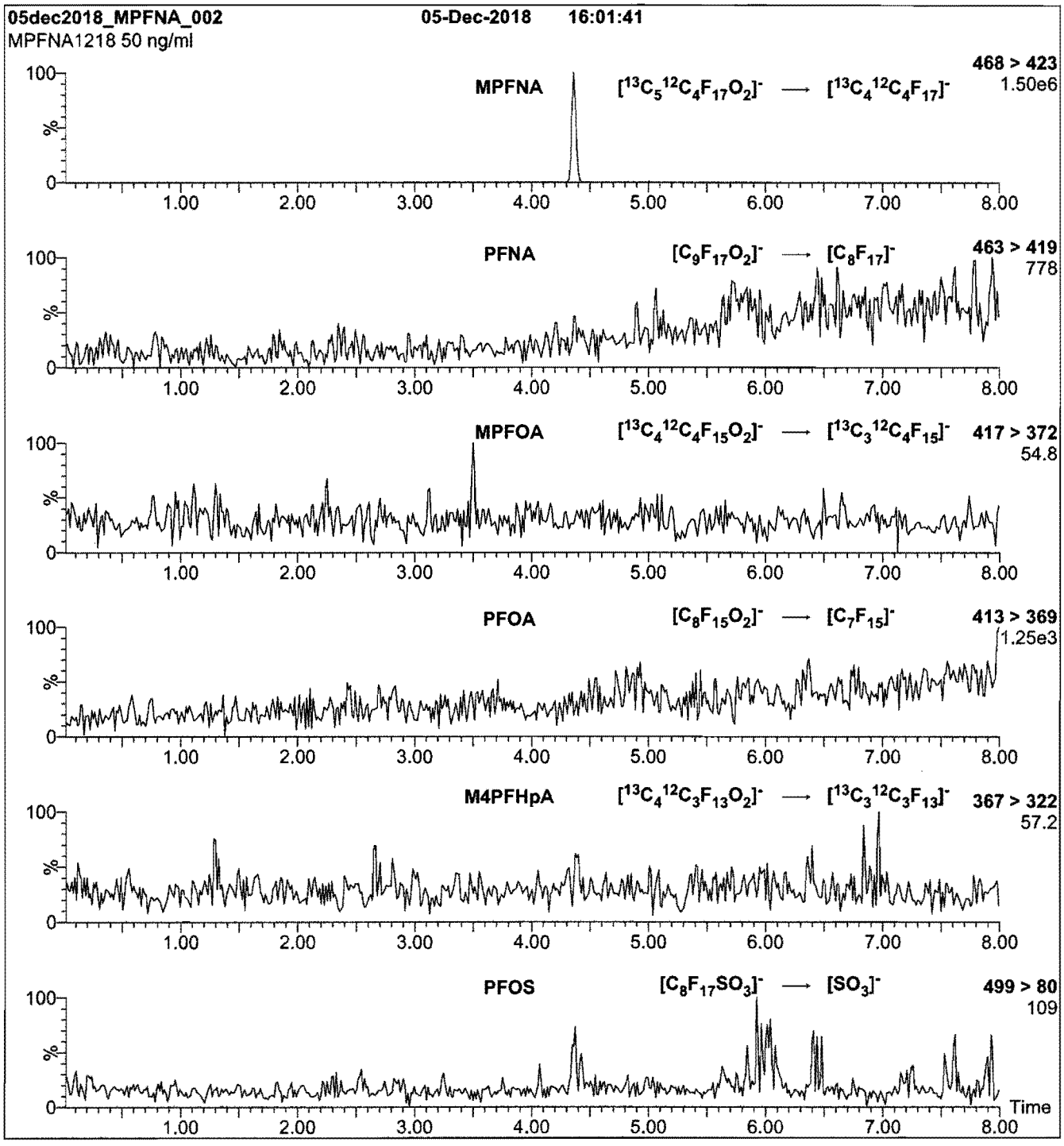
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

19L0608

Figure 2: **MPFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFNA)

Mobile phase: Same as Figure 1

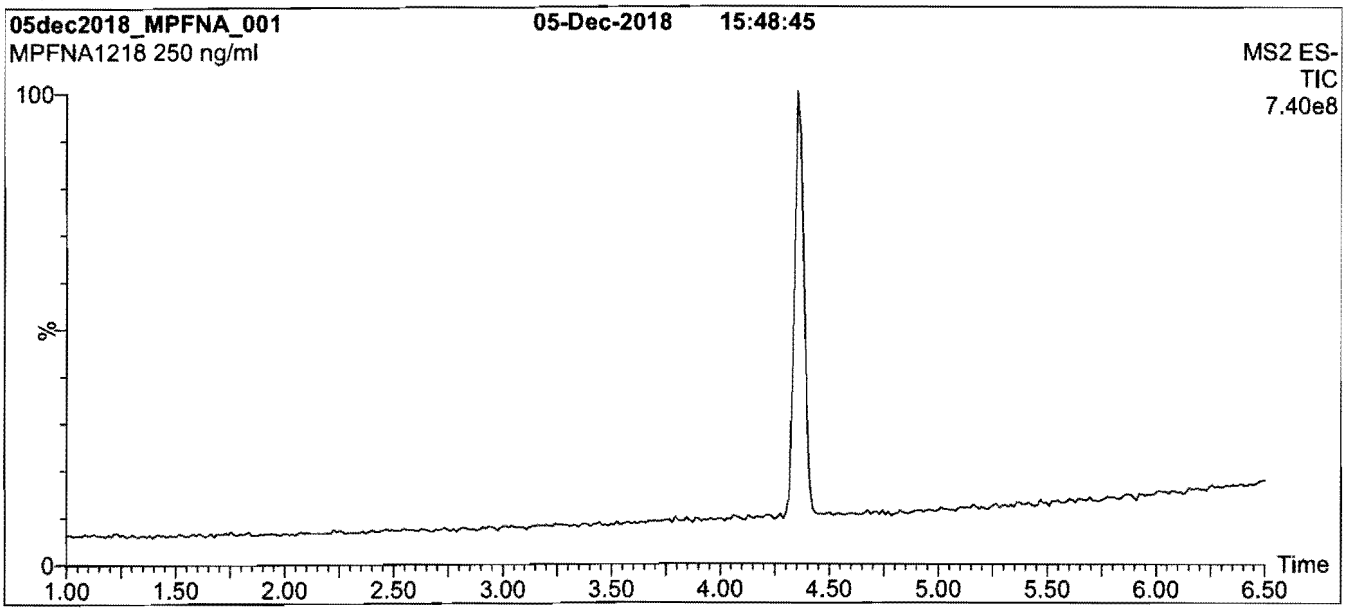
Flow: 300 µl/min

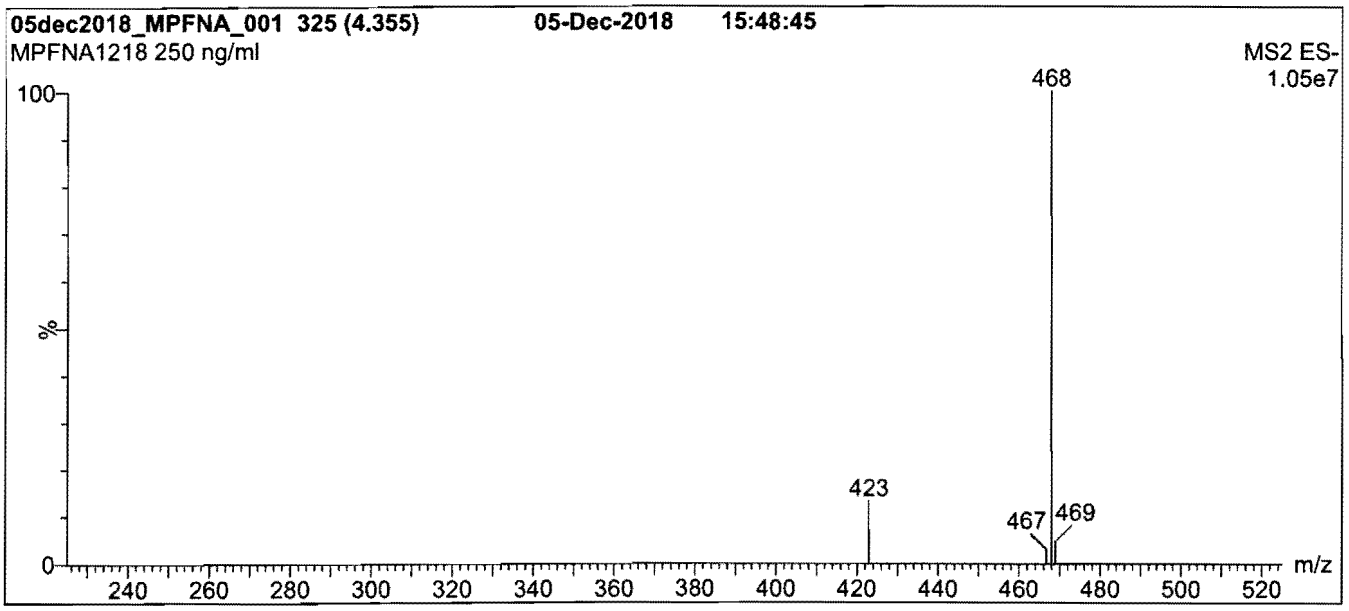
MS Parameters

Collision Gas (mbar) = 2.88e-3
Collision Energy (eV) = 10

19L0608

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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EXPIRY DATE / PERIOD OF VALIDITY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

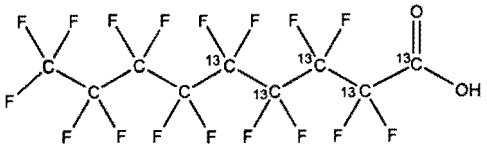
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19L0608

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFNA	**LOT NUMBER:**	MPFNA1218
COMPOUND:	Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid		
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

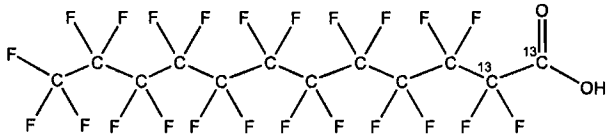
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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)

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19L0609

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QUALITY MANAGEMENT:

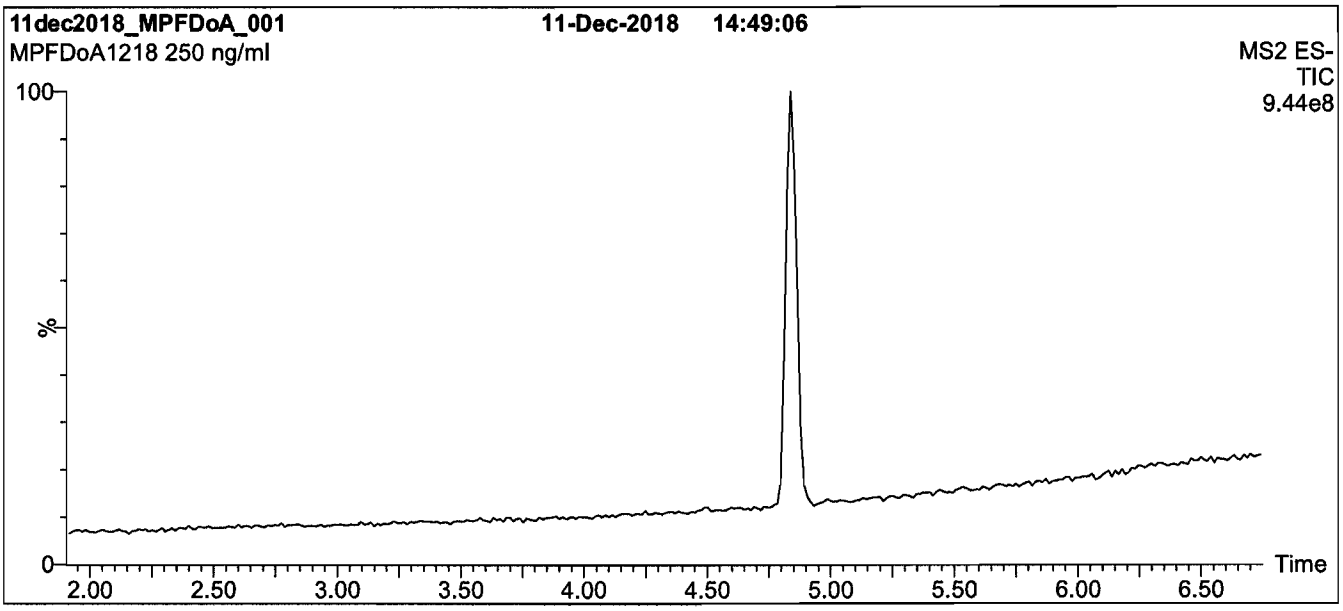
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

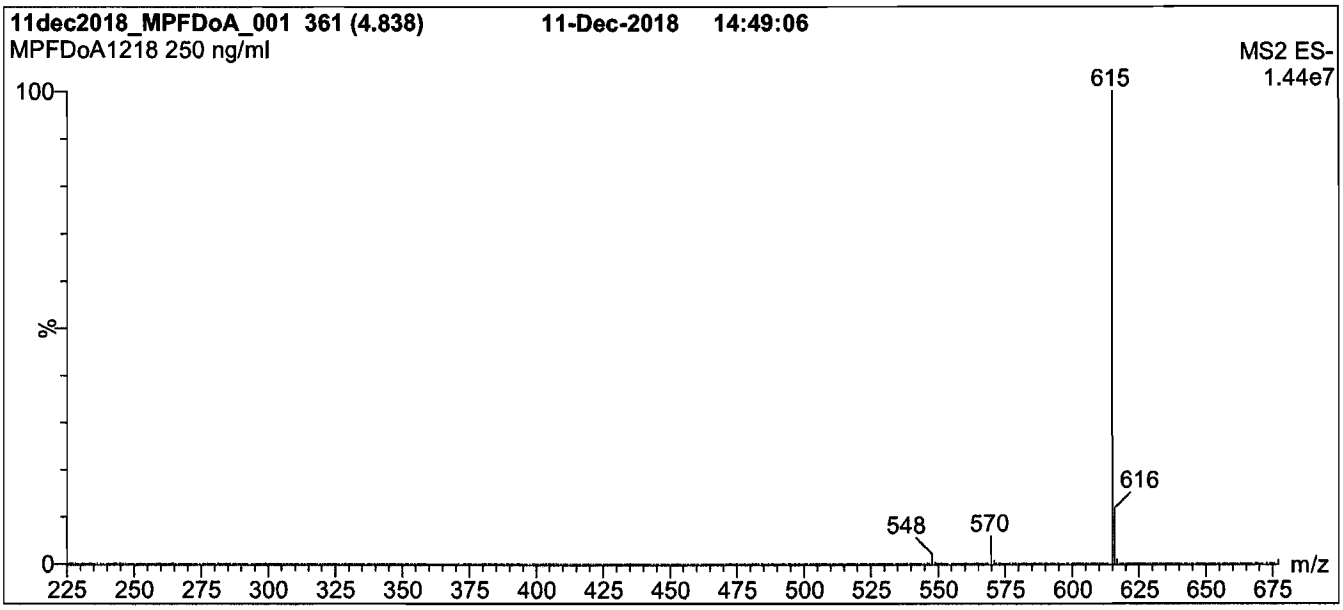
CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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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

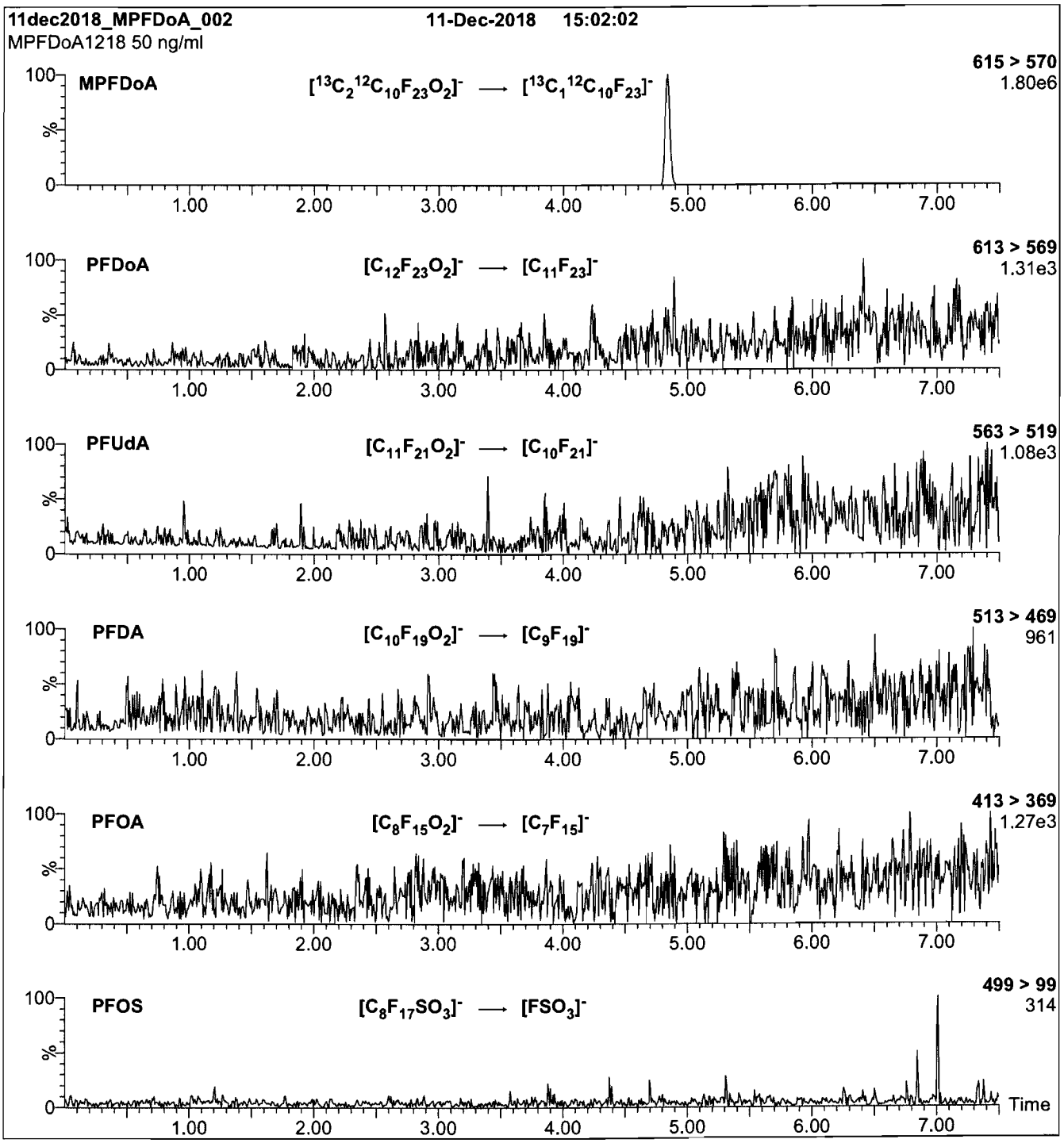
Flow: 300 µl/min

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)

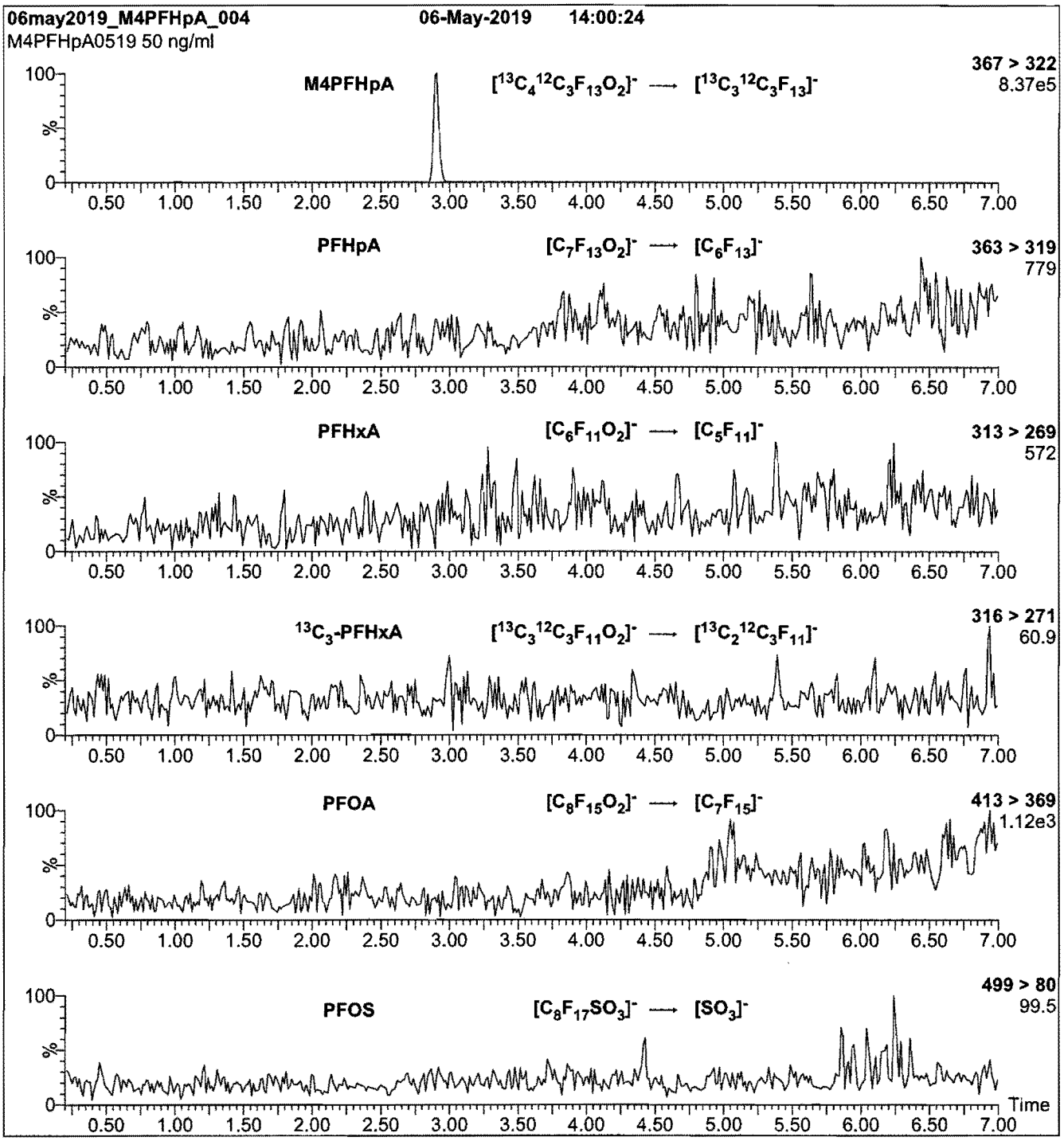
Mobile phase: Same as Figure 1

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

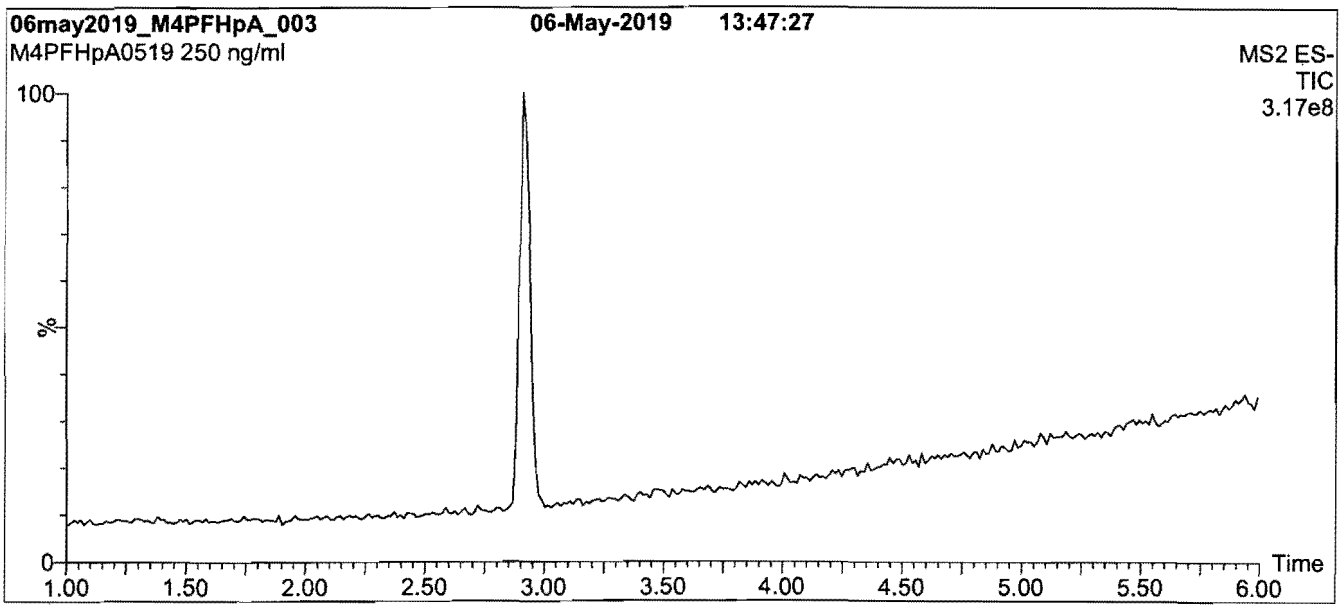
Flow: 300 µl/min

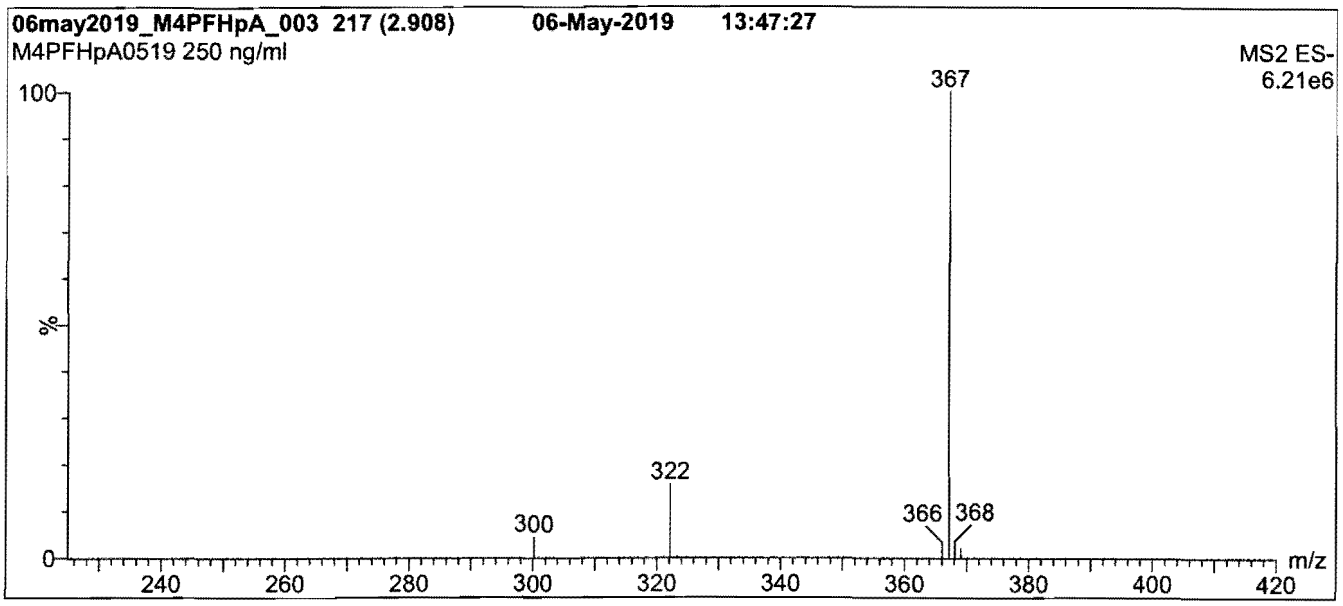
MS Parameters

Collision Gas (mbar) = 2.87e-3
Collision Energy (eV) = 8

19L0610

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
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19L0010

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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

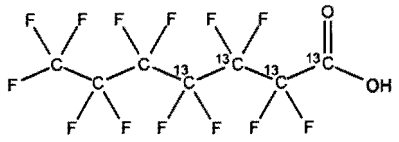
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19L0610

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 ($1,2,3,4\text{-}^{13}C_4$)
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.

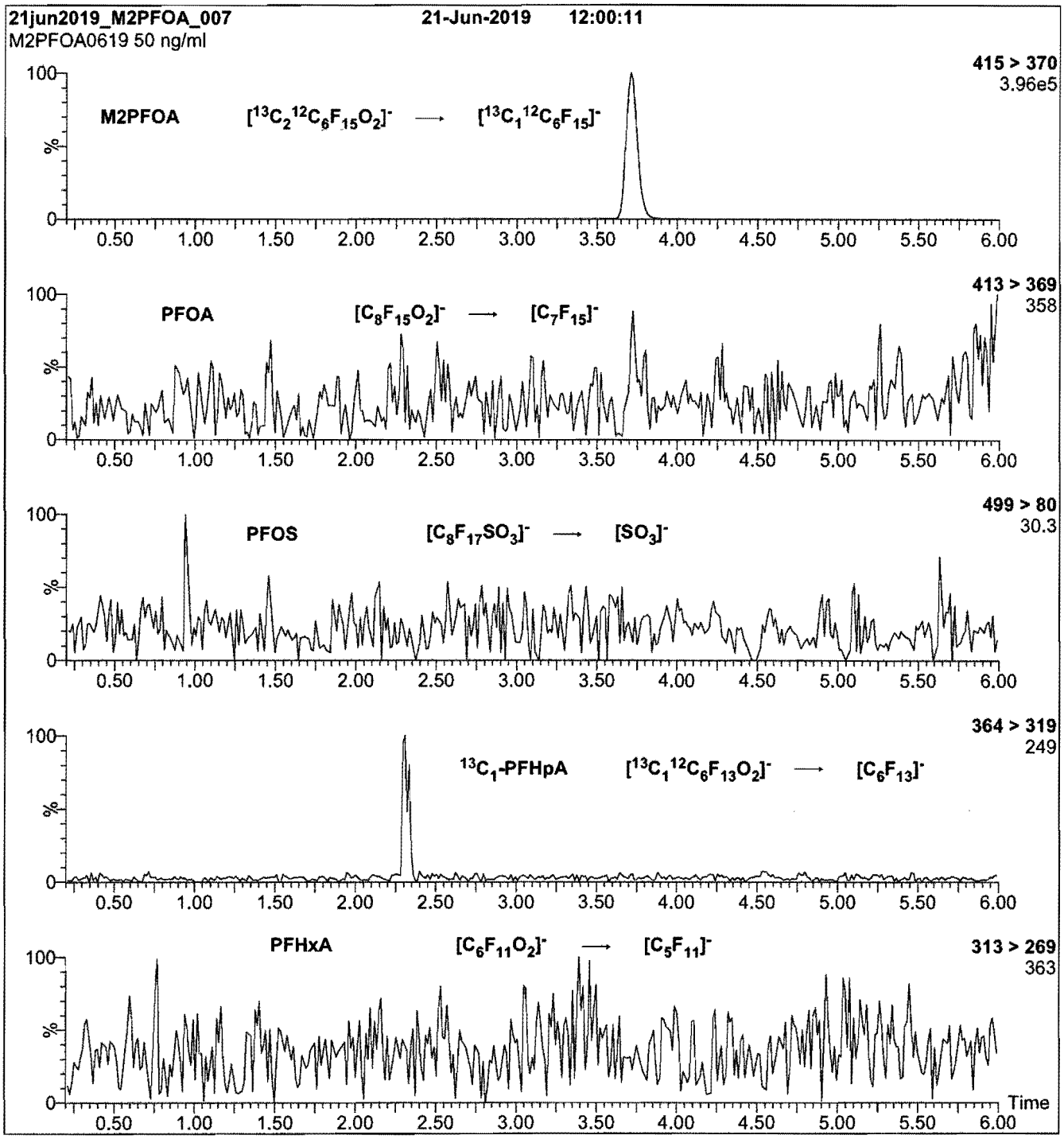
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

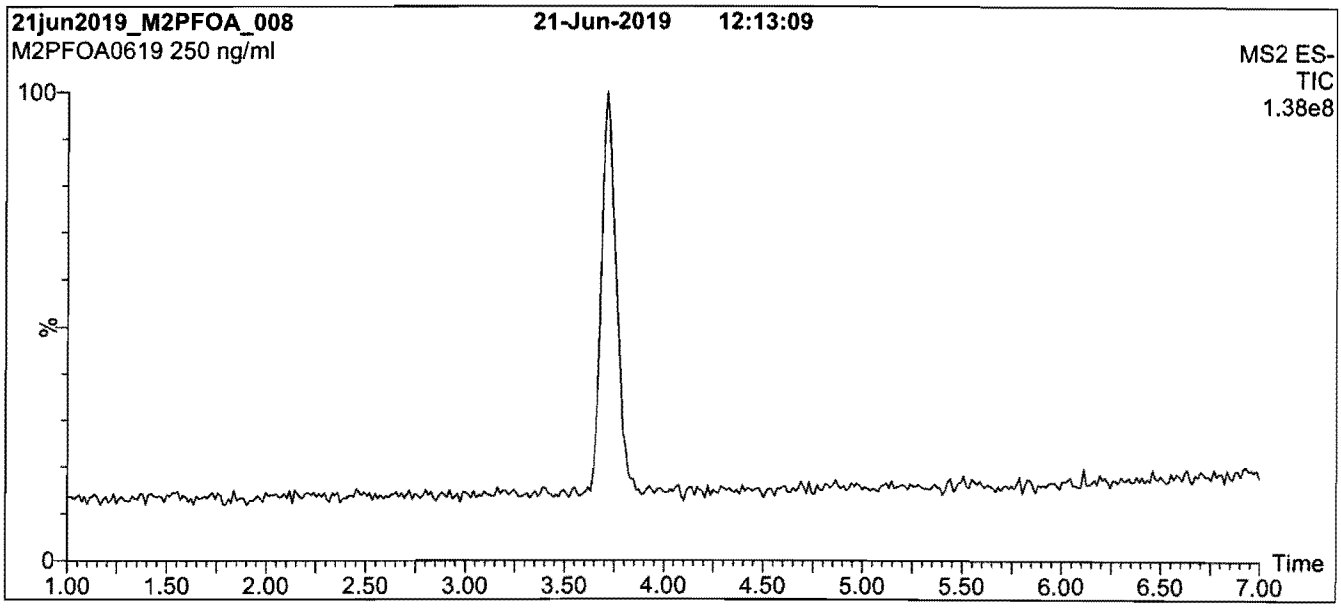
Flow: 300 µl/min

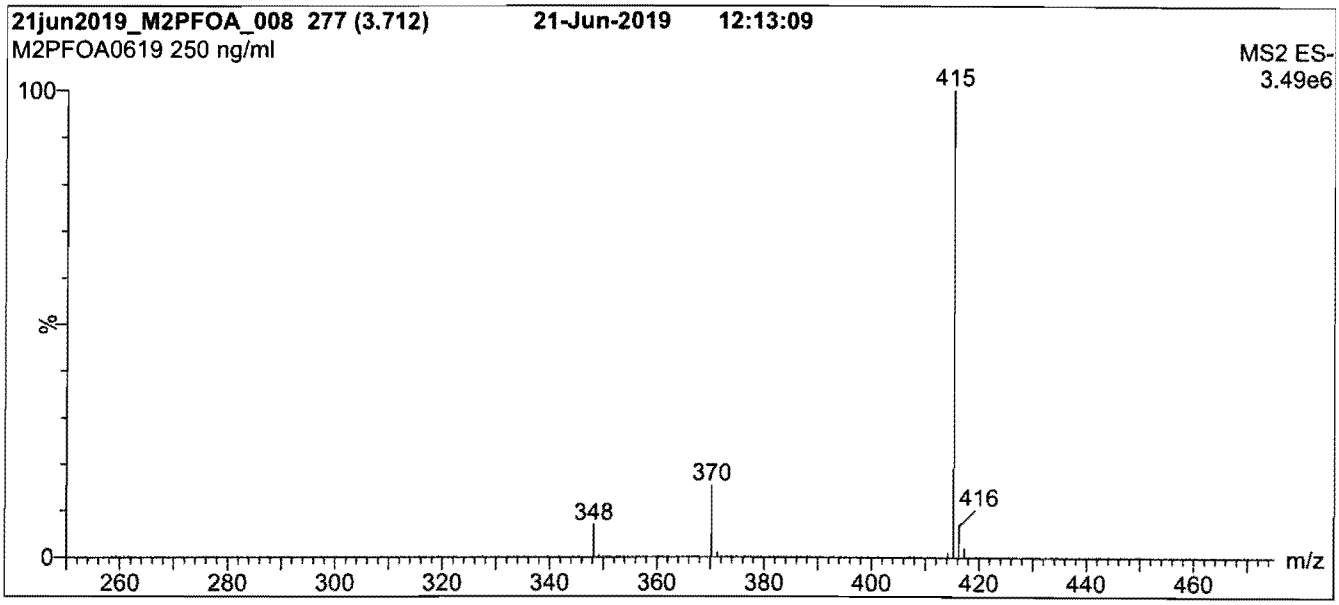
MS Parameters

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

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:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

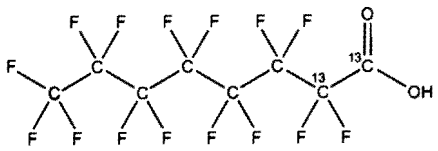
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19L 0611

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).

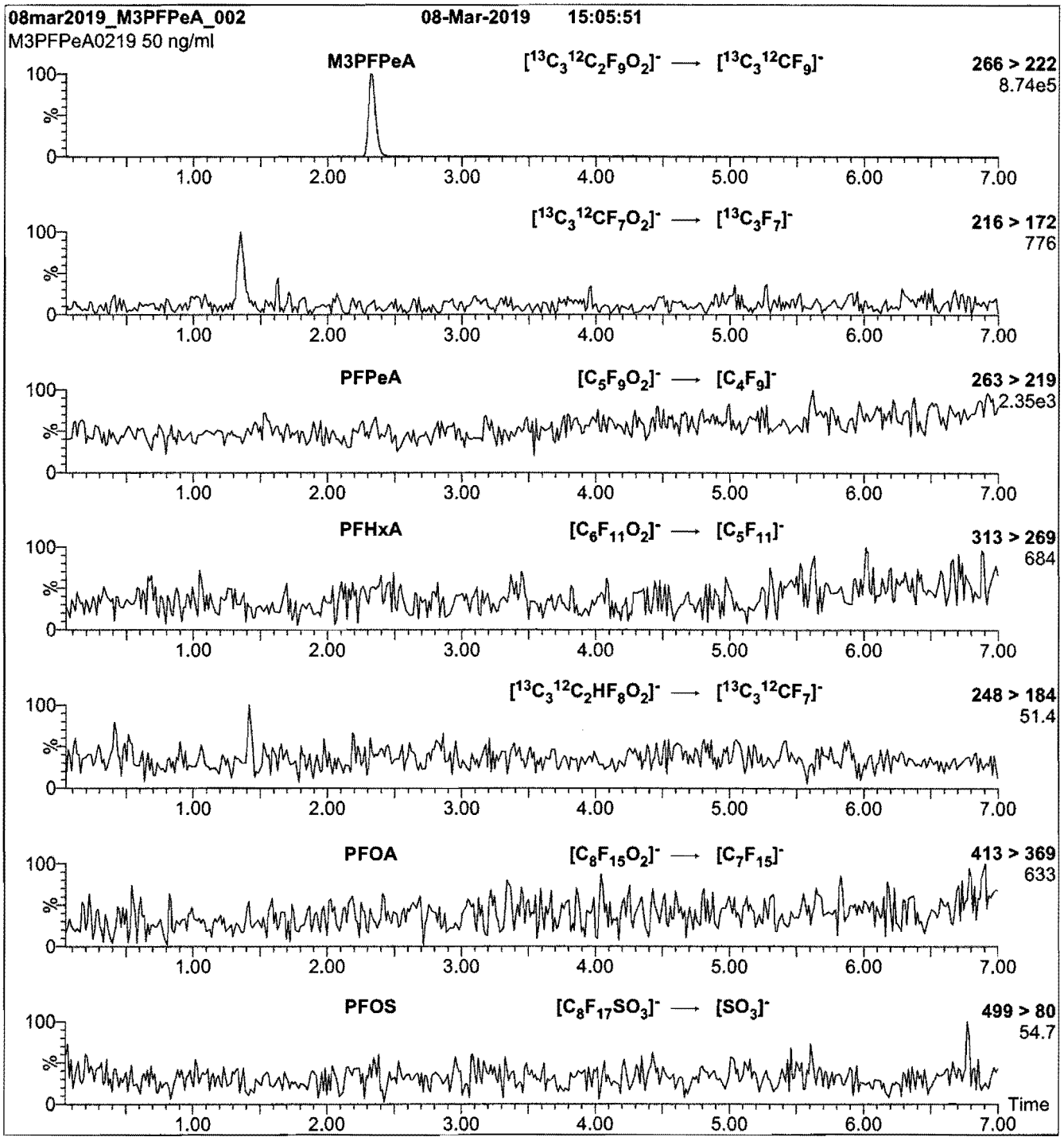
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
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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

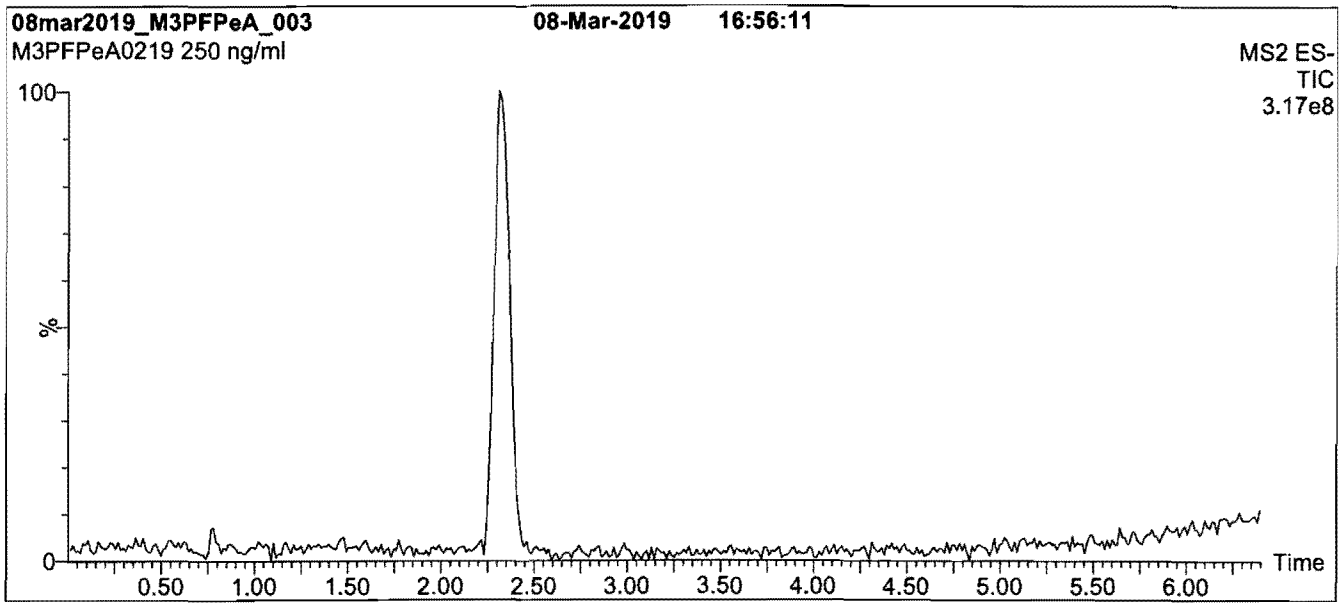
Flow: 300 µl/min

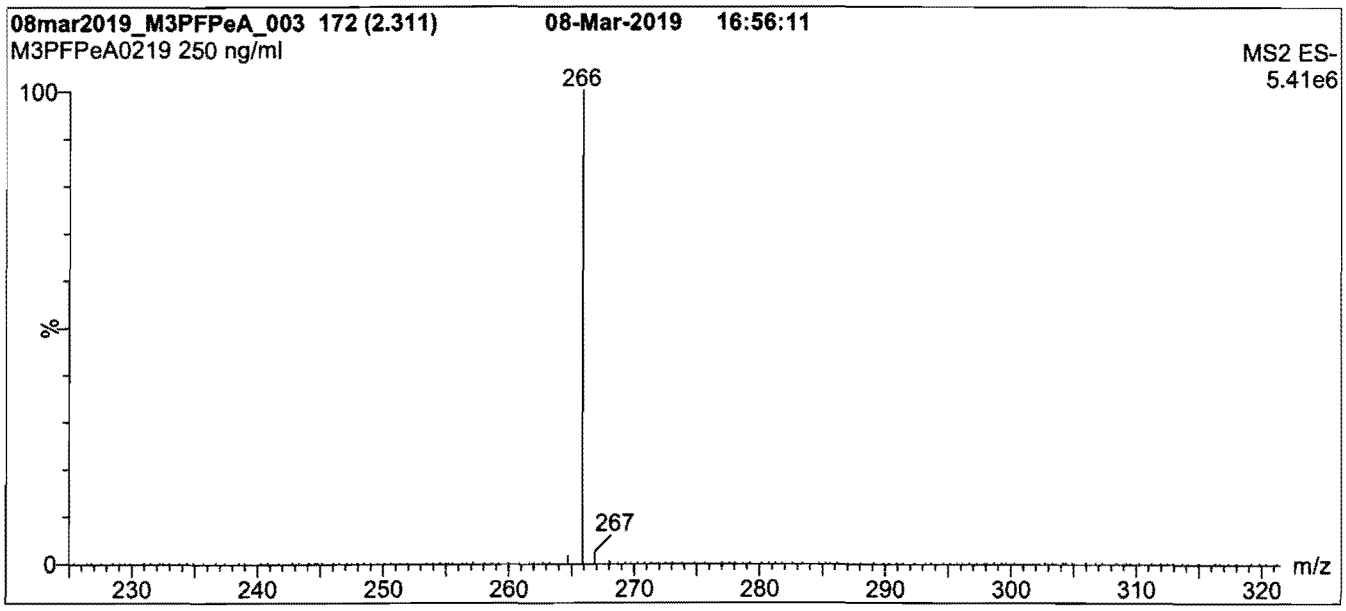
MS Parameters

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 $x_1, x_2, \ldots x_n$ 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

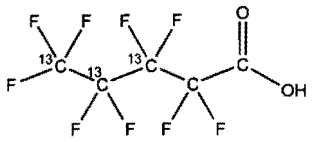
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19L0612

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.

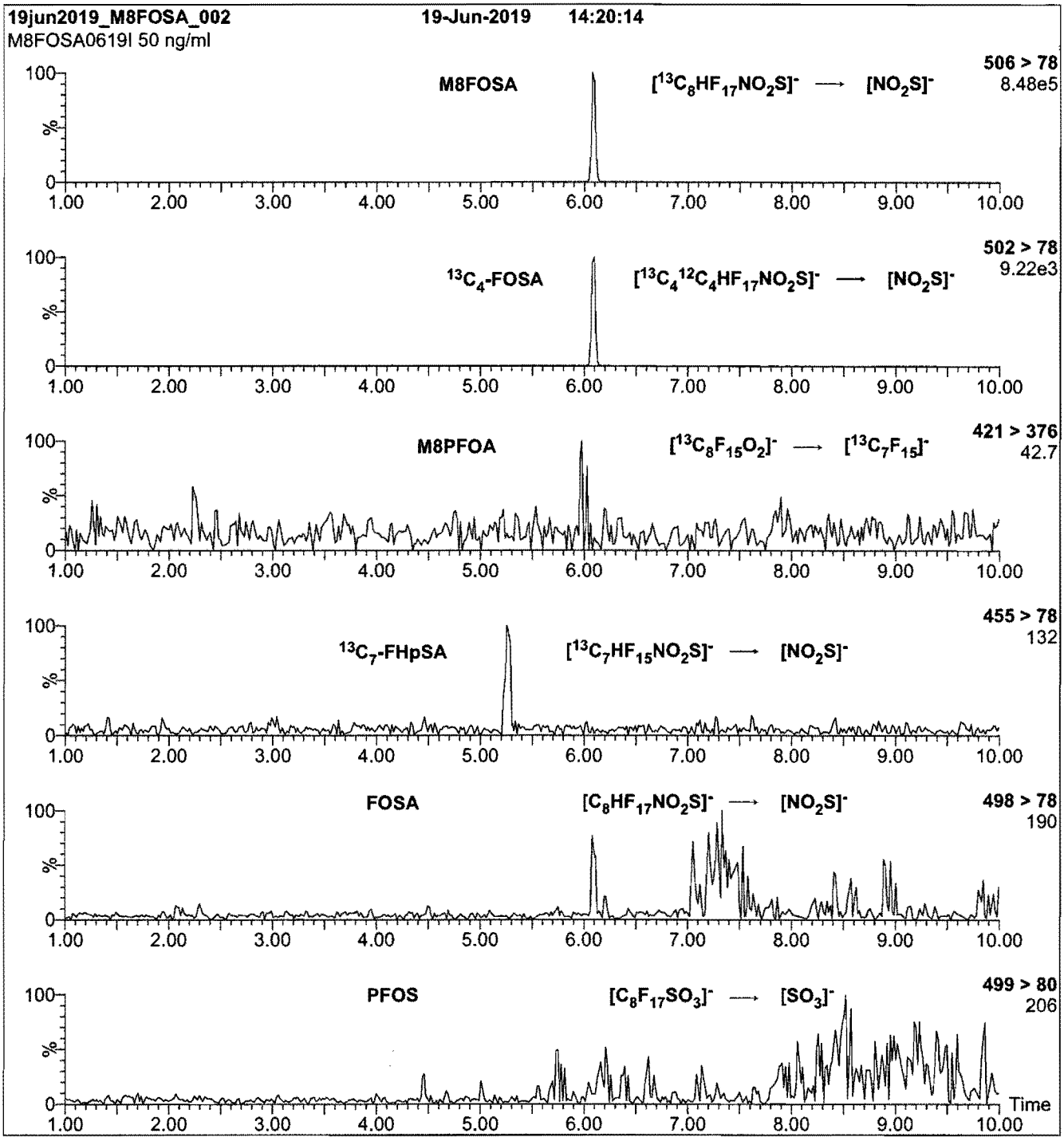
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
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19L0613

Figure 2: **M8FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8FOSA-I)

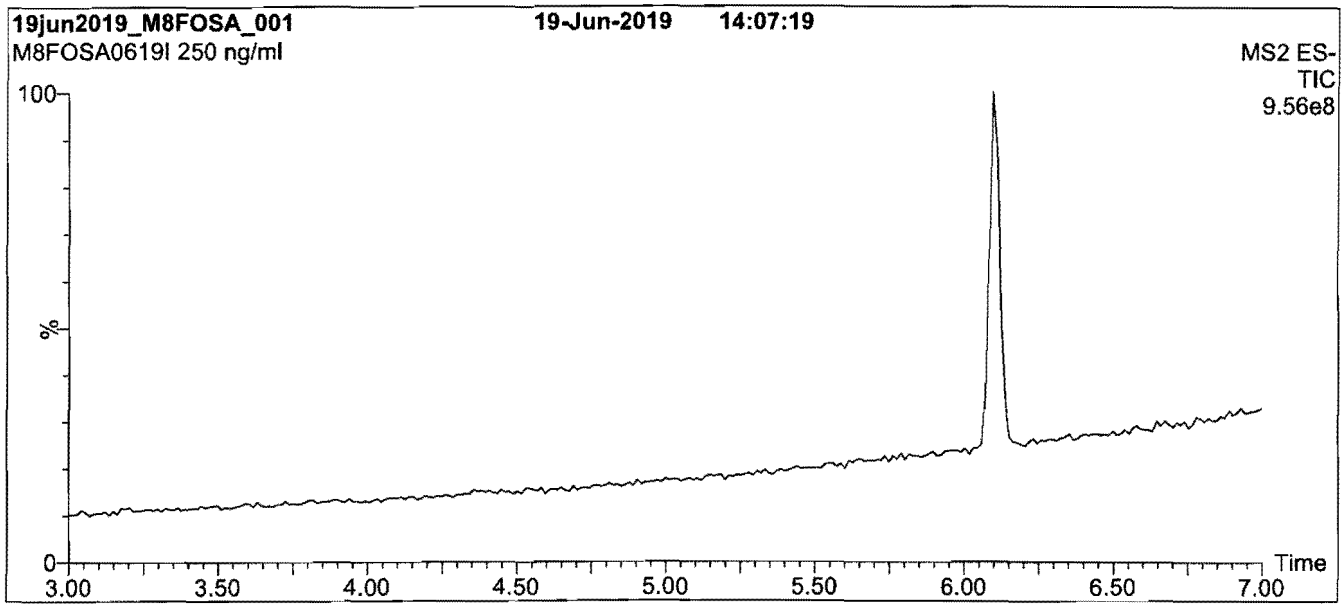
Mobile phase: Same as Figure 1

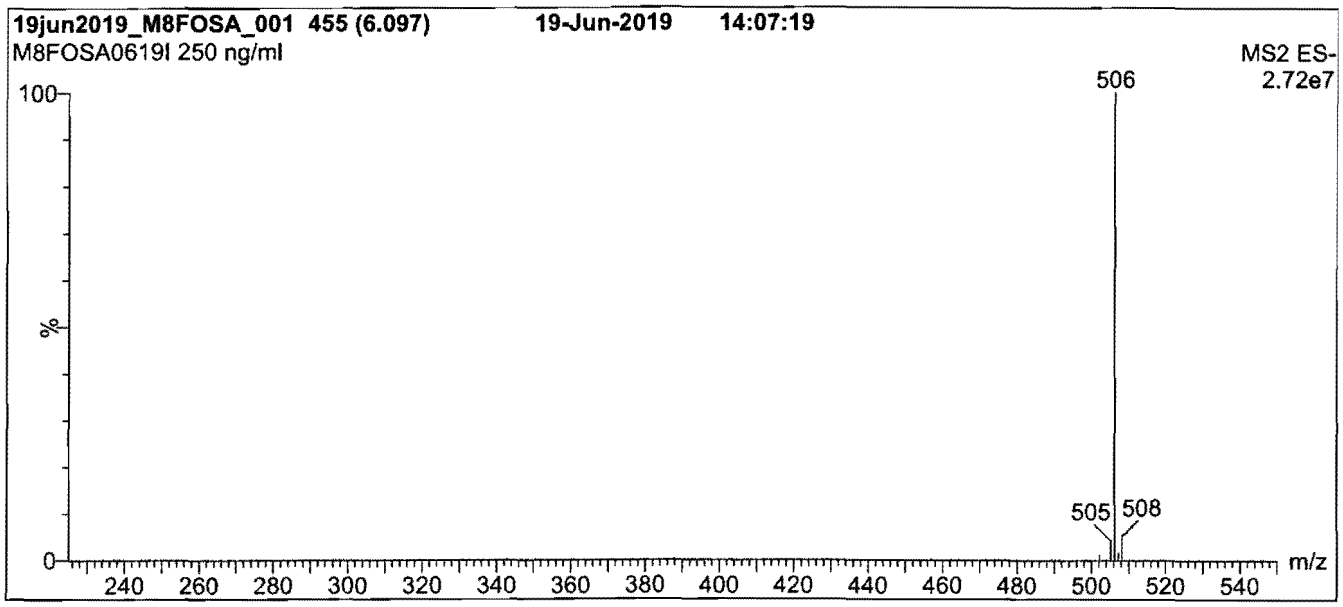
Flow: 300 µl/min

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

INTENDED USE:

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HANDLING:

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HOMOGENEITY:

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UNCERTAINTY:

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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:

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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

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19L0613

WELLINGTON LABORATORIES

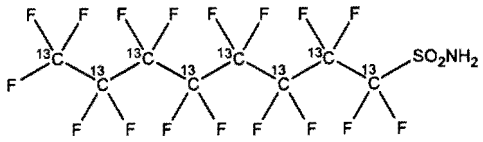
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0614

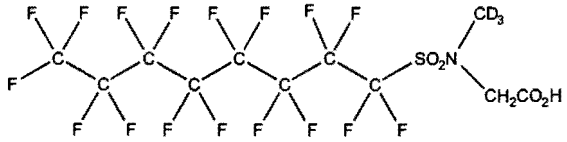
WELLINGTON LABORATORIES

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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:

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).

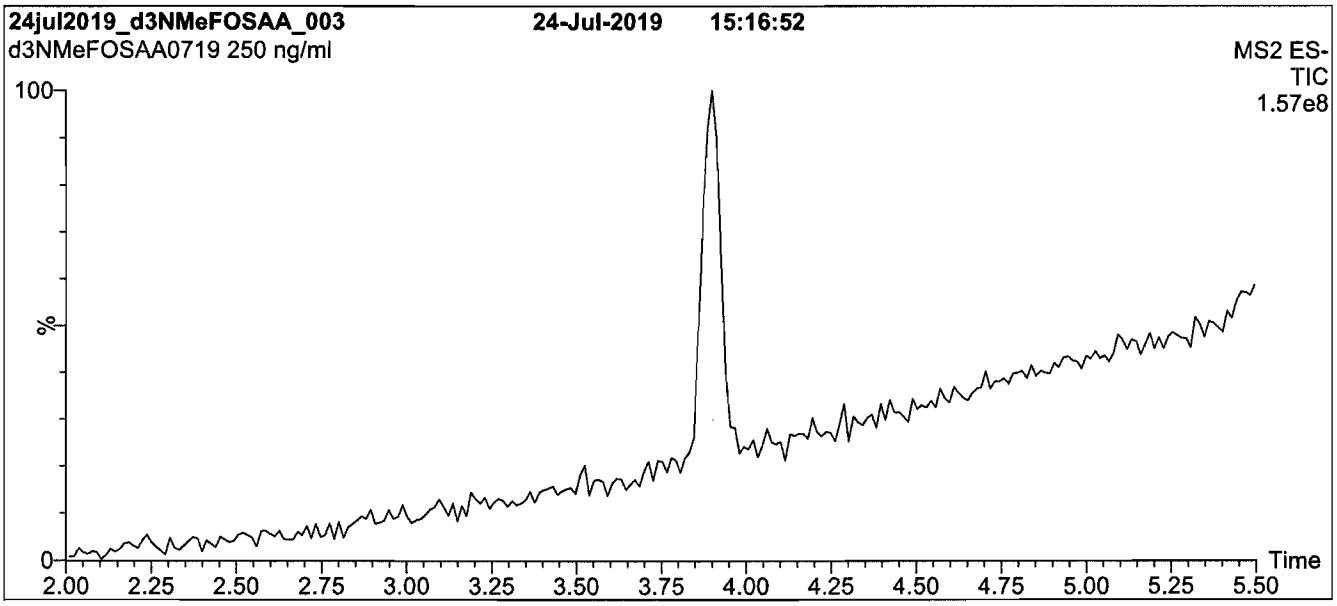
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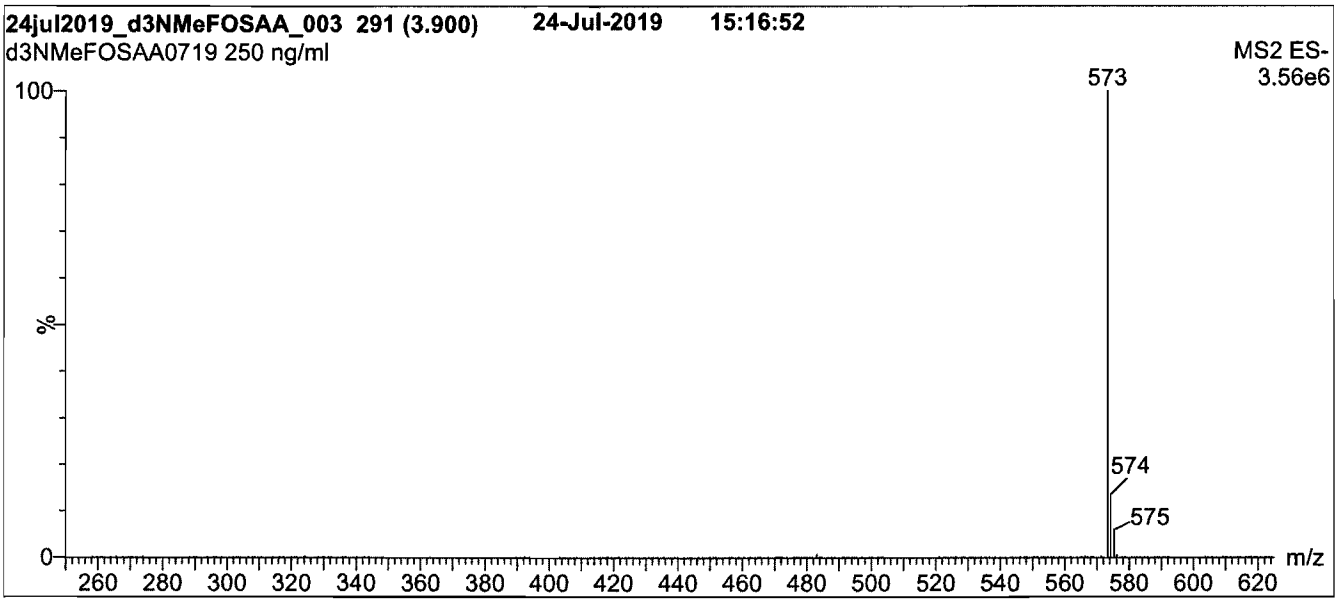
ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

19L0614

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

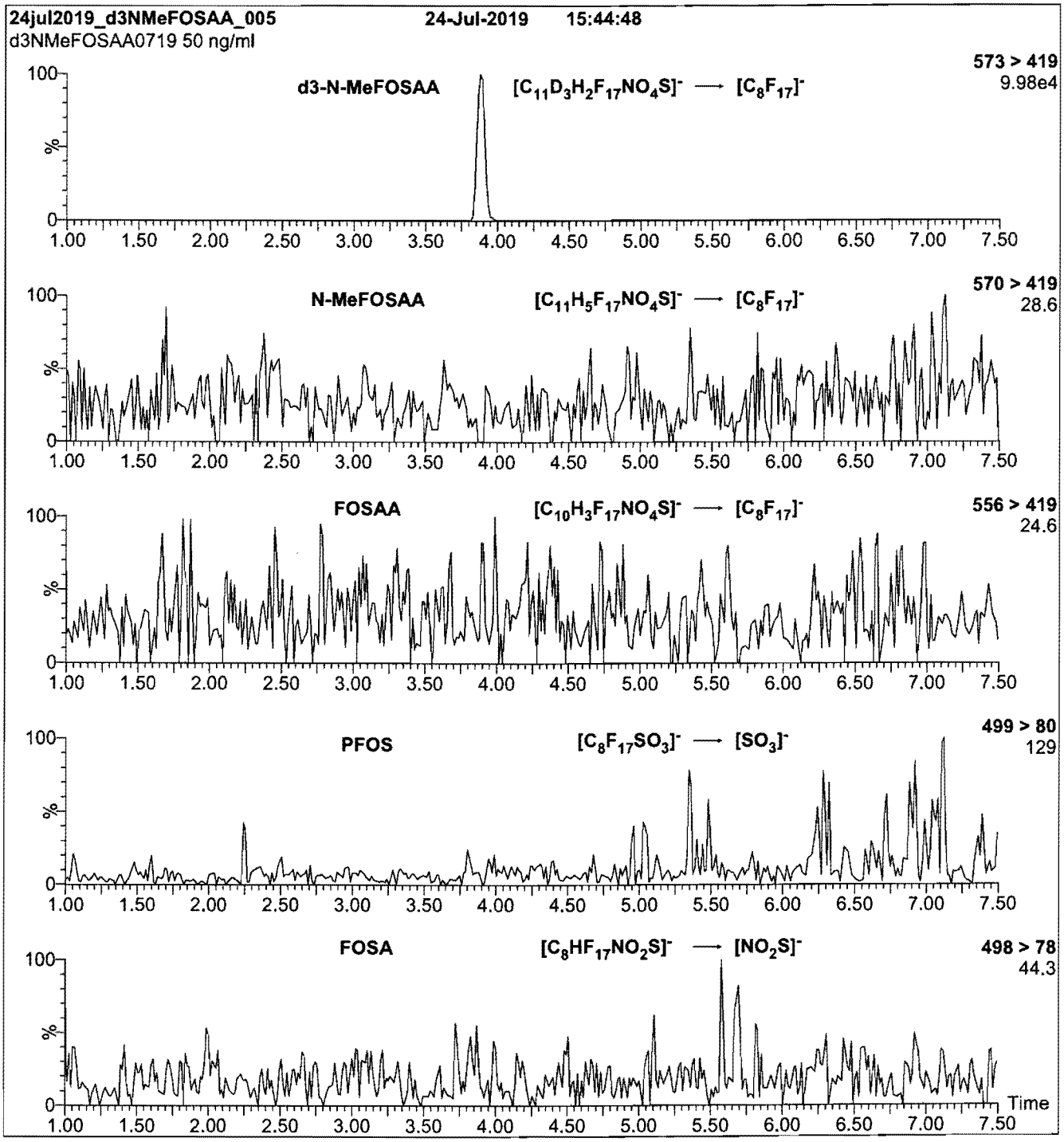
Flow: 300 µl/min

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

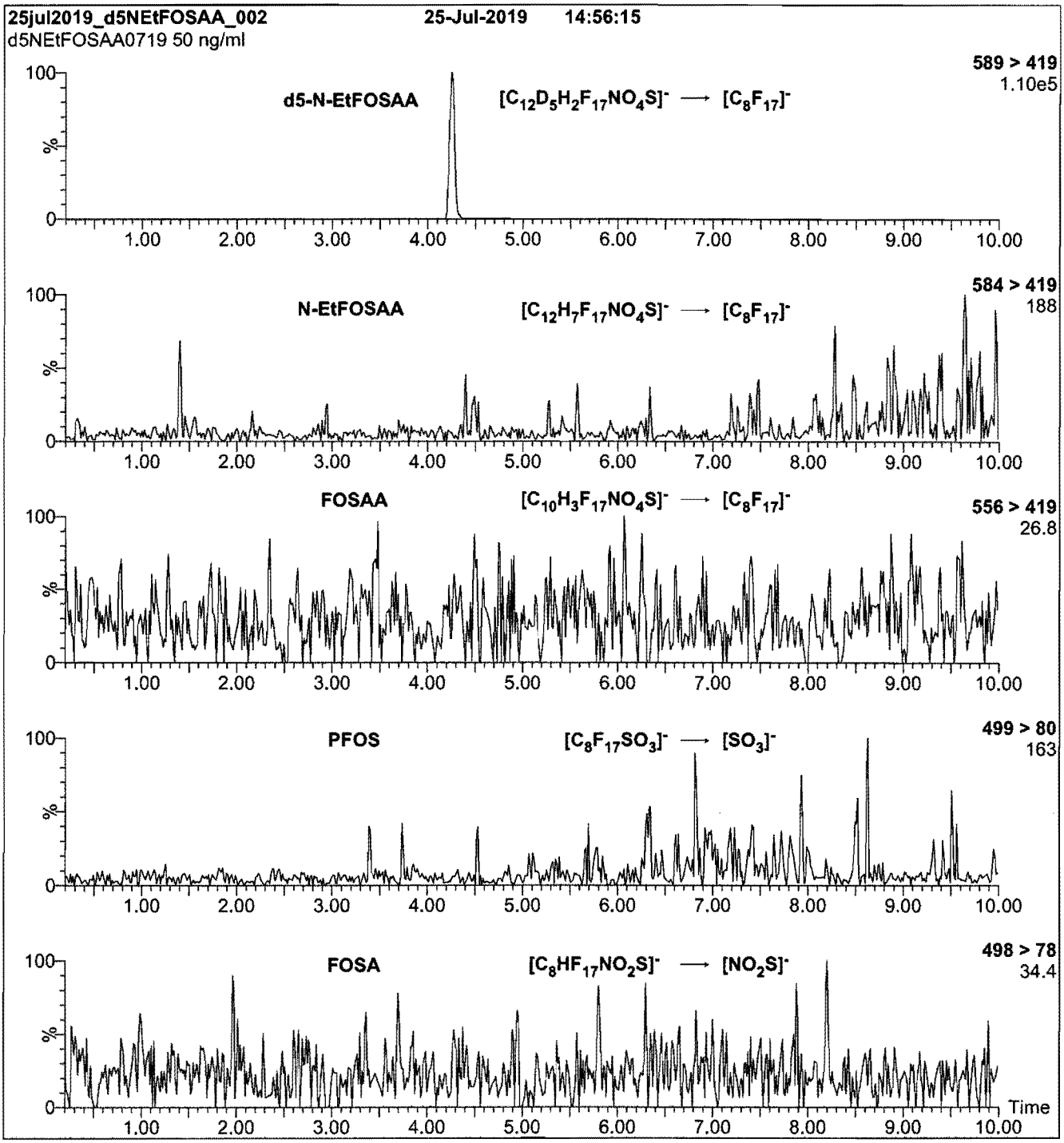
Flow: 300 µl/min

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

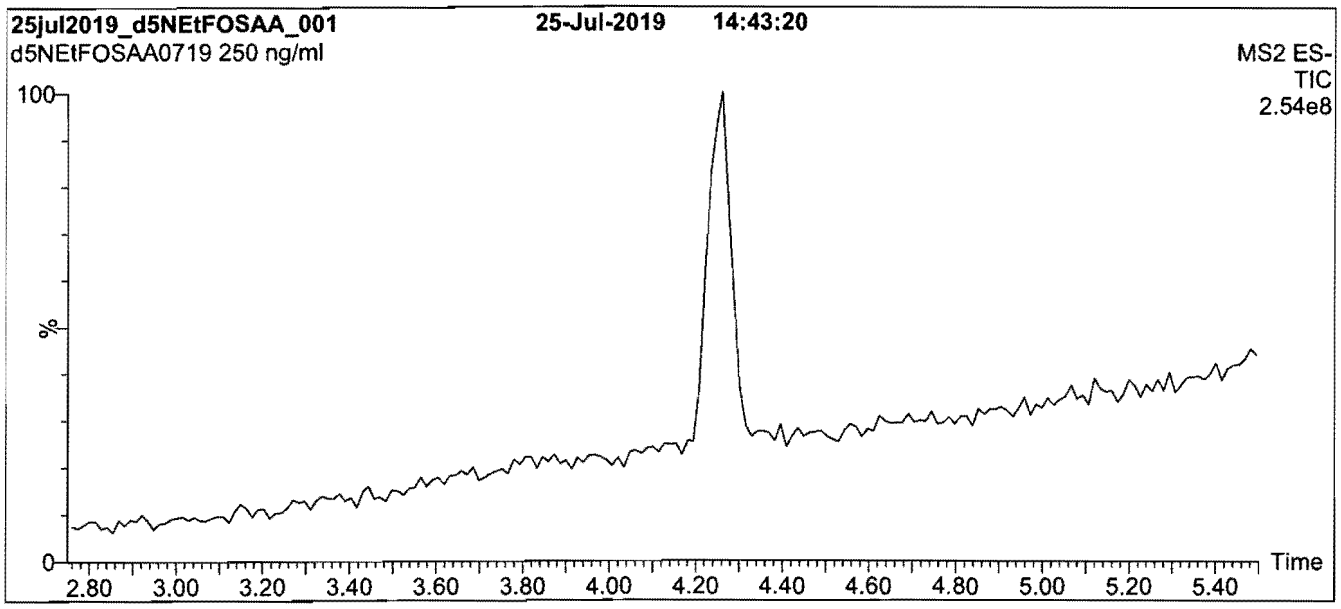
Flow: 300 µl/min

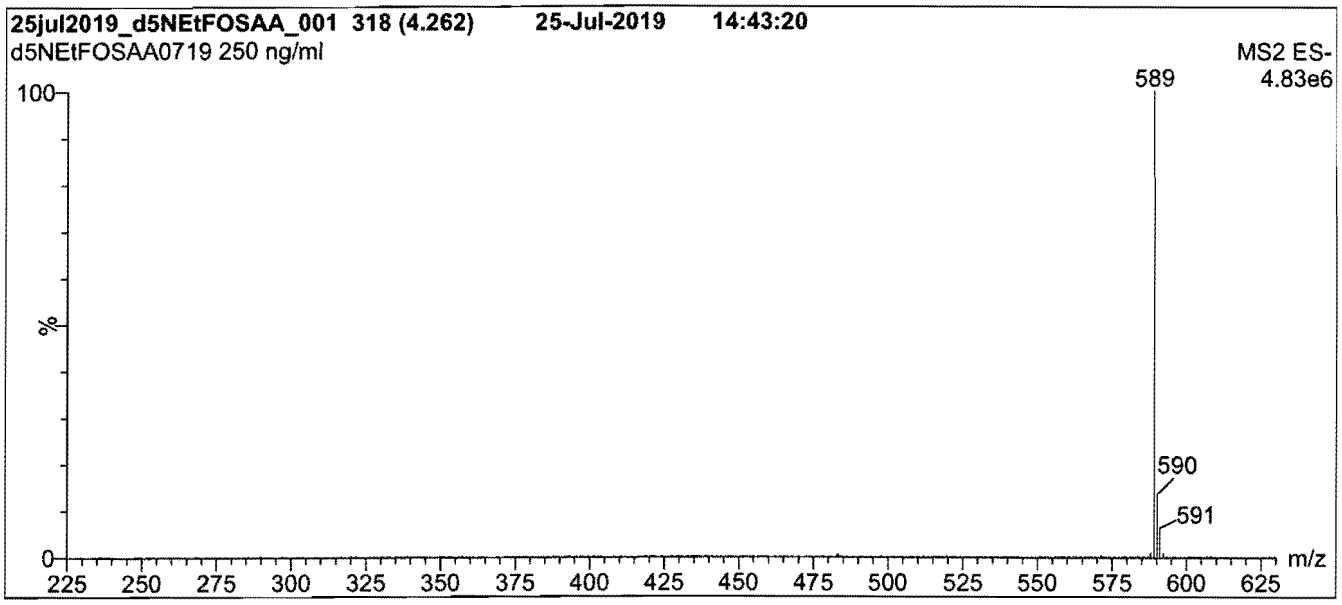
MS Parameters

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:

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UNCERTAINTY:

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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

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

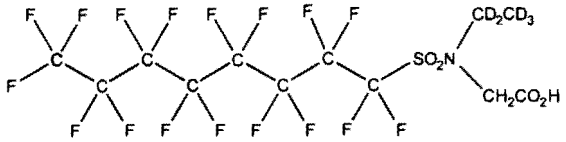
1910615

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:

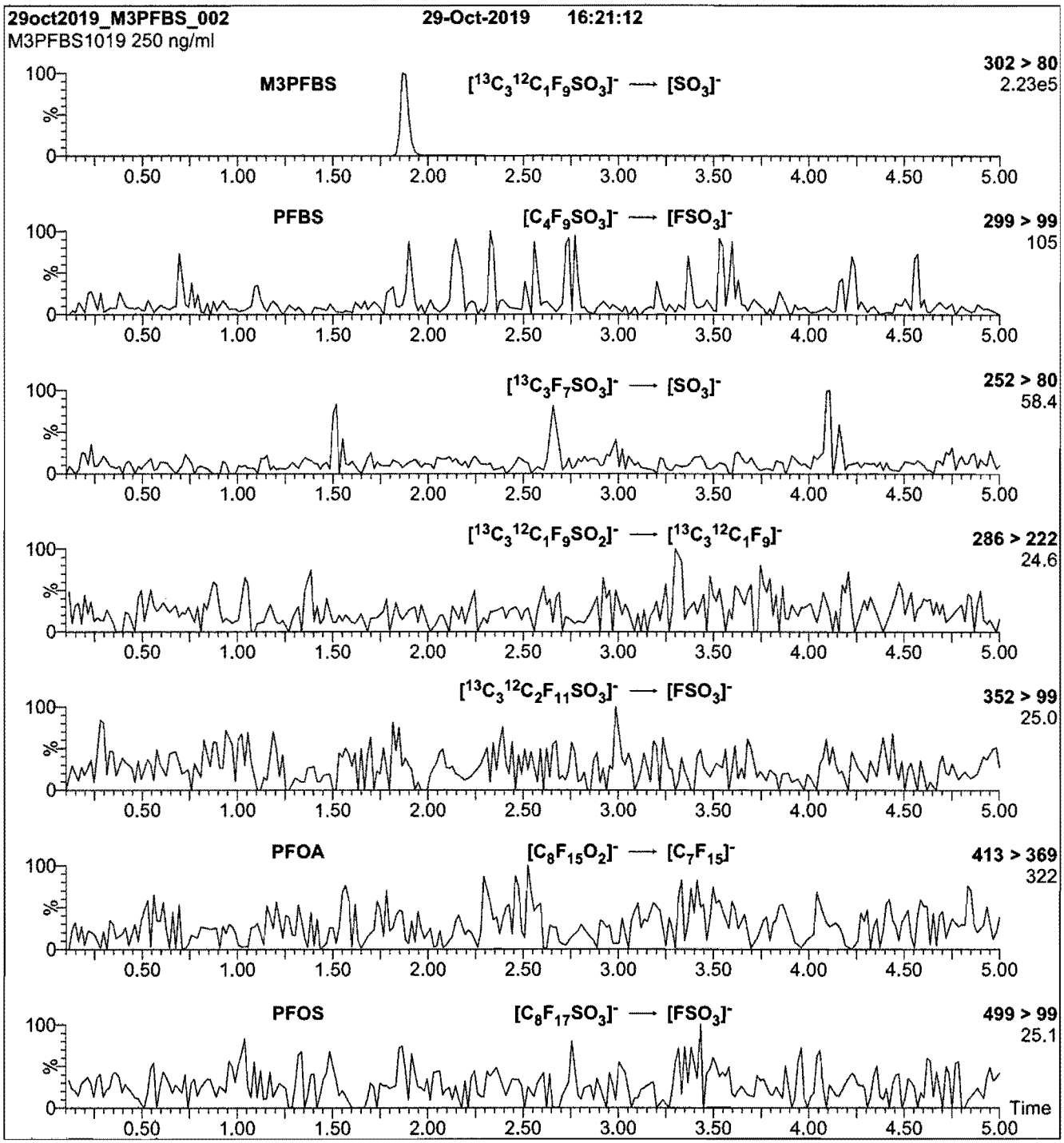
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

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

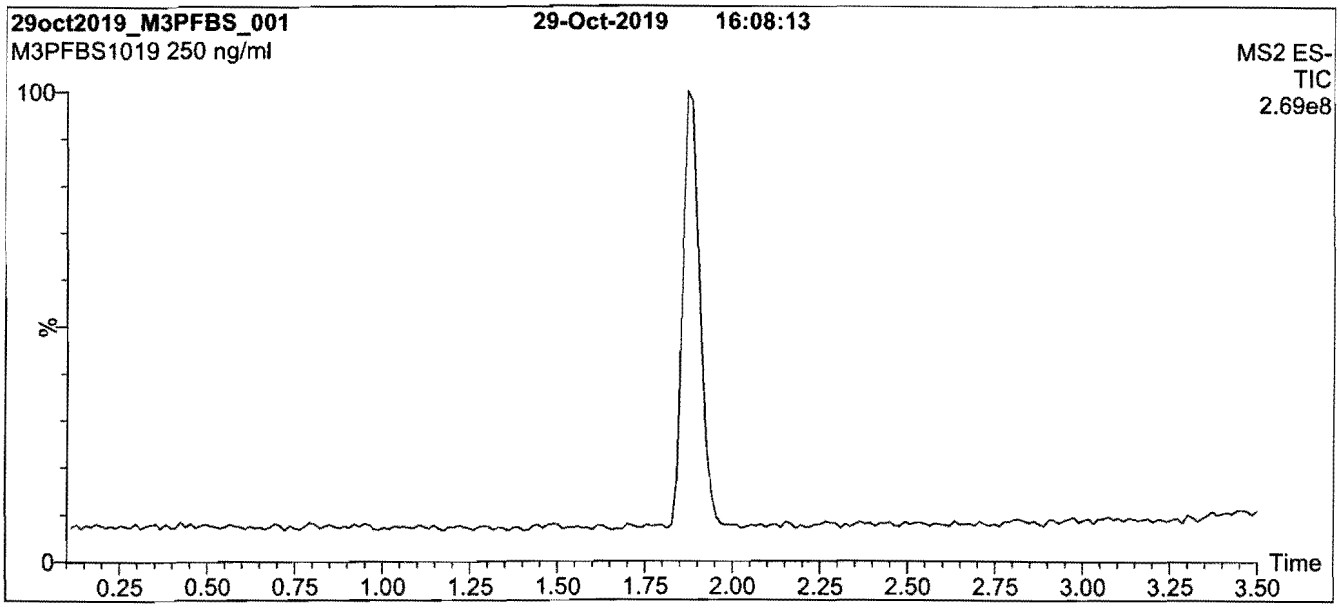
Flow: 300 µl/min

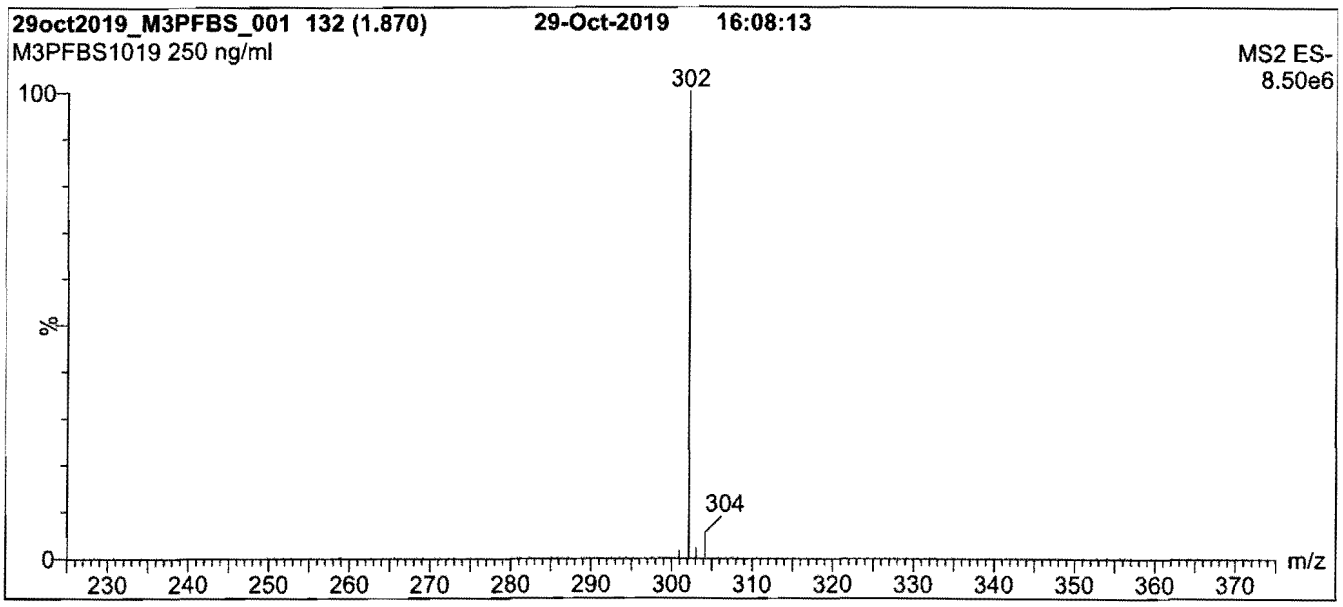
MS Parameters

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:

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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. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

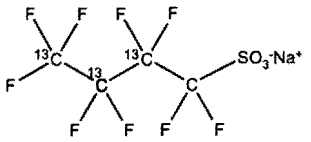
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19L0616

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.

