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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 1901766

Marine Corps Air Station Yuma
Yuma, Arizona

November 2019

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

August 22, 2019

Vista Work Order No. 1901766

Ms. Lisa Bienkowski
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614

Dear Ms. Bienkowski,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on June 26, 2019 under your Project Name '4663.3803'.

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

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. 1901766
Case Narrative

Sample Condition on Receipt:

Seven aqueous samples and three soil 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. This report was amended to include the correct data file for the OPR and to add the associated calibrations.

Analytical Notes:

PFAS Isotope Dilution Method

Samples "SAOA-B06-GW", "SAOA-B07-GW" and "SAOA-B04-GW" contained particulate and were centrifuged prior to extraction.

The aqueous 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 "SAOA-B06-GW". The MS/MSD recoveries and RPDs were within the acceptance criteria.

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

VAL-PFAS Method

The soil samples were extracted and analyzed for a selected list of PFAS using VAL Method PFAS. 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 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 "SAOA-B04-SO-5-5.5". The MS/MSD recoveries and/or RPDs were out of the acceptance criteria for PFHxA, PFHpA, PFHxS, PFOA and PFOS.

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

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1901766-02	SAOA-B06-GW	PFAS Isotope Dilution Method	13C2-PFTeDA	H	38.4
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	13C2-PFDA	H	48.6
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	d3-MeFOSAA	H	48.2
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	13C2-PFUnA	H	41.1
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	d5-EtFOSAA	H	46.7
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	13C2-PFDoA	H	41.0
1901766-06	SAOA-B04-SO-20-20.5	PFAS Isotope Dilution Method	13C2-PFTeDA	H	36.6
1901766-08	SAOA-B04-GW	PFAS Isotope Dilution Method	13C2-PFTeDA	H	26.5
1901766-10	FRB-06252019	PFAS Isotope Dilution Method	d3-MeFOSAA	H	43.8
B9F0253-BS1	B9F0253-BS1	PFAS Isotope Dilution Method	13C2-PFDoA	H	45.9
B9F0253-BS1	B9F0253-BS1	PFAS Isotope Dilution Method	13C2-PFTeDA	H	18.2
B9F0253-MS1	B9F0253-MS1	PFAS Isotope Dilution Method	13C2-PFTeDA	H	25.7
B9F0253-MSD1	B9F0253-MSD1	PFAS Isotope Dilution Method	13C2-PFTeDA	H	33.4

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1901766-01	EB-GW-06202019	20-Jun-19 15:55	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-02	SAOA-B06-GW	MS/MSD24-Jun-19 12:50	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-03	FRB-06242019	24-Jun-19 15:30	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-04	SAOA-B07-GW	25-Jun-19 08:50	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-05	SAOA-B04-SO-5-5.5	MS/MSD25-Jun-19 10:30	26-Jun-19 09:25	HDPE Jar, 6 oz
				HDPE Jar, 6 oz
				HDPE Jar, 6 oz
1901766-06	SAOA-B04-SO-20-20.5	25-Jun-19 10:50	26-Jun-19 09:25	HDPE Jar, 6 oz
1901766-07	SAOA-B04-SO-47-47.5	25-Jun-19 11:50	26-Jun-19 09:25	HDPE Jar, 6 oz
1901766-08	SAOA-B04-GW	25-Jun-19 12:05	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-09	EB-06252019	25-Jun-19 14:50	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL
1901766-10	FRB-06252019	25-Jun-19 15:00	26-Jun-19 09:25	HDPE Bottle, 125 mL
				HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Matrix: Aqueous

Laboratory Data

Lab Sample: B9F0253-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	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFHxA	307-24-4	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFHpA	375-85-9	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFHxS	355-46-4	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFOA	335-67-1	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFNA	375-95-1	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFOS	1763-23-1	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFDA	335-76-2	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
MeFOSAA	2355-31-9	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
EtFOSAA	2991-50-6	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFUnA	2058-94-8	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFDoA	307-55-1	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFTrDA	72629-94-8	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
PFTeDA	376-06-7	ND	0.00274	0.00400	0.00800	U	B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	103	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFHxA	IS	91.6	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C4-PFHpA	IS	90.9	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C3-PFHxS	IS	106	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFOA	IS	86.1	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C5-PFNA	IS	72.1	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C8-PFOS	IS	85.6	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFDA	IS	63.1	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
d3-MeFOSAA	IS	67.2	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
d5-EtFOSAA	IS	73.5	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFUnA	IS	73.2	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFDoA	IS	72.7	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1
13C2-PFTeDA	IS	51.3	50 - 150		B9F0253	01-Jul-19	0.125 L	02-Jul-19 17:10	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

Results reported to the DL.

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

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

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Matrix: Aqueous

Laboratory Data

Lab Sample: B9F0253-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	0.0811	0.0800	101	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFHxA	307-24-4	0.0901	0.0800	113	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFHpA	375-85-9	0.0847	0.0800	106	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFHxS	355-46-4	0.0863	0.0800	108	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFOA	335-67-1	0.0866	0.0800	108	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFNA	375-95-1	0.0898	0.0800	112	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFOS	1763-23-1	0.0846	0.0800	106	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFDA	335-76-2	0.0862	0.0800	108	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
MeFOSAA	2355-31-9	0.0931	0.0800	116	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
EtFOSAA	2991-50-6	0.0882	0.0800	110	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFUnA	2058-94-8	0.0883	0.0800	110	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFDoA	307-55-1	0.0922	0.0800	115	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFTrDA	72629-94-8	0.0509	0.0800	63.6	60 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
PFTeDA	376-06-7	0.0843	0.0800	105	70 - 130		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	94.4	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFHxA	IS	95.0	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C4-PFHpA	IS	93.2	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C3-PFHxS	IS	86.4	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFOA	IS	92.9	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C5-PFNA	IS	83.1	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C8-PFOS	IS	86.0	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFDA	IS	69.6	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
d3-MeFOSAA	IS	79.3	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
d5-EtFOSAA	IS	84.2	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFUnA	IS	73.1	50- 150		B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFDoA	IS	45.9	50- 150	H	B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1
13C2-PFTeDA	IS	18.2	50- 150	H	B9F0253	01-Jul-19	0.125 L	18-Jul-19 11:54	1

Sample ID: EB-GW-06202019

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 20-Jun-19 15:55

Laboratory Data

Lab Sample: 1901766-01
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFHxA	307-24-4	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFHpA	375-85-9	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFHxS	355-46-4	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFOA	335-67-1	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFNA	375-95-1	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFOS	1763-23-1	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFDA	335-76-2	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
MeFOSAA	2355-31-9	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
EtFOSAA	2991-50-6	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFUnA	2058-94-8	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFDoA	307-55-1	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFTrDA	72629-94-8	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
PFTeDA	376-06-7	ND	0.00303	0.00442	0.00885	U	B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	104	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFHxA	IS	92.6	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C4-PFHpA	IS	92.3	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C3-PFHxS	IS	101	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFOA	IS	92.1	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C5-PFNA	IS	80.4	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C8-PFOS	IS	93.1	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFDA	IS	76.8	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
d3-MeFOSAA	IS	66.3	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
d5-EtFOSAA	IS	65.4	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFUnA	IS	75.6	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFDoA	IS	69.6	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	1
13C2-PFTeDA	IS	71.2	50 - 150		B9F0253	01-Jul-19	0.113 L	02-Jul-19 18:24	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: SAOA-B06-GW

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 24-Jun-19 12:50

Laboratory Data

Lab Sample: 1901766-02
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.142	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFHxA	307-24-4	0.347	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFHpA	375-85-9	0.0214	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFHxS	355-46-4	0.276	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFOA	335-67-1	0.177	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFNA	375-95-1	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFOS	1763-23-1	0.0677	0.00292	0.00427	0.00851		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFDA	335-76-2	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
MeFOSAA	2355-31-9	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
EtFOSAA	2991-50-6	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFUnA	2058-94-8	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFDoA	307-55-1	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFTrDA	72629-94-8	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
PFTeDA	376-06-7	ND	0.00292	0.00427	0.00851	U	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	88.8	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFHxA	IS	88.9	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C4-PFHpA	IS	90.5	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C3-PFHxS	IS	94.1	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFOA	IS	92.2	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C5-PFNA	IS	84.1	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C8-PFOS	IS	88.8	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFDA	IS	70.4	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
d3-MeFOSAA	IS	74.9	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
d5-EtFOSAA	IS	70.0	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFUnA	IS	74.1	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFDoA	IS	59.5	50 - 150		B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1
13C2-PFTeDA	IS	38.4	50 - 150	H	B9F0253	01-Jul-19	0.117 L	02-Jul-19 18:34	1

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

Results reported to the DL.

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

Sample ID: SAOA-B06-GW **PFAS Isotope Dilution Method**

Name:	Tetra Tech EC, Inc.	Lab Sample:	B9F0253-MS1/B9F0253-MSD1	Source Lab Sample:	1901766-02
Project:	4663.3803	QC Batch:	B9F0253	Date Extracted:	01-Jul-19
Matrix:	Aqueous	Samp Size:	0.118/0.114 L	Column:	BEH C18

Analyte	CAS Number	Sample (ug/L)	MS (ug/L)	MS Spike Amt	MS % Rec	MS Quals	MSD (ug/L)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	375-73-5	0.142	0.225	0.0847	98.2		0.241	0.0876	113	14.0		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFHxA	307-24-4	0.347	0.423	0.0847	89.6		0.442	0.0876	109	19.5		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFHpA	375-85-9	0.0214	0.111	0.0847	106		0.113	0.0876	104	1.90		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFHxS	355-46-4	0.276	0.361	0.0847	101		0.370	0.0876	108	6.70		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFOA	335-67-1	0.177	0.276	0.0847	117		0.290	0.0876	129	9.76		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFNA	375-95-1	ND	0.0926	0.0847	107		0.105	0.0876	118	9.78		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFOS	1763-23-1	0.0677	0.159	0.0847	108		0.165	0.0876	112	3.64		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFDA	335-76-2	ND	0.0950	0.0847	110		0.103	0.0876	115	4.44		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
MeFOSAA	2355-31-9	ND	0.0978	0.0847	115		0.110	0.0876	126	9.13		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
EtFOSAA	2991-50-6	ND	0.0968	0.0847	114		0.105	0.0876	120	5.13		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFUnA	2058-94-8	ND	0.0943	0.0847	111		0.103	0.0876	117	5.26		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFDoA	307-55-1	ND	0.0892	0.0847	105		0.0943	0.0876	108	2.82		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFTrDA	72629-94-8	ND	0.0681	0.0847	80.4		0.0743	0.0876	84.8	5.33		60-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1
PFTeDA	376-06-7	ND	0.0951	0.0847	112		0.0915	0.0876	104	7.41		70-130	30	02-Jul-19 16:48	1	02-Jul-19 16:59	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	97.6		94.9		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFHxA	IS	95.0		91.6		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C4-PFHpA	IS	93.0		94.5		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C3-PFHxS	IS	95.6		93.0		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFOA	IS	90.2		92.5		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C5-PFNA	IS	85.0		81.8		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C8-PFOS	IS	99.3		92.4		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFDA	IS	69.5		75.4		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
d3-MeFOSAA	IS	65.4		71.9		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
d5-EtFOSAA	IS	72.4		73.7		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFUnA	IS	68.1		73.0		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFDoA	IS	55.8		59.3		50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1
13C2-PFTeDA	IS	25.7	H	33.4	H	50-150	02-Jul-19 16:48	1	02-Jul-19 16:59	1

Sample ID: FRB-06242019 **PFAS Isotope Dilution Method**

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 24-Jun-19 15:30

Laboratory Data

Lab Sample: 1901766-03
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFHxA	307-24-4	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFHpA	375-85-9	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFHxS	355-46-4	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFOA	335-67-1	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFNA	375-95-1	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFOS	1763-23-1	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFDA	335-76-2	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
MeFOSAA	2355-31-9	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
EtFOSAA	2991-50-6	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFUnA	2058-94-8	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFDoA	307-55-1	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFTrDA	72629-94-8	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
PFTeDA	376-06-7	ND	0.00301	0.00439	0.00878	U	B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	86.7	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFHxA	IS	94.9	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C4-PFHpA	IS	91.4	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C3-PFHxS	IS	93.5	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFOA	IS	102	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C5-PFNA	IS	87.9	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C8-PFOS	IS	91.1	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFDA	IS	78.4	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
d3-MeFOSAA	IS	74.5	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
d5-EtFOSAA	IS	76.2	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFUnA	IS	74.5	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFDoA	IS	69.8	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	1
13C2-PFTeDA	IS	83.9	50 - 150		B9F0253	01-Jul-19	0.114 L	02-Jul-19 18:45	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: SAOA-B07-GW

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 25-Jun-19 08:50

Laboratory Data

Lab Sample: 1901766-04
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00918	0.00290	0.00424	0.00847		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFHxA	307-24-4	0.0439	0.00290	0.00424	0.00847		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFHpA	375-85-9	0.00335	0.00290	0.00424	0.00847	J	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFHxS	355-46-4	0.0299	0.00290	0.00424	0.00847		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFOA	335-67-1	0.0196	0.00290	0.00424	0.00847		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFNA	375-95-1	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFOS	1763-23-1	0.0175	0.00290	0.00424	0.00847		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFDA	335-76-2	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
MeFOSAA	2355-31-9	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
EtFOSAA	2991-50-6	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFUnA	2058-94-8	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFDoA	307-55-1	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFTrDA	72629-94-8	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
PFTeDA	376-06-7	ND	0.00290	0.00424	0.00847	U	B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	90.2	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFHxA	IS	98.3	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C4-PFHpA	IS	97.8	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C3-PFHxS	IS	91.0	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFOA	IS	91.7	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C5-PFNA	IS	92.4	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C8-PFOS	IS	93.9	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFDA	IS	81.2	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
d3-MeFOSAA	IS	68.9	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
d5-EtFOSAA	IS	69.0	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFUnA	IS	76.6	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFDoA	IS	64.1	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	1
13C2-PFTeDA	IS	53.9	50 - 150		B9F0253	01-Jul-19	0.118 L	02-Jul-19 18:56	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: SAOA-B04-GW

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 25-Jun-19 12:05

Laboratory Data

Lab Sample: 1901766-08
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	0.00597	0.00275	0.00403	0.00804	J	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFHxA	307-24-4	0.0439	0.00275	0.00403	0.00804		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFHpA	375-85-9	0.00502	0.00275	0.00403	0.00804	J	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFHxS	355-46-4	0.0383	0.00275	0.00403	0.00804		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFOA	335-67-1	0.0343	0.00275	0.00403	0.00804		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFNA	375-95-1	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFOS	1763-23-1	0.0573	0.00275	0.00403	0.00804		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFDA	335-76-2	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
MeFOSAA	2355-31-9	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
EtFOSAA	2991-50-6	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFUnA	2058-94-8	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFDoA	307-55-1	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFTrDA	72629-94-8	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
PFTeDA	376-06-7	ND	0.00275	0.00403	0.00804	U	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	91.7	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFHxA	IS	85.5	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C4-PFHpA	IS	88.9	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C3-PFHxS	IS	94.6	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFOA	IS	87.5	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C5-PFNA	IS	79.1	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C8-PFOS	IS	83.3	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFDA	IS	73.9	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
d3-MeFOSAA	IS	61.7	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
d5-EtFOSAA	IS	66.0	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFUnA	IS	68.0	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFDoA	IS	55.8	50 - 150		B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	1
13C2-PFTeDA	IS	26.5	50 - 150	H	B9F0253	01-Jul-19	0.124 L	02-Jul-19 19:06	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: EB-06252019

PFAS Isotope Dilution Method

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 25-Jun-19 14:50

Laboratory Data

Lab Sample: 1901766-09
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFHxA	307-24-4	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFHpA	375-85-9	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFHxS	355-46-4	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFOA	335-67-1	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFNA	375-95-1	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFOS	1763-23-1	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFDA	335-76-2	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
MeFOSAA	2355-31-9	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
EtFOSAA	2991-50-6	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFUnA	2058-94-8	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFDoA	307-55-1	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFTrDA	72629-94-8	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
PFTeDA	376-06-7	ND	0.00288	0.00420	0.00841	U	B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	91.2	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFHxA	IS	83.6	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C4-PFHpA	IS	82.9	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C3-PFHxS	IS	88.0	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFOA	IS	82.4	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C5-PFNA	IS	79.6	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C8-PFOS	IS	80.6	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFDA	IS	67.6	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
d3-MeFOSAA	IS	58.8	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
d5-EtFOSAA	IS	56.1	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFUnA	IS	62.8	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFDoA	IS	57.2	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	1
13C2-PFTeDA	IS	61.8	50 - 150		B9F0253	01-Jul-19	0.119 L	02-Jul-19 19:17	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: FRB-06252019 **PFAS Isotope Dilution Method**

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Aqueous
Date Collected: 25-Jun-19 15:00

Laboratory Data

Lab Sample: 1901766-10
Date Received: 26-Jun-19 09:25

Column: BEH C18

Analyte	CAS Number	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFHxA	307-24-4	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFHpA	375-85-9	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFHxS	355-46-4	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFOA	335-67-1	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFNA	375-95-1	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFOS	1763-23-1	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFDA	335-76-2	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
MeFOSAA	2355-31-9	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
EtFOSAA	2991-50-6	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFUnA	2058-94-8	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFDoA	307-55-1	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFTrDA	72629-94-8	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
PFTeDA	376-06-7	ND	0.00306	0.00446	0.00894	U	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	99.7	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFHxA	IS	92.4	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C4-PFHpA	IS	92.9	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C3-PFHxS	IS	93.5	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFOA	IS	95.7	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C5-PFNA	IS	82.7	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C8-PFOS	IS	90.3	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFDA	IS	68.5	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
d3-MeFOSAA	IS	43.8	50 - 150	H	B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
d5-EtFOSAA	IS	52.6	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFUnA	IS	53.9	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFDoA	IS	52.2	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	1
13C2-PFTeDA	IS	67.4	50 - 150		B9F0253	01-Jul-19	0.112 L	02-Jul-19 19:27	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: Method Blank

VAL - PFAS

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Matrix: Solid

Laboratory Data

Lab Sample: B9F0280-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ug/kg)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFHxA	307-24-4	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFHpA	375-85-9	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFHxS	355-46-4	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFOA	335-67-1	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFNA	375-95-1	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFOS	1763-23-1	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFDA	335-76-2	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
MeFOSAA	2355-31-9	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
EtFOSAA	2991-50-6	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFUnA	2058-94-8	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFDoA	307-55-1	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFTrDA	72629-94-8	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
PFTeDA	376-06-7	ND	0.845	1.00	2.00	U	B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	106	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFHxA	IS	93.2	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C4-PFHpA	IS	86.0	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C3-PFHxS	IS	94.0	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFOA	IS	90.4	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C5-PFNA	IS	77.0	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C8-PFOS	IS	86.4	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFDA	IS	62.9	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
d3-MeFOSAA	IS	55.7	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
d5-EtFOSAA	IS	58.5	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFUnA	IS	58.0	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFDoA	IS	53.1	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1
13C2-PFTeDA	IS	72.3	50 - 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 19:13	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

The results are reported in dry weight.
The sample size is reported in wet weight.
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 **VAL - PFAS**

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Matrix: Solid

Laboratory Data

Lab Sample: B9F0280-BS1
Column: BEH C18

Analyte	CAS Number	Amt Found (ug/kg	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	10.3	10.0	103	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFHxA	307-24-4	10.4	10.0	104	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFHpA	375-85-9	10.1	10.0	101	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFHxS	355-46-4	9.99	10.0	99.9	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFOA	335-67-1	10.3	10.0	103	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFNA	375-95-1	10.5	10.0	105	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFOS	1763-23-1	10.5	10.0	105	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFDA	335-76-2	10.4	10.0	104	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
MeFOSAA	2355-31-9	12.0	10.0	120	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
EtFOSAA	2991-50-6	10.9	10.0	109	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFUnA	2058-94-8	10.3	10.0	103	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFDoA	307-55-1	10.1	10.0	101	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFTrDA	72629-94-8	11.7	10.0	117	60 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
PFTeDA	376-06-7	10.7	10.0	107	70 - 130		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	85.1	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFHxA	IS	94.8	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C4-PFHpA	IS	97.5	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C3-PFHxS	IS	83.3	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFOA	IS	88.8	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C5-PFNA	IS	83.2	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C8-PFOS	IS	90.7	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFDA	IS	69.5	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
d3-MeFOSAA	IS	56.2	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
d5-EtFOSAA	IS	59.7	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFUnA	IS	62.2	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFDoA	IS	62.1	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1
13C2-PFTeDA	IS	76.7	50- 150		B9F0280	09-Jul-19	1.00 g	10-Jul-19 18:41	1

Sample ID: SAOA-B04-SO-5-5.5

VAL - PFAS

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Soil
Date Collected: 25-Jun-19 10:30

Laboratory Data

Lab Sample: 1901766-05
Date Received: 26-Jun-19 09:25
% Solids: 96.7

Column: BEH C18

Analyte	CAS Number	Conc. (ug/kg)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFHxA	307-24-4	9.24	0.809	0.958	1.92		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFHpA	375-85-9	7.56	0.809	0.958	1.92		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFHxS	355-46-4	10.9	0.809	0.958	1.92		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFOA	335-67-1	5.23	0.809	0.958	1.92		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFNA	375-95-1	1.60	0.809	0.958	1.92	J	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFOS	1763-23-1	91.1	0.809	0.958	1.92		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFDA	335-76-2	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
MeFOSAA	2355-31-9	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
EtFOSAA	2991-50-6	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFUnA	2058-94-8	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFDoA	307-55-1	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFTrDA	72629-94-8	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
PFTeDA	376-06-7	ND	0.809	0.958	1.92	U	B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	96.1	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFHxA	IS	85.7	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C4-PFHpA	IS	80.6	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C3-PFHxS	IS	86.0	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFOA	IS	90.5	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C5-PFNA	IS	78.4	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C8-PFOS	IS	92.5	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFDA	IS	71.7	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
d3-MeFOSAA	IS	67.8	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
d5-EtFOSAA	IS	78.1	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFUnA	IS	71.7	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFDoA	IS	67.6	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1
13C2-PFTeDA	IS	73.7	50 - 150		B9F0280	09-Jul-19	1.08 g	10-Jul-19 20:27	1

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

The results are reported in dry weight.
The sample size is reported in wet weight.
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: SAOA-B04-SO-5-5.5 **VAL - PFAS**

Name:	Tetra Tech EC, Inc.	Lab Sample:	B9F0280-MS1/B9F0280-MSD1	Source Lab Sample:	1901766-05
Project:	4663.3803	QC Batch:	B9F0280	Date Extracted:	09-Jul-19
Matrix:	Solid	Samp Size:	1.08/1.04 g	Column:	BEH C18

Analyte	CAS Number	Sample (ug/kg)	MS (ug/kg)	MS Spike Amt	MS % Rec	MS Quals	MSD (ug/kg)	MSD Spike Amt	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBS	375-73-5	ND	11.5	9.58	116		11.5	9.94	112	3.51		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFHxA	307-24-4	9.24	22.6	9.58	139	H	16.7	9.94	75.5	59.2	H	70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFHpA	375-85-9	7.56	21.0	9.58	140	H	16.4	9.94	88.5	45.1	H	70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFHxS	355-46-4	10.9	25.5	9.58	152	H	18.3	9.94	74.6	68.3	H	70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFOA	335-67-1	5.23	18.6	9.58	140	H	14.7	9.94	95.1	38.2	H	70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFNA	375-95-1	1.60	12.9	9.58	118		12.1	9.94	106	10.7		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFOS	1763-23-1	91.1	122	9.58	321	D, H	86.3	9.94	-48.5	271	H	70-130	30	12-Jul-19 12:42	5	10-Jul-19 19:02	1
PFDA	335-76-2	ND	10.3	9.58	104		10.7	9.94	105	0.957		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
MeFOSAA	2355-31-9	ND	11.8	9.58	123		12.0	9.94	121	1.64		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
EtFOSAA	2991-50-6	ND	11.2	9.58	116		11.4	9.94	114	1.74		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFUnA	2058-94-8	ND	10.1	9.58	105		11.6	9.94	117	10.8		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFDoA	307-55-1	ND	10.6	9.58	111		10.8	9.94	108	2.74		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFTrDA	72629-94-8	ND	11.7	9.58	122		12.0	9.94	120	1.65		60-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1
PFTeDA	376-06-7	ND	11.3	9.58	118		11.5	9.94	116	1.71		70-130	30	10-Jul-19 18:52	1	10-Jul-19 19:02	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C3-PFBS	IS	92.8		86.0		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C2-PFHxA	IS	90.1		96.9		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C4-PFHpA	IS	85.3		90.1		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C3-PFHxS	IS	93.6		85.6		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C2-PFOA	IS	82.4		89.6		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C5-PFNA	IS	66.6		81.2		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C8-PFOS	IS	96.0	D	79.6		50-150	12-Jul-19 12:42	5	10-Jul-19 19:02	1
13C2-PFDA	IS	63.9		70.3		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
d3-MeFOSAA	IS	65.0		67.7		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
d5-EtFOSAA	IS	63.5		76.5		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C2-PFUnA	IS	68.1		67.8		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C2-PFDoA	IS	66.1		72.4		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1
13C2-PFTeDA	IS	77.9		80.7		50-150	10-Jul-19 18:52	1	10-Jul-19 19:02	1

Sample ID: SAOA-B04-SO-20-20.5

VAL - PFAS

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Soil
Date Collected: 25-Jun-19 10:50

Laboratory Data

Lab Sample: 1901766-06
Date Received: 26-Jun-19 09:25
% Solids: 83.5

Column: BEH C18

Analyte	CAS Number	Conc. (ug/kg)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	1.29	0.843	0.997	1.99	J	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFHxA	307-24-4	17.0	0.843	0.997	1.99		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFHpA	375-85-9	1.71	0.843	0.997	1.99	J	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFHxS	355-46-4	4.29	0.843	0.997	1.99		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFOA	335-67-1	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFNA	375-95-1	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFOS	1763-23-1	2.06	0.843	0.997	1.99		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFDA	335-76-2	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
MeFOSAA	2355-31-9	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
EtFOSAA	2991-50-6	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFUnA	2058-94-8	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFDoA	307-55-1	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFTrDA	72629-94-8	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
PFTeDA	376-06-7	ND	0.843	0.997	1.99	U	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	72.9	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFHxA	IS	73.1	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C4-PFHpA	IS	64.9	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C3-PFHxS	IS	71.2	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFOA	IS	69.5	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C5-PFNA	IS	59.1	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C8-PFOS	IS	73.1	50 - 150		B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFDA	IS	48.6	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
d3-MeFOSAA	IS	48.2	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
d5-EtFOSAA	IS	46.7	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFUnA	IS	41.1	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFDoA	IS	41.0	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1
13C2-PFTeDA	IS	36.6	50 - 150	H	B9F0280	09-Jul-19	1.20 g	10-Jul-19 20:38	1

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

The results are reported in dry weight.
The sample size is reported in wet weight.
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: SAOA-B04-SO-47-47.5

VAL - PFAS

Client Data

Name: Tetra Tech EC, Inc.
Project: 4663.3803
Location: YUMA, AZ

Matrix: Soil
Date Collected: 25-Jun-19 11:50

Laboratory Data

Lab Sample: 1901766-07
Date Received: 26-Jun-19 09:25
% Solids: 85.8

Column: BEH C18

Analyte	CAS Number	Conc. (ug/kg)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFHxA	307-24-4	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFHpA	375-85-9	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFHxS	355-46-4	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFOA	335-67-1	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFNA	375-95-1	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFOS	1763-23-1	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFDA	335-76-2	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
MeFOSAA	2355-31-9	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
EtFOSAA	2991-50-6	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFUnA	2058-94-8	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFDoA	307-55-1	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFTrDA	72629-94-8	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
PFTeDA	376-06-7	ND	0.828	0.979	1.96	U	B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBS	IS	93.8	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFHxA	IS	96.2	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C4-PFHpA	IS	84.0	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C3-PFHxS	IS	85.5	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFOA	IS	86.0	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C5-PFNA	IS	81.4	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C8-PFOS	IS	77.1	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFDA	IS	67.7	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
d3-MeFOSAA	IS	55.2	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
d5-EtFOSAA	IS	51.5	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFUnA	IS	58.6	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFDoA	IS	55.5	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1
13C2-PFTeDA	IS	74.8	50 - 150		B9F0280	09-Jul-19	1.19 g	10-Jul-19 20:48	1

DL - Detection Limit

LOD - Limit of Detection
LOQ - Limit of quantitation

The results are reported in dry weight.
The sample size is reported in wet weight.
Results reported to the DL.

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

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
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
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limits of Detection
LOQ	Limits of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
NA	Not applicable
ND	Not Detected
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
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 Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 1901766 Temp: 0.1 °C
Storage ID: R-13, WR-2 Storage Secured: Yes ☑ No ☐

Project ID: 4663.3803 PO#: 1164824 Sampler: McKinstry (name)

TAT (check one): Standard: ☐ 21 days Rush (surcharge may apply): ☐ 14 days ☐ 7 days Specify: 10 BD

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Accts Payable	Tetra Tech EC, Inc.	1230 Columbia St. Suite 750	San Diego	CA	619-234-8696	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Jeremy McKinstry	6/25/19	1645	FEDEX	6/25/19	1645
FedEx			Marissa Sparks	06/26/19	0925

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

ATTN: SAMPLE RECEIVING

Method of Shipment: FED EX

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	Mod. EPA Method 537: PFOA/ PFOS	UCMR3 PFAS List:6	537 List: 14	Full List of 26	Other: Please List Below	EPA Method 537(DW only): PFOA/ PFOS	UCMR3 PFAS List:6	PFAS List: 14	Comments
EB-GW-06202019	6/20/19	1555	YUMA, AZ	2	P	AQ			X						
SAOA-B06-GW	6/24/19	1250	Yuma, AZ	6	P	AQ			X						RUN MS/MSD
FRB-06242019	6/24/19	1530	Yuma, AZ	2	P	AQ			X						
SAOA-B07-GW	6/25/19	0850	Yuma, AZ	2	P	AQ			X						
SAOA-B04-SO-5-5.5	6/25/19	1030	Yuma, AZ	3	P	SO			X						RUN MS/MSD
SAOA-B04-SO-20-20.5	6/25/19	1050	Yuma, AZ	1	P	SO			X						
SAOA-B04-SO-47-47.5	6/25/19	1150	Yuma, AZ	1	P	SO			X						
SAOA-B04-GW	6/25/19	1205	Yuma, AZ	2	P	AQ			X						
EB-06252019	6/25/19	1450	Yuma, AZ	2	P	AQ			X						
FRB-06252019	6/25/19	1500	Yuma, AZ	2	P	AQ			X						

Special Instructions/Comments:

SEND DOCUMENTATION AND RESULTS TO:

Name: Lisa Bienkowski
Company: Tetra Tech EC, Inc.
Address: 17885 Von Karman Avenue, Suite 500
City: Irvine State: CA Zip: 92614
Phone: 949-809-5028 Fax:
Email: lisa.bienkowski@tetratech.com

Container Types: P= HDPE, PJ= HDPE Jar
O = Other:

Bottle Preservation Type: T = Thiosulfate,
TZ = Trizma:

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other:

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1901766 TAT 14 days

Samples Arrival:	**Date/Time** 06/26/19 0925	**Initials:** WWS	**Location:** WR-2 **Shelf/Rack:** N/a
Logged In:	**Date/Time** 06/26/19 1045	**Initials:** WWS	**Location:** R-13, WR-2 **Shelf/Rack:** B-1, E-3

Delivered By:	(FedEx)	UPS	On Trac	GSO	DHL	Hand Delivered	Other
Preservation:	(Ice)		Blue Ice		Dry Ice		None

Temp °C: 0.1 (uncorrected)	**Probe used:** Y / (N)	**Thermometer ID:** IR-3
Temp °C: 0.1 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7881 1213 2859	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	✓

If Chlorinated or Drinking Water Samples, Acceptable Preservation?						~
Preservation Documented:	$Na_2S_2O_3$ Trizma None Other				Yes	No	NA
Shipping Container	(Vista)	Client	(Retain)	Return	Dispose	

Comments:


ORIGIN ID:YUMA (619) 200-6897
JEREMY MCKINSTRY
TETRA TECH
1230 COLUMBIA ST STE 750
106-4663.3803.1400.0100
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 25JUN19
ACTWGT: 40.50 LB
CAD: 006995180/SSFE2002
DIMS: 24x14x13 IN
BILL THIRD PARTY
TO VISTA ANALYTICAL LAB
SAMPLE RECEIVING
1104 WINDFIELD WAY
EL DORADO HILLS CA 95762
(916) 673-1520
REF:
INV:
PO:
DEPT:
FedEx
Express
WED - 26 JUN 10:30A
PRIORITY OVERNIGHT
TRK# 0201 7881 1213 2859
WD MHRA
95762
CA-US SMF


ORIGIN ID:YUMA (619) 200-6897
JEREMY MCKINSTRY
TETRA TECH
1230 COLUMBIA ST STE 750
106-4663.3803.1400.0100
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 25JUN19
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TO VISTA ANALYTICAL LAB
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PO:
DEPT:
FedEx
Express
WED - 26 JUN 10:30A
PRIORITY OVERNIGHT
TRK# 0201 7881 1213 2859
WD MHRA
95762
CA-US SMF

Correspondence

Jade White-Dobbs

From: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Sent: Wednesday, June 26, 2019 9:19 AM
To: Jade White-Dobbs
Subject: FW: 3803 Yuma: Cooler arriving today for PFAS analysis
Attachments: COC 6-25-19.pdf; FEDEX RECEIPT 6-25-19.pdf

Jade,

See correction to below. Please make a note of this correct sample ID and not what is on COC.