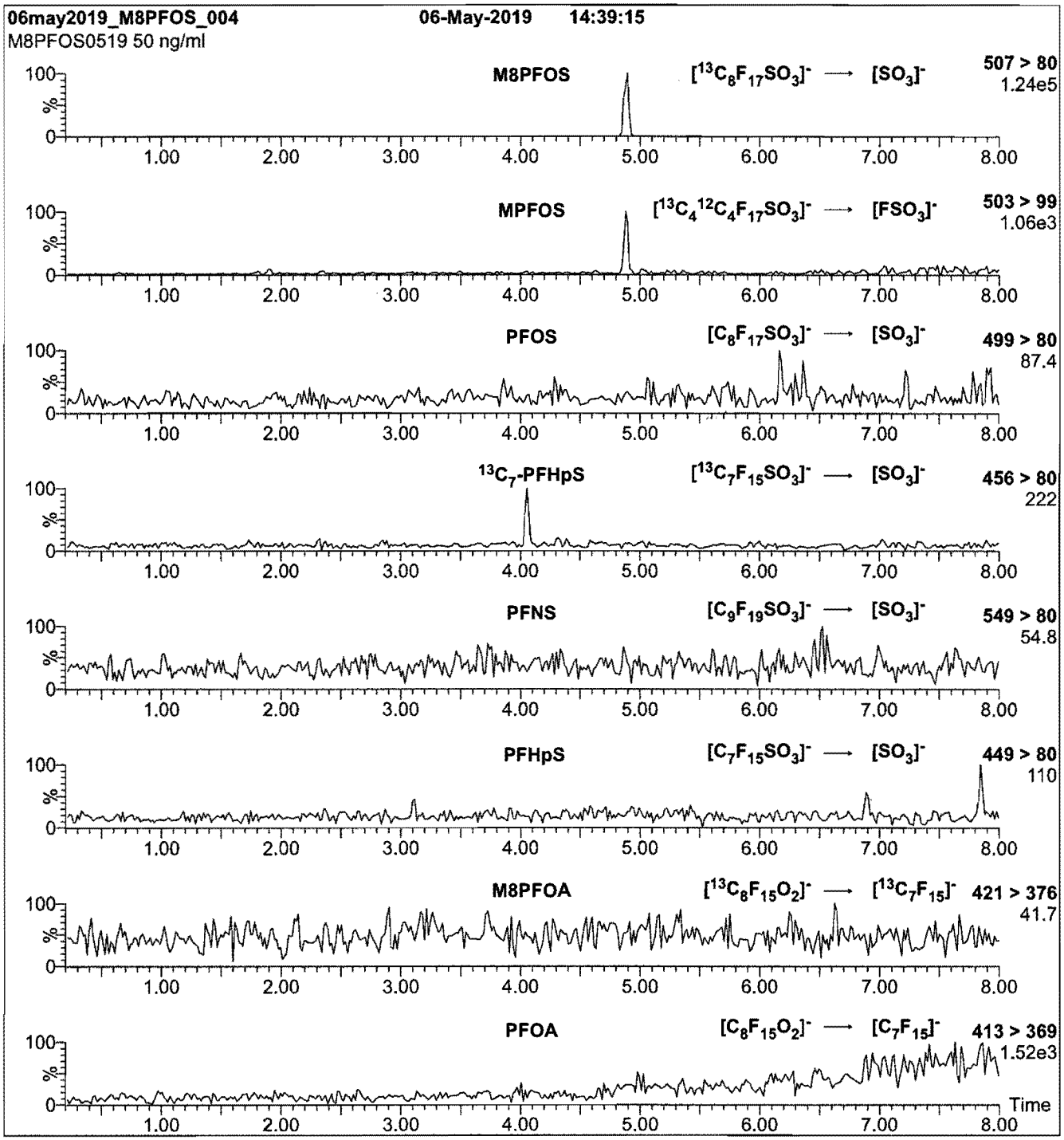
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

19L0617

Figure 2: **M8PFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M8PFOS)

Mobile phase: Same as Figure 1

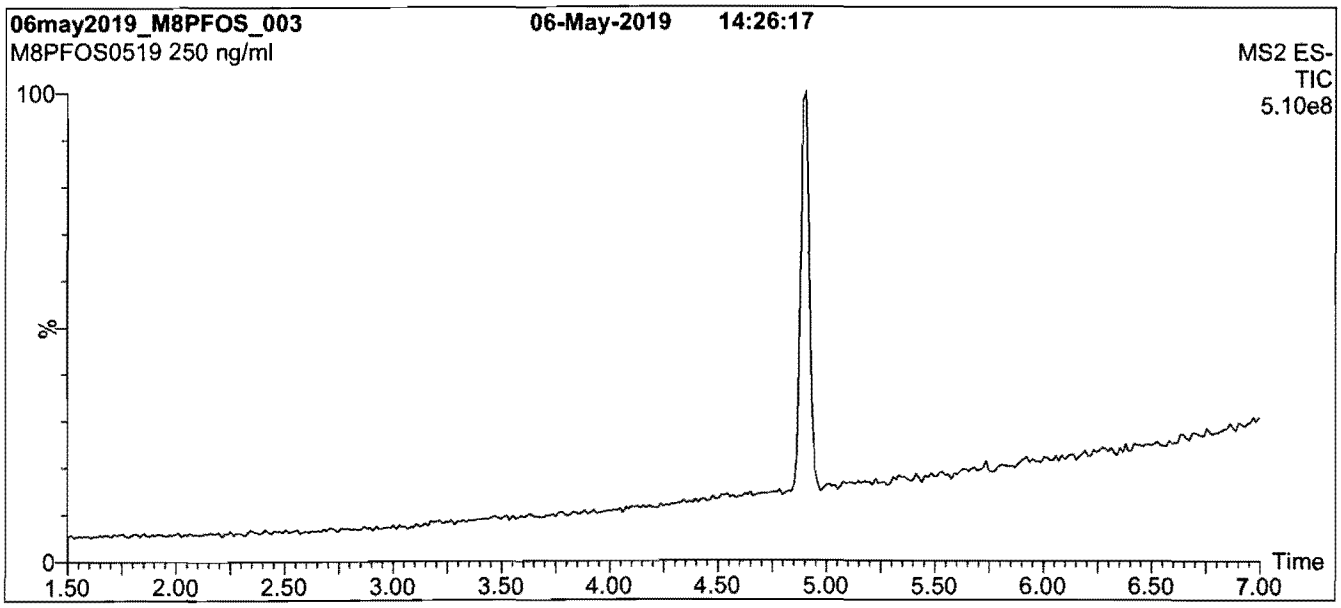
Flow: 300 µl/min

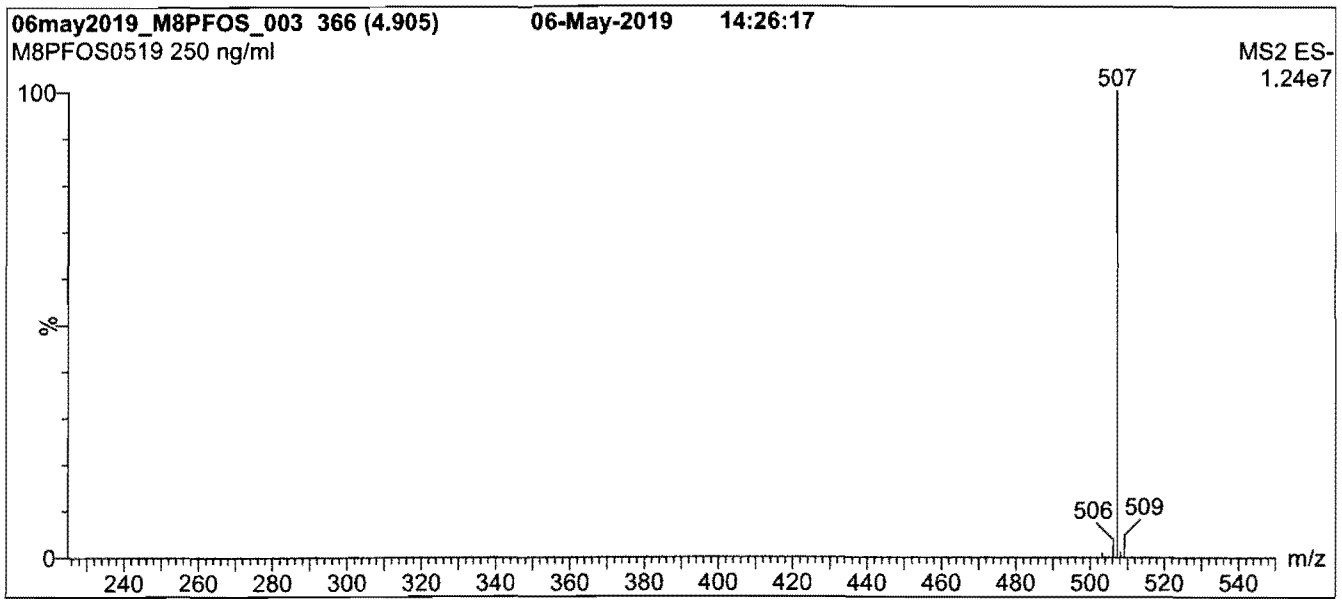
MS Parameters

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:

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

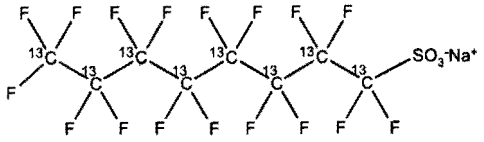
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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:

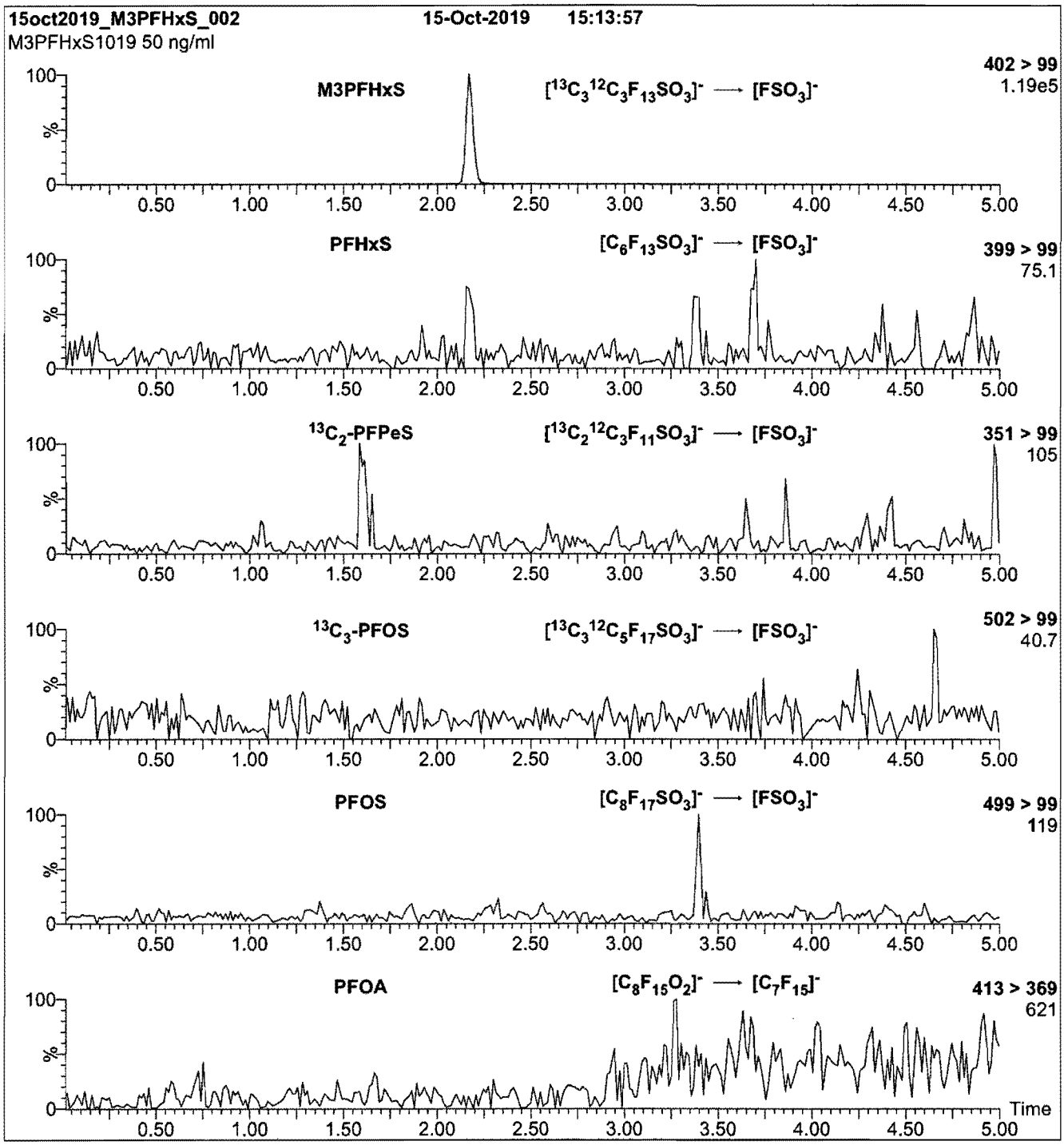
- See page 2 for further details.
- Contains ~ 0.2% of sodium perfluoro-1-[$^{13}C_7$]heptanesulfonate ($^{13}C_7$-PFHpS) and ~ 1.0% of sodium perfluoro-1-[$^{13}C_4$]octanesulfonate (MPFOS).

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

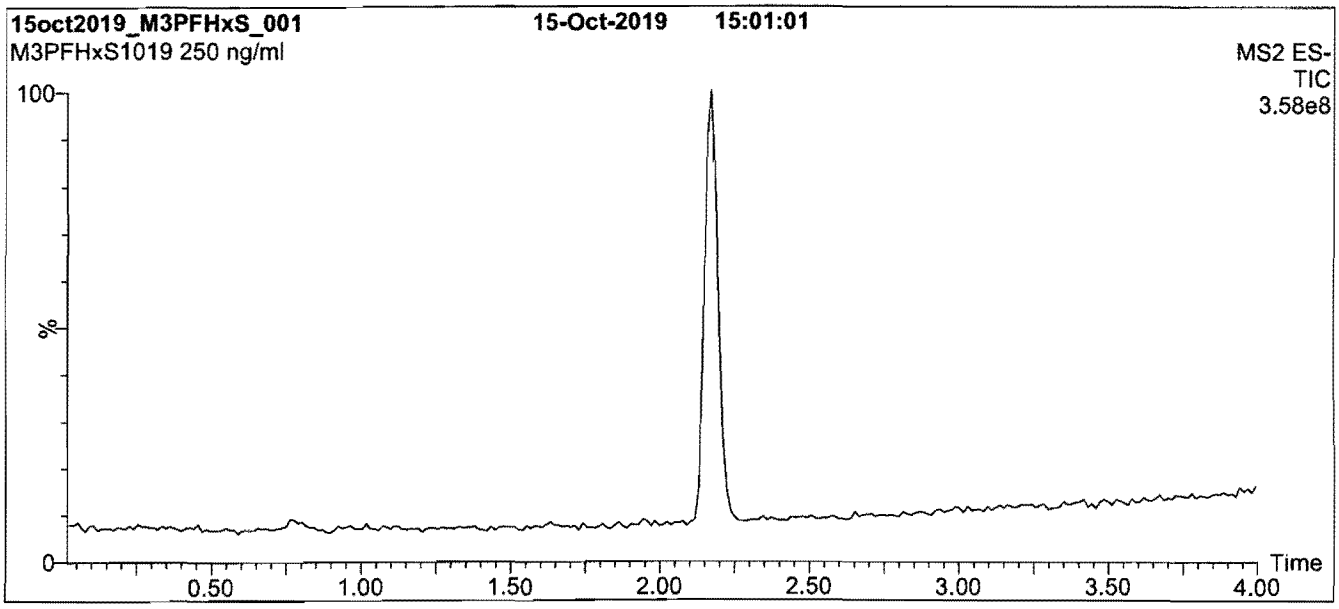
Flow: 300 µl/min

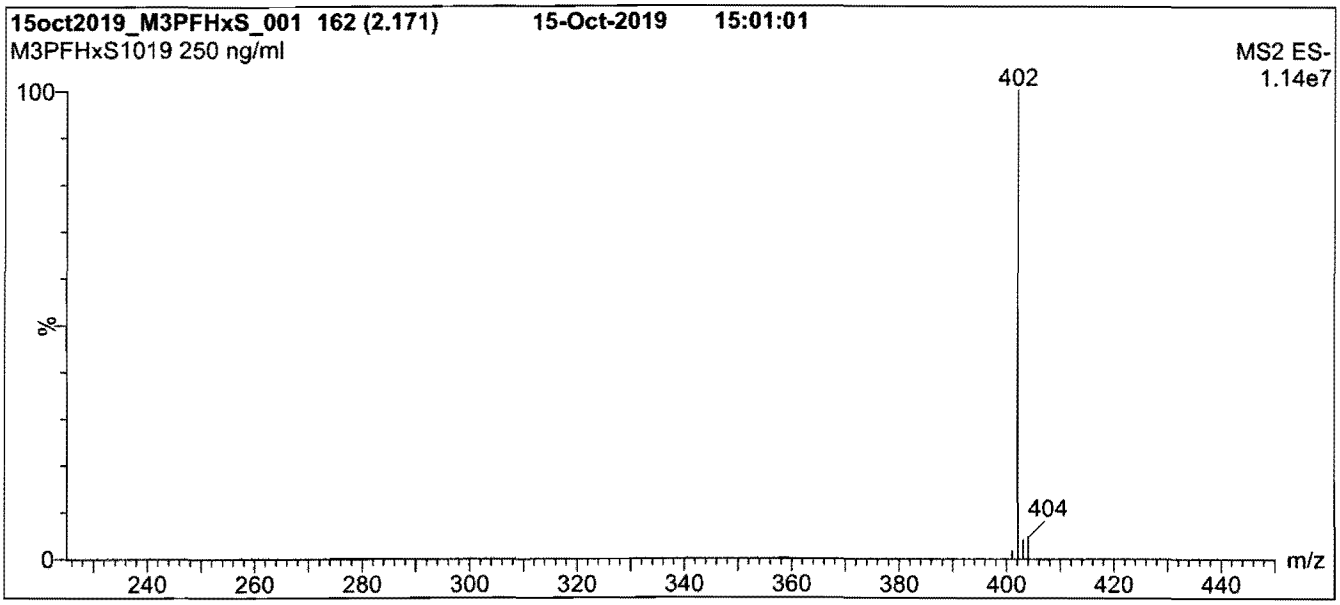
MS Parameters

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:

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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

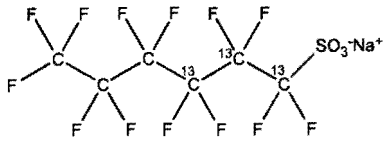
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19L0618

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:

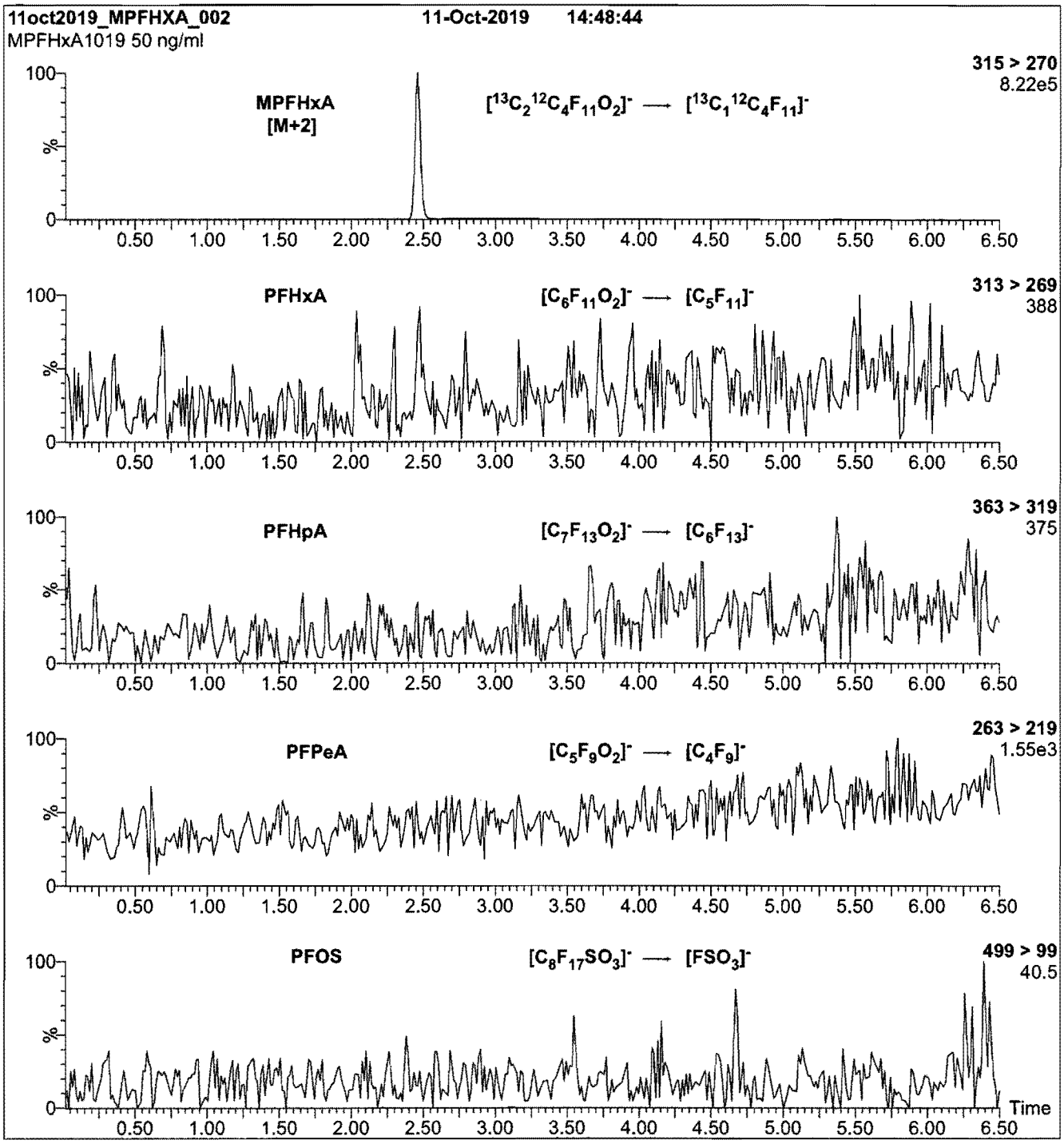
- See page 2 for further details.
- Contains ~ 0.1% perfluoro-1-[1,2-$^{13}C_2$]pentanesulfonate, ~ 0.1% perfluoro-1-octanesulfonate, and ~ 0.05% of perfluoro-1-hexanesulfonate.

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

Figure 2: **MPFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFHxA)

Mobile phase: Same as Figure 1

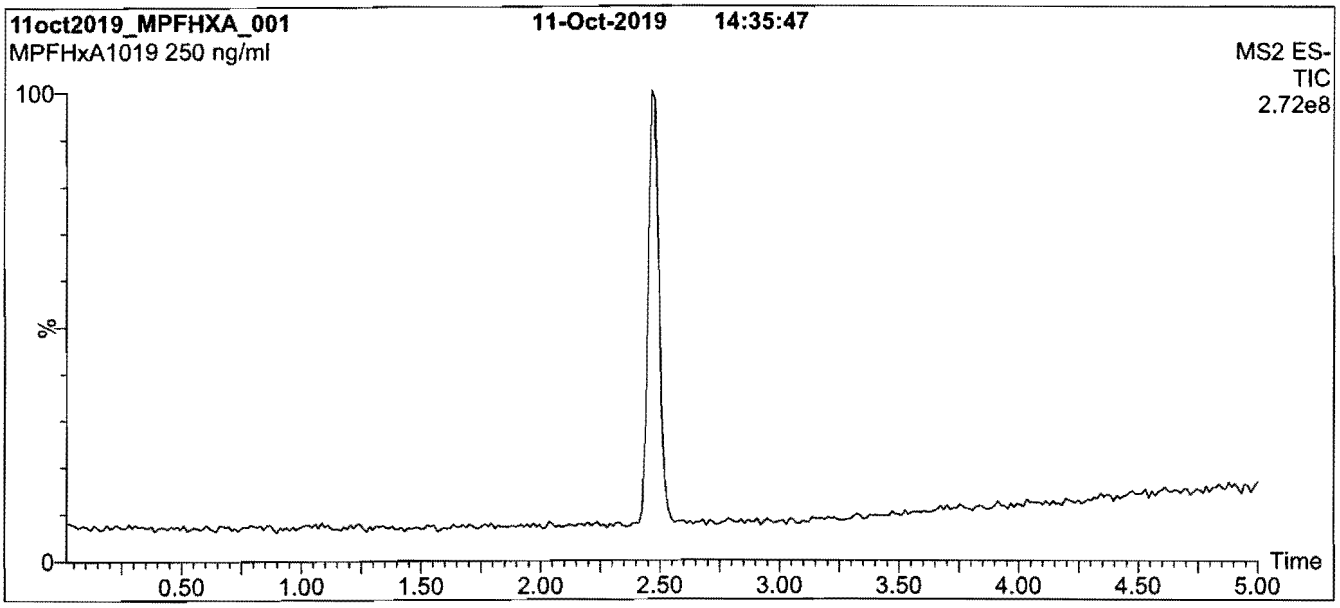
Flow: 300 µl/min

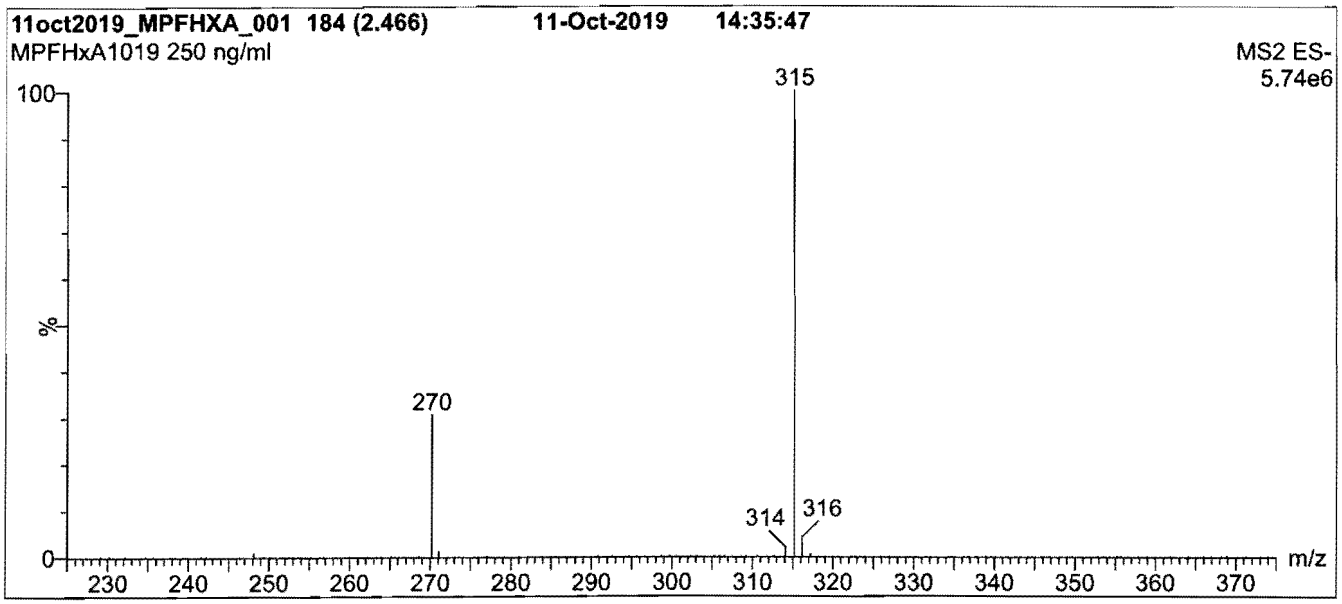
MS Parameters

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

INTENDED USE:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

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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:

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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 REFERENCE MATERIAL PRODUCER

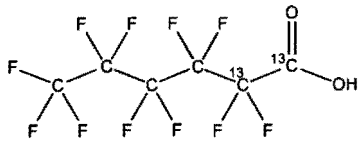
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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

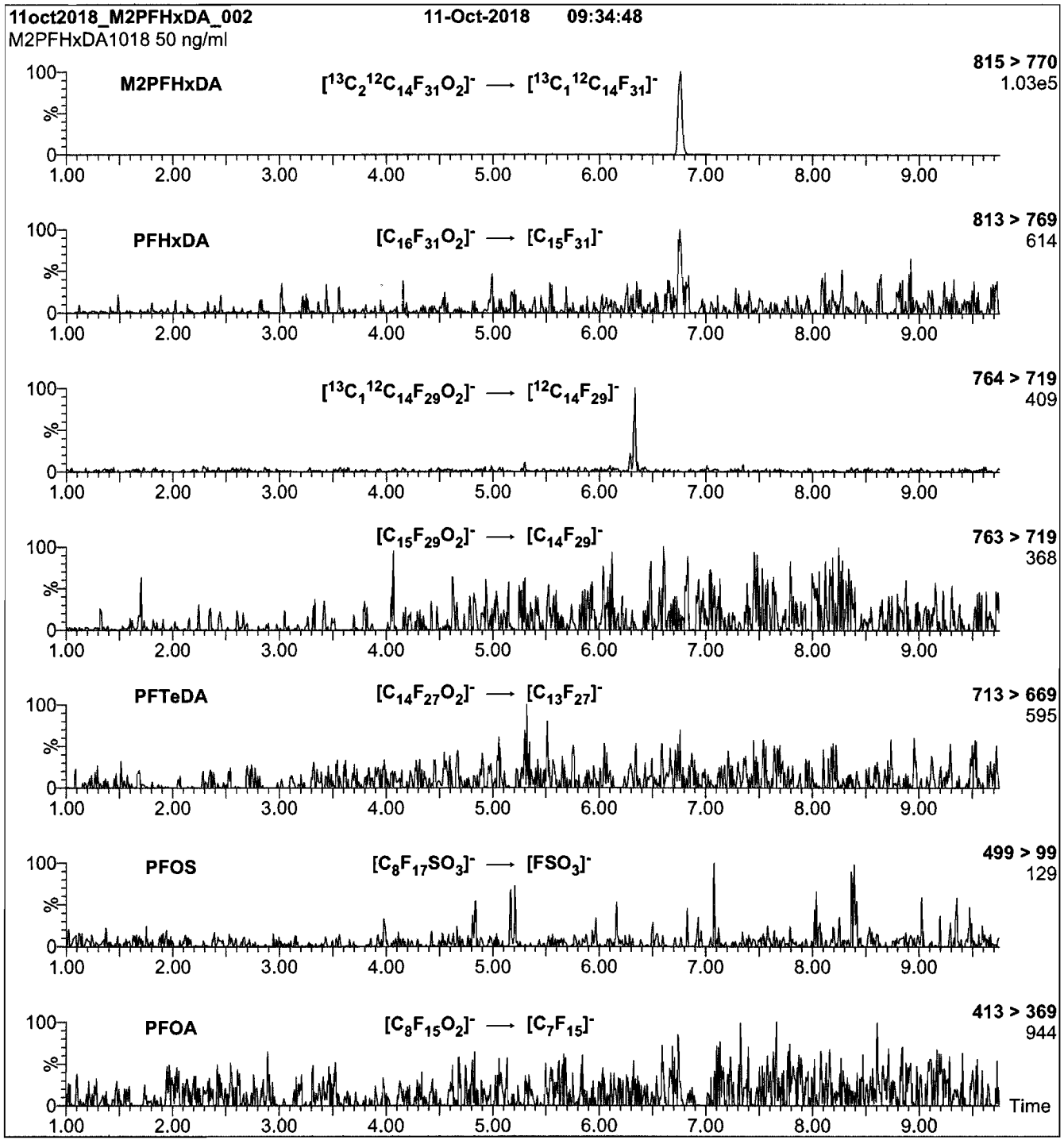
Certified By: _____ **Date:** 10/22/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

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

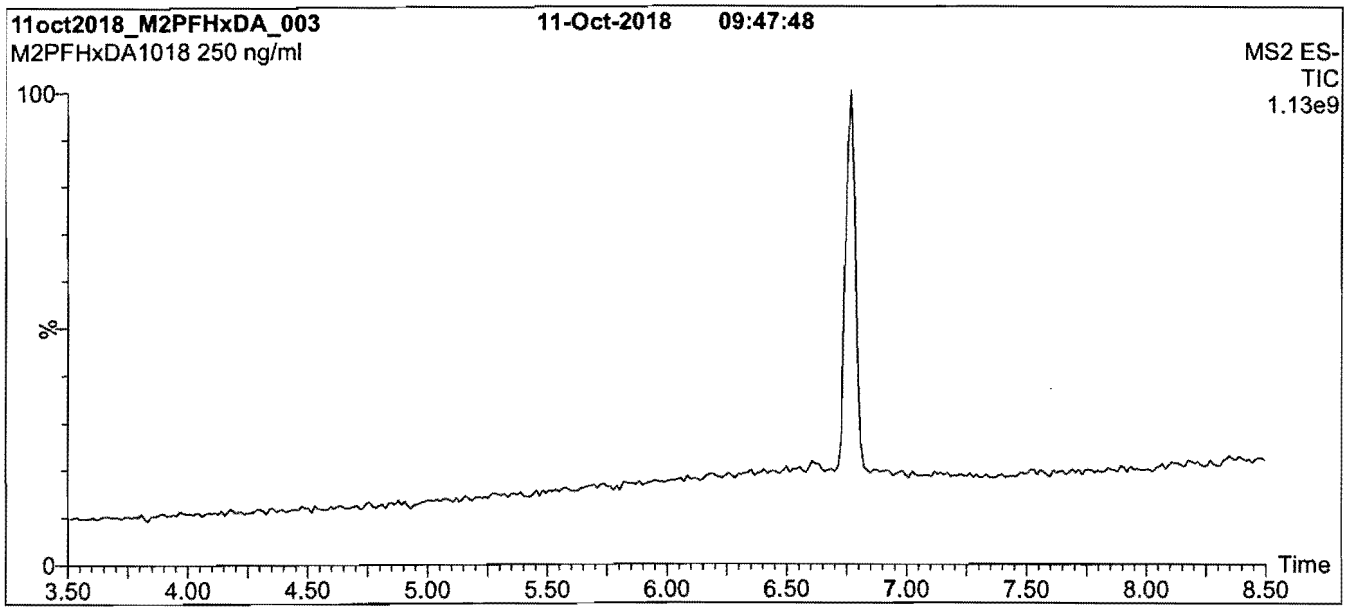
Flow: 300 µl/min

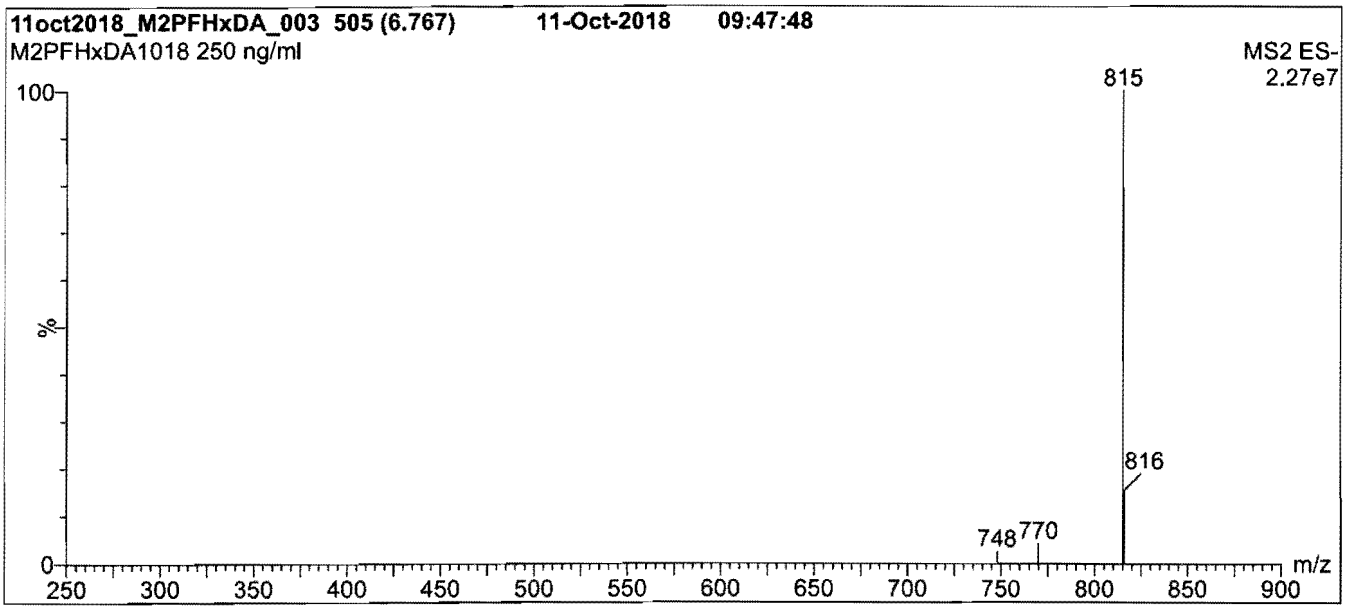
MS Parameters

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

19L0620

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

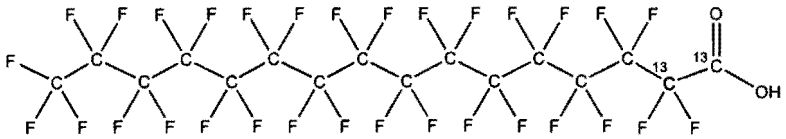
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

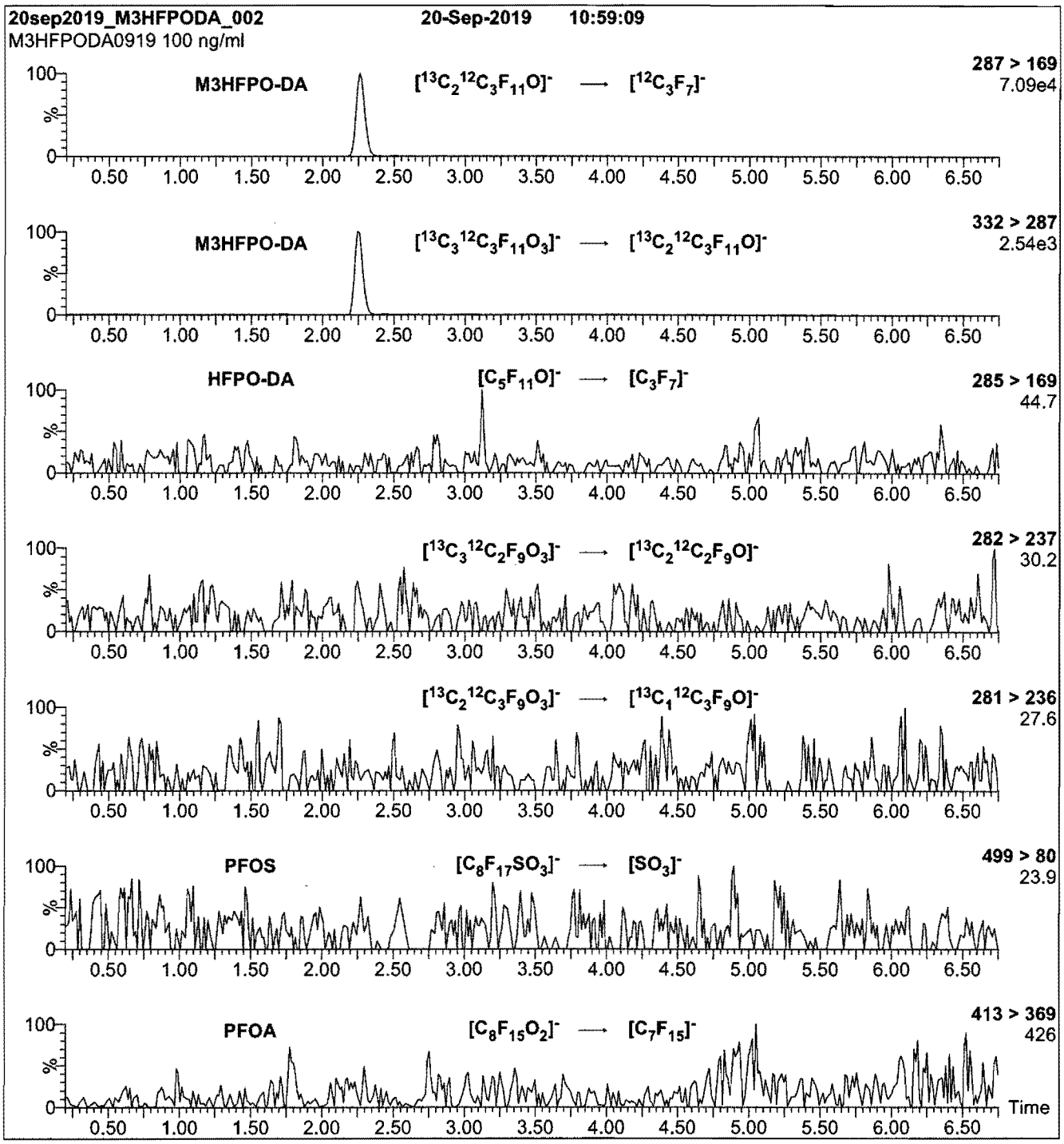
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

19L0621

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

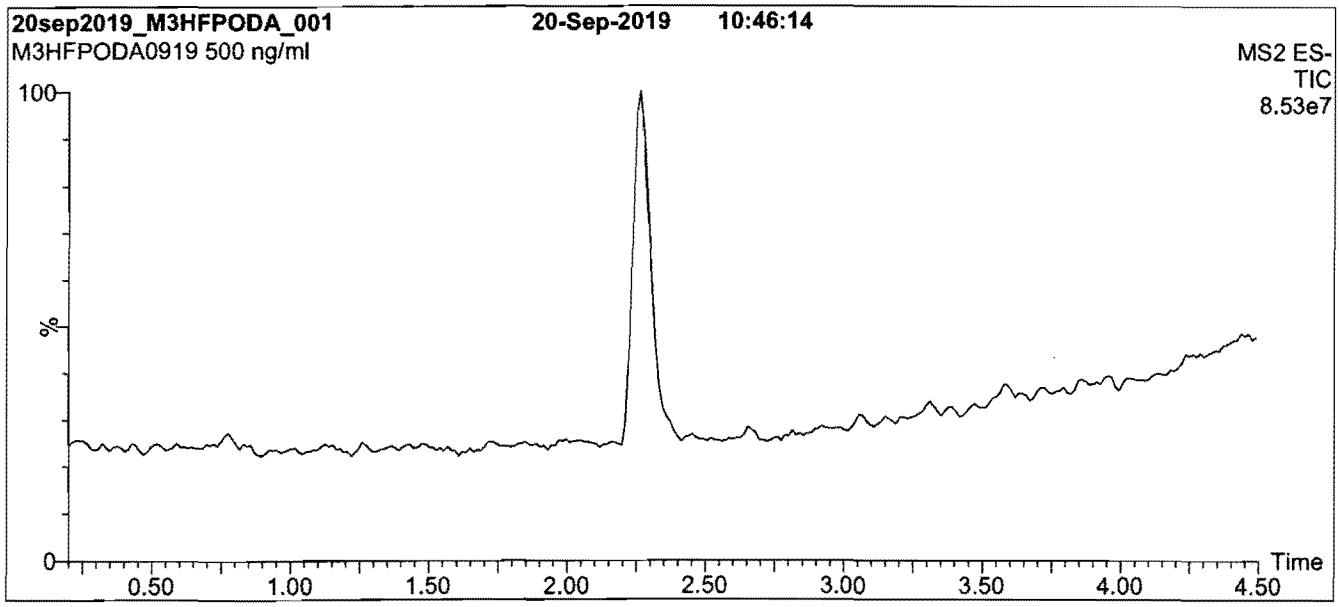
Flow: 300 µl/min

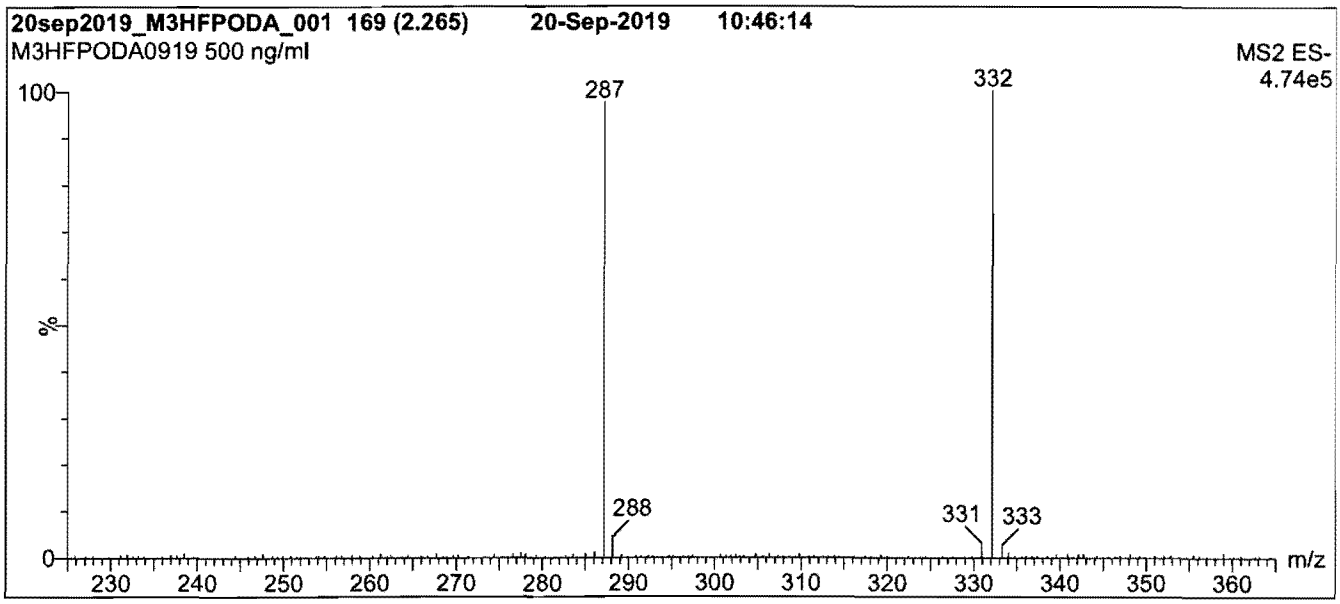
MS Parameters

Collision Gas (mbar) = 3.60e-3
Collision Energy (eV) = 8

19L0621

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

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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

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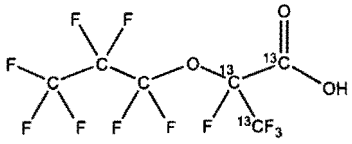
WELLINGTON LABORATORIES

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

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Standard Type:	Analyte Spike	Prepared:	08-Jan-20
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Vials:	1	Last Edit:	08-Jan-20 14:18 by BML

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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

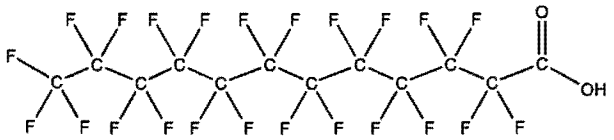
19L0635

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:

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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.

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Certified By: _____ **Date:** 01/30/2019 (mm/dd/yyyy)
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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19L0635

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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).

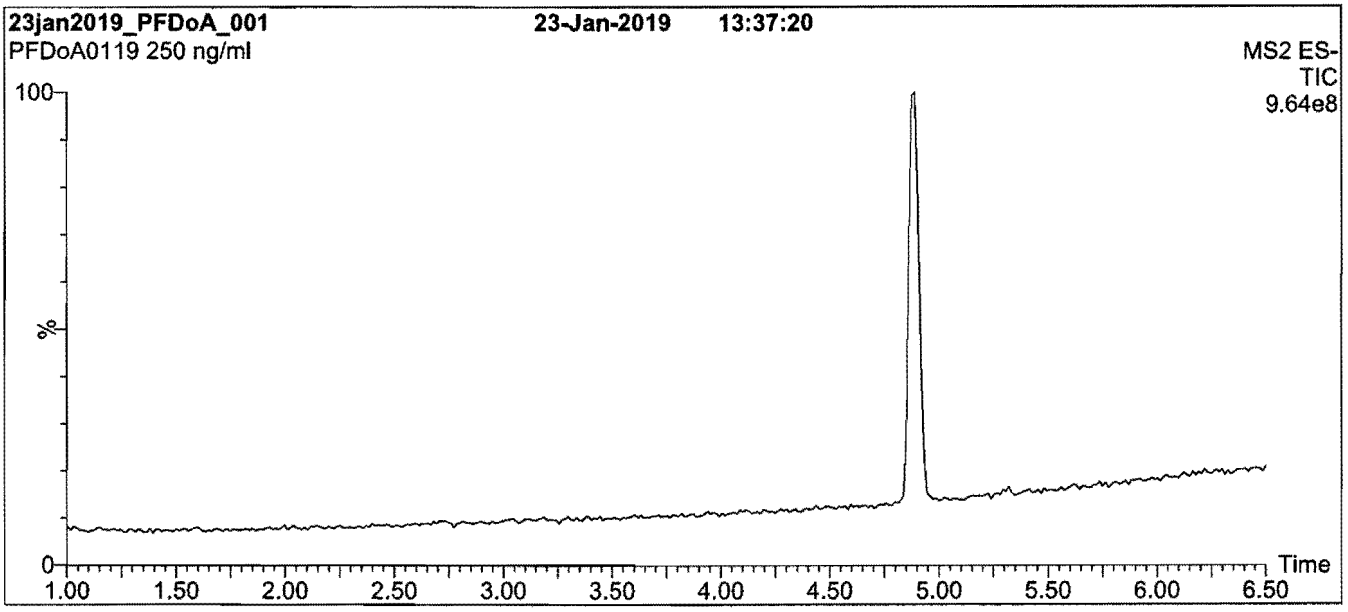
CALA Testing Accreditation No. A 1226

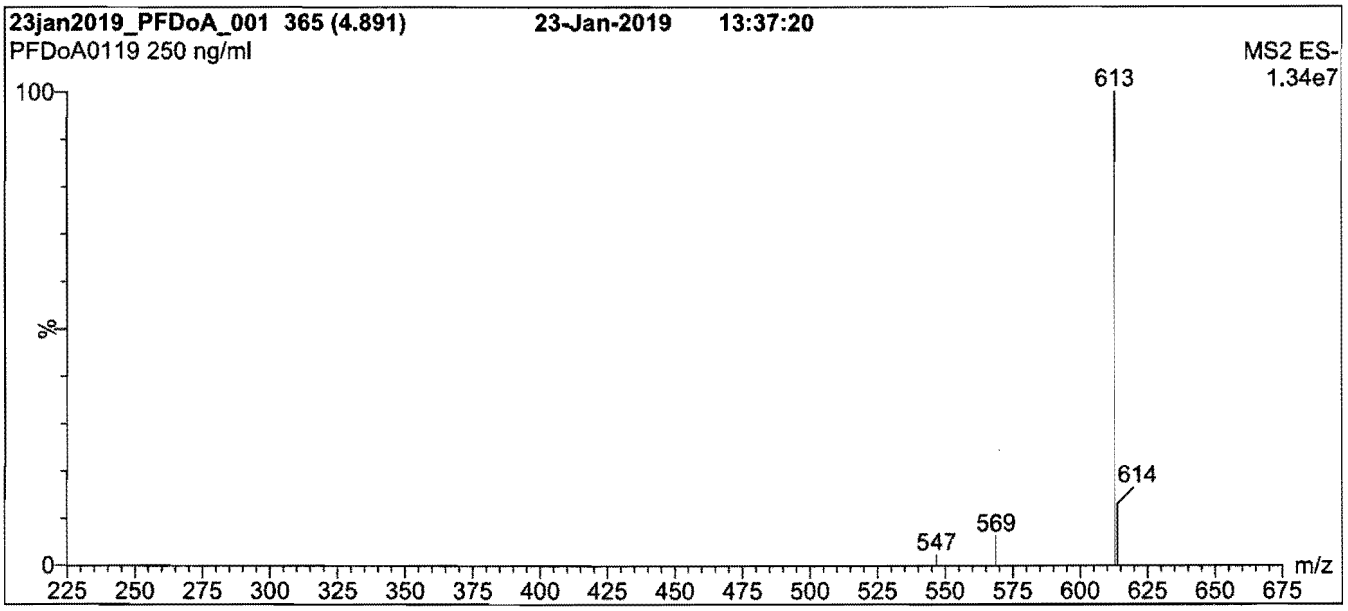
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

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

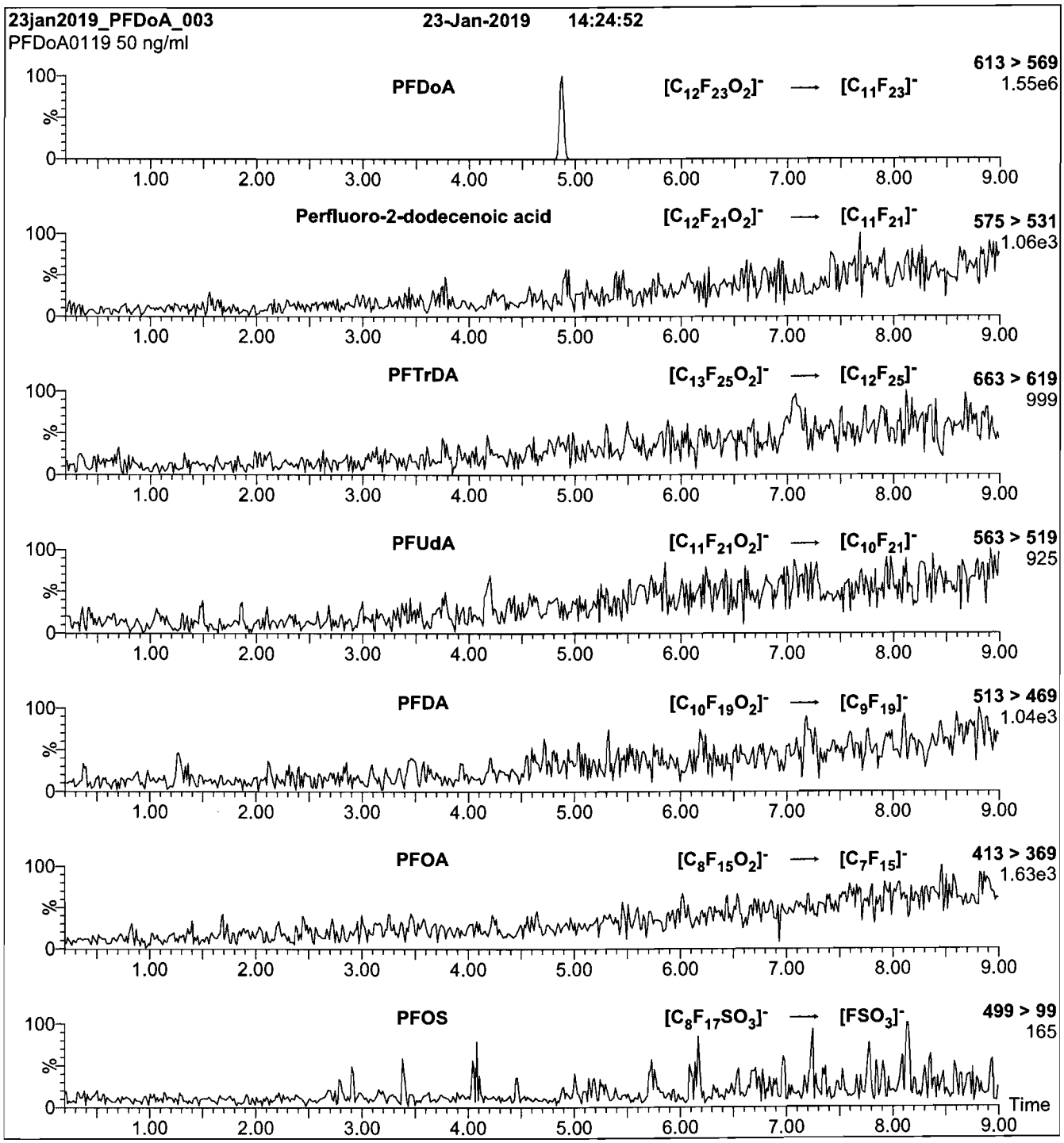
MS Parameters

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

191L0635

Figure 2: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFDoA)

Mobile phase: Same as Figure 1

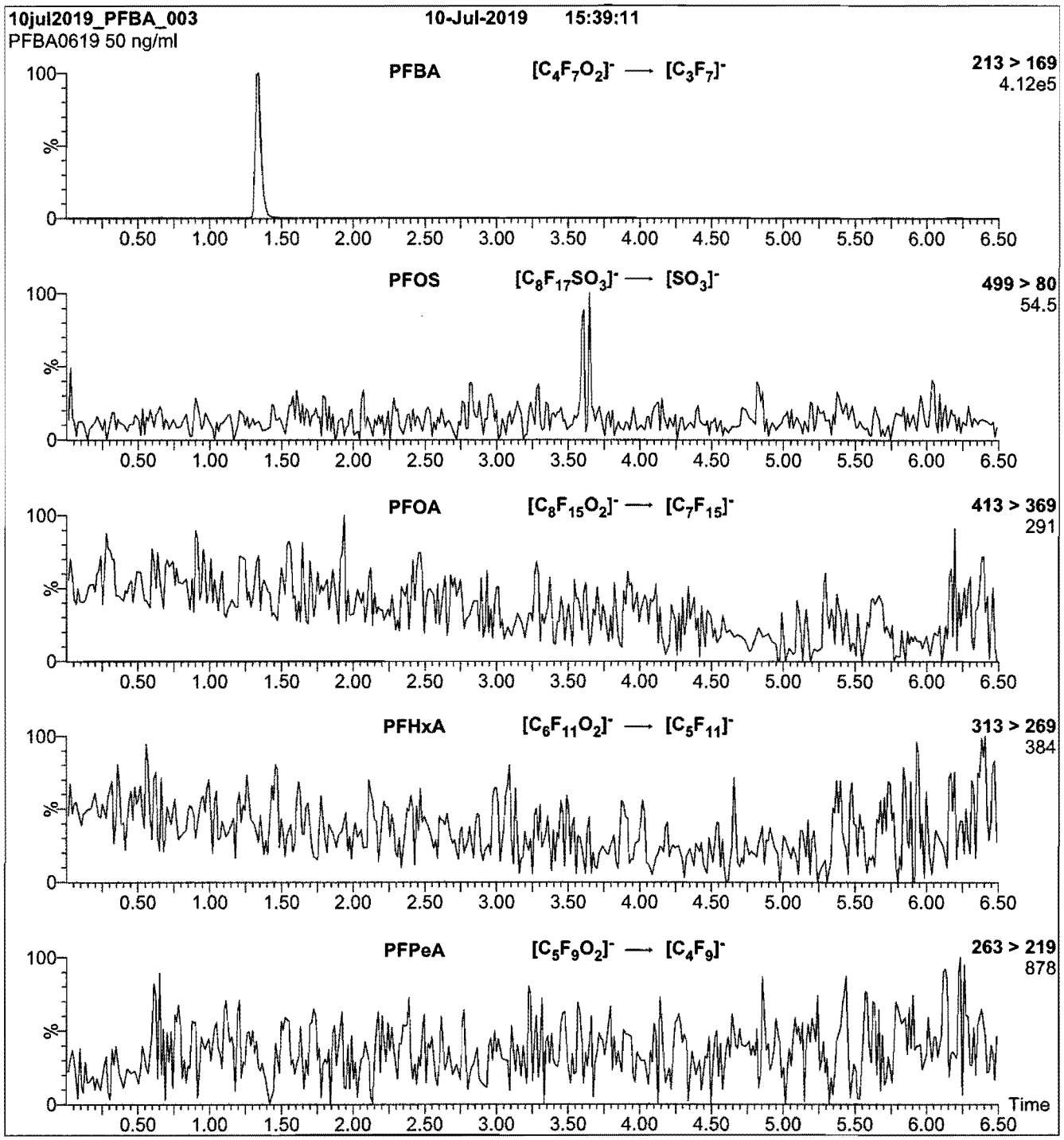
Flow: 300 µl/min

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

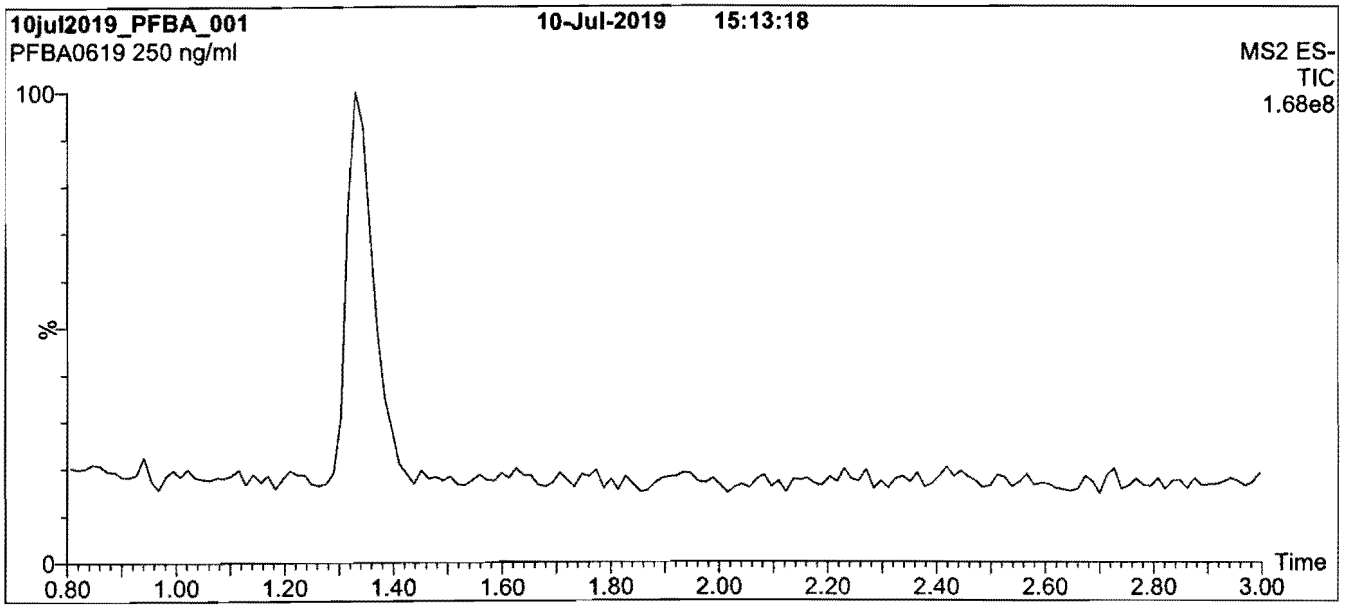
Flow: 300 µl/min

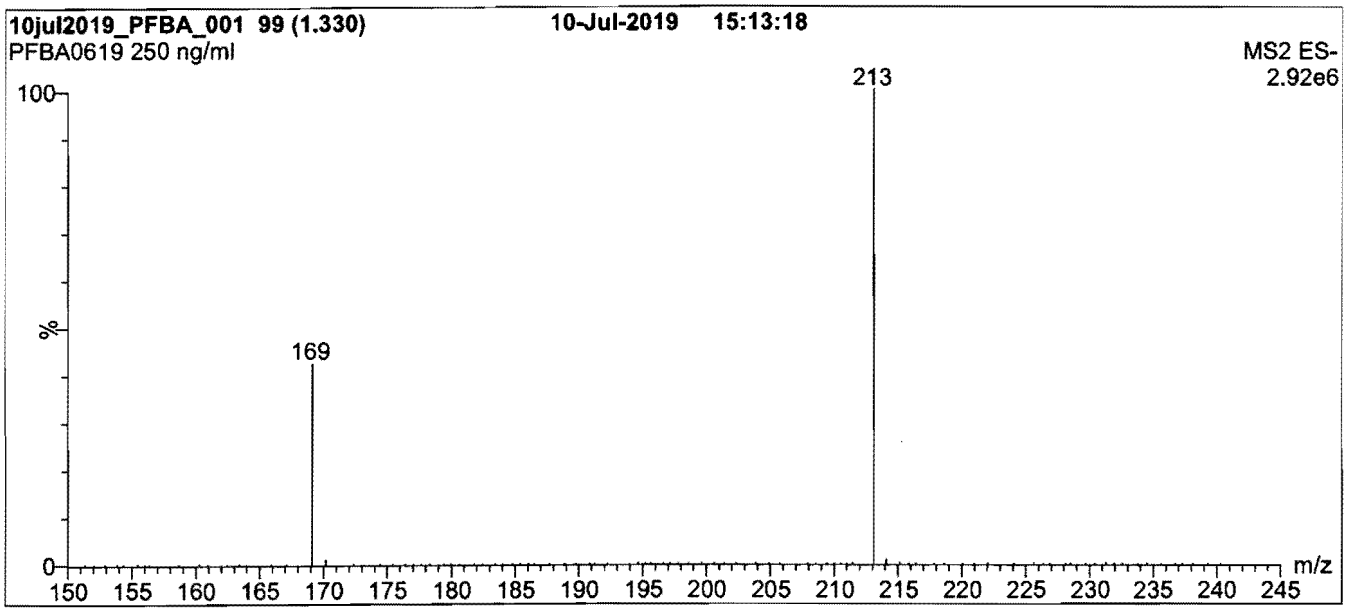
MS Parameters

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

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

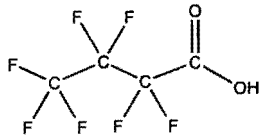
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19L0636

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:

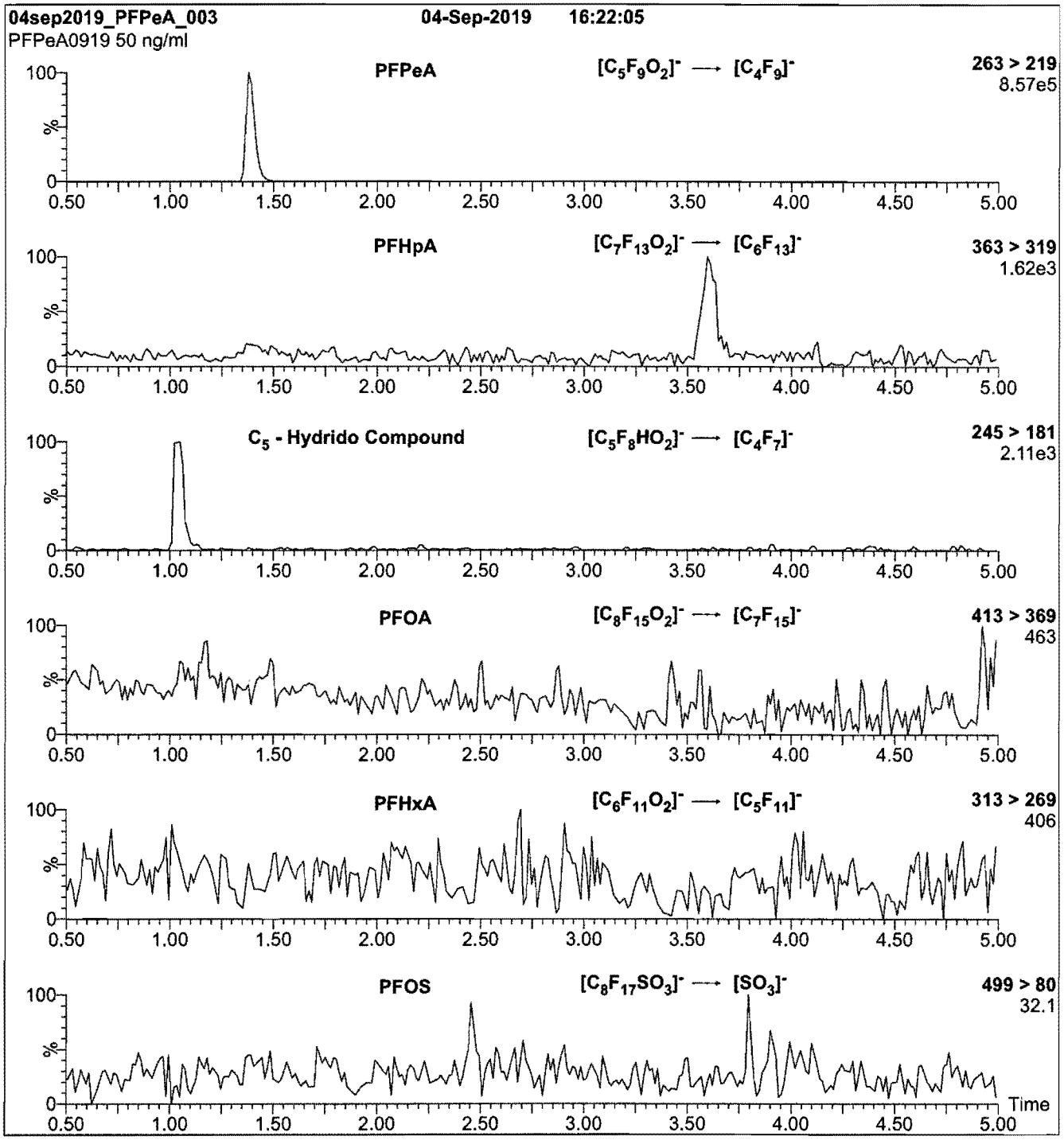
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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

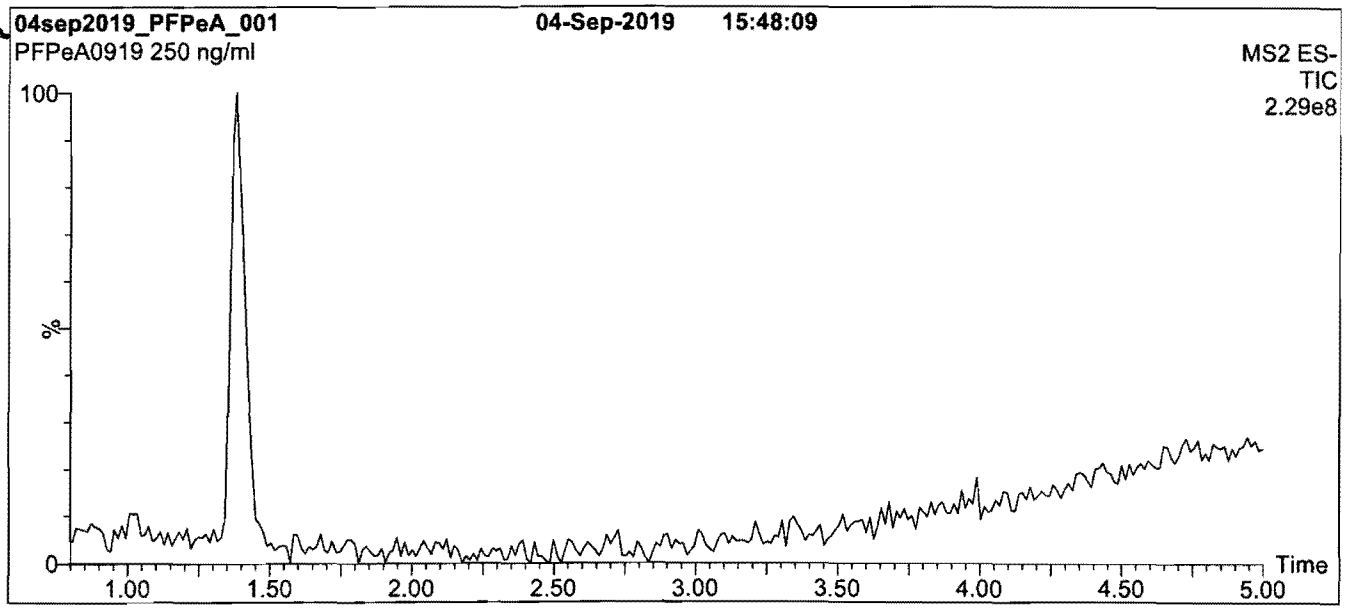
Flow: 300 µl/min

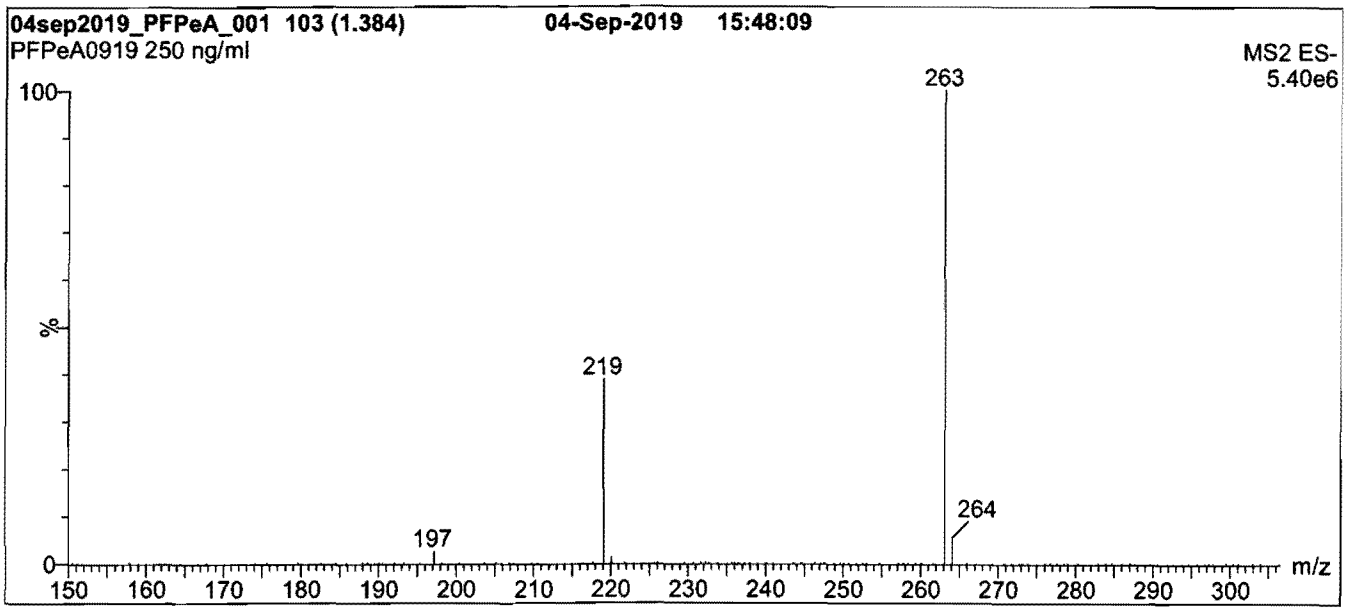
MS Parameters

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:

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HANDLING:

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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.