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Bienkowski, Lisa
Sent: Wednesday, June 26, 2019 8:56 AM
To: White-Dobbs, Jade <jdobbs@vista-analytical.com>
Subject: 3803 Yuma: Cooler arriving today for PFAS analysis

Jade,

Attached is COC and FedEx for next set of samples from Yuma project arriving today. Once again just so we are clear on sample IDs, here is a list:

- EB-GW-06202019
- SAOA-B06-GW
- FRB-06242019
- SAOA-B07-GW
- SAOA-B04-SO-5-5.5
- SAOA-B04-SO-20-20.5
- SAOA-B04-SO-47-47.5
- SAOS-B04-GW
- EB-06252019
- FRB-06252019

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

Jade White-Dobbs

From: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Sent: Wednesday, August 21, 2019 12:57 PM
To: Jade White-Dobbs; projectmanagement@vista-analytical.com
Subject: PLEASE READ: Tetra Tech - Yuma PFAS
Attachments: ST190710M3-13.pdf; ST190710M3-14.pdf; ST190702M2-3.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Jade,

Before you submit me these revised Level IVs to include that info, could you also take a look at each of the case narratives for all 8 SDGs for this project (see SDG list below) and see if they are correct as follows:

- Example on 1901705, the case narrative under PFAS Isotope Dilution Method states that OPR is acceptable within limits. But on page 23 of 1025, the OPR clearly is out for PFTrDA. I saw this in other packages as well for the water and soil analysis whether you reference OPR or LCS/LCSD. So please have someone carefully check these case narratives for each of the 8 SDGs to make sure they contain accurate information for OPR or LCS/LCSD being out. If any of those case narratives need revising please do so and THEN post all packages that need revising of case narrative or including attached.

Please email me when you know which SDGs will have revised Level IV reports so I know what to expect. If you can complete by COB tomorrow with sending me all the revised Level IVs, that would be great.

SDGs
1901705
1901766
1901857
1901920
1901922
1902014
1902097
1902189

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Jade White-Dobbs <jdobbs@vista-analytical.com>
Sent: Wednesday, August 21, 2019 9:38 AM
To: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>; projectmanagement@vista-analytical.com
Subject: RE: Tetra Tech - Yuma PFAS

⚠ **CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. ⚠

Hi Lisa,

Understood, we will get these out to you this afternoon – I will be in touch if anything changes.

Best,

Jade White
Project Management

Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
Phone: (916) 673-1520
www.vista-analytical.com

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We value your feedback. Please click the following link to provide us with information about your experience with Vista: http://www.vista-analytical.com/documents/CustomerSatisfactionSurvey_000.pdf

Please consider the environment before printing this e-mail.

From: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Sent: Wednesday, August 21, 2019 8:30 AM
To: projectmanagement@vista-analytical.com
Subject: FW: Tetra Tech - Yuma PFAS

Vista,

I need to get a revised Level IV report for this per email below and attached. Please post today.

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Christina Rink <crink@lab-data.com>
Sent: Monday, August 19, 2019 1:05 PM

To: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Cc: Martha Maier <mmaier@vista-analytical.com>; projectmanagement@vista-analytical.com; Anne Wilhoit <awilhoit@vista-analytical.com>; Brianna Davis <bdavis@vista-analytical.com>
Subject: RE: Tetra Tech - Yuma PFAS

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Hi all,
The revision is complete. Can you please send Lisa a revised data package with the correct ICALS?

Thanks,
Christina

Christina Rink-Ashdown
Inorganic Chemist/Project Manager

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From: Bienkowski, Lisa [mailto:Lisa.Bienkowski@tetratech.com]
Sent: Monday, August 19, 2019 9:41 AM
To: Christina Rink
Cc: Martha Maier; projectmanagement@vista-analytical.com; Anne Wilhoit; Brianna Davis
Subject: RE: Tetra Tech - Yuma PFAS

Christina,

When you respond end of today if Vista has sent everything you need, please also indicate if Vista should revise the Level IV data packages for me to include the attached.

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Christina Rink <crink@lab-data.com>
Sent: Monday, August 19, 2019 8:45 AM
To: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Cc: Martha Maier <mmaier@vista-analytical.com>; projectmanagement@vista-analytical.com; Anne Wilhoit <awilhoit@vista-analytical.com>; Brianna Davis <bdavis@vista-analytical.com>
Subject: RE: Tetra Tech - Yuma PFAS

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I'll have the validator review this morning and I'll get back to everyone with a response by the end of the day.

Thanks,

Christina

Christina Rink-Ashdown
Inorganic Chemist/Project Manager

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From: Bienkowski, Lisa [mailto:Lisa.Bienkowski@tetratech.com]
Sent: Monday, August 19, 2019 8:43 AM
To: Christina Rink
Cc: Martha Maier; projectmanagement@vista-analytical.com; Anne Wilhoit; Brianna Davis
Subject: RE: Tetra Tech - Yuma PFAS

Christina,

Please let Brianna know if this covers everything for your validation purposes.

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Brianna Davis <bdavis@vista-analytical.com>
Sent: Monday, August 19, 2019 8:41 AM
To: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Cc: Martha Maier <mmaier@vista-analytical.com>; projectmanagement@vista-analytical.com; Anne Wilhoit <awilhoit@vista-analytical.com>; crink@lab-data.com
Subject: RE: Tetra Tech - Yuma PFAS

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Hi Lisa,

2. We do not report the ICV if the ISC was used from within a curve. The client is typically provided with the CCAL and the CRV info that was used for the samples. The ICV is located towards the end of the CCal, It is scanned in with the curve so it is not saved as a separate file.

3. You are correct, a note was not added that “CRV not used” from the 190710M3 run. This was corrected and is attached to my previous email. The sample files have been verified that the CRV from 190710M2 was used.

For your other concerns, the run long is noted with “CRV not used”, therefore the ICAL is not reflected on the run log. The correct ICAL is included in the reports.

Please let us know if you have anymore questions, thank you.

Kind Regards,

Brianna Davis
Quality Assurance Manager

Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
Phone: (916) 673-1520
www.vista-analytical.com

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Please consider the environment before printing this e-mail.

From: Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Sent: Friday, August 16, 2019 10:42 AM
To: Brianna Davis <bdavis@vista-analytical.com>; crink@lab-data.com
Cc: projectmanagement@vista-analytical.com; Anne Wilhoit <awilhoit@vista-analytical.com>
Subject: RE: Tetra Tech - Yuma PFAS

Thanks Brianna.

LDC also had the following questions from another email. Not sure if you are working on, so wanted to put here again so you can respond:

Lab: Vista
PFAS (537M) = ICAL dates and file IDs are a bit confusing.

SDG# 1901705

1. ICAL and ICV summaries and raw data provided (190701M1-CRV) do not match the ICAL indicated on the run log on page 256 of 1025. Please provide the correct ICAL and ICV.

SDG# 1901766

2. ICAL and ICV summaries and raw data provided (190701M1-CRV) do not match the ICAL indicated on the run log on page 222 of 965. Please provide the correct ICAL and ICV.
3. ICAL and ICV summaries and raw data provided (190710M2-CRV) do not match the ICAL indicated on the run log on page 269 of 965. Please provide the correct ICAL and ICV.

SDG# 1901857

4. ICAL file IDs have M2 (190707M2-CRV) but the file IDs end in M3 for results in this SDG. Please confirm the correct ICAL was submitted.

SDG# 1901920, 1901922

1. ICAL file IDs have M2 (190710M2-CRV) but the file IDs end in M3 for results in this SDG. Please confirm the correct ICAL was submitted.

Regards,
Lisa Bienkowski
Program Chemist
Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
Office: 949-809-5028
Cell: 949-923-7842

From: Brianna Davis <bdavis@vista-analytical.com>
Sent: Friday, August 16, 2019 10:39 AM

To: crink@lab-data.com; Bienkowski, Lisa <Lisa.Bienkowski@tetratech.com>
Cc: projectmanagement@vista-analytical.com; Anne Wilhoit <awilhoit@vista-analytical.com>
Subject: RE: Tetra Tech - Yuma PFAS

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Hi Christina,

The vendor used for second source for the 537M ICV has some concentrations that are not exactly 10, please see below;

The actual conc are:
PFOS 9.24
PFHxS 9.12
PFHpS 9.52
PFBS 8.84
8:2 FTS 9.6
6:2 FTS 9.52
PFDS 9.64

I've attached the requested ICV files, please let us know if you have any further questions.

Kind Regards,

Brianna Davis
Quality Assurance Manager

Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
Phone: (916) 673-1520
www.vista-analytical.com

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Please consider the environment before printing this e-mail.

From: Christina Rink <crink@lab-data.com>
Sent: Wednesday, August 14, 2019 3:17 PM
To: Jade White-Dobbs <jdobbs@vista-analytical.com>
Cc: 'Bienkowski, Lisa' <Lisa.Bienkowski@tetratech.com>
Subject: Tetra Tech - Yuma PFAS

Hi Jade,
Please see the validator's questions below.

PFAS (537M)
SDG#1901857, 1901705, 1901766, 1901920, 1901922

1. Could not match the %Recoveries reported for ICVs for PFOS, PFBS and PFHxS using 10ng/L as the actual concentration of the standard. Please verify and provide concentrations of the standards.

SDG# 1901705

2. Missing ICV file 190702M2_13 summary and raw data. Please provide.

SDG# 1901766

3. Missing ICV files 190702M2_13 and 190710M3_14 summaries and raw data. Please provide.

Thanks,
Christina

Christina Rink-Ashdown
Inorganic Chemist/Project Manager
Laboratory Data Consultants, Inc.
Data Validation, ADR, Custom Software, and Database Management
Main Office:
2701 Loker Ave. West Suite 220
Carlsbad, CA 92010
ph. 760-827-1100, extension 161
LDC hours M-Th 7am-5pm, F 7am-2pm
My Schedule: M-Th 7am-3:30pm, F 7am-2pm

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EXTRACTION INFORMATION

Process Sheet

Workorder: 1901766

Prep Expiration: 2019-08-24
Client: Tetra Tech EC, Inc.

Workorder Due: 11-Jul-19 00:00
TAT: 15

Method: **VAL - PFAS DoD (LOQ as RL)**
Matrix: **Solid**

Prep Batch: B9F0280

Also run: **Percent Solids**
Version: 537 (14 Analyte) - DoD Limits
DoD: DoD QSM 5.1

Prep Data Entered: AE 07/10/19
Date and Initials

Initial Sequence: S9G0023

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1901766-05	A,B,C	☑	☑	SAOA-B04-SO-5-5.5	*MS/MSD	WR-2 E-3	HDPE Jar, 6 oz
1901766-06	A	☑	☑	SAOA-B04-SO-20-20.5		WR-2 E-3	HDPE Jar, 6 oz
1901766-07	A	☑	☑	SAOA-B04-SO-47-47.5		WR-2 E-3	HDPE Jar, 6 oz

WO Comments: **Internal COC**

Pre-Prep Check Out: OPV 06/27/19
Pre-Prep Check In: OPV 06/27/19

Prep Check Out: OPV 07/09/19
Prep Check In: OPV 07/09/19

Prep Reconciled Initals/Date: OPV 06/27/19
Spike Reconciled Initals/Date: OPV 07/09/19
VialBoxID: Conch

Batch: B9F0280

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1901683-01	**3.56**	**28.68217**	**1.0211**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901683-02	**3.6**	**28.64584**	**1.0313**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901683-03	**3.93**	**25.69269**	**1.0097**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901683-04	**3.99**	**25.56962**	**1.0202**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901683-05	**2.51**	**41.68865**	**1.0464**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901683-06	**2.47**	**41.2234**	**1.0182**	**1000**	**09-Jul-19 16:26**	**AME**			Sludge	VAL - PFAS DoD (LOQ as
1901766-05	**1.08**	**96.69261**	**1.0443**	**1000**	**09-Jul-19 16:26**	**AME**			Soil	VAL - PFAS DoD (LOQ as
1901766-06	**1.2**	**83.54701**	**1.0026**	**1000**	**09-Jul-19 16:26**	**AME**			Soil	VAL - PFAS DoD (LOQ as
1901766-07	**1.19**	**85.80376**	**1.0211**	**1000**	**09-Jul-19 16:26**	**AME**			Soil	VAL - PFAS DoD (LOQ as
1901768-01	**8.59**	**11.72249**	**1.0070**	**1000**	**09-Jul-19 16:26**	**AME**			Solid	VAL - PFAS DoD (LOQ as
B9F0280-BLK1	**1**	100.00000	1.0000	**1000**	**09-Jul-19 16:26**	**AME**				QC
B9F0280-BS1	**1**	100.00000	1.0000	**1000**	**09-Jul-19 16:26**	**AME**	**19E2204**	**10**		QC
B9F0280-MS1	**1.08**	96.69261	1.0443	**1000**	**09-Jul-19 16:26**	**AME**	**19E2204**	**10**		QC
B9F0280-MSD1	**1.04**	96.69261	1.0056	**1000**	**09-Jul-19 16:26**	**AME**	**19E2204**	**10**		QC

All bolded data on report verified against written benchsheet by (initial/date) AE 07/10/19

Printed: 7/10/2019 2:47:41PM
Page 1 of 1

Matrix: Solid

Method: VAL - PFAS DoD (LOQ as RL)

Vista Internal Chain-of-Custody

B9F0280

Vista Analytical Laboratory

	Location		L2	R12	L2	L4					
	Reason		Pre-extraction	R9	R4	R8					
	Initials		OPV	QE	QE	CGH					
	Date/Time		07/09/19 15:30	07/09/19 17:12	07/10/19 07:16	7/10/19 1523					
Initial Storage	LabNumber	Cont									
WR-2 H-2	1901683-01	A	O	E	E	E					
WR-2 H-2	1901683-02										
WR-2 H-2	1901683-03										
WR-2 H-2	1901683-04										
WR-2 H-2	1901683-05										
WR-2 H-2	1901683-06										
WR-2 E-3	1901766-05										
WR-2 E-3	1901766-06										
WR-2 E-3	1901766-07										
WR-2 F-2	1901768-01										

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 = P

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

Matrix: Solid
Method: VAL - PFAS DoD (LOQ as RL)

PREPARATION BENCH SHEET

B9F0280

Chemist: AE

Prep Date: 07/09/19

Prep Time: 16:26

Prepared using: ☒ Sonication ☒ Shaker ☒ SPE Extraction ☒ Centrifuge ID: CH

Initial/Date: APV 07/09/19

BalanceID: HRMS-9

Cen	VISTA Sample ID	Sample Amt. (g)	IS/NS CHEM/WIT DATE	Pre-Ext	Extraction	SPE	ENVI-Carb	RS CHEM/WIT DATE
☐	B9F0280-BLK1	(1.00)	AE HR 07/09/19	AE 07/09/19	AE 07/10/19	AE 07/10/19	AE 07/10/19	HR ONL 07/10/19
☐	B9F0280-BS1	(1.00)						
☐	B9F0280-MS1 1901766-05	1.08						
☐	B9F0280-MSD1 1901766-05	1.04						
☐	1901683-01	3.56						
☐	1901683-02	3.60						
☐	1901683-03	3.93						
☐	1901683-04	3.99						
☐	1901683-05	2.51						
☐	1901683-06	2.47						
☐	1901766-05	1.08						
☐	1901766-06 (5)(3)	1.20						
☐	1901766-07	1.19						
☐	1901768-01	8.59						

IS: 19E2201, 10mL, V4

IS SUP: N/A

NS: 19E2204, 10mL, V3

NS SUP: N/A

RS: 19E2202, 10mL, V4

SPE Chem: Strata XL-AW 100µm 200 mg/6 mL

SPE Lot#: S18-00686H

Extraction Solvent: 1:1 MeOH:ACN

ENVI-Carb Lot#: 1115550

Ele SOLV: MeOH/0.5%NH4OH in MeOH

Final Volume(s) 1 mL

Notes:
(5) 07/10/19 AE
(3) 07/10/19 AE

Comments: Assume 1 g = 1 mL

1 = Sample deeply colored
2 = Cartridge sorbent discolored after SPE
3 = Sample clogged cartridge, additional cartridge(s) used
4 = Sample recombined at final volume
5 = Sample took longer to SPE, required stronger vacuum
6 = Required Nitrogen line to finish SPE
7 = Required Nitrogen line to finish elution

Matrix: Solid
Method: Percent Solids

Vista Internal Chain-of-Custody

B9F0254

Vista Analytical Laboratory

	Location		L2	R-13	L2	L4					
	Reason		R1	R9	R1	R8					
	Initials		OPV	OPV	HP	C&H					
	Date/Time		06/27/19 13:51	06/27/19 14:23	06/28/19 11:43	07/10/19 1771					
Initial Storage	LabNumber	Cont									
WR-2 E-3	1901766-05	A	O	O	O						
WR-2 E-3	1901766-06	A	↓	↓	↓						
WR-2 E-3	1901766-07	A	↓	↓	↓						

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

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9F0254

Analyst: OPV	**Test Code:** %Moist/%Solids
Analyte:	**Units:** %
Dried at 110°C+/-5°C	
Oven ID: 01 02	

Data Entry Verified by: (Initial and Date) NA

Inst MP-MS-9

Date/Time IN: 06/27/19 14:18 Date/Time OUT 06/28/19 11:43

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	OPV 06/27/19	MP 06/28/19			OPV 06/27/19					OPV 06/27/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1901766-05	A	Sample	1.29	6.43	6.26			Brown Sand					✓
	1901766-06	A	Sample	1.30	5.98	5.21	NA		Clay		NA			✓
	1901766-07	A	Sample	1.29	6.08	5.40			Brown Sand					✓

*Sample homogenized in sample container unless otherwise noted.

Percent Moisture/ Percent Solids

D2216-90 BATCH ID B9F0254

Analyst: OPV ✓ **Test Code:** %Moist/%Solids

Analyte: **Units:** %

Dried at 110°C+/-5°C

Oven ID: 01 ✓ 02

Data Entry Verified by:
(Initial and Date) HR 06/28/19

Inst HRMS-9 ✓

Date/Time IN: 6/27/19 14:18 ✓ Date/Time OUT: 6/28/19 11:43 ✓

	B	C	D	E	F	G	H	I	K	L	M	N	O	P
				Intial and Date:	OPV 06/27/19 ✓	HR 06/28/19 ✓			OPV 06/27/19					OPV 06/27/19
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	Cl-	pH Before	pH After	Acid Added	Sample Homogenized*
	1901766-05		Sample	1.2900 ✓	6.4300 ✓	6.2600 ✓	4.9700	96.69	Brown Sand	N/A	N/A	N/A	N/A	X
	1901766-06		Sample	1.3000 ✓	5.9800 ✓	5.2100 ✓	3.9100	83.55	Clay	N/A	N/A	N/A	N/A	X
	1901766-07		Sample	1.2900 ✓	6.0800 ✓	5.4000 ✓	4.1100	85.80	Brown Sand	N/A	N/A	N/A	N/A	X

*Sample homogenized in sample container unless otherwise noted.

Process Sheet

Workorder: 1901766

Prep Expiration: 2019-07-04
Client: Tetra Tech EC, Inc.

Workorder Due: 11-Jul-19 00:00
TAT: 15

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

Prep Batch: BJF0253

Prep Data Entered: HR 07/02/19
Date and Initials

Version: 537 (14 Analyte) - DoD Limits
DoD: DoD QSM 5.1

Initial Sequence: S9G0007

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1901766-01	A	✓	✓	EB-GW-06202019		R-13 A-1	HDPE Bottle, 125 mL
1901766-02	ABC	✓	✓	SAOA-B06-GW	MS/MSD	R-13 A-1	HDPE Bottle, 125 mL
1901766-03	A	✓	✓	FRB-06242019		R-13 A-1	HDPE Bottle, 125 mL
1901766-04	↓	✓	✓	SAOA-B07-GW		R-13 A-1	HDPE Bottle, 125 mL
1901766-08		✓	✓	SAOA-B04-GW		R-13 A-1	HDPE Bottle, 125 mL
1901766-09		✓	✓	EB-06252019		R-13 A-1	HDPE Bottle, 125 mL
1901766-10		✓	✓	FRB-06252019		R-13 A-1	HDPE Bottle, 125 mL

WO Comments: Internal COC

Pre-Prep Check Out: SAE 06/27/19 Prep Check Out: HR 07/01/19

Pre-Prep Check In: SAE 06/27/19 Prep Check In: N/A

Prep Reconciled Initals/Date: SAE 06/27/19

Spike Reconciled Initals/Date: HR 07/01/19

VialBoxID: Carnitas

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

Vista Internal Chain-of-Custody

B9F0253

Vista Analytical Laboratory

	Location		L2	R-13	L2	R12	L2	R12	L4		L4
	Reason		Prep	Storage	R4	R9	R8	R9	R8		R8
	Initials		SAE	SAE	HR	HR	CNL	HR	CH		CM
	Date/Time		06/27/19 10:20	06/27/19 11:48	*07/01/19 05:39	*07/01/19 12:23	07/02/19 05:47	07/02/19 13:52	07/02/19 16:27		7/3/19 1045
Initial Storage	LabNumber	Cont									
WR-2 B-5	1901705-02	A	O	O	O	E	E	E	E	E	
WR-2 B-5	1901705-08	T	T	T	T	T	T	T	T	T	
WR-2 B-5	1901705-16										
WR-2 B-5	1901705-17										
WR-2 B-5	1901705-18										
WR-2 B-5	1901705-19										
R-13 A-1	1901766-01	↓									
R-13 A-1	1901766-02	ABC									
R-13 A-1	1901766-03	A									
R-13 A-1	1901766-04	T									
R-13 A-1	1901766-08										
R-13 A-1	1901766-09										
R-13 A-1	1901766-10	↓	↓	↓	↓	↓	↓	↓	↓	↓	E

CM 7/3/19

CM 7/3/19

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 = _____

*HR 07/01/19

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

Batch: B9F0253

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1901705-02	0.11453	N/A	N/A	1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901705-08	0.11426			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901705-16	0.11764			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901705-17	0.11443			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901705-18	0.12			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901705-19	0.11889			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-01	0.11296			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-02	0.11745			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-03	0.11389			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-04	0.11804			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-08	0.12437			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-09	0.11886			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
1901766-10	0.11191			1000	01-Jul-19 06:40	HNR			Aqueous	537M PFAS DOD (LOQ as
B9F0253-BLK1	0.125			1000	01-Jul-19 06:40	HNR				QC
B9F0253-BS1	0.125			1000	01-Jul-19 06:40	HNR	19E2204	10		QC
B9F0253-MS1	0.11802			1000	01-Jul-19 06:40	HNR	19E2204	10		QC
B9F0253-MSD1	0.11415			1000	01-Jul-19 06:40	HNR	19E2204	10		QC

All bolded data on report verified against written benchsheet by (initial/date) HP 07/01/19

Printed: 7/2/2019 10:42:19AM
Page 1 of 1

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

PREPARATION BENCH SHEET

B9F0253

Chemist: HR

Prep Date: ~~06/27~~ 07/01/19 HR 07/01/19

Prep Time: 0640

Prepared using: ☐ Sonication Shaker ☐ SPE Extraction ☒ Centrifuge ID: C3

Date/Initals: ~~SAT 06/27/19~~ BalanceID: HRMS-9

Cen	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	ENVI-Carb	RS CHEM/WIT DATE
☒	B9F0253-BLK1	5	2	0	1	NA	NA	(0.125)	HR 07/01/19	OPV 07/01/19	OPV 07/01/19	OPV ~~06/27/19~~ 07/01/19
☒	B9F0253-BS1	5	2	0	1	↓	↓	(0.125)	↓	↓	↓	↓
☒	B9F0253-MS1 1901766-02 ⑨	8	2	0	3	144.87	26.85	0.11802 ✓	↓	↓	↓	↓
☒	B9F0253-MSD1 ⑨ 1901766-02	8	2	0	3	140.88	26.73	0.11415 ✓	↓	↓	↓	↓
☐	1901705-02	5	2	0	1	141.35	26.82	0.11453	↓	↓	↓	↓
☐	1901705-08	5	2	0	1	141.09	26.83	0.11426	↓	↓	↓	↓
☐	1901705-16	5	2	0	1	144.36	26.72	0.11764	↓	↓	↓	↓
☐	1901705-17	5	2	0	1	141.19	26.76	0.11443	↓	↓	↓	↓
☐	1901705-18	5	2	0	1	146.64	26.64	0.12000	↓	↓	↓	↓
☒	1901705-19 ③	7	2	0	2	145.63	26.74	0.11889	↓	↓	↓	↓
☐	1901766-01	5	2	0	1	139.78	26.82	0.11296 ✓	↓	↓	↓	↓
☒	1901766-02	8	2	0	3	144.25	26.80	0.11745 ✓	↓	↓	↓	↓
☐	1901766-03	5	2	0	1	140.72	26.83	0.11389 ✓	↓	↓	↓	↓
☒	1901766-04 ③	8	2	0	2	144.80	26.76	0.11804	↓	↓	↓	↓

IS: 19E2201, 10mL, (V5)

IS SUP: N/A

NS: 19E2204, 10mL, (V3)

NS SUP: N/A

RS: 19E2202, 10mL (V5)

SPE Chem: Strata-X-AW 33µm, 200mg/6mL

SPE Lot#: S18-006880

ENVI-Carb Lot#: 11155501

Ele SOLV: MeOH/0.5%NH4OH in MeOH

Final Volume(s) ____ | ____ mL

Notes: ③ OPV 07/01/19

Comments: Assume 1 g = 1 mL
Cen = Centrifuged

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

Matrix: Aqueous

Method: 537M PFAS DOD (LOQ as mRL)

PREPARATION BENCH SHEET

B9F0253

Chemist: HR

Prep Date: 07/01/19

Prep Time: 06:40

Prepared using: ☐ Sonication Shaker ☐ SPE Extraction ☒ Centrifuge ID: C3

Date/Initals: BAE 06/27/19 BalanceID: HRMS-9

Cen	VISTA Sample ID	pH Before	pH After	Chlorine (Cl)	Drops HCl Added	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	ENVI-Carb	RS CHEM/WIT DATE
☒	1901766-08 (3)	8	2	0	2	151.06	26.69	0.12437	HR MM 07/01/19	ORV 07/01/19	ORV 07/01/19	ORV MM 07/01/19
☐	1901766-09	5	2	0	1	145.64	26.78	0.11886	↓	↓	↓	↓
☐	1901766-10	5	2	0	1	138.68	26.77	0.11191	↓	↓	↓	↓

IS: 19E2201, 10mL, (V5)

IS SUP: N/A

NS: 19E2204, 10mL, (V3)

NS SUP: N/A

RS: 19E2202, 10µL (V5)

SPE Chem: Strata-X-AW 33µm, 200mg/6mL

SPE Lot#: S18-006680

ENVI-Carb Lot#: 1115550

Ele SOLV: MeOH/0.5%NH4OH in MeOH

Final Volume(s) ____ mL

Notes: (3) ORV 07/01/19

Comments: Assume 1 g = 1 mL

Cen = Centrifuged

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)

Sample Data – PFAS Isotope Dilution Method

Vista Analytical Laboratory L14

Review: AMR 7/8/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-18.qld

Last Altered: Wednesday, July 03, 2019 15:57:08 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 15:58:50 Pacific Daylight Time

Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, 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		9.18e2	0.125		2.59						
2	7	PFHxA	313.0 > 269.0		5.18e3	0.125		3.09						
3	11	PFHpA	363.0 > 318.9		6.82e3	0.125		3.71						
4	13	L-PFHxS	398.9 > 79.6		1.92e3	0.125		3.86						
5	80	Total PFHxS	398.9 > 79.6	0.00e0	1.92e3	0.125		3.83		0.000				
6	49	13C3-PFBS	302.0 > 98.8	9.18e2	8.36e2	0.125	1.067	2.59	2.59	13.7	102.8930	102.9		
7	52	13C2-PFHxA	315.0 > 270.0	5.18e3	1.40e4	0.125	1.008	3.09	3.09	4.62	36.6562	91.6		
8	53	13C4-PFHpA	367.2 > 321.8	6.82e3	1.40e4	0.125	0.535	3.71	3.71	6.08	90.9260	90.9		
9	54	13C3-PFHxS	401.8 > 79.9	1.92e3	8.36e2	0.125	2.170	3.86	3.86	28.8	106.0881	106.1		
10	54	13C3-PFHxS	401.8 > 79.9	1.92e3	8.36e2	0.125	2.170	3.86	3.86	28.8	106.0881	106.1		
11	-1													
12	16	L-PFOA	412.8 > 368.9		1.11e4	0.125		4.23						
13	81	Total PFOA	412.8 > 368.9	0.00e0	1.11e4	0.125		4.21		0.000				
14	21	PFNA	463.0 > 418.8		9.37e3	0.125		4.66						
15	23	L-PFOS	498.9 > 79.9		1.79e3	0.125		4.74						
16	82	Total PFOS	498.9 > 79.9	0.00e0	1.79e3	0.125		4.74		0.000				
17	58	13C2-PFOA	414.9 > 369.7	1.11e4	1.73e4	0.125	0.744	4.23	4.23	8.01	86.1093	86.1		
18	58	13C2-PFOA	414.9 > 369.7	1.11e4	1.73e4	0.125	0.744	4.23	4.23	8.01	86.1093	86.1		
19	56	13C5-PFNA	468.2 > 422.9	9.37e3	1.28e4	0.125	1.014	4.66	4.66	9.14	72.1164	72.1		
20	59	13C8-PFOS	507.0 > 79.9	1.79e3	2.10e3	0.125	0.998	4.75	4.74	10.7	85.5553	85.6		
21	59	13C8-PFOS	507.0 > 79.9	1.79e3	2.10e3	0.125	0.998	4.75	4.74	10.7	85.5553	85.6		
22	-1													
23	26	PFDA	513 > 468.8		8.18e3	0.125		5.04						
24	29	L-MeFOSAA	570 > 419		1.76e3	0.125		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.76e3	0.125		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.24e4	0.125		5.36						
27	37	PFDoA	612.9 > 569.0	1.18e1	1.23e4	0.125		5.65	5.64	0.0119			3.071	YES
28	60	13C2-PFDA	515.1 > 469.9	8.18e3	1.55e4	0.125	0.836	5.04	5.04	6.60	63.1439	63.1		
29	62	d3-N-MeFOSAA	573.3 > 419	1.76e3	1.61e4	0.125	0.163	5.19	5.19	1.37	67.1978	67.2		
30	62	d3-N-MeFOSAA	573.3 > 419	1.76e3	1.61e4	0.125	0.163	5.19	5.19	1.37	67.1978	67.2		
31	63	13C2-PFUdA	565 > 519.8	1.24e4	1.61e4	0.125	1.053	5.36	5.36	9.63	73.1929	73.2		
32	65	13C2-PFDoA	614.7 > 569.7	1.23e4	1.55e4	0.125	1.094	5.65	5.65	9.95	72.7228	72.7		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		2.12e3	0.125		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	2.12e3	0.125		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.23e4	0.125		5.89						

Vista Analytical Laboratory L14

Review: AMR 7/8/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-18.qld

Last Altered: Wednesday, July 03, 2019 15:57:08 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 15:58:50 Pacific Daylight Time

Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		5.50e3	0.125		6.11						
38	85	TDCA	498.3>106.9			0.125		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.12e3	1.61e4	0.125	0.179	5.34	5.34	1.65	73.5005	73.5		
40	64	d5-N-EtFOSAA	589.3 > 419	2.12e3	1.61e4	0.125	0.179	5.34	5.34	1.65	73.5005	73.5		
41	65	13C2-PFDoA	614.7 > 569.7	1.23e4	1.55e4	0.125	1.094	5.65	5.65	9.95	72.7228	72.7		
42	67	13C2-PFTeDA	715.1 > 669.7	5.50e3	1.61e4	0.125	0.666	6.11	6.11	4.28	51.3462	51.3		
43	59	13C8-PFOS	507.0 > 79.9	1.79e3	2.10e3	0.125	0.998	4.75	4.74	10.7	85.5553	85.6		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.40e4	1.40e4	0.125	1.000	3.09	3.08	12.5	100.0000	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.73e4	1.73e4	0.125	1.000	4.23	4.23	12.5	100.0000	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	8.36e2	8.36e2	0.125	1.000	3.86	3.86	12.5	100.0000	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.28e4	1.28e4	0.125	1.000	4.66	4.66	12.5	100.0000	100.0		
49	77	13C4-PFOS	503 > 79.9	2.10e3	2.10e3	0.125	1.000	4.75	4.75	12.5	100.0000	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.55e4	1.55e4	0.125	1.000	5.04	5.04	12.5	100.0000	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.61e4	1.61e4	0.125	1.000	5.36	5.36	12.5	100.0000	100.0		

Vista Analytical Laboratory L14

Review: AMR 7/8/2019

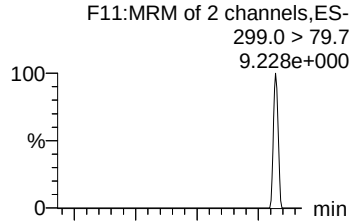
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-18.qld

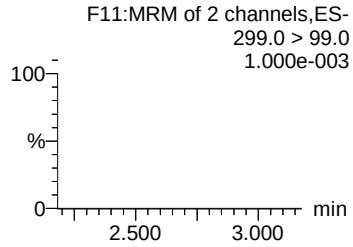
Last Altered: Wednesday, July 03, 2019 15:57:08 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 15:58:50 Pacific Daylight Time

Method: Z:\Projects\PFAS.pro\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

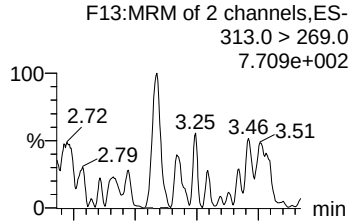
Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, Description: Method Blank

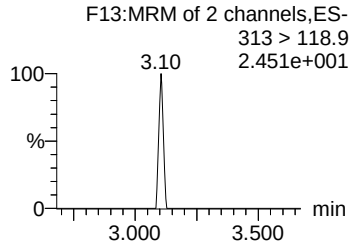
PFBS



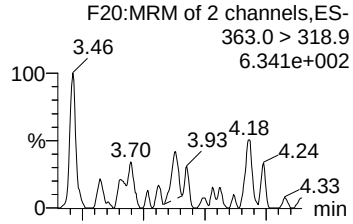


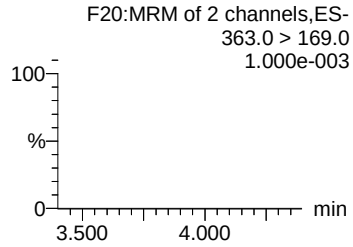
PFHxA



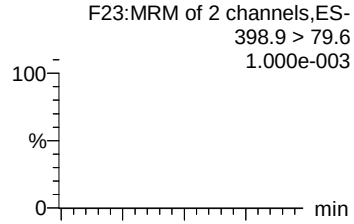


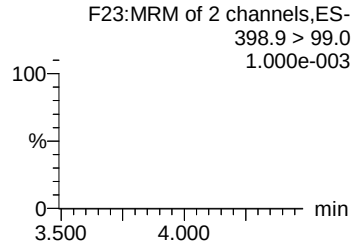
PFHpA





L-PFHxS





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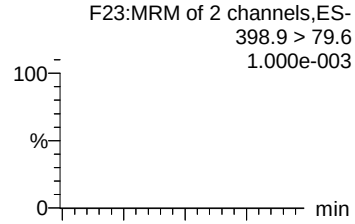
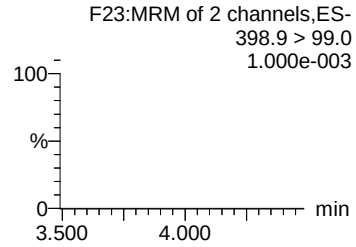
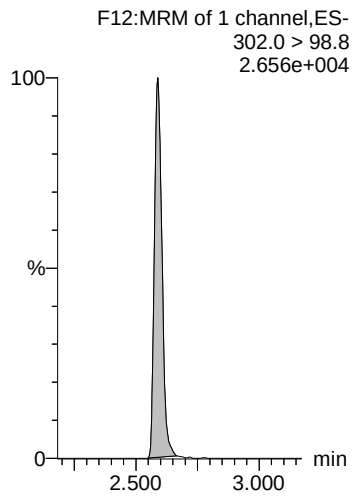
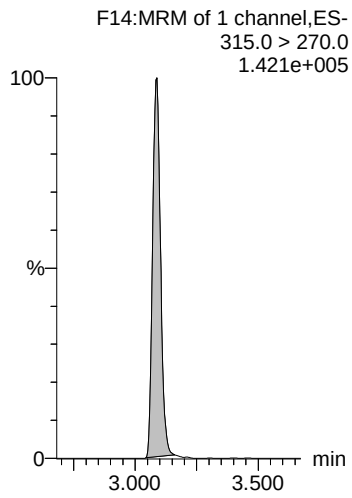




13C3-PFBS



13C2-PFHxA



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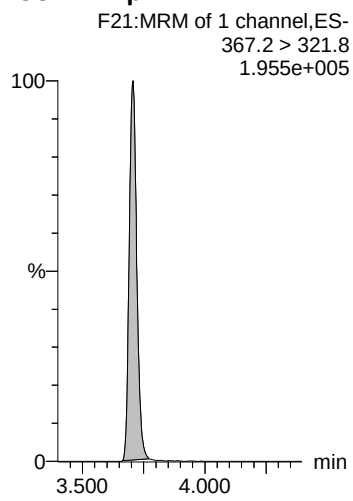

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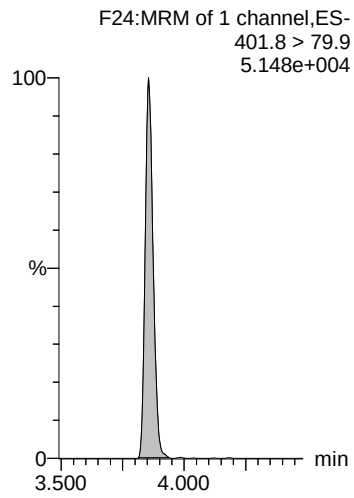

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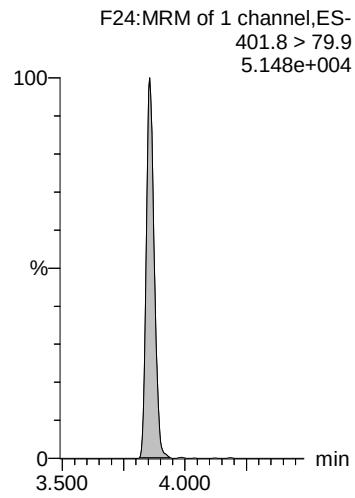

Vista Analytical Laboratory L14

Review: AMR 7/8/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-18.qld

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Printed: Wednesday, July 03, 2019 15:58:50 Pacific Daylight Time

Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, Description: Method Blank

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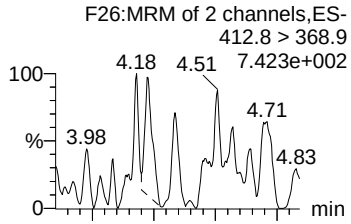

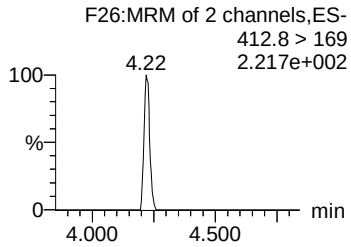

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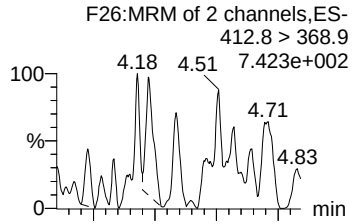
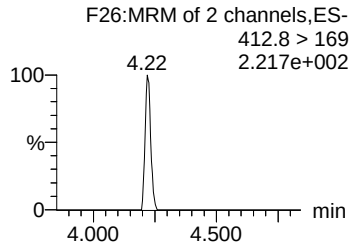
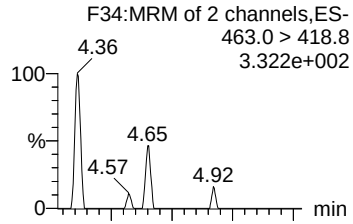
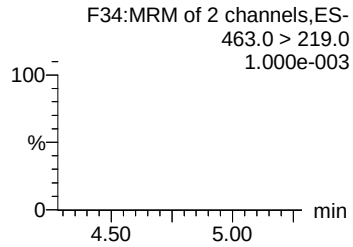


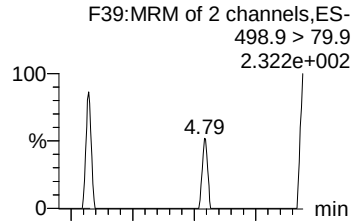


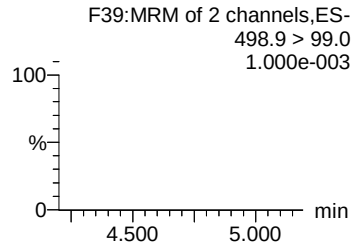
PFNA



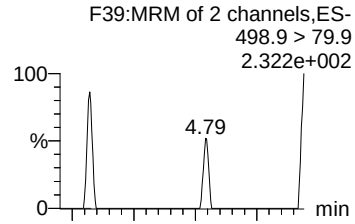


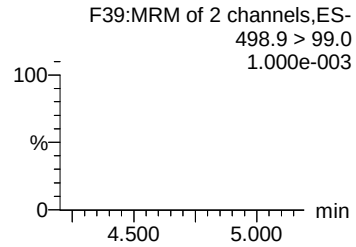
L-PFOS



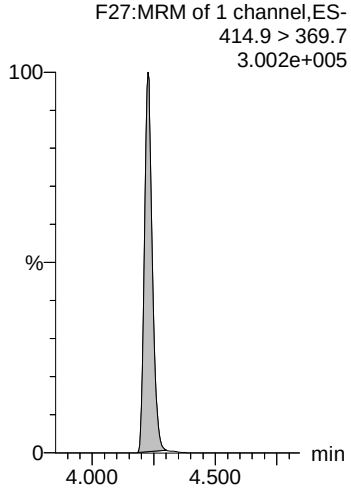


Total PFOS





13C2-PFOA



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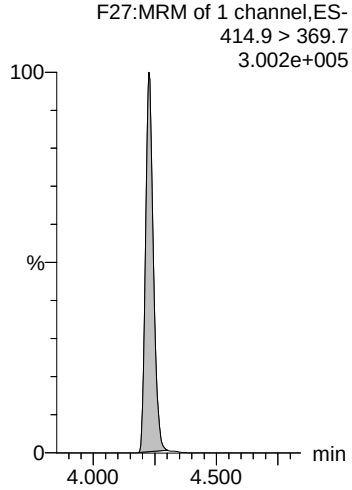

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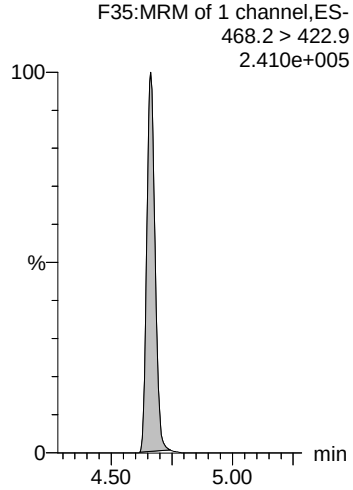
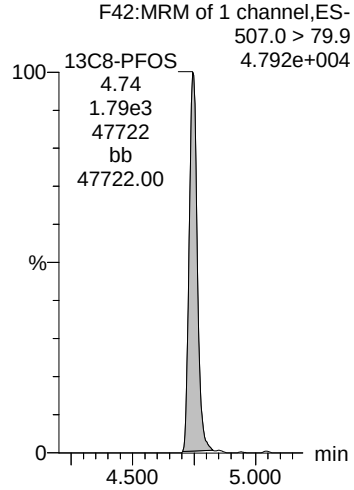
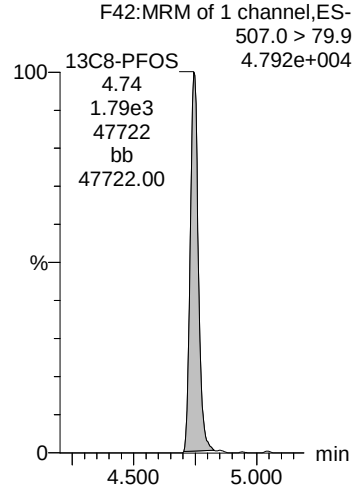


13C8-PFOS



13C8-PFOS



Review: AMR 7/8/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-18.qld

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Printed: Wednesday, July 03, 2019 15:58:50 Pacific Daylight Time

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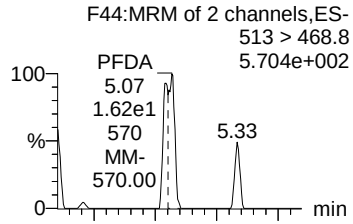
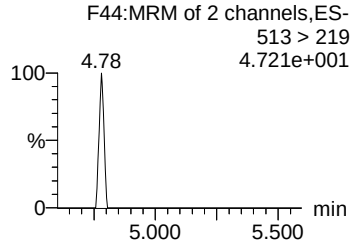
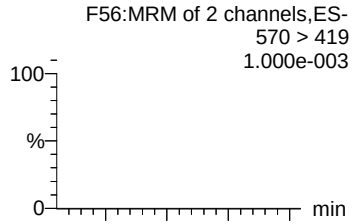
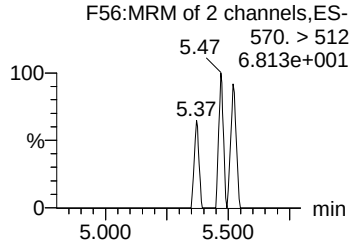




L-MeFOSAA





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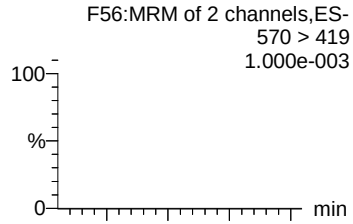
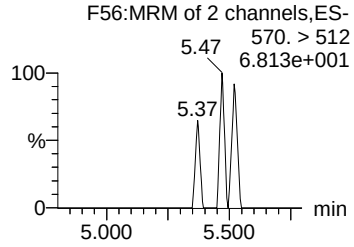
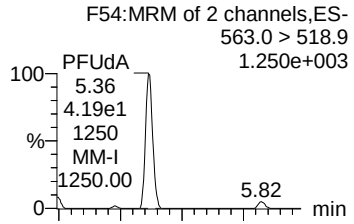
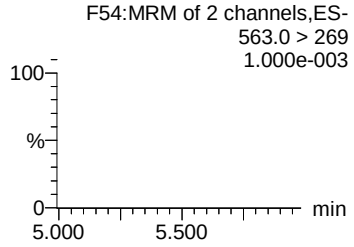




PFUdA





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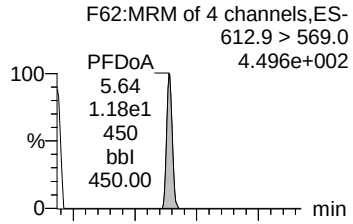

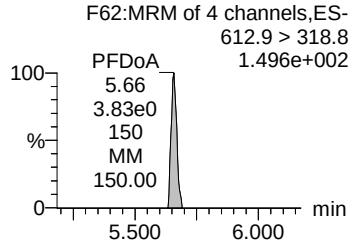

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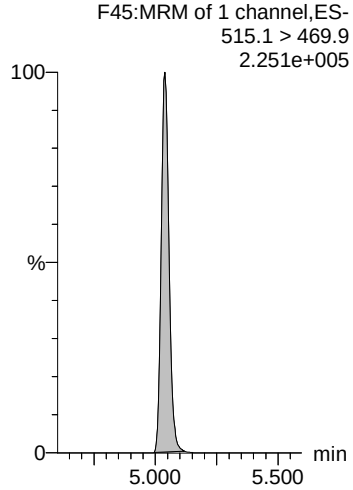
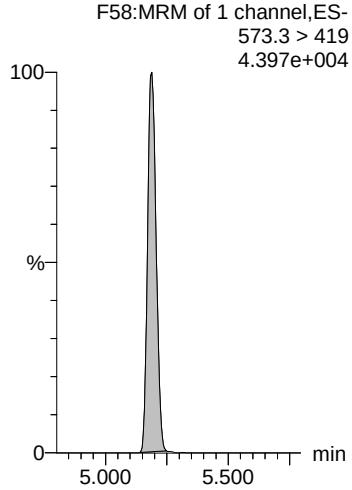


d3-N-MeFOSAA



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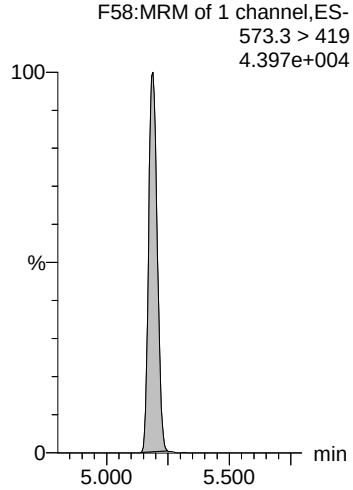

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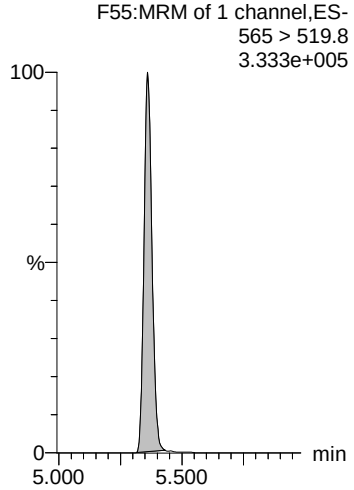

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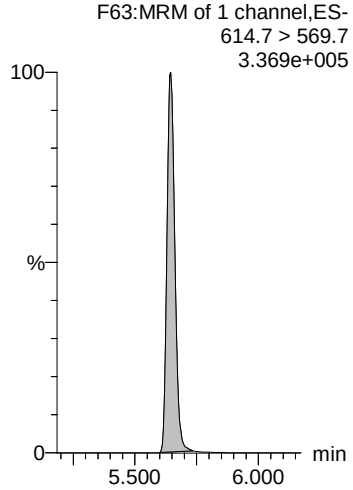

 FBR 7/3/2019

Review: AMR 7/8/2019

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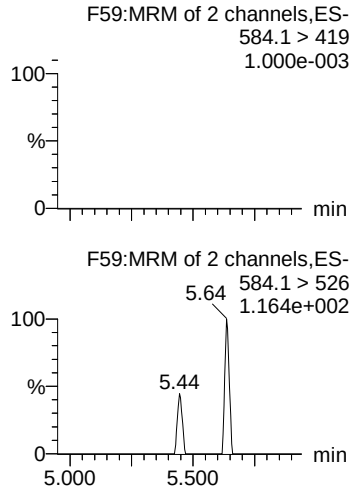
Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, Description: Method Blank

L-EtFOSAA



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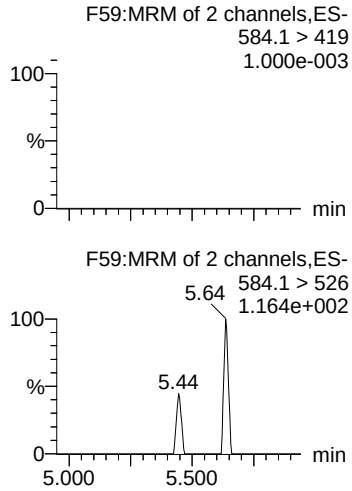
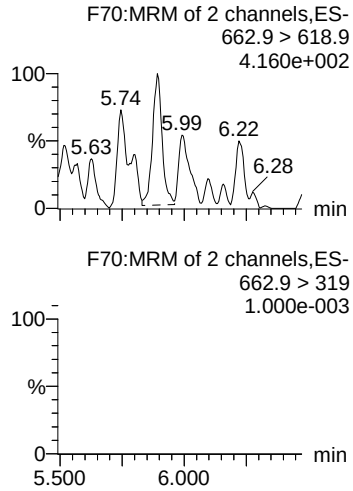
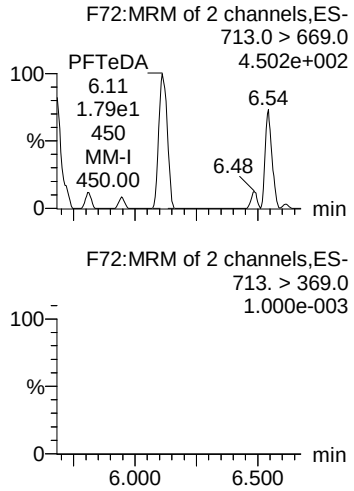


PFTrDA



PFTeDA



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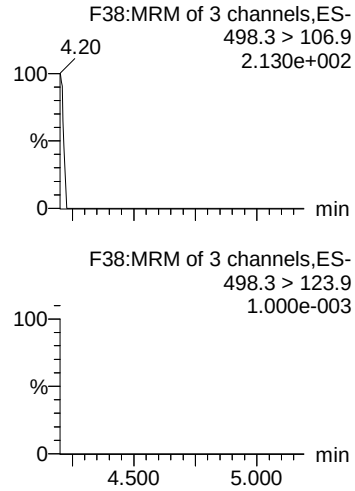
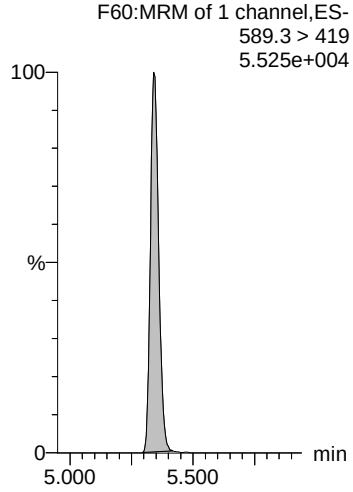


d5-N-EtFOSAA



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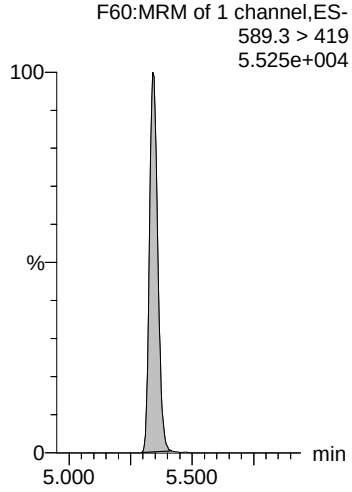
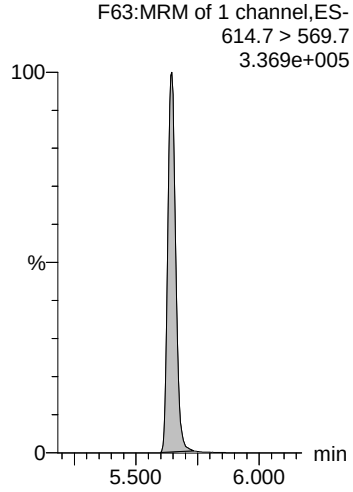


13C2-PFDoA



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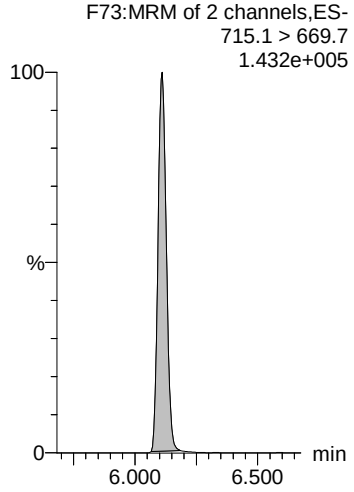
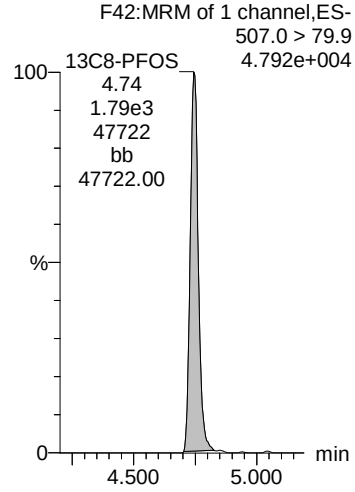


13C8-PFOS



 FBR 7/3/2019

Review: AMR 7/8/2019

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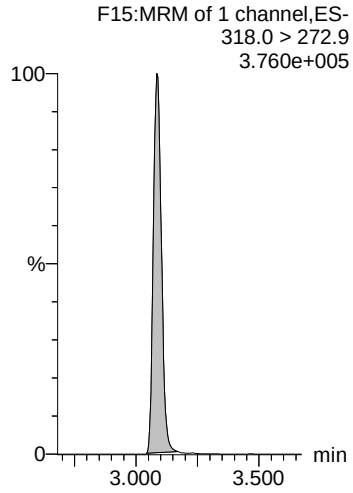
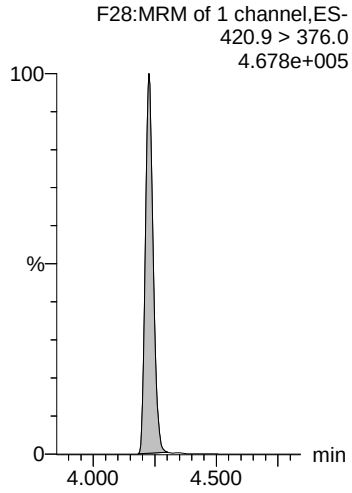
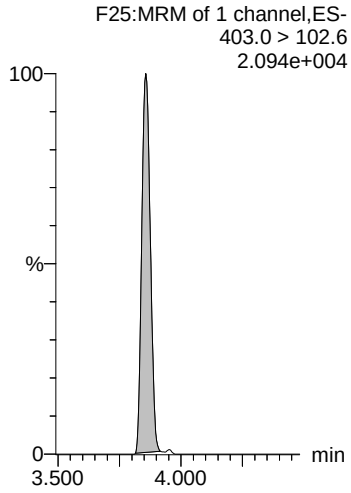
13C5-PFHxA



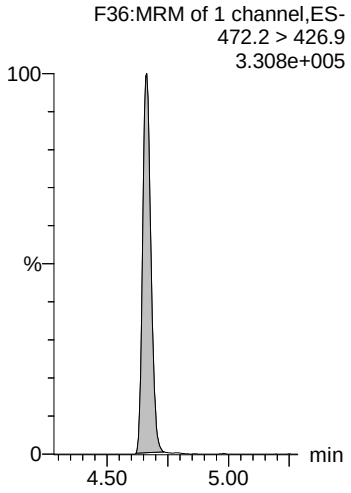
13C8-PFOA



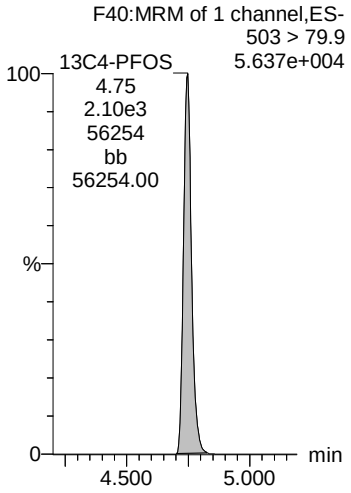
18O2-PFHxS



13C9-PFNA



13C4-PFOS



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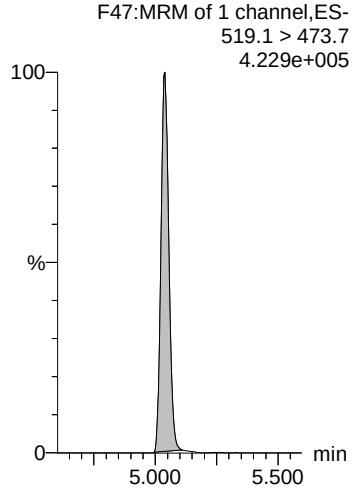
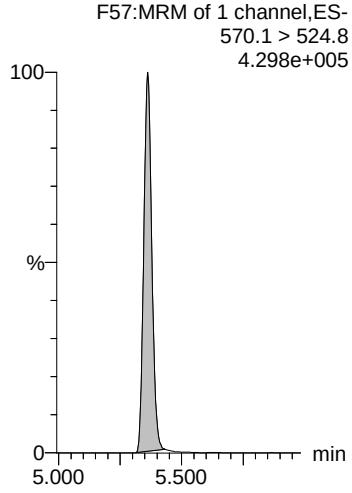


13C7-PFUdA



 FBR 7/3/2019

Vista Analytical Laboratory L14

Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, 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	1.70e3	9.11e2	0.125		2.49	2.49	23.3	81.0986	101.4	3.273	NO
2	7	PFHxA	313.0 > 269.0	1.07e4	4.10e3	0.125		2.99	2.99	13.0	90.0966	112.6	14.569	NO
3	11	PFHpA	363.0 > 318.9	4.93e3	4.64e3	0.125		3.62	3.62	13.3	84.7444	105.9	4.463	NO
4	13	L-PFHxS	398.9 > 79.6	1.53e3	1.78e3	0.125		3.77	3.77	10.7	86.2549	107.8	2.310	NO
5	80	Total PFHxS	398.9 > 79.6	1.53e3	1.78e3	0.125		3.83		10.7	86.2549			
6	49	13C3-PFBS	302.0 > 98.8	9.11e2	9.33e2	0.125	1.034	2.48	2.49	12.2	94.3690	94.4		
7	52	13C2-PFHxA	315.0 > 270.0	4.10e3	1.36e4	0.125	0.791	2.99	2.99	3.76	37.9820	95.0		
8	53	13C4-PFHpA	367.2 > 321.8	4.64e3	1.36e4	0.125	0.365	3.61	3.62	4.25	93.2345	93.2		
9	54	13C3-PFHxS	401.8 > 79.9	1.78e3	9.33e2	0.125	2.210	3.77	3.77	23.9	86.4137	86.4		
10	54	13C3-PFHxS	401.8 > 79.9	1.78e3	9.33e2	0.125	2.210	3.77	3.77	23.9	86.4137	86.4		
11	-1													
12	16	L-PFOA	412.8 > 368.9	1.56e4	9.04e3	0.125		4.15	4.14	21.6	86.6013	108.3	3.803	NO
13	81	Total PFOA	412.8 > 368.9	1.57e4	9.04e3	0.125		4.21		21.6	86.6013			
14	21	PFNA	463.0 > 418.8	7.62e3	8.18e3	0.125		4.59	4.59	11.6	89.8208	112.3	2.951	NO
15	23	L-PFOS	498.9 > 79.9	1.84e3	1.71e3	0.125		4.68	4.68	13.5	84.5744	105.7	2.041	NO
16	82	Total PFOS	498.9 > 79.9	1.84e3	1.71e3	0.125		4.74		13.5	84.5744			
17	58	13C2-PFOA	414.9 > 369.7	9.04e3	1.91e4	0.125	0.509	4.14	4.15	5.91	92.9069	92.9		
18	58	13C2-PFOA	414.9 > 369.7	9.04e3	1.91e4	0.125	0.509	4.14	4.15	5.91	92.9069	92.9		
19	56	13C5-PFNA	468.2 > 422.9	8.18e3	9.86e3	0.125	0.998	4.59	4.59	10.4	83.1260	83.1		
20	59	13C8-PFOS	507.0 > 79.9	1.71e3	1.96e3	0.125	1.015	4.68	4.68	10.9	85.9979	86.0		
21	59	13C8-PFOS	507.0 > 79.9	1.71e3	1.96e3	0.125	1.015	4.68	4.68	10.9	85.9979	86.0		
22	-1													
23	26	PFDA	513 > 468.8	8.01e3	6.21e3	0.125		4.97	4.97	16.1	86.1782	107.7	4.271	NO
24	29	L-MeFOSAA	570 > 419	4.30e3	1.56e3	0.125		5.13	5.13	34.4	93.111C	116.4	2.421	NO
25	83	Total N-MeFOSAA	570. > 419	4.30e3	1.56e3	0.125		5.19		34.4	93.111C			
26	33	PFUdA	563.0 > 518.9	7.42e3	9.41e3	0.125		5.30	5.30	9.86	88.2627	110.3	6.183	NO
27	37	PFDoA	612.9 > 569.0	7.14e3	8.04e3	0.125		5.59	5.59	11.1	92.2267	115.3	8.156	NO
28	60	13C2-PFDA	515.1 > 469.9	6.21e3	1.34e4	0.125	0.669	4.97	4.97	5.82	69.5795	69.6		
29	62	d3-N-MeFOSAA	573.3 > 419	1.56e3	1.59e4	0.125	0.124	5.13	5.13	1.23	79.2932	79.3		
30	62	d3-N-MeFOSAA	573.3 > 419	1.56e3	1.59e4	0.125	0.124	5.13	5.13	1.23	79.2932	79.3		
31	63	13C2-PFUdA	565 > 519.8	9.41e3	1.59e4	0.125	0.812	5.30	5.30	7.42	73.1212	73.1		
32	65	13C2-PFDoA	614.7 > 569.7	8.04e3	1.34e4	0.125	1.311	5.59	5.59	7.53	45.9056	45.9		
33	-1													
34	31	L-EtFOSAA	584.1 > 419	3.23e3	2.33e3	0.125		5.28	5.29	17.3	88.2477	110.3	1.347	NO
35	84	Total N-EtFOSAA	584.1 > 419	3.23e3	2.33e3	0.125		5.33		17.3	88.2477			
36	39	PFTrDA	662.9 > 618.9	4.20e3	8.04e3	0.125		5.85	5.84	6.53	50.8862	63.6	12.550	NO

CGH 7/18/2019

Vista Analytical Laboratory L14

Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	1.88e3	1.26e3	0.125		6.07	6.07	18.7	84.2583	105.3	12.739	NO
38	85	TDCA	498.3>106.9			0.125		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.33e3	1.59e4	0.125	0.174	5.28	5.28	1.84	84.1876	84.2		
40	64	d5-N-EtFOSAA	589.3 > 419	2.33e3	1.59e4	0.125	0.174	5.28	5.28	1.84	84.1876	84.2		
41	65	13C2-PFDoA	614.7 > 569.7	8.04e3	1.34e4	0.125	1.311	5.59	5.59	7.53	45.9056	45.9		
42	67	13C2-PFTeDA	715.1 > 669.7	1.26e3	1.59e4	0.125	0.437	6.06	6.07	0.995	18.2163	18.2		
43	59	13C8-PFOS	507.0 > 79.9	1.71e3	1.96e3	0.125	1.015	4.68	4.68	10.9	85.9979	86.0		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.36e4	1.36e4	0.125	1.000	2.99	2.99	12.5	100.0000	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.91e4	1.91e4	0.125	1.000	4.14	4.15	12.5	100.0000	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	9.33e2	9.33e2	0.125	1.000	3.77	3.77	12.5	100.0000	100.0		
48	76	13C9-PFNA	472.2 > 426.9	9.86e3	9.86e3	0.125	1.000	4.59	4.59	12.5	100.0000	100.0		
49	77	13C4-PFOS	503 > 79.9	1.96e3	1.96e3	0.125	1.000	4.68	4.68	12.5	100.0000	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.34e4	1.34e4	0.125	1.000	4.97	4.97	12.5	100.0000	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.59e4	1.59e4	0.125	1.000	5.30	5.30	12.5	100.0000	100.0		

CGH 7/18/2019

Vista Analytical Laboratory L14

Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

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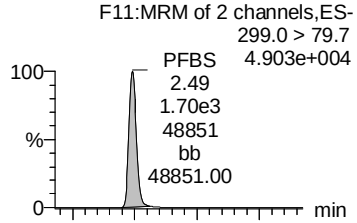
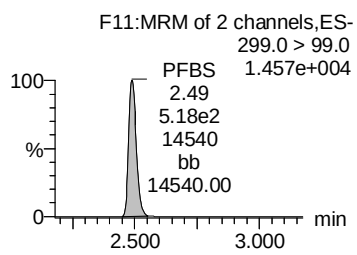
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

PFBS





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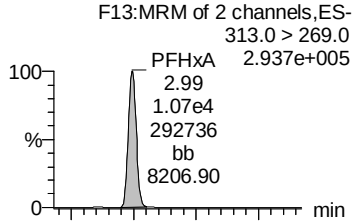

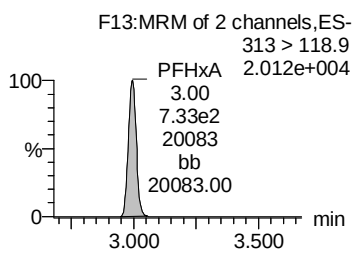

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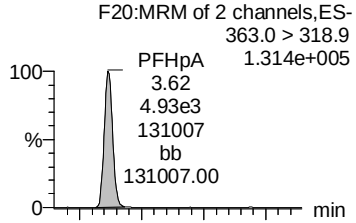