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

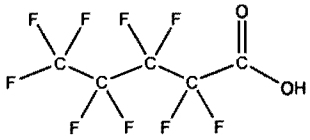
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19L0637

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:

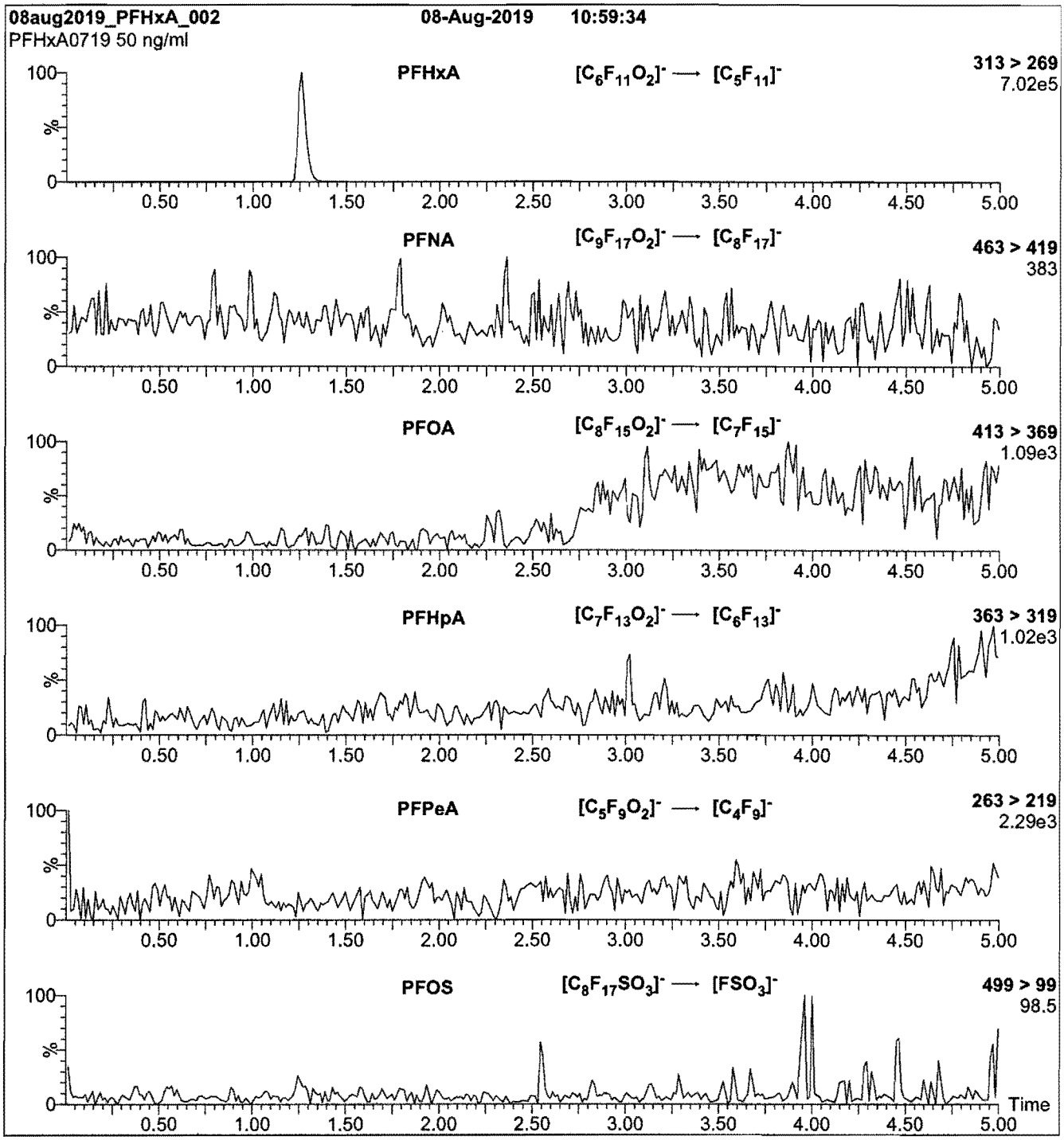
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydrido - derivative) as measured by ^{19}F NMR.

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

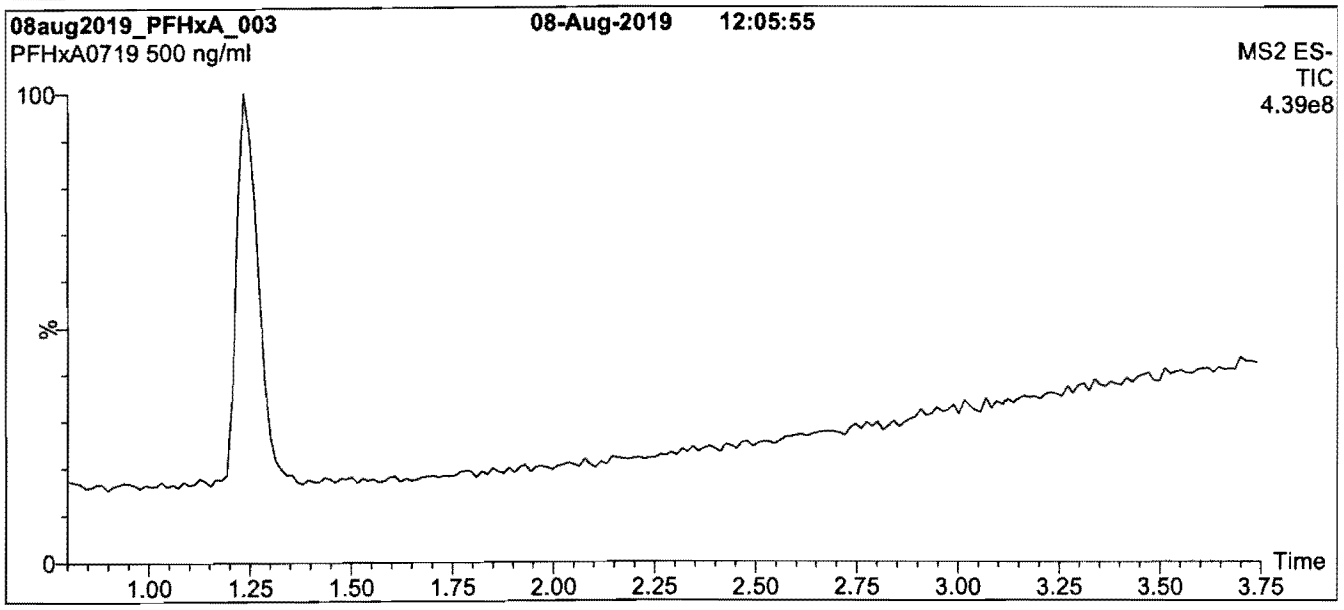
Flow: 300 µl/min

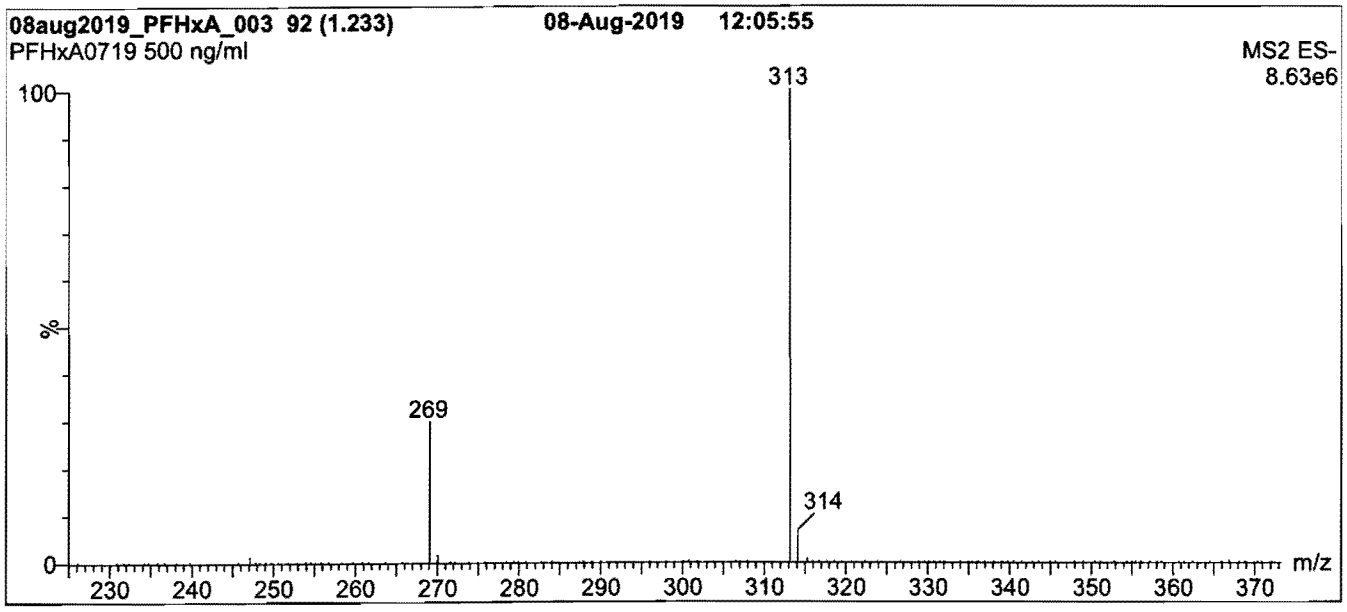
MS Parameters

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
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Time: 12 min

Flow: 300 µl/min

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Experiment: Full Scan (225 - 850 amu)

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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

19L0638

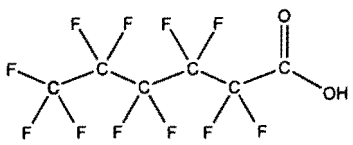
WELLINGTON LABORATORIES

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

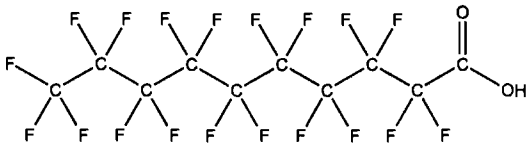
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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

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).

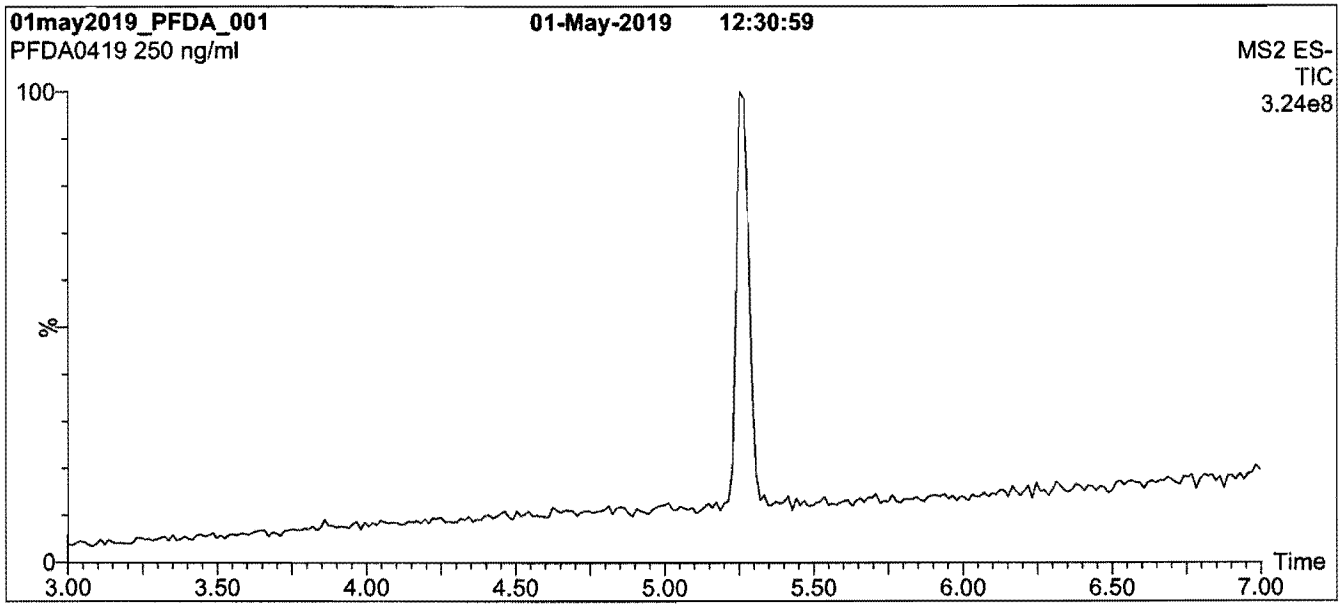
CALA Testing Accreditation No. A 1226

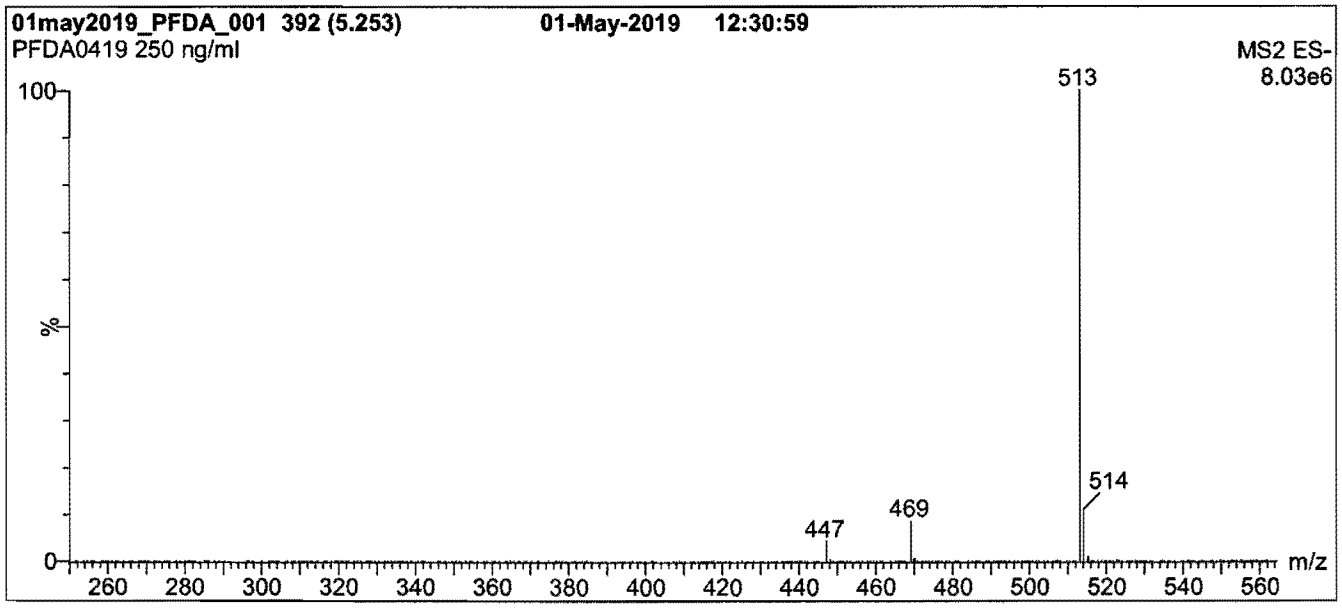
ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

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

19L0639

Figure 1: **PFDA; LC/MS Data (TIC and Mass Spectrum)**





Condltions 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

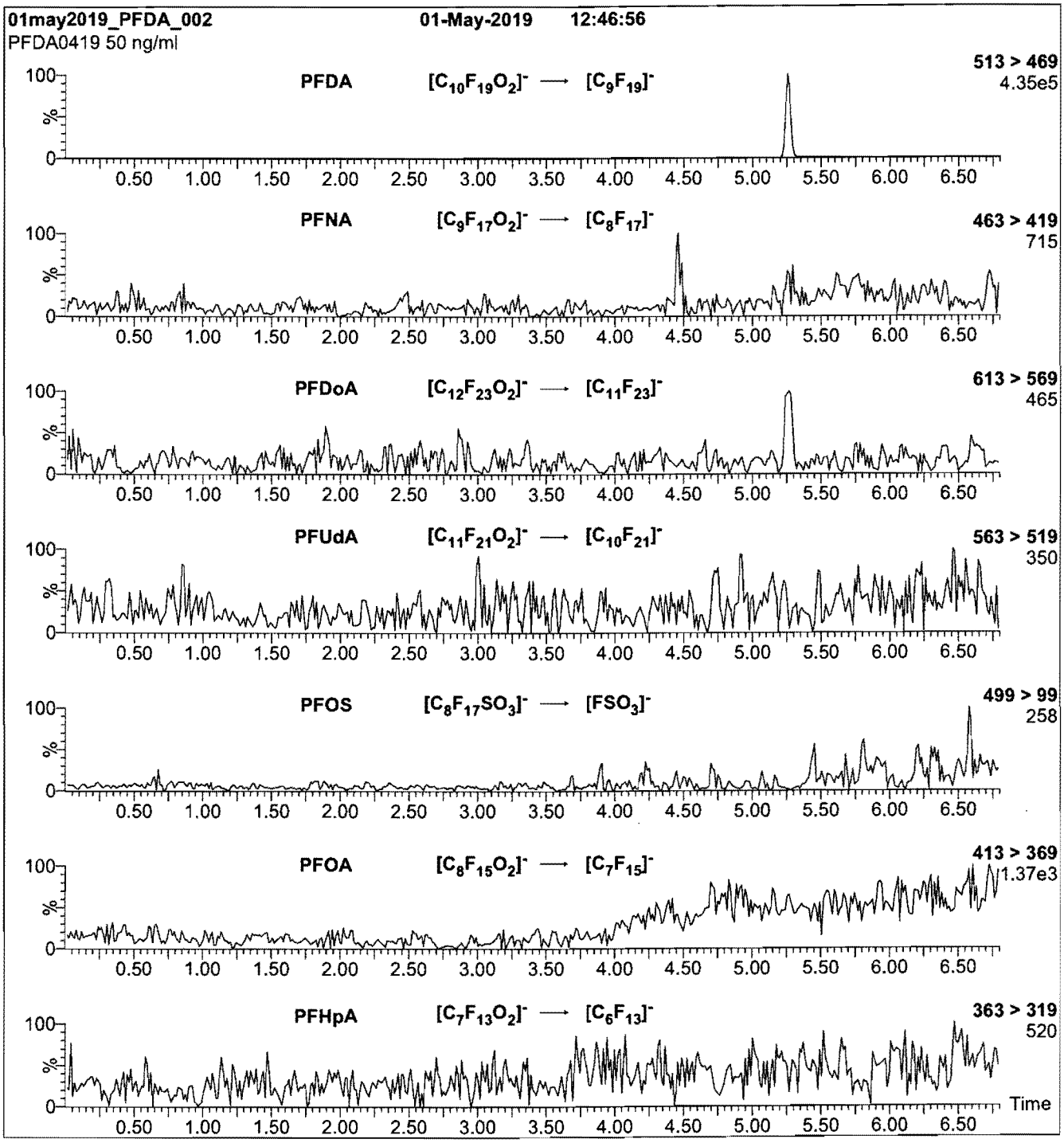
MS Parameters

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)

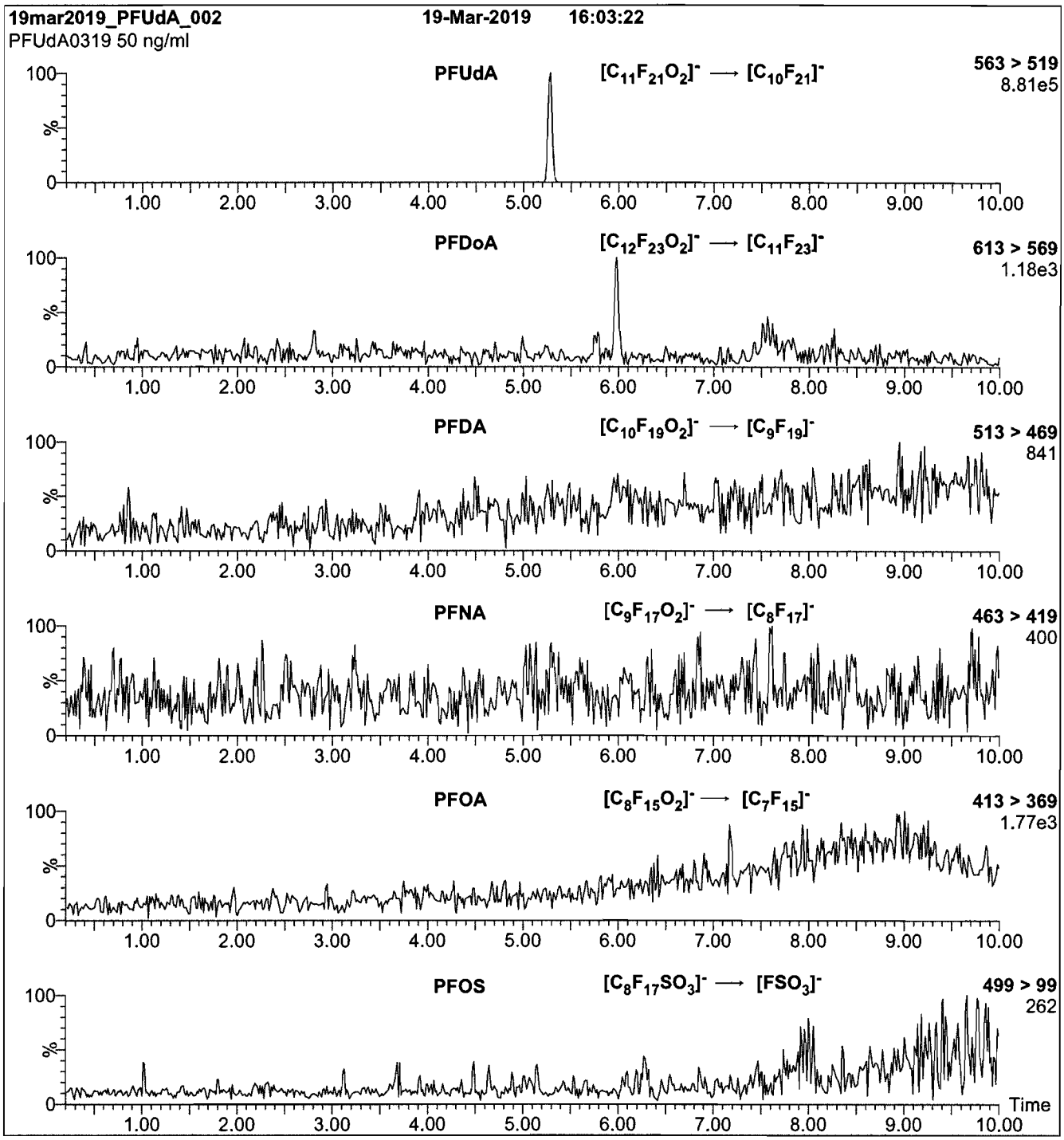
Mobile phase: Same as Figure 1

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

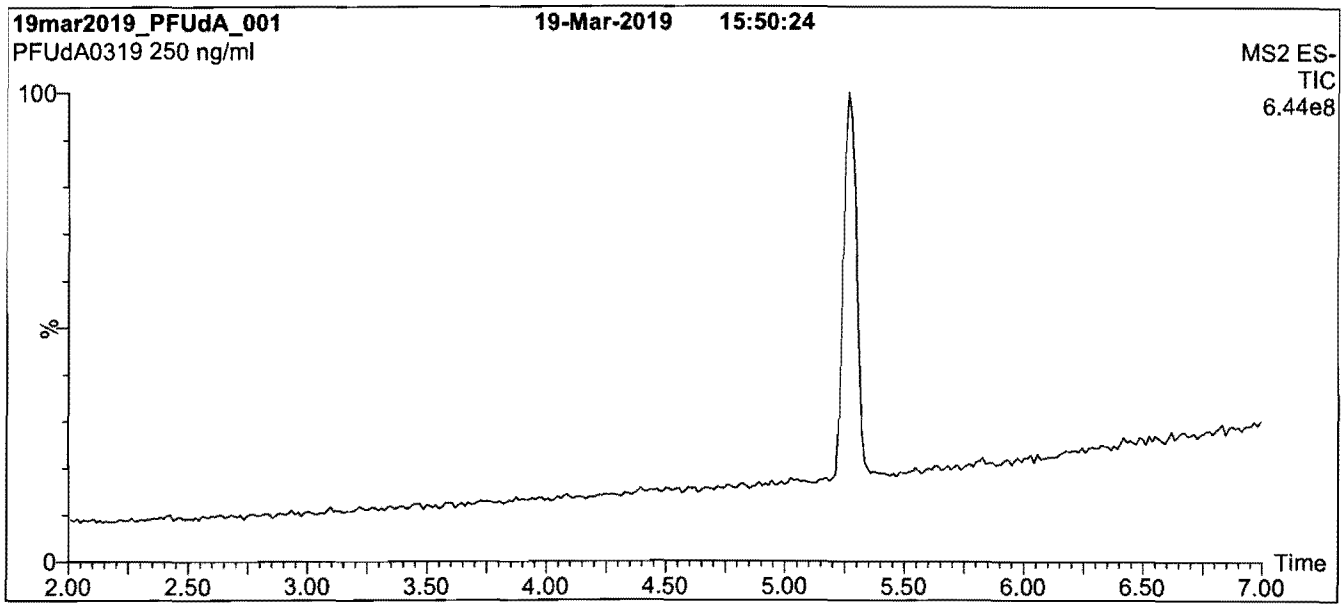
Flow: 300 µl/min

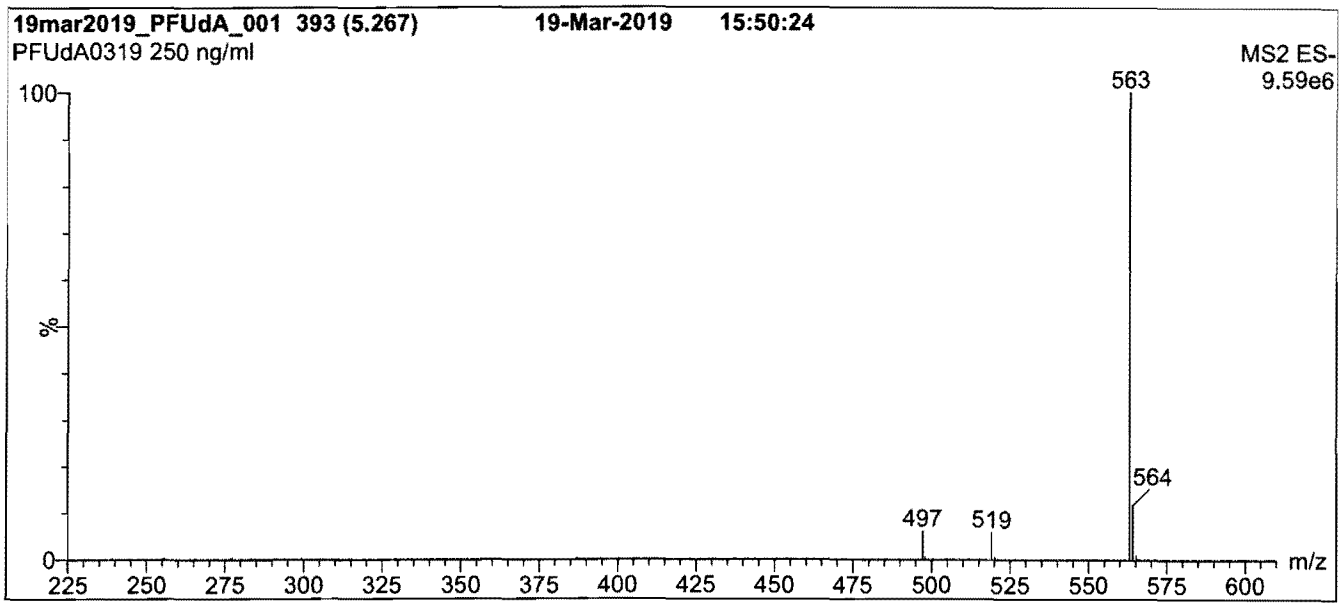
MS Parameters

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:

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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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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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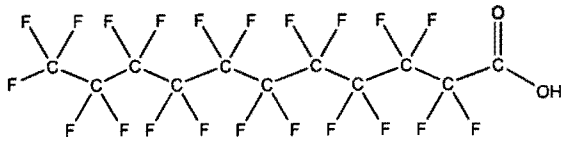
19L0640

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).

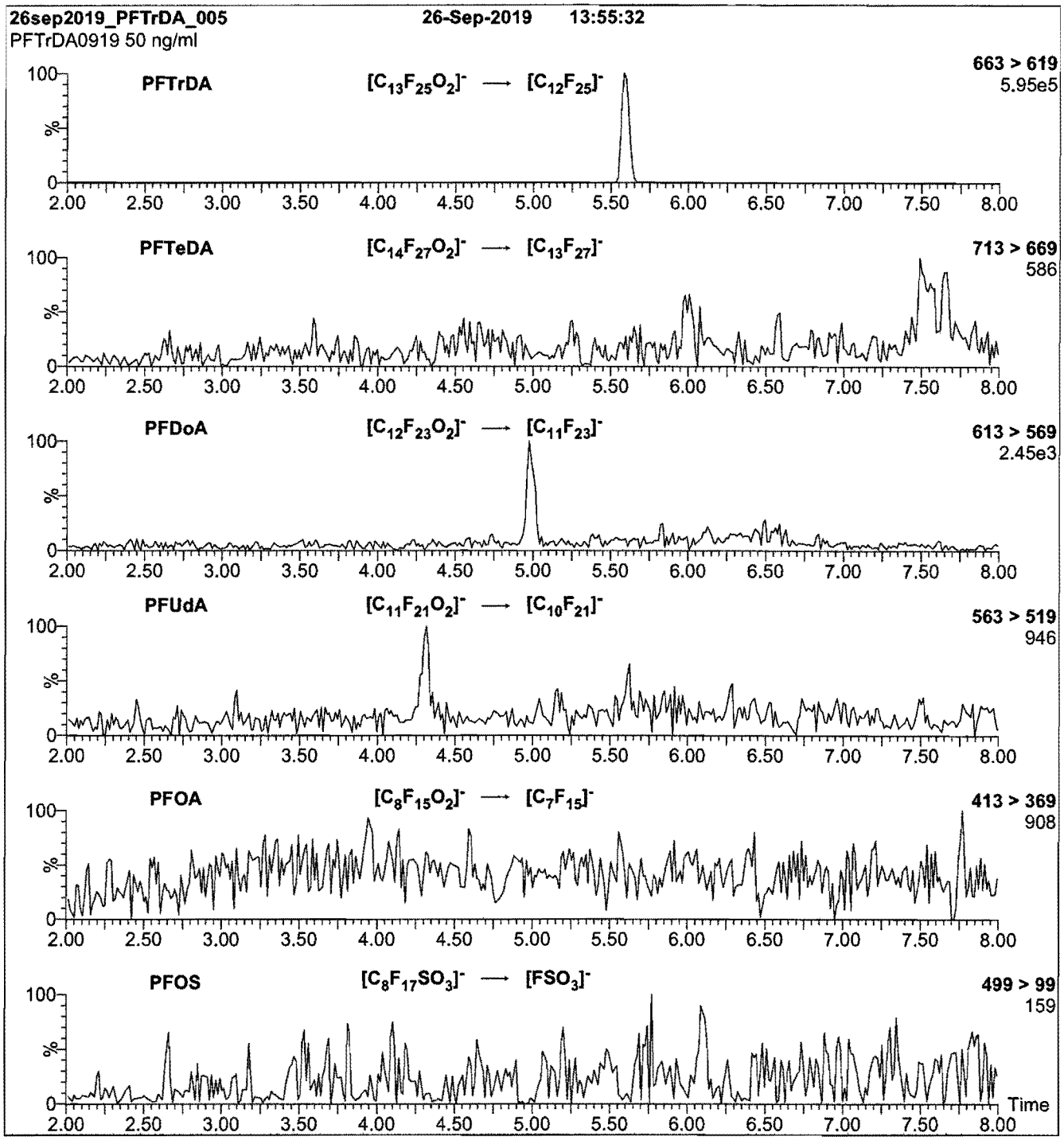
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 03/21/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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

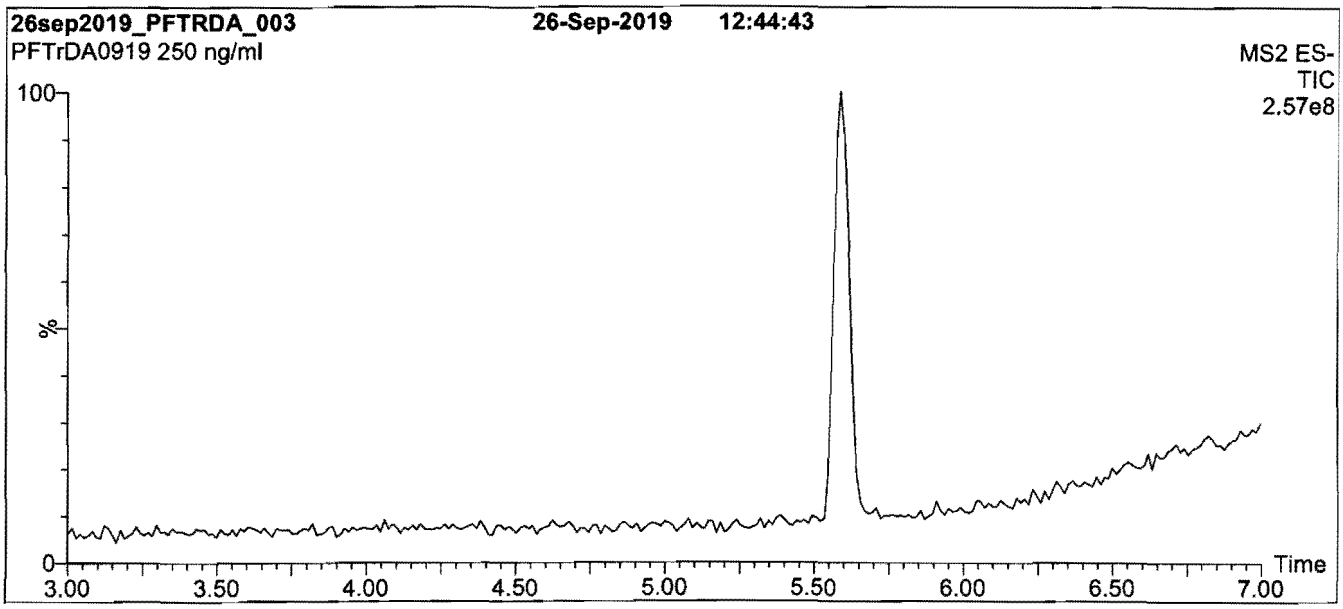
Flow: 300 µl/min

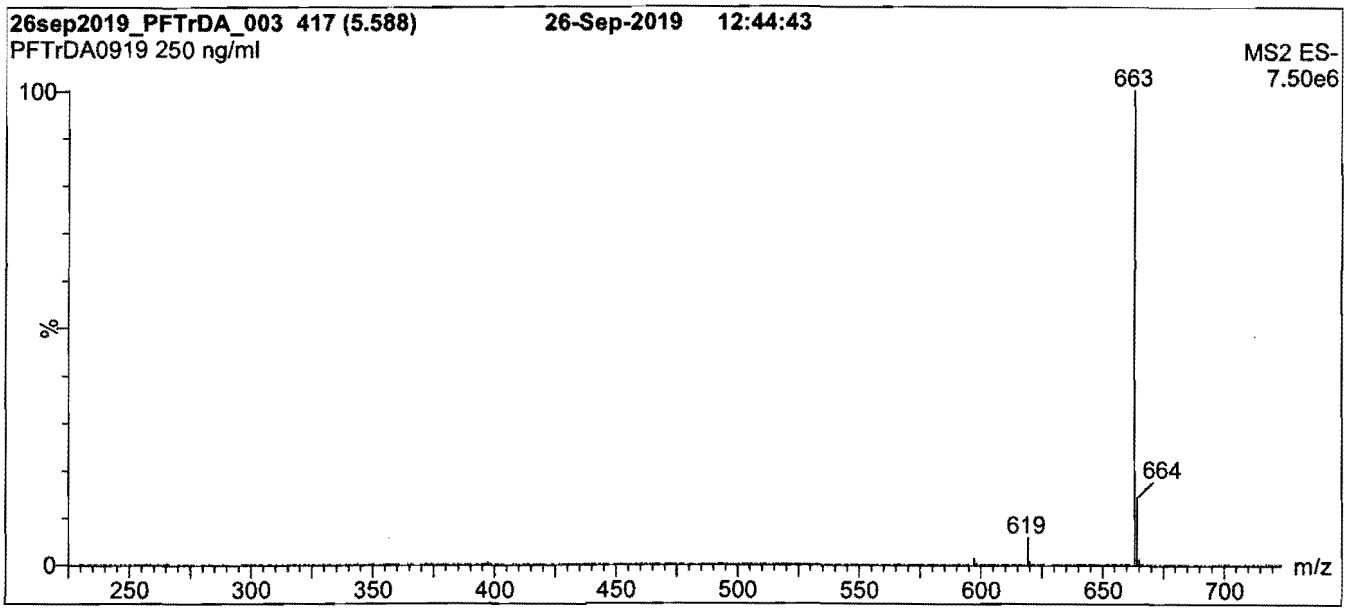
MS Parameters

Collision Gas (mbar) = 3.73e-3
Collision Energy (eV) = 12

1910641

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:

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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.

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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

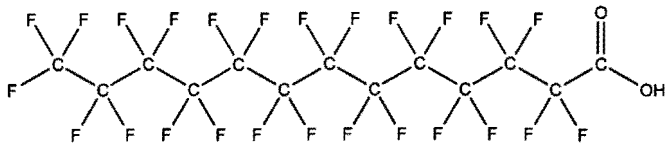
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19L0691

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 ($C_{14}HF_{27}O_2$).

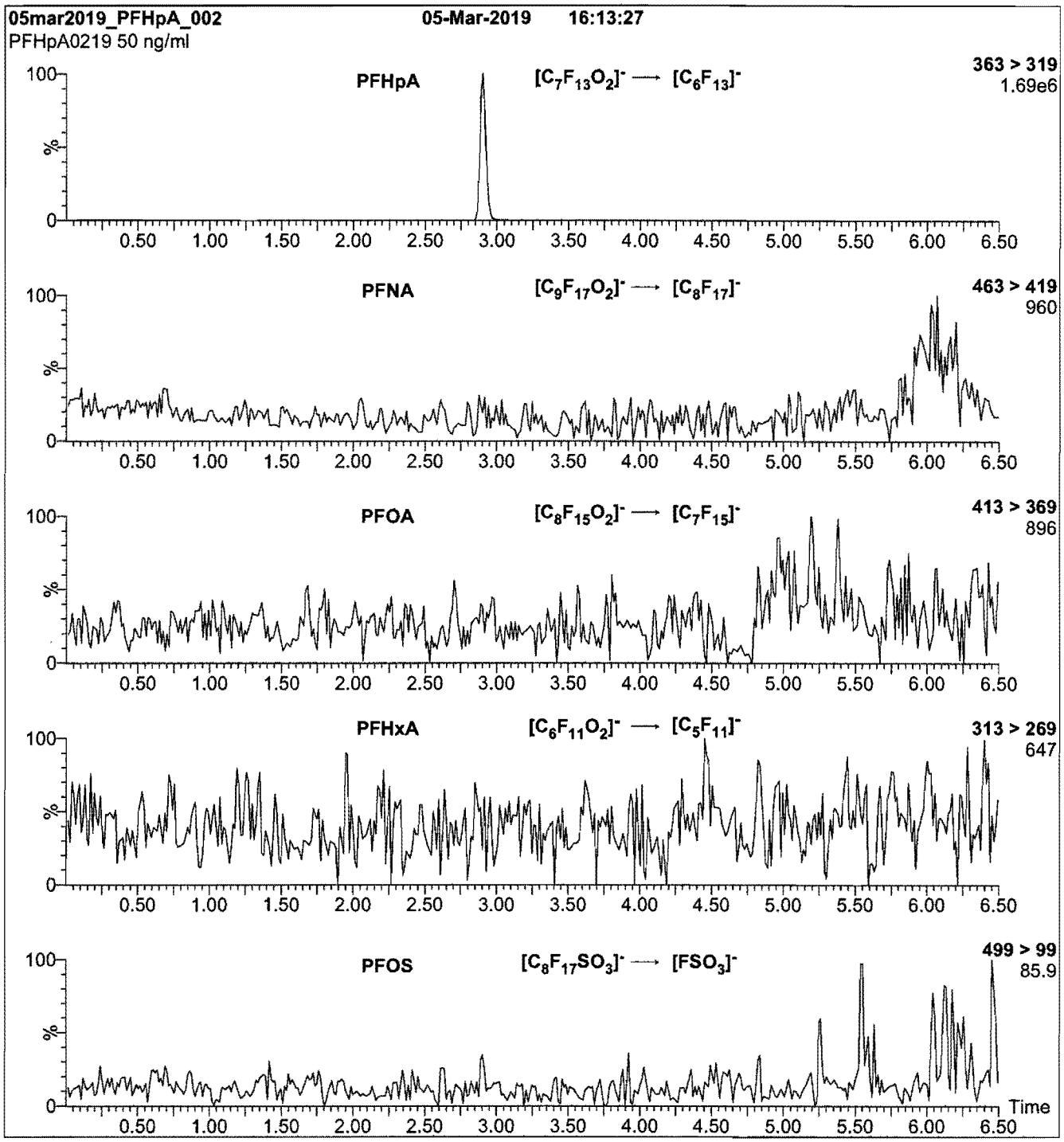
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

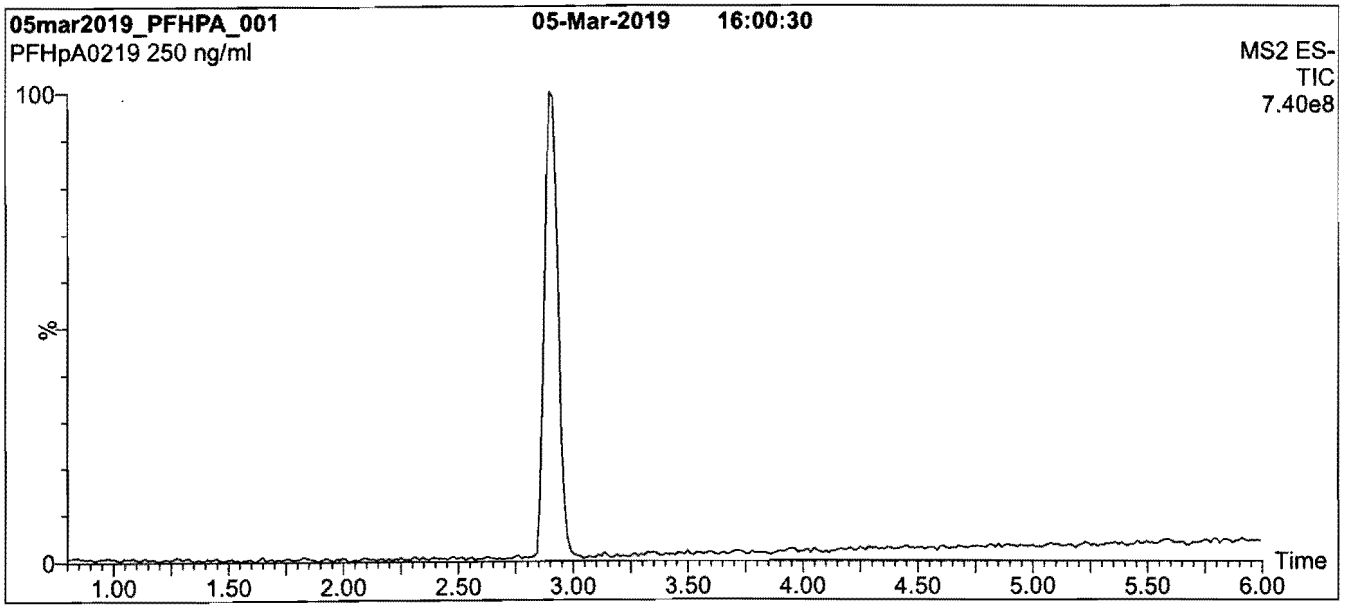
Flow: 300 µl/min

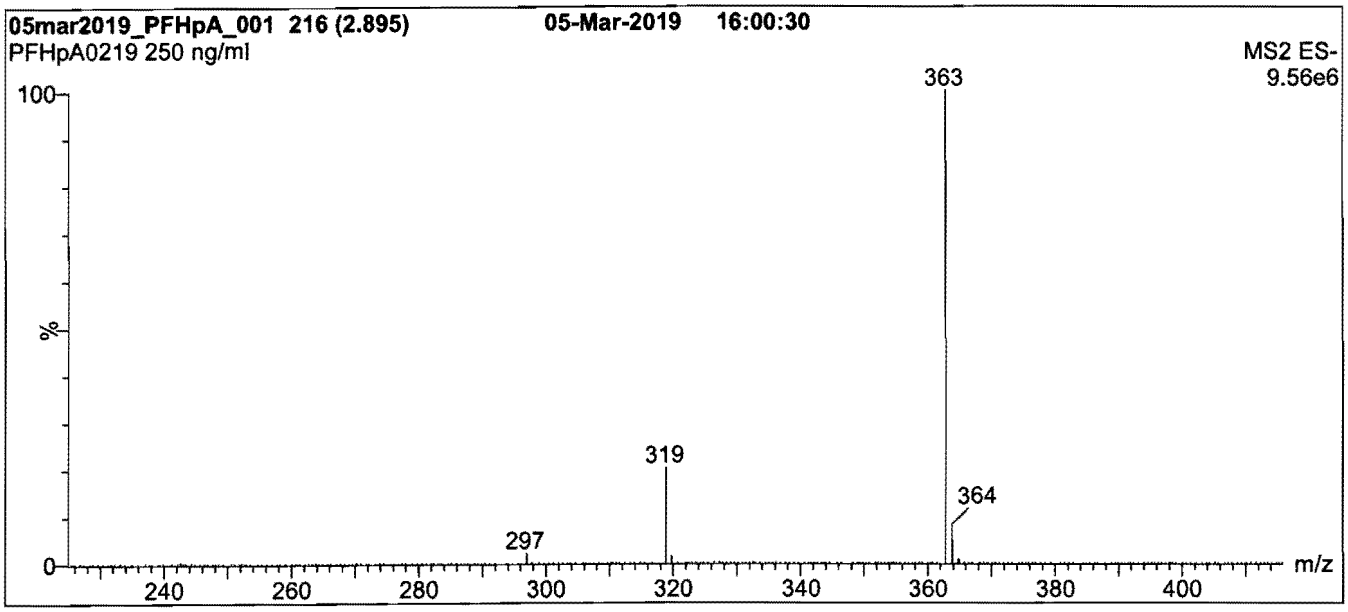
MS Parameters

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:

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

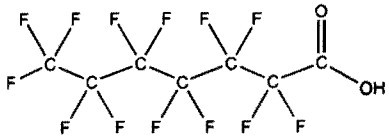
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0642

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFHpA	**LOT NUMBER:**	PFHpA0219
COMPOUND:	Perfluoro-n-heptanoic acid		
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:

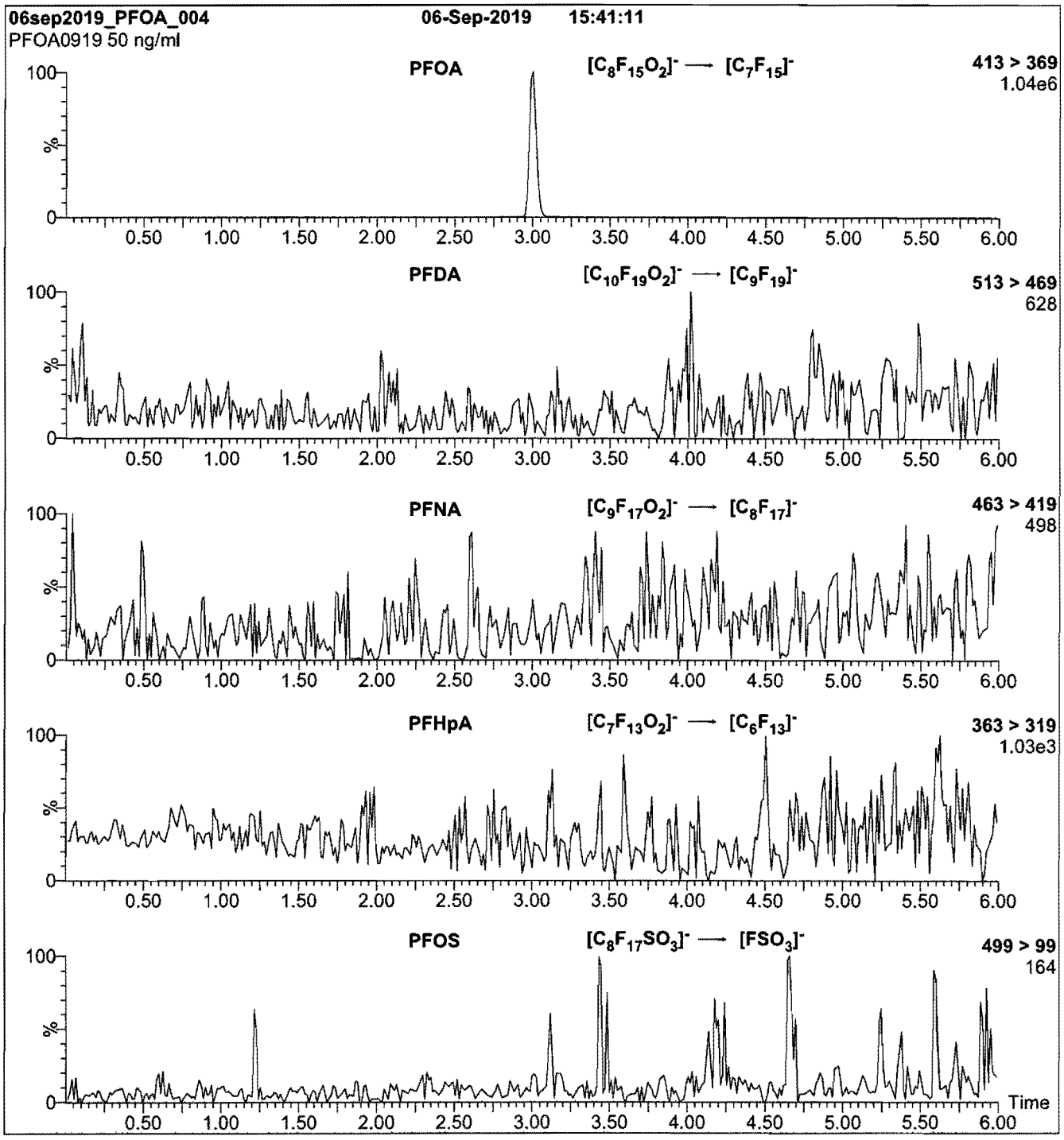
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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)

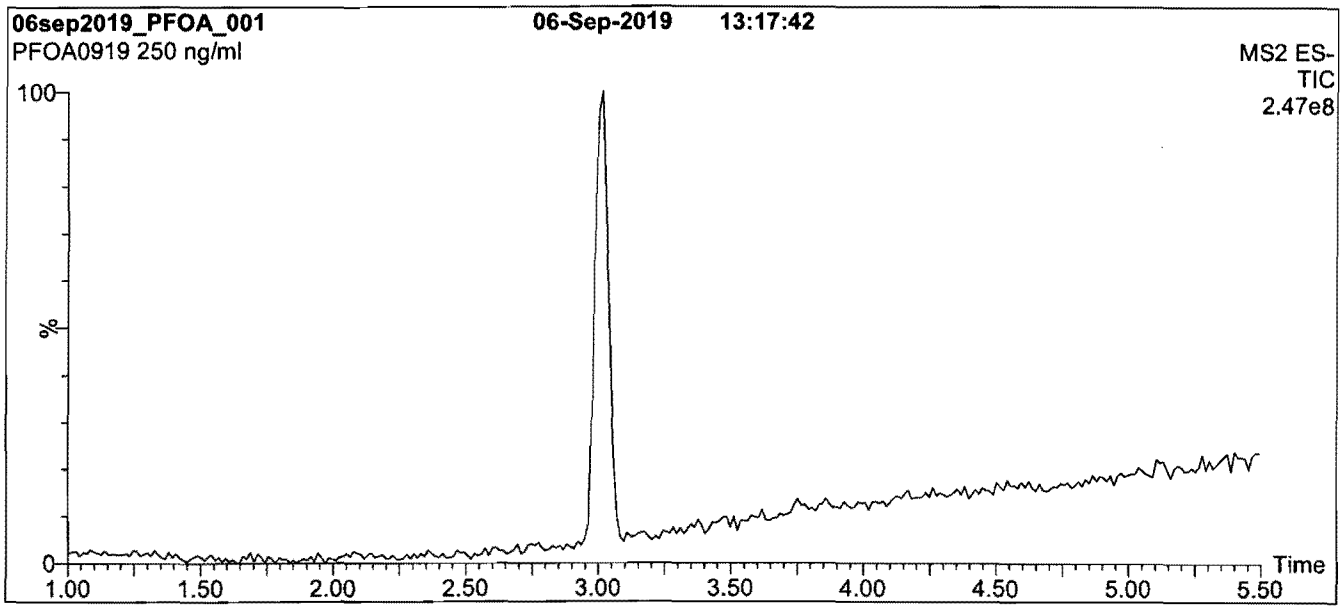
Mobile phase: Same as Figure 1

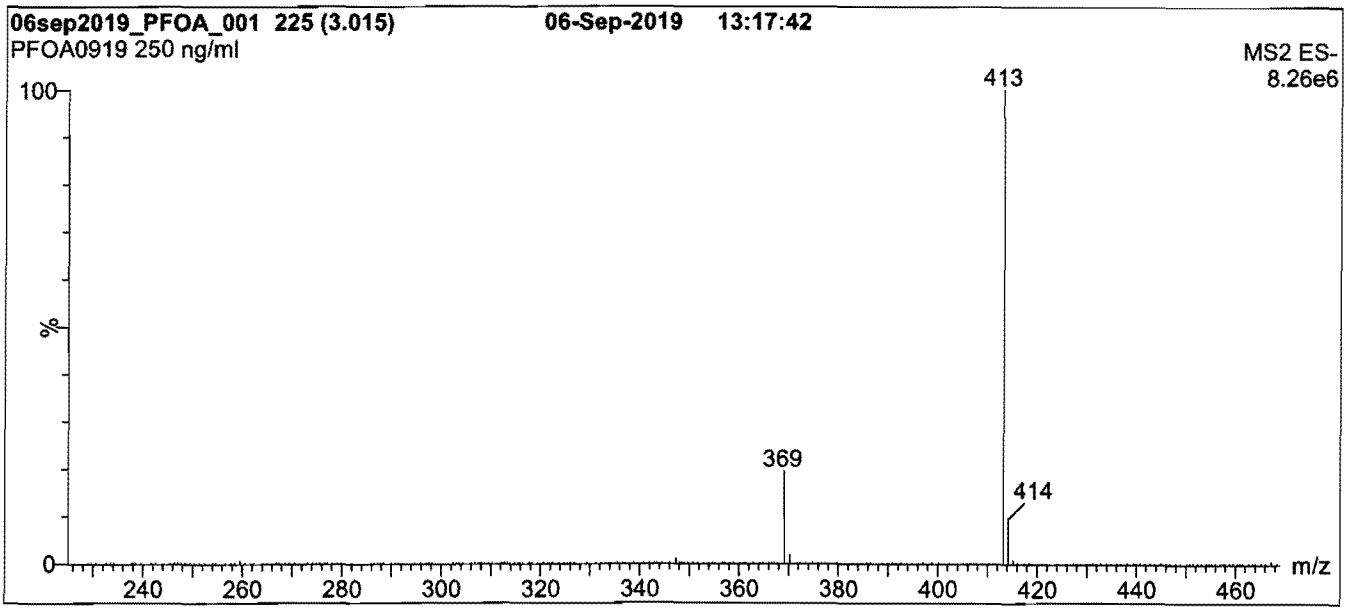
Flow: 300 µl/min

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

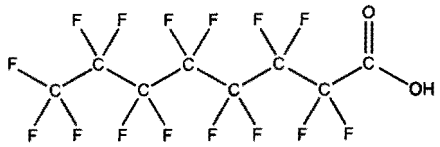
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

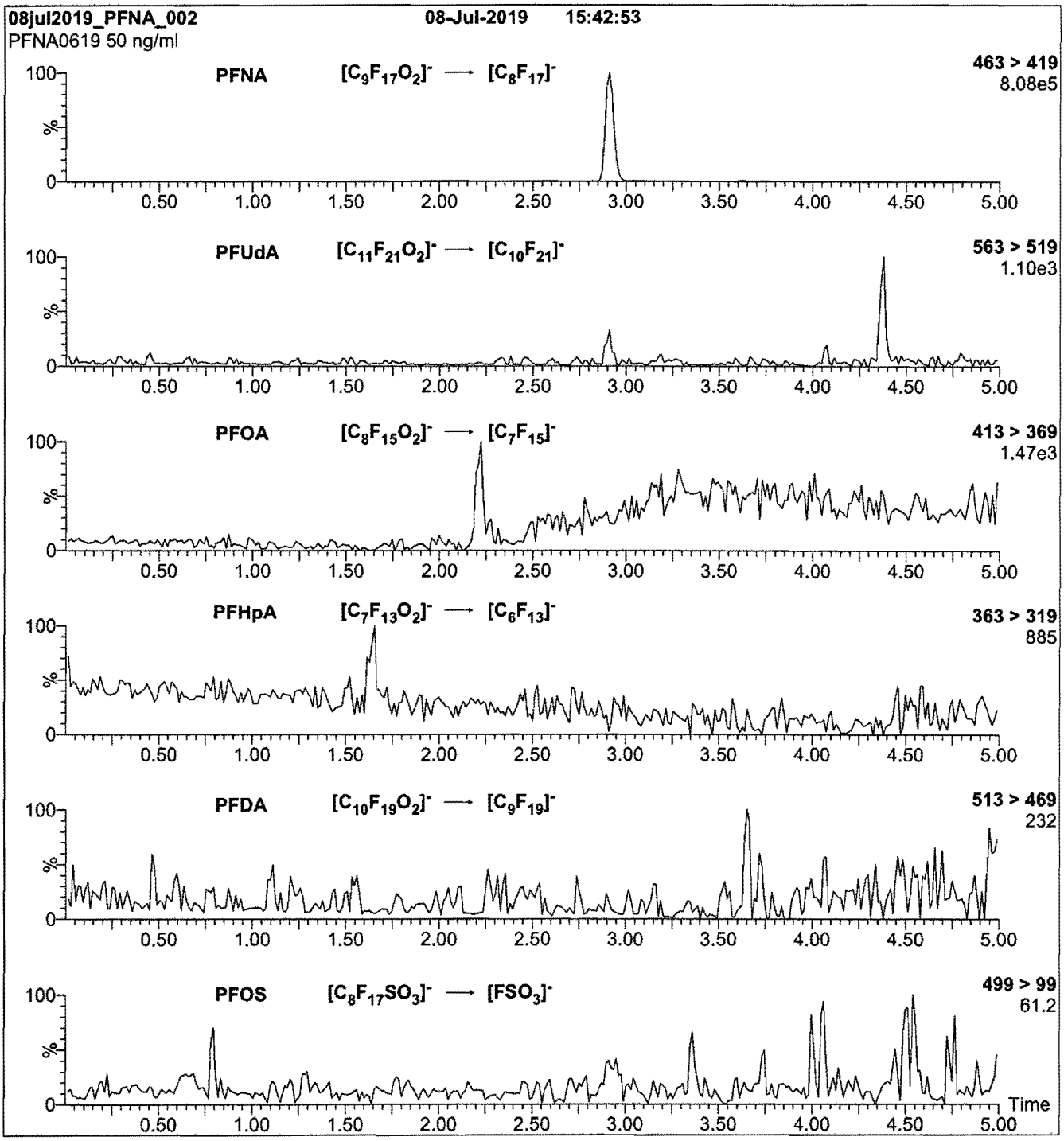
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

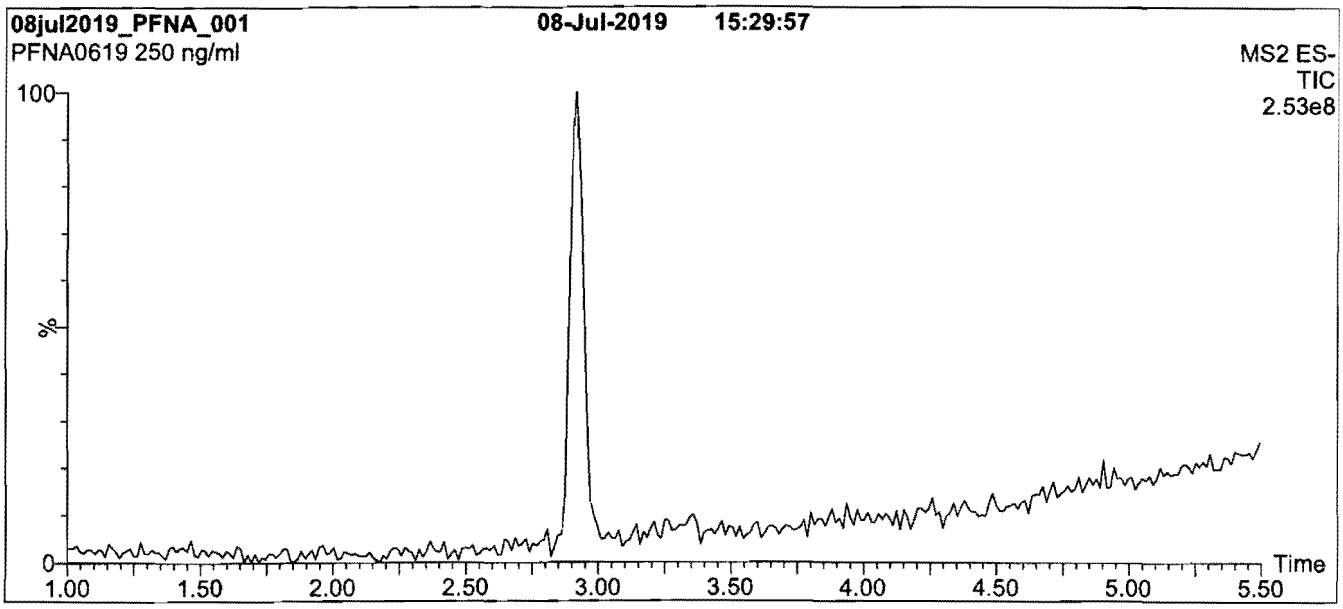
Flow: 300 µl/min

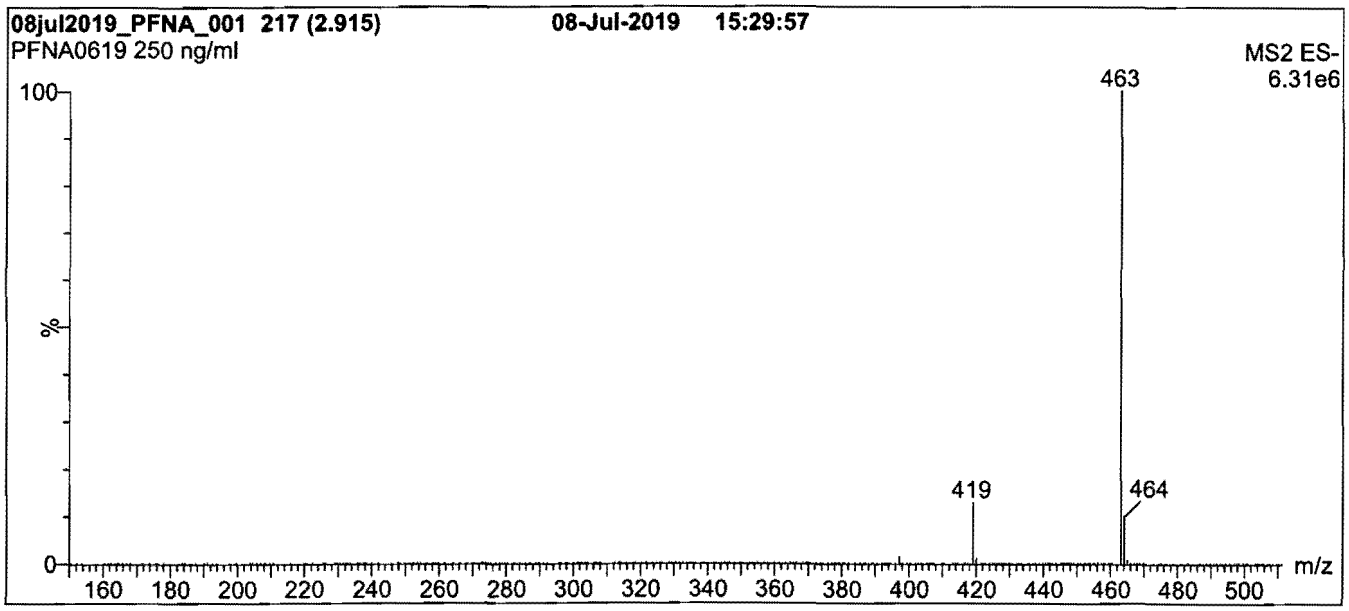
MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 10

19L0644

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

INTENDED USE:

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HANDLING:

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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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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

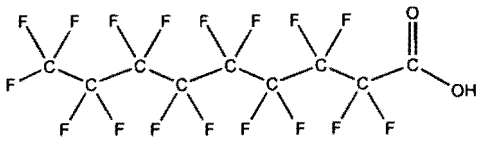
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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).

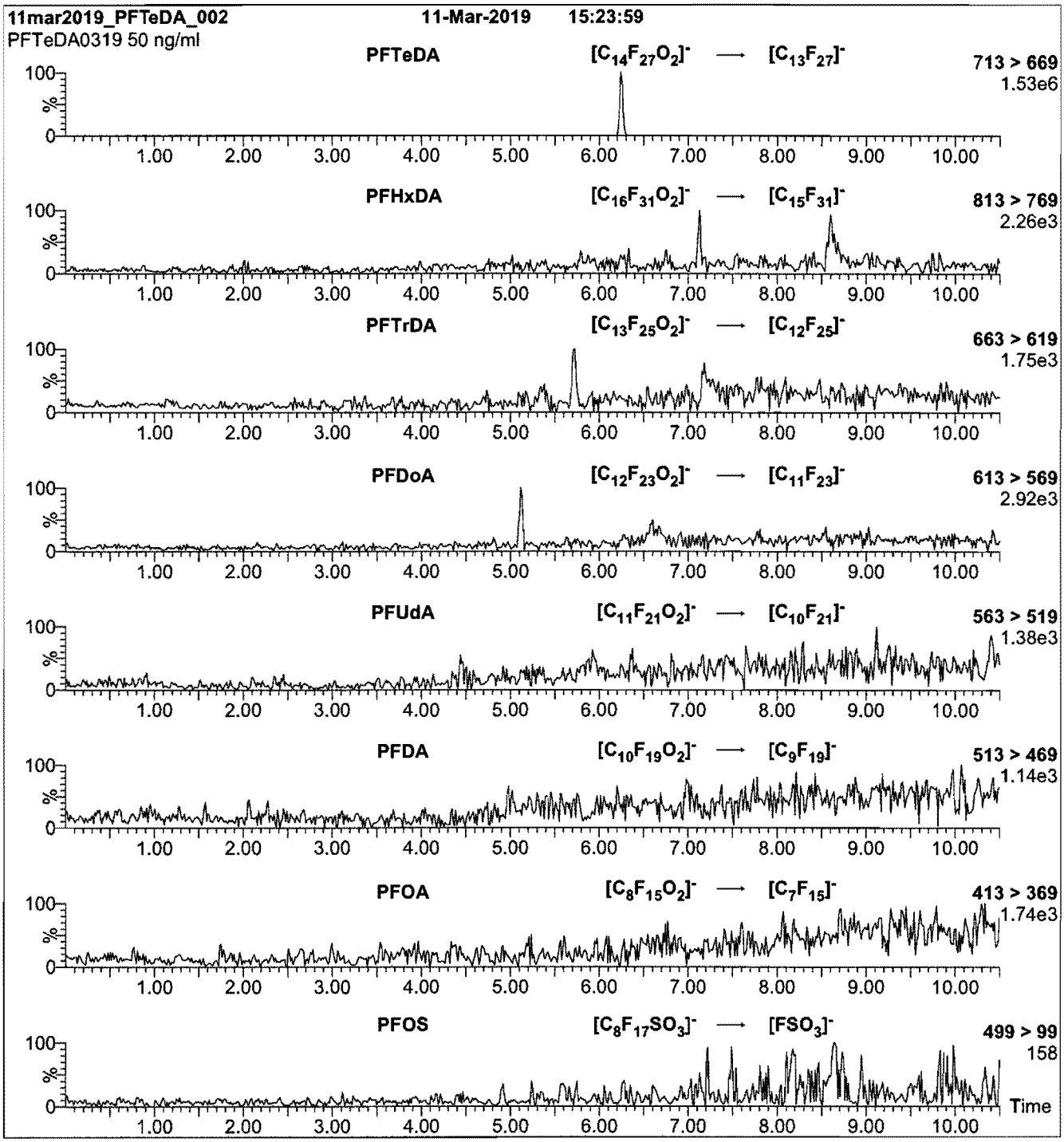
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

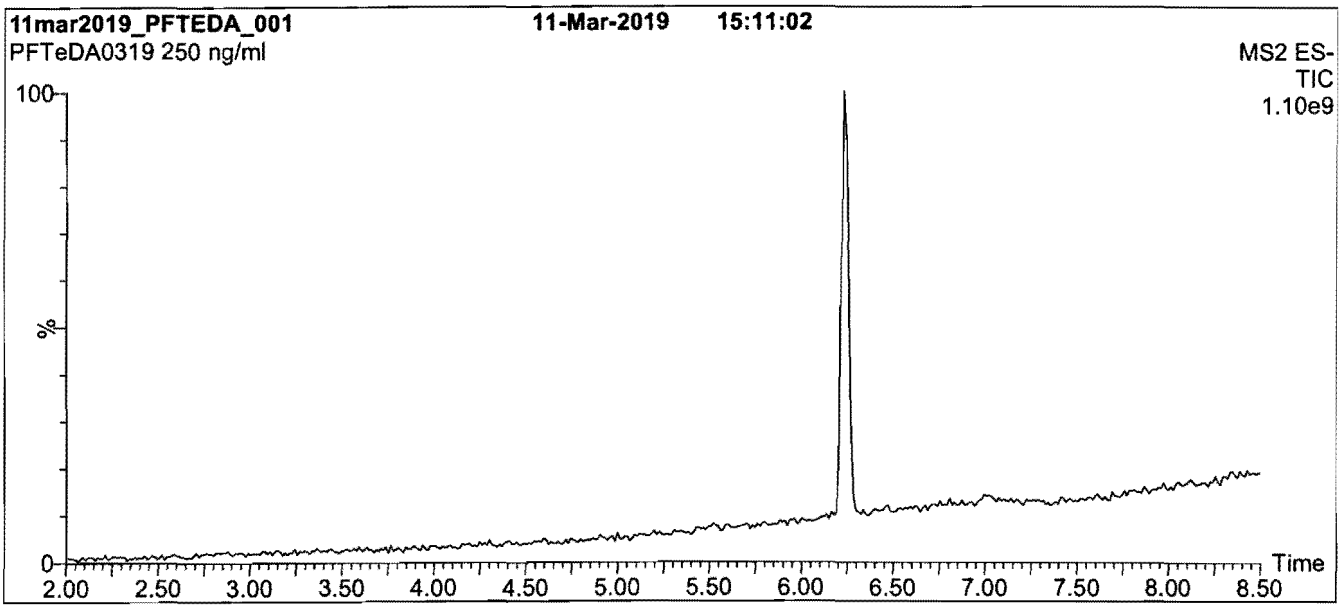
Flow: 300 µl/min

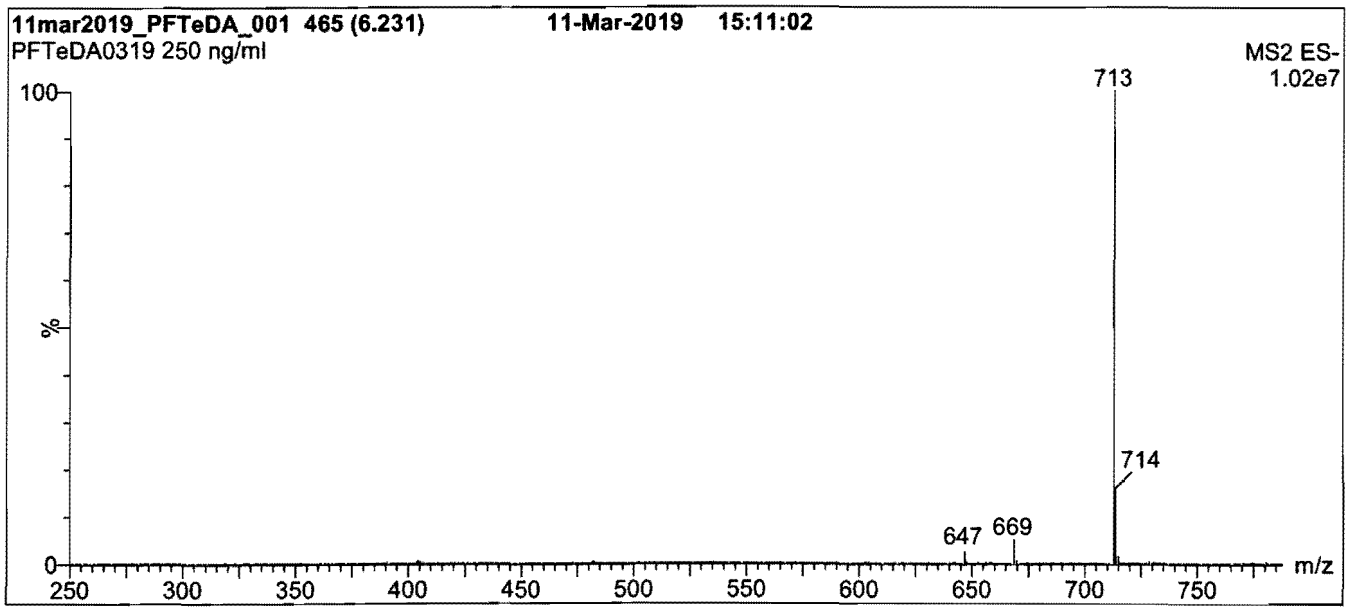
MS Parameters

Collision Gas (mbar) = 3.03e-3
Collision Energy (eV) = 14

1910645

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

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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

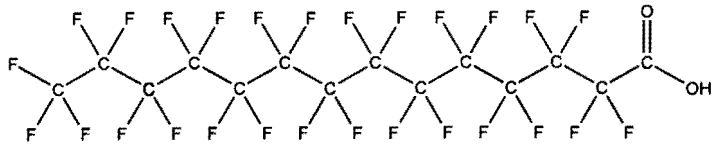
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19L0645

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 ($C_{16}HF_{31}O_2$).

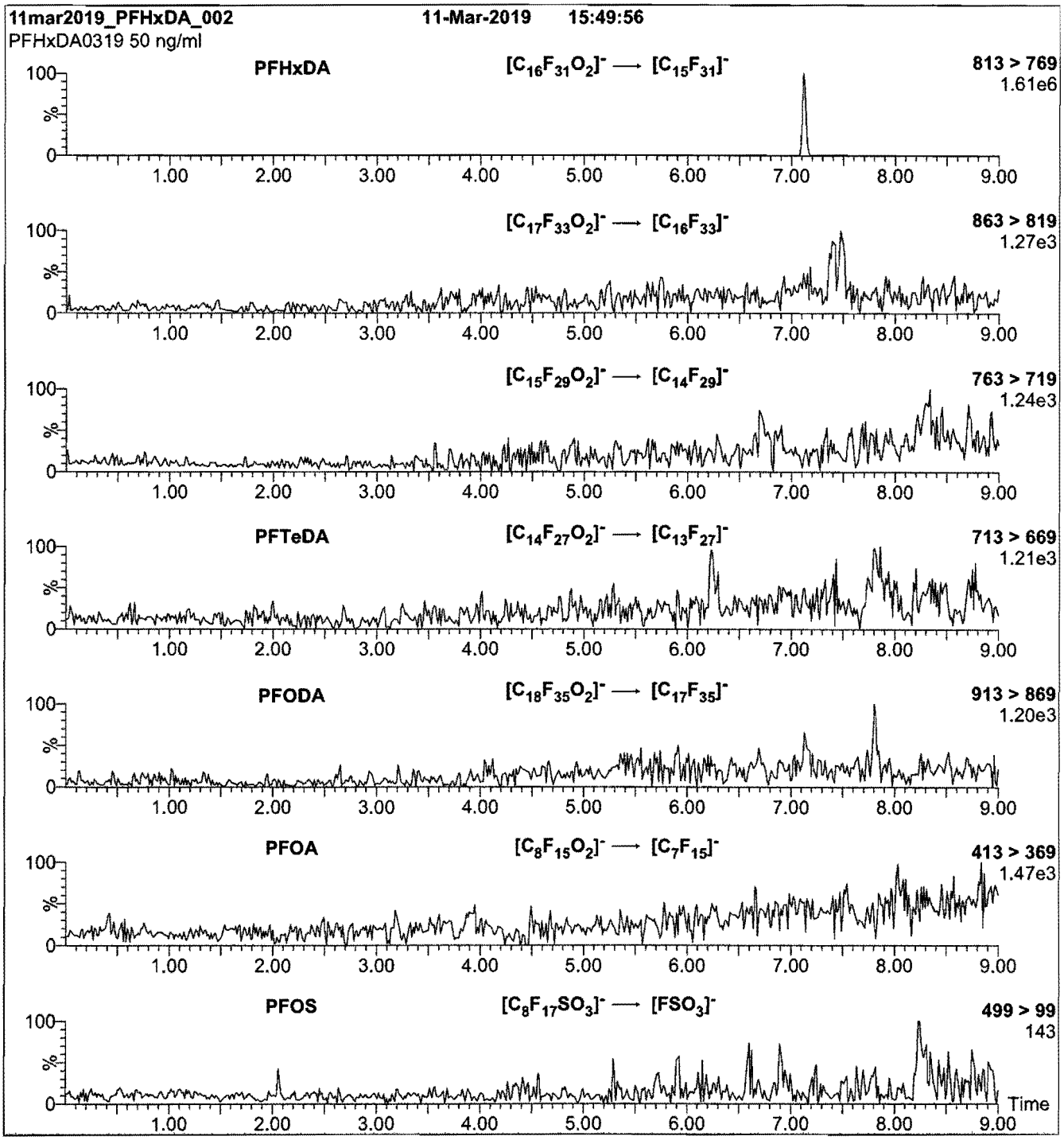
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

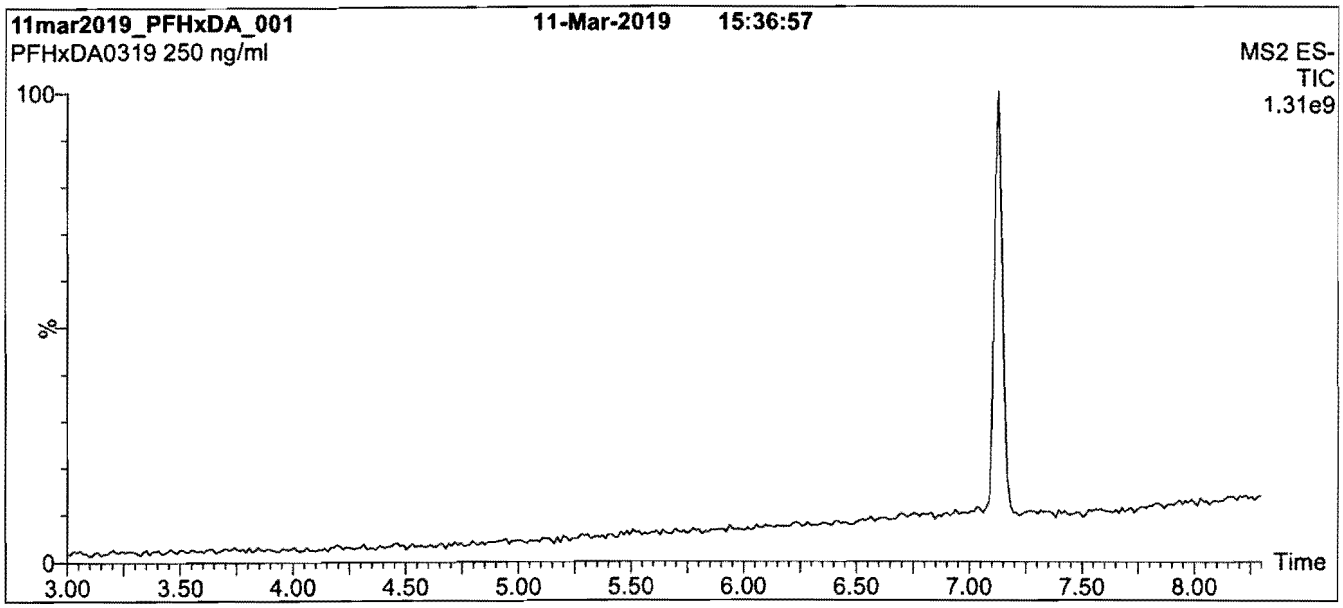
Flow: 300 µl/min

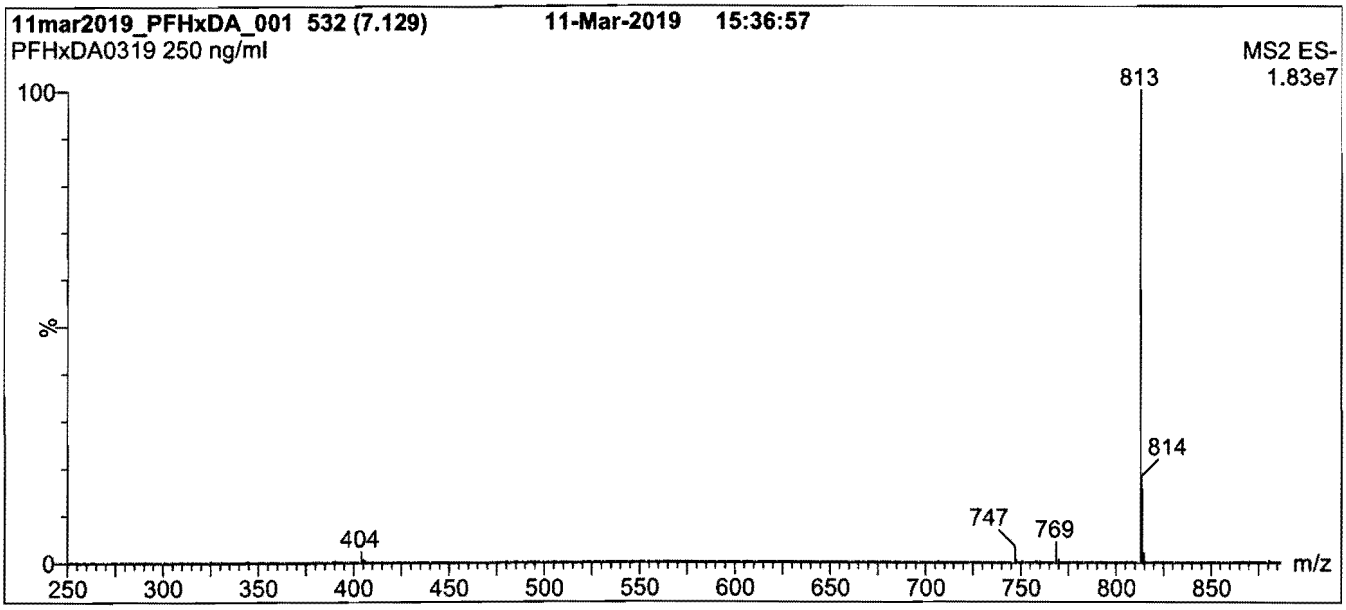
MS Parameters

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)
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

19L0646

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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. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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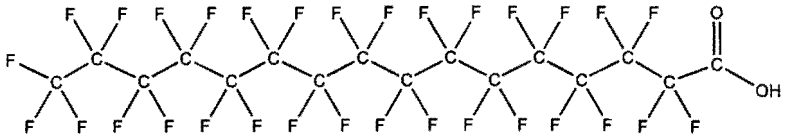
19L0646

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.

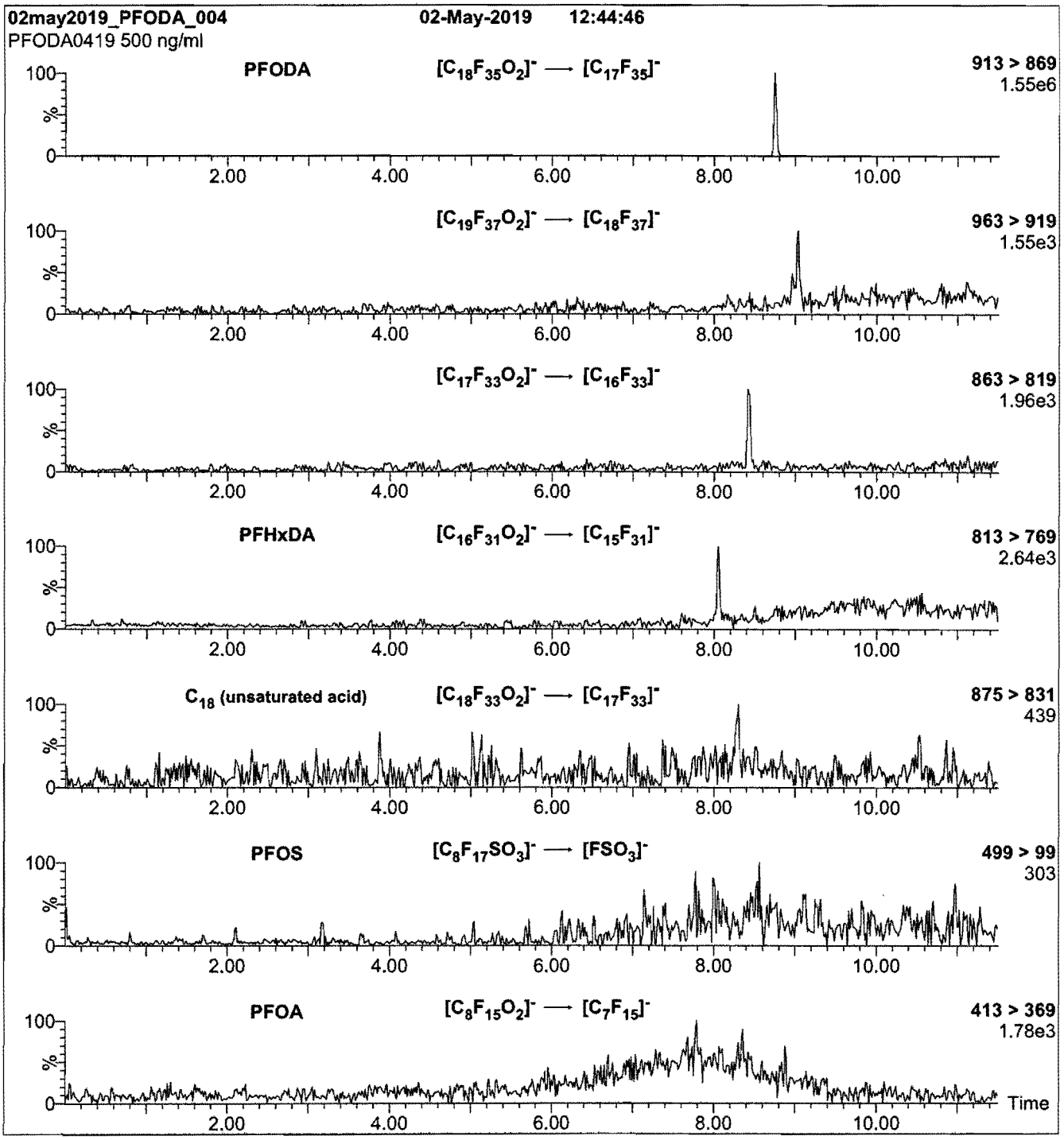
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
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19L0647

Figure 2: **PFODA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFODA)

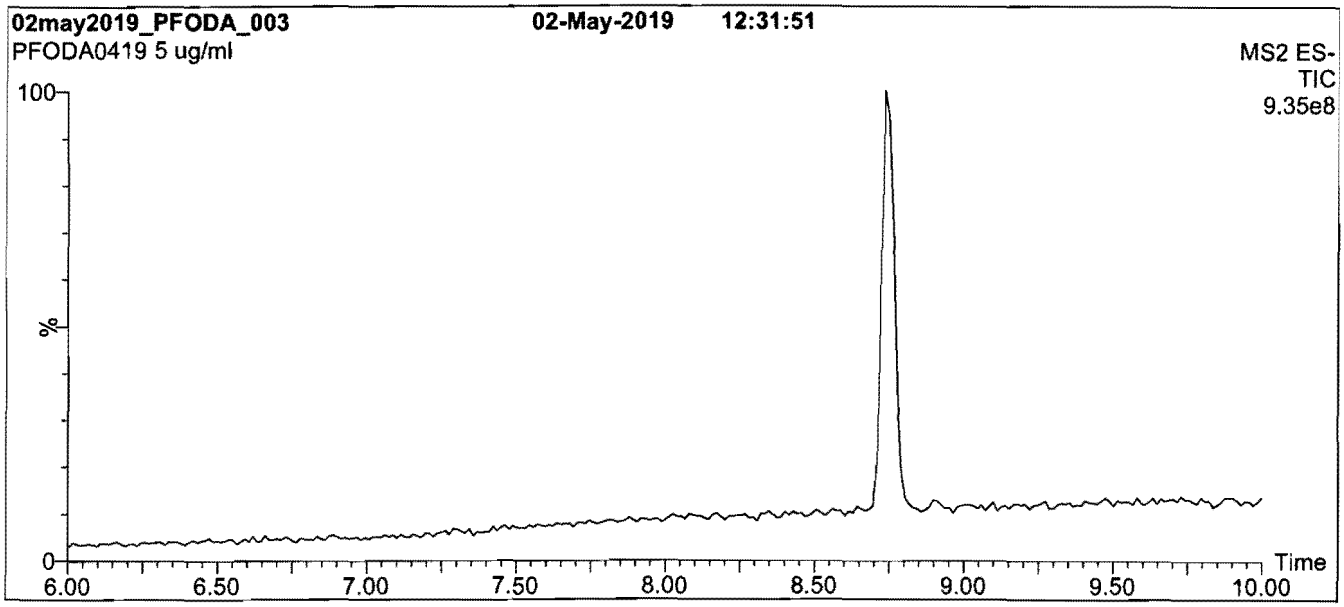
Mobile phase: Same as Figure 1

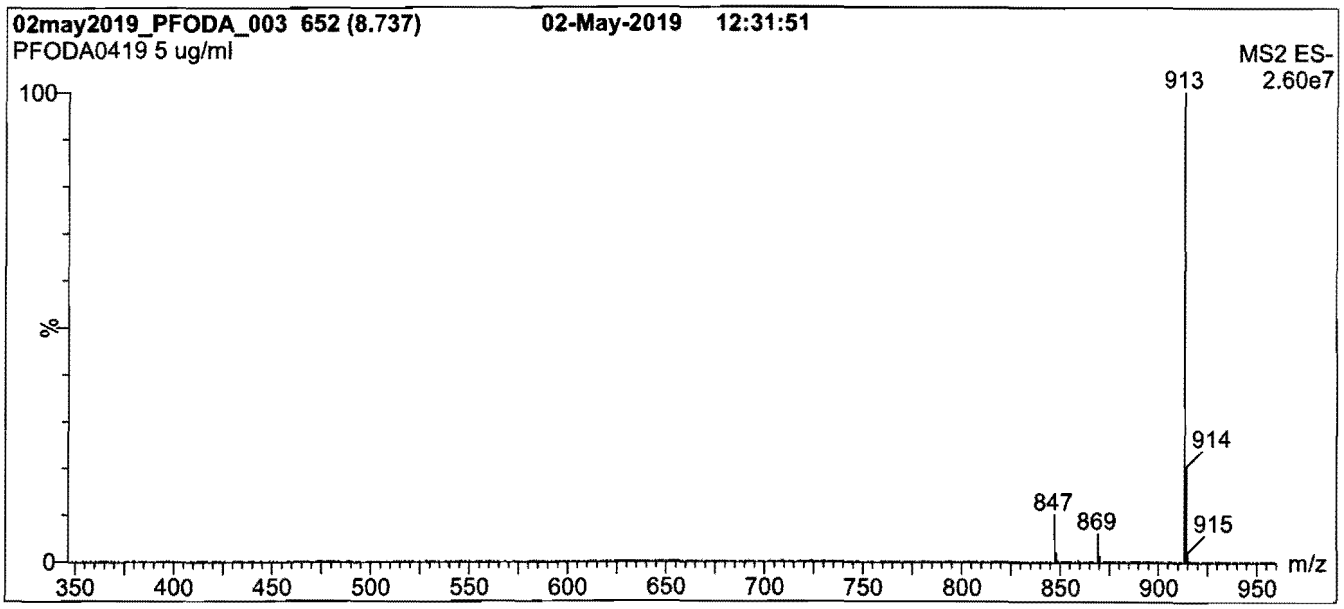
Flow: 300 µl/min

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:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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UNCERTAINTY:

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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:

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:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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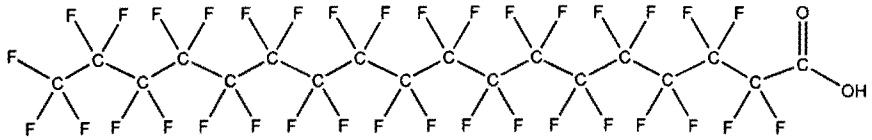
19L0647

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 ($C_{17}HF_{33}O_2$)

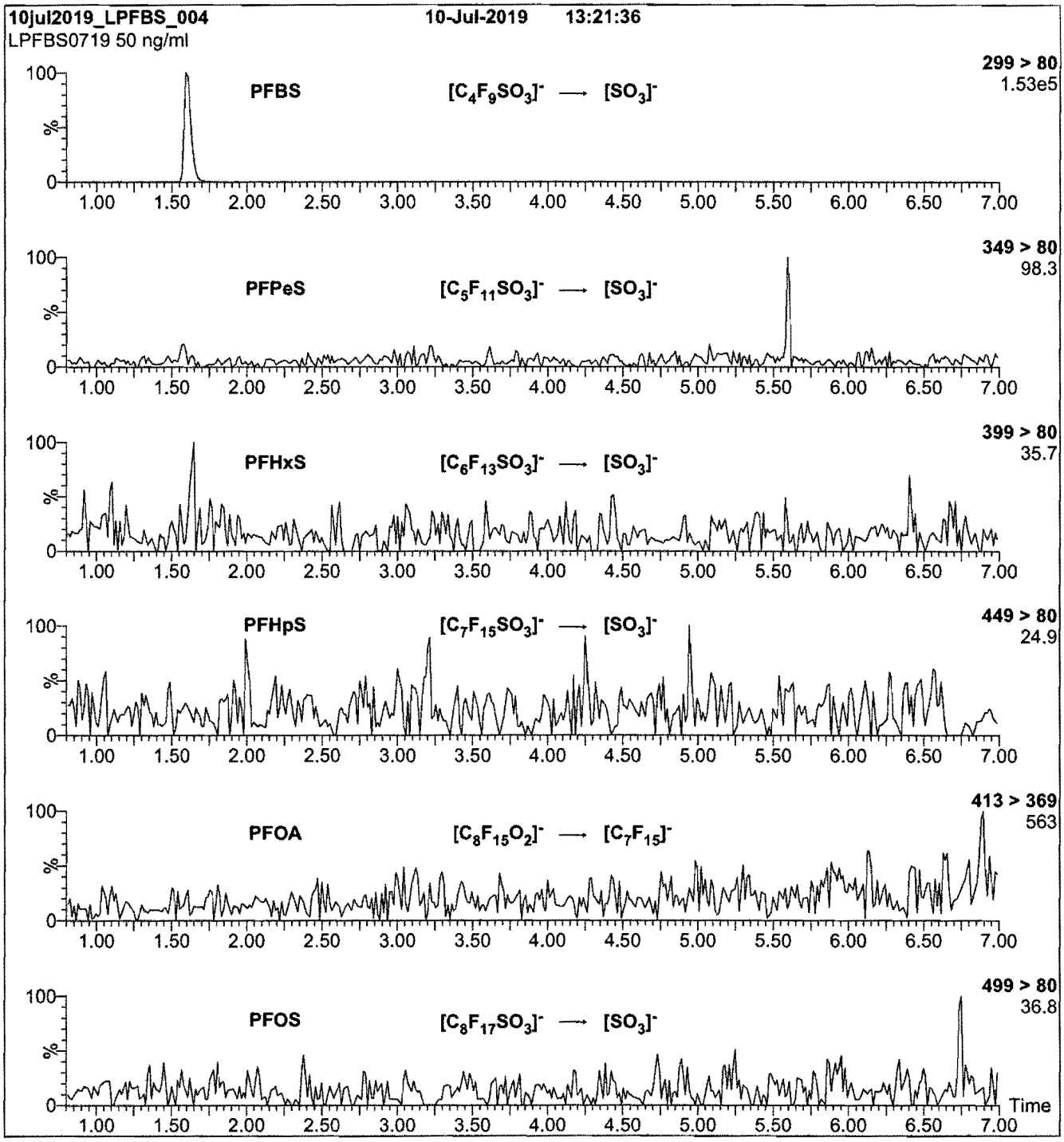
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Certified By: _____ **Date:** 05/16/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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19L0648

Figure 2: **L-PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (L-PFBS)

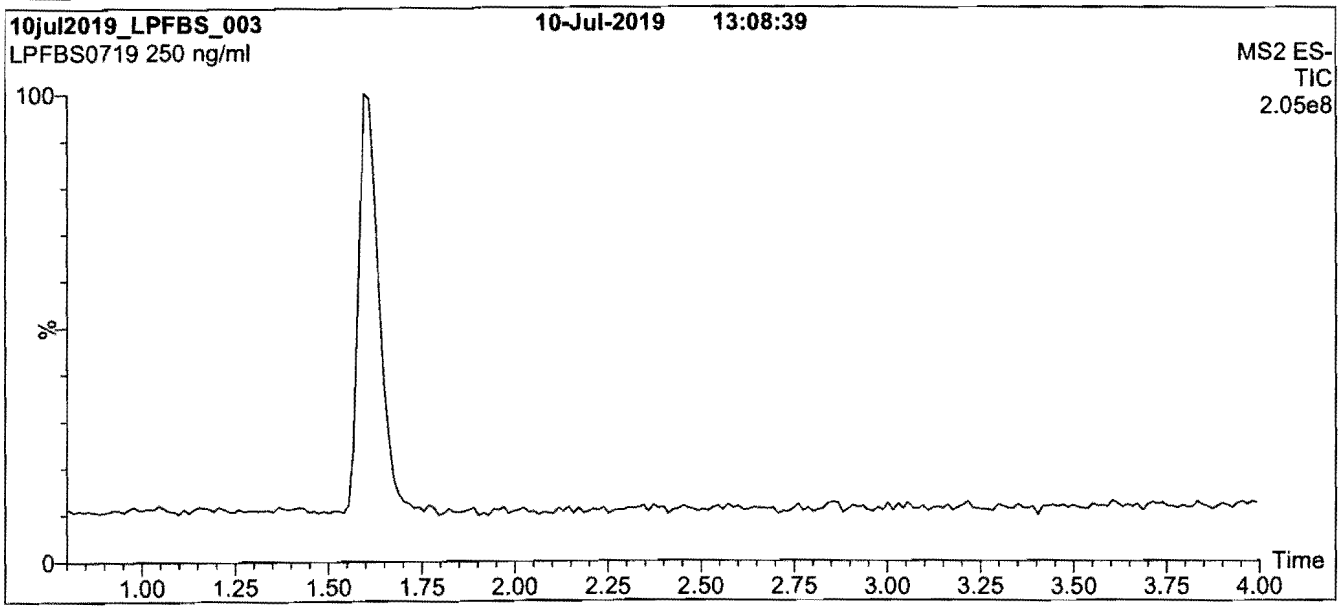
Mobile phase: Same as Figure 1

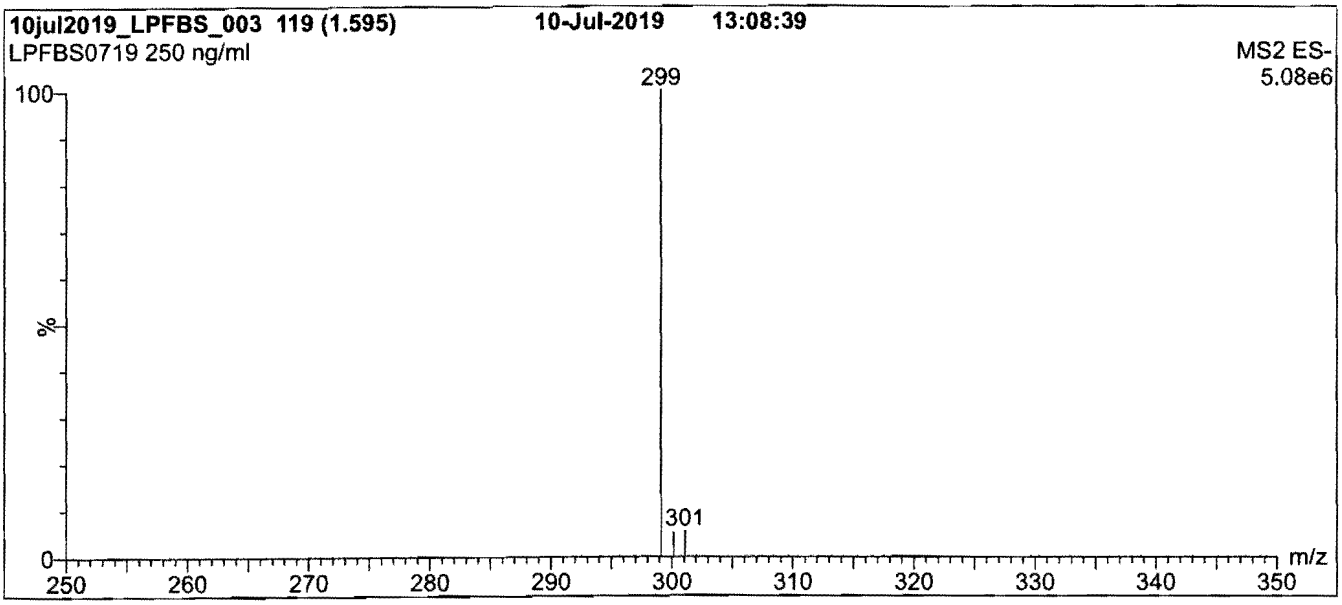
Flow: 300 µl/min

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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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

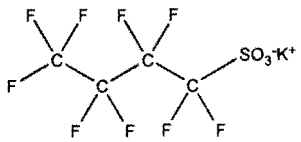
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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:

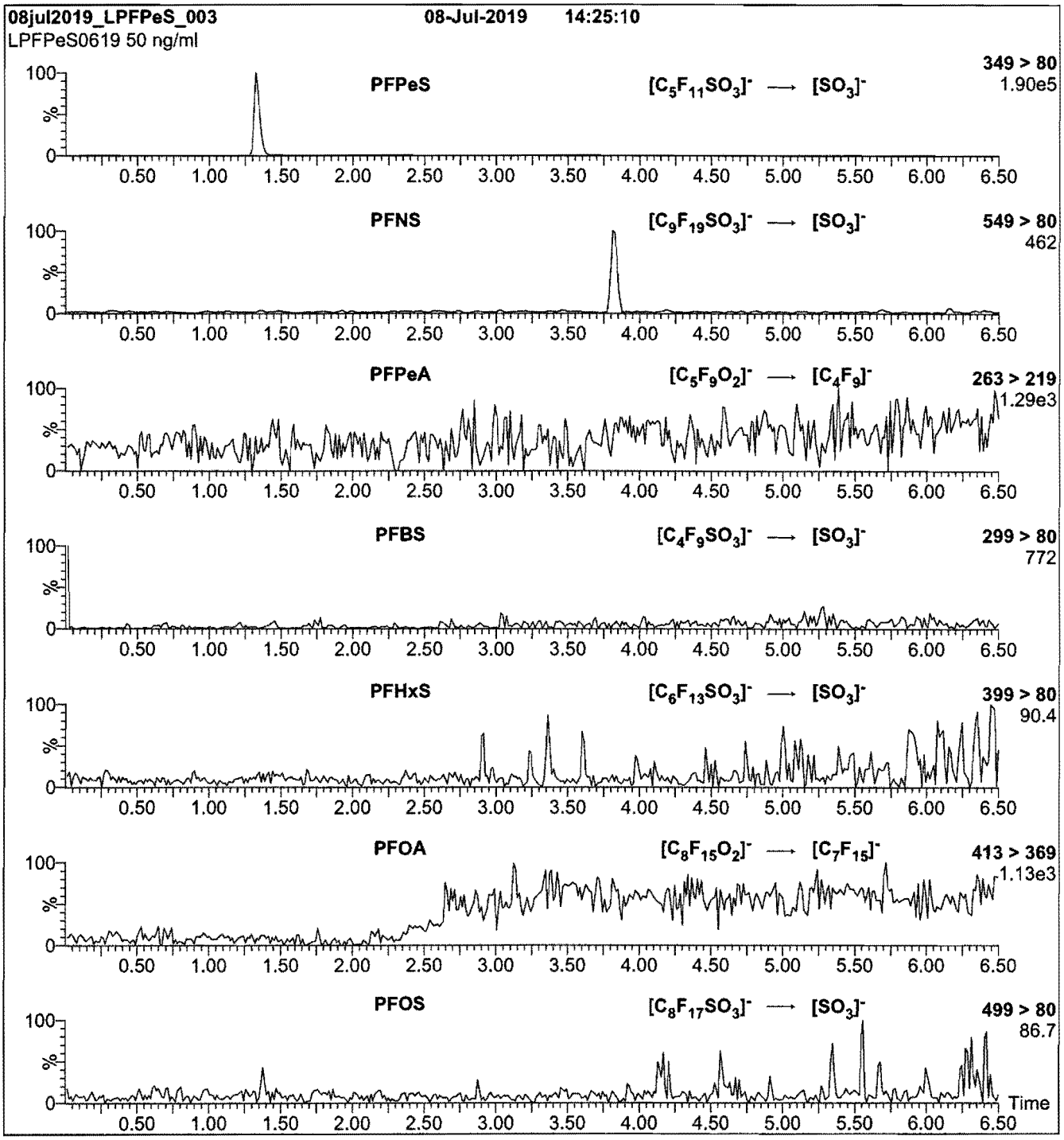
- See page 2 for further details.
- Contains ~ 0.2% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

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

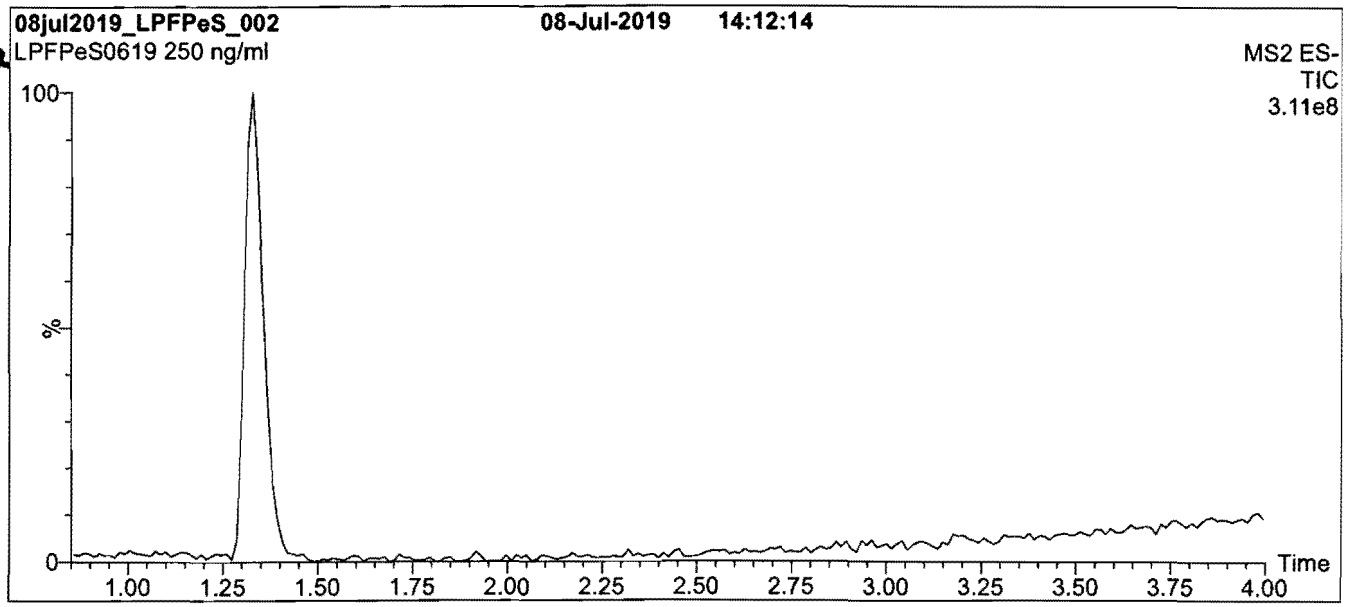
Flow: 300 µl/min

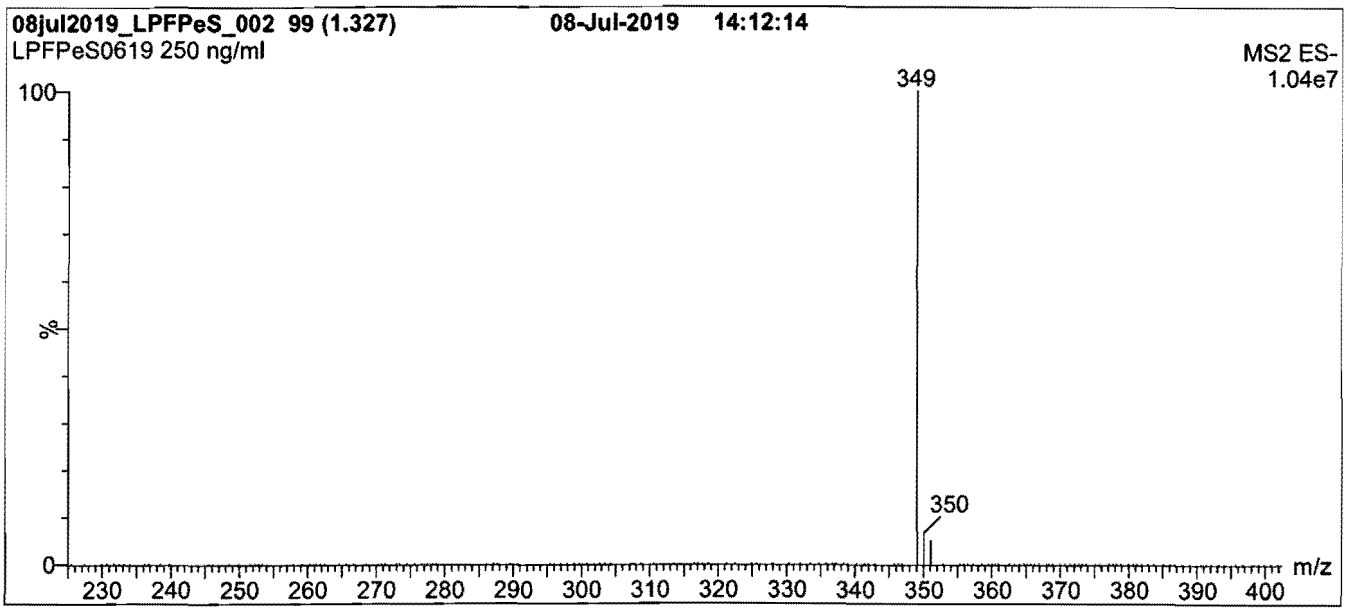
MS Parameters

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:

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,...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:

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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 ISO 17034 REFERENCE MATERIAL PRODUCER

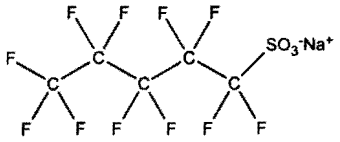
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19L0619

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:

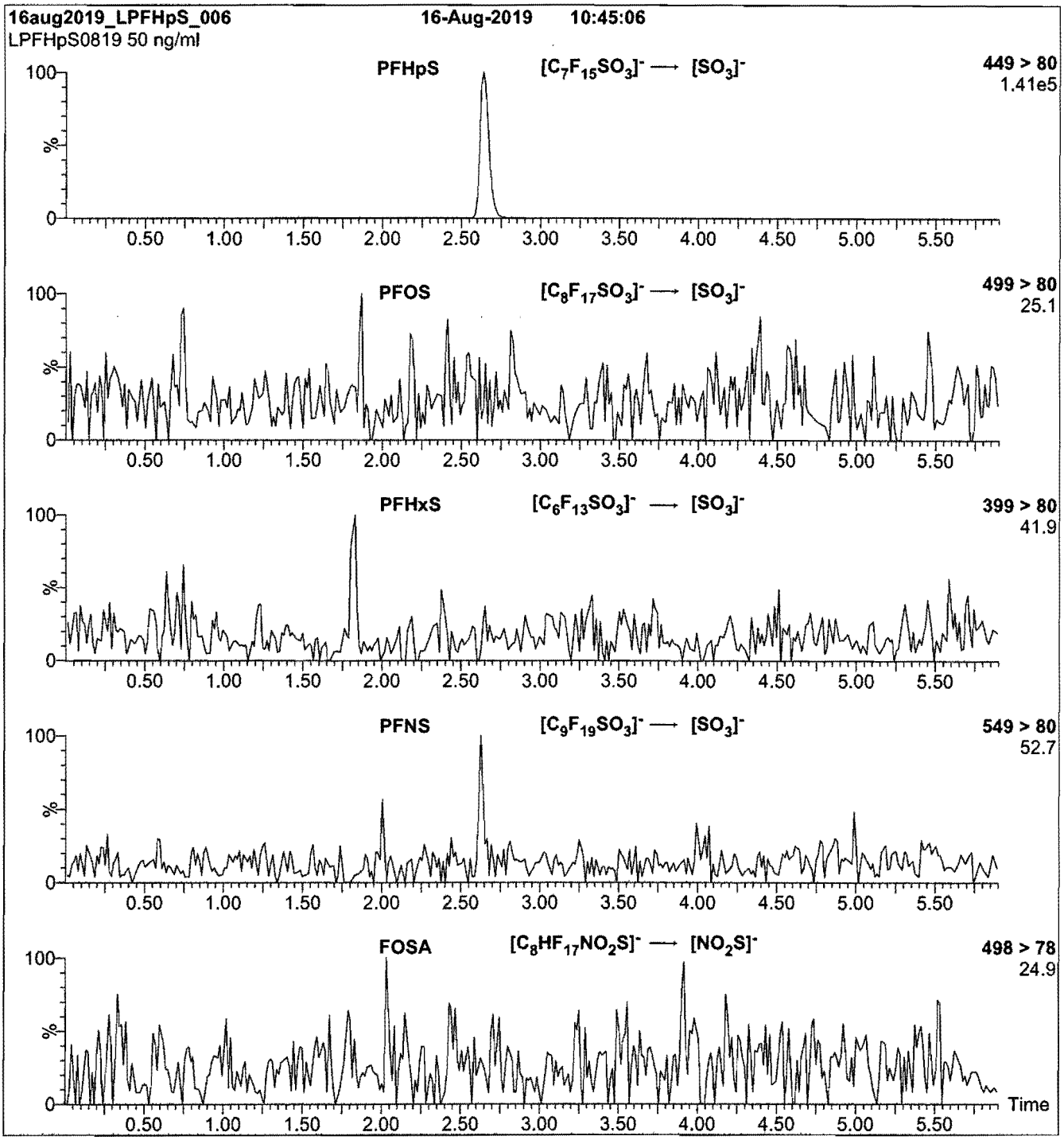
- See page 2 for further details.
- Contains ~ 0.3% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

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)

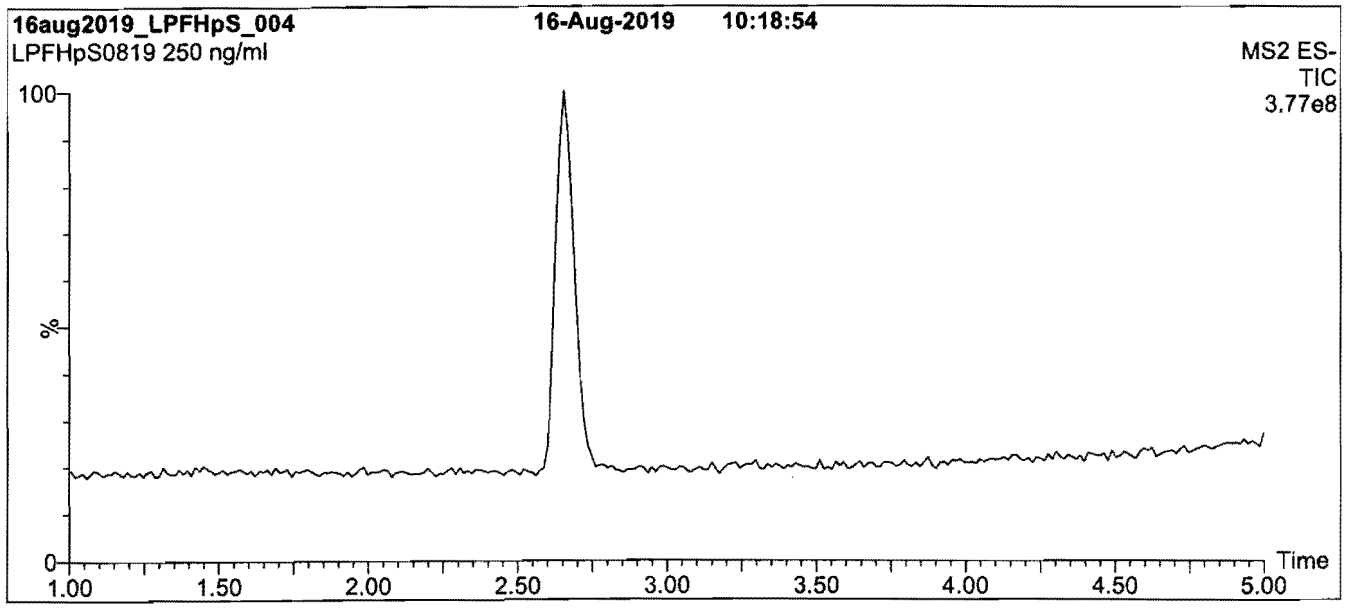
Mobile phase: Same as Figure 1

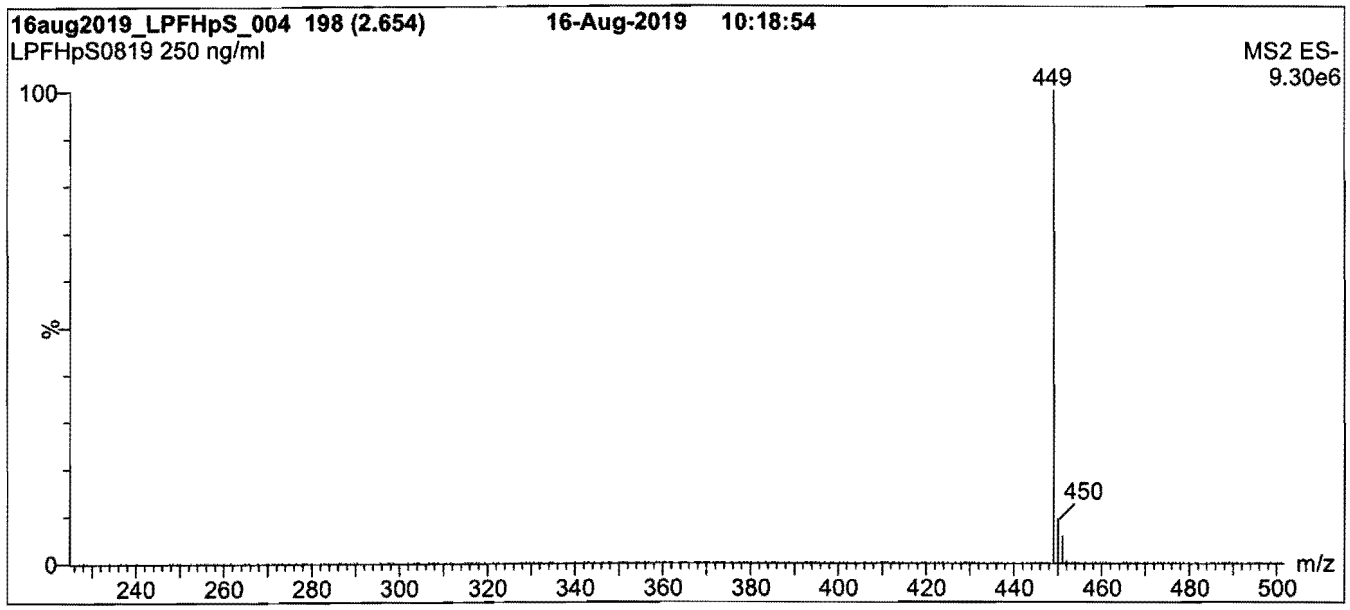
Flow: 300 µl/min

MS Parameters
Collision Gas (mbar) = 3.61e-3
Collision Energy (eV) = 42

19L0650

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

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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19L0650

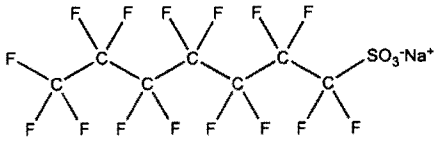
WELLINGTON LABORATORIES

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:

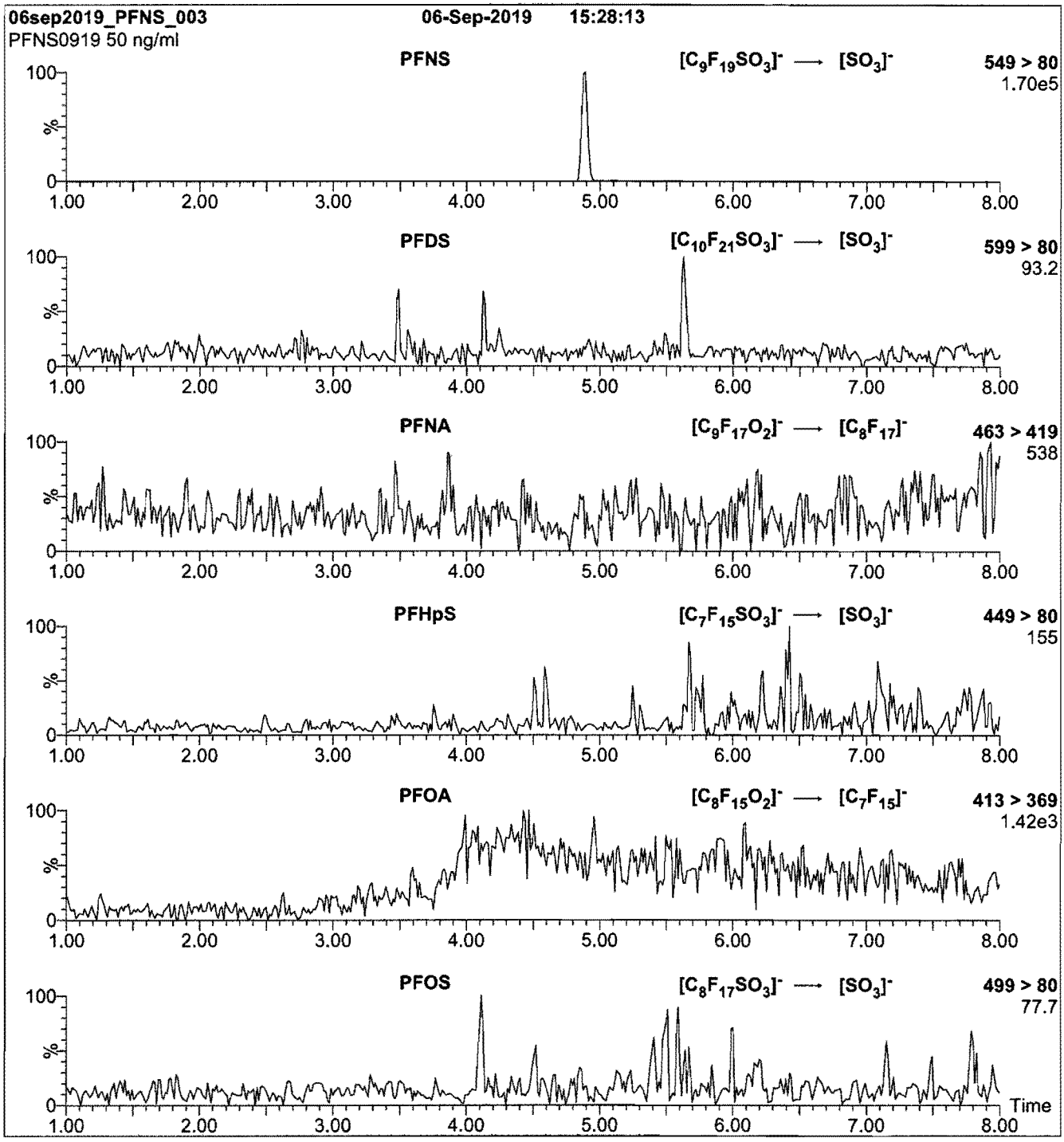
- See page 2 for further details.

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)

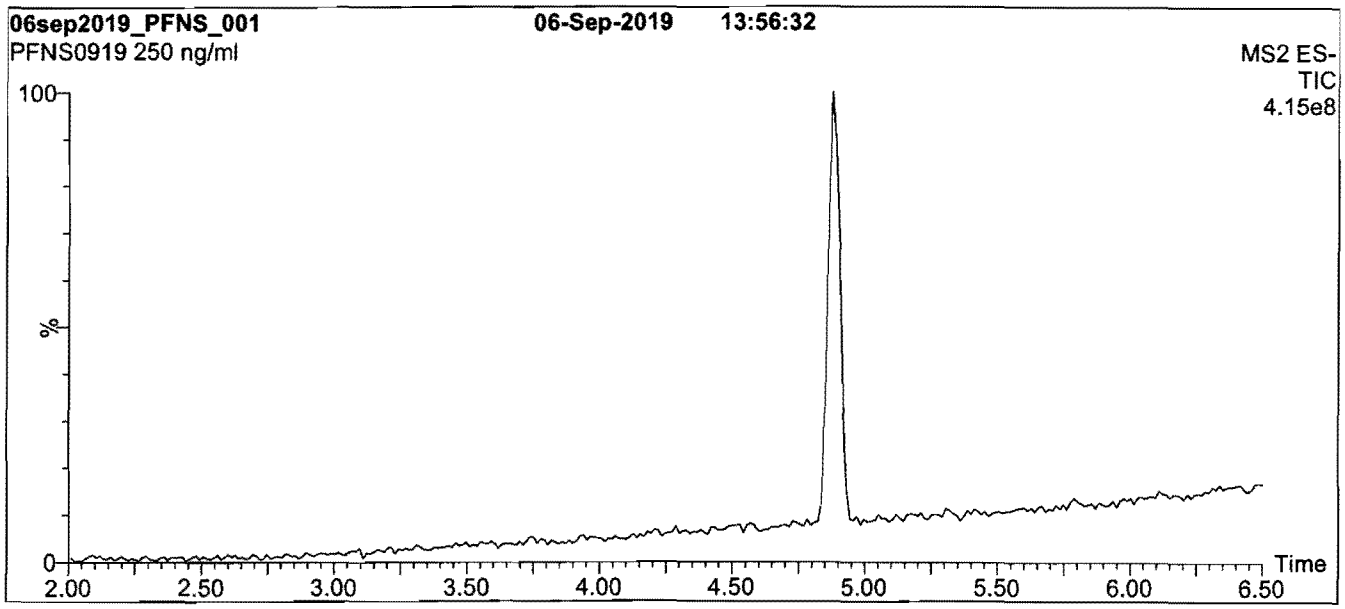
Mobile phase: Same as Figure 1

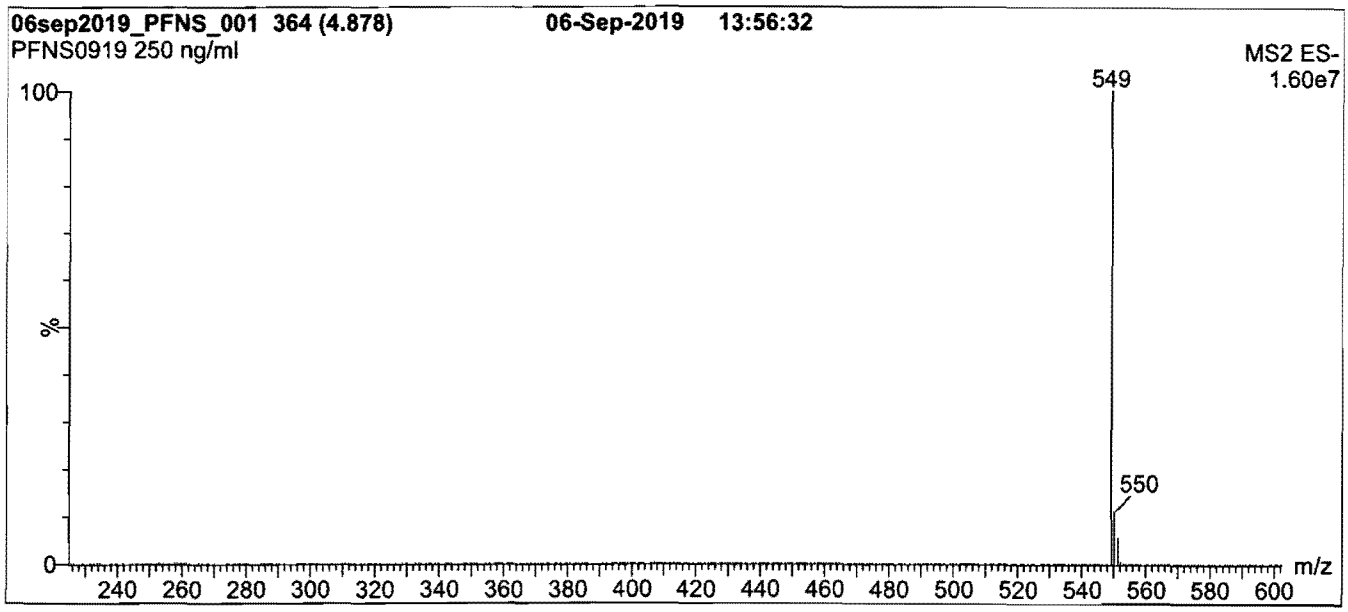
Flow: 300 µl/min

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

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

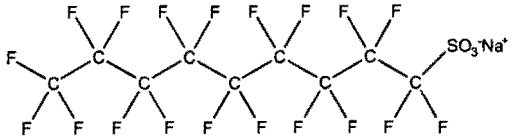
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 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.

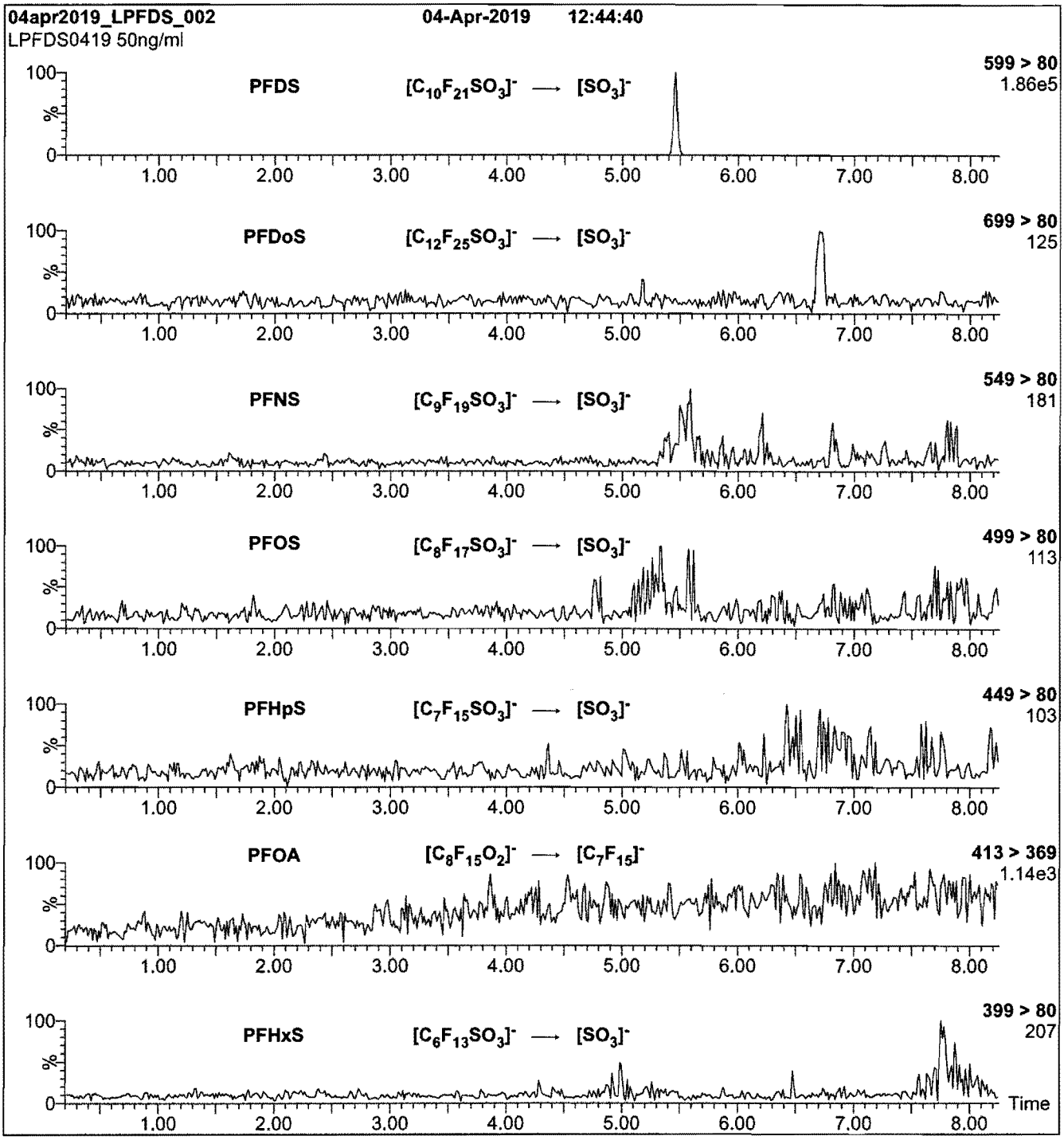
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

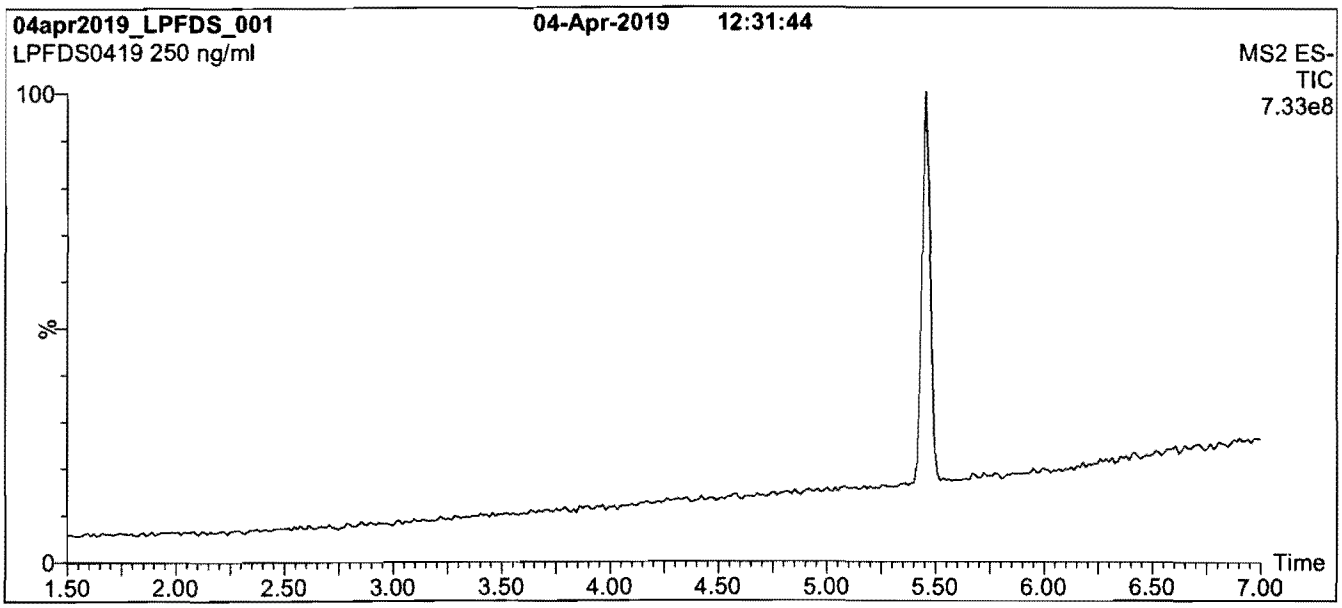
Flow: 300 µl/min

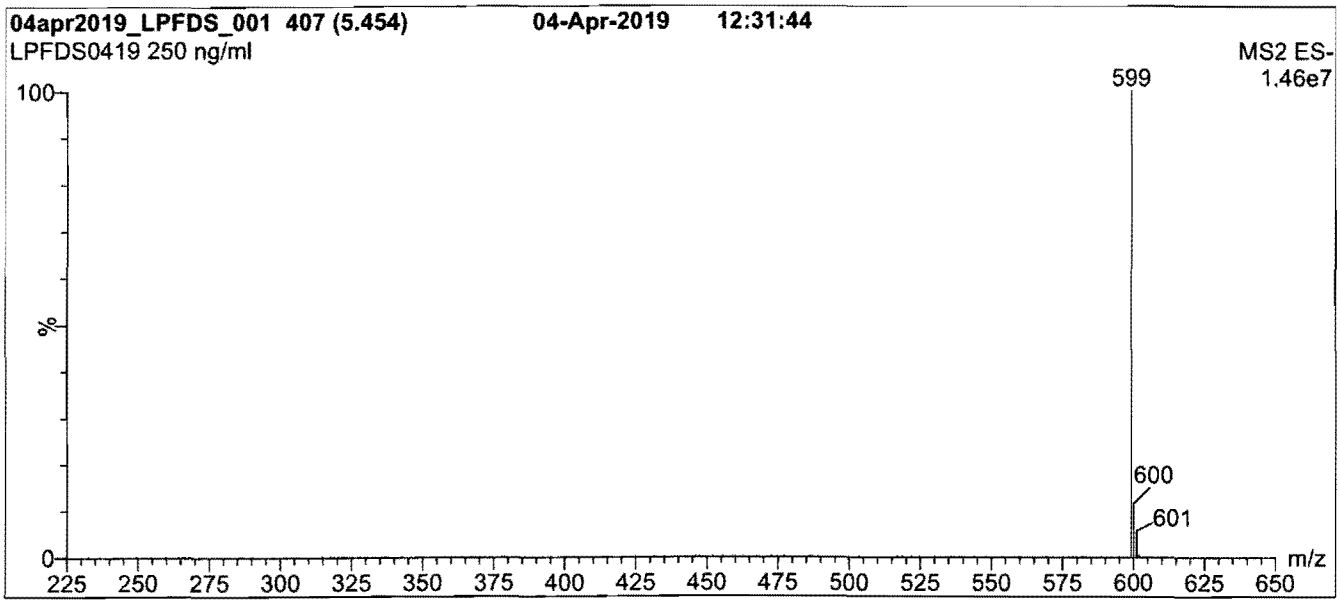
MS Parameters

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:

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. 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

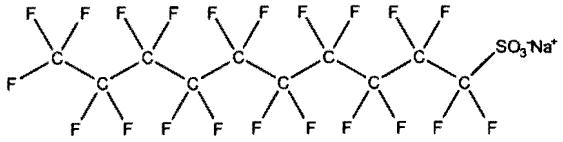
19L0652

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).