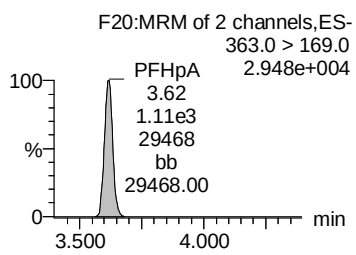

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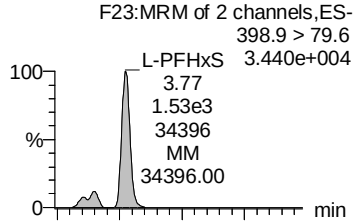
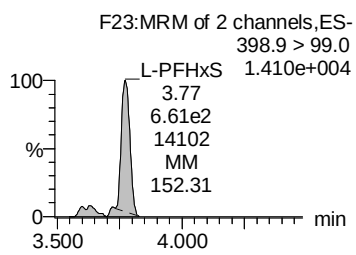
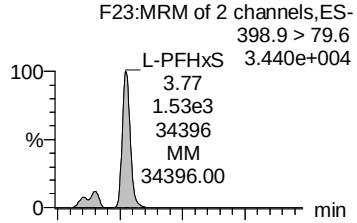
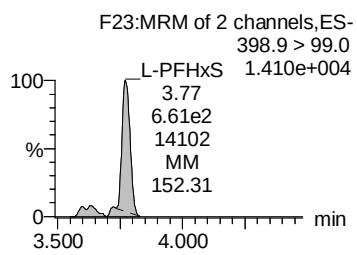


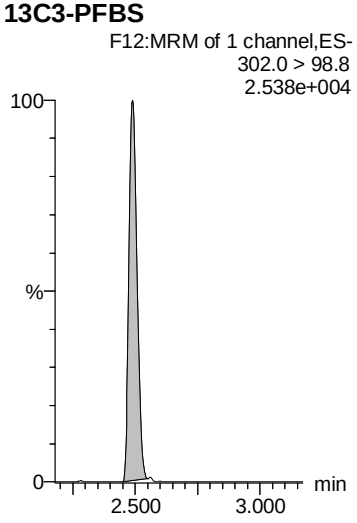


Total PFHxS





13C3-PFBS



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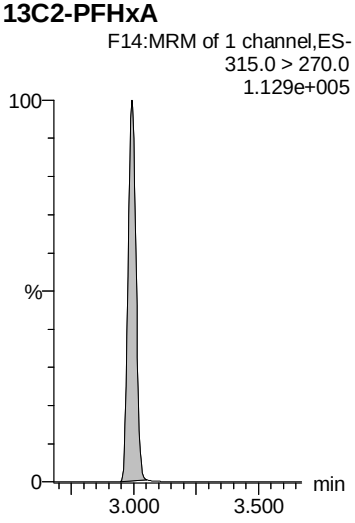

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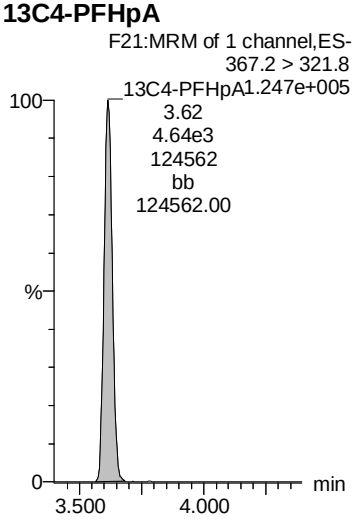

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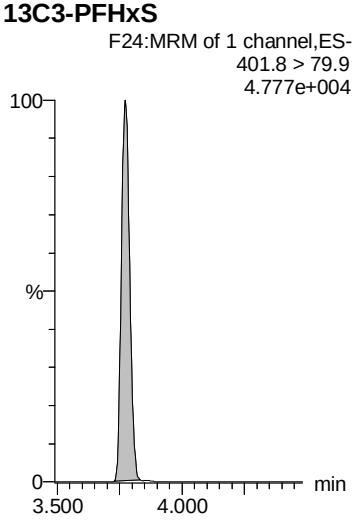

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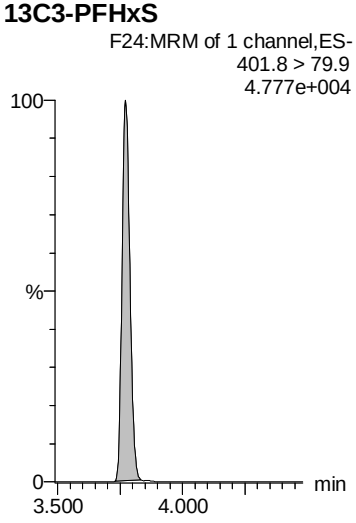


CGH 7/18/2019

Vista Analytical Laboratory L14

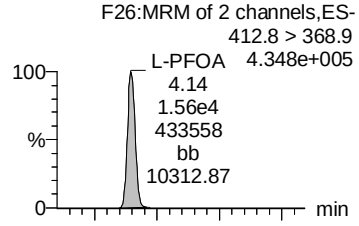
Review: AMR 8/21/2019

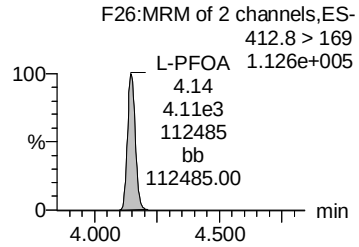
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

L-PFOA





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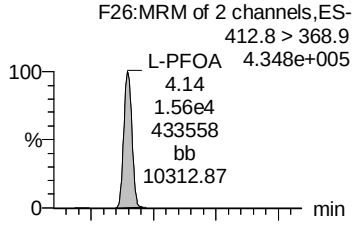
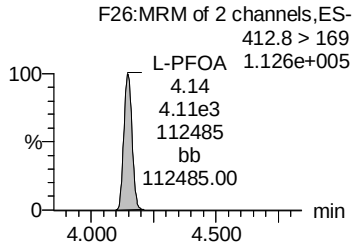
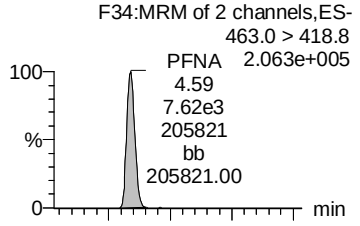
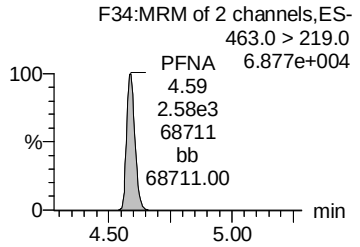


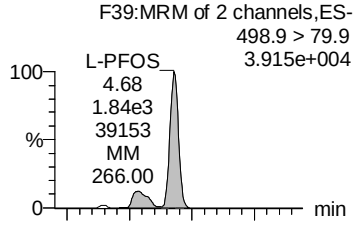


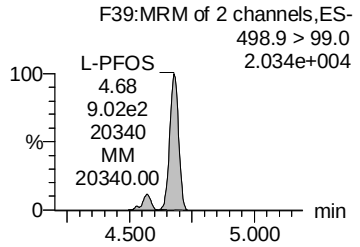
PFNA



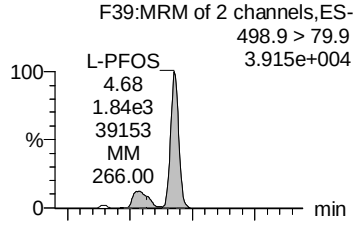


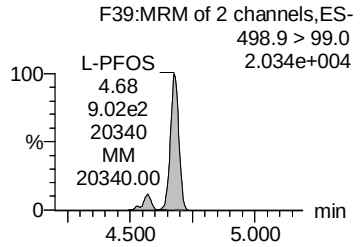
L-PFOS



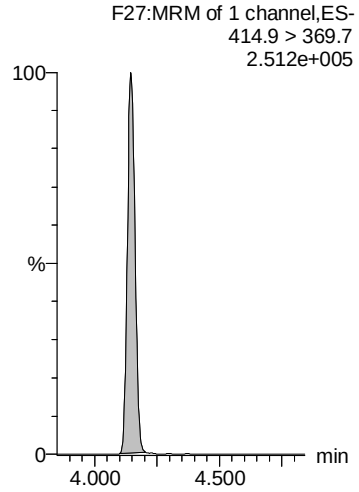


Total PFOS

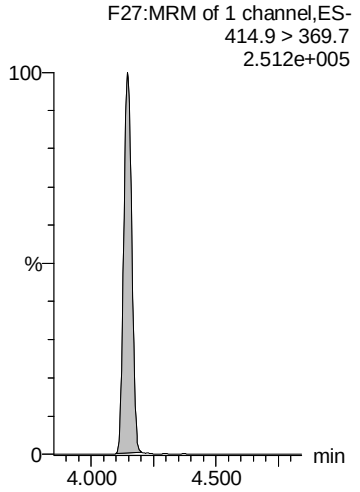




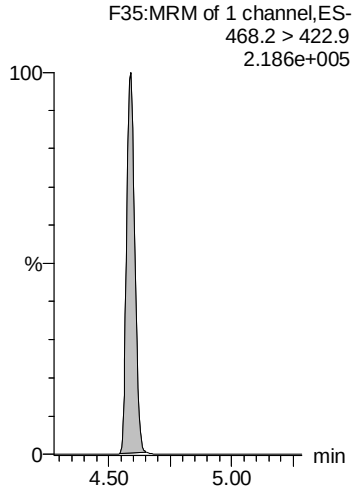
13C2-PFOA



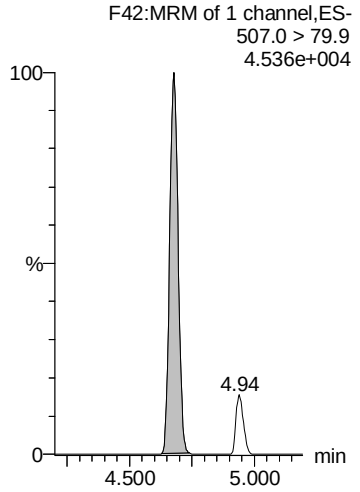
13C2-PFOA



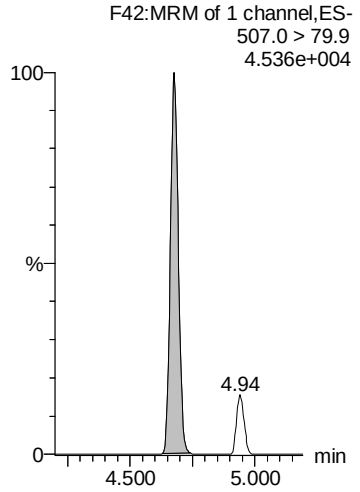
13C5-PFNA



13C8-PFOS



13C8-PFOS



CGH 7/18/2019

Vista Analytical Laboratory L14

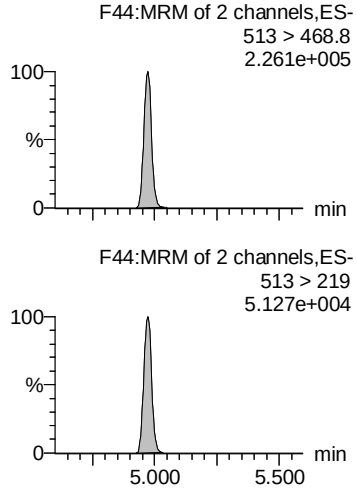
Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

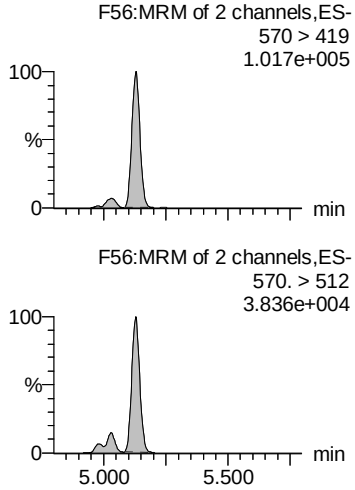
Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

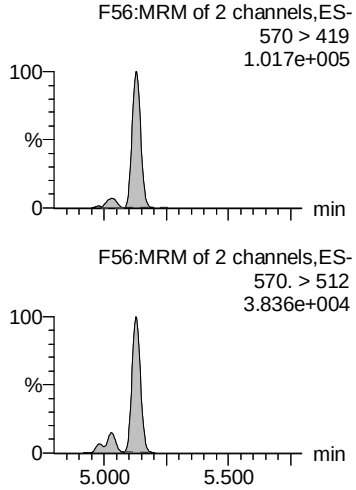
PFDA



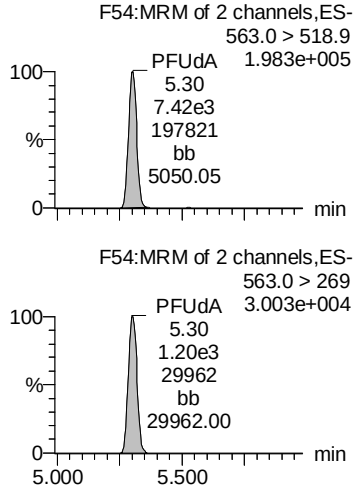
L-MeFOSAA



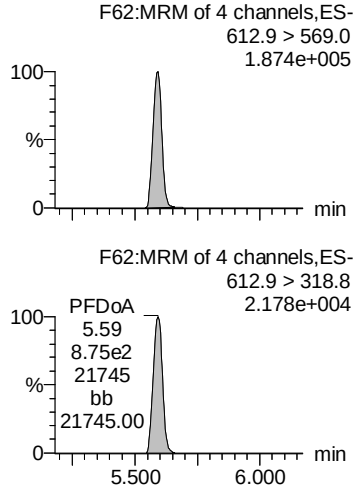
Total N-MeFOSAA



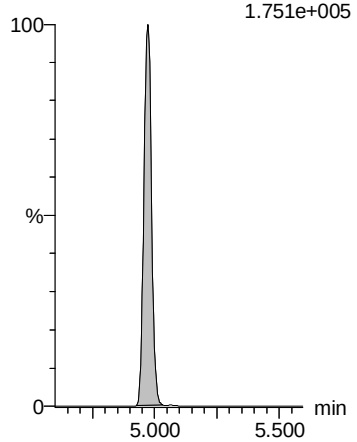
PFUdA



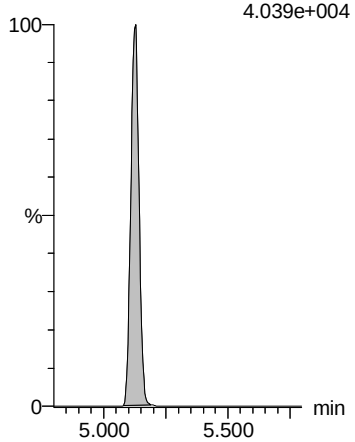
PFDoA



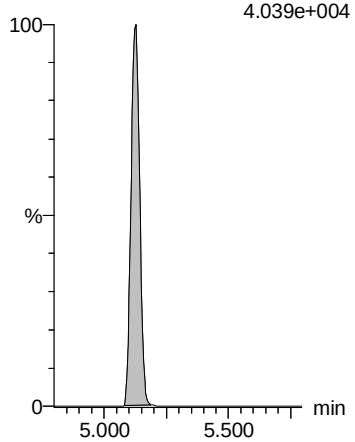
13C2-PFDA



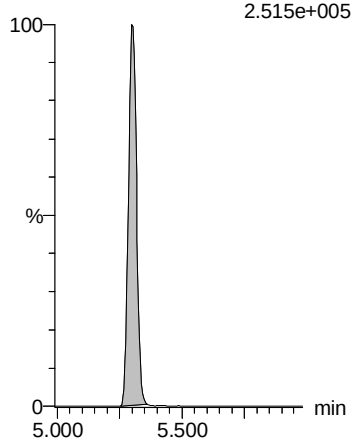
d3-N-MeFOSAA



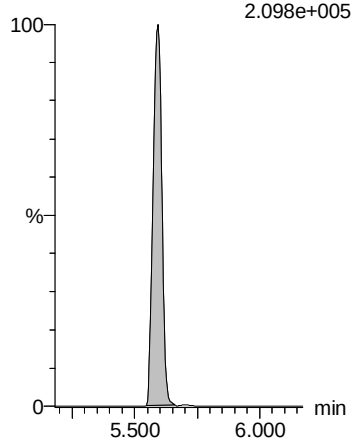
d3-N-MeFOSAA



13C2-PFUdA



13C2-PFDoA



CGH 7/18/2019

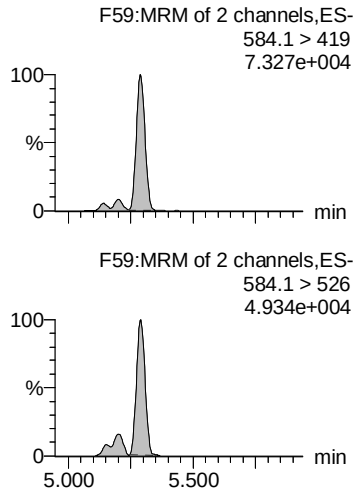
Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

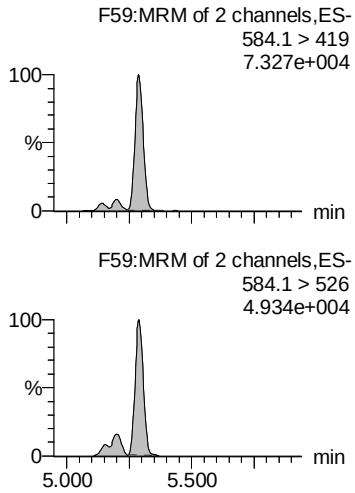
Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

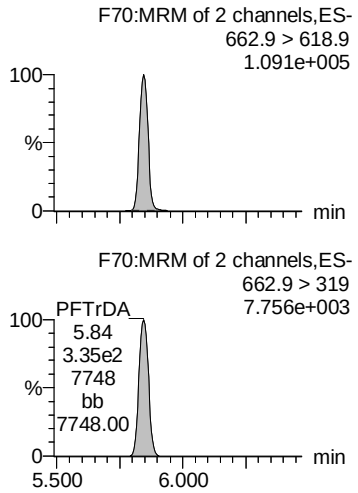
L-EtFOSAA



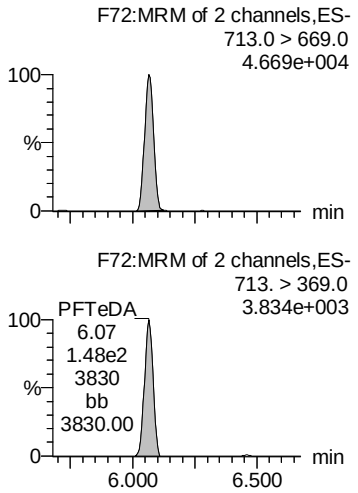
Total N-EtFOSAA



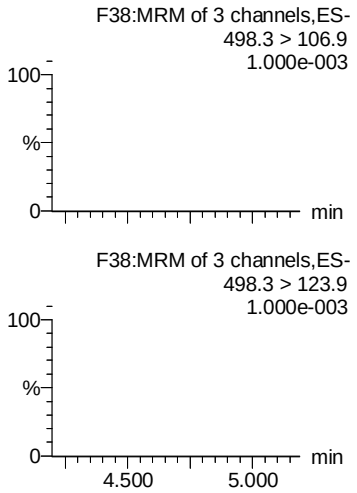
PFTrDA



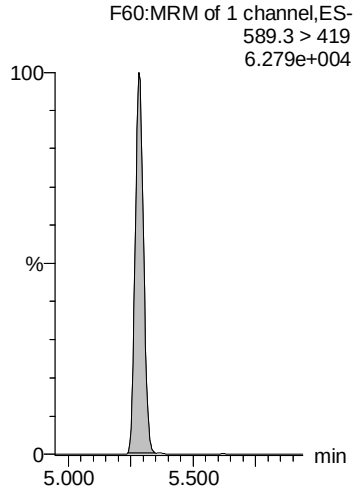
PFTeDA



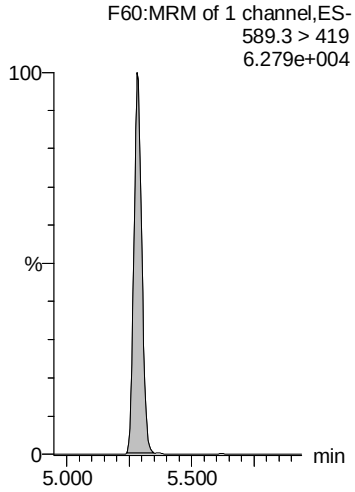
TDCA



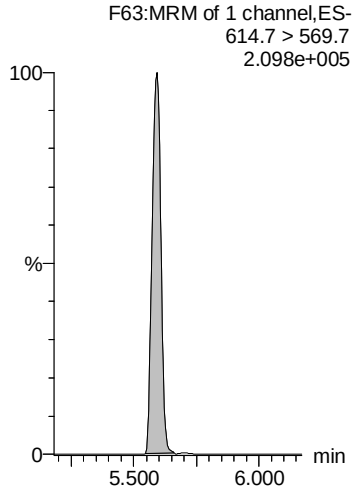
d5-N-EtFOSAA



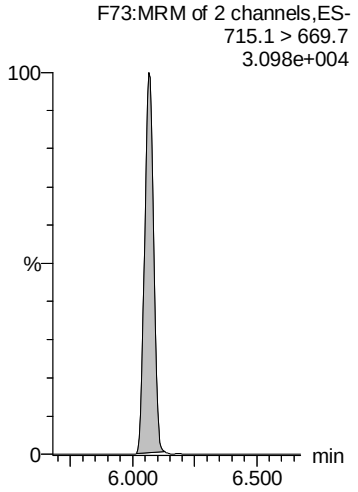
d5-N-EtFOSAA



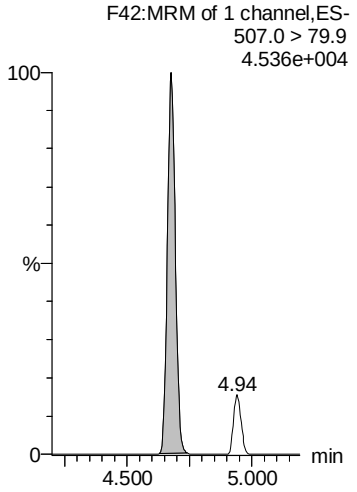
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



CGH 7/18/2019

Vista Analytical Laboratory L14

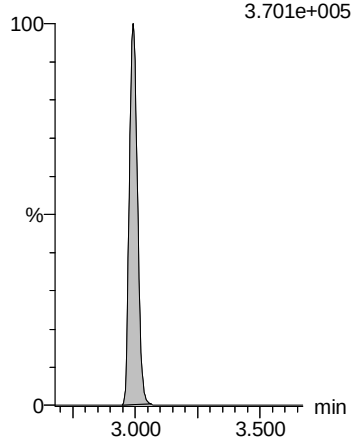
Review: AMR 8/21/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-23.qld

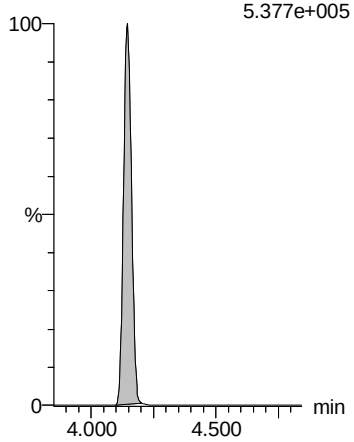
Last Altered: Thursday, July 18, 2019 12:15:19 Pacific Daylight Time
Printed: Thursday, July 18, 2019 12:16:30 Pacific Daylight Time

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

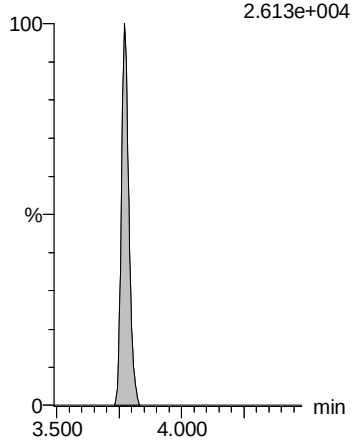
13C5-PFHxA



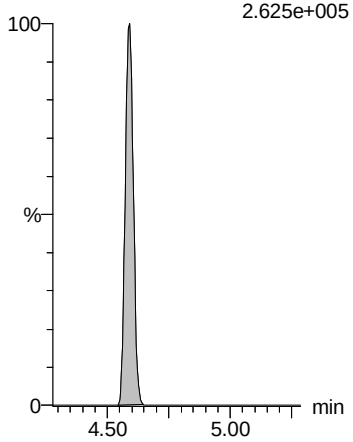
13C8-PFOA



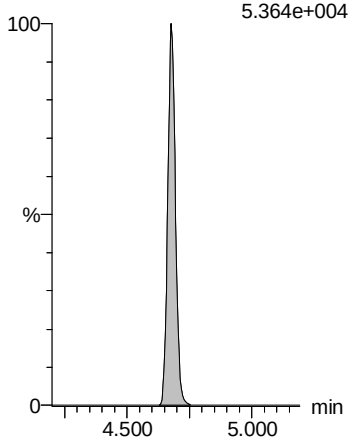
18O2-PFHxS



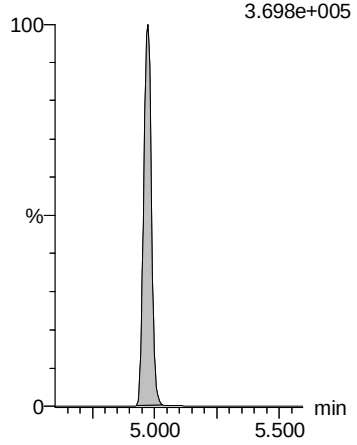
13C9-PFNA



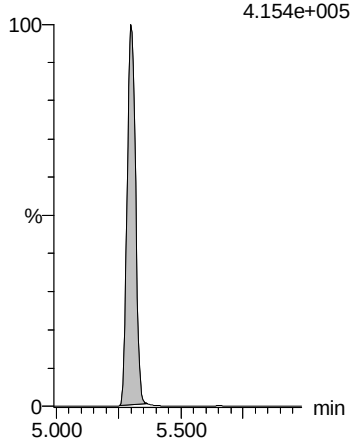
13C4-PFOS



13C6-PFDA



13C7-PFUdA



CGH 7/18/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-25.qld

Last Altered: Sunday, July 07, 2019 14:27:32 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:28:09 Pacific Daylight Time

Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

	#	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		1.10e3	0.113		2.59						
2	7	PFHxA	313.0 > 269.0		6.32e3	0.113		3.09						
3	11	PFHpA	363.0 > 318.9		8.36e3	0.113		3.71						
4	13	L-PFHxS	398.9 > 79.6		2.16e3	0.113		3.86						
5	80	Total PFHxS	398.9 > 79.6	0.00e0	2.16e3	0.113		3.83		0.000				
6	49	13C3-PFBS	302.0 > 98.8	1.10e3	9.89e2	0.113	1.067	2.59	2.59	13.9	114.9243	103.9		
7	52	13C2-PFHxA	315.0 > 270.0	6.32e3	1.69e4	0.113	1.008	3.09	3.09	4.67	41.0054	92.6		
8	53	13C4-PFHpA	367.2 > 321.8	8.36e3	1.69e4	0.113	0.535	3.71	3.71	6.17	102.1364	92.3		
9	54	13C3-PFHxS	401.8 > 79.9	2.16e3	9.89e2	0.113	2.170	3.86	3.86	27.4	111.6419	100.9		
10	54	13C3-PFHxS	401.8 > 79.9	2.16e3	9.89e2	0.113	2.170	3.86	3.86	27.4	111.6419	100.9		
11	-1													
12	16	L-PFOA	412.8 > 368.9	3.23e1	1.44e4	0.113		4.23	4.23	0.0281			11.999	YES
13	81	Total PFOA	412.8 > 368.9	3.23e1	1.44e4	0.113		4.21		0.000				
14	21	PFNA	463.0 > 418.8		1.28e4	0.113		4.67						
15	23	L-PFOS	498.9 > 79.9	2.20e0	2.28e3	0.113		4.75	4.75	0.0121	0.8133		0.550	YES
16	82	Total PFOS	498.9 > 79.9	2.20e0	2.28e3	0.113		4.74		0.0121	0.8133			
17	58	13C2-PFOA	414.9 > 369.7	1.44e4	2.10e4	0.113	0.744	4.23	4.23	8.57	101.9692	92.1		
18	58	13C2-PFOA	414.9 > 369.7	1.44e4	2.10e4	0.113	0.744	4.23	4.23	8.57	101.9692	92.1		
19	56	13C5-PFNA	468.2 > 422.9	1.28e4	1.57e4	0.113	1.014	4.66	4.67	10.2	88.9863	80.4		
20	59	13C8-PFOS	507.0 > 79.9	2.28e3	2.45e3	0.113	0.998	4.75	4.75	11.6	103.0199	93.1		
21	59	13C8-PFOS	507.0 > 79.9	2.28e3	2.45e3	0.113	0.998	4.75	4.75	11.6	103.0199	93.1		
22	-1													
23	26	PFDA	513 > 468.8		1.09e4	0.113		5.04						
24	29	L-MeFOSAA	570 > 419		1.93e3	0.113		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.93e3	0.113		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.43e4	0.113		5.37						
27	37	PFDoA	612.9 > 569.0		1.29e4	0.113		5.65						
28	60	13C2-PFDA	515.1 > 469.9	1.09e4	1.69e4	0.113	0.836	5.04	5.04	8.02	84.9500	76.8		
29	62	d3-N-MeFOSAA	573.3 > 419	1.93e3	1.79e4	0.113	0.163	5.19	5.19	1.35	73.4123	66.3		
30	62	d3-N-MeFOSAA	573.3 > 419	1.93e3	1.79e4	0.113	0.163	5.19	5.19	1.35	73.4123	66.3		
31	63	13C2-PFUdA	565 > 519.8	1.43e4	1.79e4	0.113	1.053	5.36	5.37	9.95	83.7020	75.6		
32	65	13C2-PFDoA	614.7 > 569.7	1.29e4	1.69e4	0.113	1.094	5.65	5.65	9.53	77.0458	69.6		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		2.10e3	0.113		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	2.10e3	0.113		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.29e4	0.113		5.89						

MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-25.qld

Last Altered: Sunday, July 07, 2019 14:27:32 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:28:09 Pacific Daylight Time

Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	3.21e1	8.50e3	0.113		6.11	6.11	0.0472	0.1078		23.876	YES
38	85	TDCA	498.3>106.9			0.113		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.10e3	1.79e4	0.113	0.179	5.34	5.34	1.47	72.3879	65.4		
40	64	d5-N-EtFOSAA	589.3 > 419	2.10e3	1.79e4	0.113	0.179	5.34	5.34	1.47	72.3879	65.4		
41	65	13C2-PFDoA	614.7 > 569.7	1.29e4	1.69e4	0.113	1.094	5.65	5.65	9.53	77.0458	69.6		
42	67	13C2-PFTeDA	715.1 > 669.7	8.50e3	1.79e4	0.113	0.666	6.11	6.11	5.93	78.8297	71.2		
43	59	13C8-PFOS	507.0 > 79.9	2.28e3	2.45e3	0.113	0.998	4.75	4.75	11.6	103.0199	93.1		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.69e4	1.69e4	0.113	1.000	3.09	3.09	12.5	110.6586	100.0		
46	75	13C8-PFOA	420.9 > 376.0	2.10e4	2.10e4	0.113	1.000	4.23	4.23	12.5	110.6586	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	9.89e2	9.89e2	0.113	1.000	3.86	3.86	12.5	110.6586	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.57e4	1.57e4	0.113	1.000	4.66	4.67	12.5	110.6586	100.0		
49	77	13C4-PFOS	503 > 79.9	2.45e3	2.45e3	0.113	1.000	4.75	4.75	12.5	110.6586	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.69e4	1.69e4	0.113	1.000	5.04	5.04	12.5	110.6586	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.79e4	1.79e4	0.113	1.000	5.36	5.37	12.5	110.6586	100.0		

MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-25.qld

Last Altered: Sunday, July 07, 2019 14:27:32 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:28:09 Pacific Daylight Time

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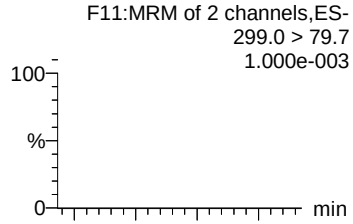
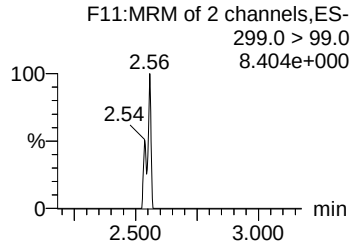
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

PFBS





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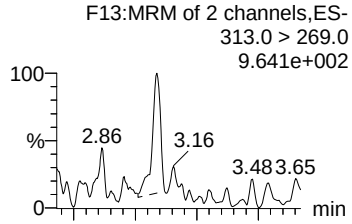

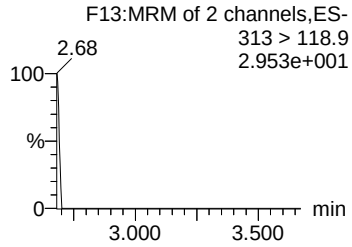

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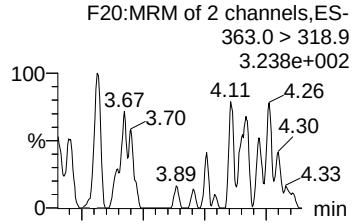

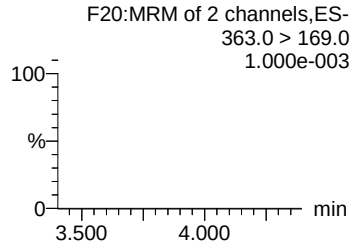

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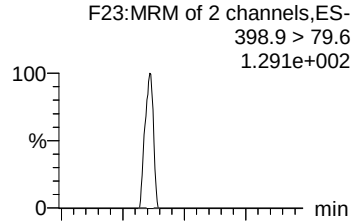

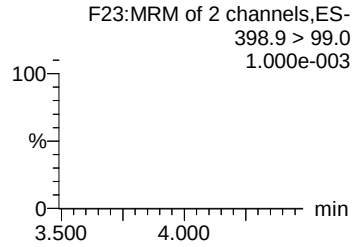

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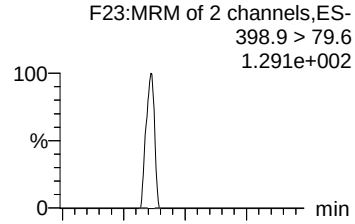