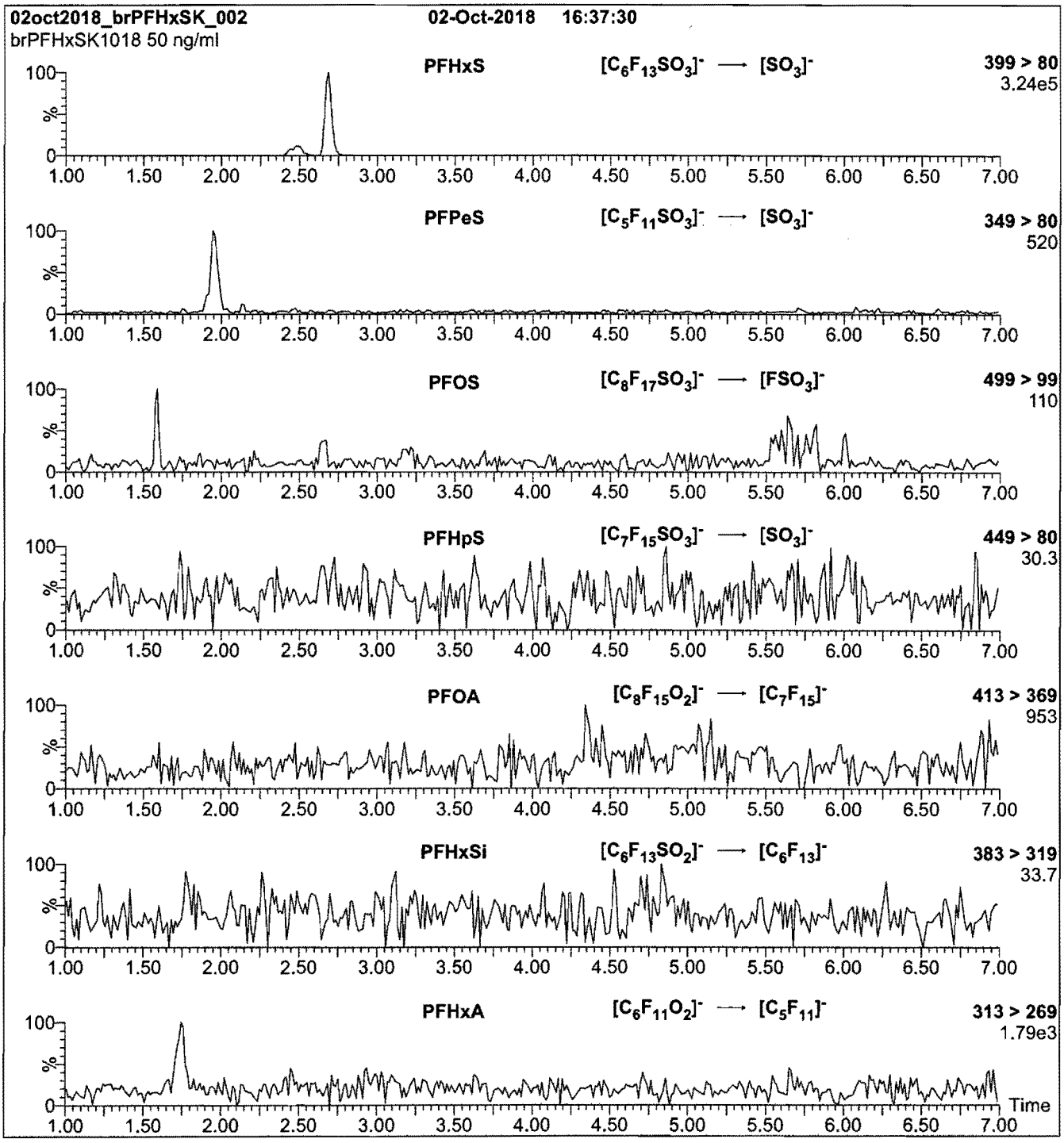
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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)

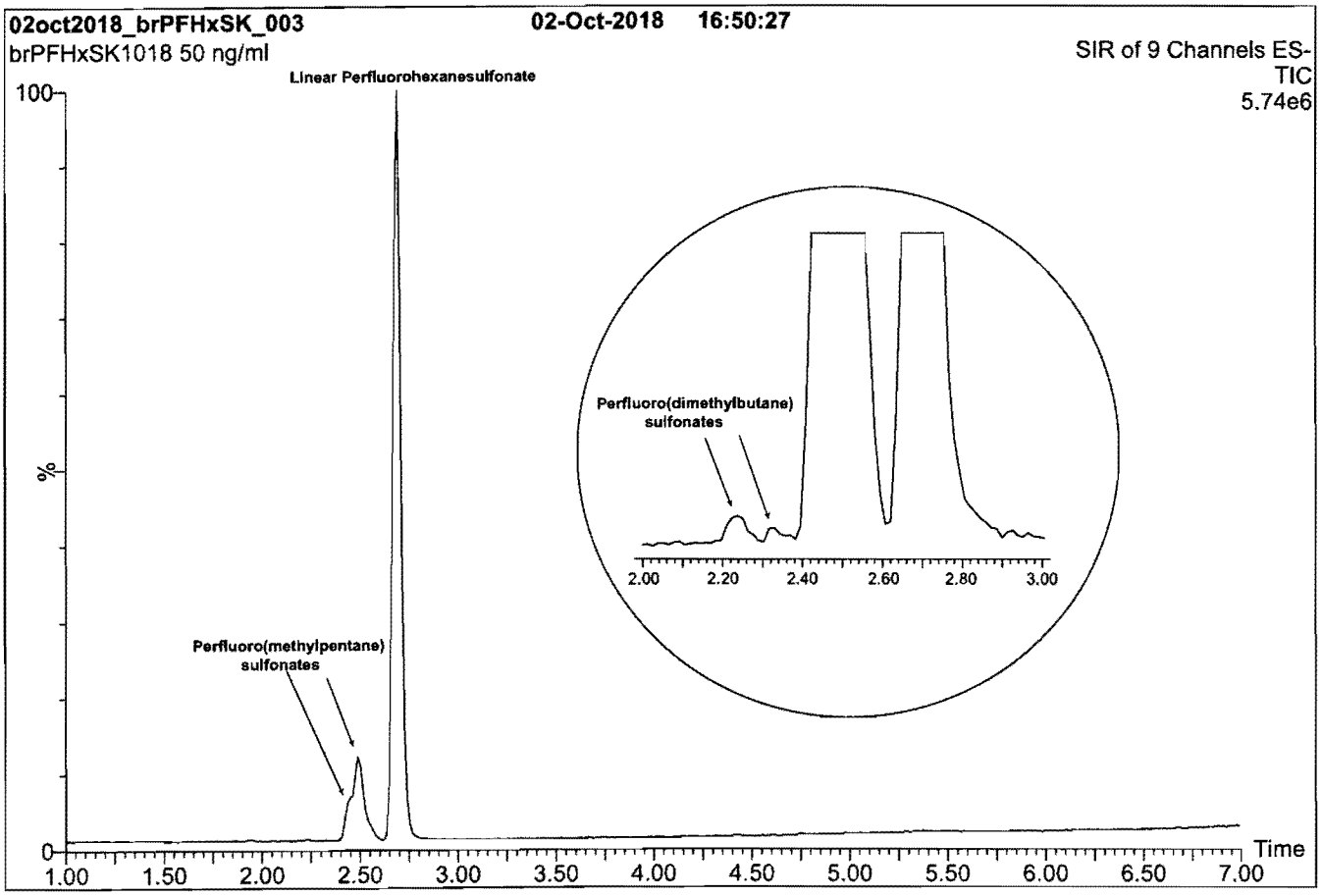
Mobile phase: Same as Figures 1 and 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.87e-3
Collision Energy (eV) = 42

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

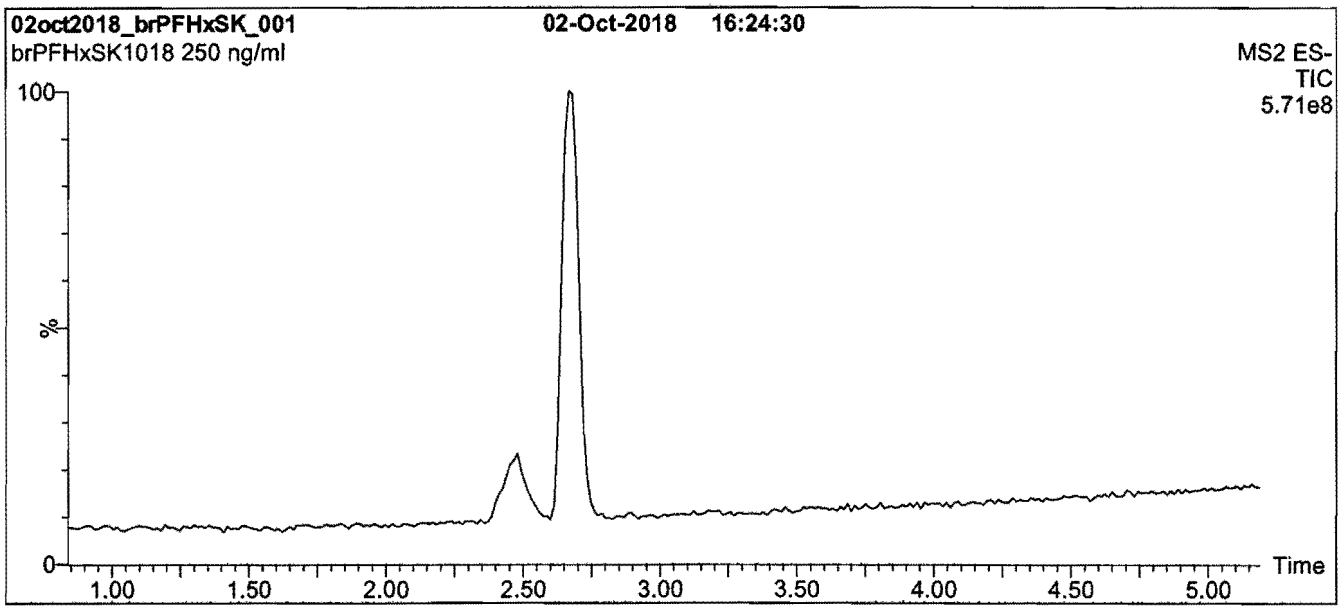
MS Parameters

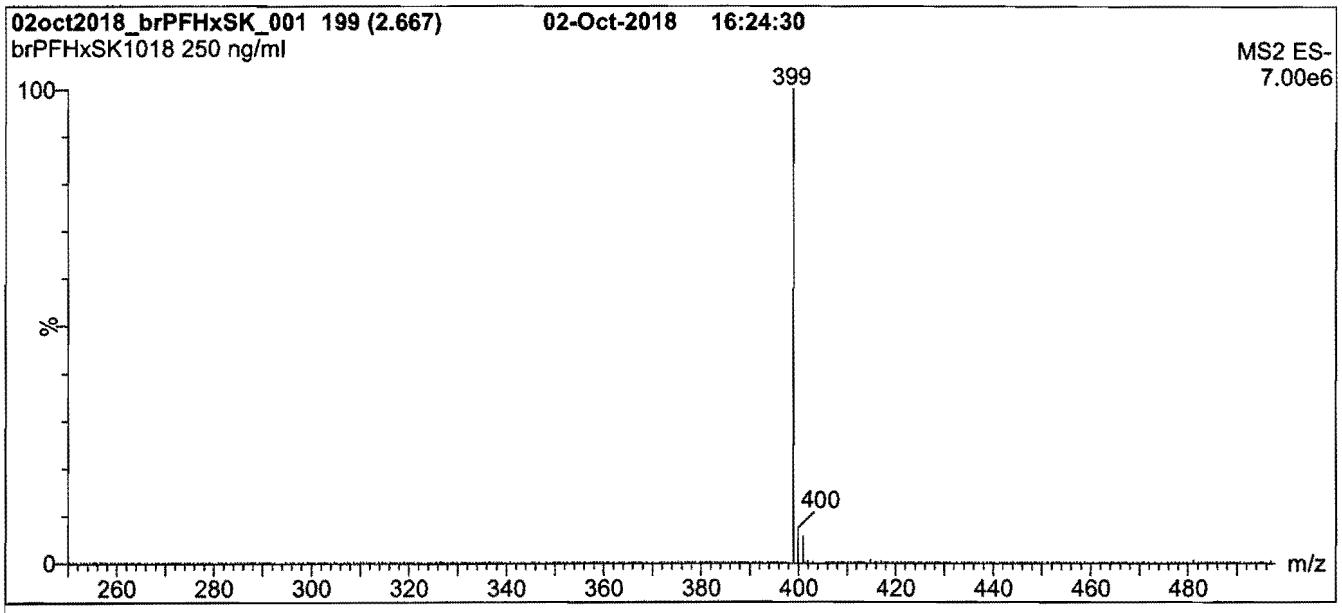
Experiment: SIR (9 channels)

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:

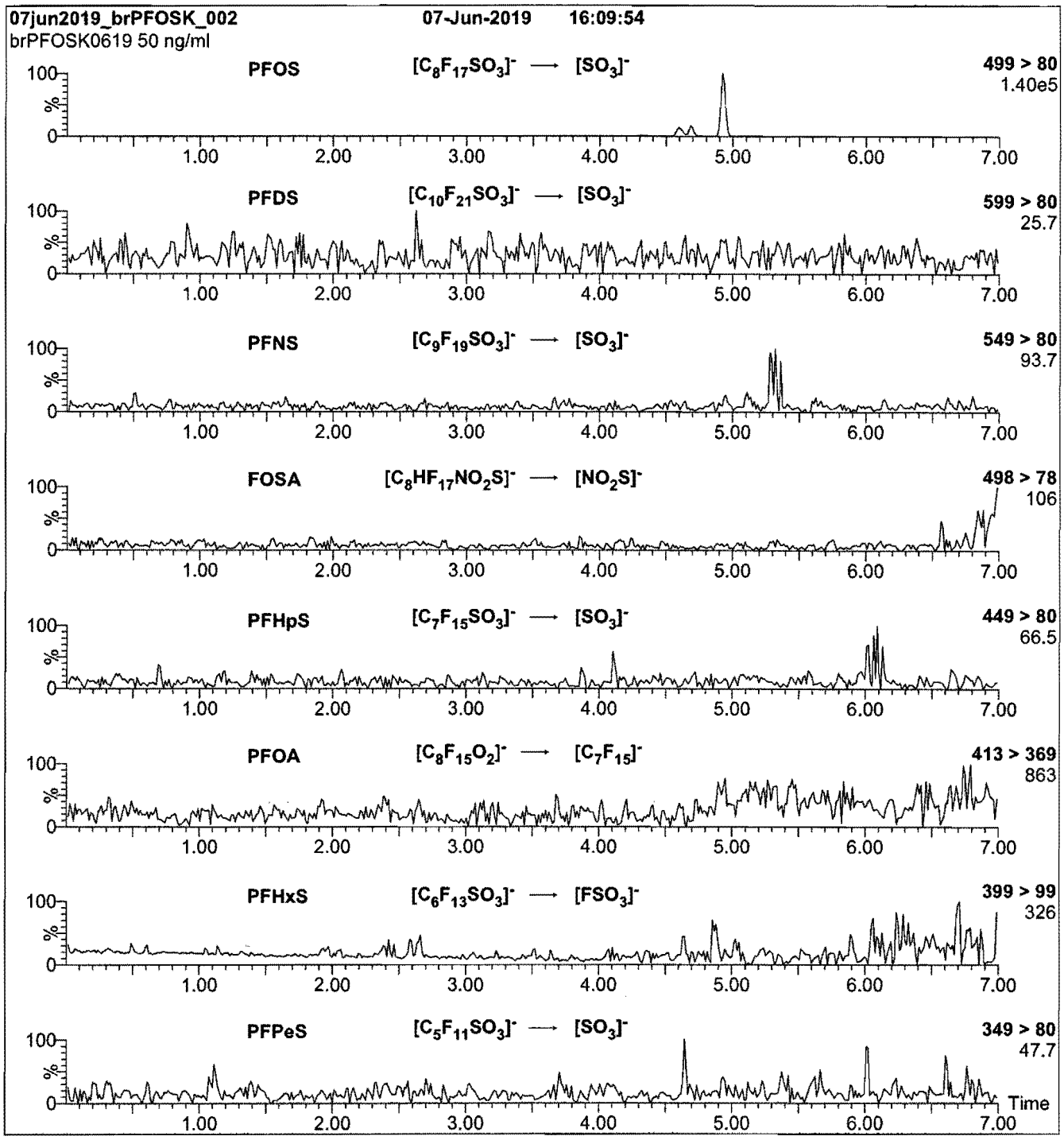
- See page 2 for further details.
- Contains ~ 0.3% of perfluoro-n-hexanoic acid and ~ 0.15% of perfluoro-1-pentanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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)

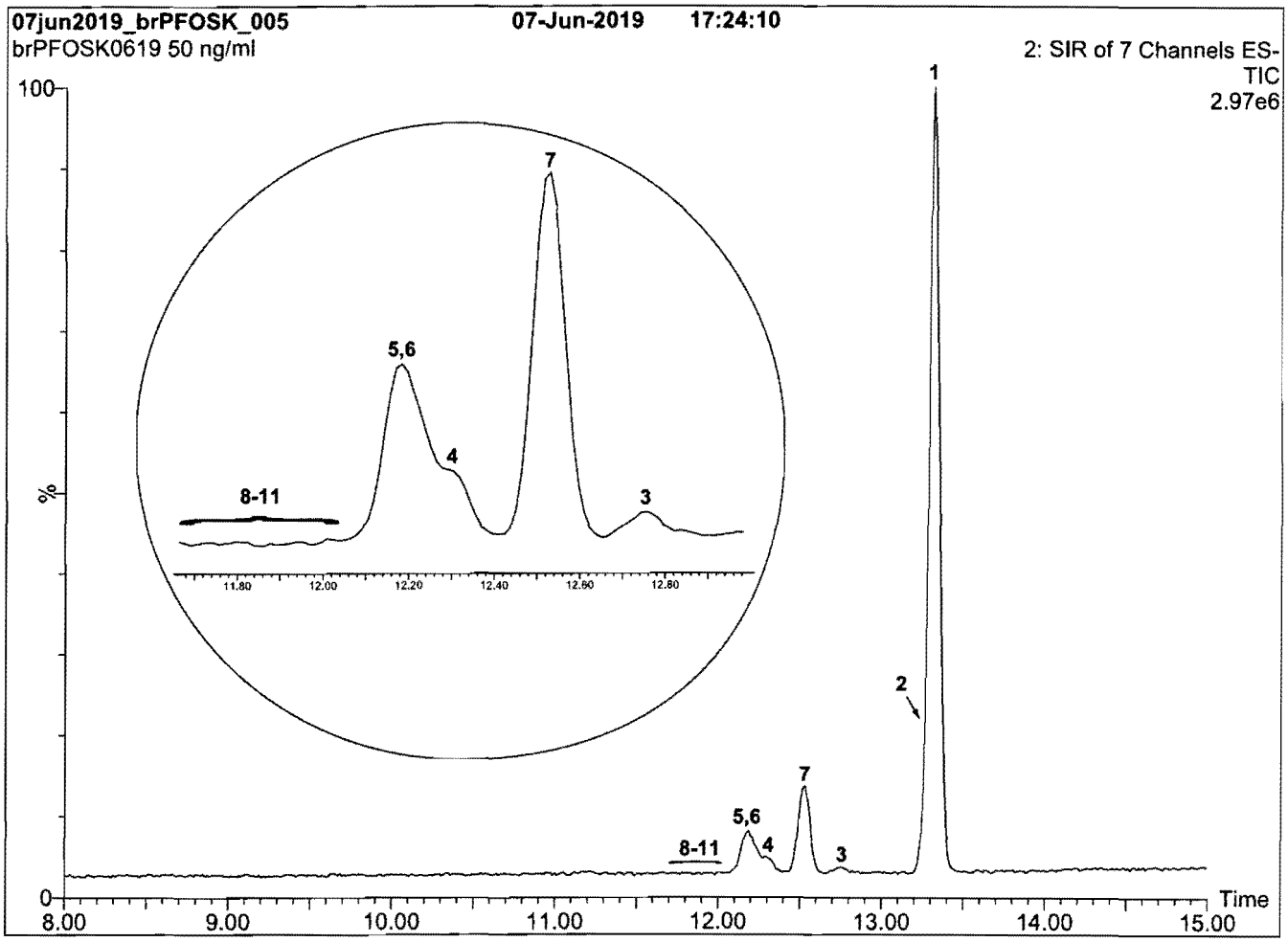
Mobile phase: Same as Figure 2

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

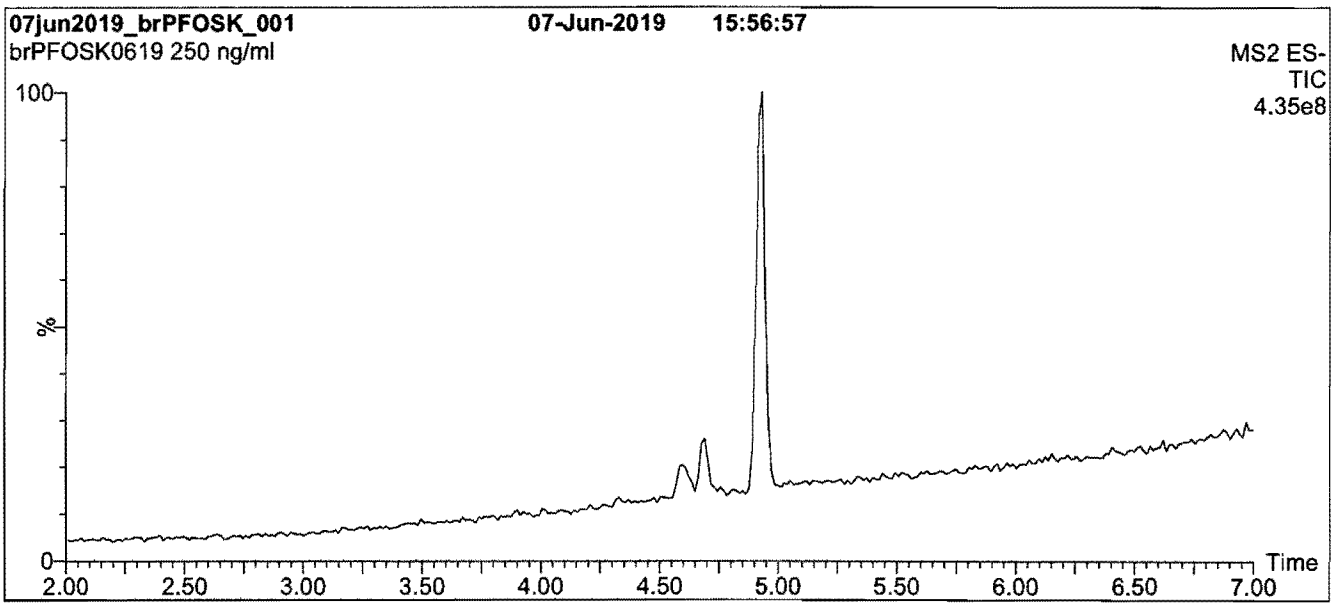
Flow: 300 µl/min

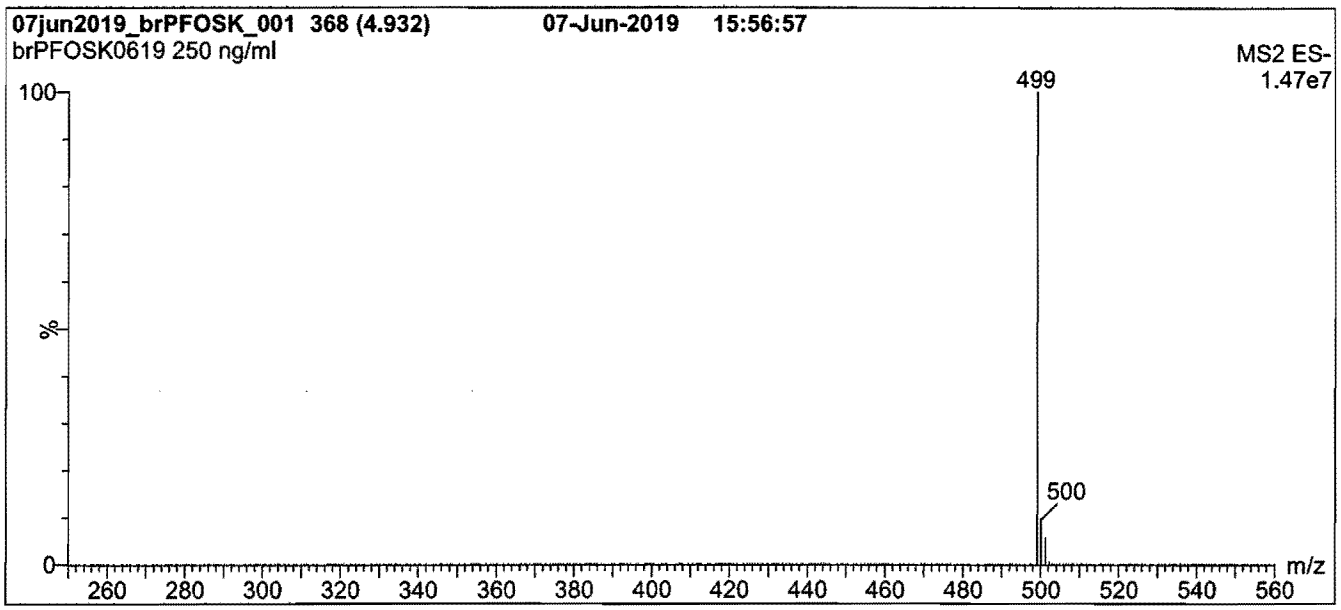
MS Conditions:

SIR (ES^-)
Source = 120 °C
Desolvation = 500 °C
Cone Voltage = 2.00V

1910654

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

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 $x_1, x_2, \ldots x_n$ 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

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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)

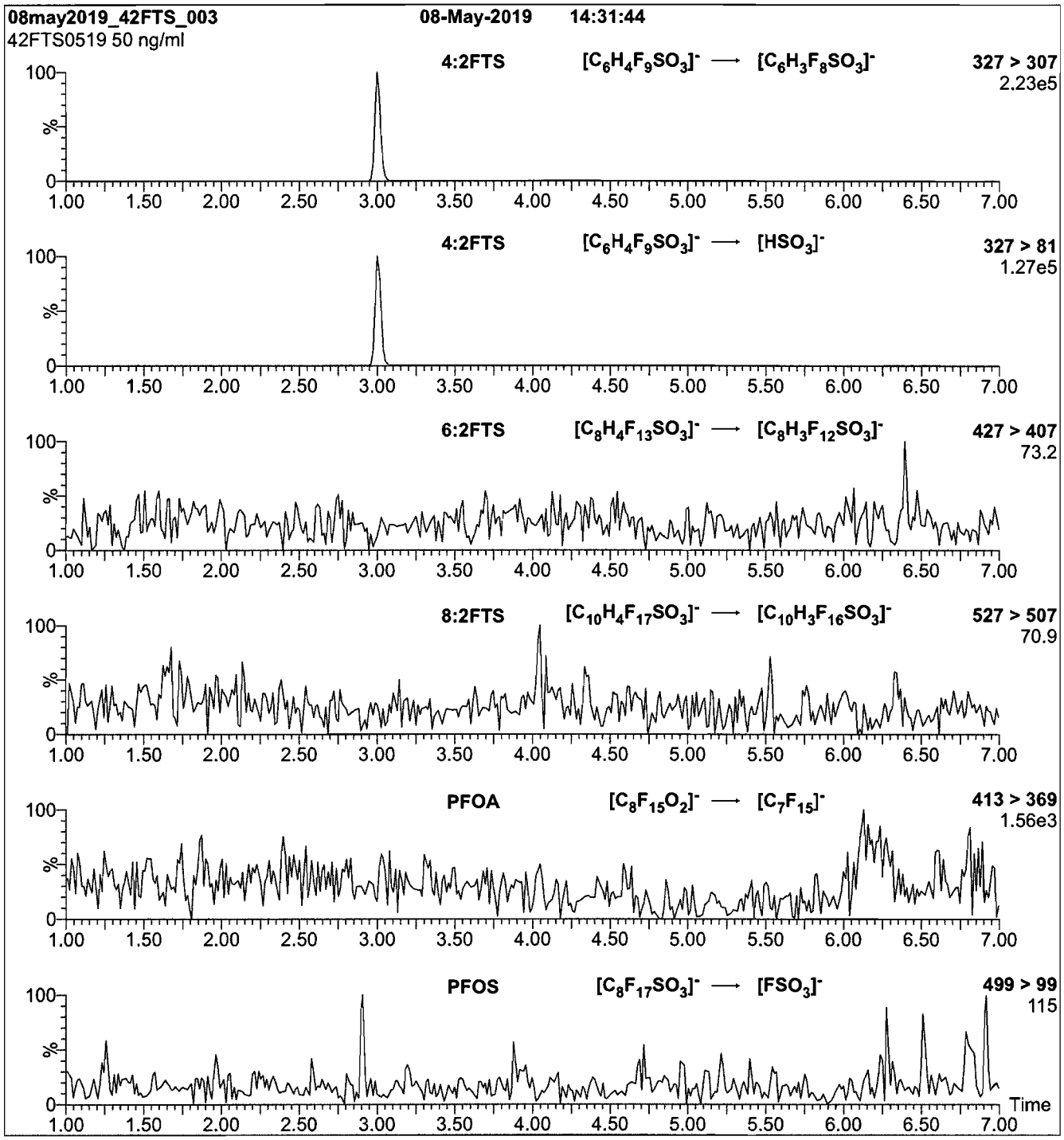
ADDITIONAL INFORMATION:

- 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).

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Figure 2: **4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (4:2FTS)

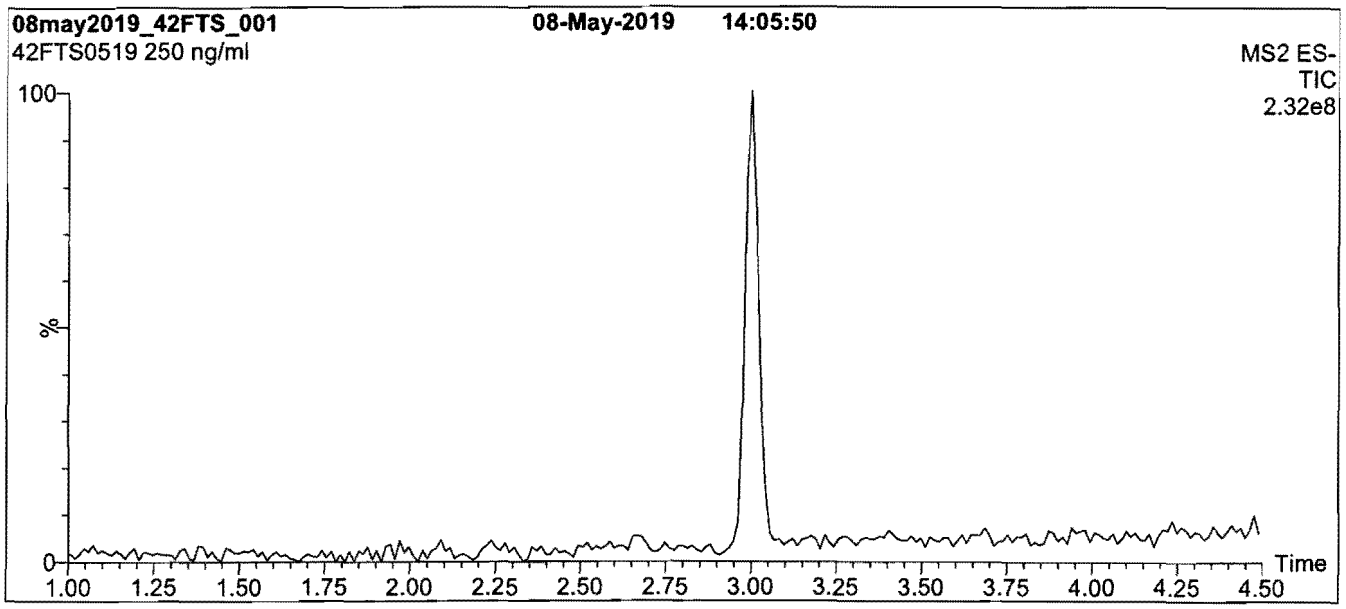
Mobile phase: Same as Figure 1

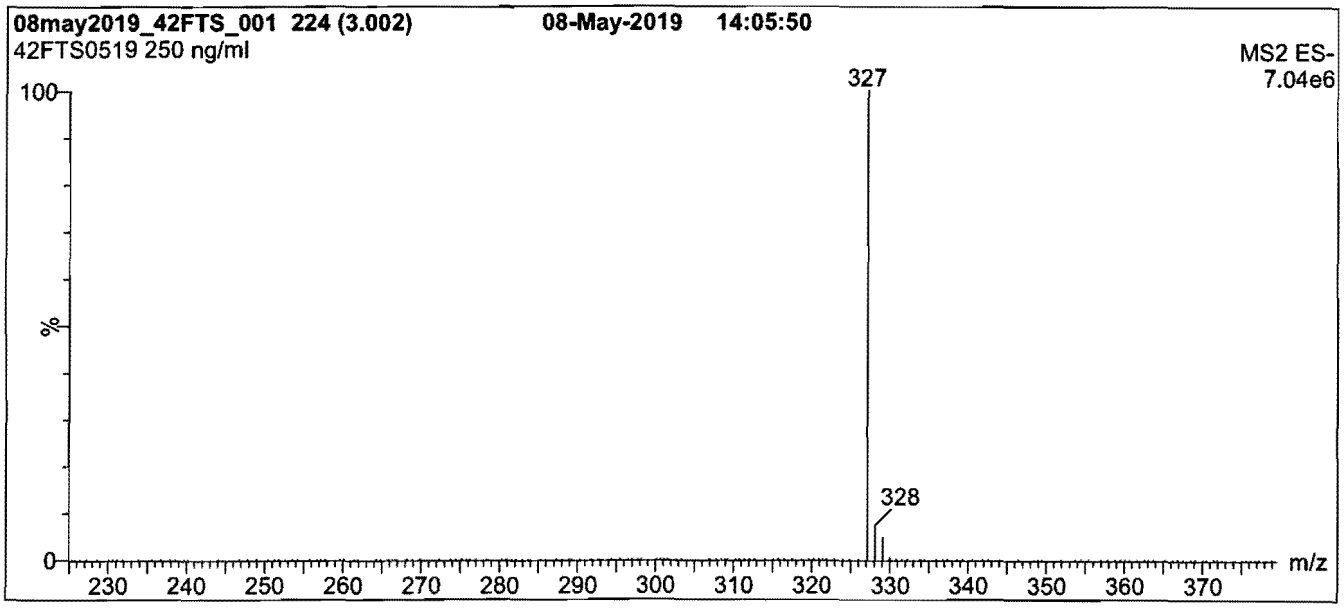
Flow: 300 µl/min

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:

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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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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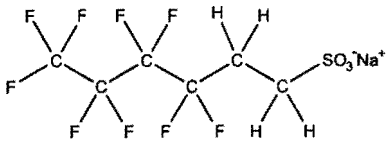
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WELLINGTON LABORATORIES

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:

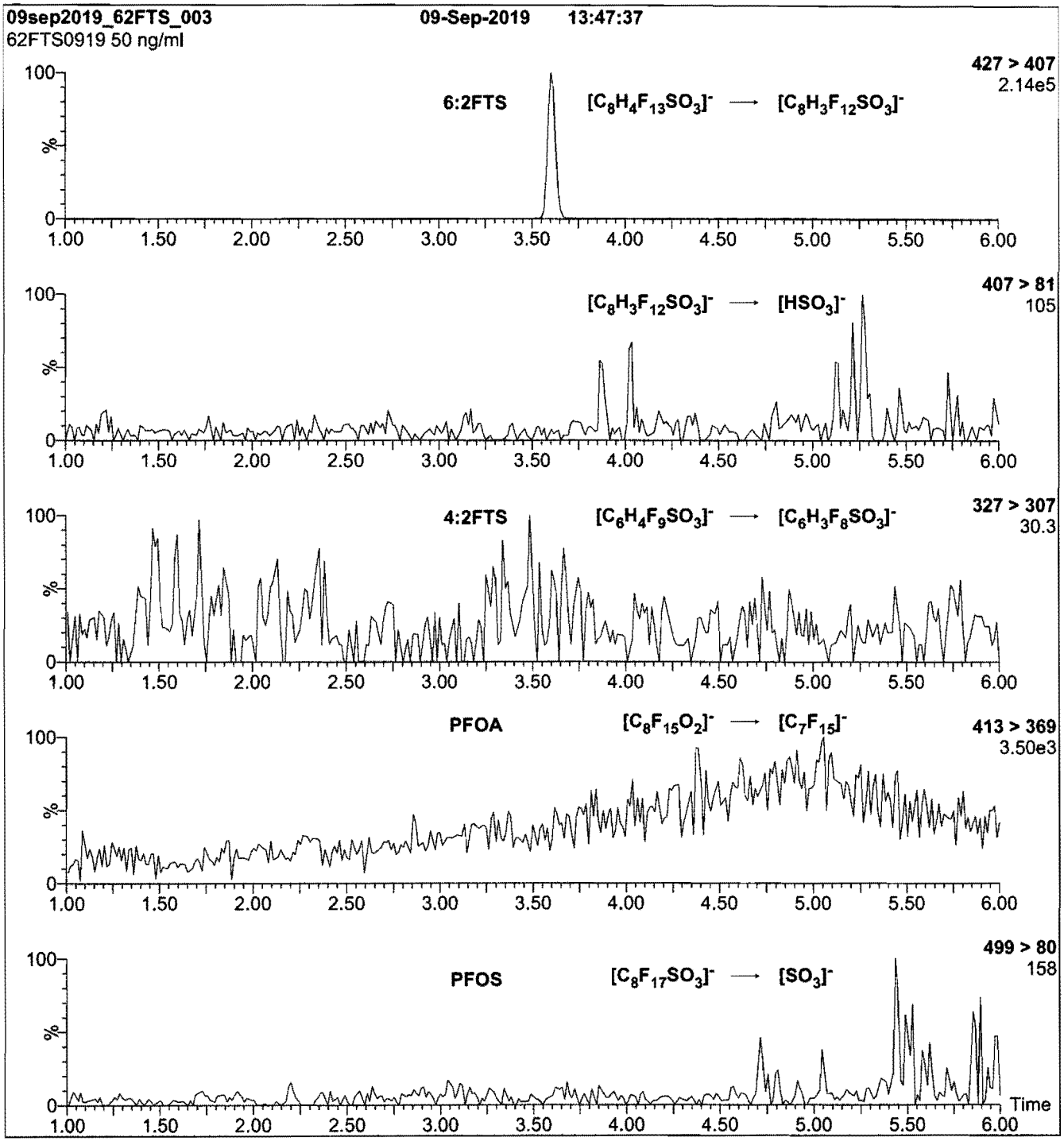
- See page 2 for further details.

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Certified By: _____ **Date:** 05/09/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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

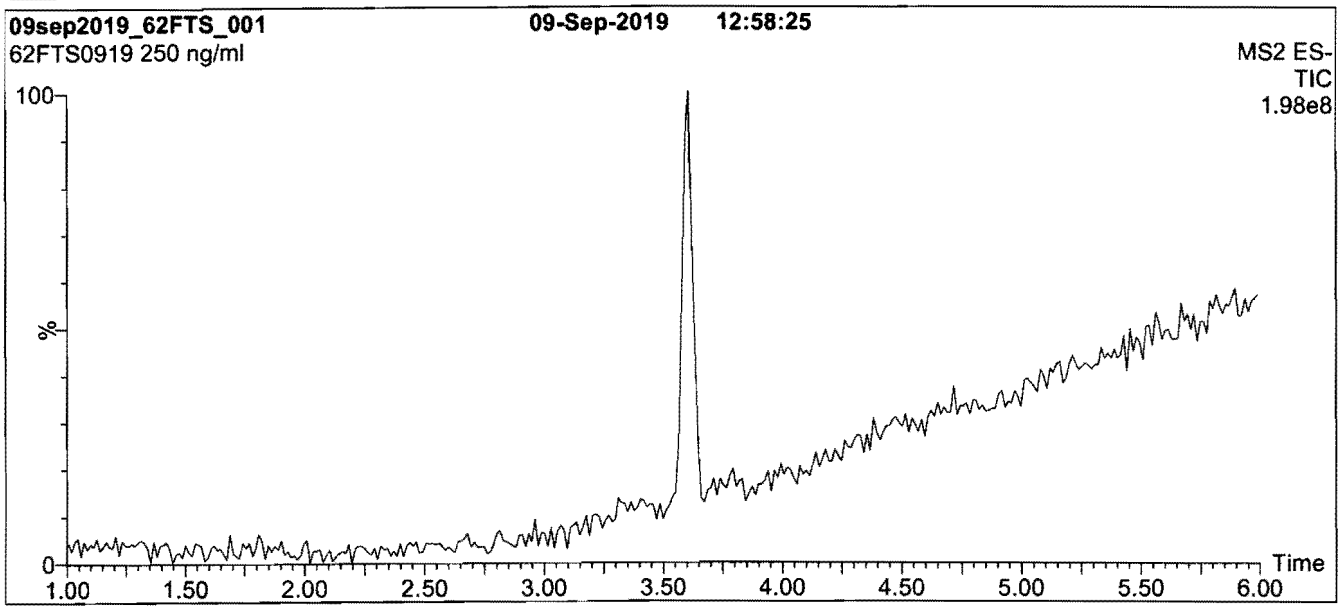
Flow: 300 µl/min

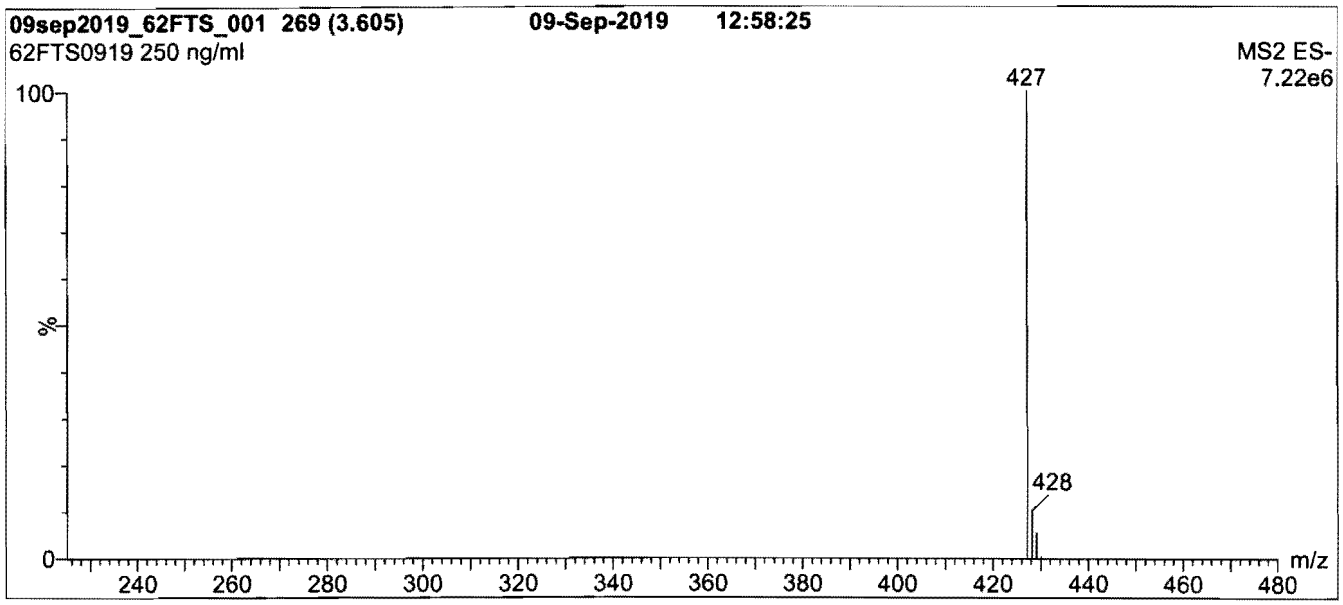
MS Parameters

Collision Gas (mbar) = 3.61e-3
Collision Energy (eV) = 20

19L0656

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:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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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. A 1226

ANAB ACCREDITED 0001 REFERENCE MATERIAL PRODUCER

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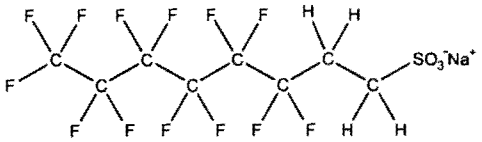
WELLINGTON LABORATORIES

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:

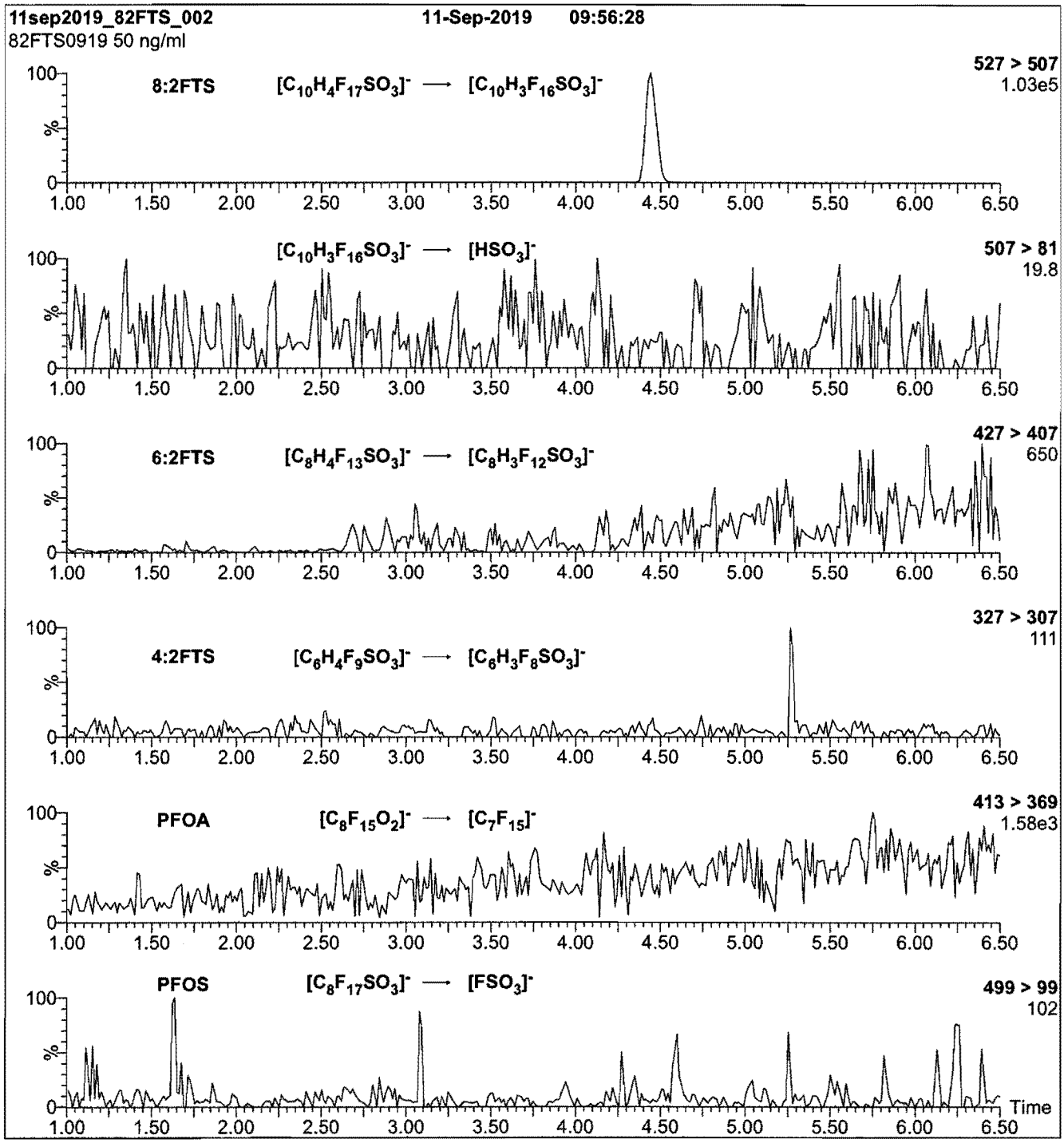
- See page 2 for further details.

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Certified By: _____ **Date:** 09/09/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

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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

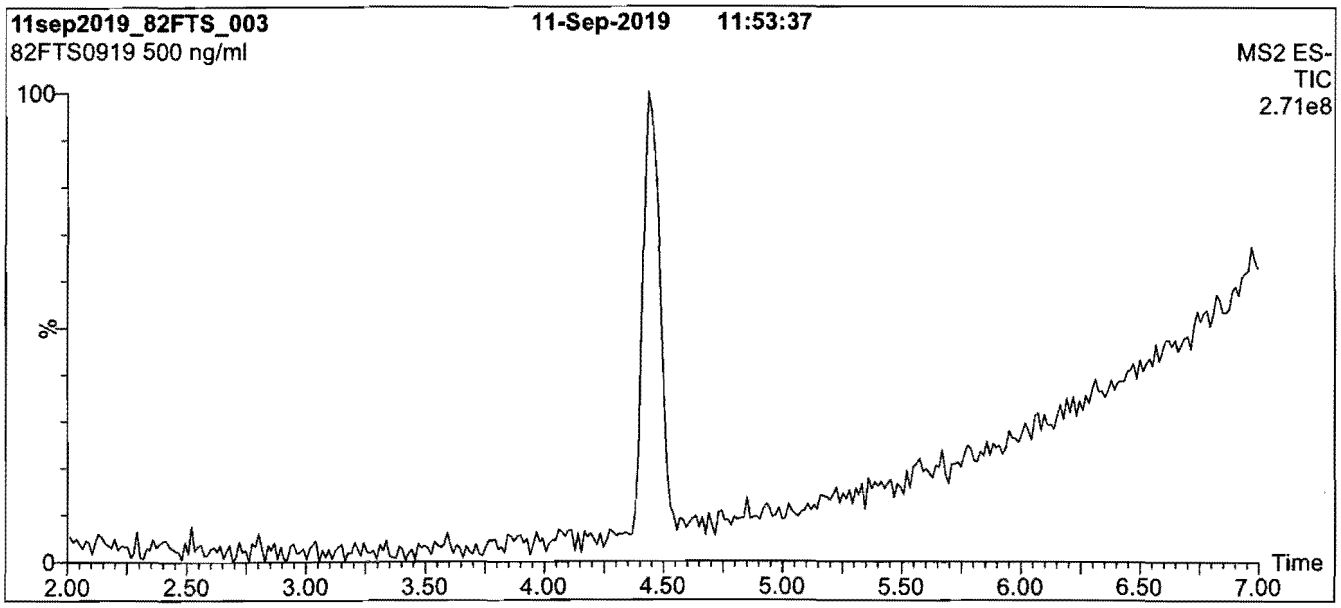
Flow: 300 µl/min

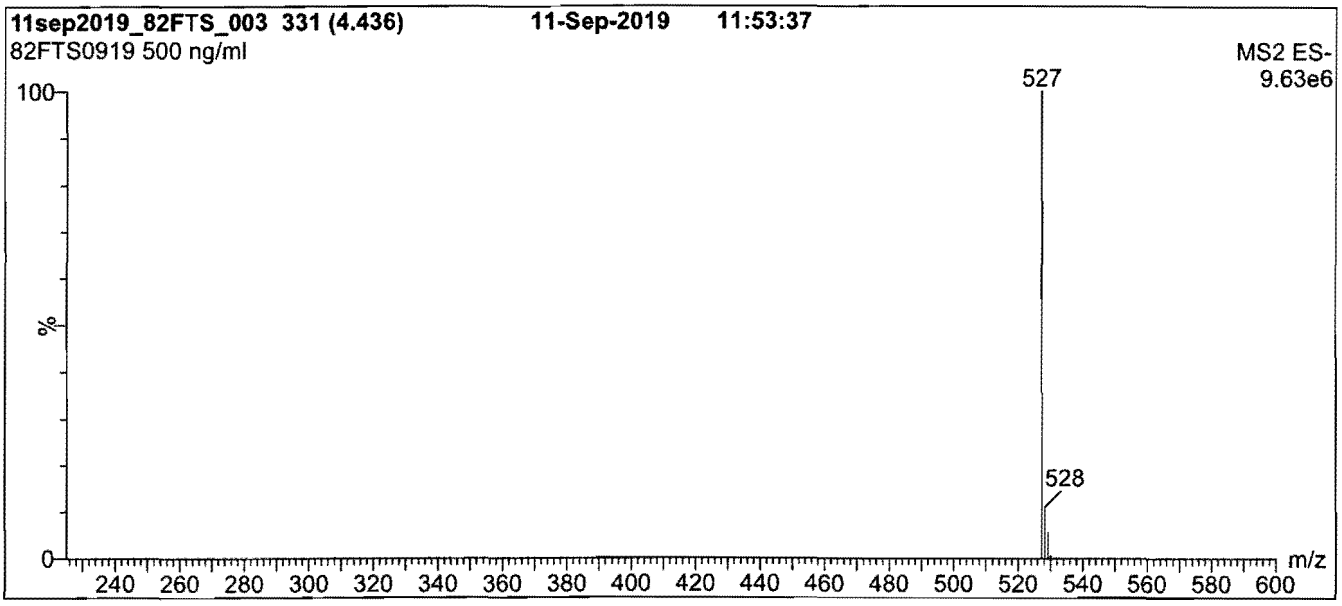
MS Parameters

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
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19L0657

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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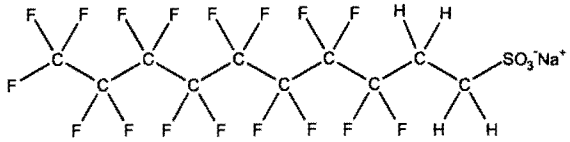
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 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.

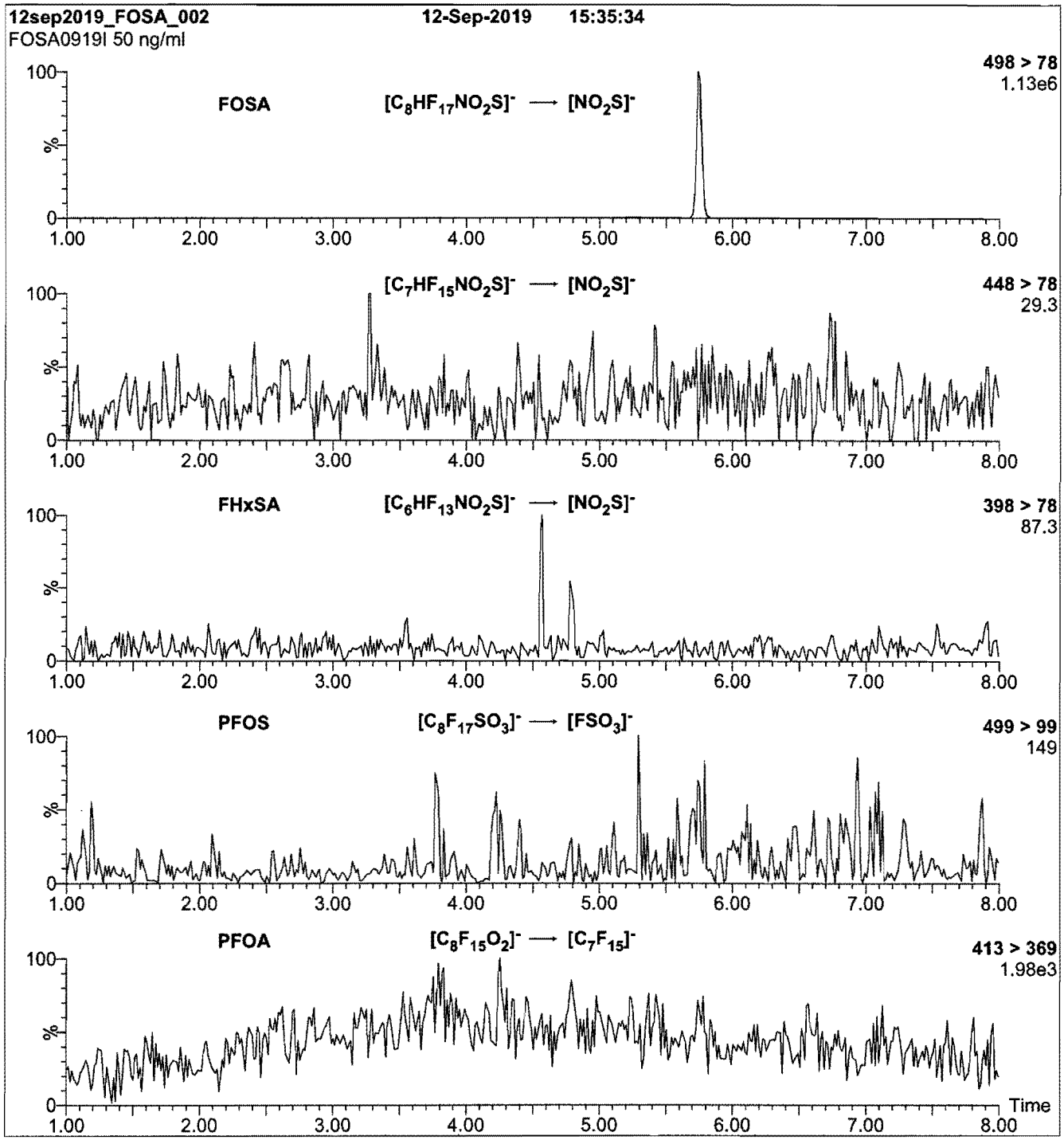
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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

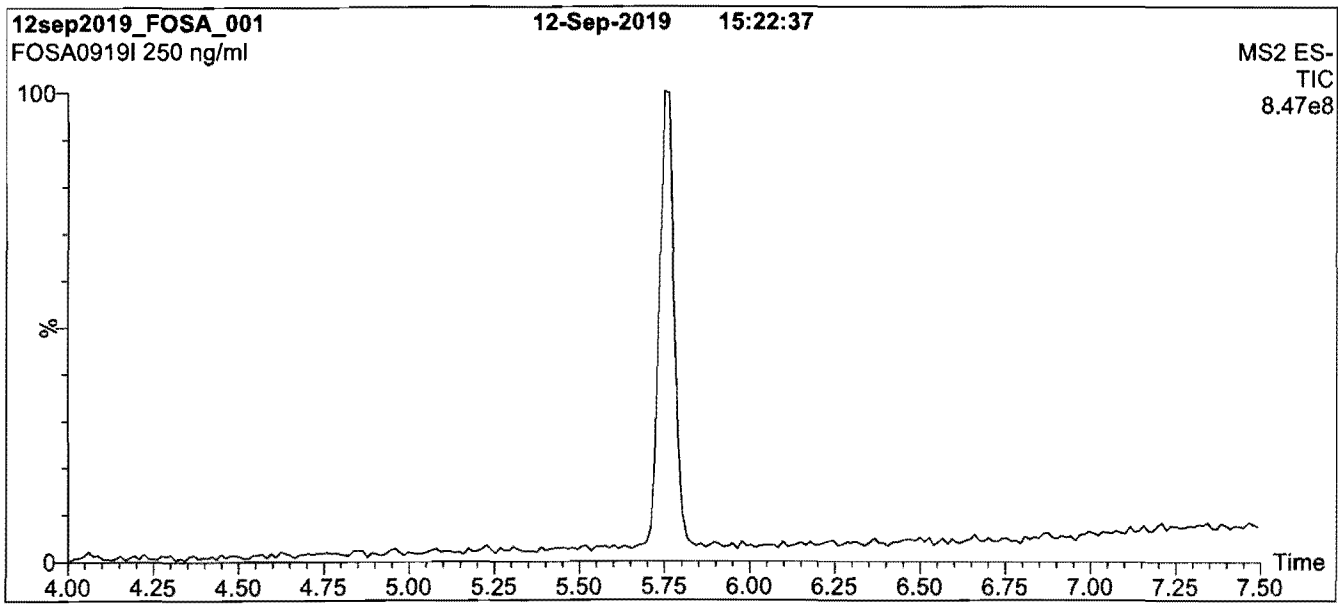
Flow: 300 µl/min

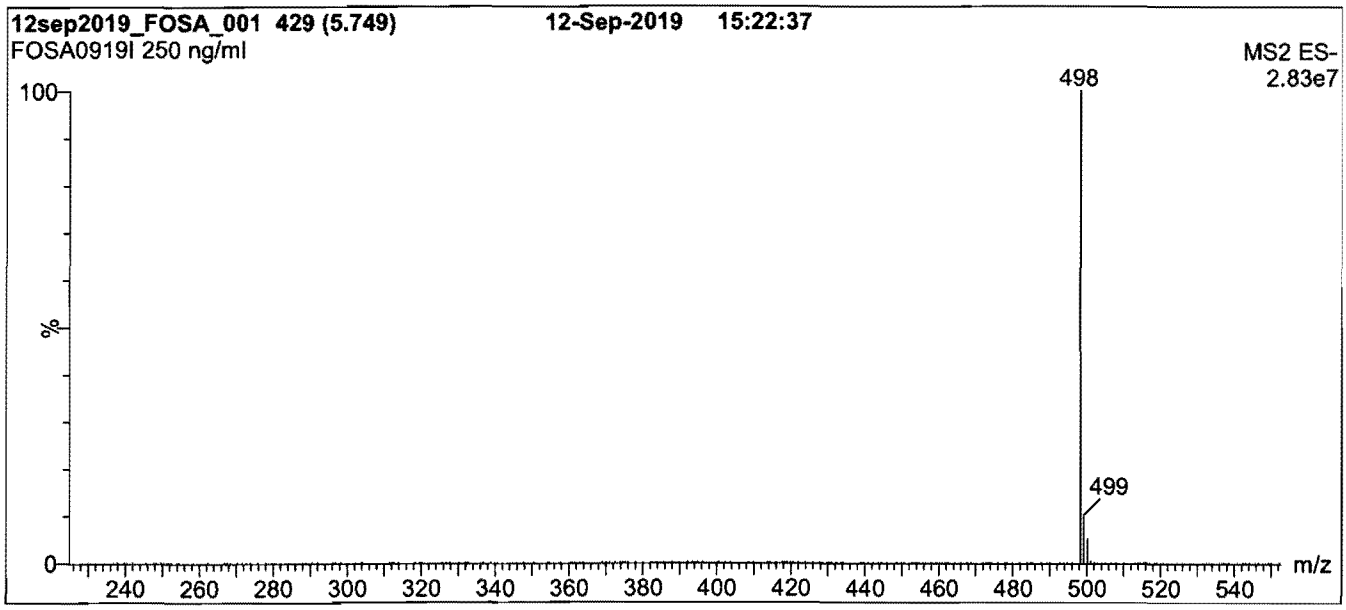
MS Parameters

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

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

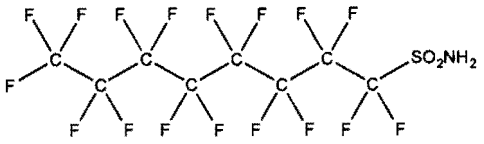
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

19L0658

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FOSA-I	**LOT NUMBER:**	FOSA0919I
COMPOUND:	Perfluoro-1-octanesulfonamide		
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:

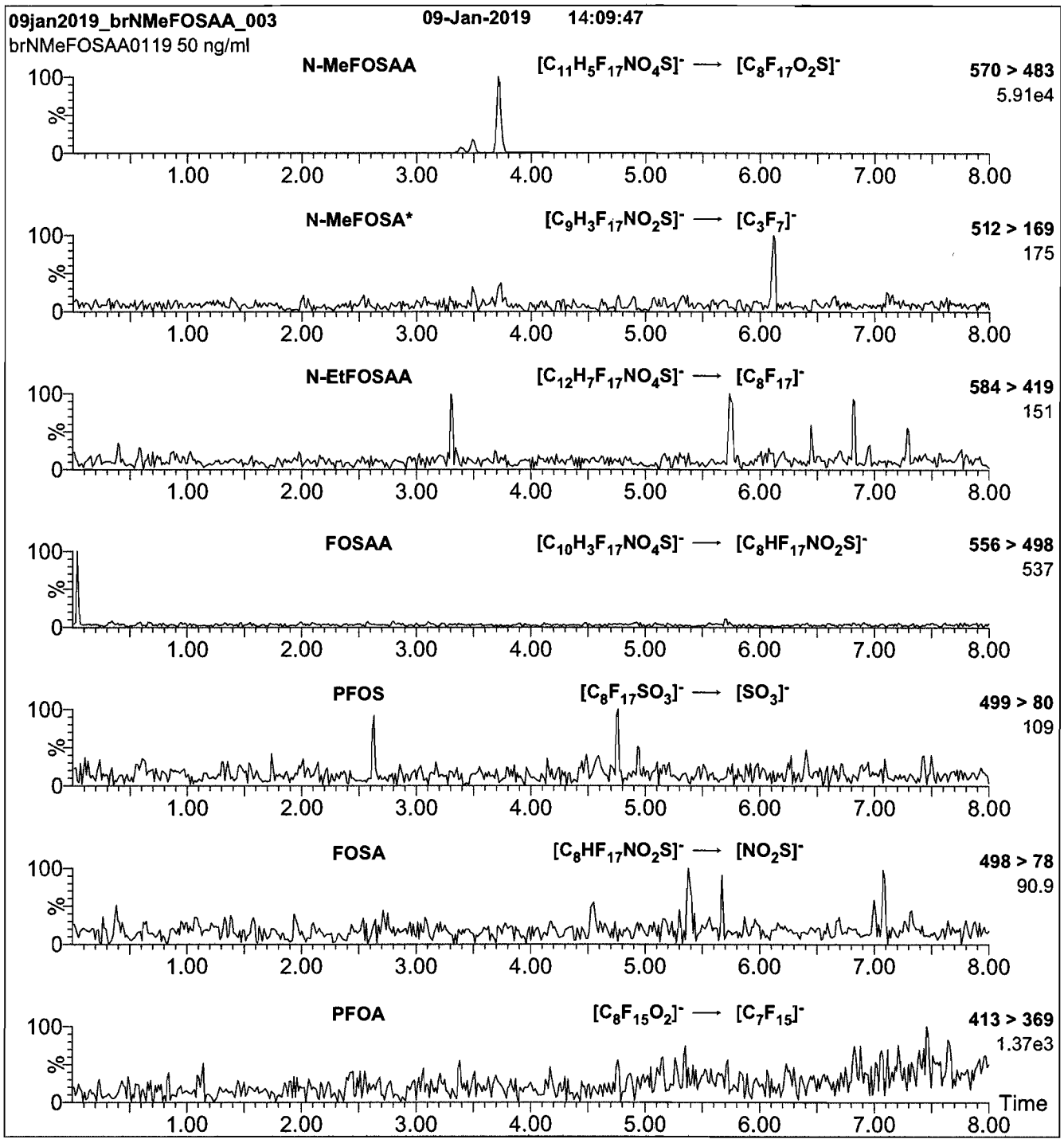
- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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)

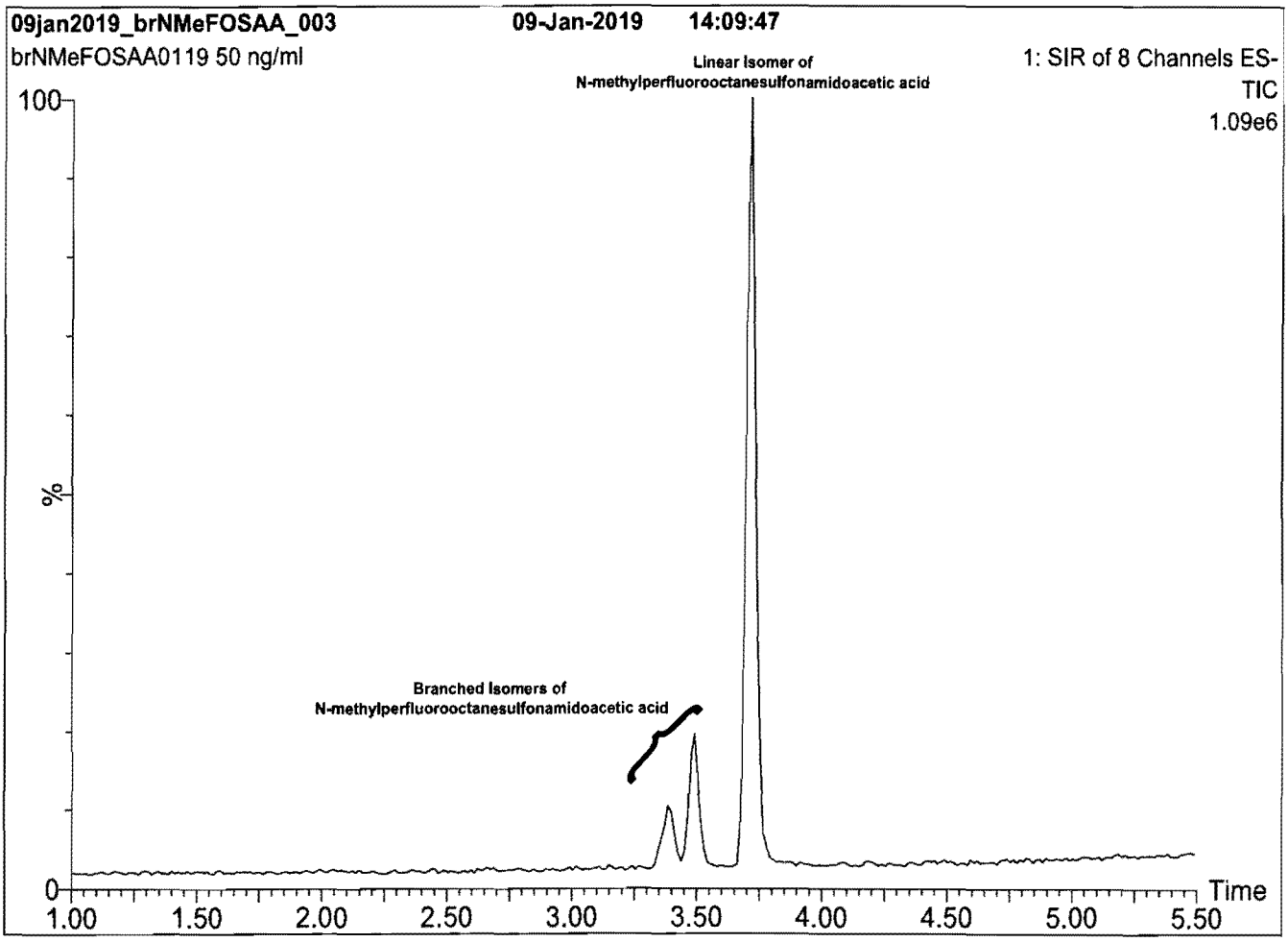
Mobile phase: Same as Figure 1

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

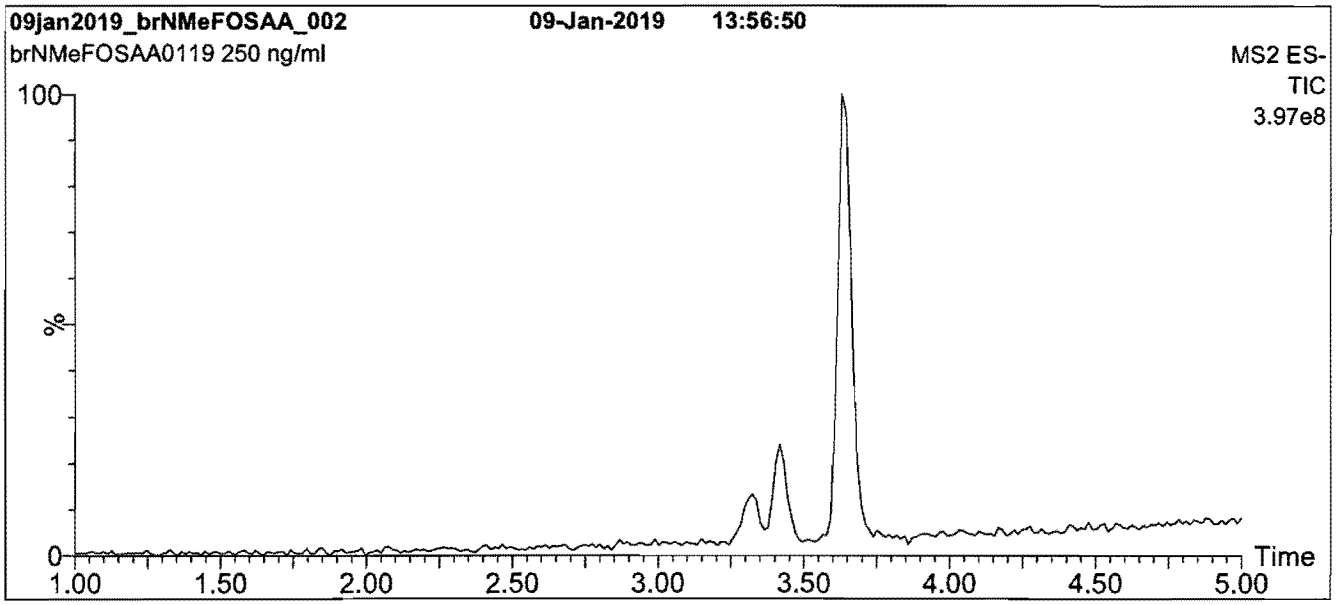
Flow: 300 µl/min

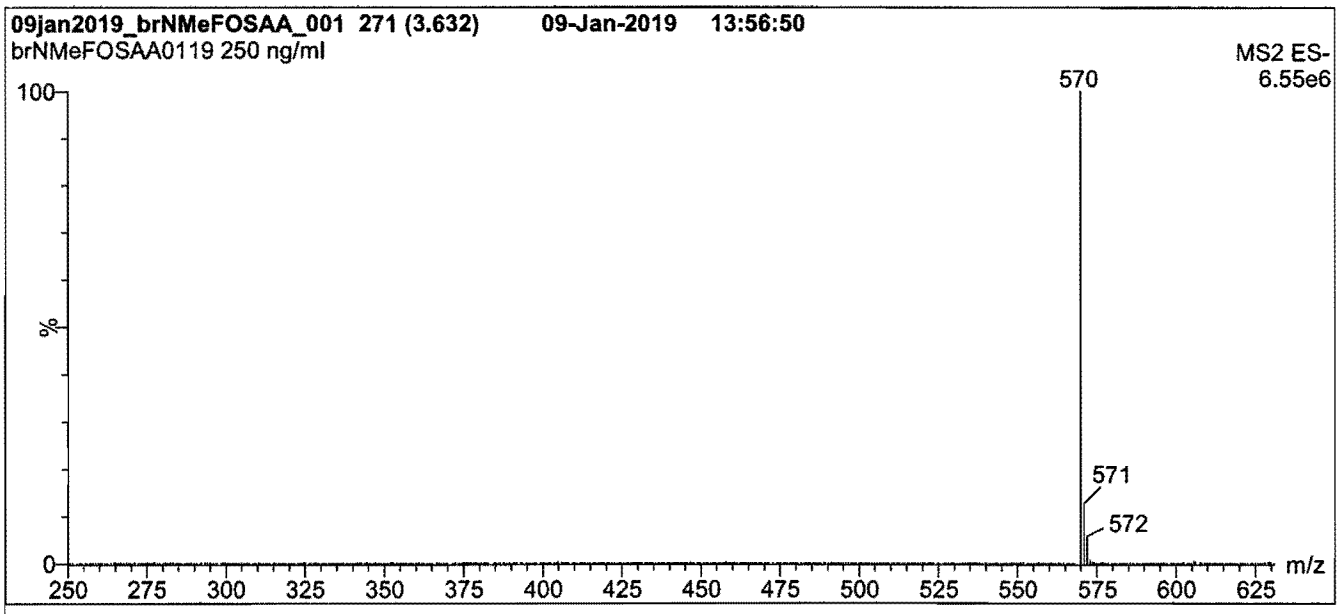
MS Parameters

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)

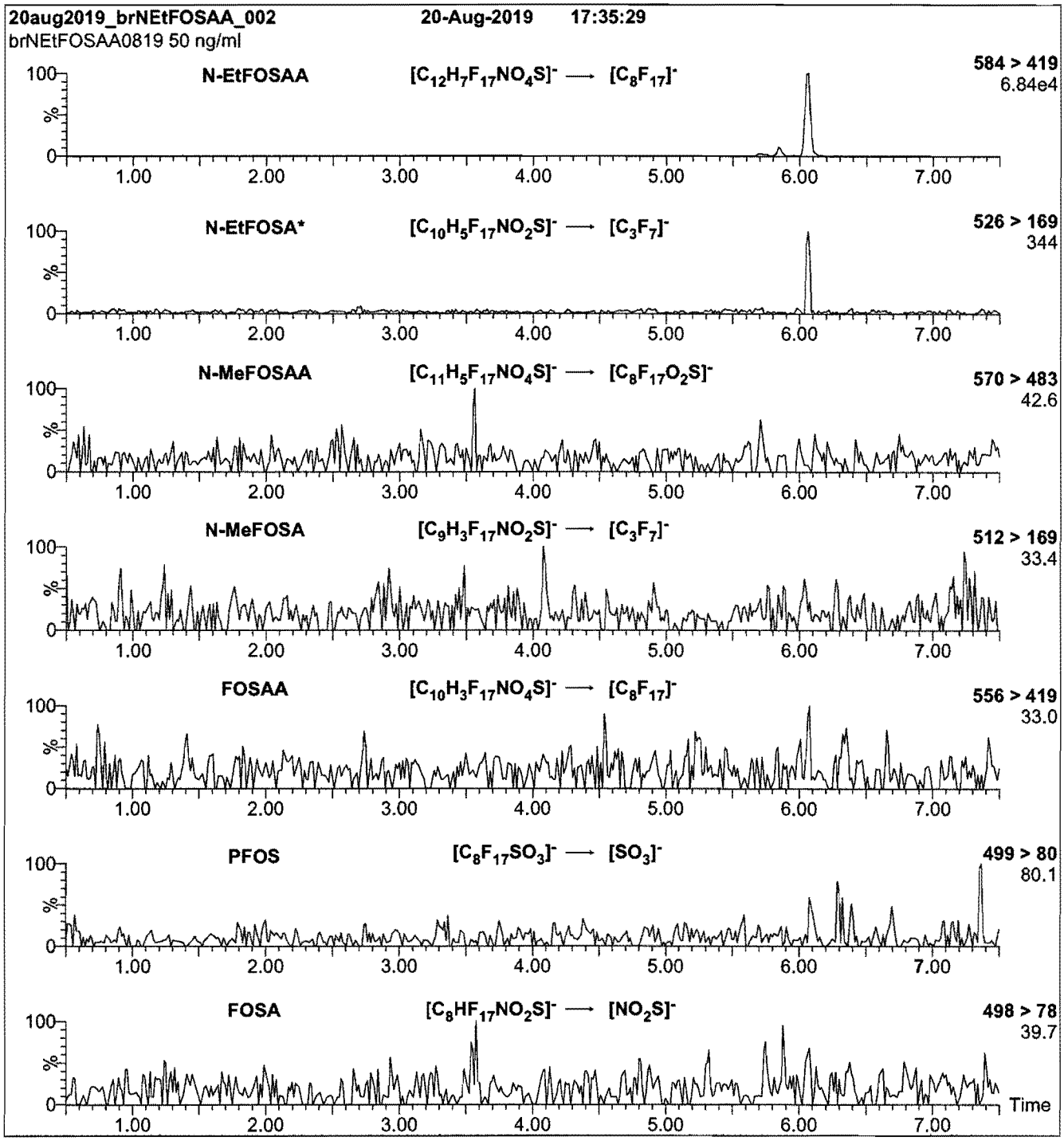
ADDITIONAL INFORMATION:

- 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)

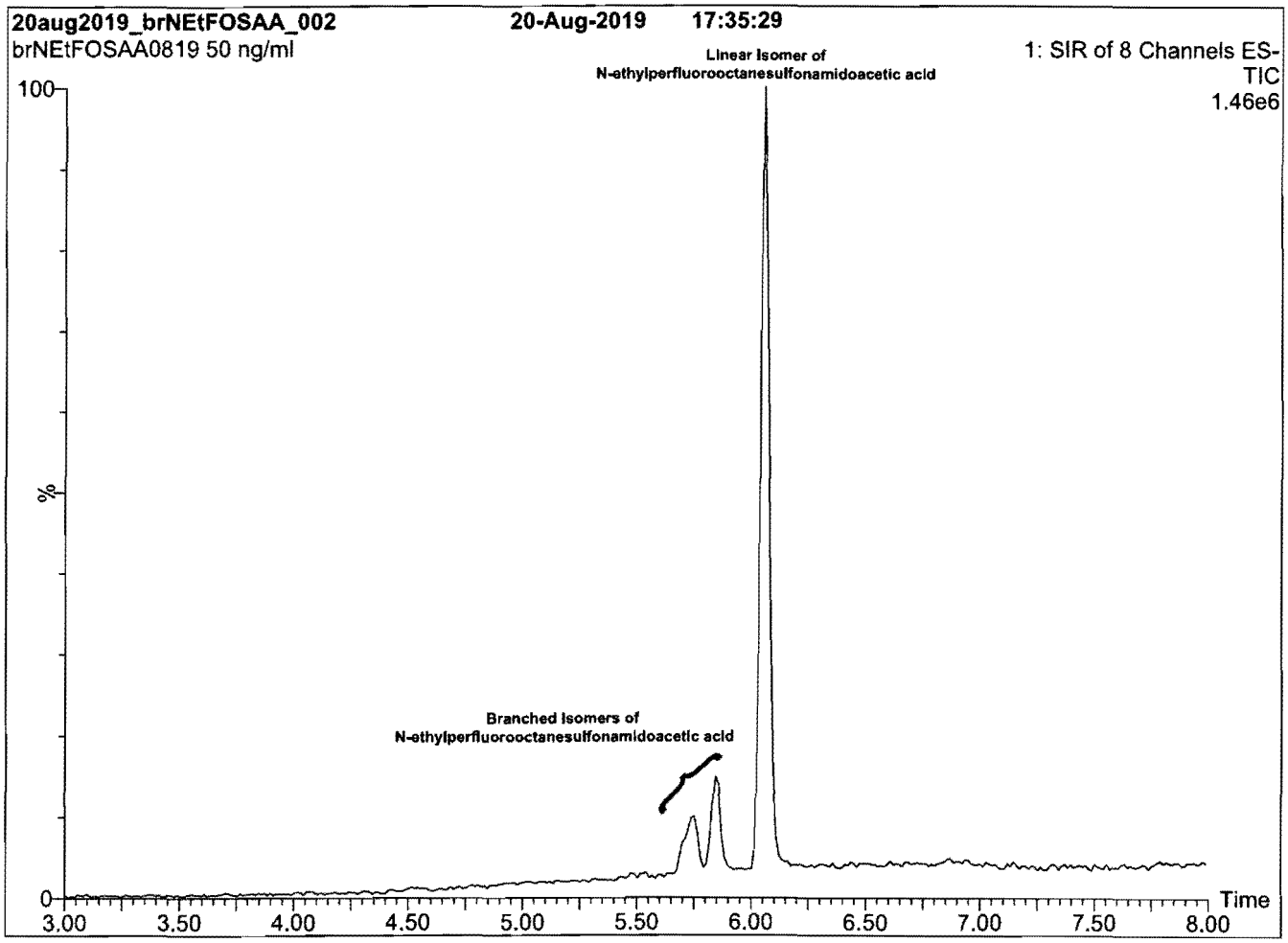
Mobile phase: Same as Figure 1

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

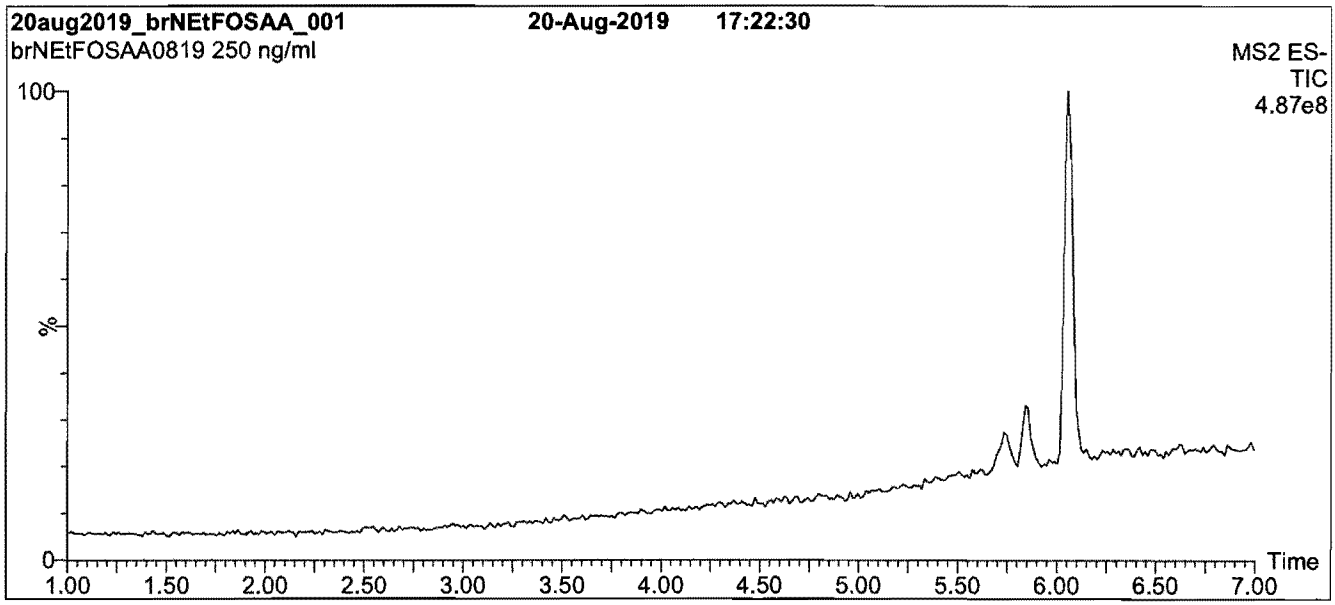
MS Parameters

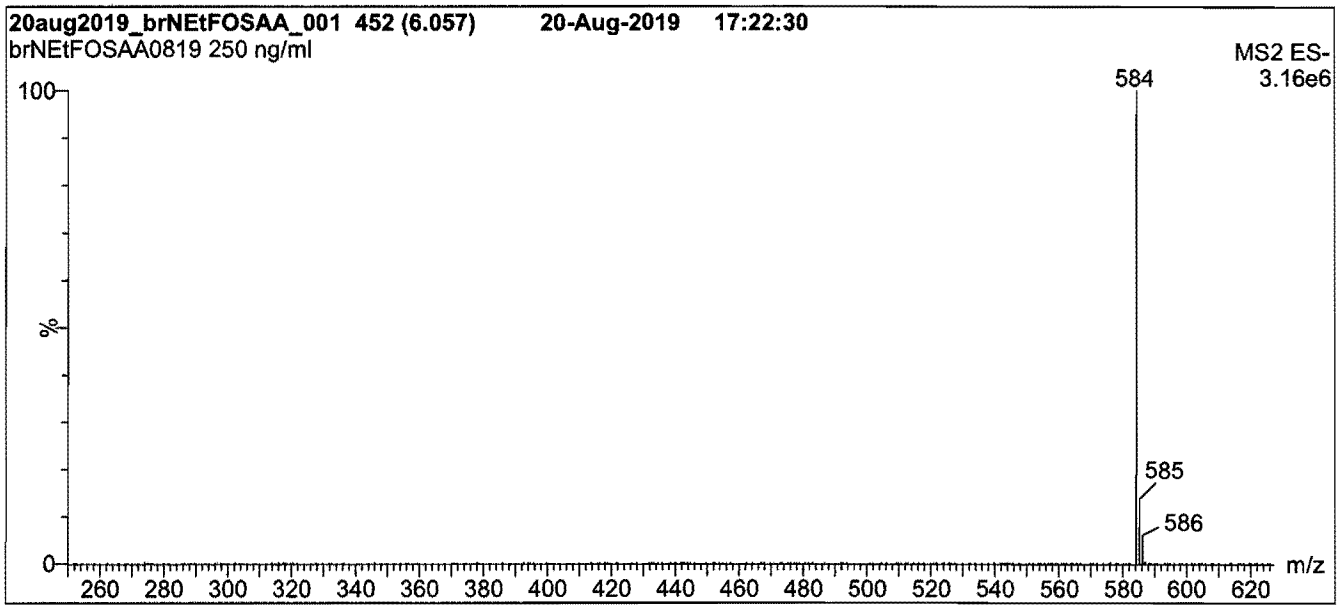
Experiment: SIR (8 channels)

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

19L0660

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

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

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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)

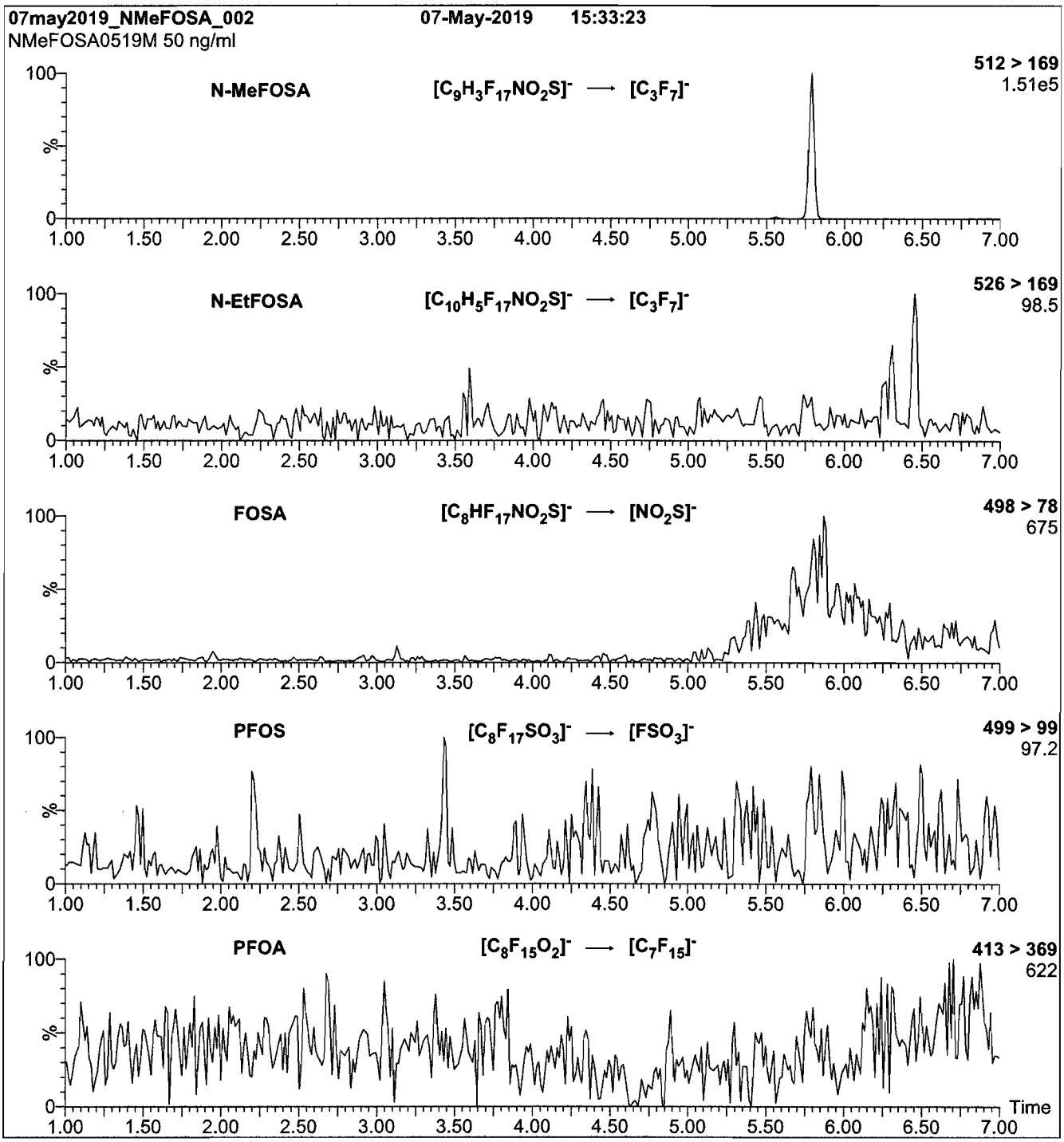
ADDITIONAL INFORMATION:

- 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.

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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

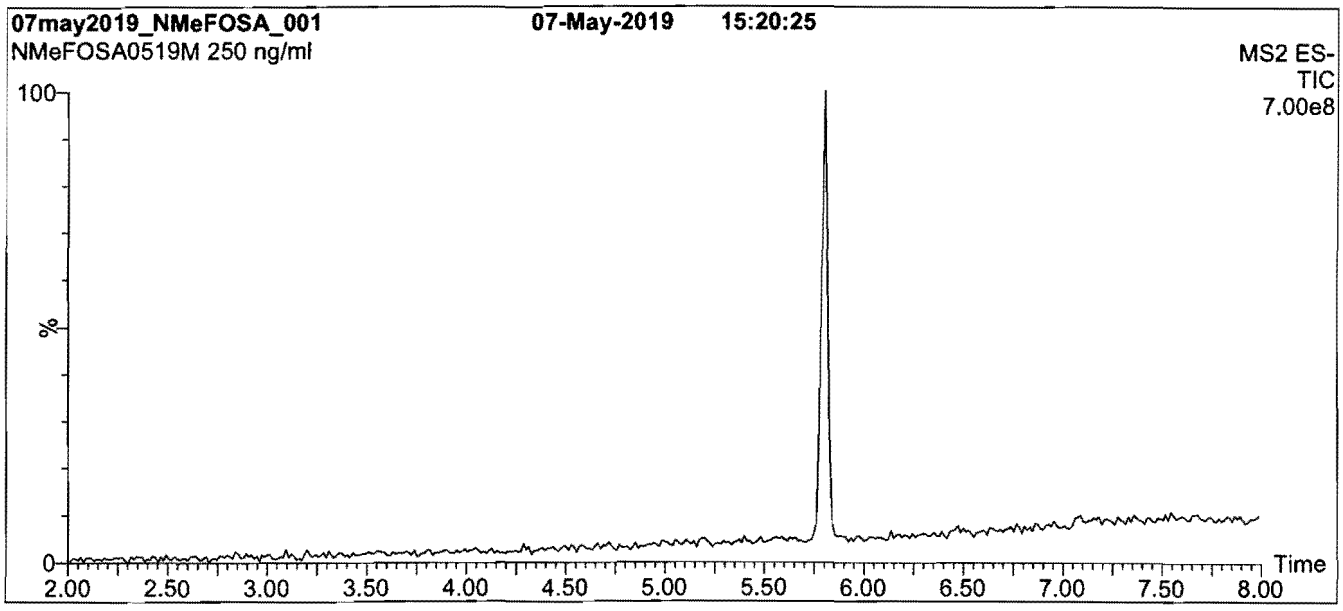
Flow: 300 µl/min

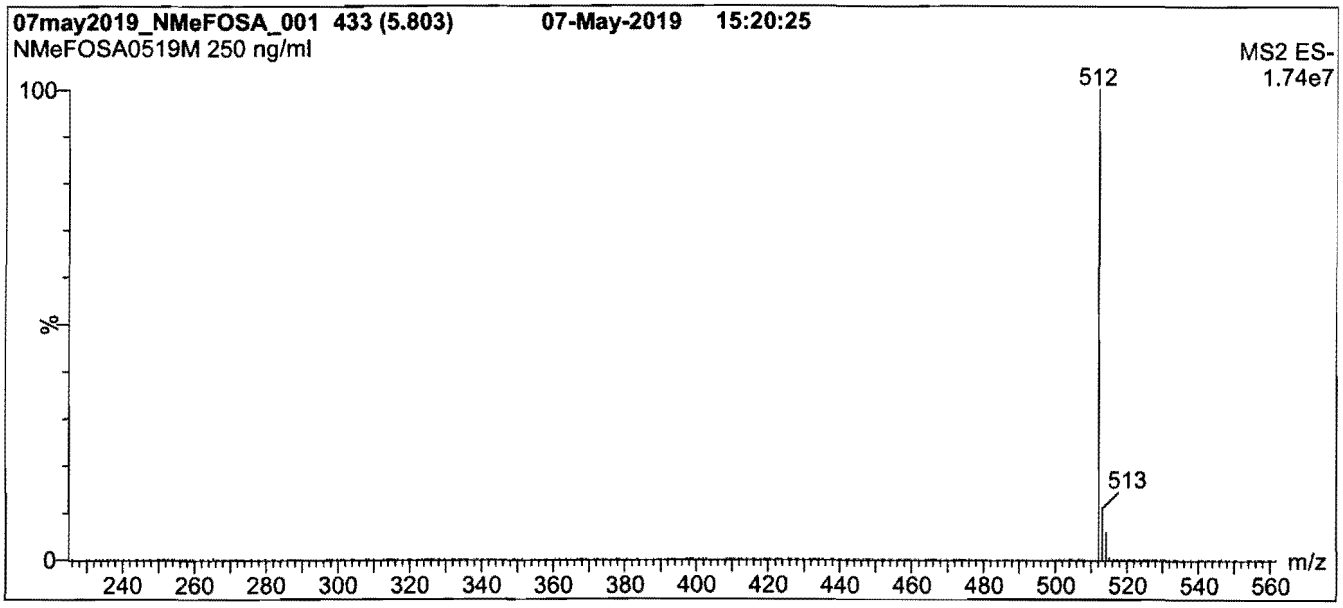
MS Parameters

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:

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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

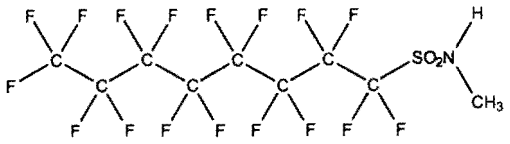
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19L0661

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:

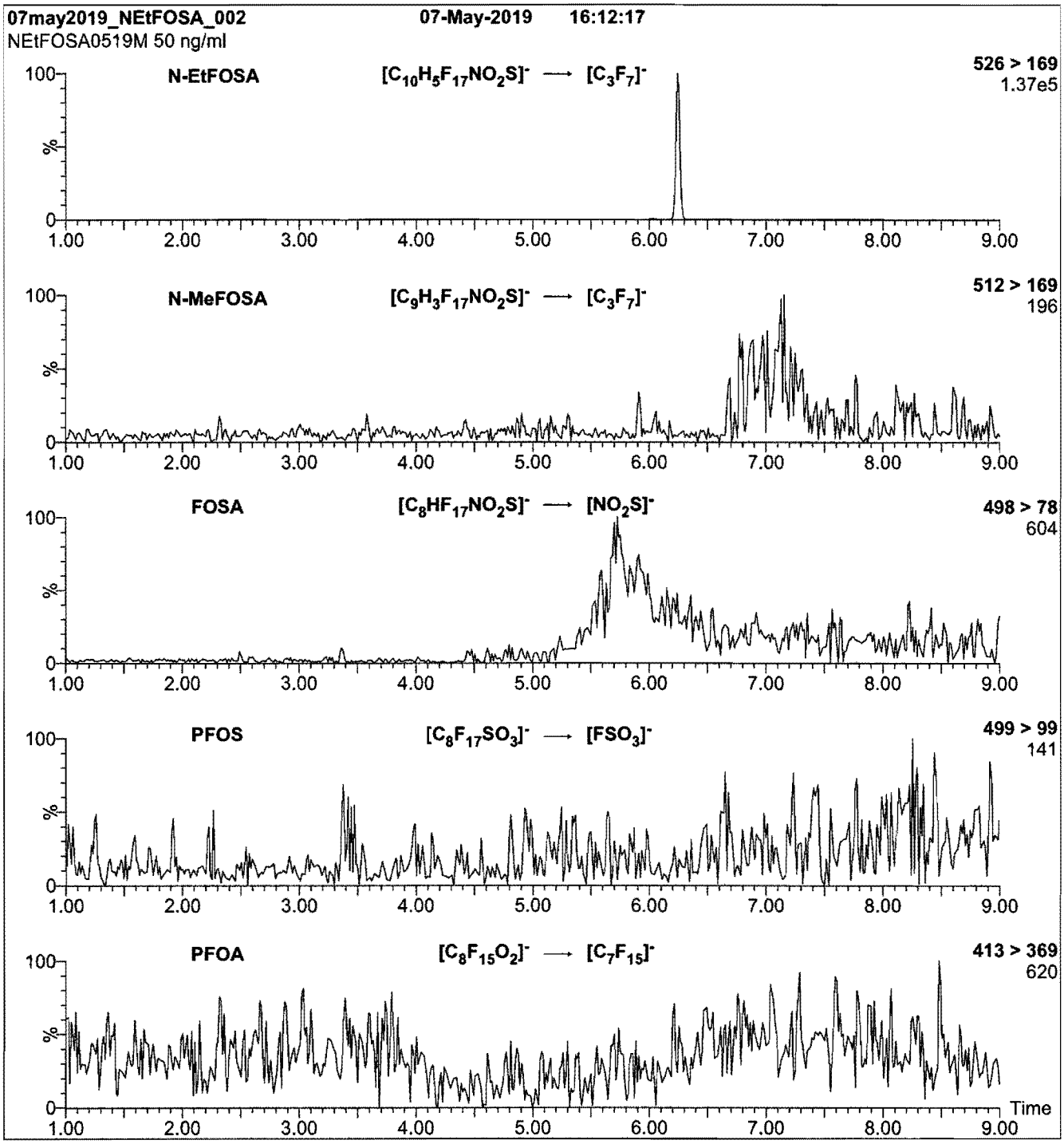
- See page 2 for further details.

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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
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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

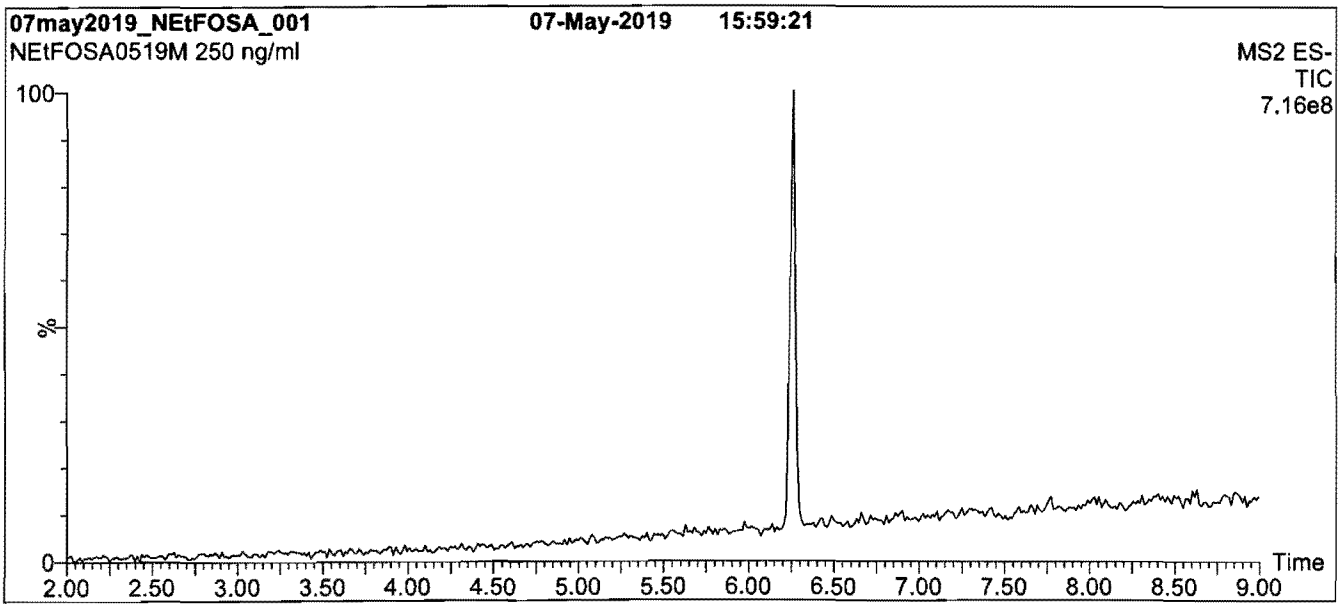
Flow: 300 µl/min

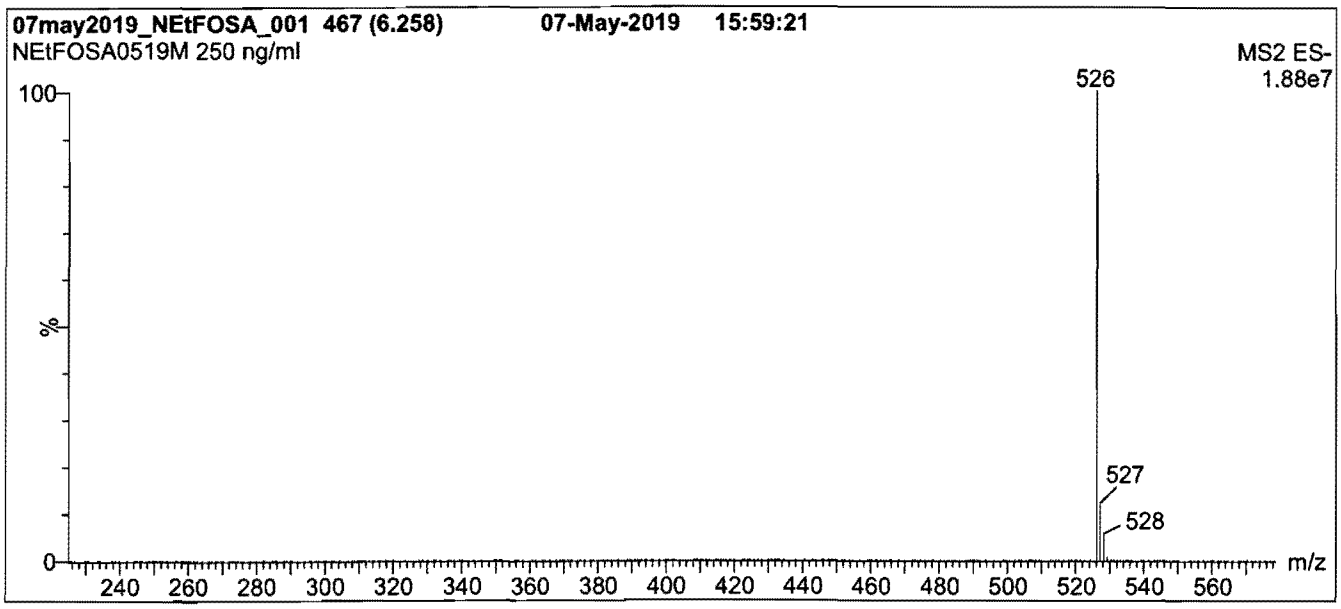
MS Parameters

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

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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:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

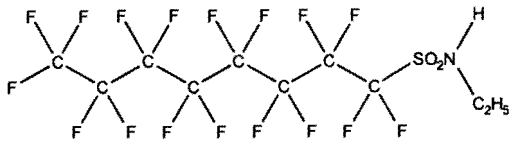
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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-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:

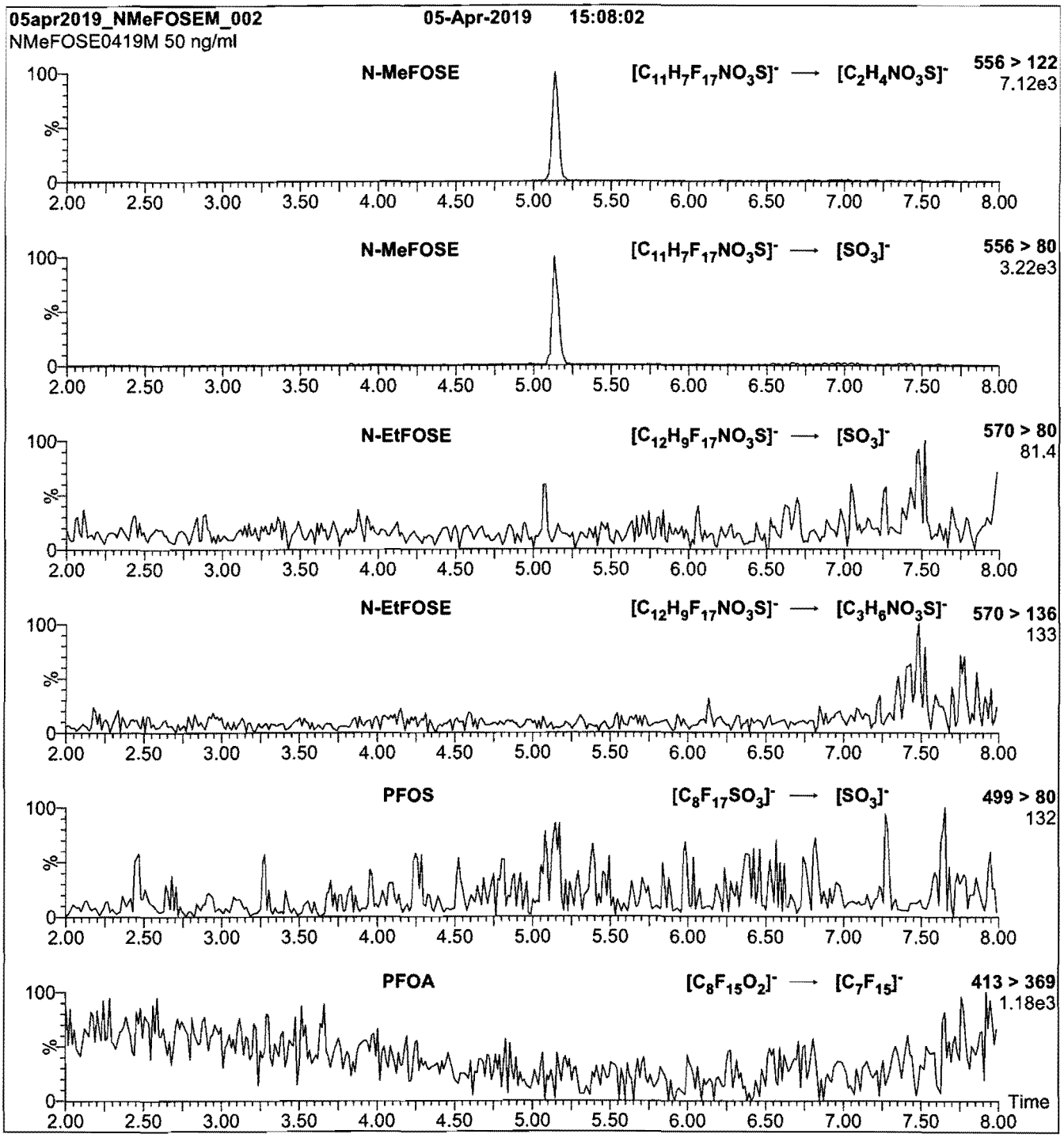
- See page 2 for further details.
- Contains ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

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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
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Figure 3: **N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (N-MeFOSE-M)

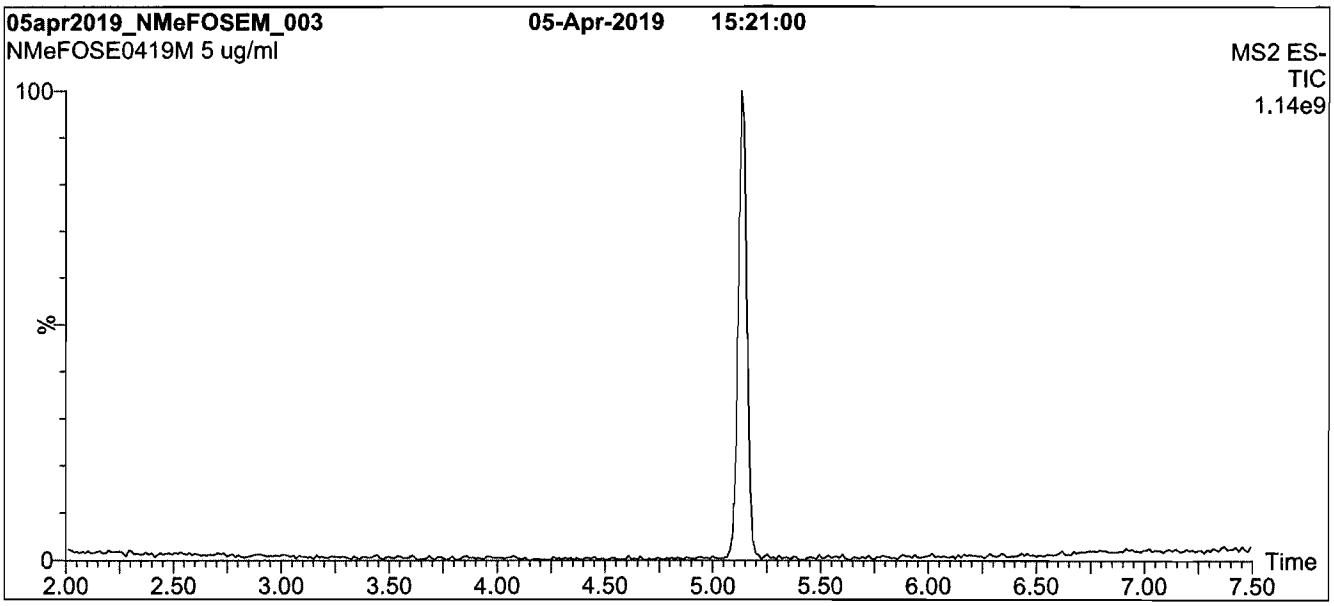
Mobile phase: Same as Figure 2

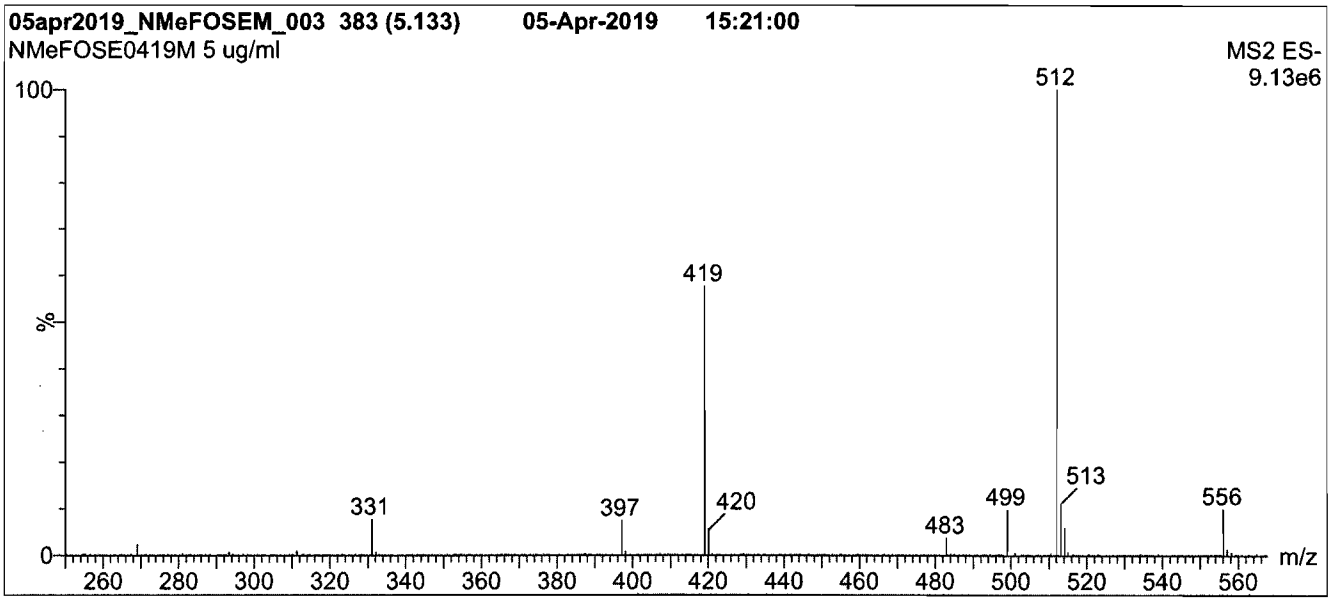
Flow: 300 µl/min

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

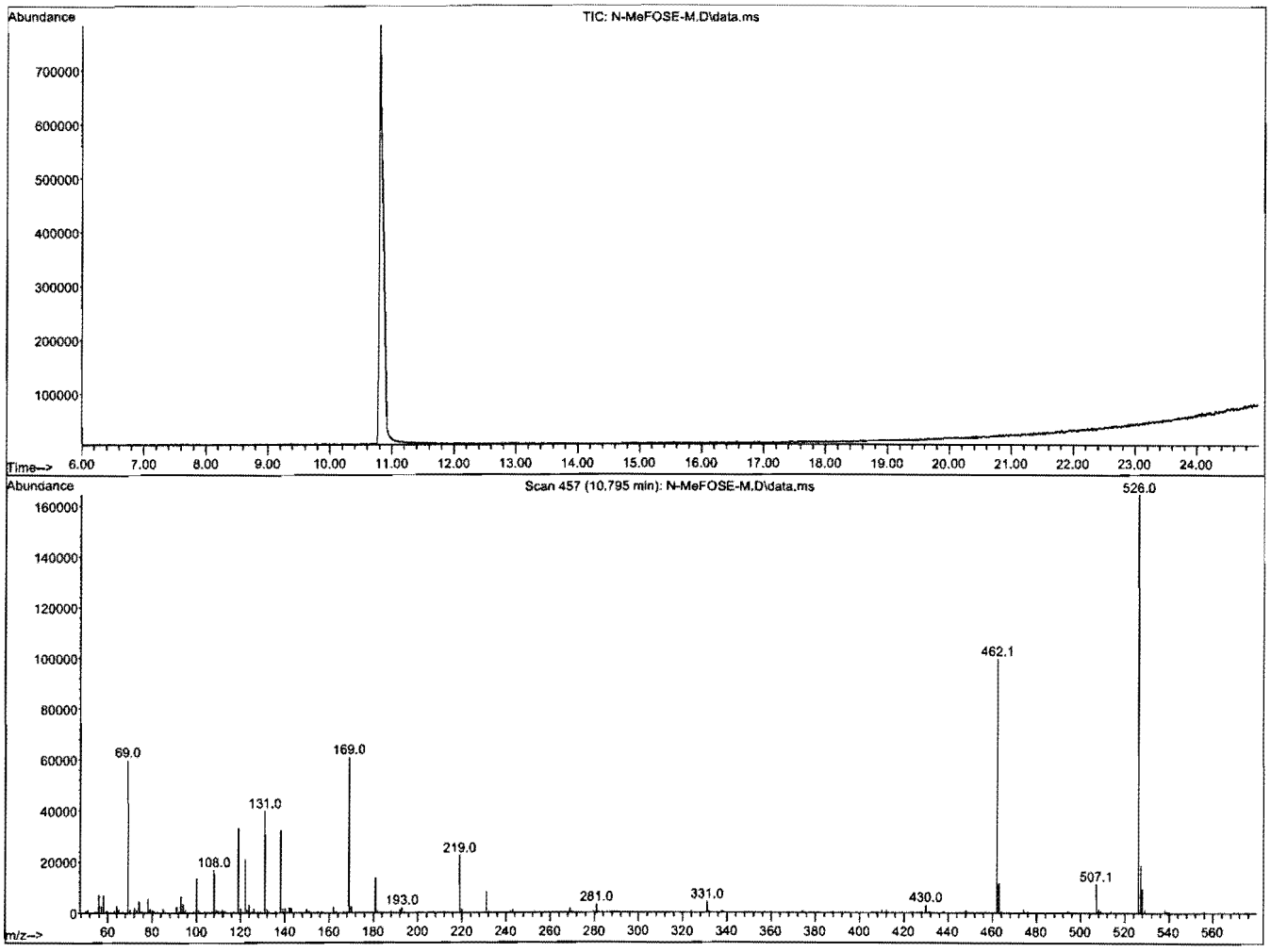
Flow: 300 µl/min

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)

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HANDLING:

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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 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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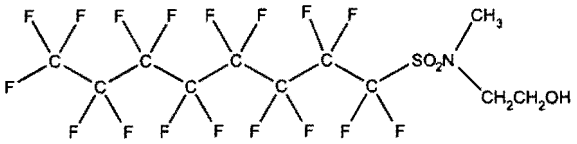
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 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:

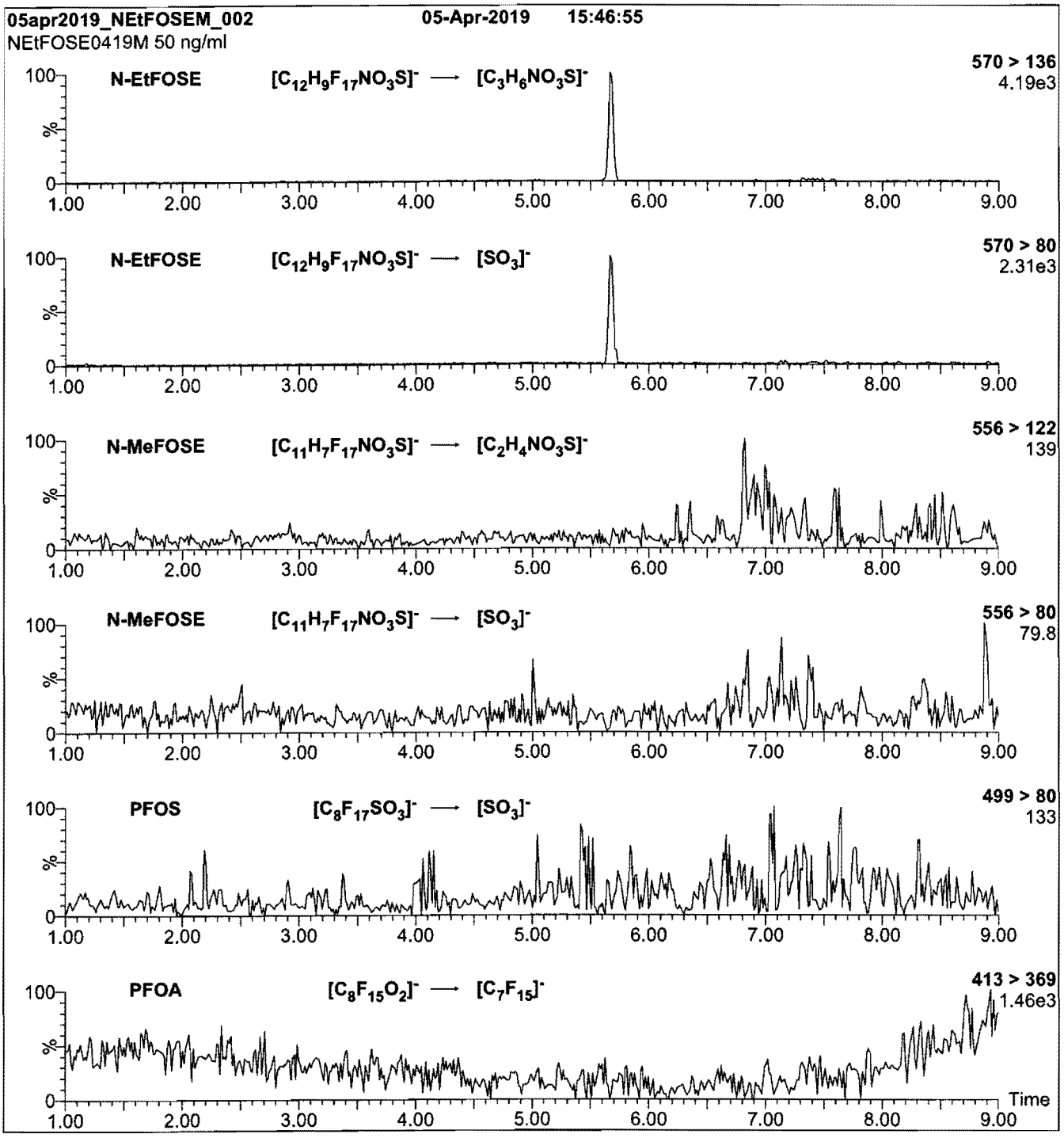
- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

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

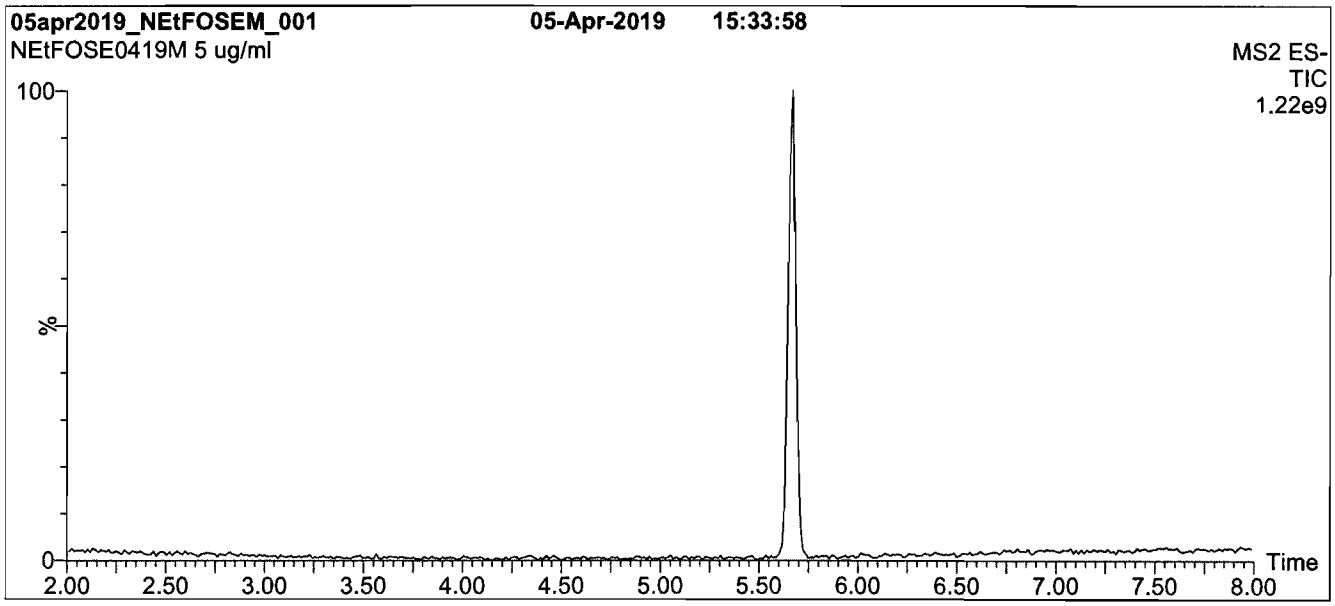
Flow: 300 µl/min

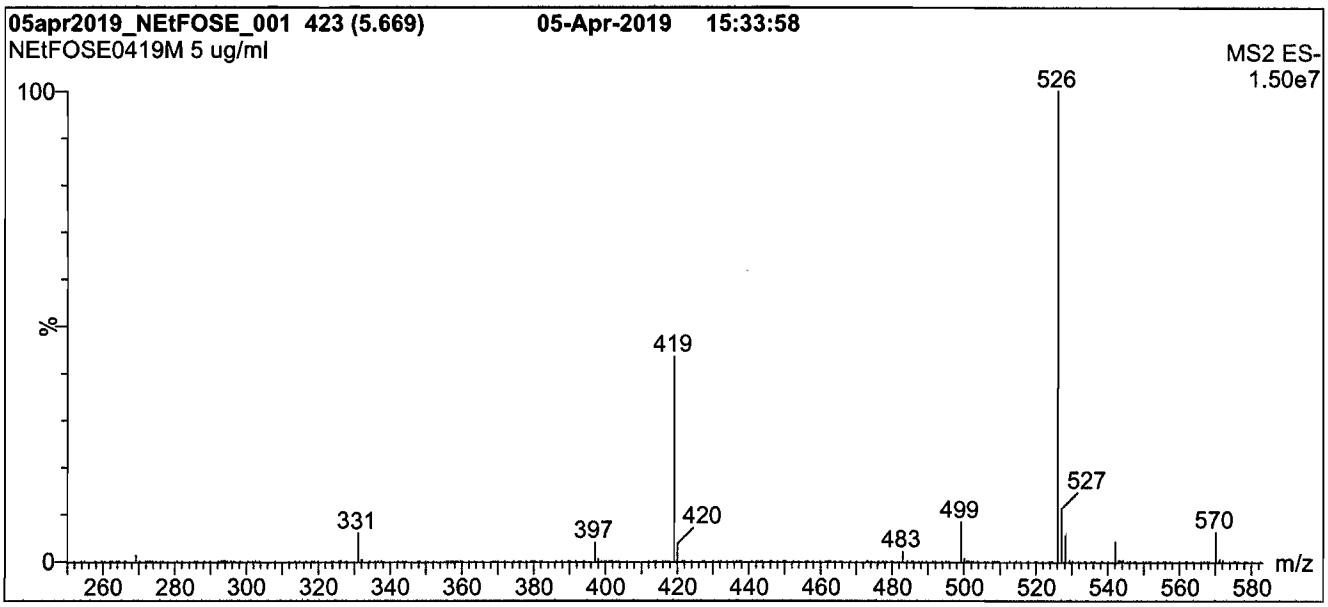
MS Parameters

Collision Gas (mbar) = 2.76e-3
Collision Energy (eV) = 32

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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

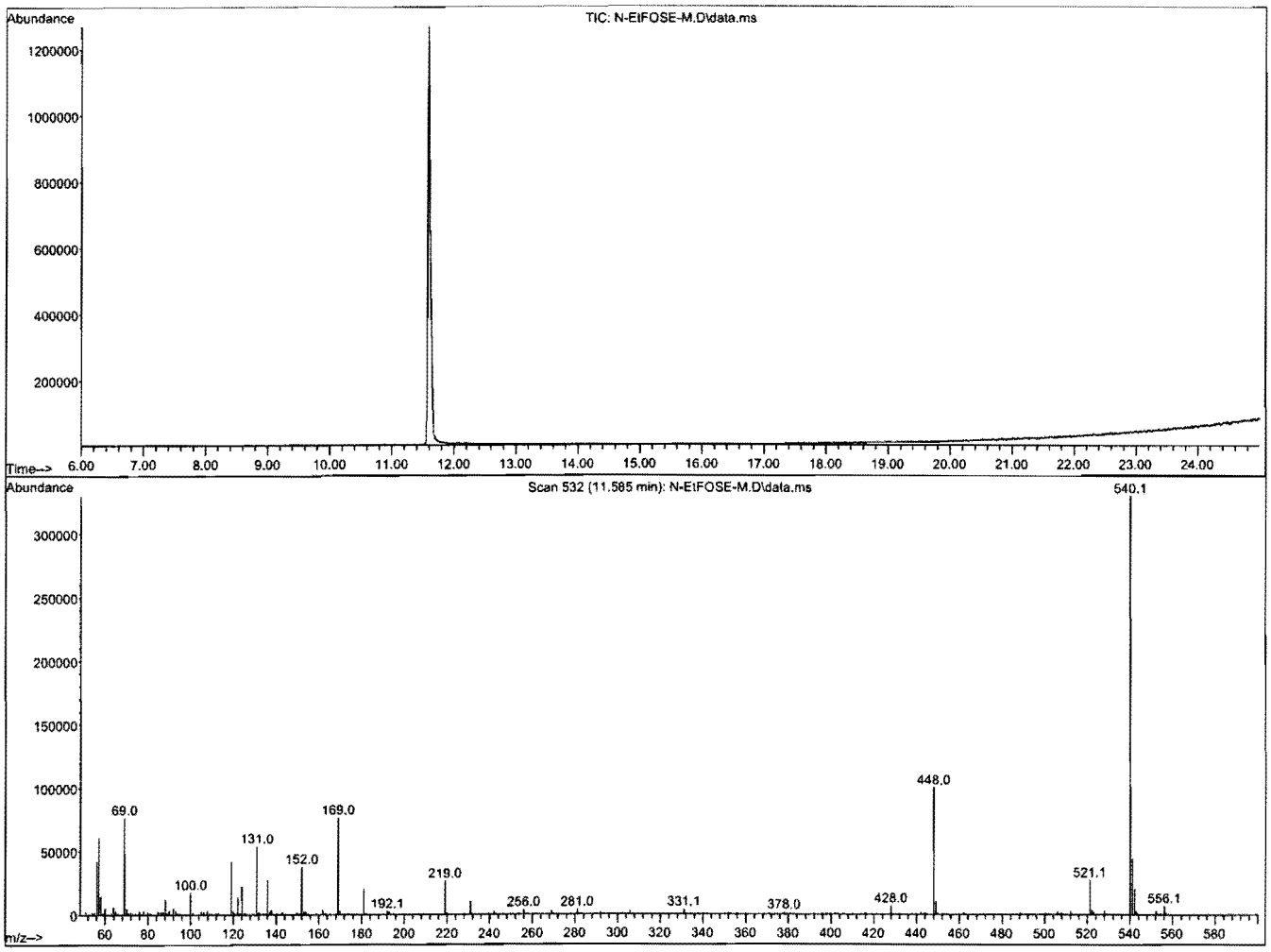
Flow: 300 µl/min

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)

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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,...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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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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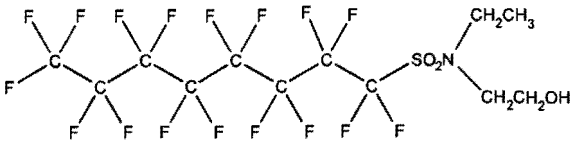
WELLINGTON LABORATORIES

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.

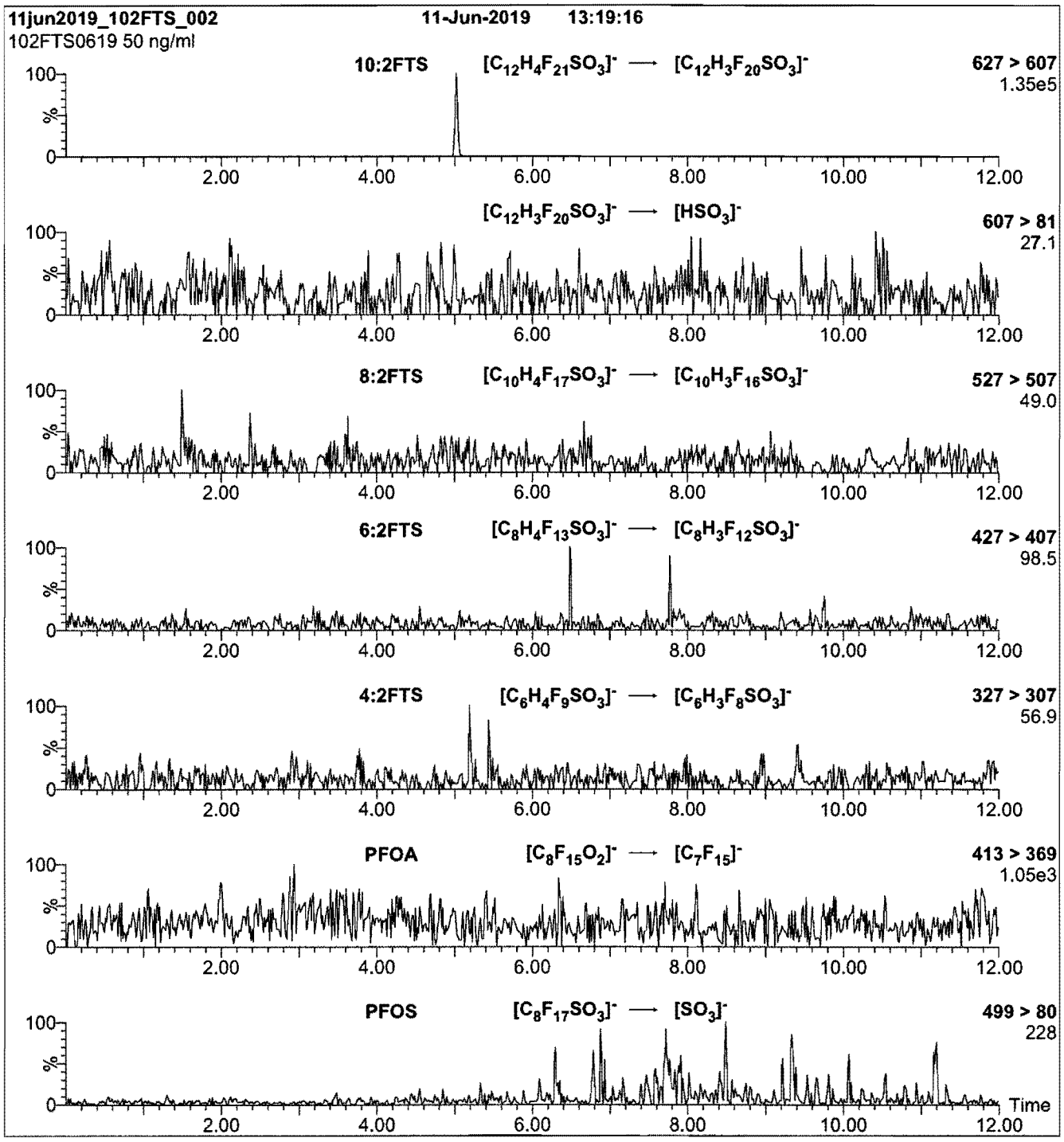
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Certified By: _____ **Date:** 04/15/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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

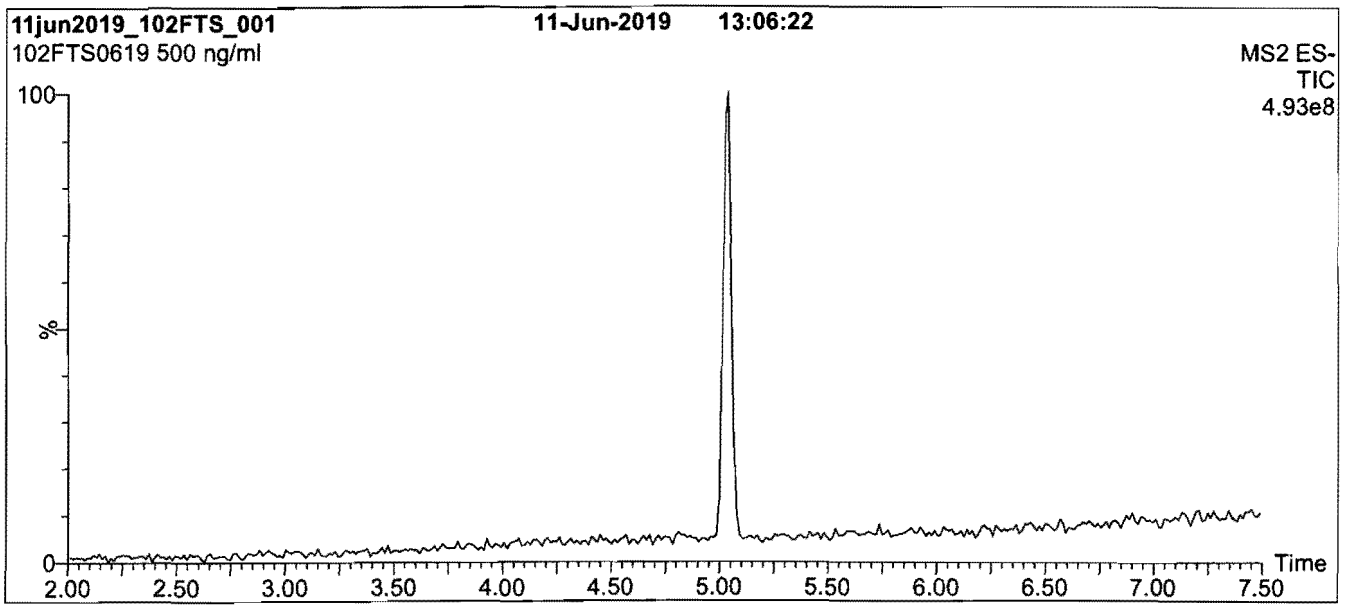
Flow: 300 µl/min

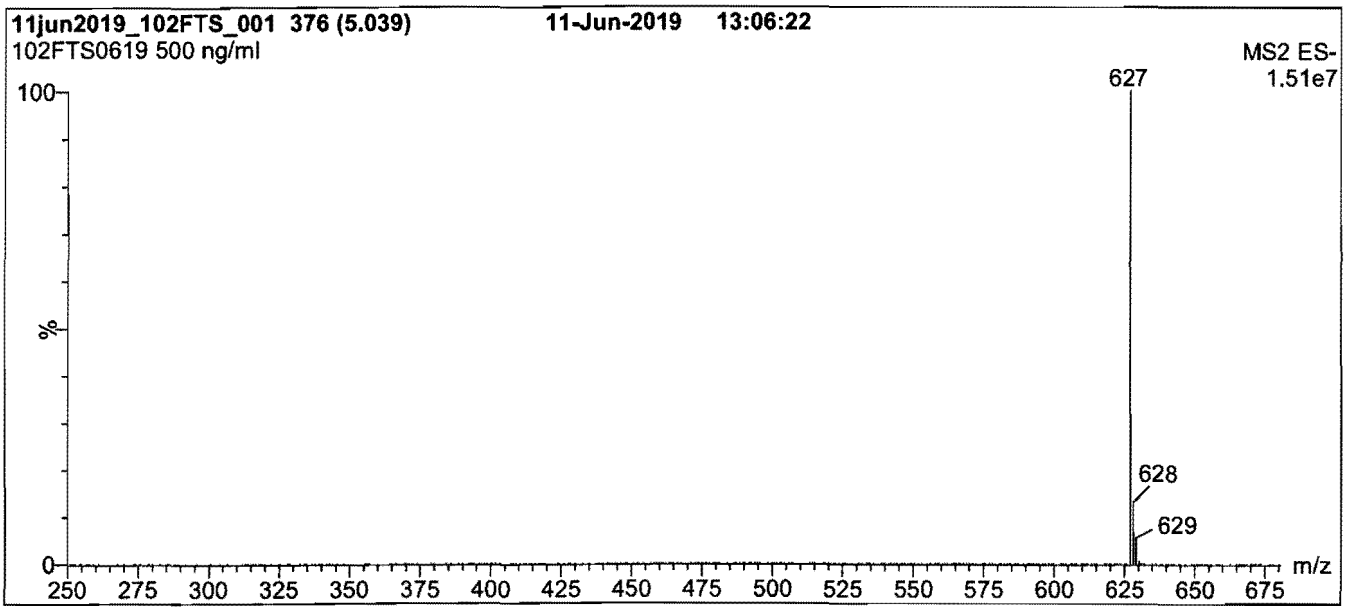
MS Parameters

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

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CALA Testing Accreditation No. A 1226

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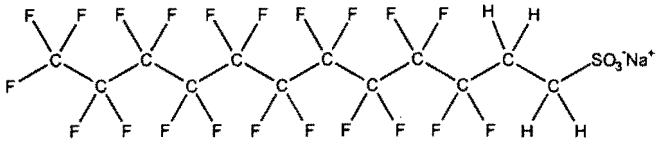
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WELLINGTON LABORATORIES

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:

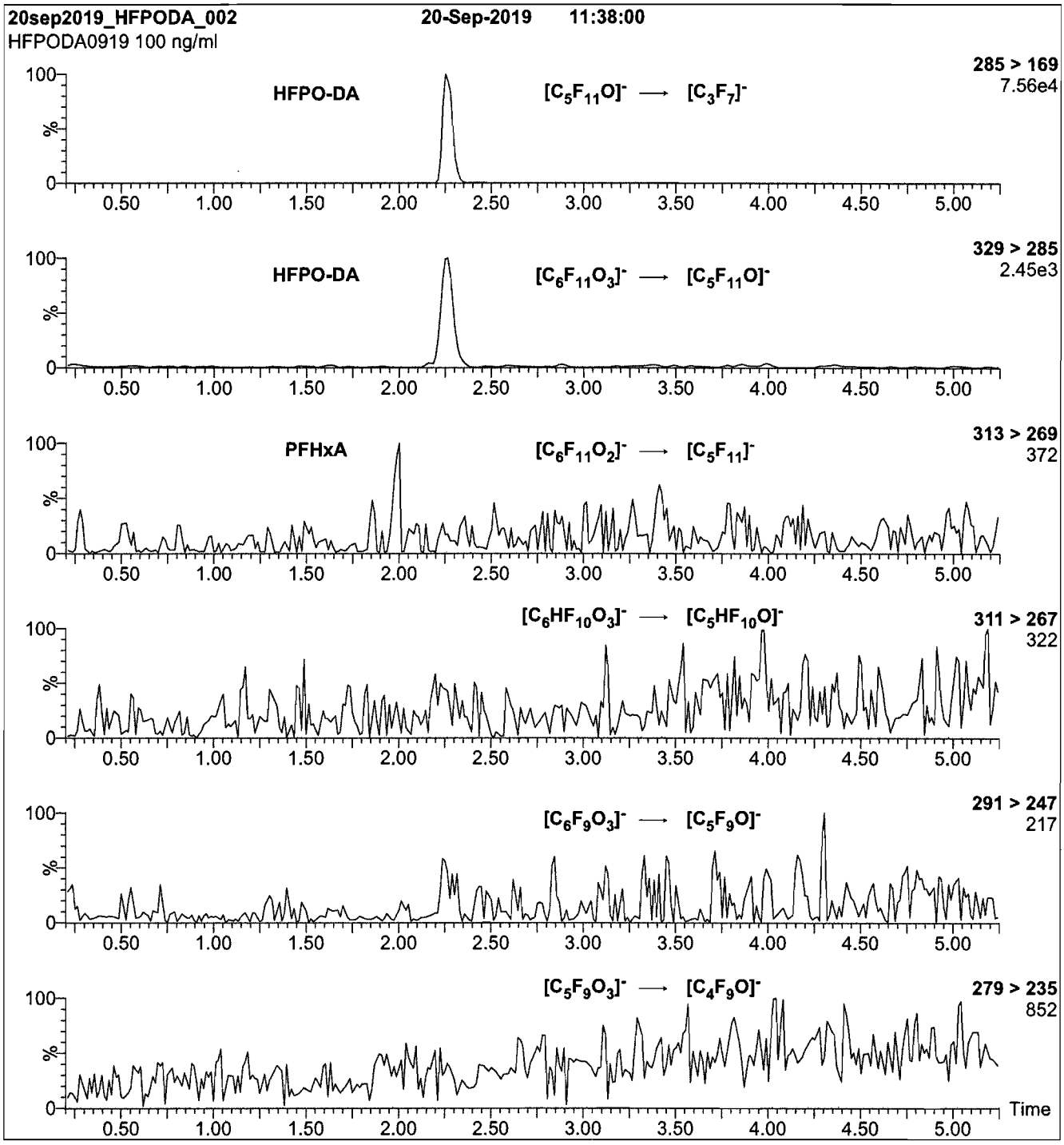
- See page 2 for further details.

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

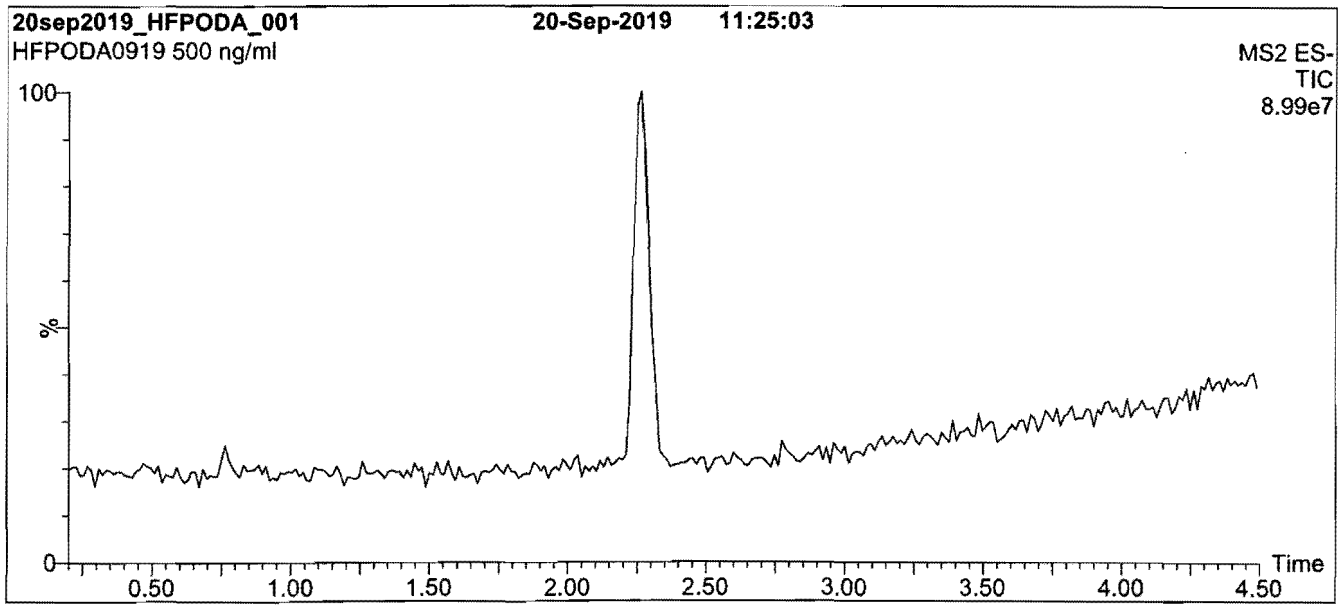
Flow: 300 µl/min

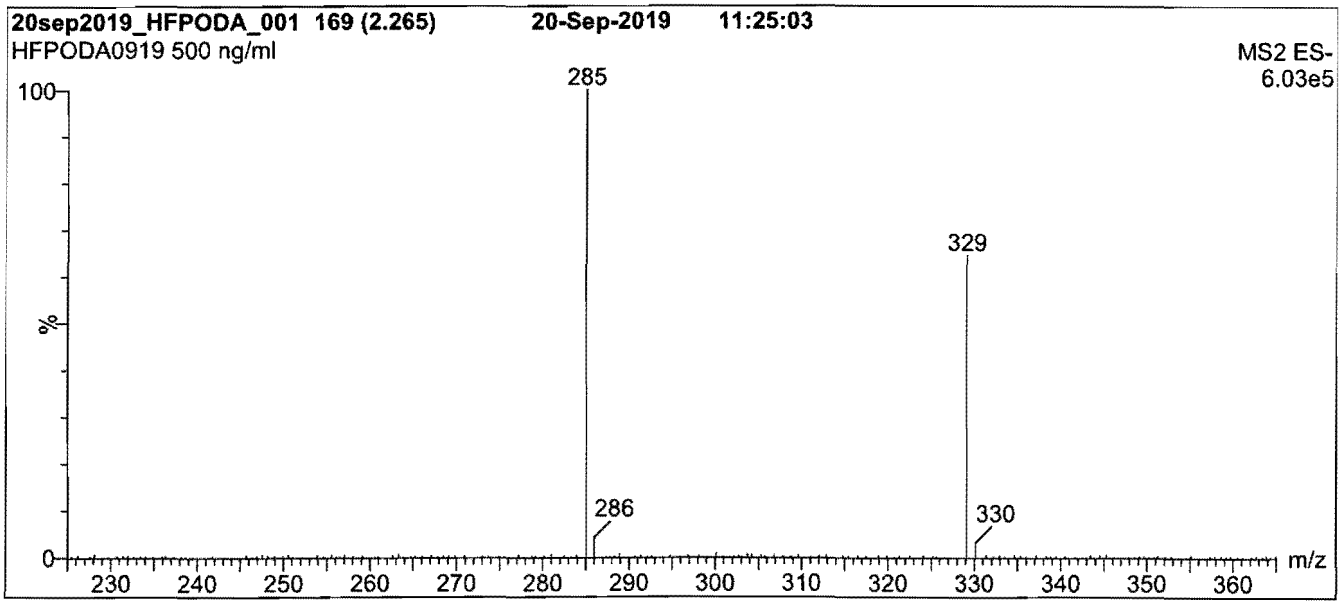
MS Parameters

Collision Gas (mbar) = 3.60e-3
Collision Energy (eV) = 8

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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

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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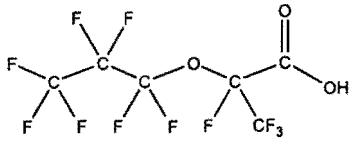
WELLINGTON LABORATORIES

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:

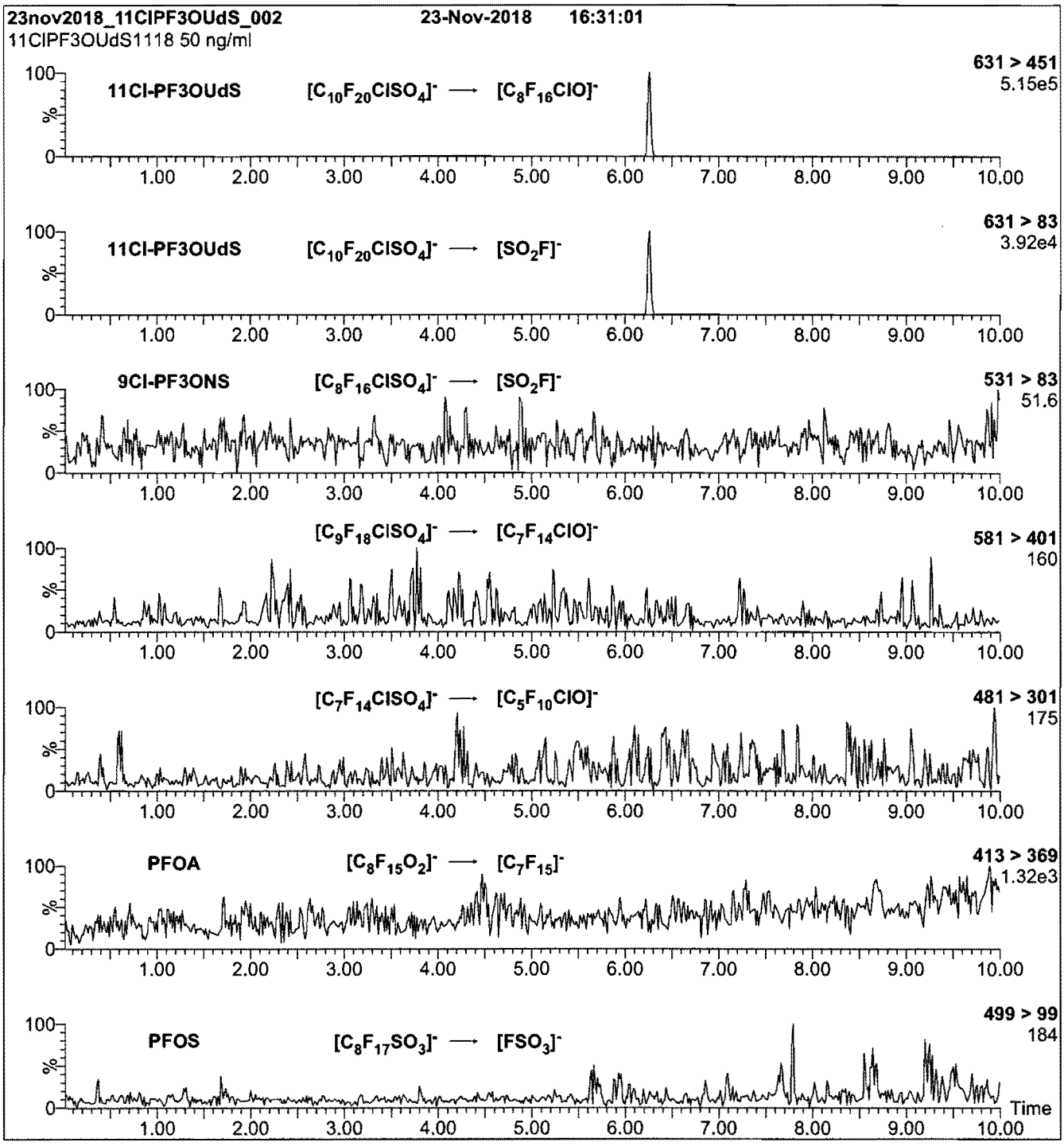
- See page 2 for further details.
- Product is commercially known as GenX.