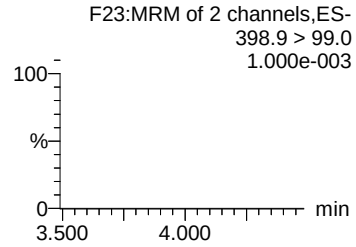

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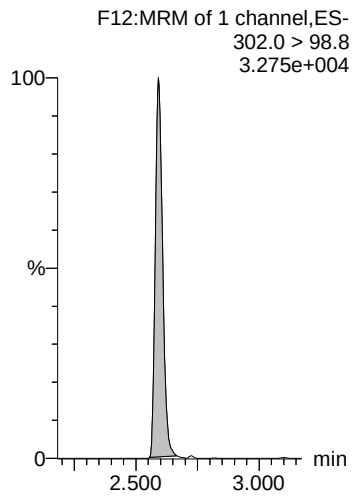

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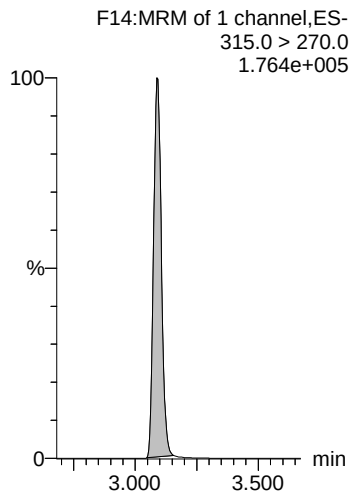

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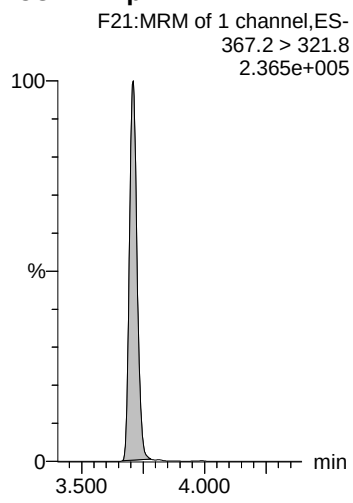

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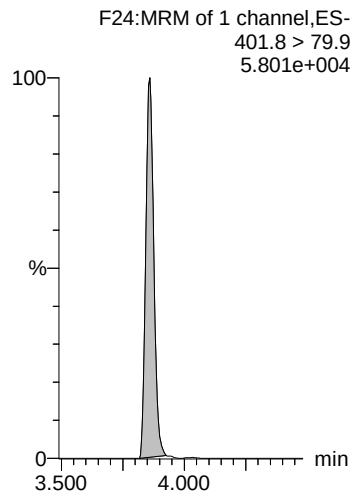

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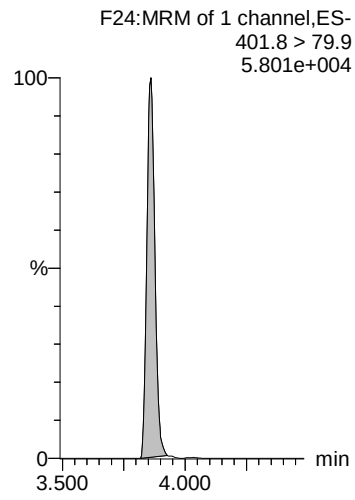

MSF 7/7/2019

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Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

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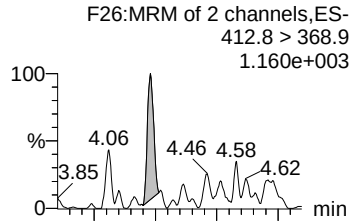

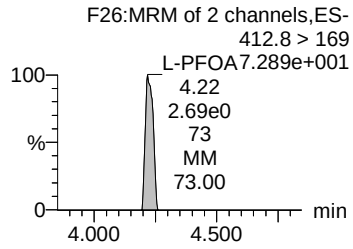

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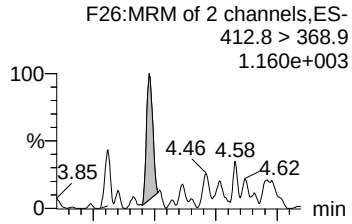

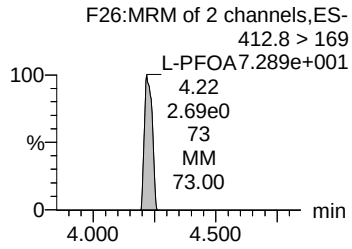

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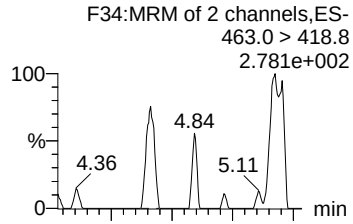

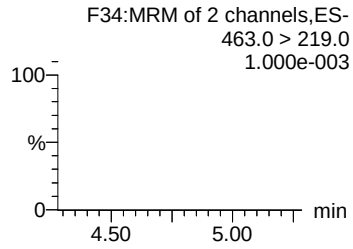

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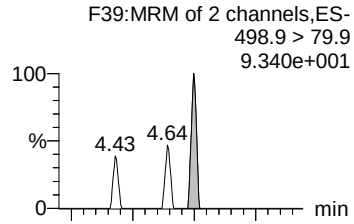

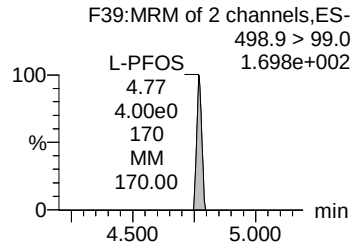

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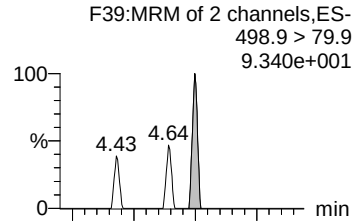

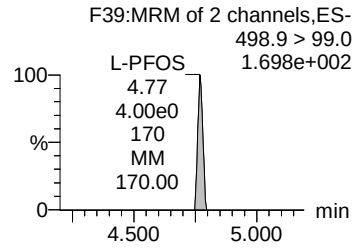

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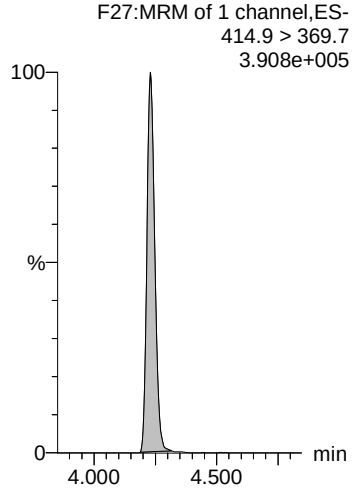

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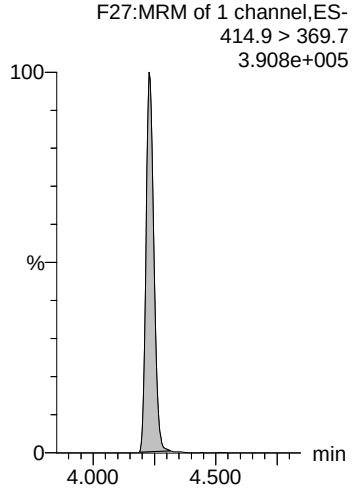

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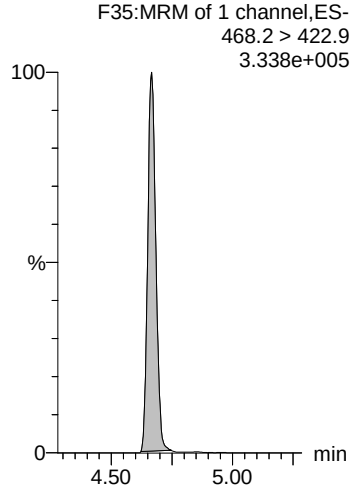

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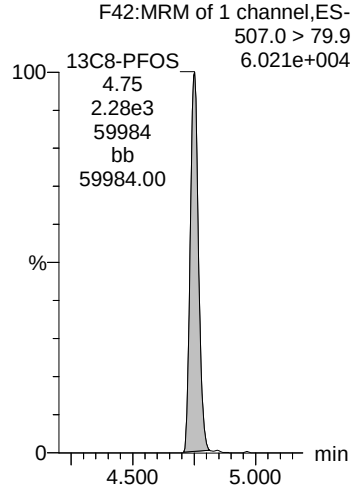

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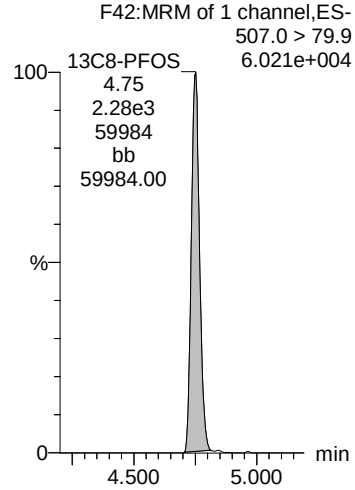

MSF 7/7/2019

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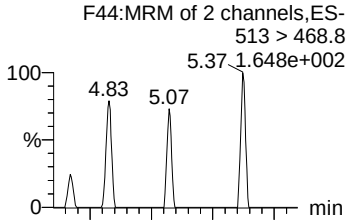
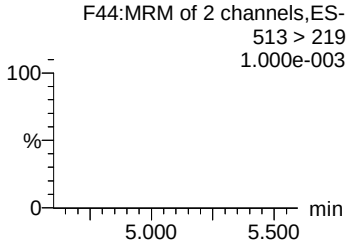
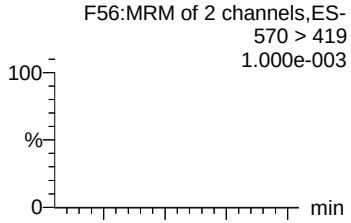
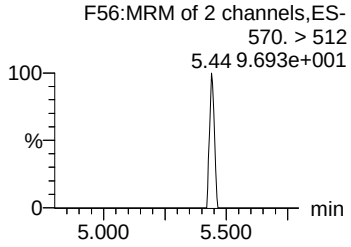




L-MeFOSAA





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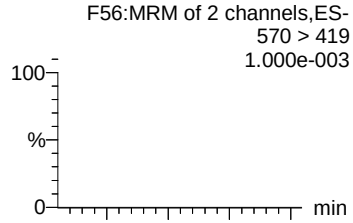

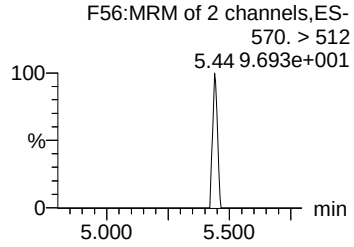

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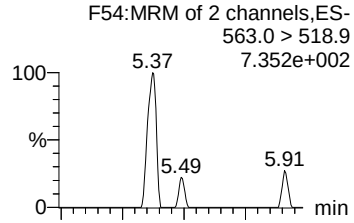

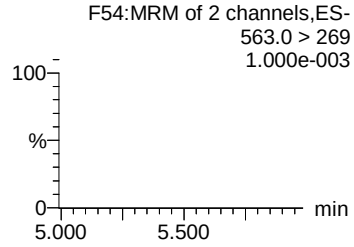

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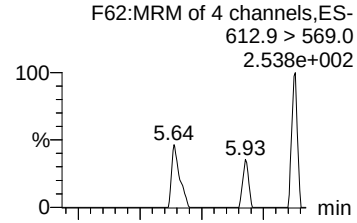

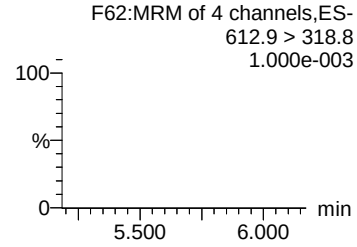

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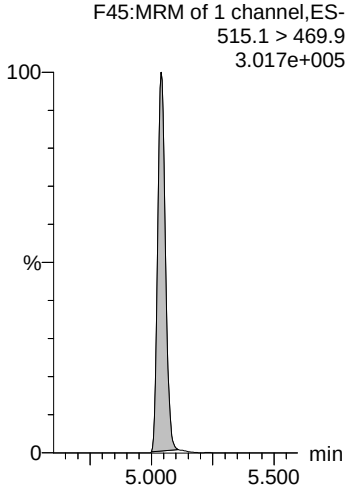

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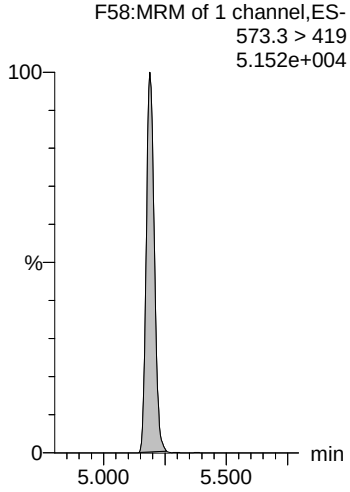

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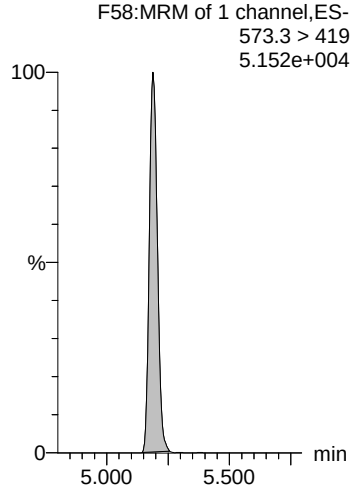

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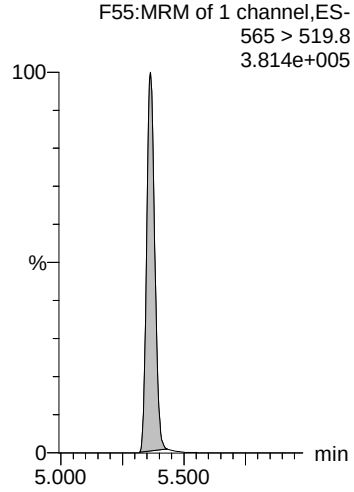

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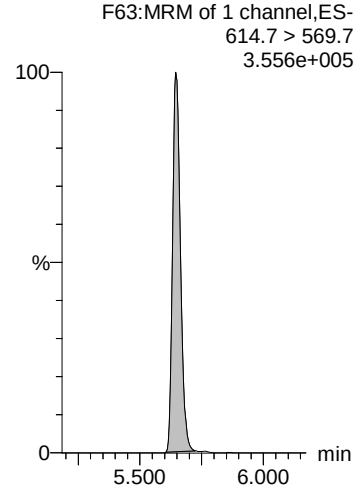

MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-25.qld

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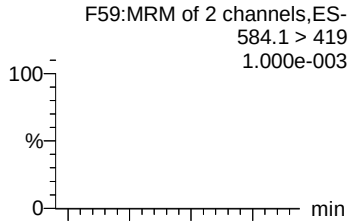
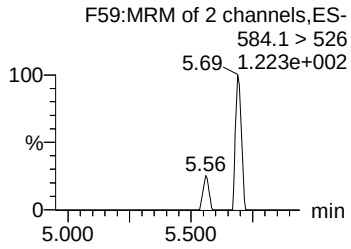
Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

L-EtFOSAA





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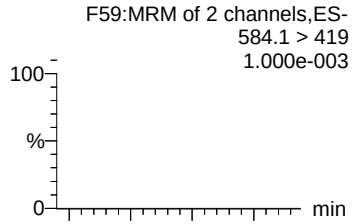

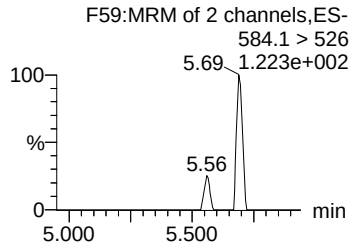

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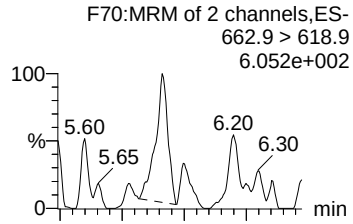
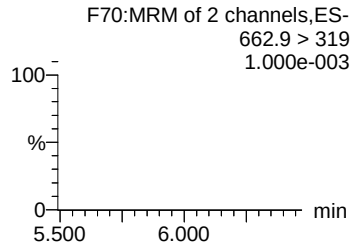
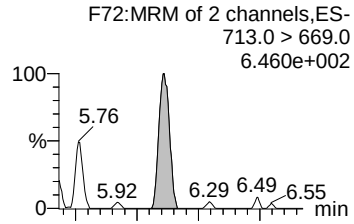
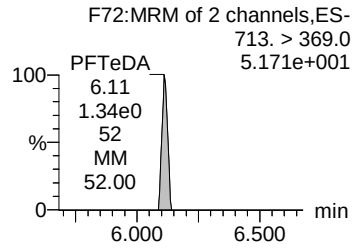


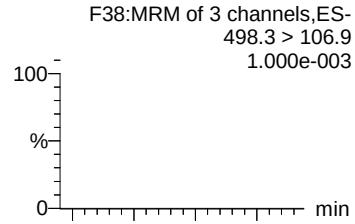


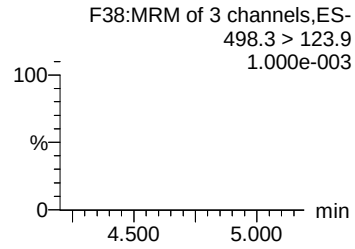
PFTeDA



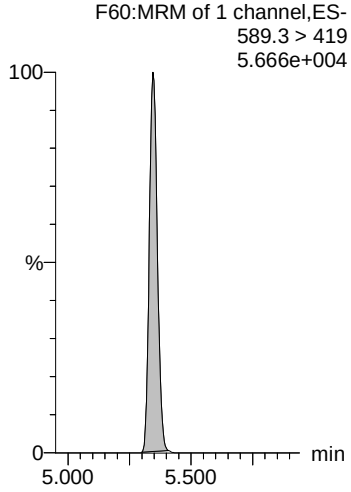


TDCA





d5-N-EtFOSAA



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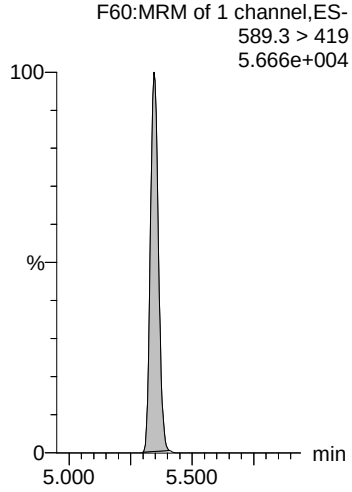
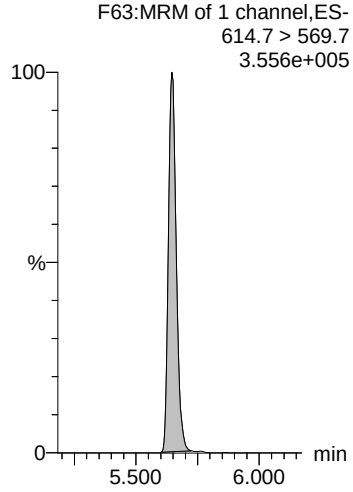
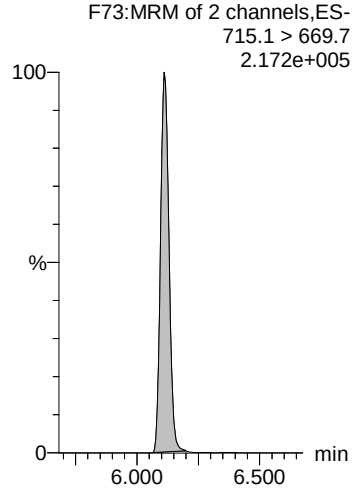


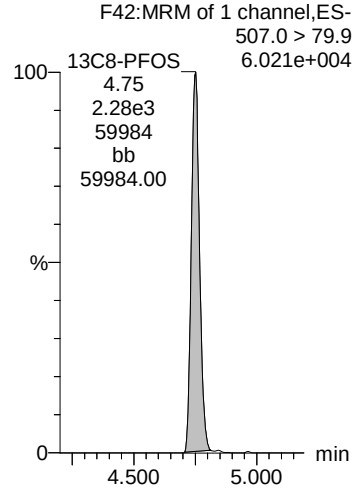
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



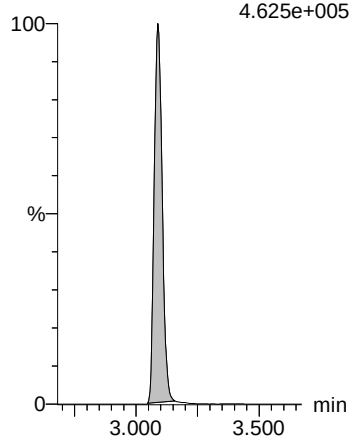
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-25.qld

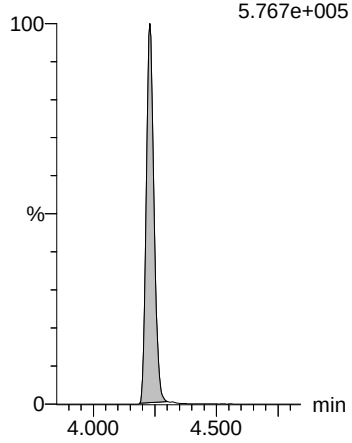
Last Altered: Sunday, July 07, 2019 14:27:32 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:28:09 Pacific Daylight Time

Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

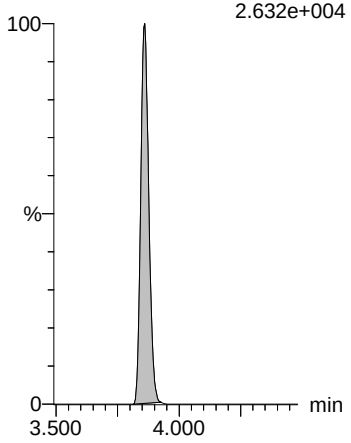
13C5-PFHxA



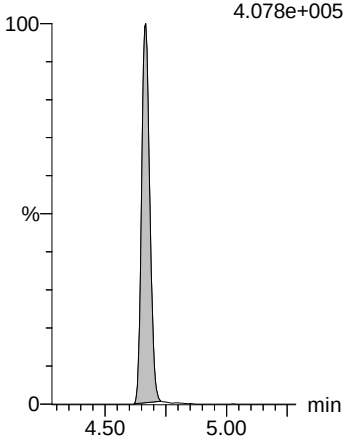
13C8-PFOA



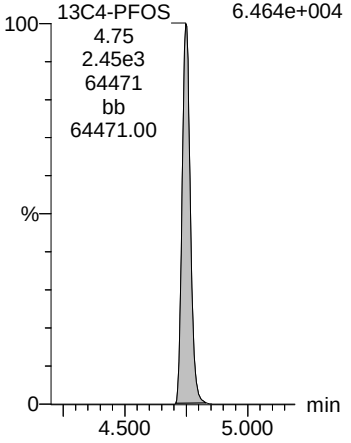
18O2-PFHxS



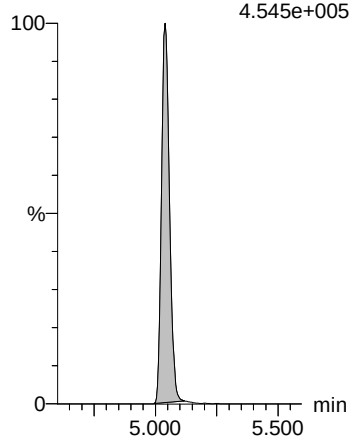
13C9-PFNA



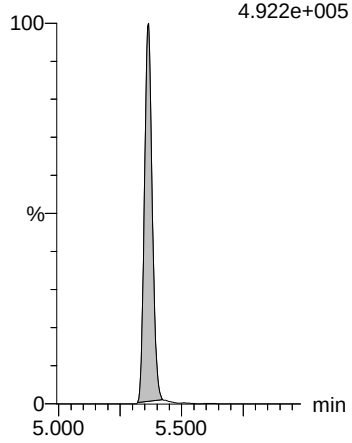
13C4-PFOS



13C6-PFDA



13C7-PFUdA



MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

	#	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	2.79e3	9.80e2	0.117		2.59	2.59	35.6	141.9660		2.703	NO
2	7	PFHxA	313.0 > 269.0	3.90e4	5.55e3	0.117		3.09	3.09	35.1	346.6750		15.380	NO
3	11	PFHpA	363.0 > 318.9	1.99e3	7.49e3	0.117		3.71	3.71	3.33	21.4002		14.426	NO
4	13	L-PFHxS	398.9 > 79.6	5.35e3	2.11e3	0.117		3.86	3.86	31.7	275.5513		1.933	NO
5	80	Total PFHxS	398.9 > 79.6	5.35e3	2.11e3	0.117		3.83		31.7	275.5513			
6	49	13C3-PFBS	302.0 > 98.8	9.80e2	1.03e3	0.117	1.067	2.59	2.59	11.8	94.5431	88.8		
7	52	13C2-PFHxA	315.0 > 270.0	5.55e3	1.55e4	0.117	1.008	3.09	3.09	4.48	37.8502	88.9		
8	53	13C4-PFHpA	367.2 > 321.8	7.49e3	1.55e4	0.117	0.535	3.71	3.71	6.05	96.3126	90.5		
9	54	13C3-PFHxS	401.8 > 79.9	2.11e3	1.03e3	0.117	2.170	3.86	3.86	25.5	100.1098	94.1		
10	54	13C3-PFHxS	401.8 > 79.9	2.11e3	1.03e3	0.117	2.170	3.86	3.86	25.5	100.1098	94.1		
11	-1													
12	16	L-PFOA	412.8 > 368.9	2.99e4	1.26e4	0.117		4.23	4.23	29.6	176.7756		3.012	NO
13	81	Total PFOA	412.8 > 368.9	2.99e4	1.26e4	0.117		4.21		29.6	176.7756			
14	21	PFNA	463.0 > 418.8	2.24e2	1.18e4	0.117		4.66	4.67	0.236	2.0546		9.714	YES
15	23	L-PFOS	498.9 > 79.9	1.40e3	2.12e3	0.117		4.75	4.75	8.23	67.7025		1.822	NO
16	82	Total PFOS	498.9 > 79.9	1.40e3	2.12e3	0.117		4.74		8.23	67.7025			
17	58	13C2-PFOA	414.9 > 369.7	1.26e4	1.84e4	0.117	0.744	4.23	4.23	8.57	98.1277	92.2		
18	58	13C2-PFOA	414.9 > 369.7	1.26e4	1.84e4	0.117	0.744	4.23	4.23	8.57	98.1277	92.2		
19	56	13C5-PFNA	468.2 > 422.9	1.18e4	1.39e4	0.117	1.014	4.66	4.66	10.7	89.4873	84.1		
20	59	13C8-PFOS	507.0 > 79.9	2.12e3	2.40e3	0.117	0.998	4.75	4.75	11.1	94.4925	88.8		
21	59	13C8-PFOS	507.0 > 79.9	2.12e3	2.40e3	0.117	0.998	4.75	4.75	11.1	94.4925	88.8		
22	-1													
23	26	PFDA	513 > 468.8	2.05e2	9.55e3	0.117		5.04	5.04	0.268	1.7398		10.431	YES
24	29	L-MeFOSAA	570 > 419		2.11e3	0.117		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	2.11e3	0.117		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.35e4	0.117		5.36						
27	37	PFDoA	612.9 > 569.0		1.06e4	0.117		5.65						
28	60	13C2-PFDA	515.1 > 469.9	9.55e3	1.62e4	0.117	0.836	5.04	5.04	7.35	74.8908	70.4		
29	62	d3-N-MeFOSAA	573.3 > 419	2.11e3	1.73e4	0.117	0.163	5.19	5.19	1.53	79.6992	74.9		
30	62	d3-N-MeFOSAA	573.3 > 419	2.11e3	1.73e4	0.117	0.163	5.19	5.19	1.53	79.6992	74.9		
31	63	13C2-PFUdA	565 > 519.8	1.35e4	1.73e4	0.117	1.053	5.36	5.36	9.74	78.8120	74.1		
32	65	13C2-PFDoA	614.7 > 569.7	1.06e4	1.62e4	0.117	1.094	5.65	5.65	8.14	63.3558	59.5		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		2.17e3	0.117		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	2.17e3	0.117		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.06e4	0.117		5.89						

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Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	2.56e1	4.43e3	0.117		6.11	6.11	0.0723	0.2471		34.400	YES
38	85	TDCA	498.3>106.9			0.117		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.17e3	1.73e4	0.117	0.179	5.34	5.34	1.57	74.4606	70.0		
40	64	d5-N-EtFOSAA	589.3 > 419	2.17e3	1.73e4	0.117	0.179	5.34	5.34	1.57	74.4606	70.0		
41	65	13C2-PFDoA	614.7 > 569.7	1.06e4	1.62e4	0.117	1.094	5.65	5.65	8.14	63.3558	59.5		
42	67	13C2-PFTeDA	715.1 > 669.7	4.43e3	1.73e4	0.117	0.666	6.11	6.11	3.20	40.8913	38.4		
43	59	13C8-PFOS	507.0 > 79.9	2.12e3	2.40e3	0.117	0.998	4.75	4.75	11.1	94.4925	88.8		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.55e4	1.55e4	0.117	1.000	3.09	3.09	12.5	106.4283	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.84e4	1.84e4	0.117	1.000	4.23	4.23	12.5	106.4283	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	1.03e3	1.03e3	0.117	1.000	3.86	3.86	12.5	106.4283	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.39e4	1.39e4	0.117	1.000	4.66	4.66	12.5	106.4283	100.0		
49	77	13C4-PFOS	503 > 79.9	2.40e3	2.40e3	0.117	1.000	4.75	4.75	12.5	106.4283	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.62e4	1.62e4	0.117	1.000	5.04	5.04	12.5	106.4283	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.73e4	1.73e4	0.117	1.000	5.36	5.36	12.5	106.4283	100.0		

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Vista Analytical Laboratory L14

MM 7/10/2019

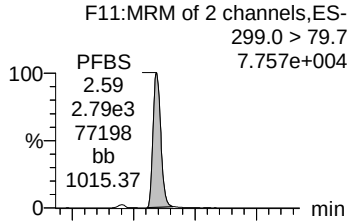
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

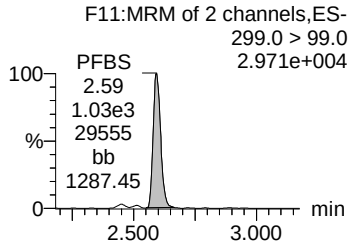
Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

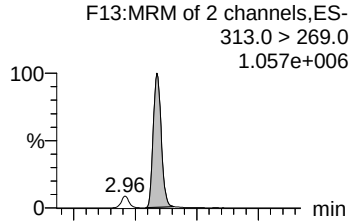
Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

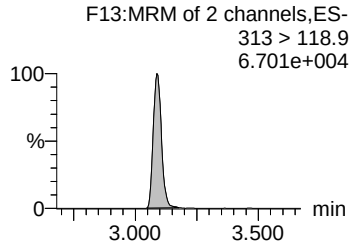
PFBS



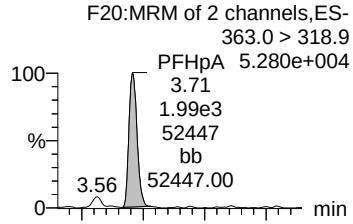


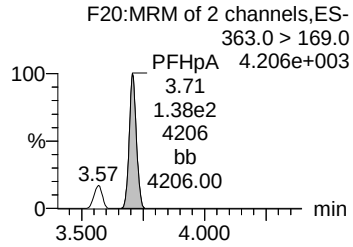
PFHxA



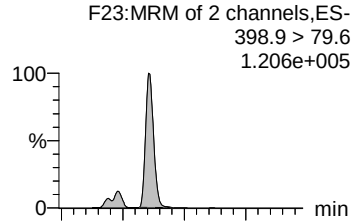


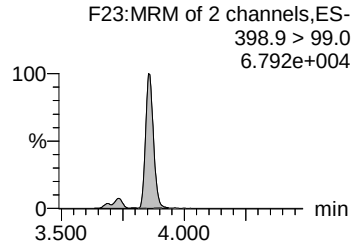
PFHpA



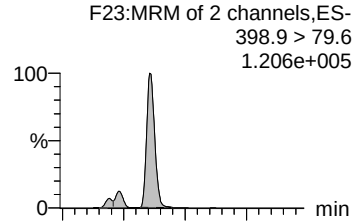


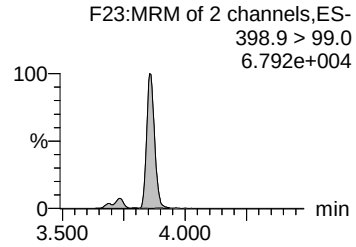
L-PFHxS



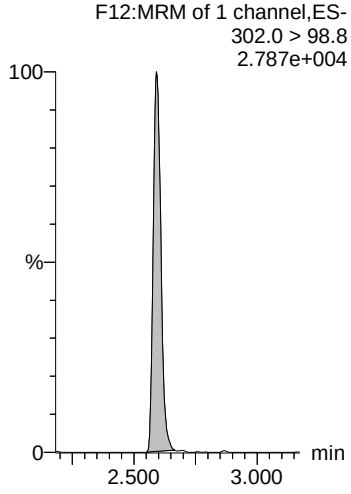


Total PFHxS

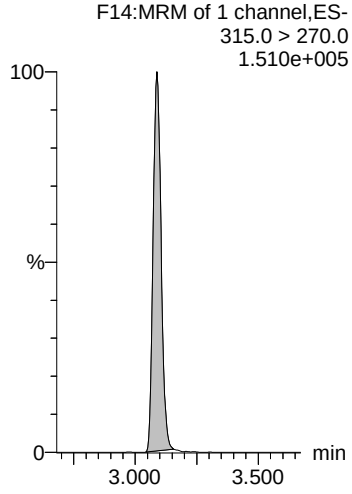




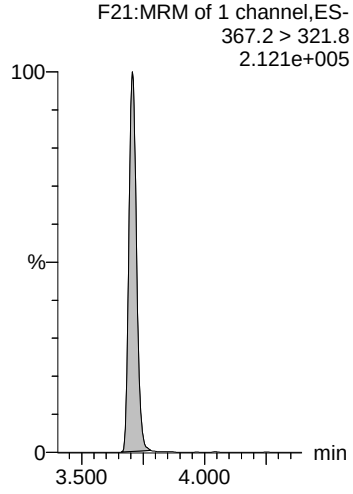
13C3-PFBS



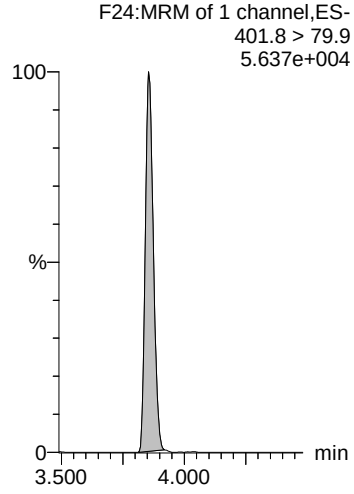
13C2-PFHxA



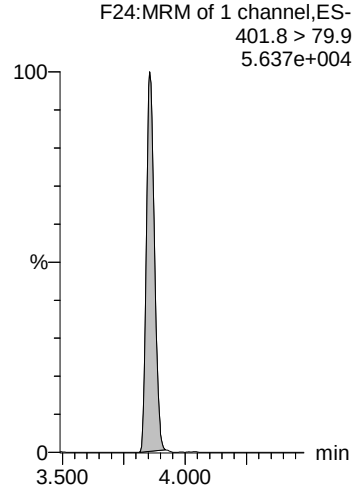
13C4-PFHpA



13C3-PFHxS



13C3-PFHxS



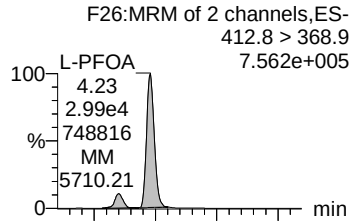
MSF 7/7/2019

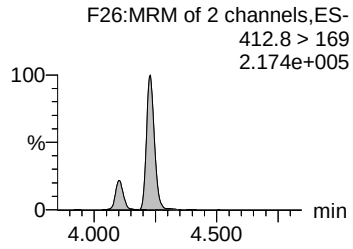
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