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)

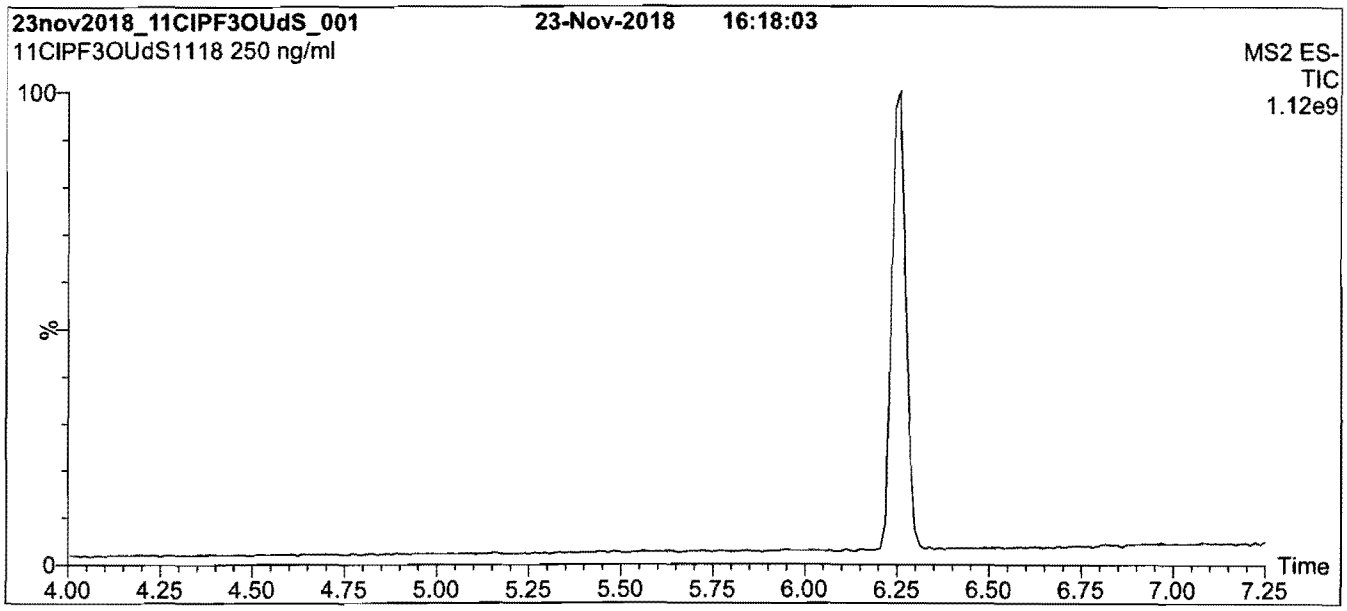
Mobile phase: Same as Figure 1

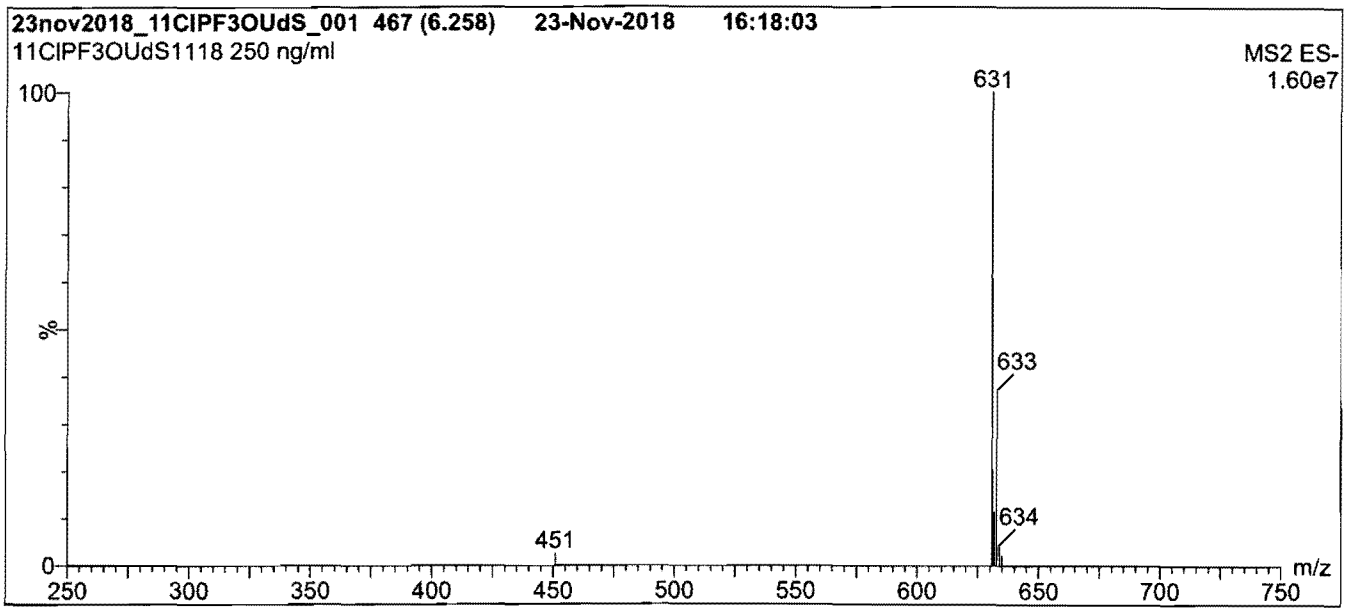
Flow: 300 µl/min

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:

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

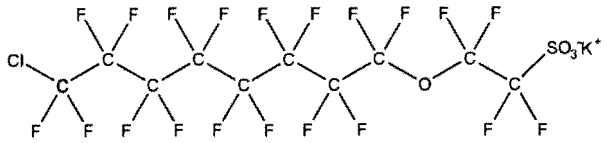
19L0667

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.

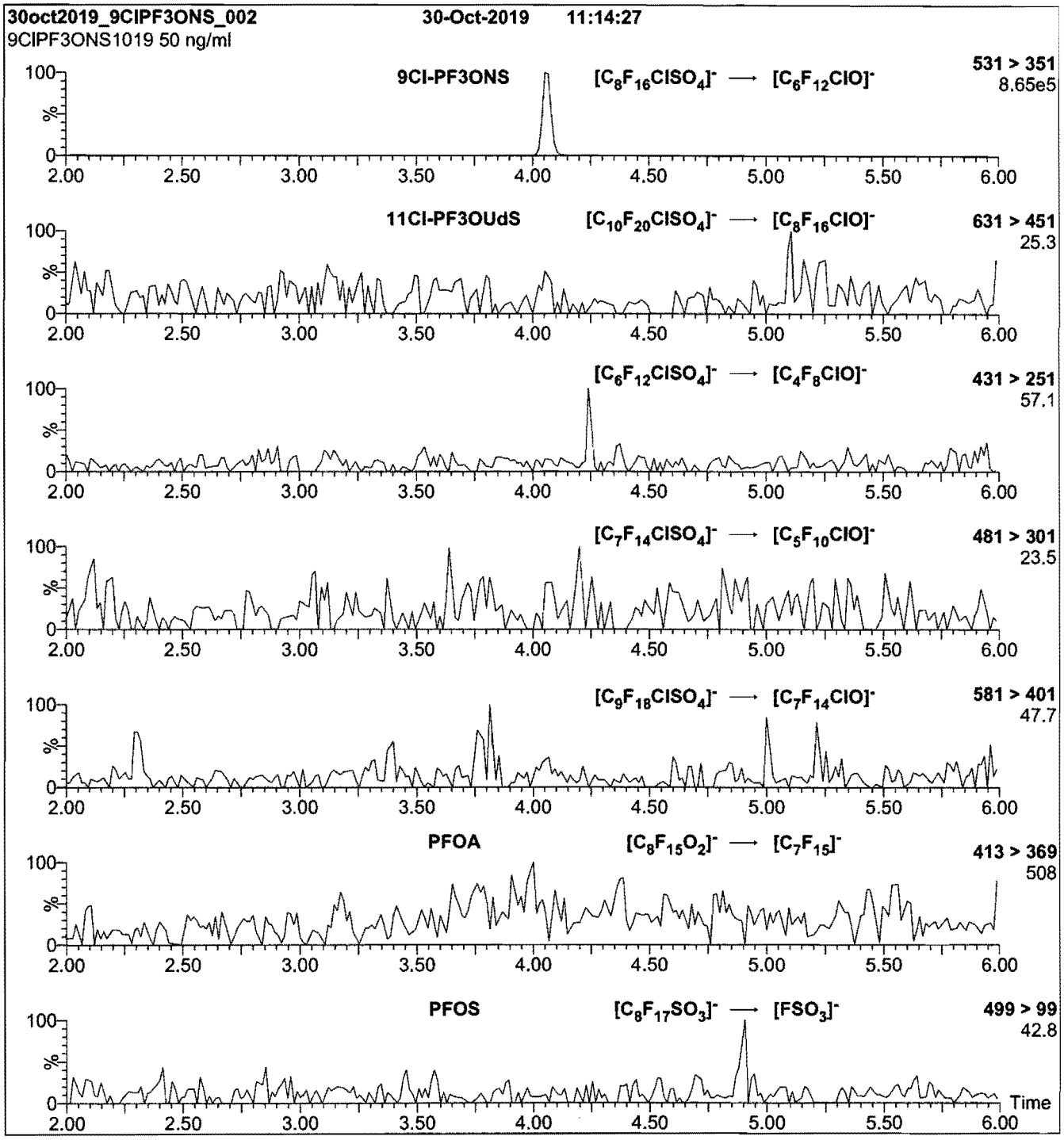
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
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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

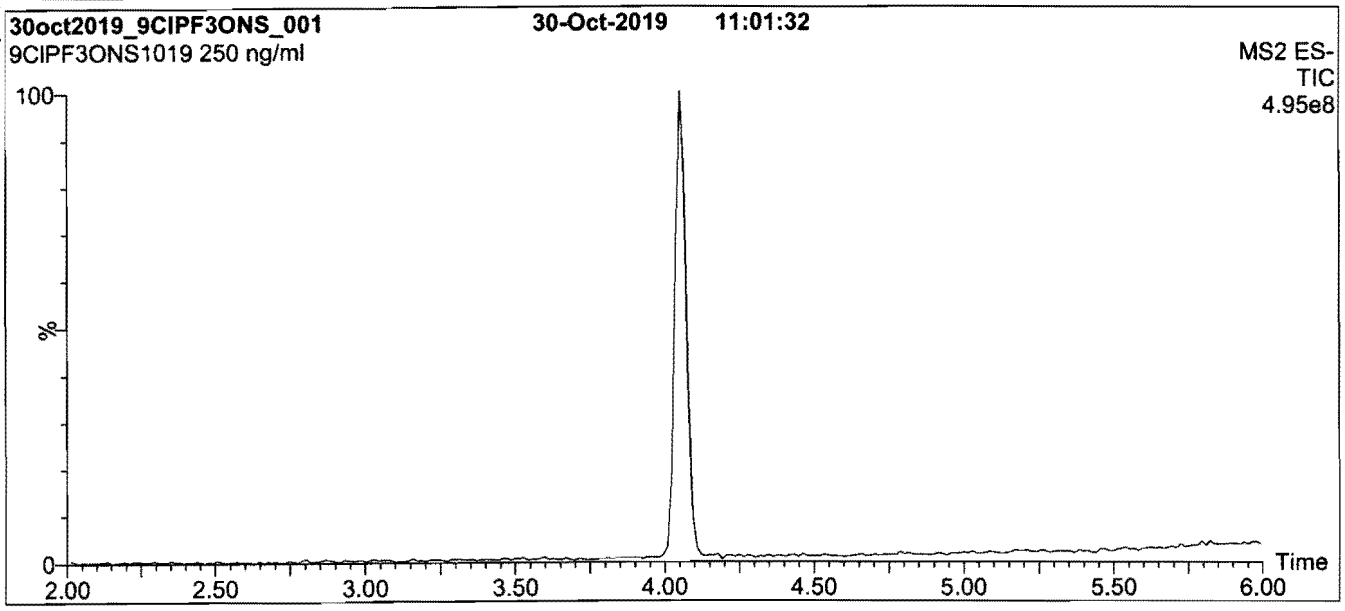
Flow: 300 µl/min

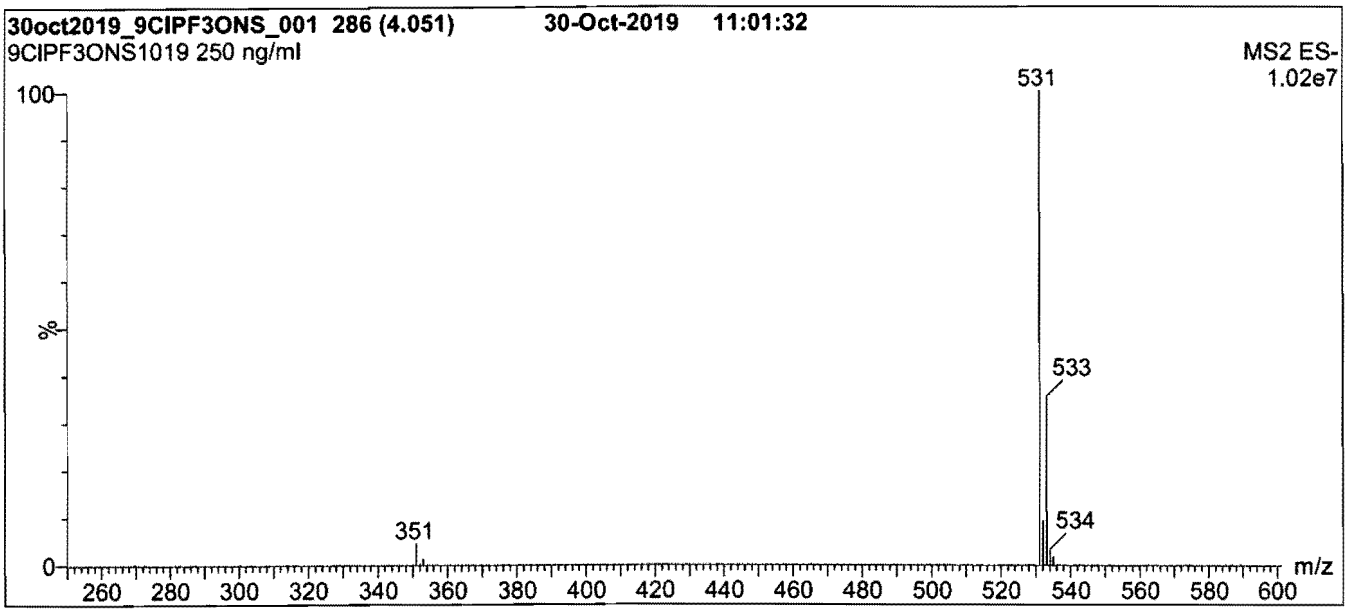
MS Parameters

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

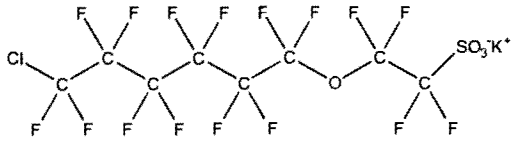
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

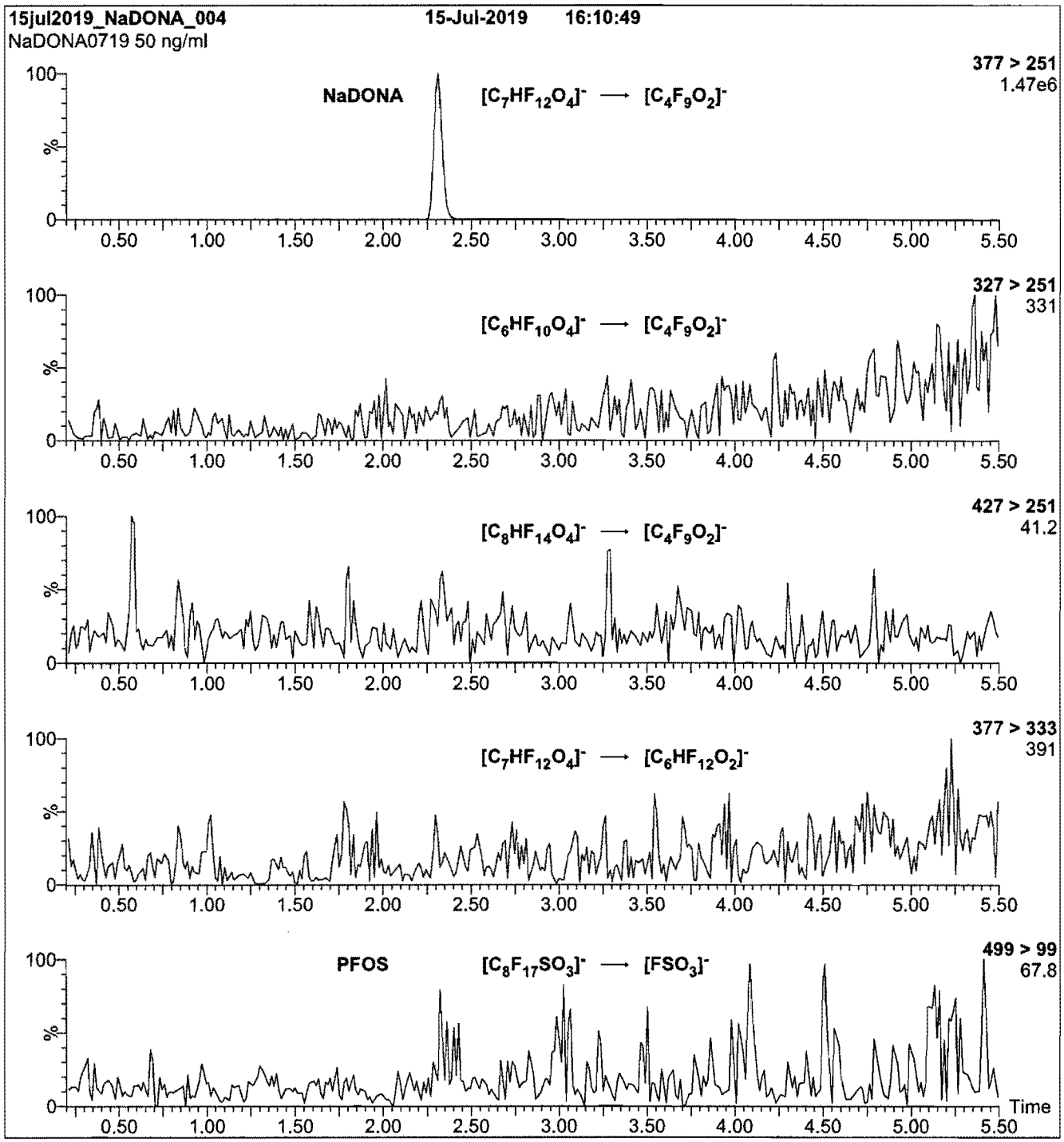
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

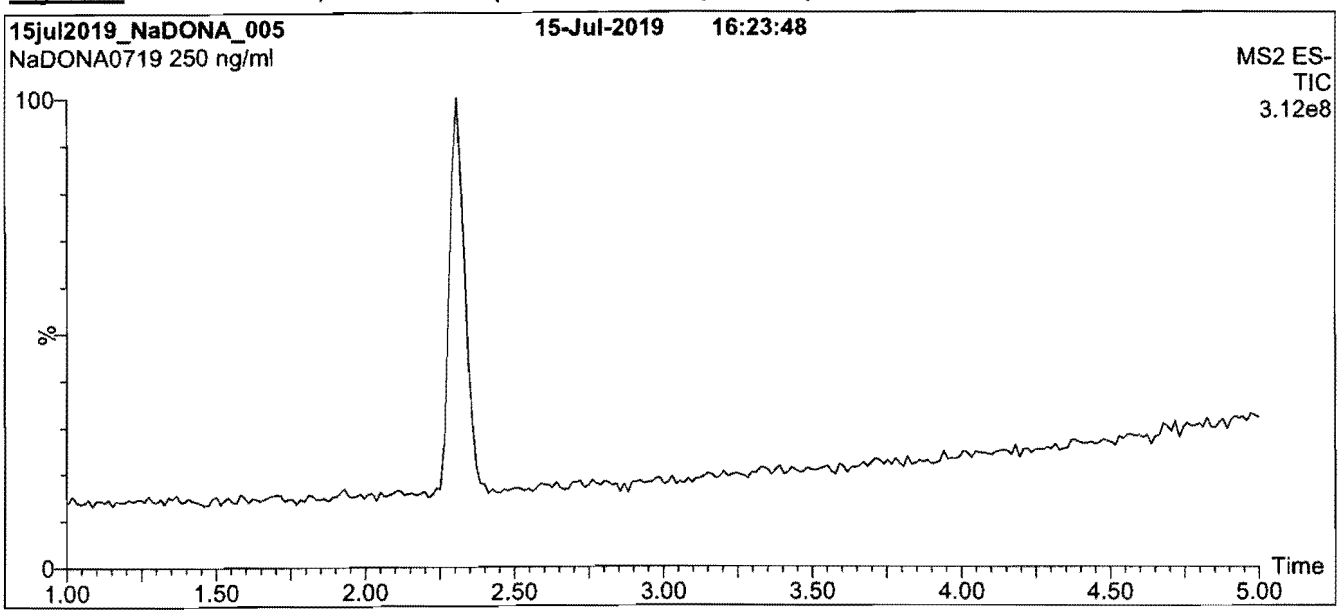
Flow: 300 µl/min

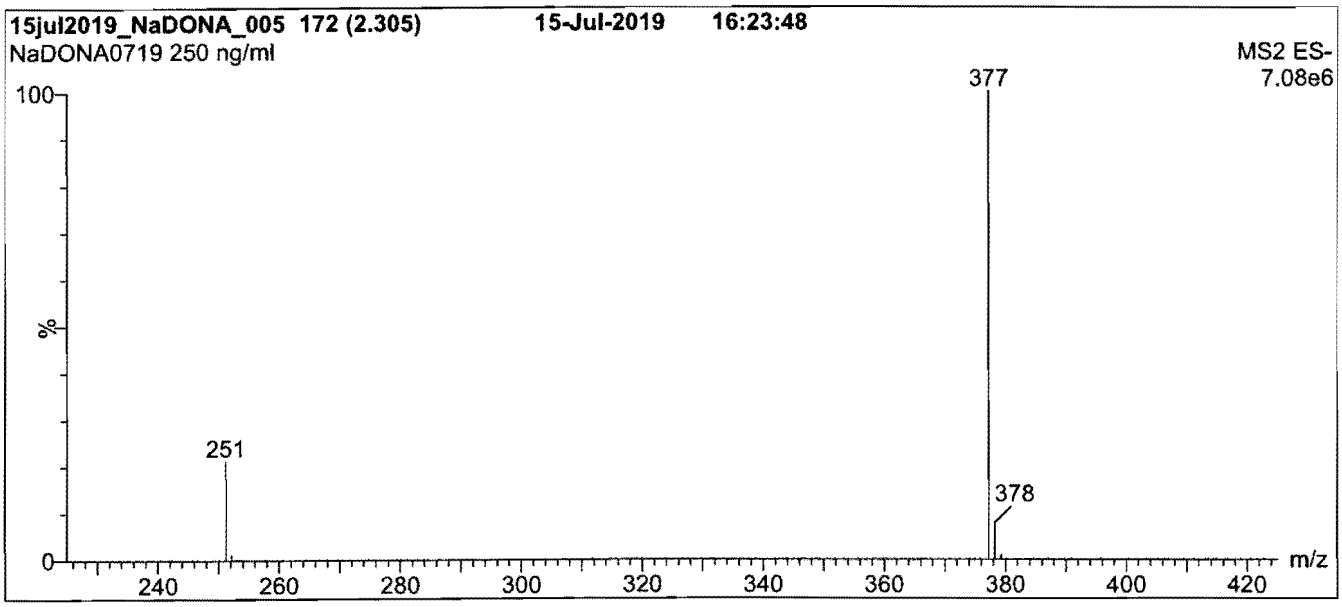
MS Parameters

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:

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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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 ISO 17034 REFERENCE MATERIAL PRODUCER

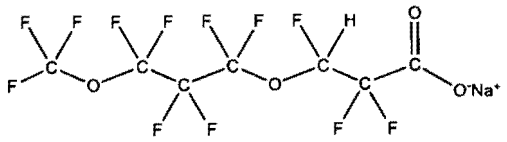
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19L0669

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.

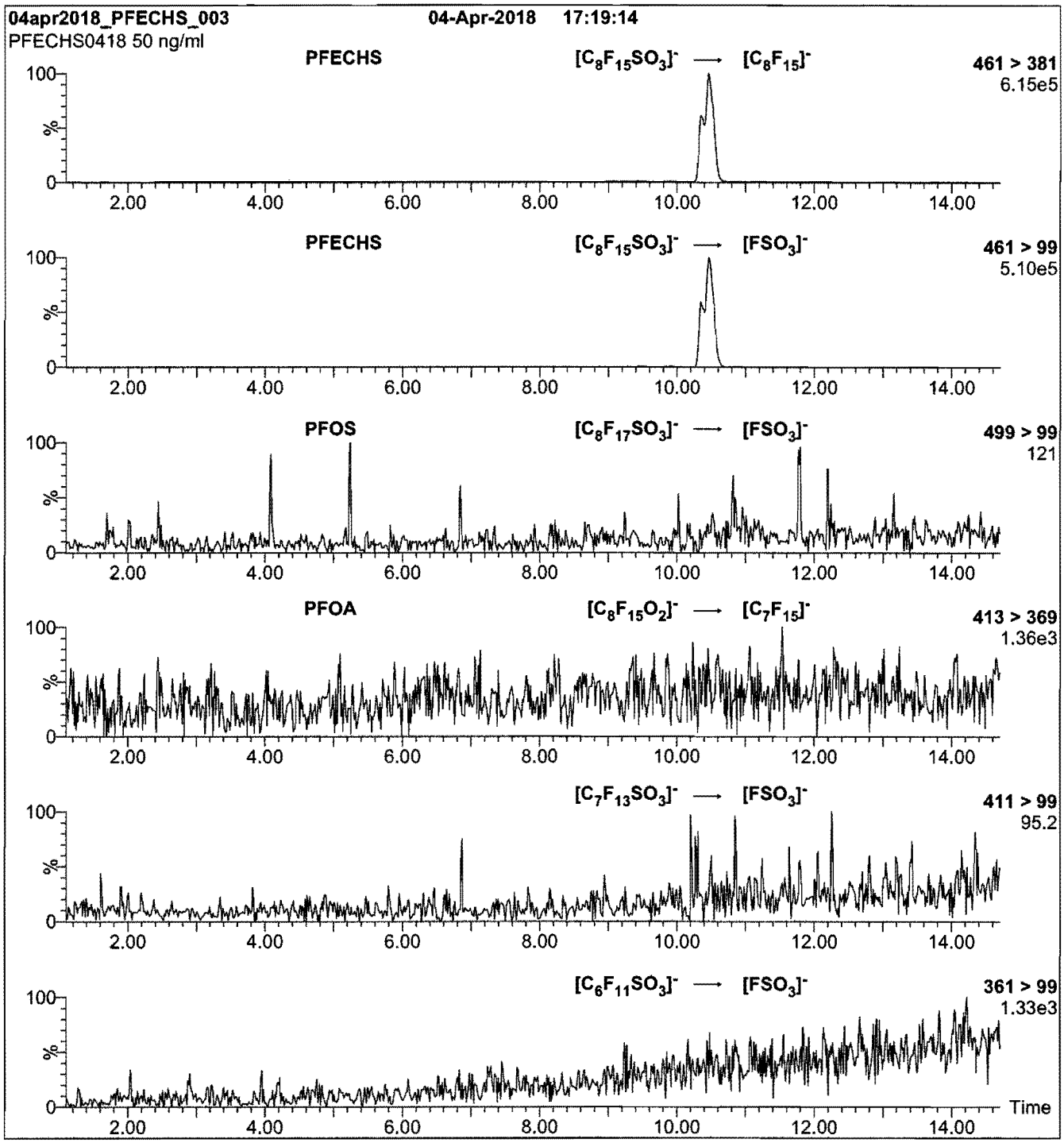
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1910670

Figure 2: **PFECHS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFECHS)

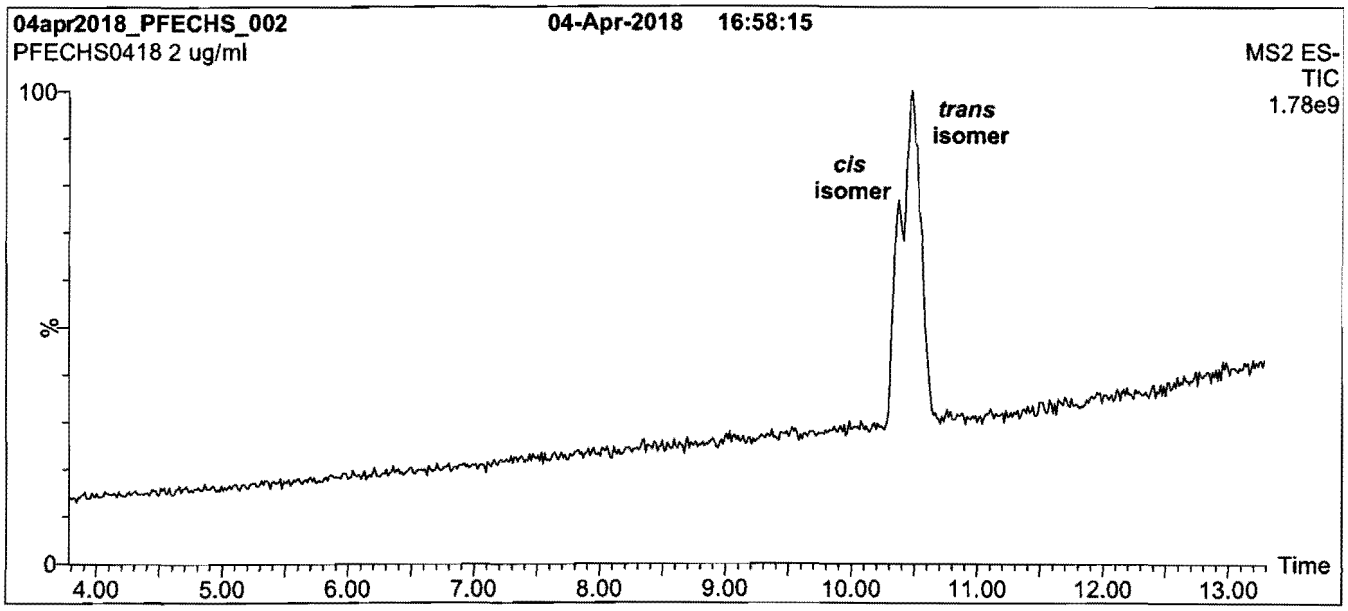
Mobile phase: Same as Figure 1

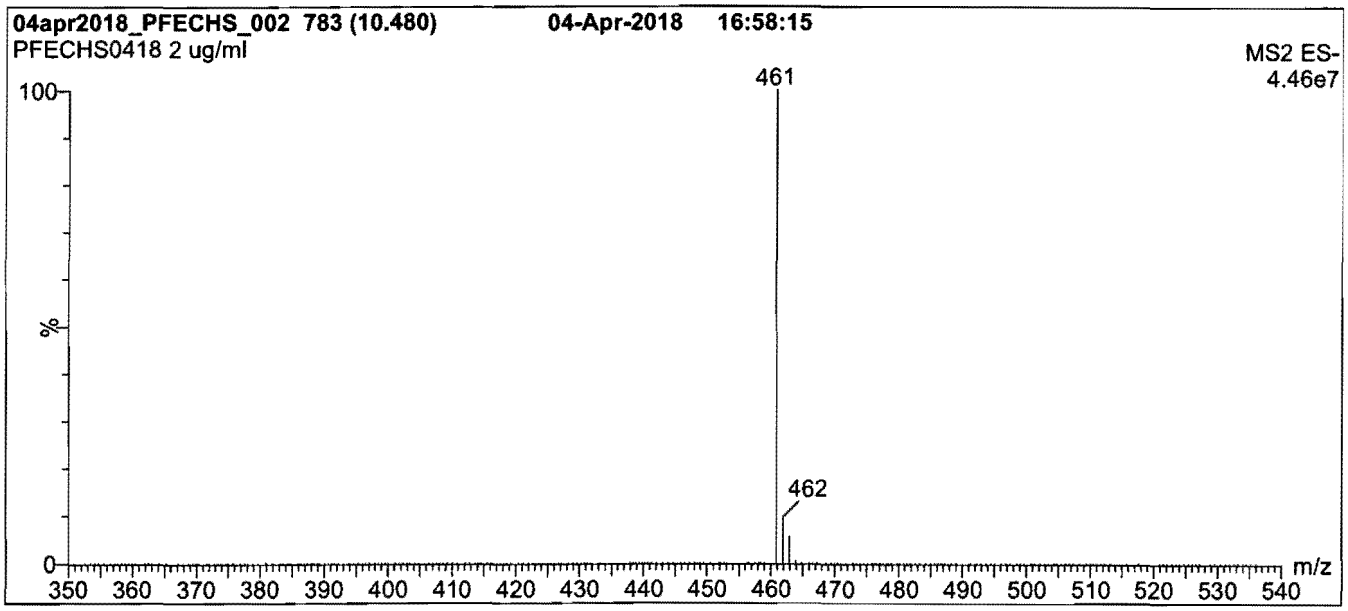
Flow: 300 µl/min

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:

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 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

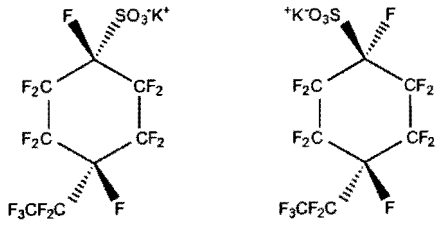
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 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:

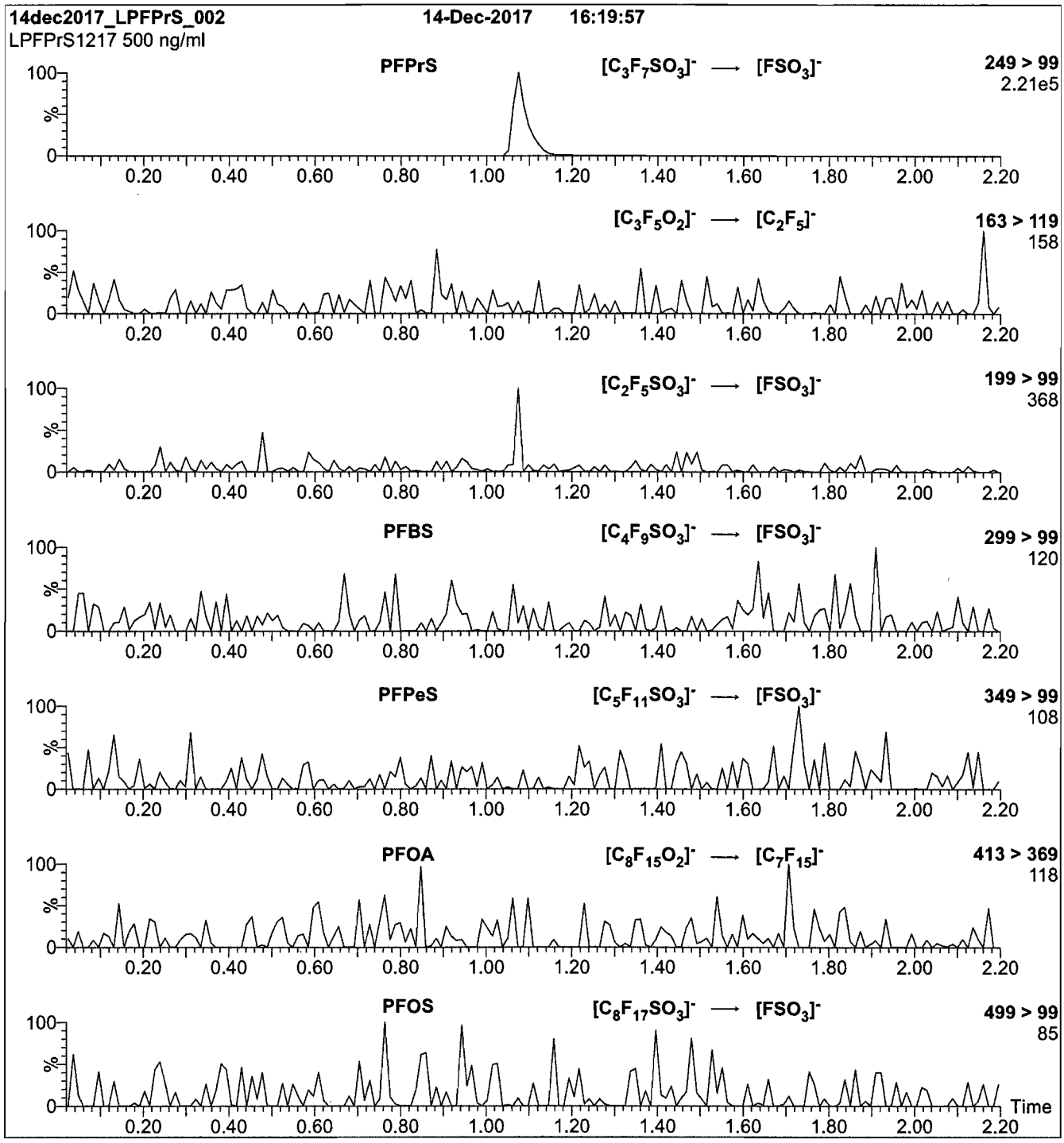
- See page 2 for further details.
- Contains a mixture of the *cis*/*trans* isomers of PFECHS at a ratio of 2:3 (*cis*:*trans*).
- Contains ~ 1.5% of other isomeric impurities.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/09/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

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-PFPrS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFPrS)

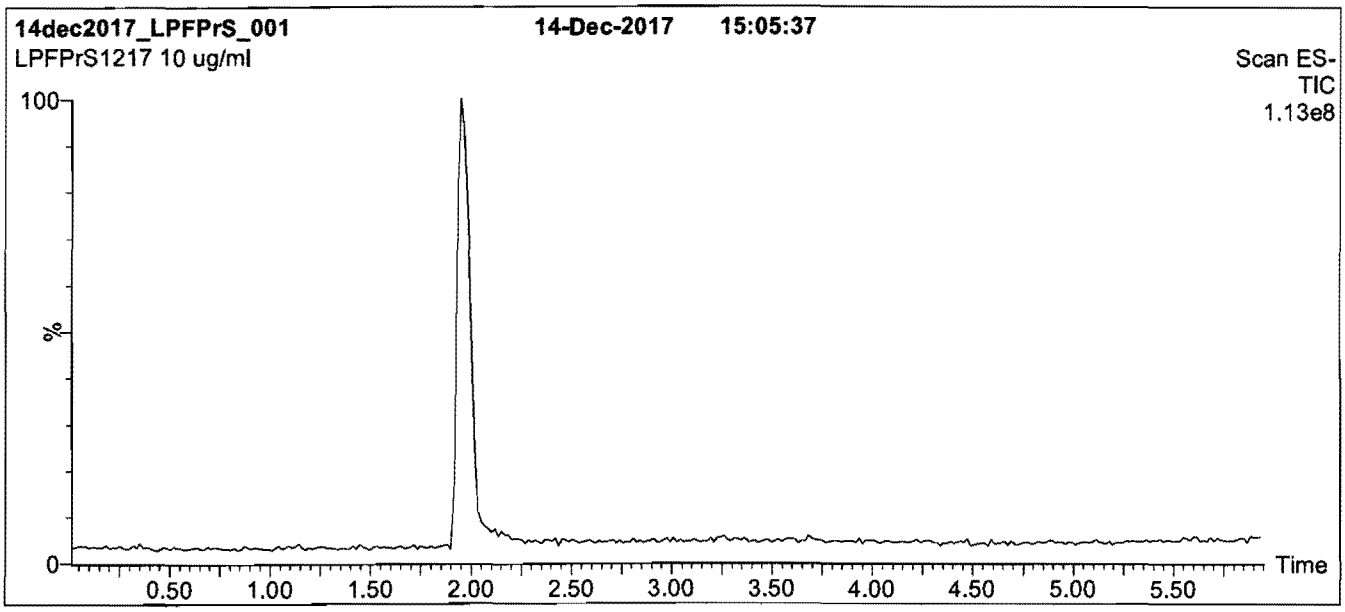
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

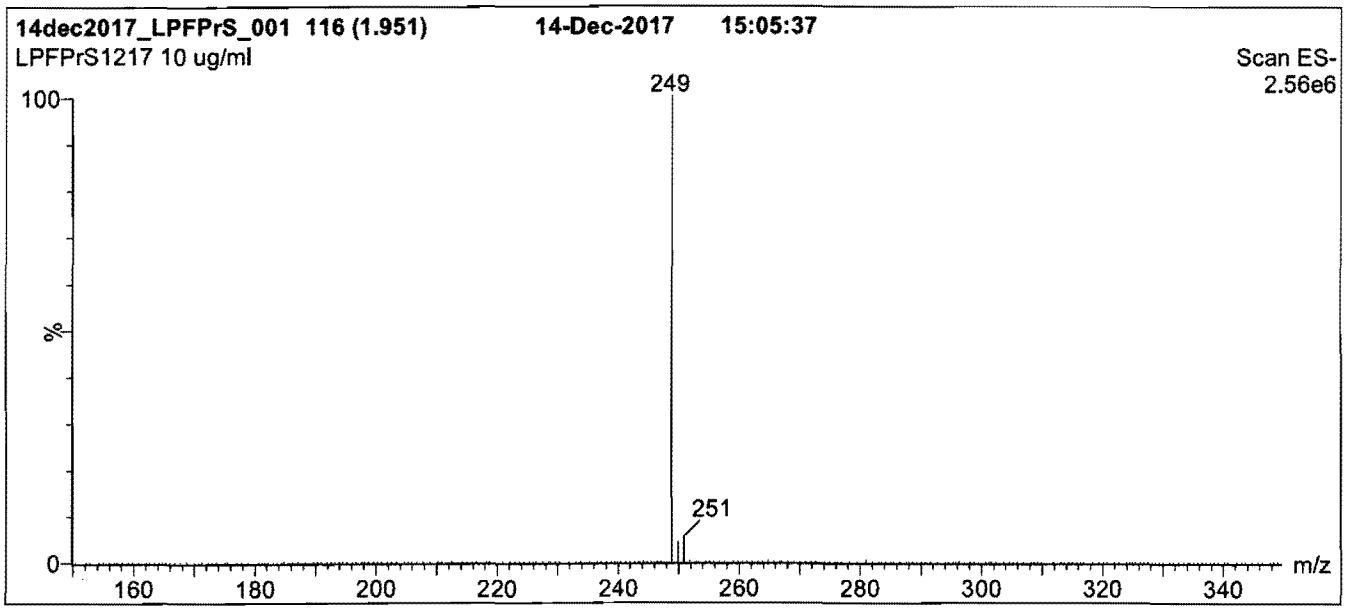
Flow: 300 µl/min

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

191067

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.

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.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. 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 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

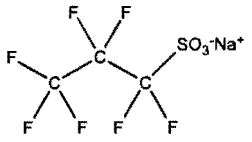
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

1L0671

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

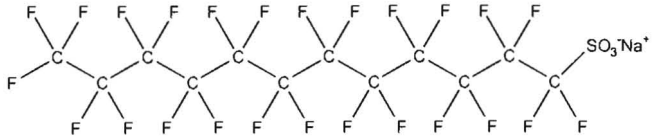
19L1707

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:

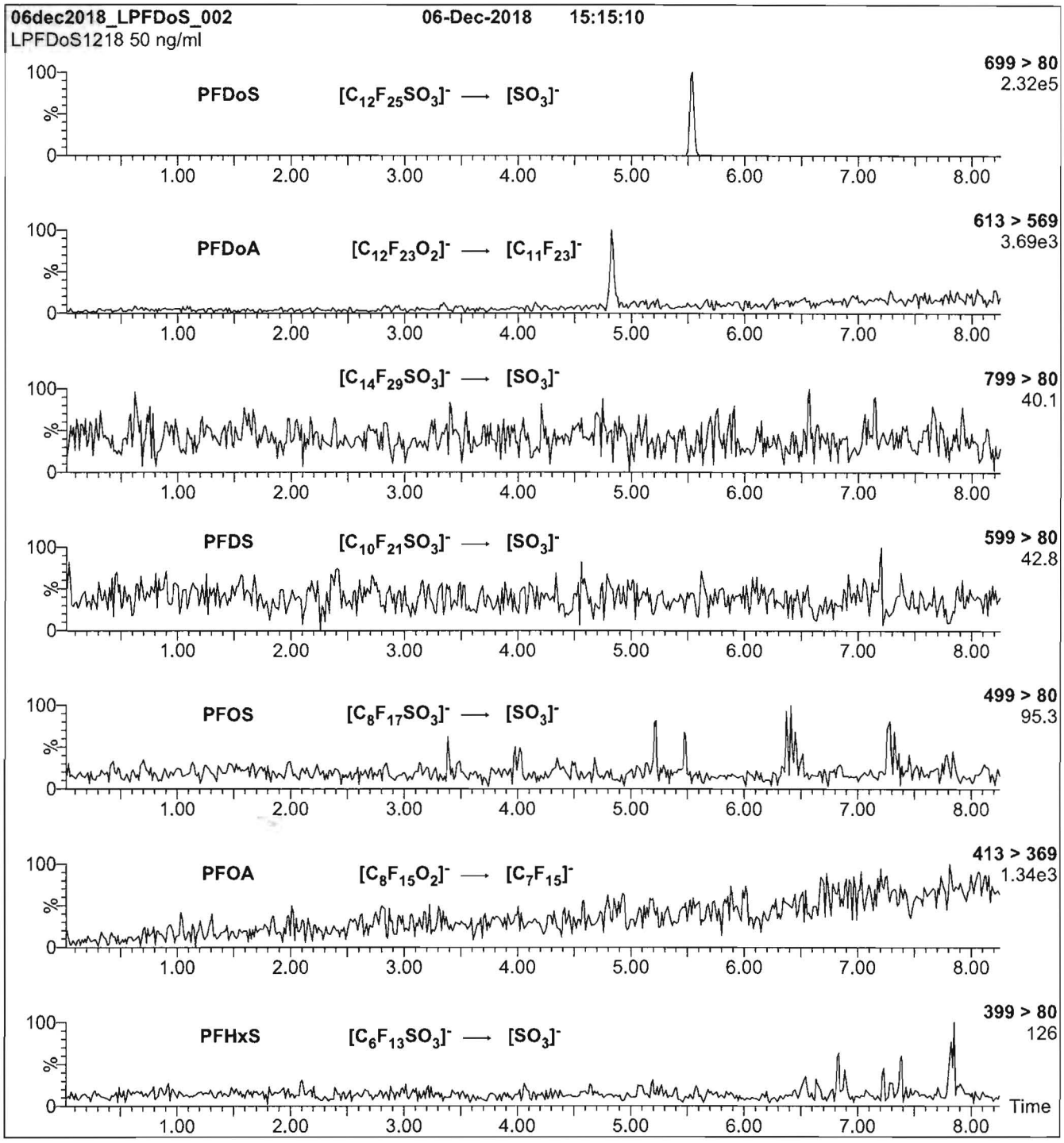
- See page 2 for further details.
- Contains ~ 0.2% of perfluoro-n-dodecanoic acid (PFDoA).

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)

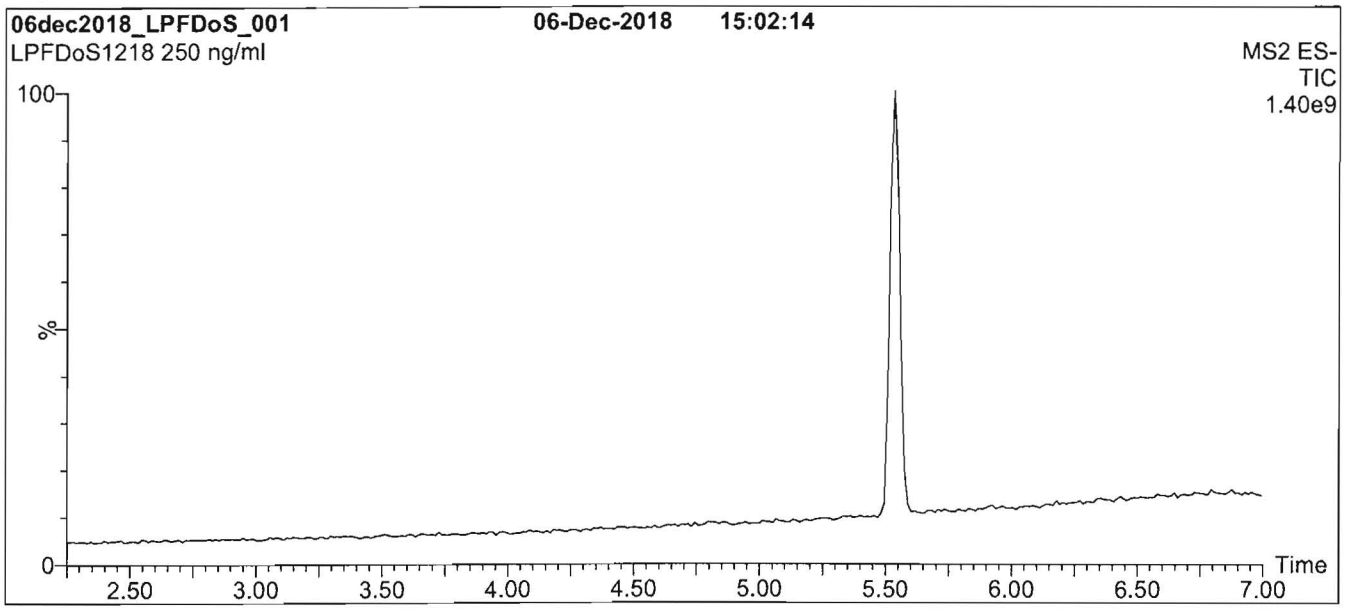
Mobile phase: Same as Figure 1

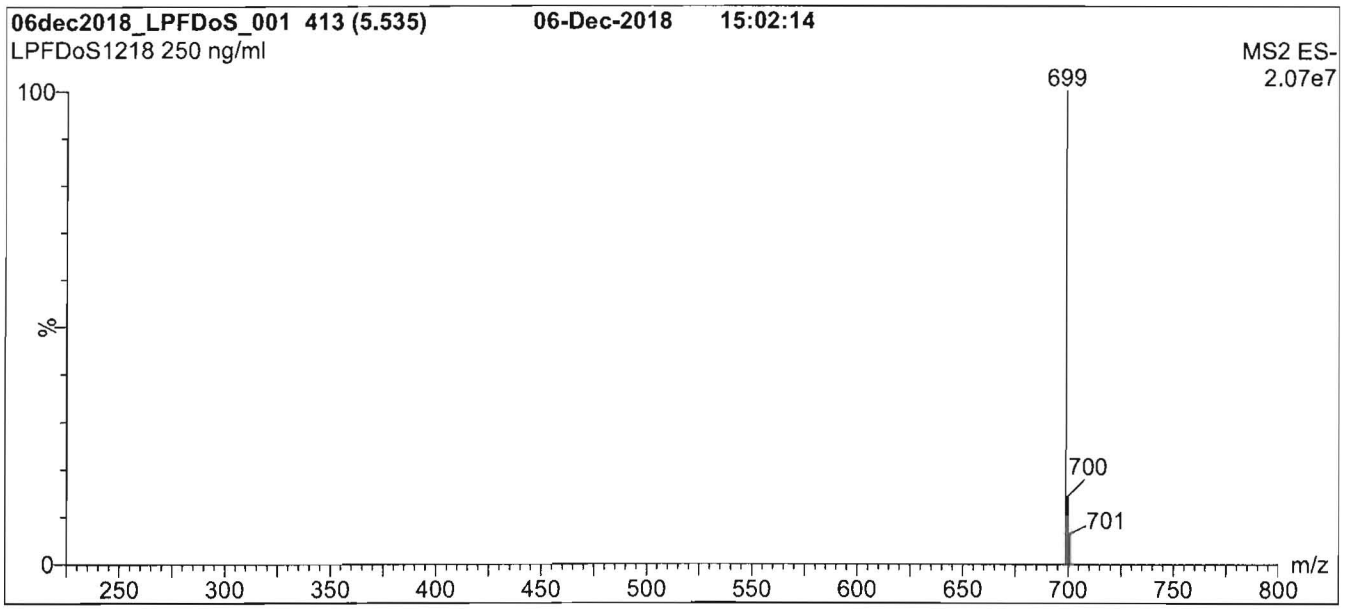
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.27e-3
Collision Energy (eV) = 60

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:

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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:

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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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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:

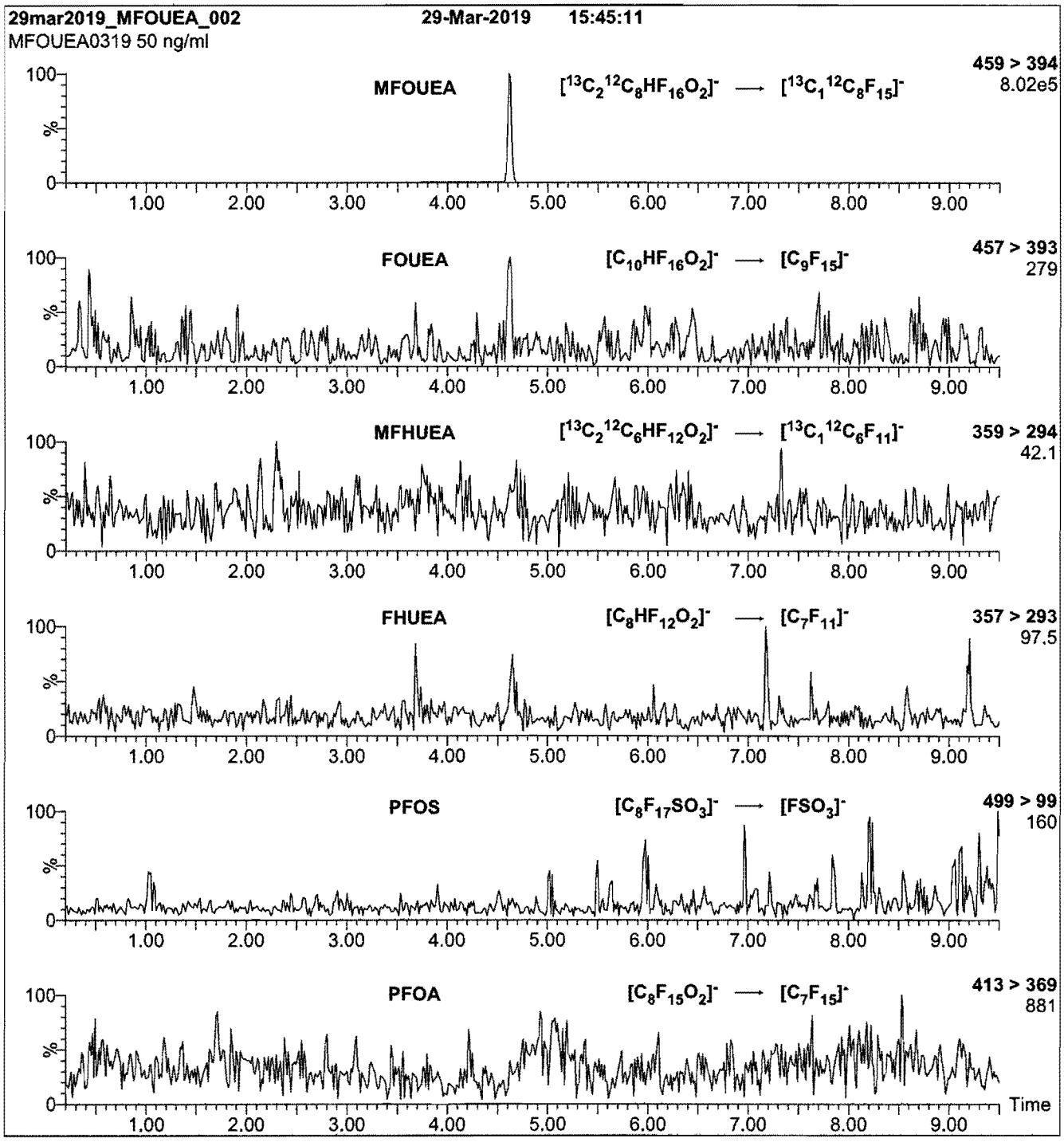
Standard	Description	Prepared	Prepared By	Expires	(mls)
19L0626	13C2-FOUEA	06-Dec-19	** Vendor **	29-Mar-21	1
19L0627	13C4-PFBA	06-Dec-19	** Vendor **	15-Nov-24	1
19L0628	13C6-PFDA	06-Dec-19	** Vendor **	25-Jul-24	1
19L0629	13C9-PFNA	06-Dec-19	** Vendor **	08-Sep-23	1
19L0630	13C7-PFUdA	06-Dec-19	** 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)

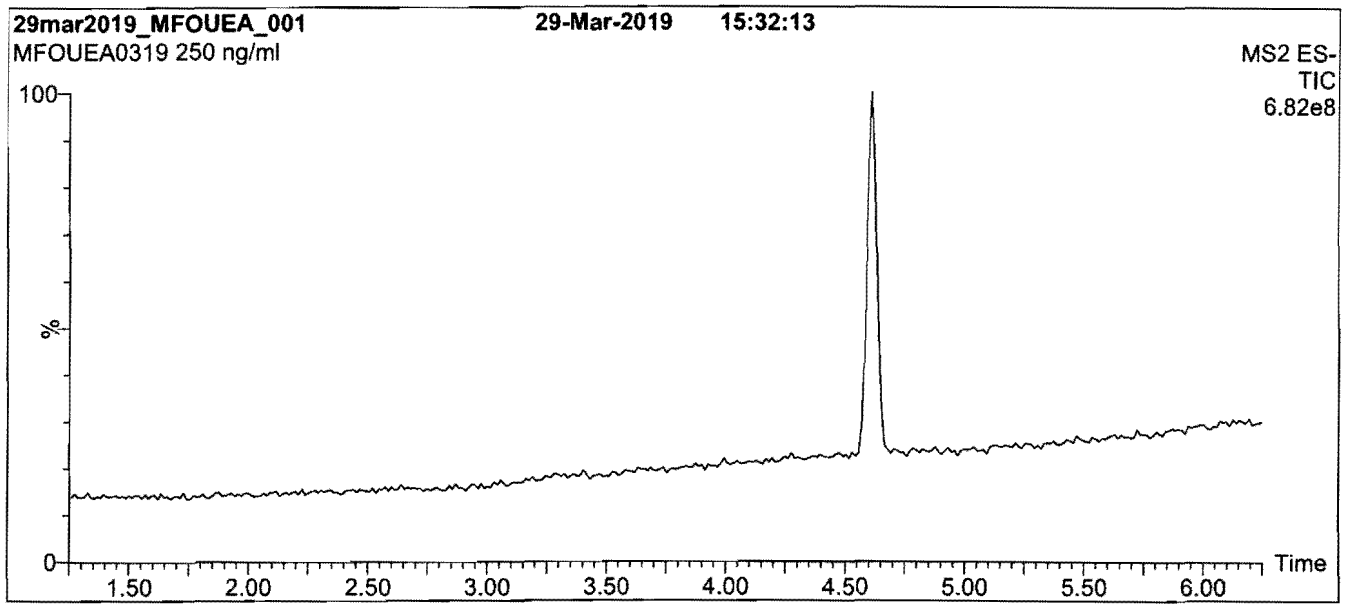
Mobile phase: Same as Figure 1

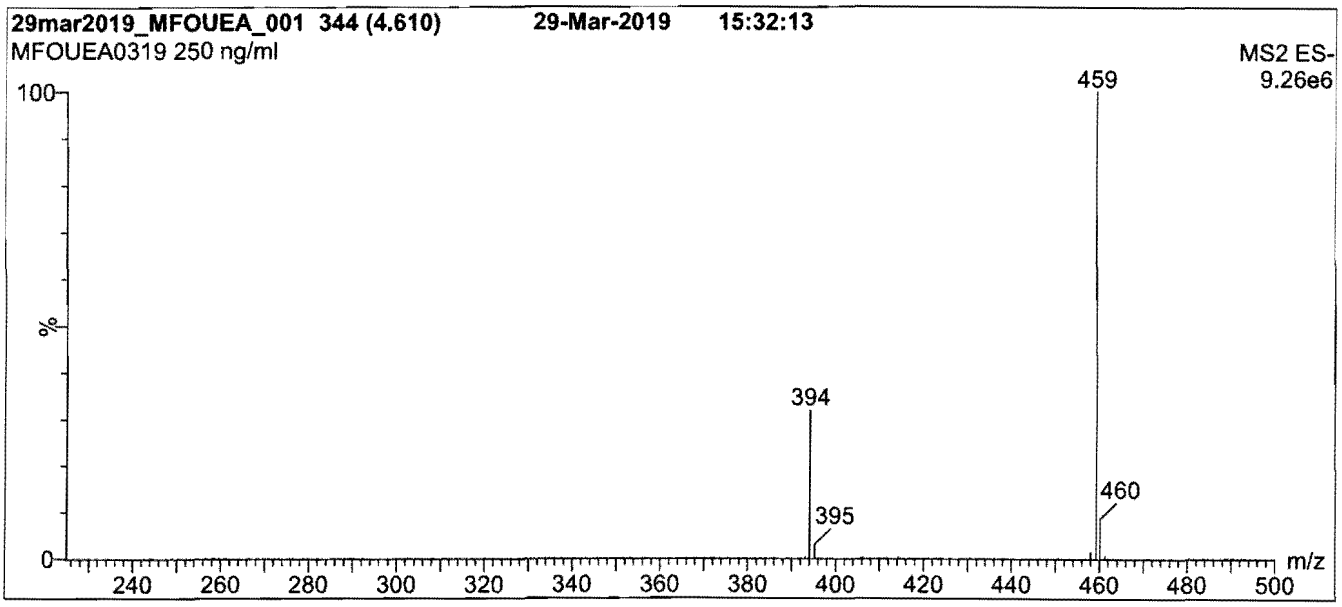
Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.84e-3
Collision Energy (eV) = 10

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:

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

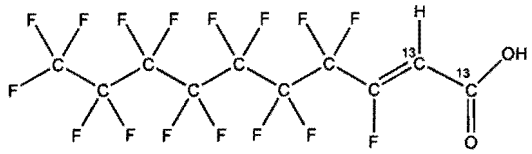
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

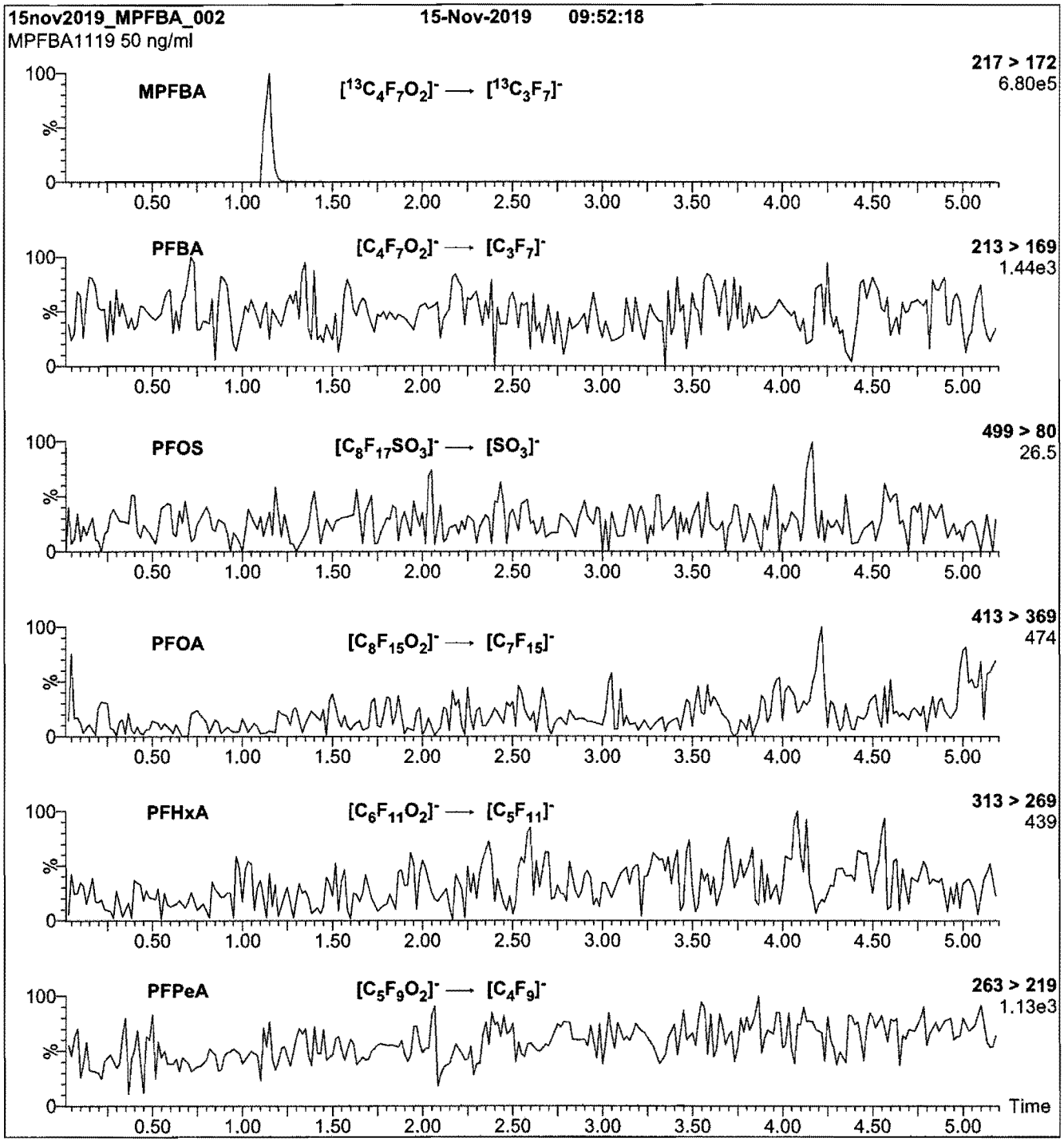
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

19L0627

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFBA)

Mobile phase: Same as Figure 1

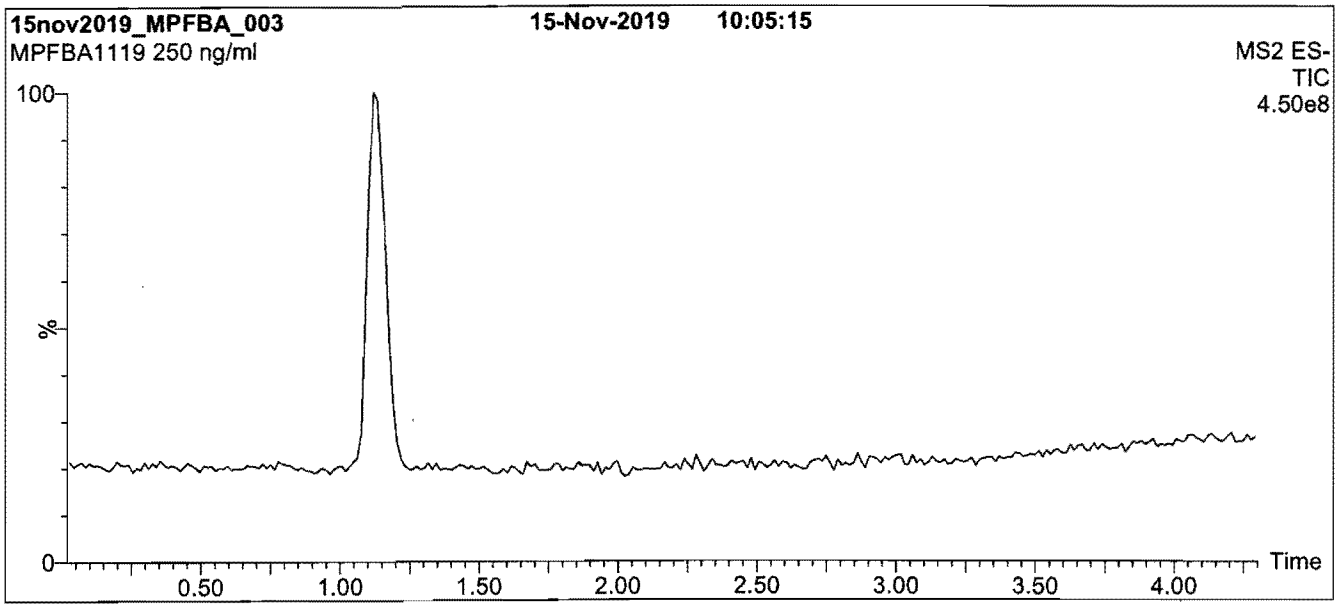
Flow: 300 µl/min

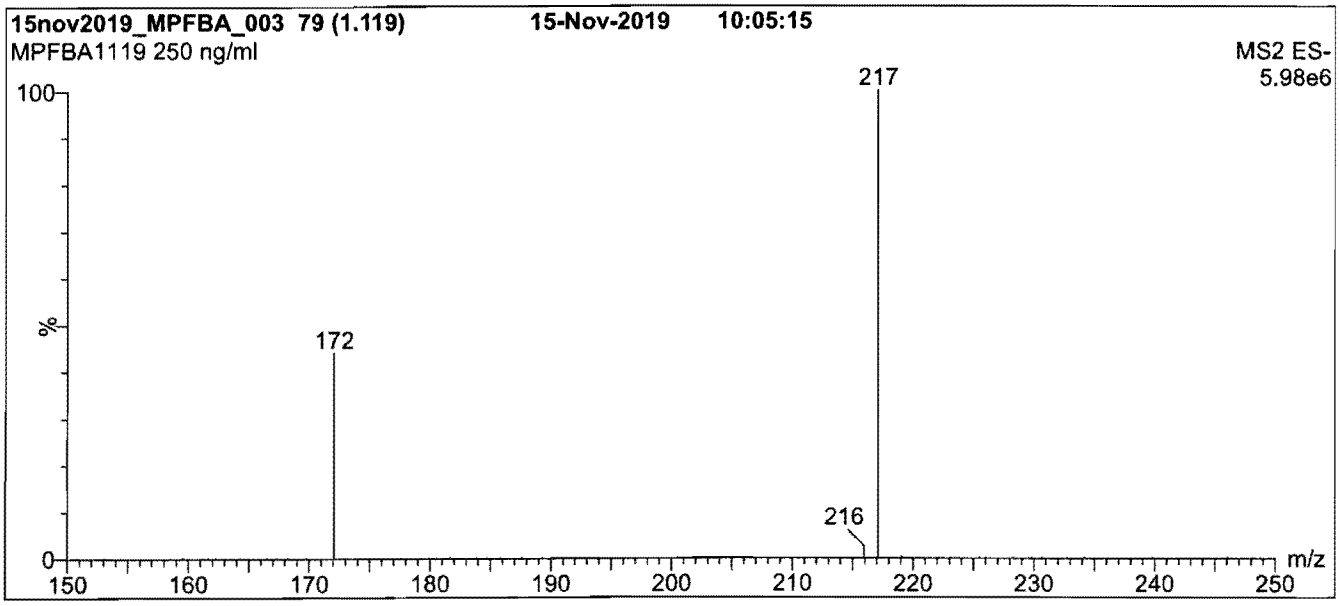
MS Parameters

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:

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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. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

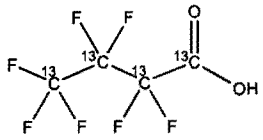
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

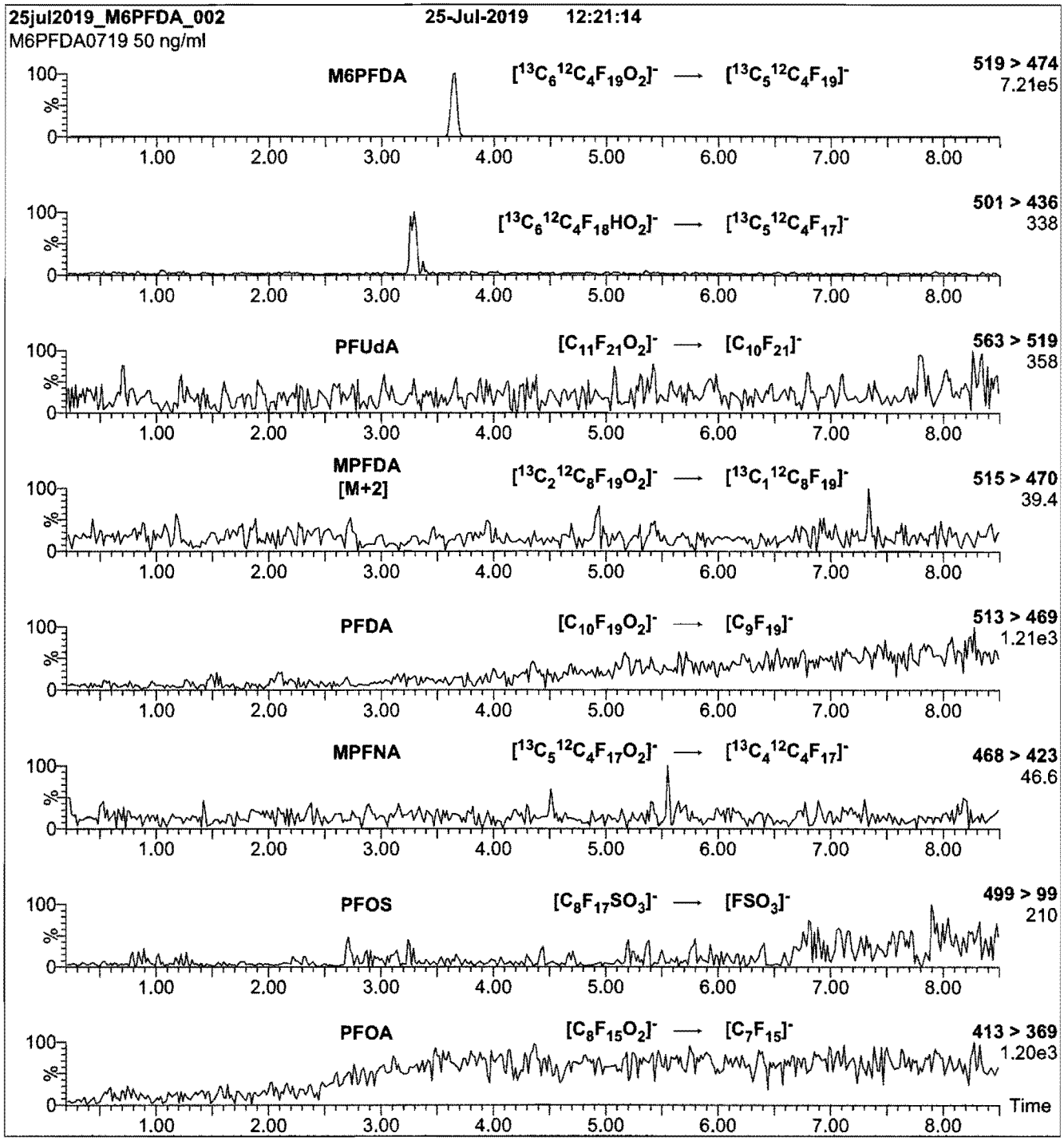
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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

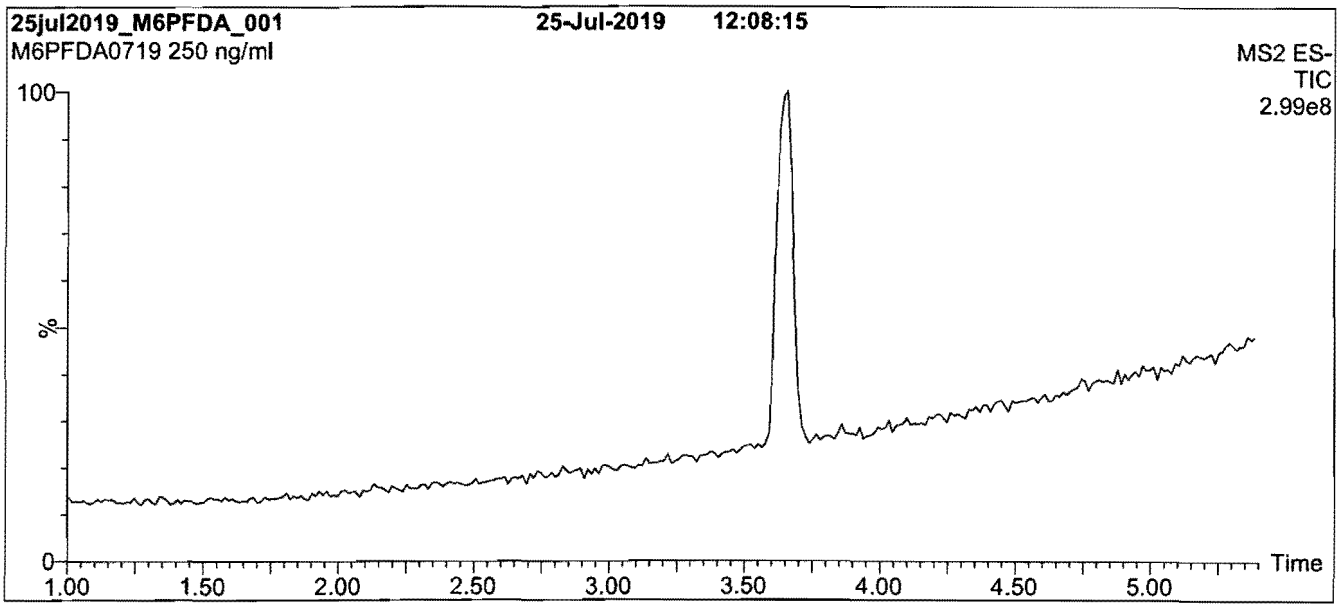
Flow: 300 µl/min

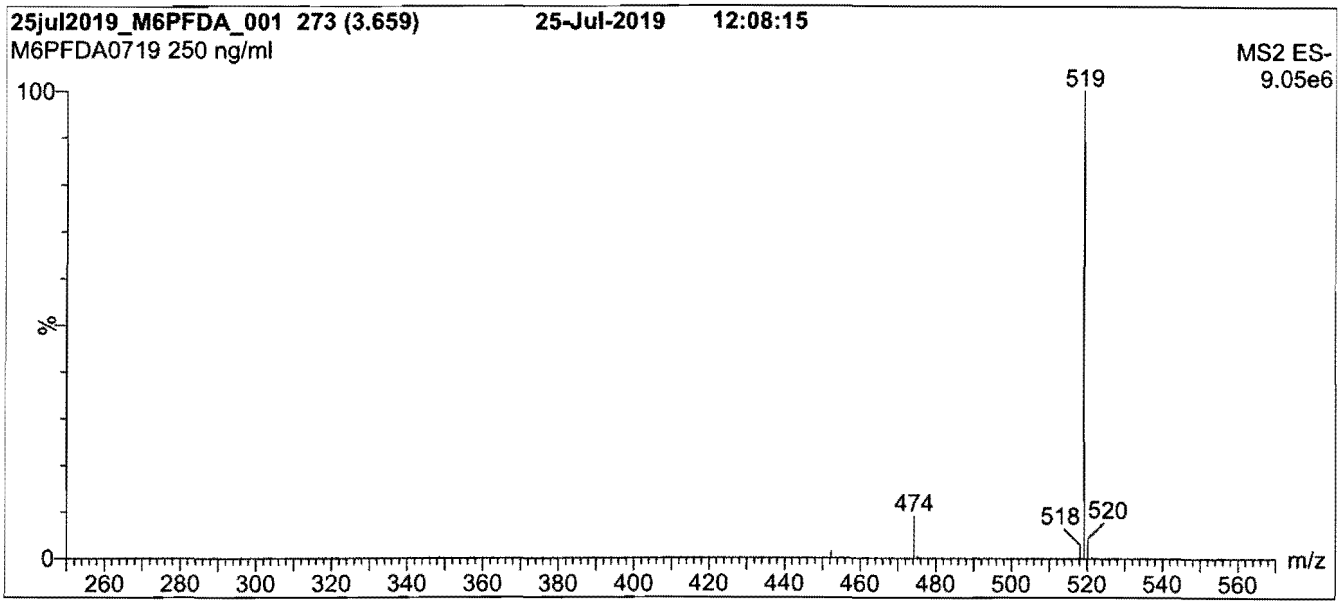
MS Parameters

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:

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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.