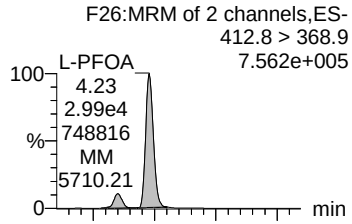
Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

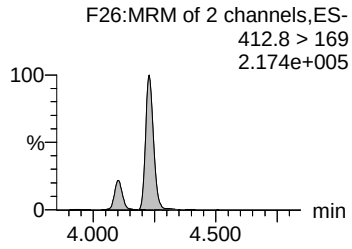
L-PFOA



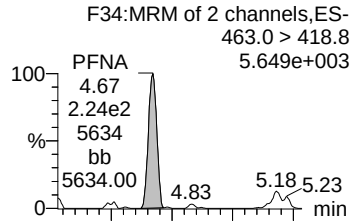


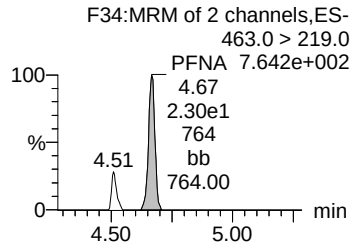
Total PFOA



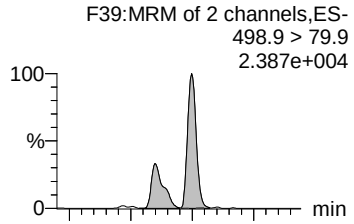


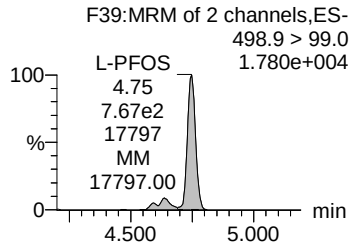
PFNA



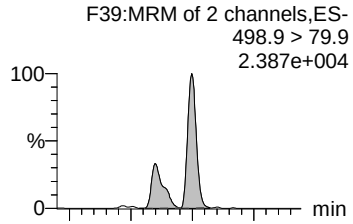


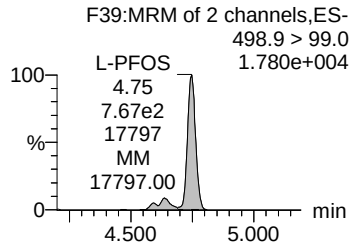
L-PFOS



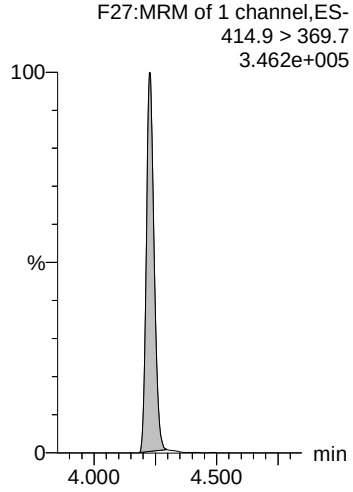


Total PFOS





13C2-PFOA



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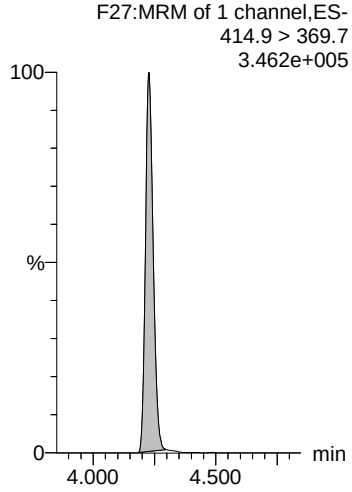
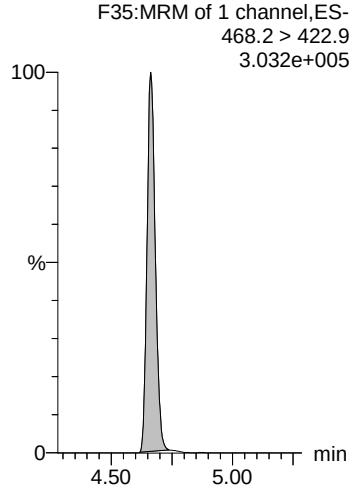
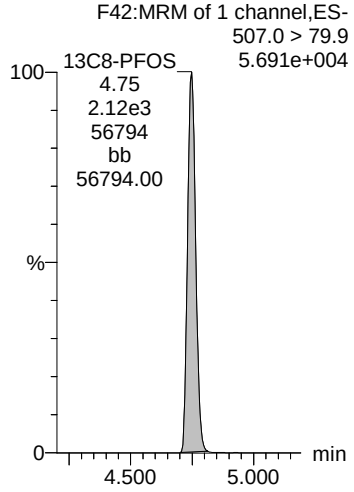


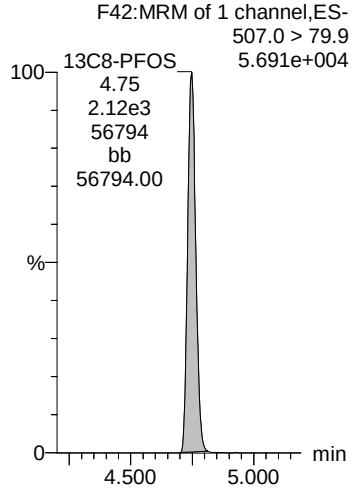
13C5-PFNA



13C8-PFOS



13C8-PFOS



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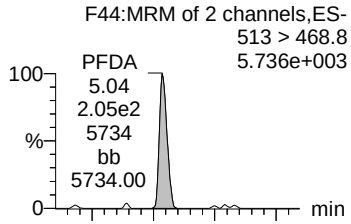
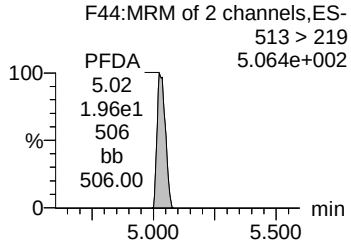
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

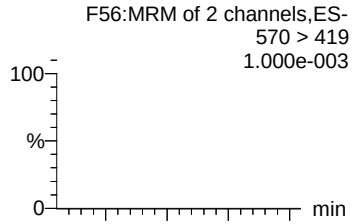
Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

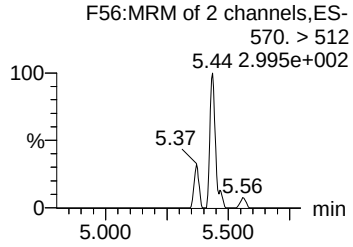
PFDA





L-MeFOSAA





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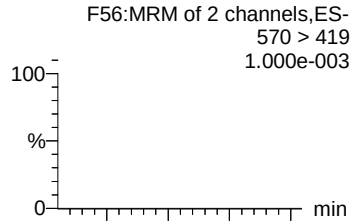
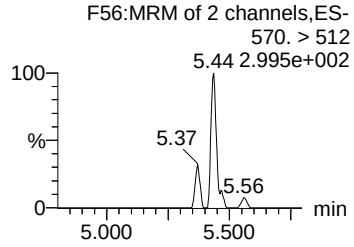
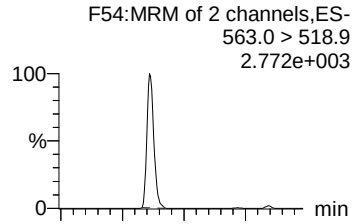
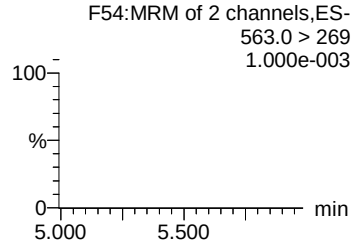


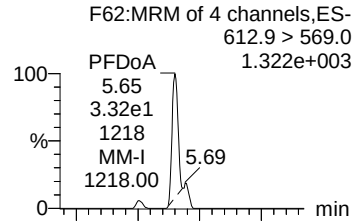


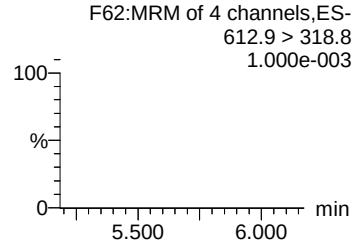
PFUdA





PFDoA





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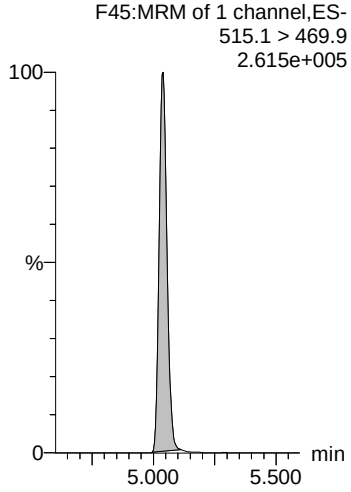
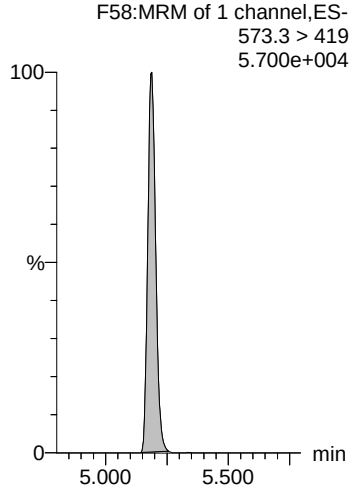


d3-N-MeFOSAA



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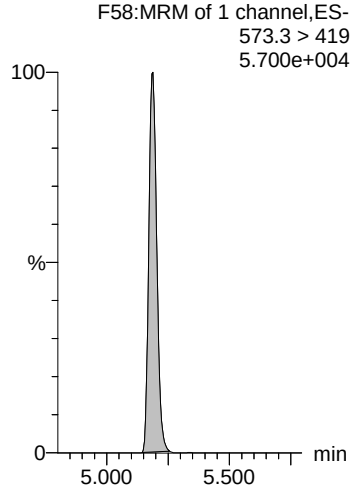

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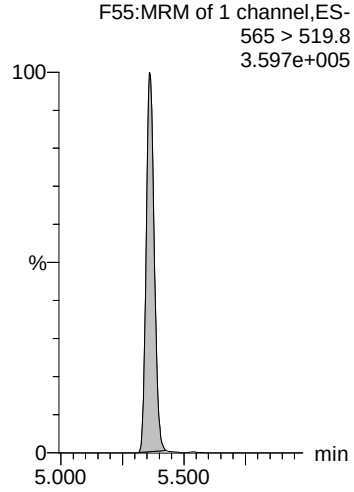
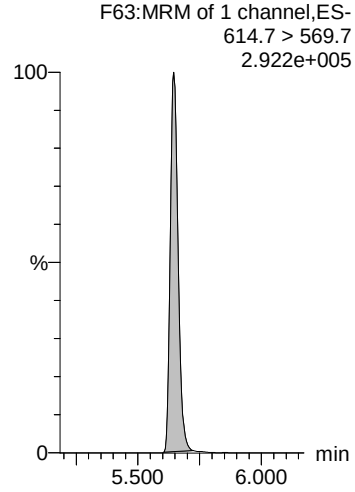


13C2-PFDoA



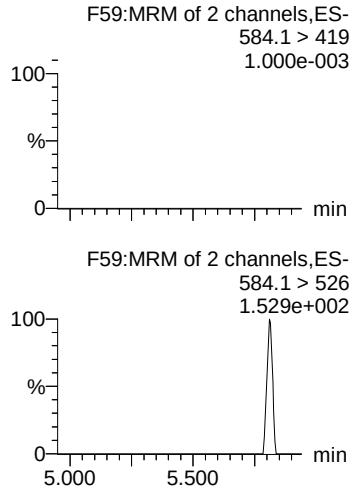
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

L-EtFOSAA



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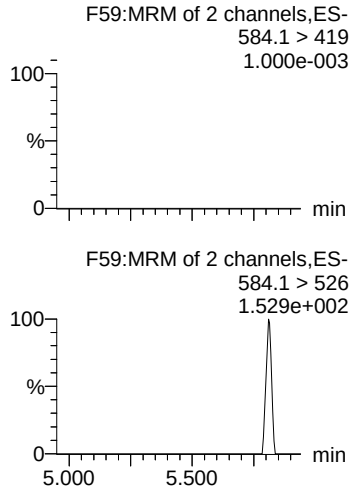
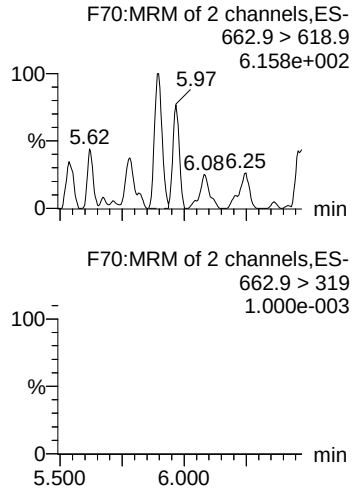
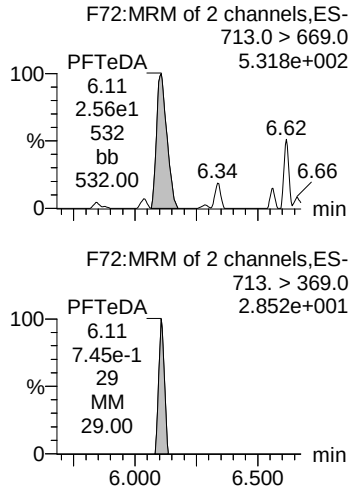


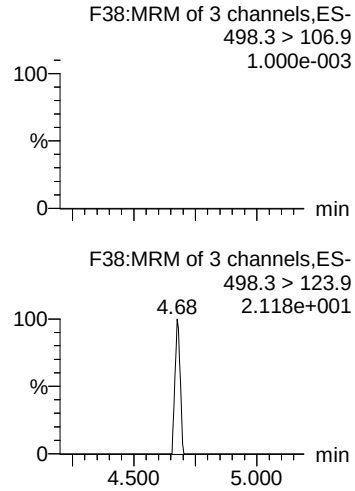
PFTrDA



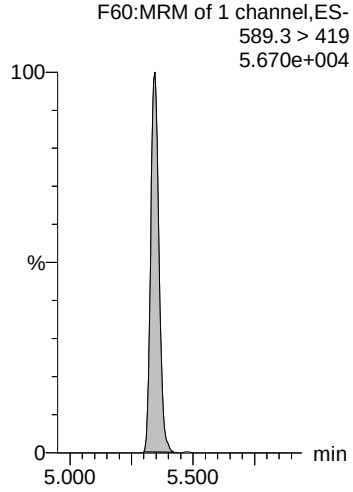
PFTeDA



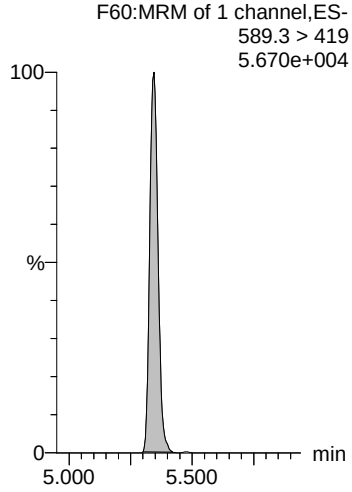
TDCA



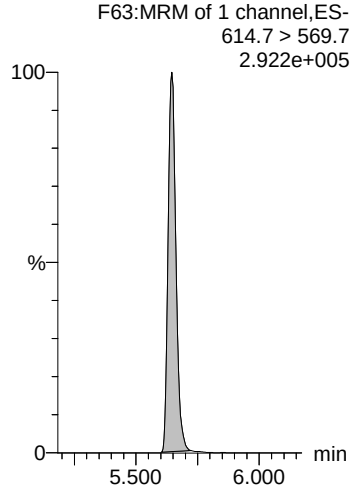
d5-N-EtFOSAA



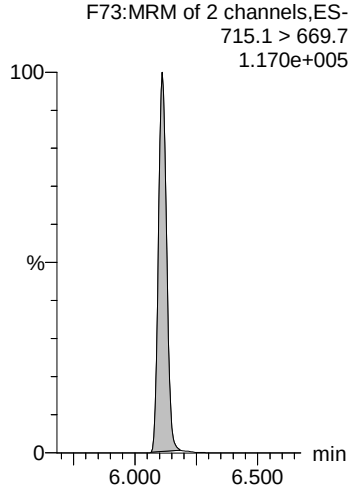
d5-N-EtFOSAA



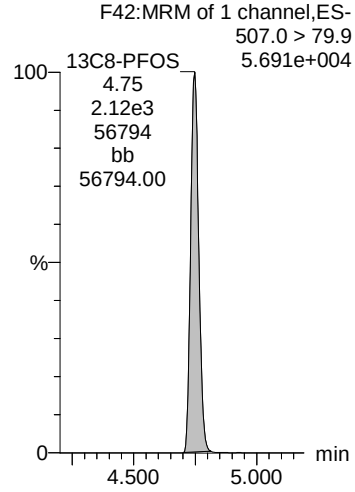
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



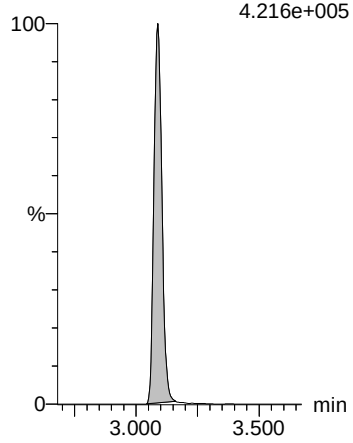
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-26.qld

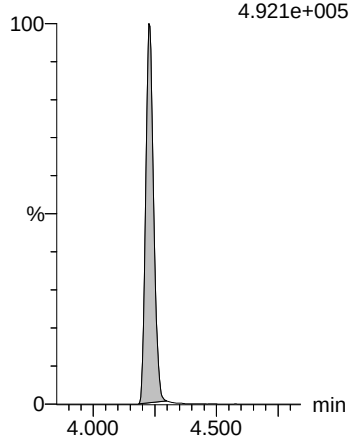
Last Altered: Sunday, July 07, 2019 14:32:56 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:33:35 Pacific Daylight Time

Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

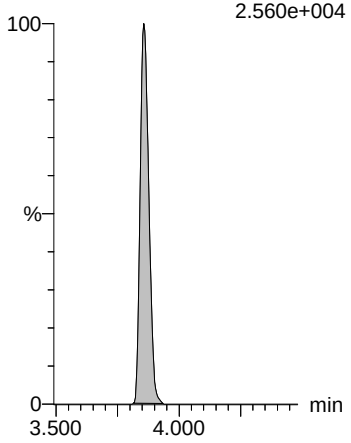
13C5-PFHxA



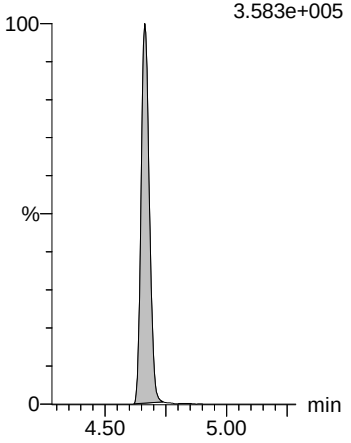
13C8-PFOA



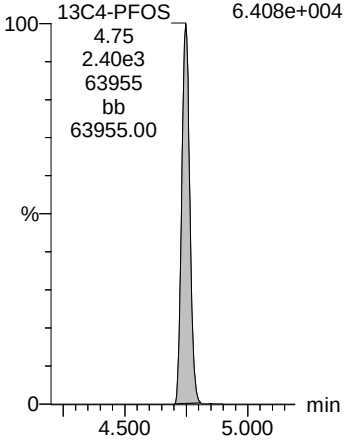
18O2-PFHxS



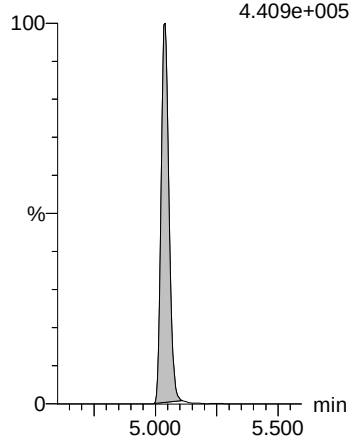
13C9-PFNA



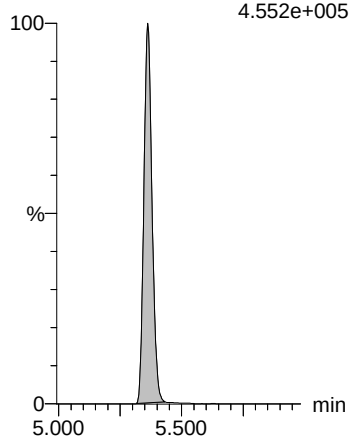
13C4-PFOS



13C6-PFDA



13C7-PFUdA



MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, 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	4.41e3	9.67e2	0.118		2.58	2.58	57.0	225.1673		2.727	NO
2	7	PFHxA	313.0 > 269.0	4.94e4	5.74e3	0.118		3.08	3.08	43.0	422.5730		15.705	NO
3	11	PFHpA	363.0 > 318.9	1.06e4	7.44e3	0.118		3.70	3.70	17.7	110.7835		13.518	NO
4	13	L-PFHxS	398.9 > 79.6	6.44e3	1.93e3	0.118		3.85	3.85	41.8	361.4364		1.786	NO
5	80	Total PFHxS	398.9 > 79.6	6.44e3	1.93e3	0.118		3.83		41.8	361.4364			
6	49	13C3-PFBS	302.0 > 98.8	9.67e2	9.29e2	0.118	1.067	2.59	2.58	13.0	103.3349	97.6		
7	52	13C2-PFHxA	315.0 > 270.0	5.74e3	1.50e4	0.118	1.008	3.09	3.08	4.79	40.2621	95.0		
8	53	13C4-PFHpA	367.2 > 321.8	7.44e3	1.50e4	0.118	0.535	3.71	3.70	6.21	98.4539	93.0		
9	54	13C3-PFHxS	401.8 > 79.9	1.93e3	9.29e2	0.118	2.170	3.86	3.85	25.9	101.2120	95.6		
10	54	13C3-PFHxS	401.8 > 79.9	1.93e3	9.29e2	0.118	2.170	3.86	3.85	25.9	101.2120	95.6		
11	-1													
12	16	L-PFOA	412.8 > 368.9	4.60e4	1.24e4	0.118		4.22	4.22	46.5	275.9653		3.449	NO
13	81	Total PFOA	412.8 > 368.9	4.60e4	1.24e4	0.118		4.21		46.5	275.9653			
14	21	PFNA	463.0 > 418.8	1.20e4	1.14e4	0.118		4.66	4.66	13.2	92.5941		4.809	NO
15	23	L-PFOS	498.9 > 79.9	3.41e3	2.14e3	0.118		4.74	4.74	19.9	159.3623		1.922	NO
16	82	Total PFOS	498.9 > 79.9	3.41e3	2.14e3	0.118		4.74		19.9	159.3623			
17	58	13C2-PFOA	414.9 > 369.7	1.24e4	1.84e4	0.118	0.744	4.23	4.22	8.38	95.4950	90.2		
18	58	13C2-PFOA	414.9 > 369.7	1.24e4	1.84e4	0.118	0.744	4.23	4.22	8.38	95.4950	90.2		
19	56	13C5-PFNA	468.2 > 422.9	1.14e4	1.32e4	0.118	1.014	4.66	4.66	10.8	90.0013	85.0		
20	59	13C8-PFOS	507.0 > 79.9	2.14e3	2.16e3	0.118	0.998	4.75	4.74	12.4	105.1910	99.3		
21	59	13C8-PFOS	507.0 > 79.9	2.14e3	2.16e3	0.118	0.998	4.75	4.74	12.4	105.1910	99.3		
22	-1													
23	26	PFDA	513 > 468.8	1.20e4	9.58e3	0.118		5.04	5.04	15.7	94.9864		5.999	NO
24	29	L-MeFOSAA	570 > 419	4.17e3	1.80e3	0.118		5.18	5.19	28.9	97.8164		2.493	NO
25	83	Total N-MeFOSAA	570. > 419	4.17e3	1.80e3	0.118		5.19		28.9	97.8164			
26	33	PFUdA	563.0 > 518.9	1.03e4	1.21e4	0.118		5.36	5.36	10.6	94.2643		11.066	NO
27	37	PFDoA	612.9 > 569.0	9.14e3	1.01e4	0.118		5.64	5.64	11.4	89.2018		7.637	NO
28	60	13C2-PFDA	515.1 > 469.9	9.58e3	1.65e4	0.118	0.836	5.04	5.04	7.27	73.6499	69.5		
29	62	d3-N-MeFOSAA	573.3 > 419	1.80e3	1.69e4	0.118	0.163	5.19	5.18	1.33	69.2940	65.4		
30	62	d3-N-MeFOSAA	573.3 > 419	1.80e3	1.69e4	0.118	0.163	5.19	5.18	1.33	69.2940	65.4		
31	63	13C2-PFUdA	565 > 519.8	1.21e4	1.69e4	0.118	1.053	5.36	5.36	8.96	72.1115	68.1		
32	65	13C2-PFDoA	614.7 > 569.7	1.01e4	1.65e4	0.118	1.094	5.65	5.64	7.63	59.0629	55.8		
33	-1													
34	31	L-EtFOSAA	584.1 > 419	3.44e3	2.20e3	0.118		5.34	5.35	19.5	96.8258		1.503	NO
35	84	Total N-EtFOSAA	584.1 > 419	3.44e3	2.20e3	0.118		5.33		19.5	96.8258			
36	39	PFTrDA	662.9 > 618.9	7.64e3	1.01e4	0.118		5.89	5.89	9.49	68.1214		24.630	NO

MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	3.89e3	2.90e3	0.118		6.11	6.11	16.8	95.0516		13.434	NO
38	85	TDCA	498.3>106.9			0.118		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.20e3	1.69e4	0.118	0.179	5.34	5.34	1.62	76.6467	72.4		
40	64	d5-N-EtFOSAA	589.3 > 419	2.20e3	1.69e4	0.118	0.179	5.34	5.34	1.62	76.6467	72.4		
41	65	13C2-PFDoA	614.7 > 569.7	1.01e4	1.65e4	0.118	1.094	5.65	5.64	7.63	59.0629	55.8		
42	67	13C2-PFTeDA	715.1 > 669.7	2.90e3	1.69e4	0.118	0.666	6.11	6.11	2.14	27.2311	25.7		
43	59	13C8-PFOS	507.0 > 79.9	2.14e3	2.16e3	0.118	0.998	4.75	4.74	12.4	105.1910	99.3		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.50e4	1.50e4	0.118	1.000	3.09	3.08	12.5	105.9143	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.84e4	1.84e4	0.118	1.000	4.23	4.22	12.5	105.9143	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	9.29e2	9.29e2	0.118	1.000	3.86	3.85	12.5	105.9143	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.32e4	1.32e4	0.118	1.000	4.66	4.66	12.5	105.9143	100.0		
49	77	13C4-PFOS	503 > 79.9	2.16e3	2.16e3	0.118	1.000	4.75	4.74	12.5	105.9143	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.65e4	1.65e4	0.118	1.000	5.04	5.04	12.5	105.9143	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.69e4	1.69e4	0.118	1.000	5.36	5.36	12.5	105.9143	100.0		

MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

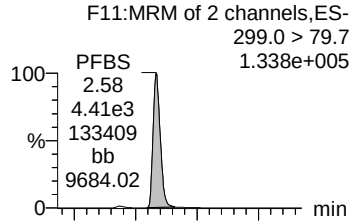
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

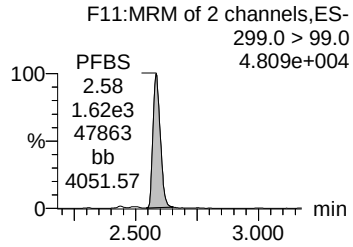
Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

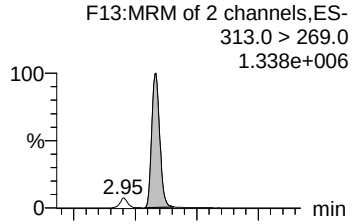
Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

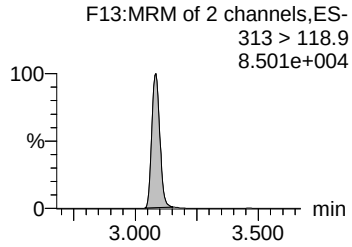
PFBS



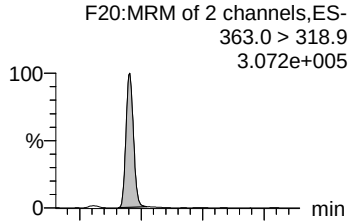


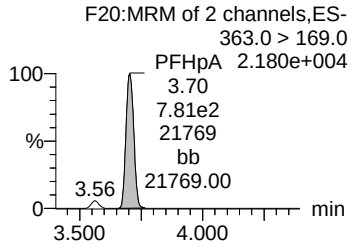
PFHxA



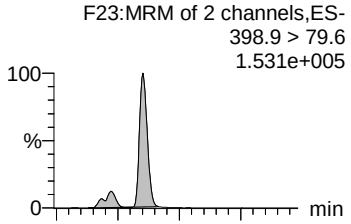


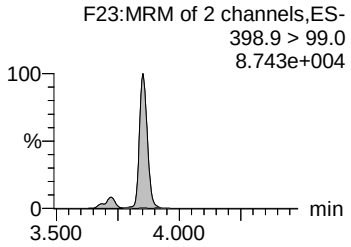
PFHpA



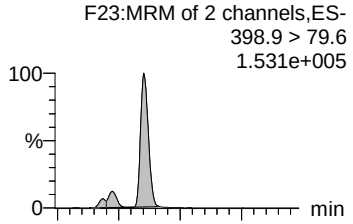


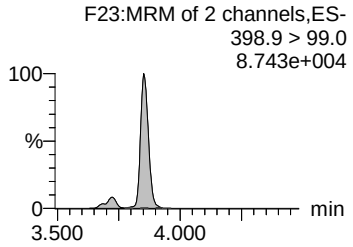
L-PFHxS





Total PFHxS





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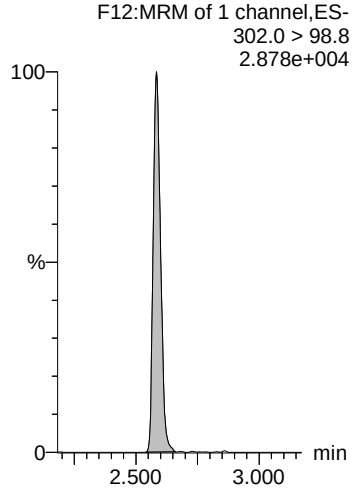
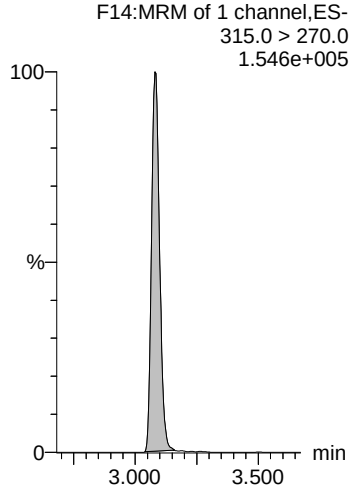
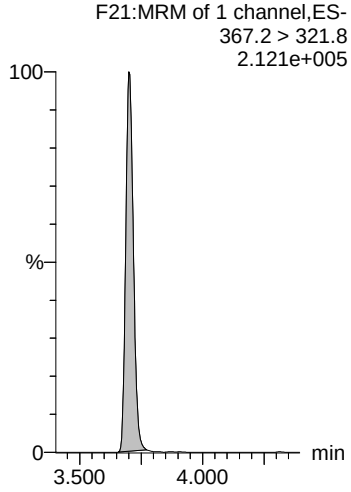