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

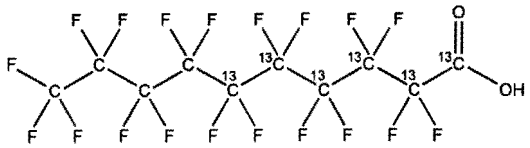
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

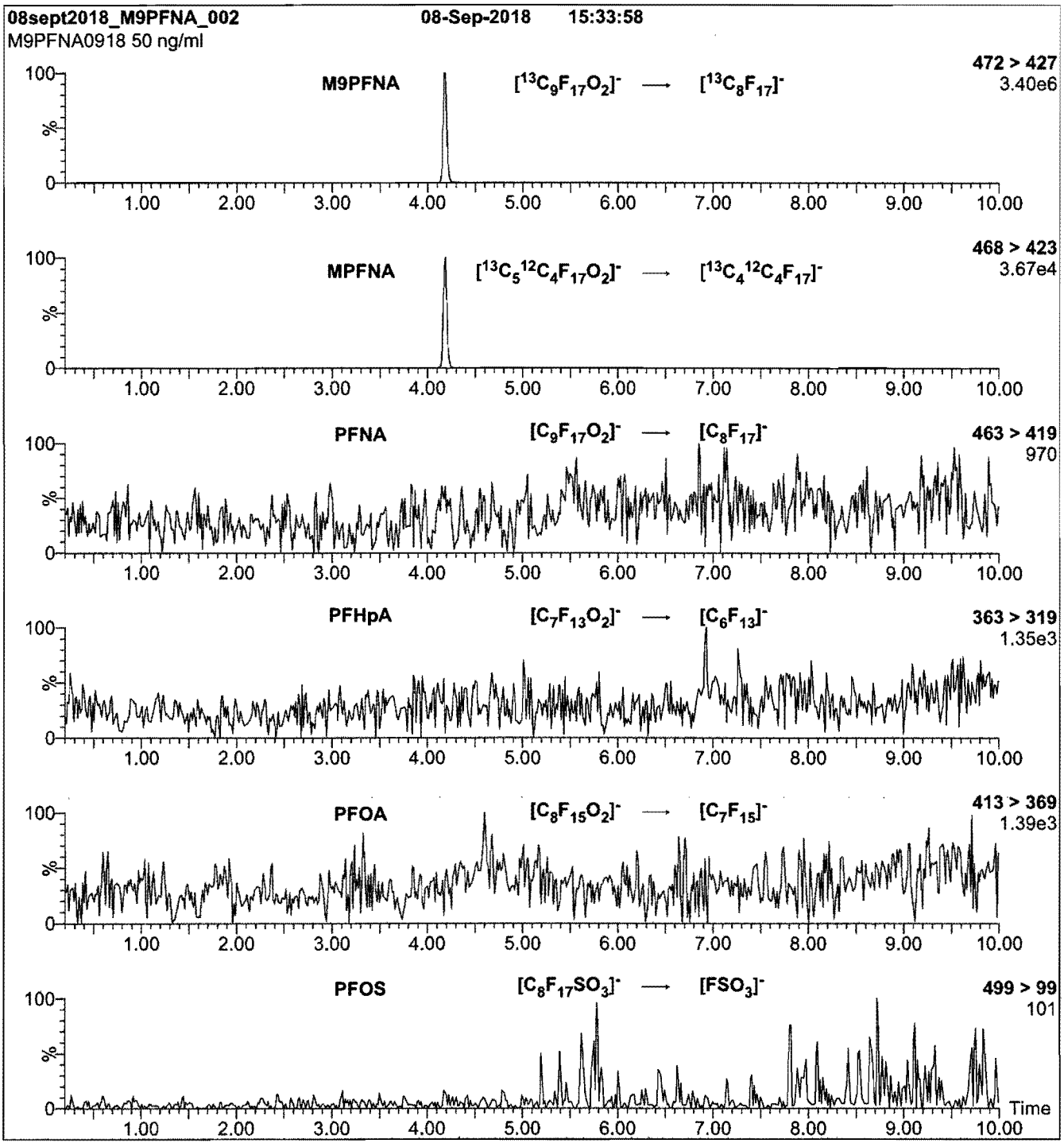
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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

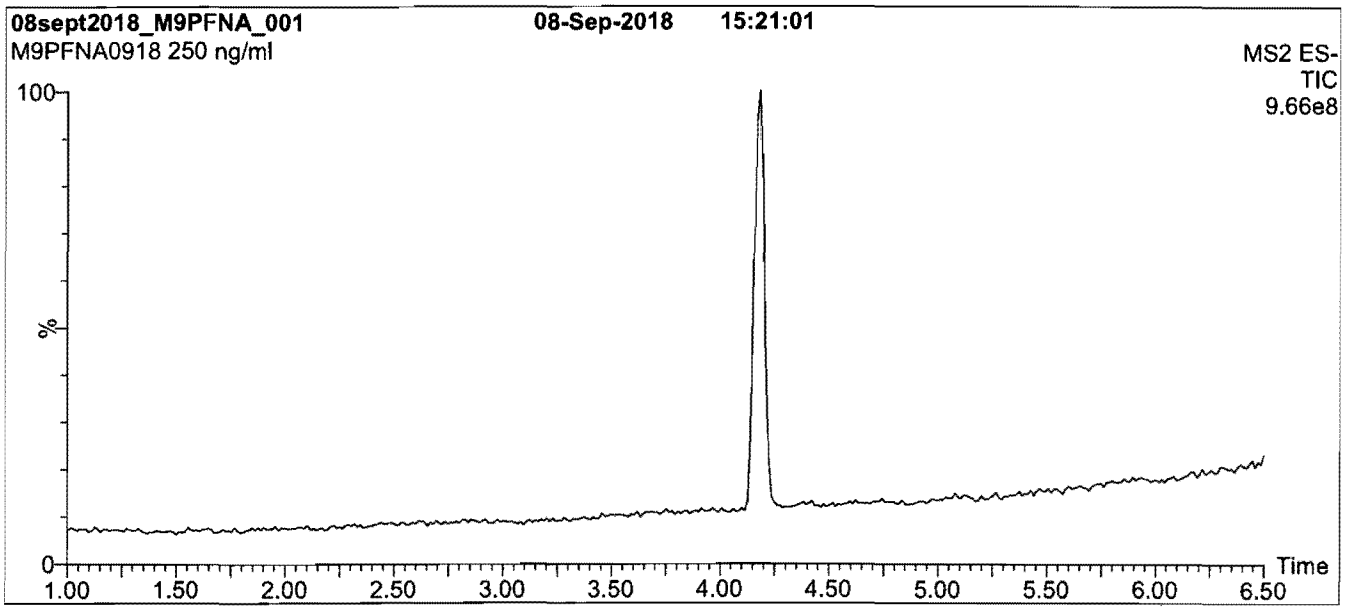
Flow: 300 µl/min

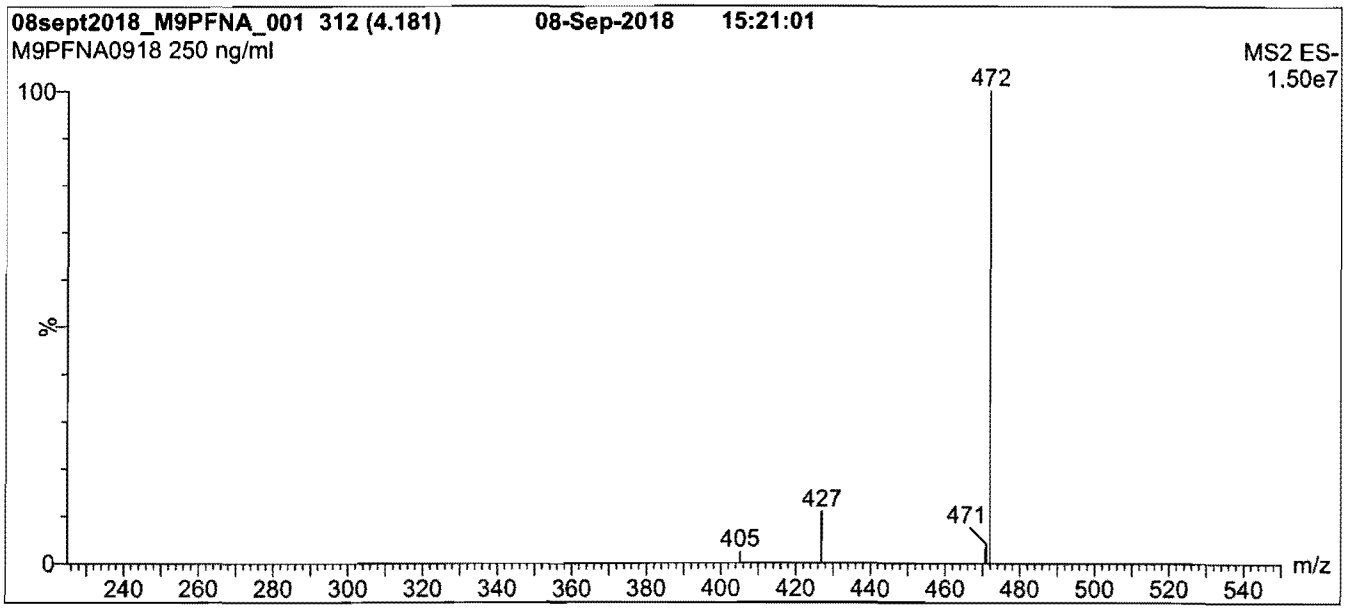
MS Parameters

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

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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 ISO 17034 REFERENCE MATERIAL PRODUCER

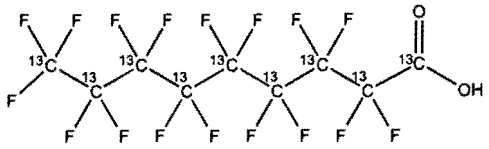
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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).

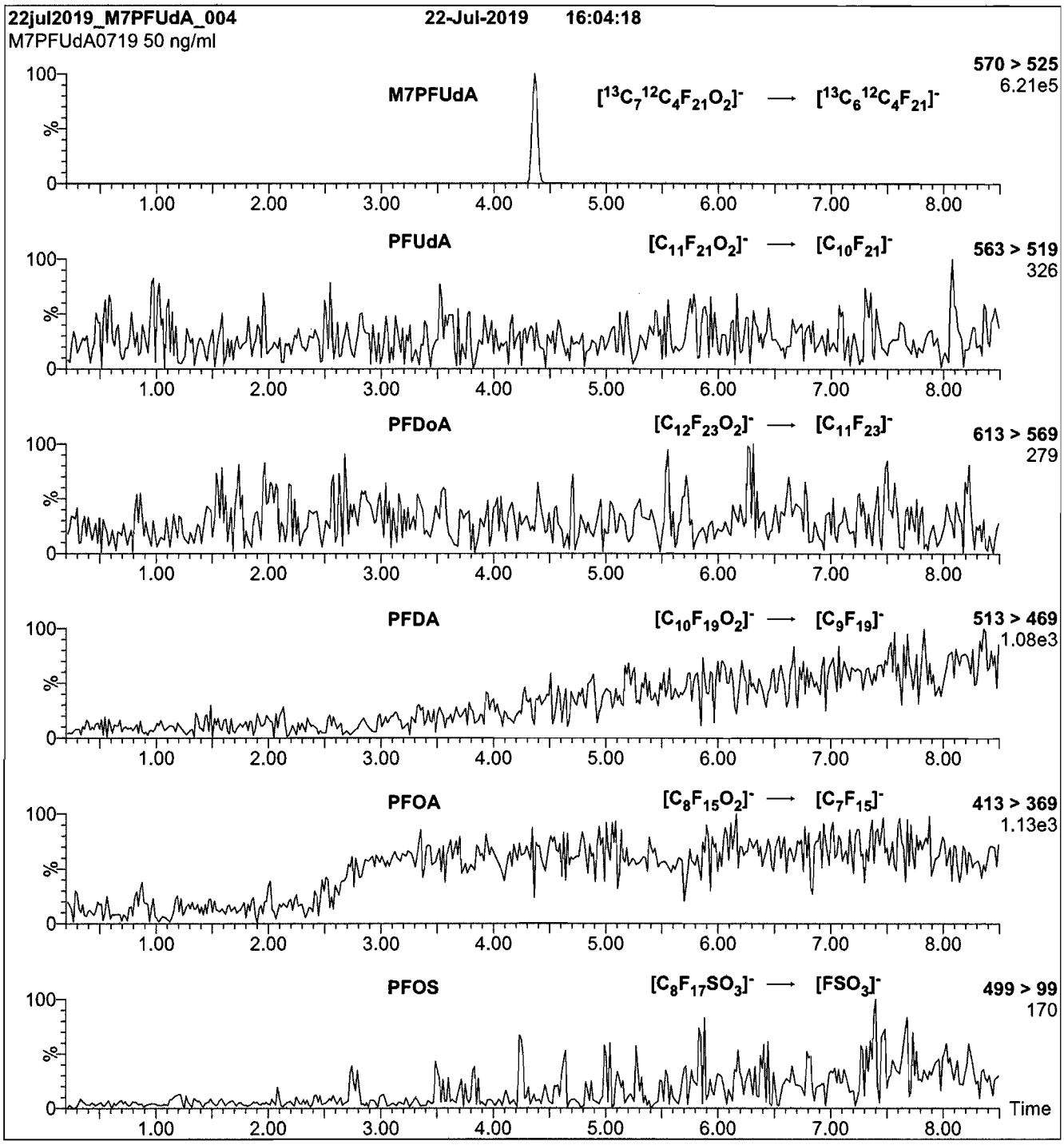
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

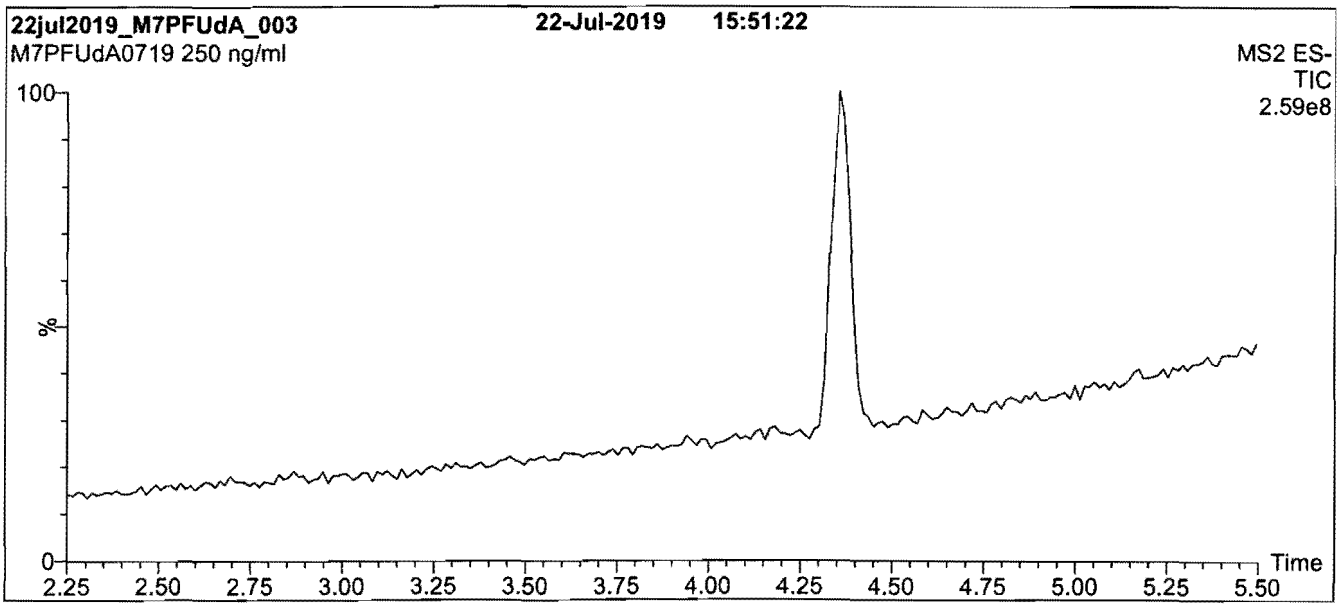
Flow: 300 µl/min

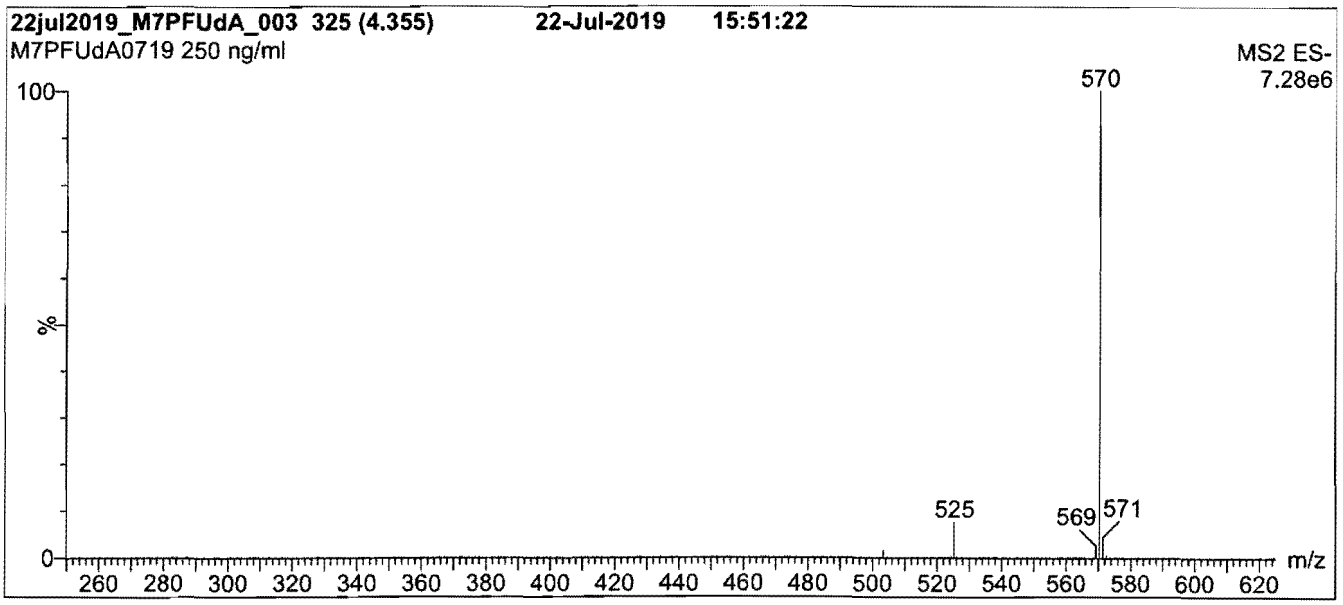
MS Parameters

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:

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:

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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. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

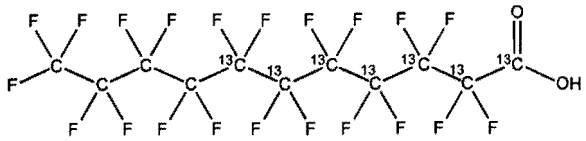
For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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.

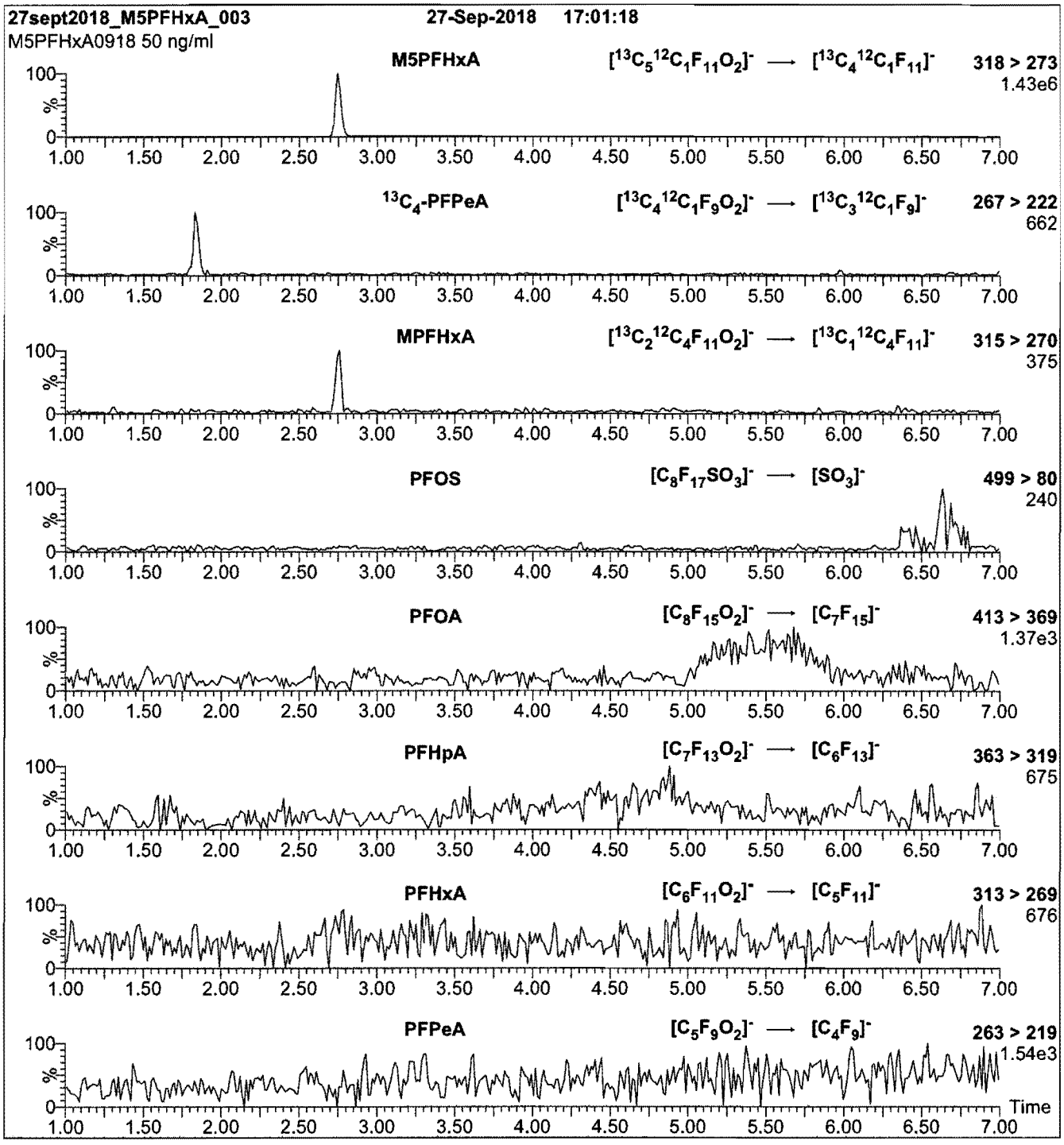
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

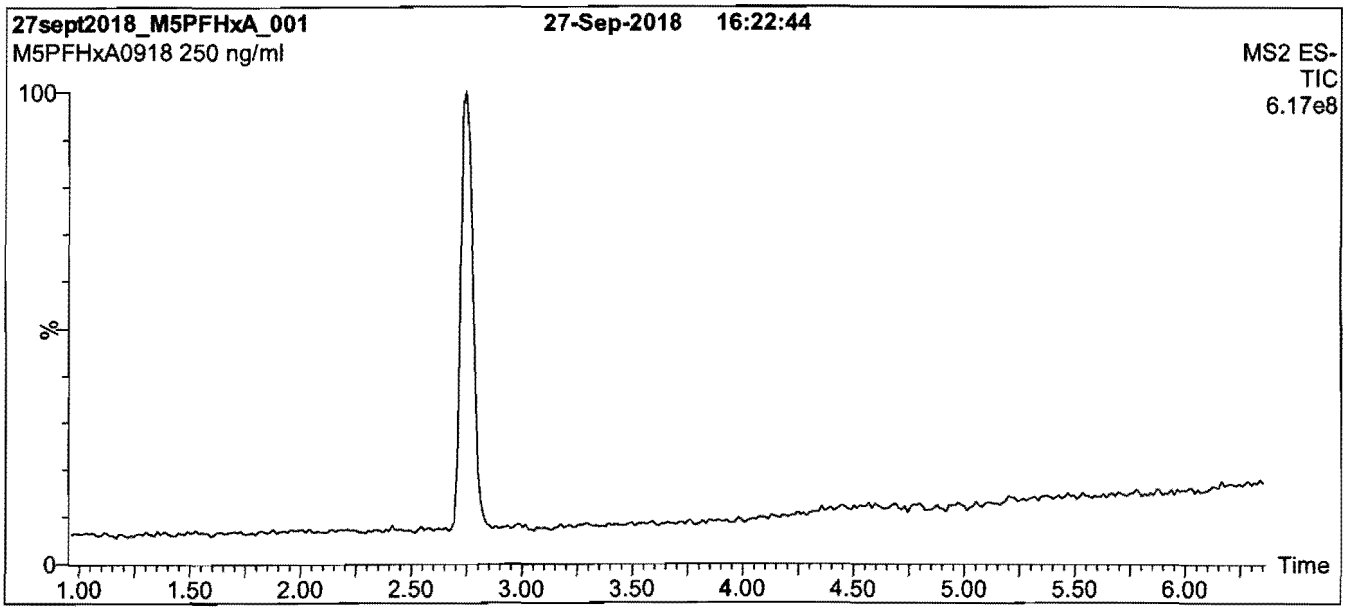
MS Parameters

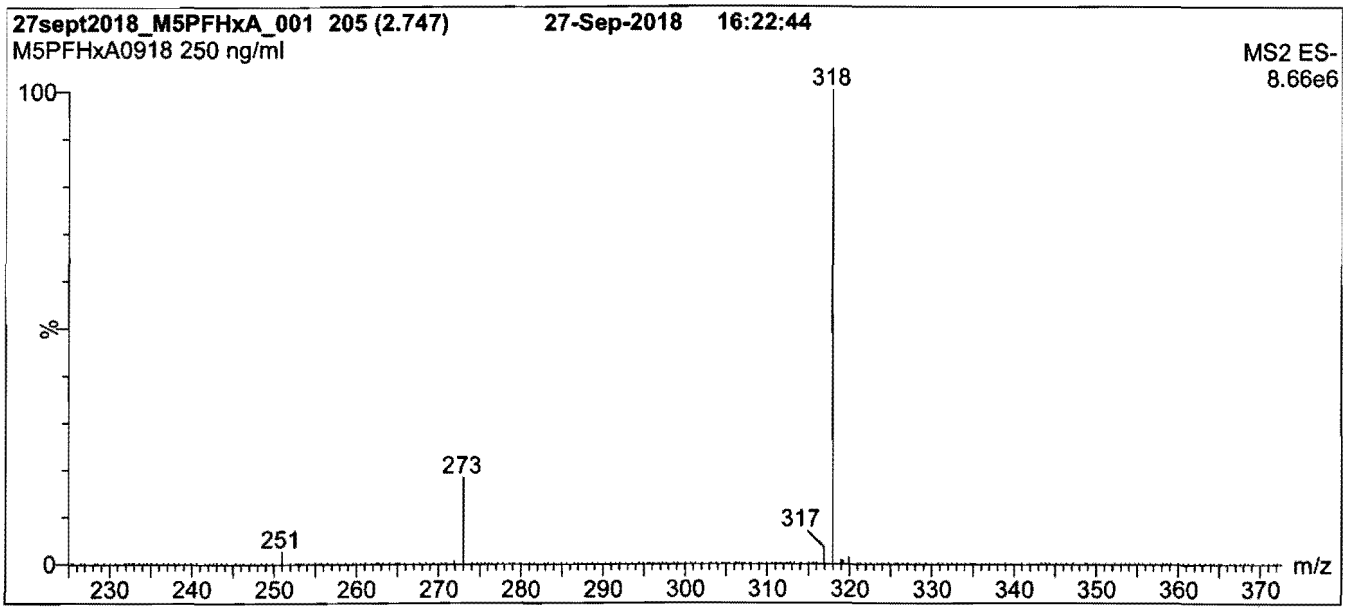
Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 8

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:

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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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UNCERTAINTY:

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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,...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:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

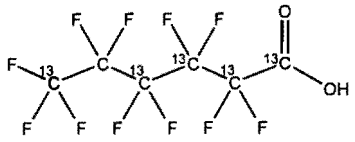
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19L0631

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:

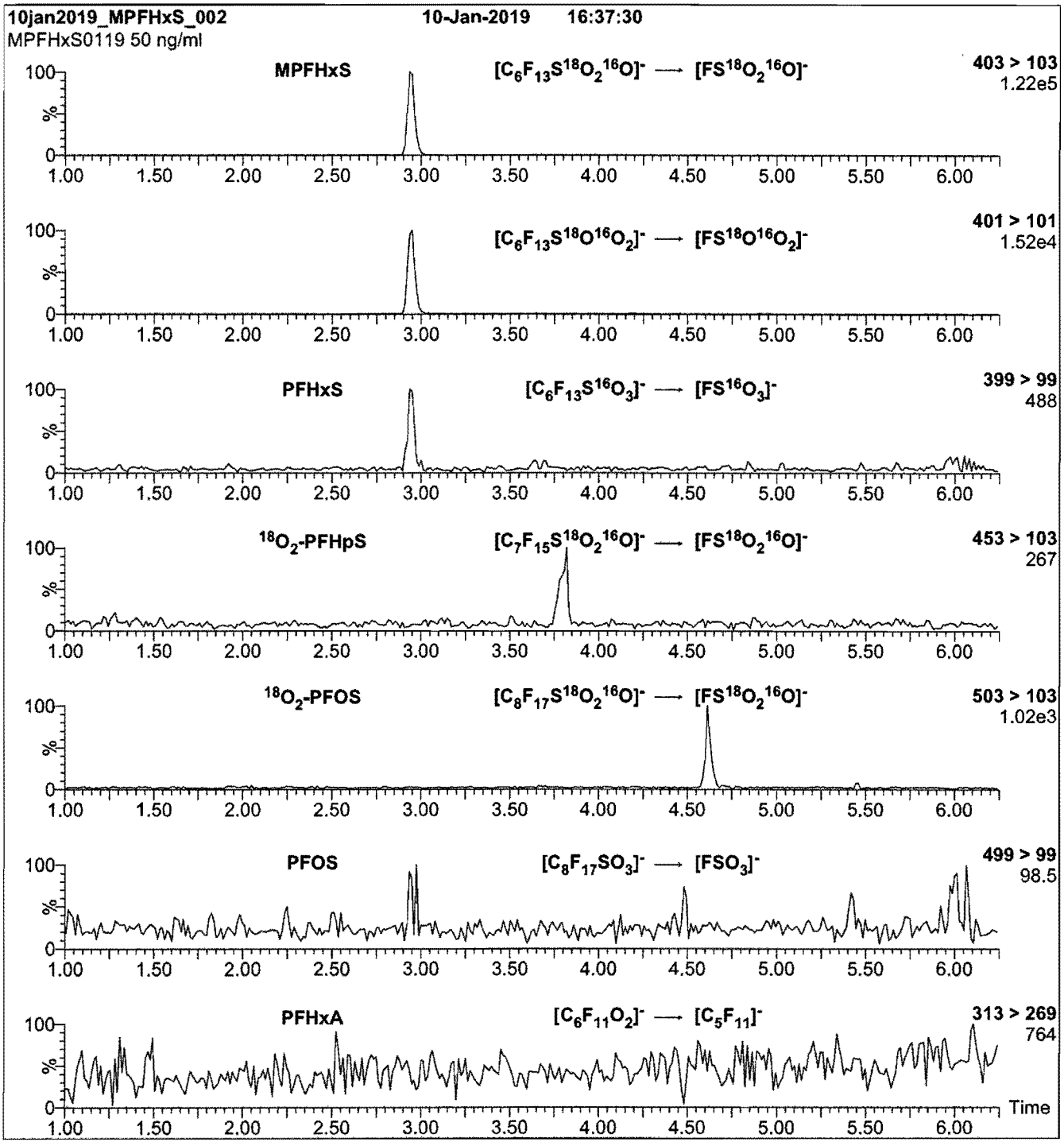
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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)

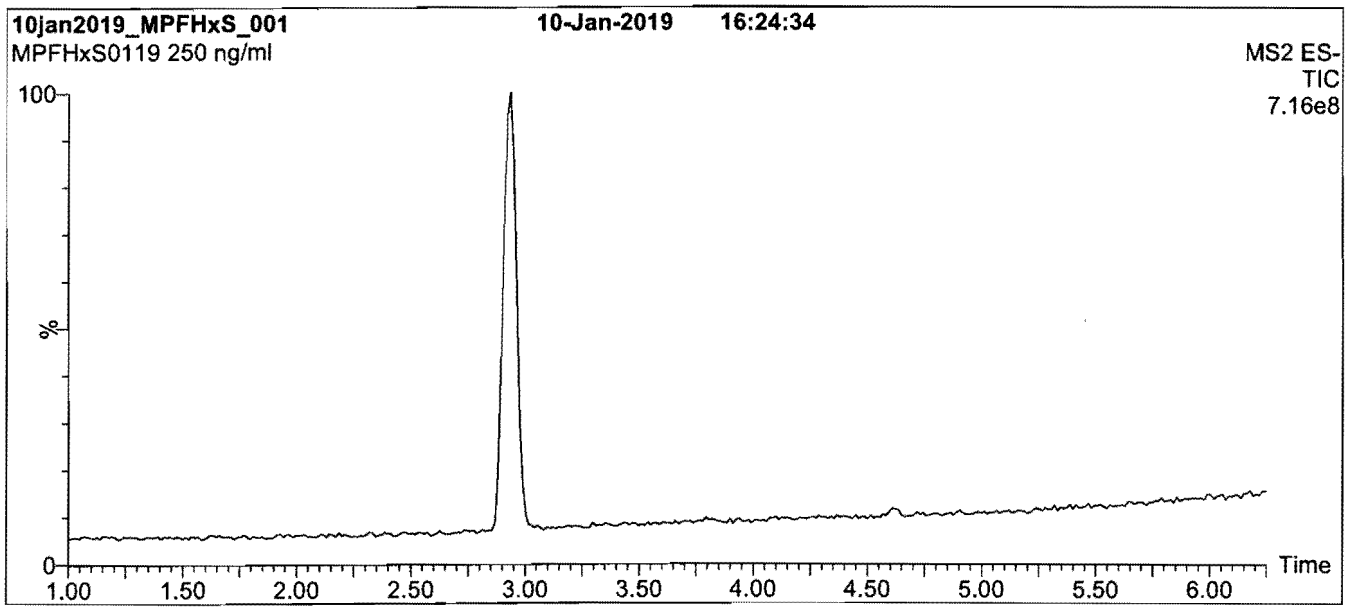
Mobile phase: Same as Figure 1

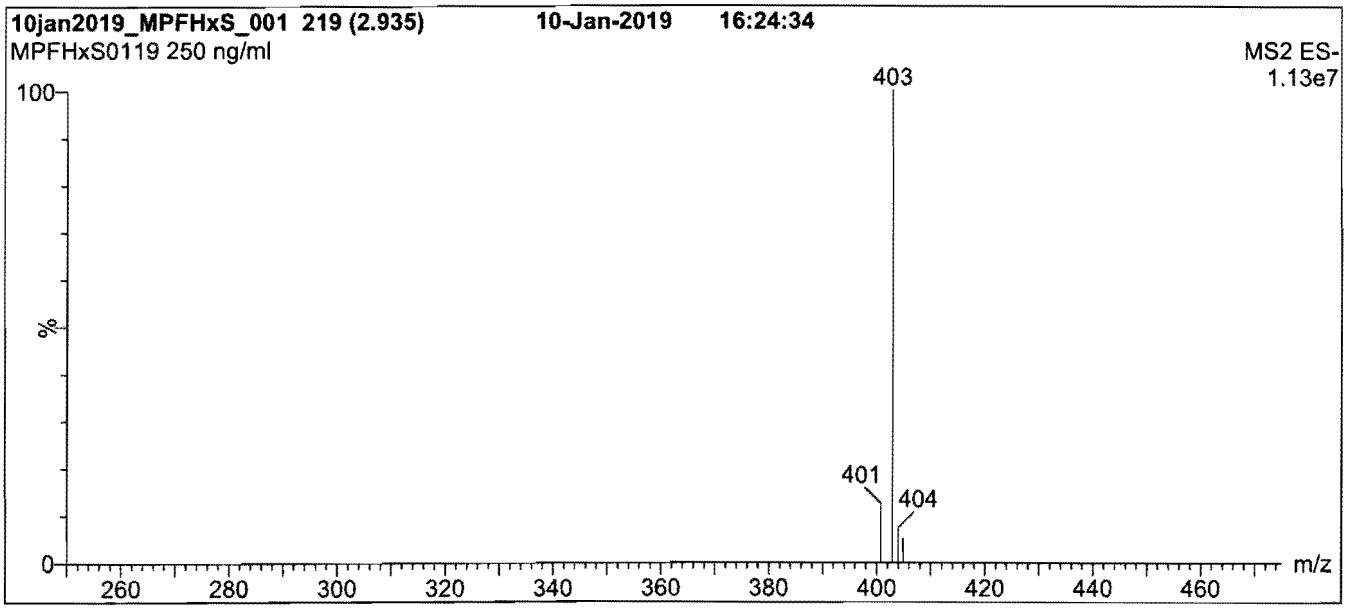
Flow: 300 µl/min

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

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

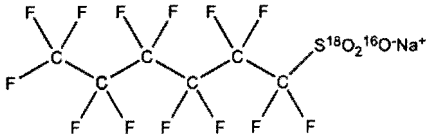
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19L0632

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:	$C_6F_{13}S^{16}O_2{}^{18}ONa$	**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:

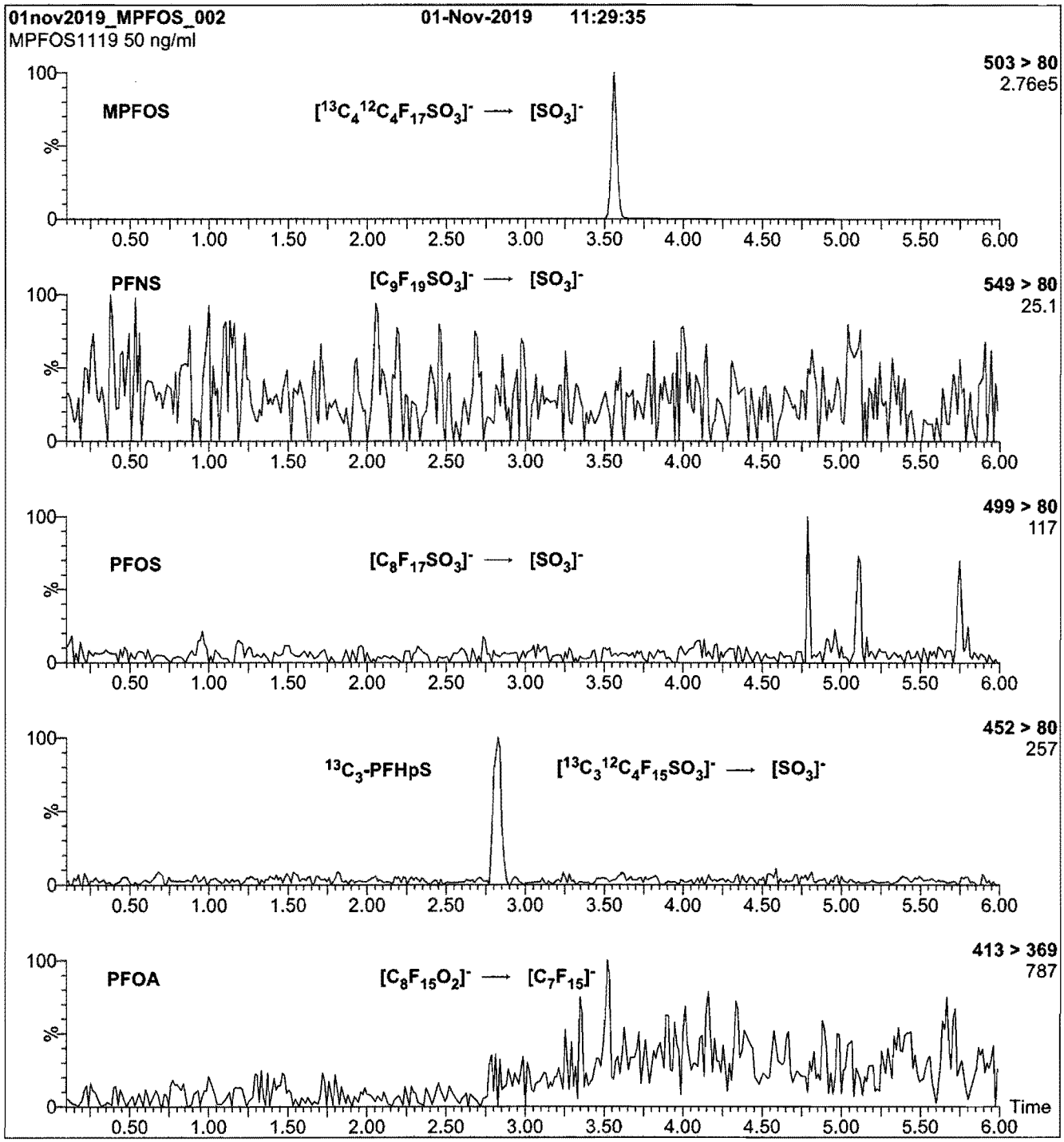
- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{16}O_2{}^{18}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 0.6% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-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

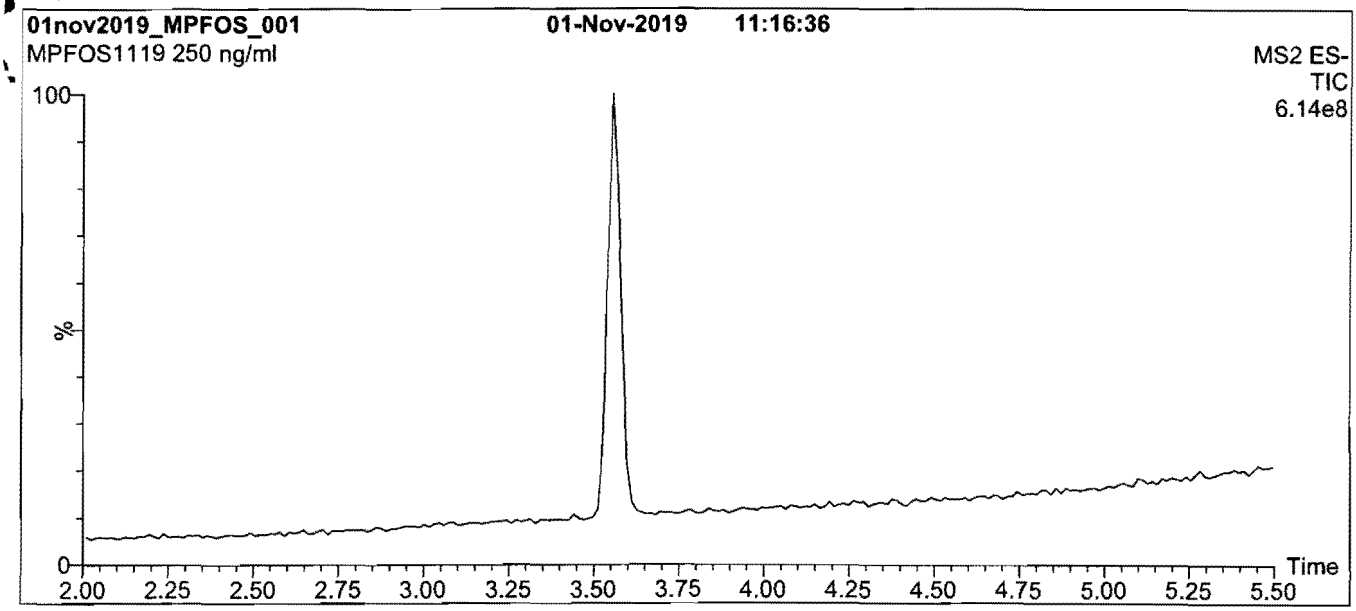
Flow: 300 µl/min

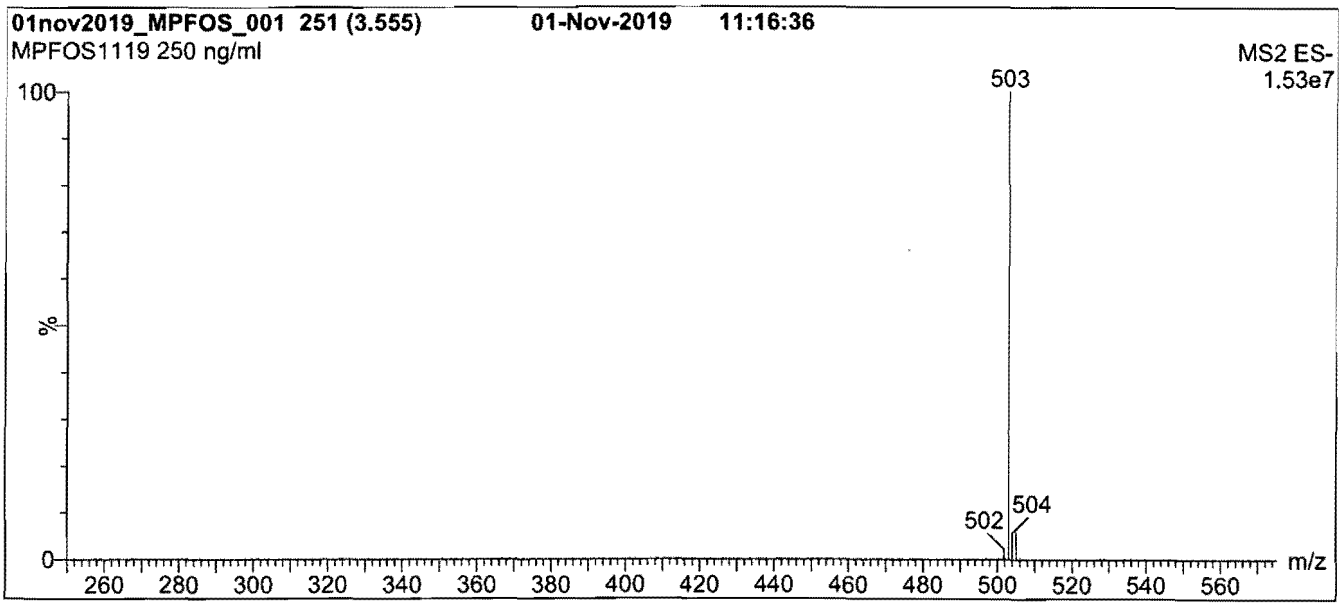
MS Parameters

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

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

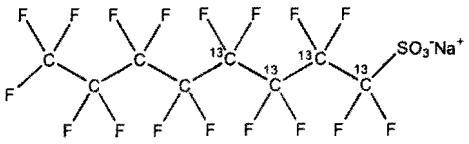
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

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 ($1,2,3,4\text{-}^{13}C_4$)
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.

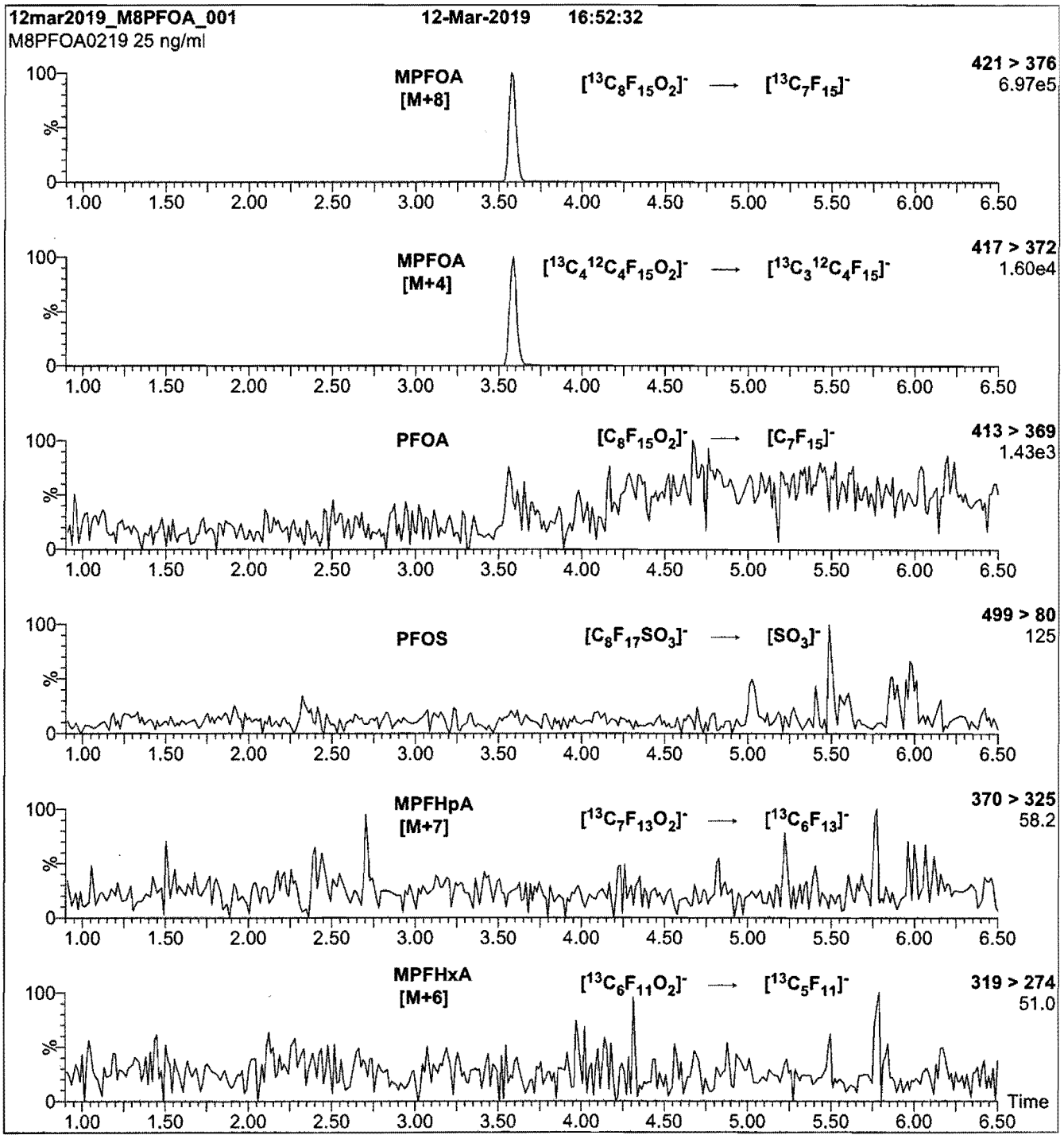
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

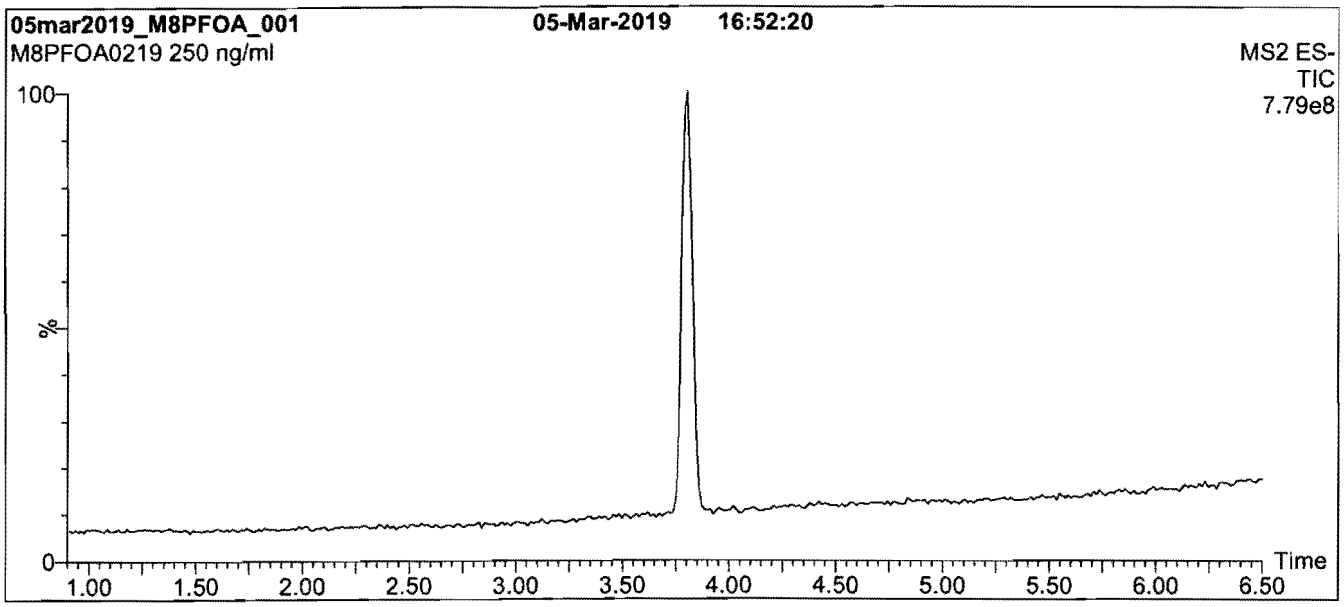
Flow: 300 µl/min

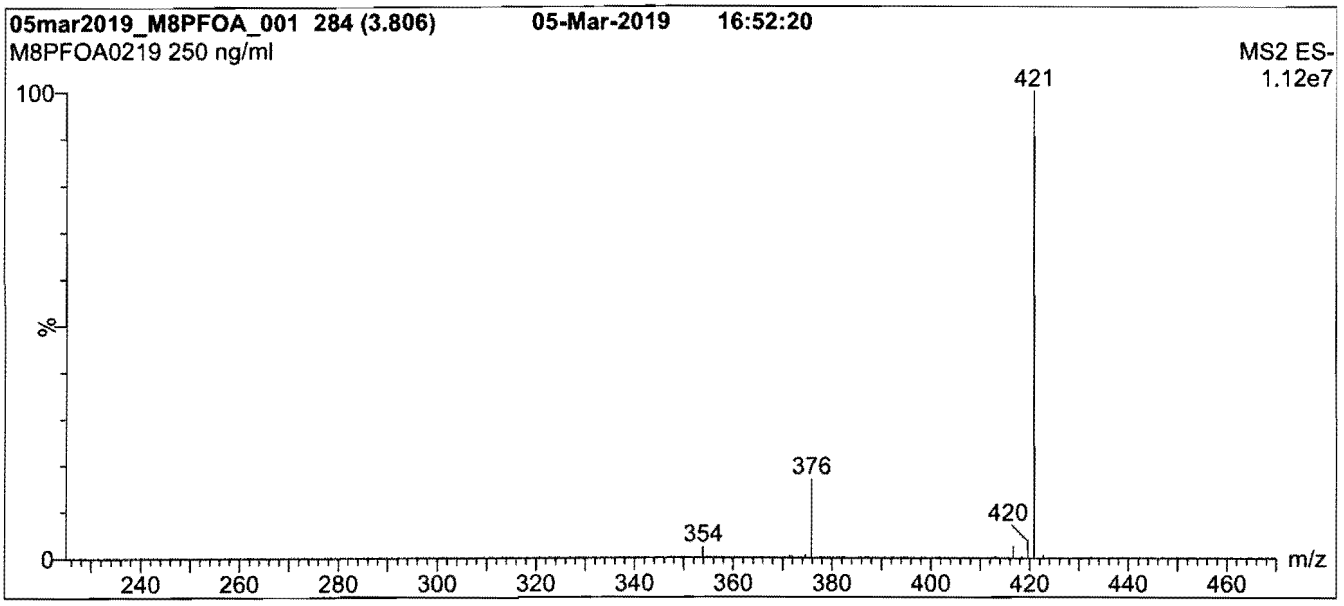
MS Parameters

Collision Gas (mbar) = 2.74e-3
Collision Energy (eV) = 8

19L0634

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

19L0634

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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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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

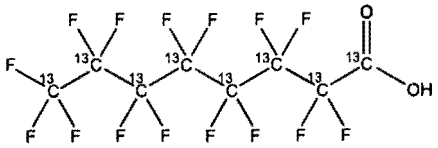
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19L0634

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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7","PFTeDA","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C3-PFBS","13C3-
PFBS","94.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.5","94.5","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C3-HFPO-DA","13C3-HFPO-
DA","81.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","81.5","81.5","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFHxA","13C2-
PFHxA","87.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","87.3","87.3","","","","","","50","150","
","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C4-PFHpA","13C4-
PFHpA","84.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.0","84.0","","","","","","50","150","
","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C3-PFHxS","13C3-
PFHxS","78.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","78.7","78.7","","","","","","50","150","
","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C5-PFNA","13C5-
PFNA","87.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","87.6","87.6","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFOA","13C2-
PFOA","83.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","83.2","83.2","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C8-PFOS","13C8-
PFOS","84.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.1","84.1","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFDA","13C2-
PFDA","75.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","75.7","75.7","","","","","","50","150","","
","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","d3-MeFOSAA","d3-
MeFOSAA","84.0","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","84.0","84.0","","","","","","50","15
0","","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFUnA","13C2-
PFUnA","79.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","79.3","79.3","","","","","","50","150","
","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","d5-EtFOSAA","d5-
EtFOSAA","80.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","80.1","80.1","","","","","","50","150
","","","","","
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFDoA","13C2-

PFDoA","69.5","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","69.5","69.5","","","","","","50","150","
","","","",""
"I003MW12S-20200214","537_MOD","02/27/20","18:19","N","NA","000","13C2-PFTeDA","13C2-
PFTeDA","72.8","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","72.8","72.8","","","","","","50","150"
,"","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","375-73-
5","PFBS","0.0349","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","0.155","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE
OXIDE DIMER ACID (HFPO-
DA)","","","TRG","Yes","N","U","Y","0.00237","0.00295","0.00393","UG_L","UG_L","","","","","","","","","","","","
","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","0.0547","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","919005-14-4","4,8-DIOXA-3H-
PERFLUORONONANOIC ACID
(ADONA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","355-46-
4","PERFLUOROHEXANESULFONIC ACID
(PFHXS)","0.166","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","0.403","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.0574","","TRG","Yes","Y","","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","756426-58-1","9-
CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-
PF3ONS)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","","","","","","","","","
","","","","","","","","","","",""
"DUP04-20200214","537_MOD","02/25/20","01:24","N","NA","000","763051-92-9","11-

CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","","","TRG","Yes","N","U","Y","0.00135","0.00197","0.00393","UG_L","UG_L","","","

0","","*","","",""
"I003MW14S-20200214","537_MOD","02/25/20","01:35","N","NA","000","375-73-
5","PFBS","0.301","","TRG","Yes","Y","","Y","0.00136","0.00198","0.00397","UG_L","UG_L","","","

"I003MW14S-20200214","537_MOD","02/25/20","01:35","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","","","TRG","Yes","N","U","Y","0.00136","0.00198","0.00397","UG_L","UG_L","","","

PFTeDA","52.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","52.7","52.7","","","","","","50","150"
,"","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","375-73-
5","PFBS","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID
(PFHXA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","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","","","","","","","","","","","
","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","919005-14-4","4,8-DIOXA-3H-
PERFLUORONONANOIC ACID
(ADONA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC
ACID
(PFHXS)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","","","","
","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","756426-58-1","9-
CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-
PF3ONS)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","2355-31-
9","MeFOSAA","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","2991-50-
6","EtFOSAA","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""
"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-
3-OXAUNDECANE-1-SULFONIC ACID (11Cl-
PF3OUdS)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","","","","","","","
","","","","","","","",""

"B0B0137-BLK1","537_MOD","02/25/20","00:11","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","","","TRG","Yes","N","U","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","

"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","0.0367","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0367","91.6","","","","","","72","129","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0329","","TRG","Yes","Y","","Y","0.00241","0.00300","0.00400","UG_L","UG_L","","","","0.0400","0.0329","82.1","","","","","","70","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","0.0350","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0350","87.5","","","","","","72","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","919005-14-4","4,8-DIOXA-3H-PERFLUORONONANOIC ACID (ADONA)","0.0338","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0338","84.5","","","","","","70","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC ACID (PFHXS)","0.0391","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0391","97.7","","","","","","68","131","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","335-67-1","PERFLUOROOCTANOIC ACID (PFOA)","0.0354","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0354","88.5","","","","","","71","133","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","375-95-1","PERFLUORONONANOIC ACID (PFNA)","0.0348","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0348","87.0","","","","","","69","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","1763-23-1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION","0.0359","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0359","89.7","","","","","","65","140","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","756426-58-1","9-CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-PF3ONS)","0.0367","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0367","91.8","","","","","","70","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","335-76-2","PERFLUORODECANOIC ACID (PFDA)","0.0368","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0368","91.9","","","","","","71","129","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","2355-31-9","MeFOSAA","0.0375","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0375","93.8","","","","","","65","136","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","2991-50-6","EtFOSAA","0.0348","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0348","87.1","","","","","","61","135","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID (PFUNA)","0.0355","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0355","88.8","","","","","","69","133","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-OXAUNDECANE-1-SULFONIC ACID (11Cl-PF3OUdS)","0.0352","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0352","88.0","","","","","","70","130","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID (PFDOA)","0.0295","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0295","73.7","","","","","","72","134","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","72629-94-8","PFTrDA","0.0297","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0297","74.3","","","","","","65","144","","","",""

"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","376-06-7","PFTeDA","0.0394","","TRG","Yes","Y","","Y","0.00137","0.00200","0.00400","UG_L","UG_L","","","","0.0400","0.0394","98.5","","","","","","71","132","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C3-PFBS","13C3-PFBS","103","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","103","103","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C3-HFPO-DA","13C3-HFPO-DA","98.3","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","98.3","98.3","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFHxA","13C2-PFHxA","101","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","101","101","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C4-PFHpA","13C4-PFHpA","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C3-PFHxS","13C3-PFHxS","100","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","100","100","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C5-PFNA","13C5-PFNA","112","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","112","112","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFOA","13C2-PFOA","113","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","113","113","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C8-PFOS","13C8-PFOS","107","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","107","107","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFDA","13C2-PFDA","101","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","101","101","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","82.1","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.1","82.1","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFUnA","13C2-PFUnA","94.2","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","94.2","94.2","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","95.4","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","95.4","95.4","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFDoA","13C2-PFDoA","102","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","102","102","","","","","","50","150","","","","",""
"B0B0137-BS1","537_MOD","02/25/20","00:21","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","82.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","82.7","82.7","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","375-73-5","PFBS","0.322","","TRG","Yes","Y","H","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","0.301","0.0403","0.322","53.1","","","","","","","72","130","","+","",""
"B0B0137-MS1","537_MOD","02/29/20","04:24","N","NA","DL1","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","3.40","","TRG","Yes","Y","D","Y","0.00691","0.0101","0.0202","UG_L","UG_L","","","3.14","0.202","3.40","127","","","","","","72","129","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0438","","TRG","Yes","Y","","Y","0.00243","0.00302","0.00403","UG_L","UG_L","","","","0.0403","0.0438

","109","","","","","","70","130","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID
(PFHPA)","1.93","","TRG","Yes","Y","H","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","1.88","0.0403"
,"1.93","138","","","","","","72","130","","+","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","919005-14-4","4,8-DIOXA-3H-
PERFLUORONONANOIC ACID
(ADONA)","0.0420","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","0
.0420","104","","","","","","70","130","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC
ACID
(PFHXS)","1.84","","TRG","Yes","Y","H","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","1.82","0.0403"
,"1.84","44.2","","","","","","68","131","","+","",""
"B0B0137-MS1","537_MOD","02/29/20","04:24","N","NA","DL1","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","4.49","","TRG","Yes","Y","D,
H","Y","0.00691","0.0101","0.0202","UG_L","UG_L","","","4.36","0.202","4.49","64.4","","","","","","71","133","","+
","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","0.0689","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","0.0268","0.040
3","0.0689","105","","","","","","69","130","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.645","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","0.601","0.0403","0.645",
"111","","","","","","65","140","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","756426-58-1","9-
CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-
PF3ONS)","0.0416","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","0.
0416","103","","","","","","70","130","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","0.0448","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","0.0
448","110","","","","","","71","129","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","2355-31-
9","MeFOSAA","0.0426","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.040
3","0.0426","106","","","","","","65","136","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","2991-50-
6","EtFOSAA","0.0384","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403
","0.0384","95.2","","","","","","61","135","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC ACID
(PFUNA)","0.0408","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","0.
0408","101","","","","","","69","133","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-3-
OXAUNDECANE-1-SULFONIC ACID (11Cl-
PF3OUdS)","0.0429","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","
0.0429","106","","","","","","70","130","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","307-55-1","PERFLUORODODECANOIC ACID
(PFDOA)","0.0392","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403","0.
0392","97.3","","","","","","72","134","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","72629-94-
8","PFTrDA","0.0396","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403",
"0.0396","98.3","","","","","","65","144","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","376-06-
7","PFTeDA","0.0409","","TRG","Yes","Y","","Y","0.00138","0.00202","0.00403","UG_L","UG_L","","","","0.0403",
"0.0409","101","","","","","","71","132","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C3-PFBS","13C3-
PFBS","90.7","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","90.7","90.7","","","","","","50","150","",

""","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C3-HFPO-DA","13C3-HFPO-DA","77.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","77.3","77.3","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/29/20","04:24","N","NA","DL1","13C2-PFHxA","13C2-PFHxA","86.0","","IS","Yes","Y","D","Y","","","","","PCT_REC","","","","","100","86.0","86.0","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C4-PFHpA","13C4-PFHpA","83.5","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","83.5","83.5","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C3-PFHxS","13C3-PFHxS","87.1","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","87.1","87.1","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C5-PFNA","13C5-PFNA","90.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","90.3","90.3","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/29/20","04:24","N","NA","DL1","13C2-PFOA","13C2-PFOA","86.7","","IS","Yes","Y","D","Y","","","","","PCT_REC","","","","","100","86.7","86.7","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C8-PFOS","13C8-PFOS","94.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","94.0","94.0","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C2-PFDA","13C2-PFDA","79.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","79.0","79.0","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","80.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","80.0","80.0","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C2-PFUnA","13C2-PFUnA","77.3","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","77.3","77.3","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","86.2","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","86.2","86.2","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C2-PFDoA","13C2-PFDoA","73.8","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","73.8","73.8","","","","","","50","150","","","","",""
"B0B0137-MS1","537_MOD","02/25/20","00:32","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","67.9","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","67.9","67.9","","","","","","50","150","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","375-73-5","PFBS","0.328","","TRG","Yes","Y","H","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","0.301","0.0405","0.328","68.3","0.322","0.0405","0.328","68.3","25.0","72","130","30","","*",""
"B0B0137-MSD1","537_MOD","02/29/20","04:34","N","NA","DL1","307-24-4","PERFLUOROHEXANOIC ACID (PFHXA)","3.26","","TRG","Yes","Y","D,H","Y","0.00693","0.0101","0.0202","UG_L","UG_L","","","3.14","0.202","3.26","61.2","3.40","0.202","3.26","61.2","69.9","72","129","30","","*","*"
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13252-13-6","HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA)","0.0373","","TRG","Yes","Y","","Y","0.00244","0.00304","0.00405","UG_L","UG_L","","","","0.0405","0.0373","92.0","0.0438","0.0405","0.0373","92.0","16.9","70","130","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","375-85-9","PERFLUOROHEPTANOIC ACID (PFHPA)","1.75","","TRG","Yes","Y","H","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","1.88","0.0405","1.75","-314","1.93","0.0405","1.75","-314","514","72","130","30","","*",""

"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","919005-14-4","4,8-DIOXA-3H-
PERFLUORONONANOIC ACID
(ADONA)","0.0408","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","0
.0408","101","0.0420","0.0405","0.0408","101","2.93","70","130","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","355-46-4","PERFLUOROHEXANESULFONIC
ACID
(PFHXS)","1.67","","TRG","Yes","Y","H","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","1.82","0.0405"
,"1.67","-379","1.84","0.0405","1.67","-379","253","68","131","30","","*",""
"B0B0137-MSD1","537_MOD","02/29/20","04:34","N","NA","DL1","335-67-1","PERFLUOROOCTANOIC ACID
(PFOA)","4.42","","TRG","Yes","Y","D,
H","Y","0.00693","0.0101","0.0202","UG_L","UG_L","","","4.36","0.202","4.42","26.4","4.49","0.202","4.42","26.4",
"83.7","71","133","30","","*","*"
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","375-95-1","PERFLUORONONANOIC ACID
(PFNA)","0.0623","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","0.0268","0.040
5","0.0623","87.8","0.0689","0.0405","0.0623","87.8","17.8","69","130","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","1763-23-
1","HEPTADECAFLUOROACTANESULFONIC ACID SOLUTION
","0.649","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","0.601","0.0405","0.649",
"120","0.645","0.0405","0.649","120","7.79","65","140","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","756426-58-1","9-
CHLOROHEXADECAFLUORO-3-OXANONE-1-SULFONIC ACID (9Cl-
PF3ONS)","0.0403","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","0.
0403","99.5","0.0416","0.0405","0.0403","99.5","3.46","70","130","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","335-76-2","PERFLUORODECANOIC ACID
(PFDA)","0.0405","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","0.0
405","99.1","0.0448","0.0405","0.0405","99.1","10.4","71","129","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","2355-31-
9","MeFOSAA","0.0310","","TRG","Yes","Y","H","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0
405","0.0310","76.4","0.0426","0.0405","0.0310","76.4","32.5","65","136","30","","","*"
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","2991-50-
6","EtFOSAA","0.0431","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405
","0.0431","106","0.0384","0.0405","0.0431","106","10.7","61","135","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","2058-94-8","PERFLUOROUNDECANOIC
ACID
(PFUNA)","0.0401","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","0.
0401","99.0","0.0408","0.0405","0.0401","99.0","2.00","69","133","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","763051-92-9","11-CHLOROEICOSAFLUORO-
3-OXAUNDECANE-1-SULFONIC ACID (11Cl-
PF3OUdS)","0.0395","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","
0.0395","97.6","0.0429","0.0405","0.0395","97.6","8.25","70","130","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","307-55-1","PERFLUORODODECANOIC
ACID
(PFDOA)","0.0340","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405","0.
0340","84.1","0.0392","0.0405","0.0340","84.1","14.6","72","134","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","72629-94-
8","PFTrDA","0.0346","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405",
"0.0346","85.4","0.0396","0.0405","0.0346","85.4","14.0","65","144","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","376-06-
7","PFTeDA","0.0389","","TRG","Yes","Y","","Y","0.00139","0.00202","0.00405","UG_L","UG_L","","","","0.0405",
"0.0389","96.0","0.0409","0.0405","0.0389","96.0","5.08","71","132","30","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C3-PFBS","13C3-
PFBS","89.2","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","89.2","89.2","","","","","","50","150","",
"","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C3-HFPO-DA","13C3-HFPO-

DA","88.6","","IS","Yes","Y","","Y","","","","PCT_REC","","","","","100","88.6","88.6","","","","","","50","150","","","","",""
"B0B0137-MSD1","537_MOD","02/29/20","04:34","N","NA","DL1","13C2-PFHxA","13C2-PFHxA","90.0","","IS","Yes","Y","D","Y","","","","","PCT_REC","","","","","100","90.0","90.0","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C4-PFHpA","13C4-PFHpA","88.4","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","88.4","88.4","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C3-PFHxS","13C3-PFHxS","92.5","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","92.5","92.5","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C5-PFNA","13C5-PFNA","93.9","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","93.9","93.9","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/29/20","04:34","N","NA","DL1","13C2-PFOA","13C2-PFOA","90.0","","IS","Yes","Y","D","Y","","","","","PCT_REC","","","","","100","90.0","90.0","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C8-PFOS","13C8-PFOS","95.8","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","95.8","95.8","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C2-PFDA","13C2-PFDA","91.5","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","91.5","91.5","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","d3-MeFOSAA","d3-MeFOSAA","92.4","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","92.4","92.4","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C2-PFUnA","13C2-PFUnA","78.2","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","78.2","78.2","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","d5-EtFOSAA","d5-EtFOSAA","85.0","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","85.0","85.0","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C2-PFDoA","13C2-PFDoA","81.1","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","81.1","81.1","","","","","","50","150","","","","","","",""
"B0B0137-MSD1","537_MOD","02/25/20","00:42","N","NA","000","13C2-PFTeDA","13C2-PFTeDA","62.4","","IS","Yes","Y","","Y","","","","","PCT_REC","","","","","100","62.4","62.4","","","","","","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		

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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			

V:\FIELD DUPLICATES\Field Duplicates\FD_Organics\2020\47508C96_WOOD.wpd

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.

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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.

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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 00003	I003MW05S	Monitoring well	6083028.54	2202343.68	I003MW05S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW05S	Monitoring well	6083028.54	2202343.68	I003MW05S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW14S	Monitoring well	6083201.5	2202408.1	I003MW14S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW14S	Monitoring well	6083201.5	2202408.1	I003MW14S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW05S	Monitoring well	6083028.54	2202343.68	I003MW05S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW05S	Monitoring well	6083028.54	2202343.68	I003MW05S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW14S	Monitoring well	6083201.5	2202408.1	I003MW14S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	DUP04-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
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TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW12S	Monitoring well	6082789.8	2202666.6	I003MW12S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
TUSTIN_MCAS	SITE 00003	I003MW14S	Monitoring well	6083201.5	2202408.1	I003MW14S-20200214	Ground water	14-Feb-20	Perfluoroalkyl Compounds	2000330
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