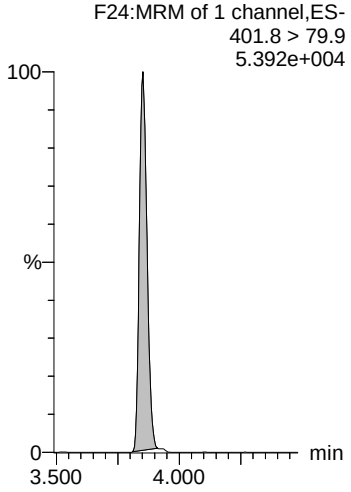
13C2-PFHxA



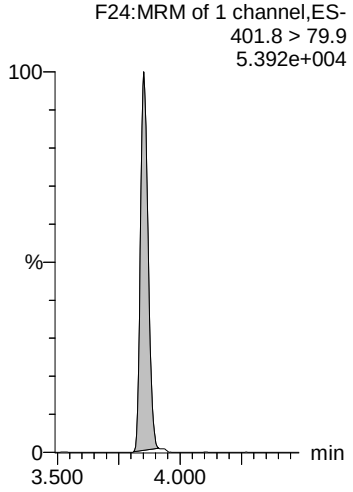
13C4-PFHpA



13C3-PFHxS



13C3-PFHxS



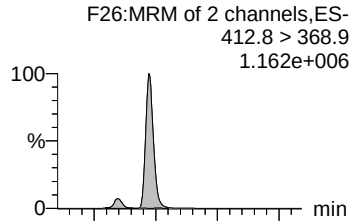
MSF 7/7/2019

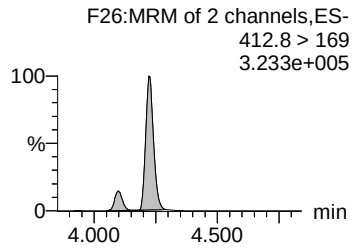
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

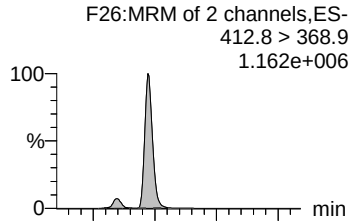
Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

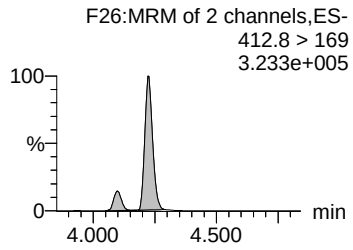
L-PFOA



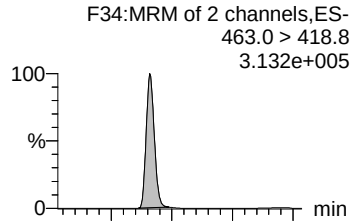


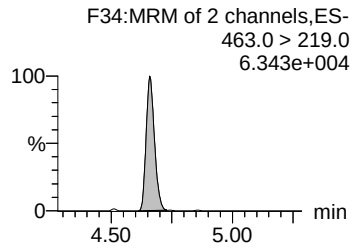
Total PFOA



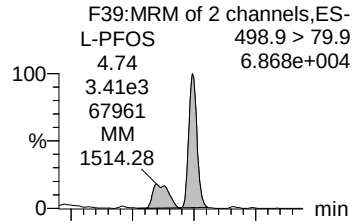


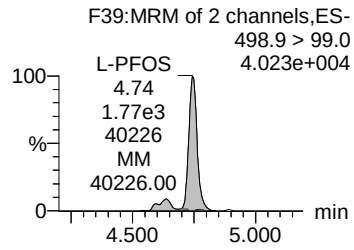
PFNA



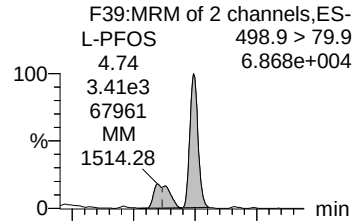


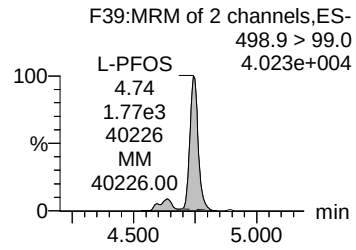
L-PFOS



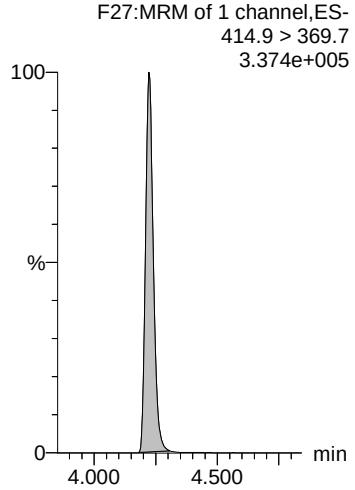


Total PFOS





13C2-PFOA



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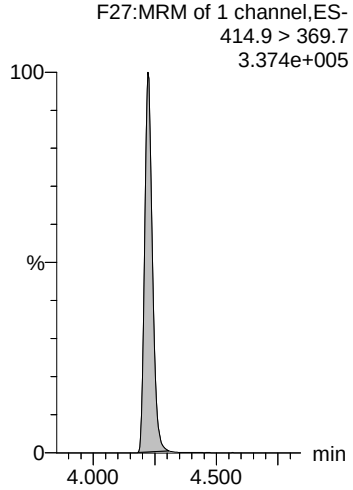
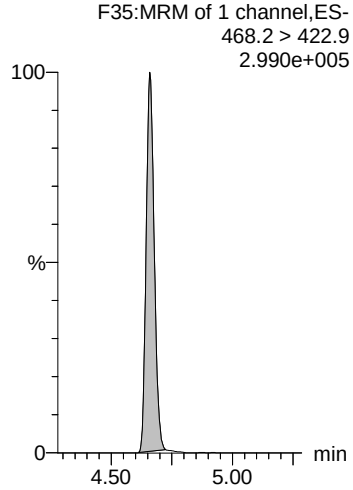
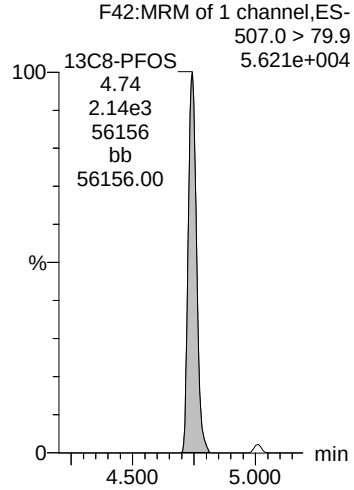


13C5-PFNA



13C8-PFOS



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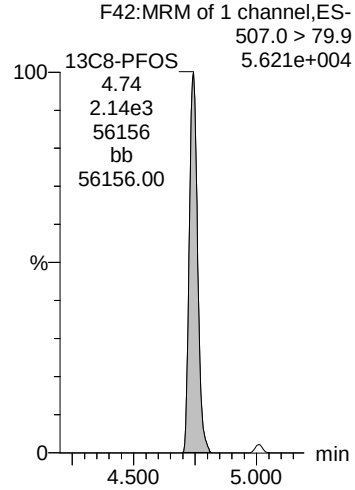


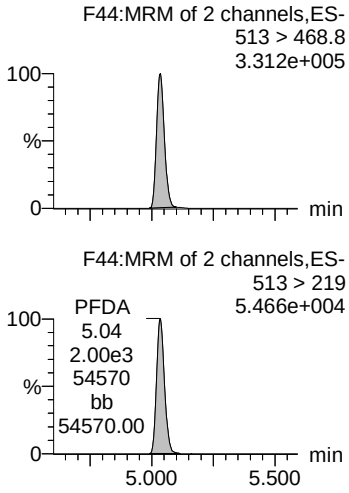
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

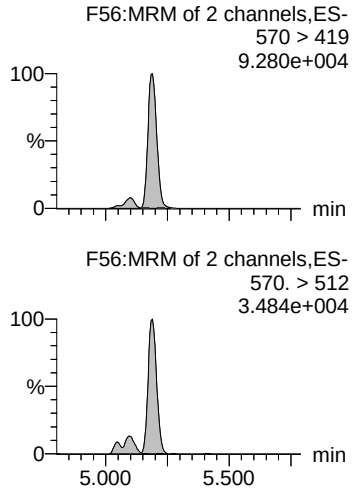
Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

PFDA



L-MeFOSAA



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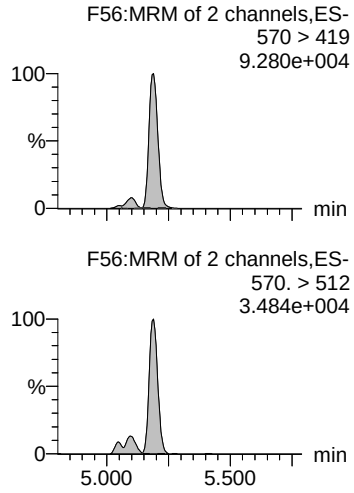
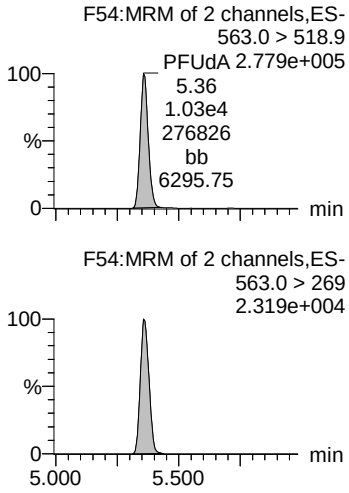
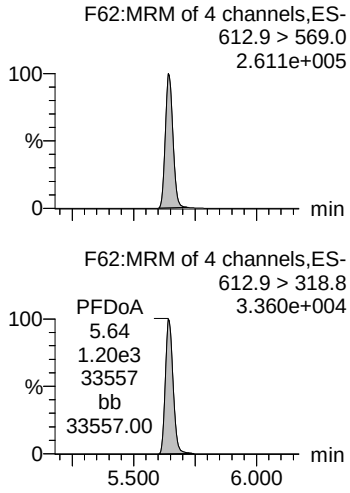


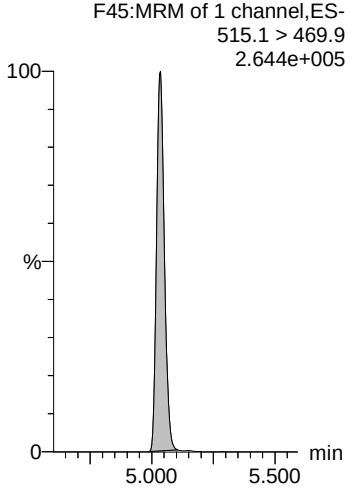
PFUdA



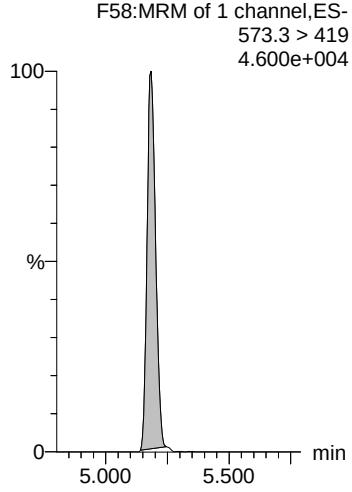
PFDoA



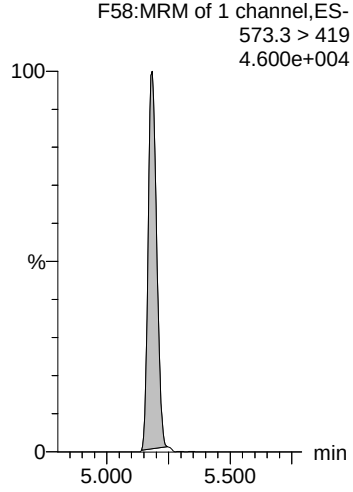
13C2-PFDA



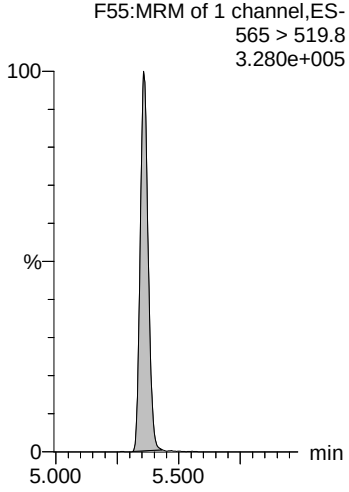
d3-N-MeFOSAA



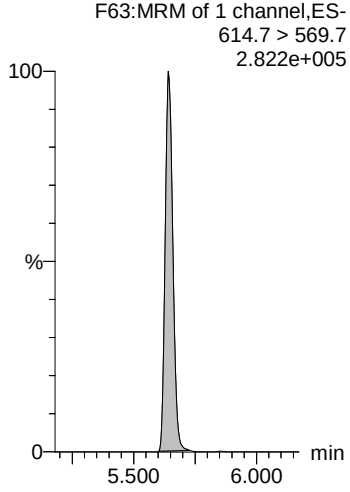
d3-N-MeFOSAA



13C2-PFUdA



13C2-PFDoA



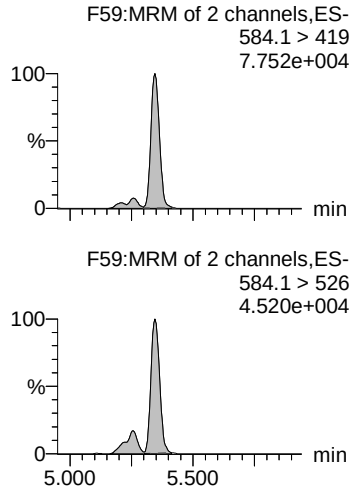
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

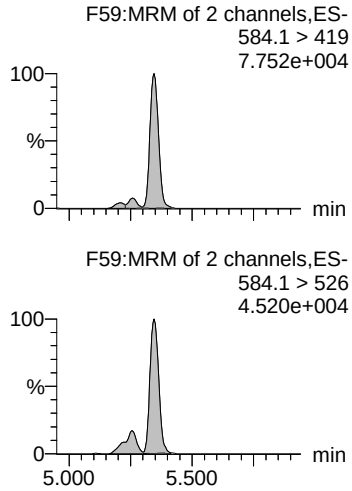
Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

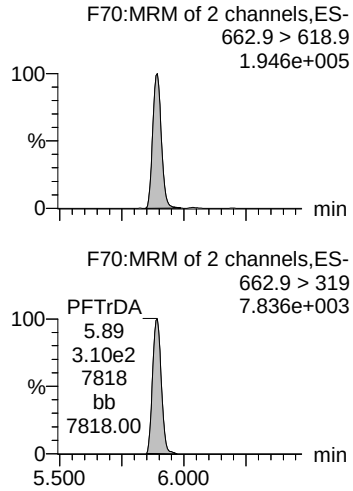
L-EtFOSAA



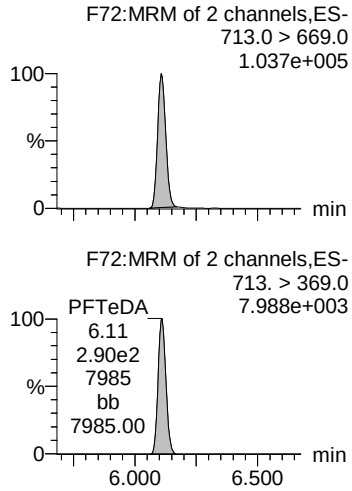
Total N-EtFOSAA



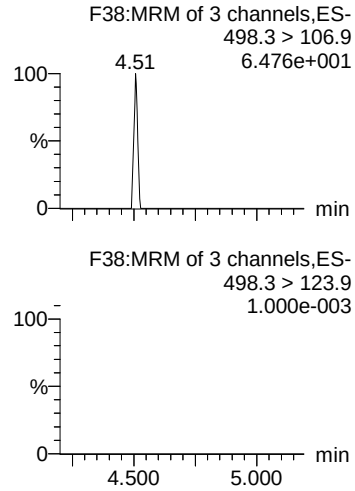
PFTrDA



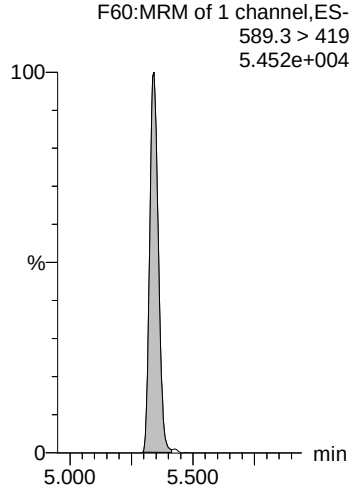
PFTeDA



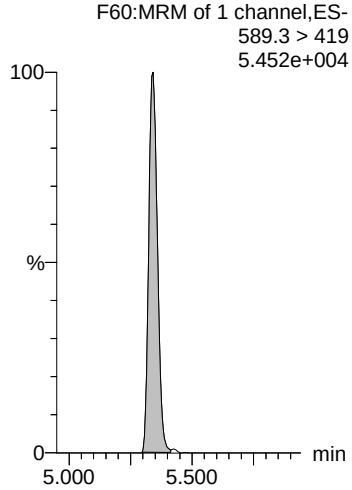
TDCA



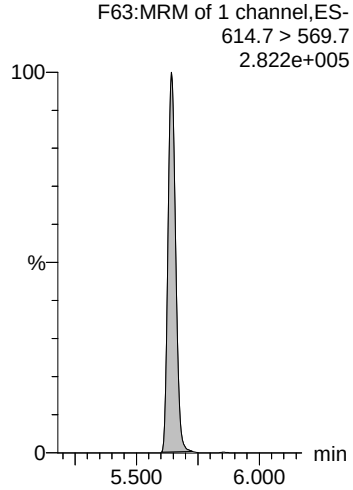
d5-N-EtFOSAA



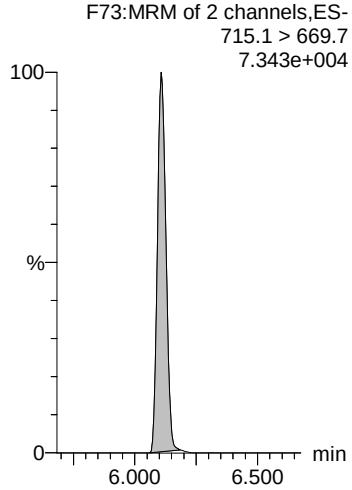
d5-N-EtFOSAA



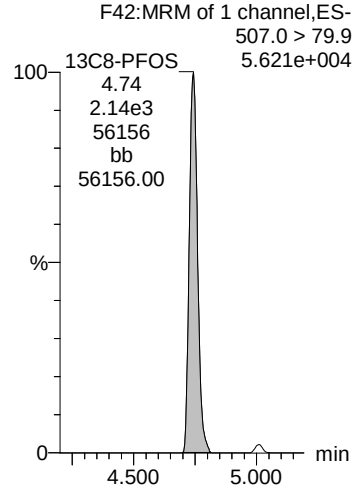
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



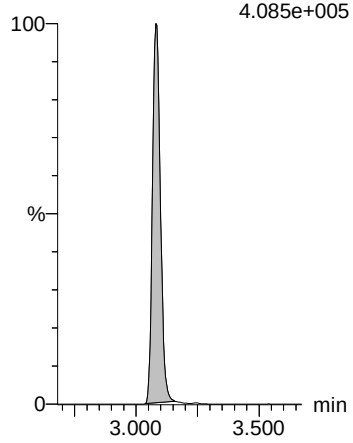
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-16.qld

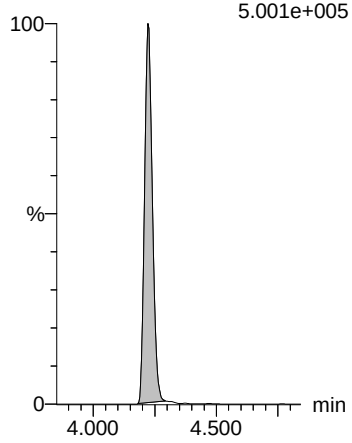
Last Altered: Sunday, July 07, 2019 14:02:35 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:17:19 Pacific Daylight Time

Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

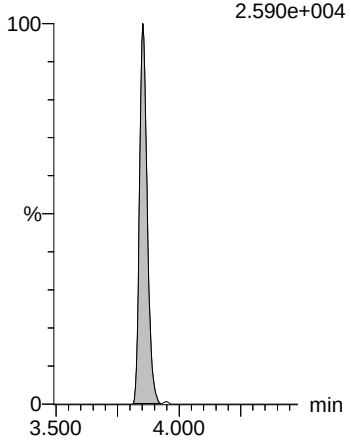
13C5-PFHxA



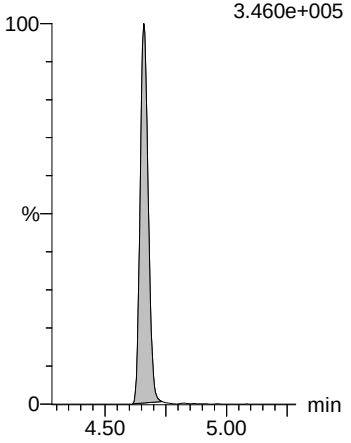
13C8-PFOA



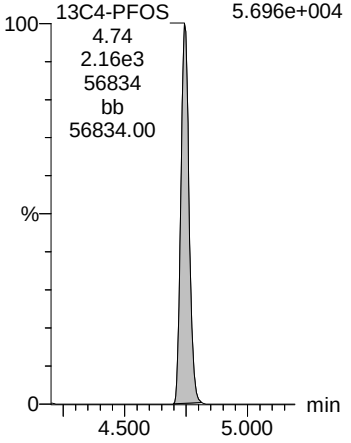
18O2-PFHxS



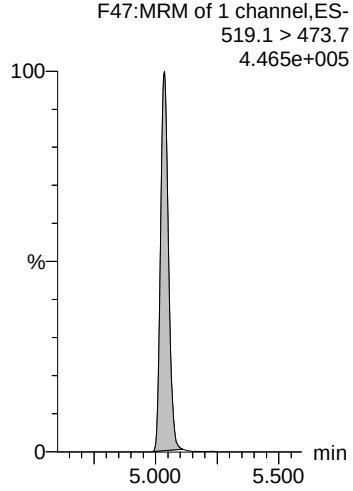
13C9-PFNA



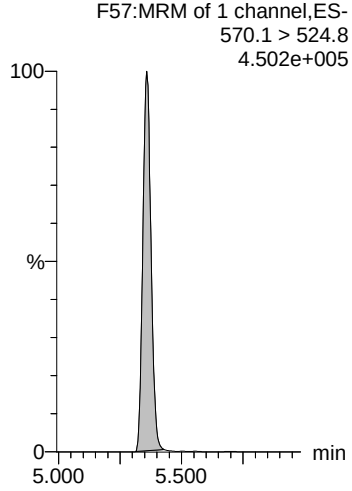
13C4-PFOS



13C6-PFDA



13C7-PFUdA



MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, 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	4.71e3	9.98e2	0.114		2.59	2.59	59.0	240.7520		2.826	NO
2	7	PFHxA	313.0 > 269.0	4.96e4	5.70e3	0.114		3.08	3.08	43.5	442.0035		15.096	NO
3	11	PFHpA	363.0 > 318.9	1.09e4	7.81e3	0.114		3.70	3.70	17.4	112.5283		12.101	NO
4	13	L-PFHxS	398.9 > 79.6	6.58e3	1.99e3	0.114		3.85	3.85	41.4	370.4880		1.917	NO
5	80	Total PFHxS	398.9 > 79.6	6.58e3	1.99e3	0.114		3.83		41.4	370.4880			
6	49	13C3-PFBS	302.0 > 98.8	9.98e2	9.85e2	0.114	1.067	2.59	2.59	12.7	103.9548	94.9		
7	52	13C2-PFHxA	315.0 > 270.0	5.70e3	1.54e4	0.114	1.008	3.09	3.08	4.62	40.1042	91.6		
8	53	13C4-PFHpA	367.2 > 321.8	7.81e3	1.54e4	0.114	0.535	3.71	3.70	6.32	103.5270	94.5		
9	54	13C3-PFHxS	401.8 > 79.9	1.99e3	9.85e2	0.114	2.170	3.86	3.85	25.2	101.8077	93.0		
10	54	13C3-PFHxS	401.8 > 79.9	1.99e3	9.85e2	0.114	2.170	3.86	3.85	25.2	101.8077	93.0		
11	-1													
12	16	L-PFOA	412.8 > 368.9	4.83e4	1.28e4	0.114		4.23	4.23	47.2	289.6059		3.433	NO
13	81	Total PFOA	412.8 > 368.9	4.83e4	1.28e4	0.114		4.21		47.2	289.6059			
14	21	PFNA	463.0 > 418.8	1.39e4	1.20e4	0.114		4.66	4.66	14.5	105.3139		4.798	NO
15	23	L-PFOS	498.9 > 79.9	3.57e3	2.23e3	0.114		4.74	4.74	20.0	165.4904		2.126	NO
16	82	Total PFOS	498.9 > 79.9	3.58e3	2.23e3	0.114		4.74		20.0	166.4361			
17	58	13C2-PFOA	414.9 > 369.7	1.28e4	1.86e4	0.114	0.744	4.23	4.23	8.60	101.2573	92.5		
18	58	13C2-PFOA	414.9 > 369.7	1.28e4	1.86e4	0.114	0.744	4.23	4.23	8.60	101.2573	92.5		
19	56	13C5-PFNA	468.2 > 422.9	1.20e4	1.44e4	0.114	1.014	4.66	4.66	10.4	89.5698	81.8		
20	59	13C8-PFOS	507.0 > 79.9	2.23e3	2.42e3	0.114	0.998	4.75	4.74	11.5	101.2046	92.4		
21	59	13C8-PFOS	507.0 > 79.9	2.23e3	2.42e3	0.114	0.998	4.75	4.74	11.5	101.2046	92.4		
22	-1													
23	26	PFDA	513 > 468.8	1.41e4	1.08e4	0.114		5.04	5.04	16.4	102.6355		6.172	NO
24	29	L-MeFOSAA	570 > 419	5.01e3	1.99e3	0.114		5.18	5.19	31.5	110.3284		2.632	NO
25	83	Total N-MeFOSAA	570. > 419	5.01e3	1.99e3	0.114		5.19		31.5	110.3284			
26	33	PFUdA	563.0 > 518.9	1.16e4	1.31e4	0.114		5.36	5.36	11.1	102.6323		11.228	NO
27	37	PFDoA	612.9 > 569.0	1.03e4	1.11e4	0.114		5.64	5.65	11.6	94.2790		8.101	NO
28	60	13C2-PFDA	515.1 > 469.9	1.08e4	1.71e4	0.114	0.836	5.04	5.04	7.88	82.5645	75.4		
29	62	d3-N-MeFOSAA	573.3 > 419	1.99e3	1.70e4	0.114	0.163	5.19	5.18	1.46	78.6872	71.9		
30	62	d3-N-MeFOSAA	573.3 > 419	1.99e3	1.70e4	0.114	0.163	5.19	5.18	1.46	78.6872	71.9		
31	63	13C2-PFUdA	565 > 519.8	1.31e4	1.70e4	0.114	1.053	5.36	5.36	9.60	79.9119	73.0		
32	65	13C2-PFDoA	614.7 > 569.7	1.11e4	1.71e4	0.114	1.094	5.65	5.64	8.11	64.8943	59.3		
33	-1													
34	31	L-EtFOSAA	584.1 > 419	3.69e3	2.25e3	0.114		5.34	5.34	20.5	105.2154		1.298	NO
35	84	Total N-EtFOSAA	584.1 > 419	3.69e3	2.25e3	0.114		5.33		20.5	105.2154			
36	39	PFTrDA	662.9 > 618.9	8.87e3	1.11e4	0.114		5.89	5.89	10.0	74.3084		29.641	NO

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MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	4.72e3	3.78e3	0.114		6.11	6.11	15.6	91.4870		15.845	NO
38	85	TDCA	498.3>106.9			0.114		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.25e3	1.70e4	0.114	0.179	5.34	5.34	1.65	80.6896	73.7		
40	64	d5-N-EtFOSAA	589.3 > 419	2.25e3	1.70e4	0.114	0.179	5.34	5.34	1.65	80.6896	73.7		
41	65	13C2-PFDoA	614.7 > 569.7	1.11e4	1.71e4	0.114	1.094	5.65	5.64	8.11	64.8943	59.3		
42	67	13C2-PFTeDA	715.1 > 669.7	3.78e3	1.70e4	0.114	0.666	6.11	6.11	2.78	36.5822	33.4		
43	59	13C8-PFOS	507.0 > 79.9	2.23e3	2.42e3	0.114	0.998	4.75	4.74	11.5	101.2046	92.4		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.54e4	1.54e4	0.114	1.000	3.09	3.08	12.5	109.5050	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.86e4	1.86e4	0.114	1.000	4.23	4.23	12.5	109.5050	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	9.85e2	9.85e2	0.114	1.000	3.86	3.85	12.5	109.5050	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.44e4	1.44e4	0.114	1.000	4.66	4.66	12.5	109.5050	100.0		
49	77	13C4-PFOS	503 > 79.9	2.42e3	2.42e3	0.114	1.000	4.75	4.75	12.5	109.5050	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.71e4	1.71e4	0.114	1.000	5.04	5.04	12.5	109.5050	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.70e4	1.70e4	0.114	1.000	5.36	5.36	12.5	109.5050	100.0		

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MM 7/10/2019

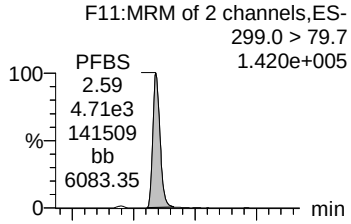
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

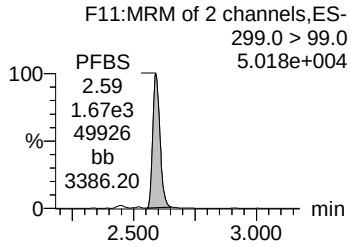
Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

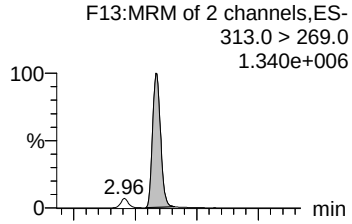
Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

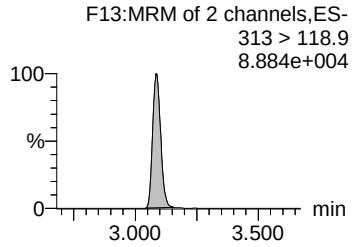
PFBS





PFHxA





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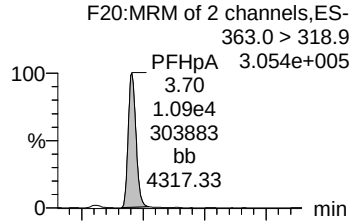
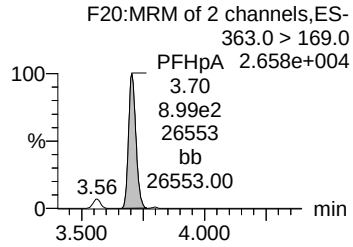
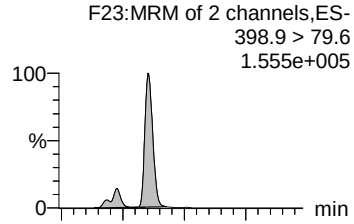
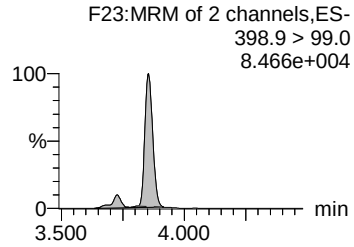


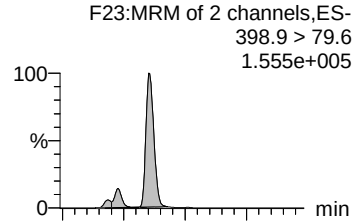


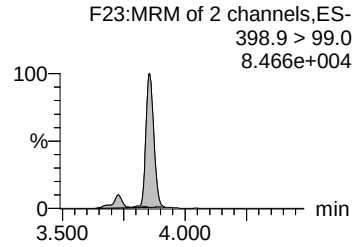
L-PFHxS



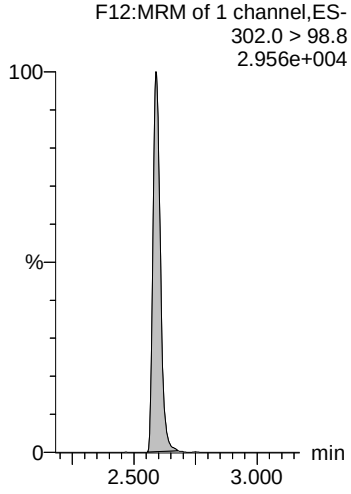


Total PFHxS

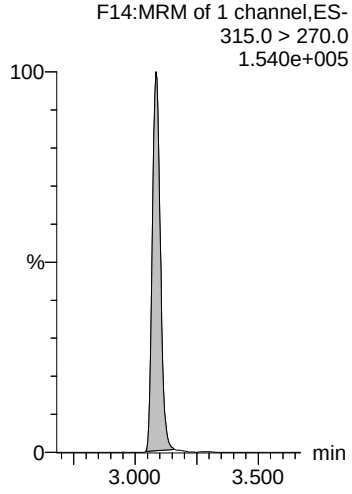




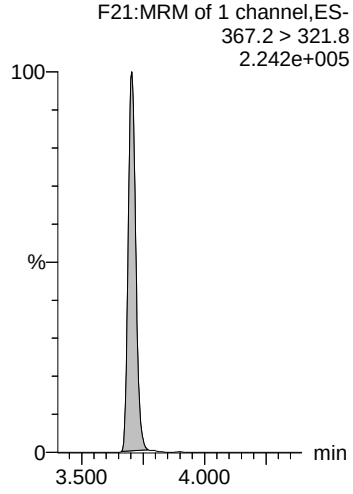
13C3-PFBS



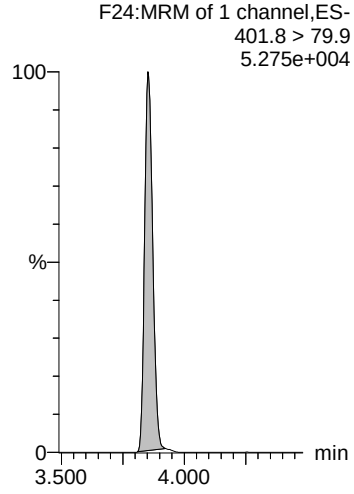
13C2-PFHxA



13C4-PFHpA



13C3-PFHxS



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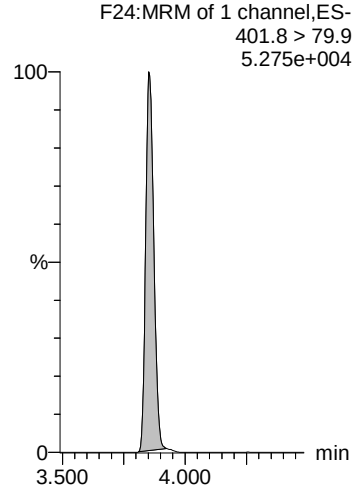


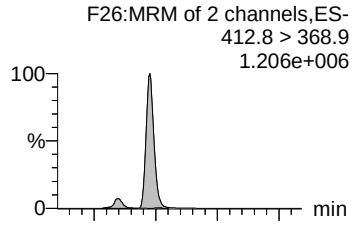
MSF 7/7/2019

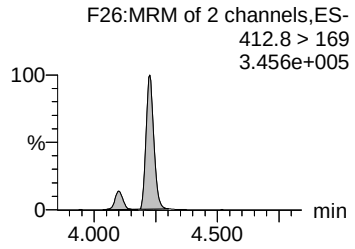
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

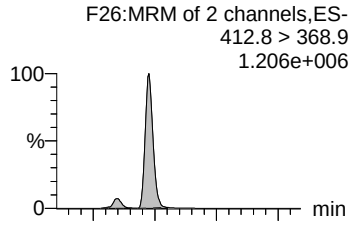
Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

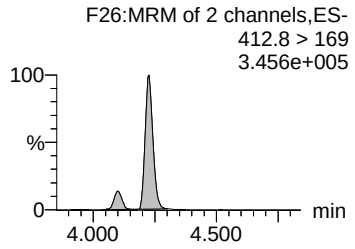
L-PFOA



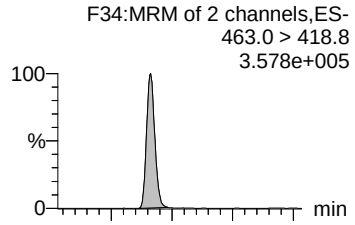


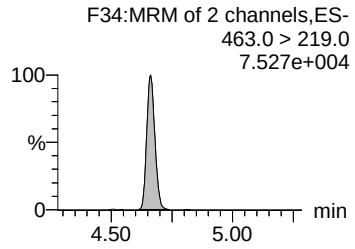
Total PFOA



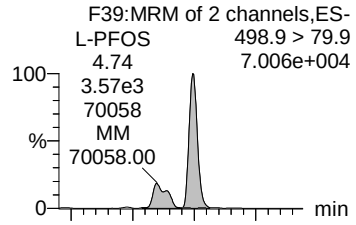


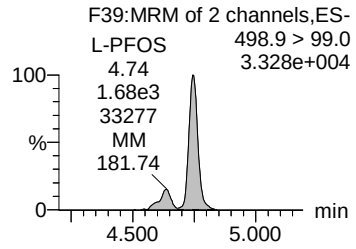
PFNA



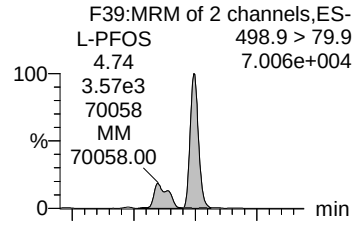


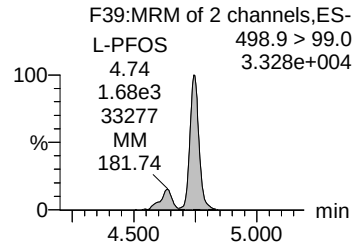
L-PFOS



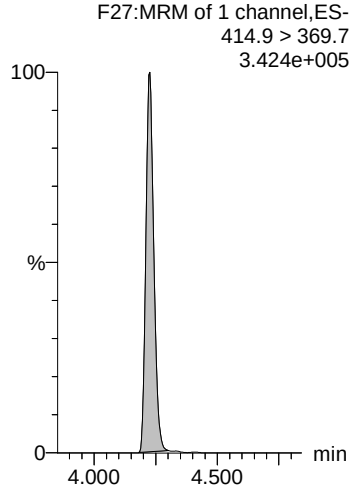


Total PFOS

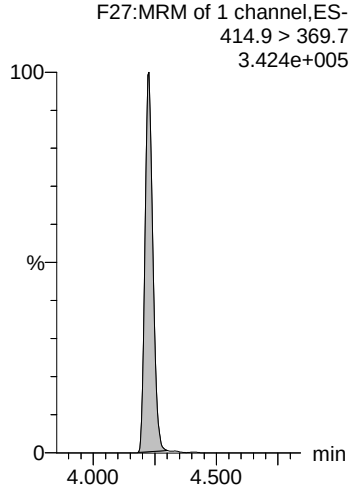




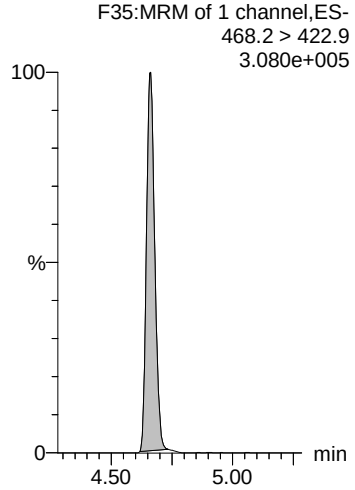
13C2-PFOA



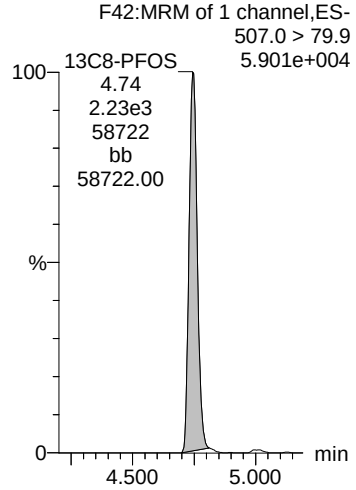
13C2-PFOA



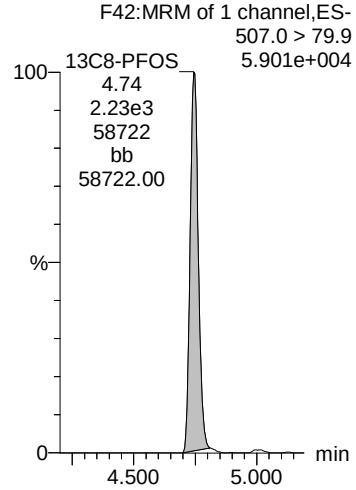
13C5-PFNA



13C8-PFOS



13C8-PFOS



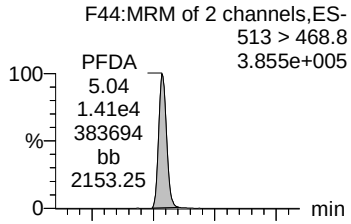
MSF 7/7/2019

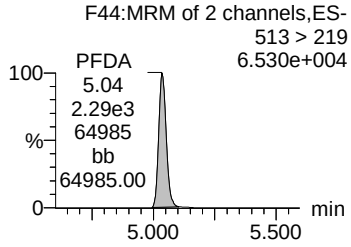
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

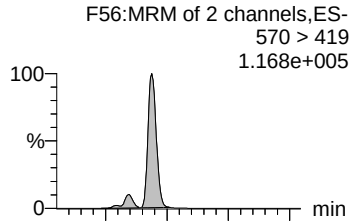
Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

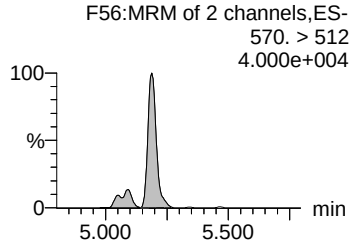
PFDA





L-MeFOSAA





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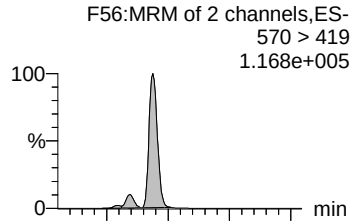
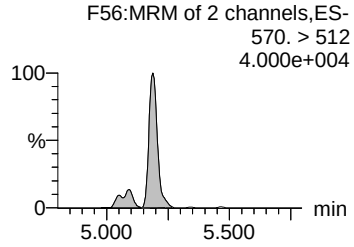
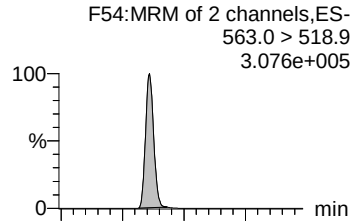
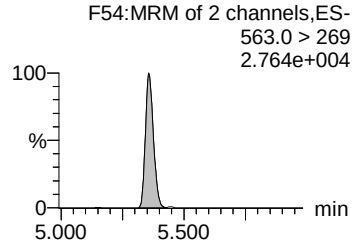


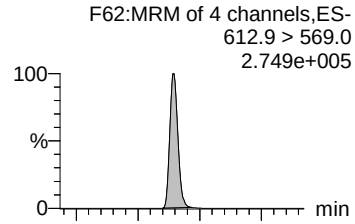


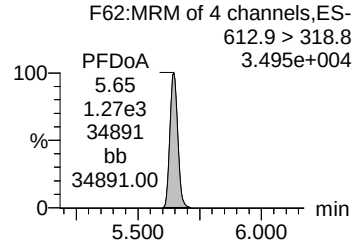
PFUdA



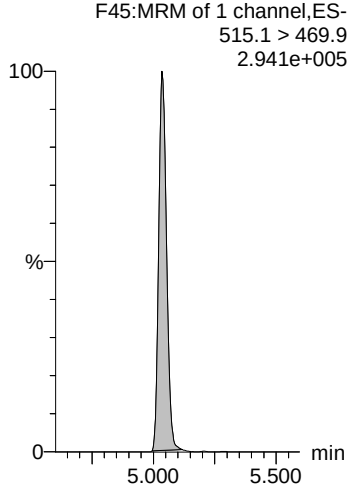


PFDoA

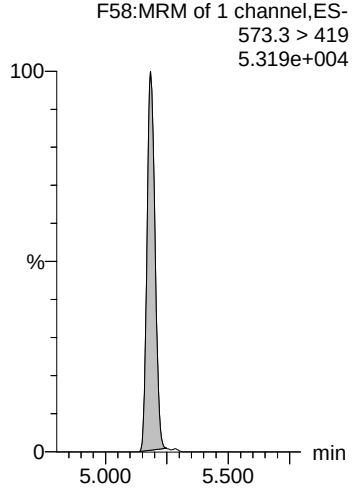




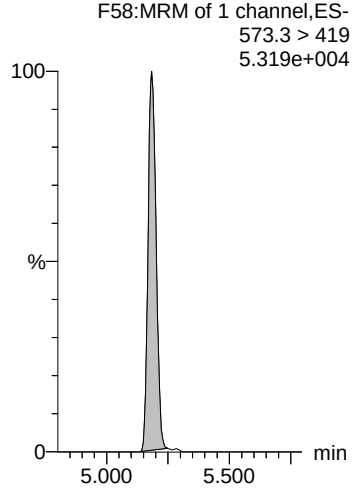
13C2-PFDA



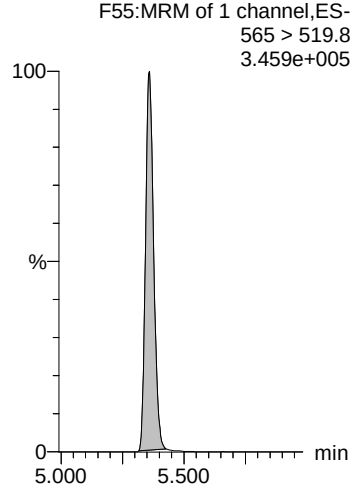
d3-N-MeFOSAA



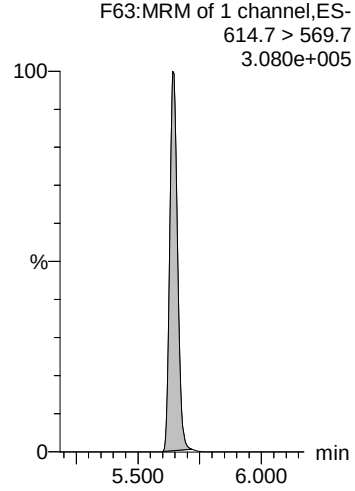
d3-N-MeFOSAA



13C2-PFUdA



13C2-PFDoA



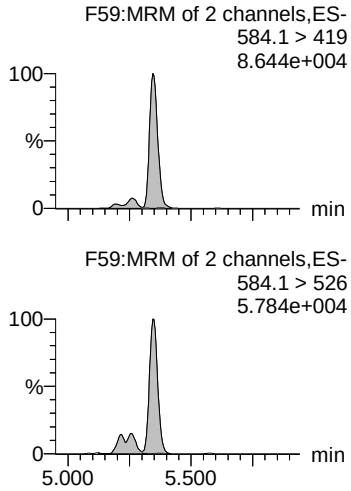
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

L-EtFOSAA



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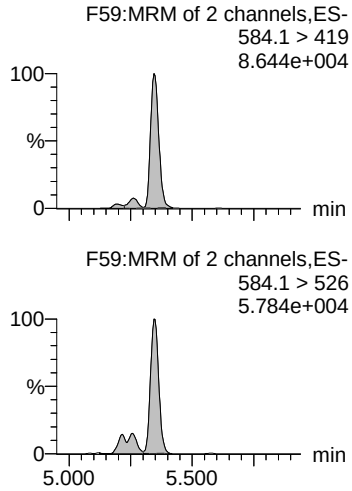
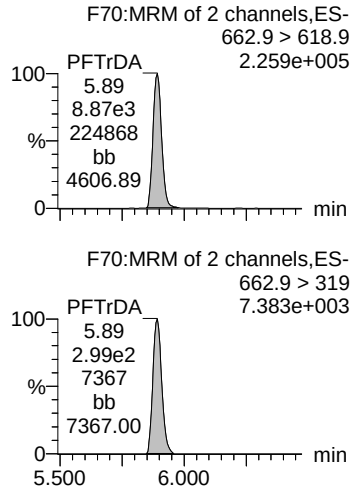
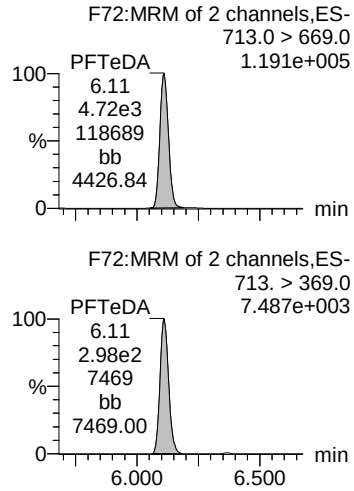


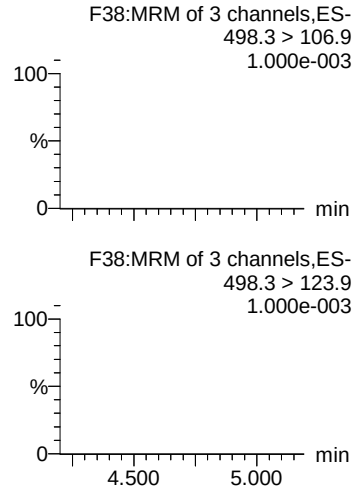
PFTrDA



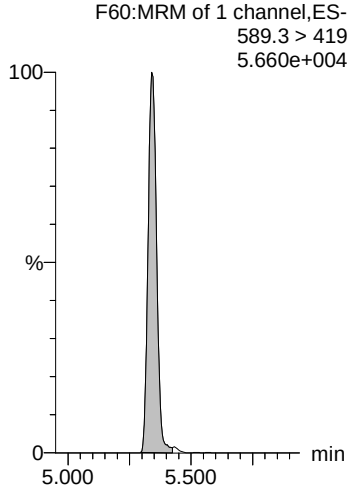
PFTeDA



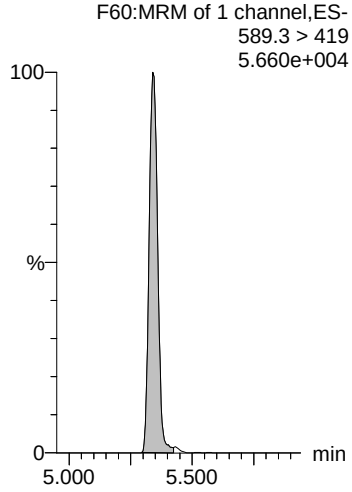
TDCA



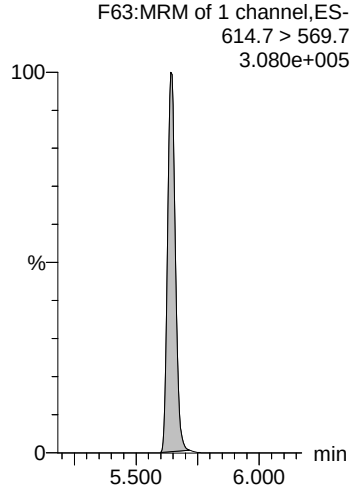
d5-N-EtFOSAA



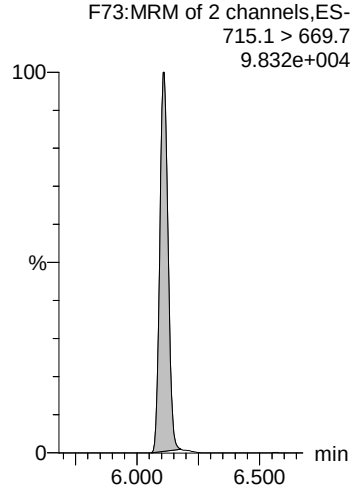
d5-N-EtFOSAA



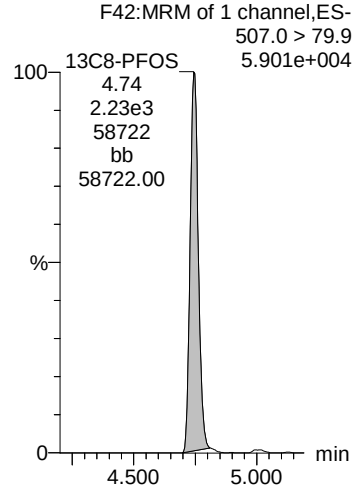
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



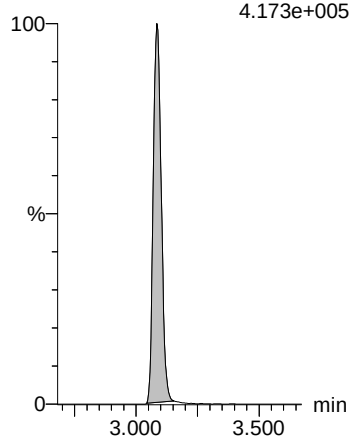
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-17.qld

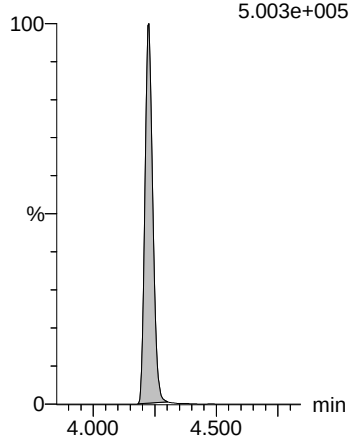
Last Altered: Sunday, July 07, 2019 14:24:10 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:24:25 Pacific Daylight Time

Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

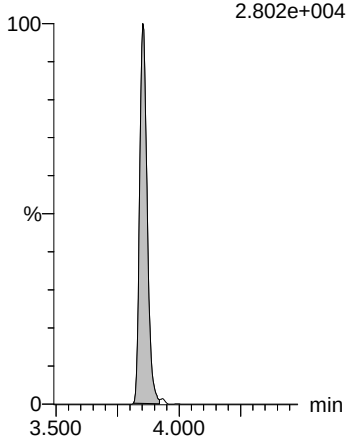
13C5-PFHxA



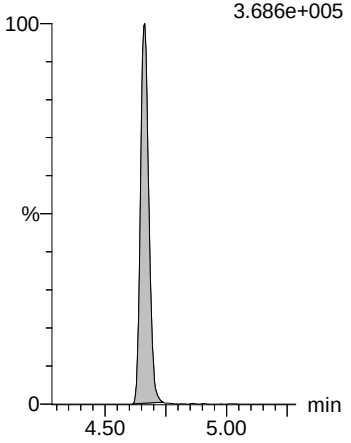
13C8-PFOA



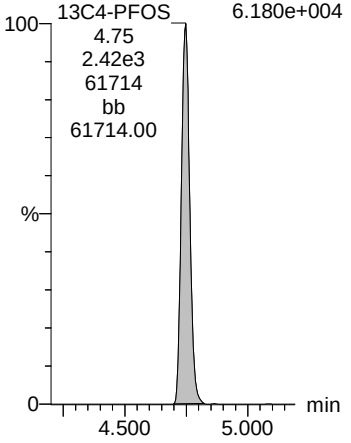
18O2-PFHxS



13C9-PFNA



13C4-PFOS



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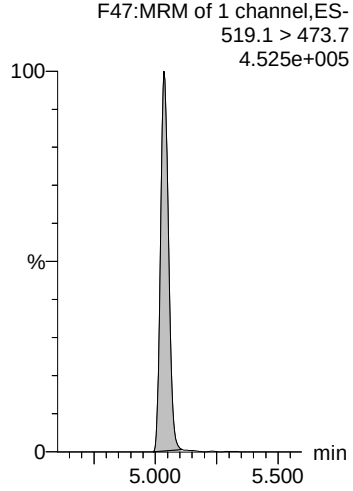
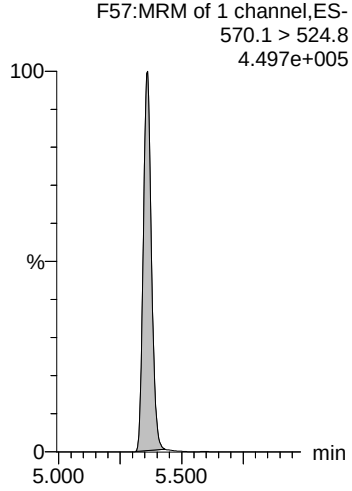


13C7-PFUdA



MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7		9.47e2	0.114		2.59						
2	7	PFHxA	313.0 > 269.0		5.97e3	0.114		3.09						
3	11	PFHpA	363.0 > 318.9		7.62e3	0.114		3.71						
4	13	L-PFHxS	398.9 > 79.6		2.07e3	0.114		3.86						
5	80	Total PFHxS	398.9 > 79.6	0.00e0	2.07e3	0.114		3.83		0.000				
6	49	13C3-PFBS	302.0 > 98.8	9.47e2	1.02e3	0.114	1.067	2.59	2.59	11.6	95.1904	86.7		
7	52	13C2-PFHxA	315.0 > 270.0	5.97e3	1.56e4	0.114	1.008	3.09	3.09	4.78	41.6550	94.9		
8	53	13C4-PFHpA	367.2 > 321.8	7.62e3	1.56e4	0.114	0.535	3.71	3.71	6.11	100.2763	91.4		
9	54	13C3-PFHxS	401.8 > 79.9	2.07e3	1.02e3	0.114	2.170	3.86	3.86	25.4	102.5913	93.5		
10	54	13C3-PFHxS	401.8 > 79.9	2.07e3	1.02e3	0.114	2.170	3.86	3.86	25.4	102.5913	93.5		
11	-1													
12	16	L-PFOA	412.8 > 368.9		1.31e4	0.114		4.23						
13	81	Total PFOA	412.8 > 368.9	0.00e0	1.31e4	0.114		4.21		0.000				
14	21	PFNA	463.0 > 418.8		1.12e4	0.114		4.66						
15	23	L-PFOS	498.9 > 79.9		2.16e3	0.114		4.75						
16	82	Total PFOS	498.9 > 79.9	0.00e0	2.16e3	0.114		4.74		0.000				
17	58	13C2-PFOA	414.9 > 369.7	1.31e4	1.73e4	0.114	0.744	4.23	4.23	9.47	111.8072	101.9		
18	58	13C2-PFOA	414.9 > 369.7	1.31e4	1.73e4	0.114	0.744	4.23	4.23	9.47	111.8072	101.9		
19	56	13C5-PFNA	468.2 > 422.9	1.12e4	1.26e4	0.114	1.014	4.66	4.66	11.1	96.4479	87.9		
20	59	13C8-PFOS	507.0 > 79.9	2.16e3	2.37e3	0.114	0.998	4.75	4.75	11.4	100.0208	91.1		
21	59	13C8-PFOS	507.0 > 79.9	2.16e3	2.37e3	0.114	0.998	4.75	4.75	11.4	100.0208	91.1		
22	-1													
23	26	PFDA	513 > 468.8		9.26e3	0.114		5.04						
24	29	L-MeFOSAA	570 > 419		1.77e3	0.114		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.77e3	0.114		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.14e4	0.114		5.36						
27	37	PFDoA	612.9 > 569.0		1.08e4	0.114		5.65						
28	60	13C2-PFDA	515.1 > 469.9	9.26e3	1.41e4	0.114	0.836	5.04	5.04	8.19	85.9992	78.4		
29	62	d3-N-MeFOSAA	573.3 > 419	1.77e3	1.45e4	0.114	0.163	5.19	5.19	1.52	81.7928	74.5		
30	62	d3-N-MeFOSAA	573.3 > 419	1.77e3	1.45e4	0.114	0.163	5.19	5.19	1.52	81.7928	74.5		
31	63	13C2-PFUdA	565 > 519.8	1.14e4	1.45e4	0.114	1.053	5.36	5.36	9.81	81.7855	74.5		
32	65	13C2-PFDoA	614.7 > 569.7	1.08e4	1.41e4	0.114	1.094	5.65	5.65	9.55	76.6183	69.8		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		1.99e3	0.114		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.99e3	0.114		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.08e4	0.114		5.89						

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Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		8.13e3	0.114		6.11						
38	85	TDCA	498.3>106.9			0.114		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.99e3	1.45e4	0.114	0.179	5.34	5.34	1.71	83.6861	76.2		
40	64	d5-N-EtFOSAA	589.3 > 419	1.99e3	1.45e4	0.114	0.179	5.34	5.34	1.71	83.6861	76.2		
41	65	13C2-PFDoA	614.7 > 569.7	1.08e4	1.41e4	0.114	1.094	5.65	5.65	9.55	76.6183	69.8		
42	67	13C2-PFTeDA	715.1 > 669.7	8.13e3	1.45e4	0.114	0.666	6.11	6.11	6.99	92.0578	83.9		
43	59	13C8-PFOS	507.0 > 79.9	2.16e3	2.37e3	0.114	0.998	4.75	4.75	11.4	100.0208	91.1		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.56e4	1.56e4	0.114	1.000	3.09	3.09	12.5	109.7550	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.73e4	1.73e4	0.114	1.000	4.23	4.23	12.5	109.7550	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	1.02e3	1.02e3	0.114	1.000	3.86	3.86	12.5	109.7550	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.26e4	1.26e4	0.114	1.000	4.66	4.66	12.5	109.7550	100.0		
49	77	13C4-PFOS	503 > 79.9	2.37e3	2.37e3	0.114	1.000	4.75	4.75	12.5	109.7550	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.41e4	1.41e4	0.114	1.000	5.04	5.04	12.5	109.7550	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.45e4	1.45e4	0.114	1.000	5.36	5.36	12.5	109.7550	100.0		

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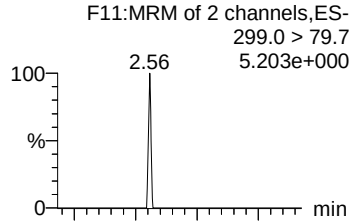
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

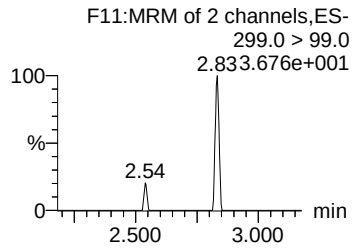
Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

PFBS





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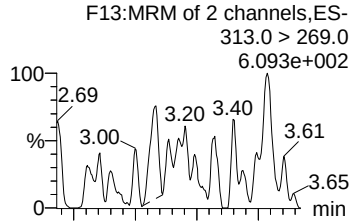

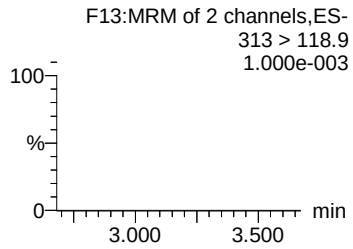

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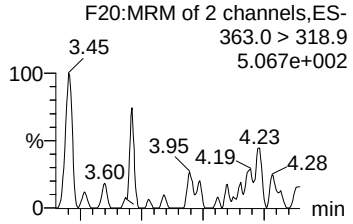

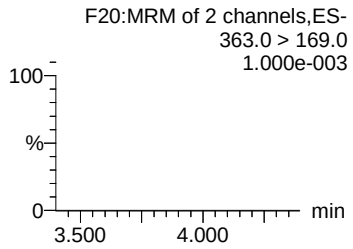

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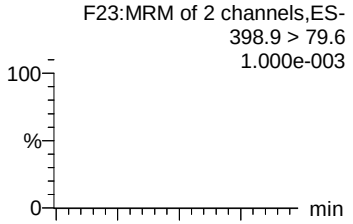

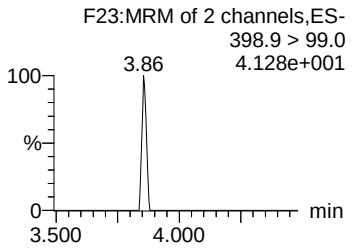

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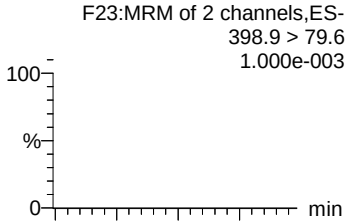

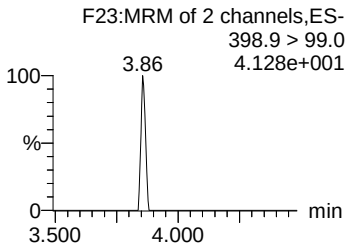

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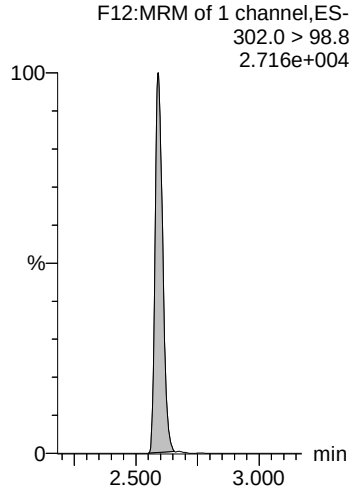

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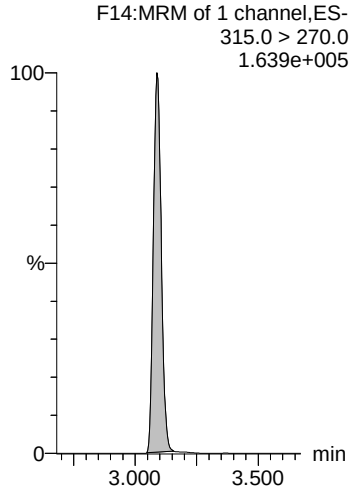

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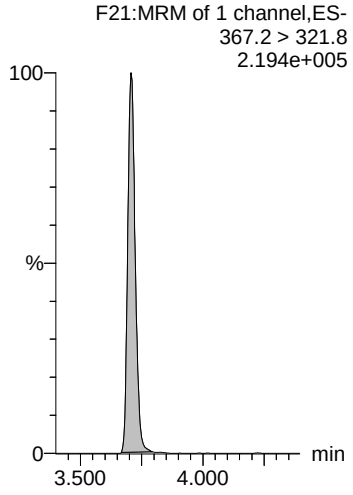

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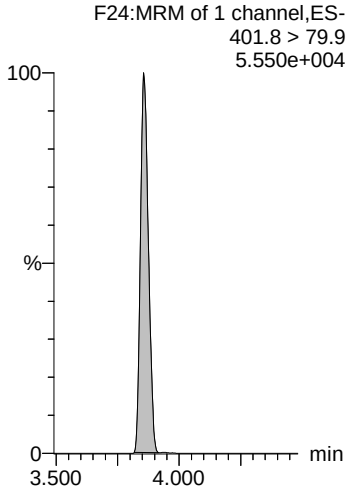

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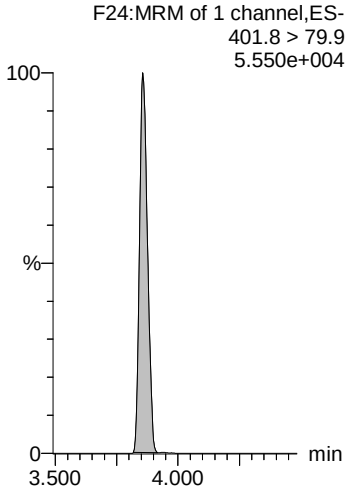


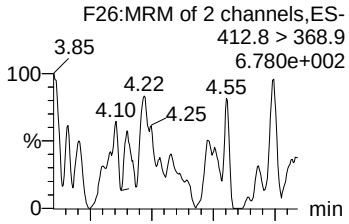
MSF 7/7/2019

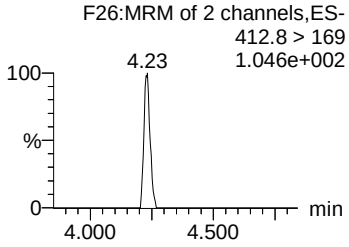
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

L-PFOA





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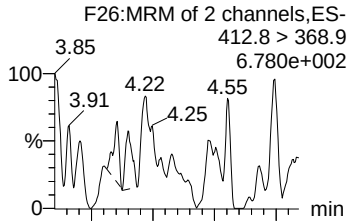

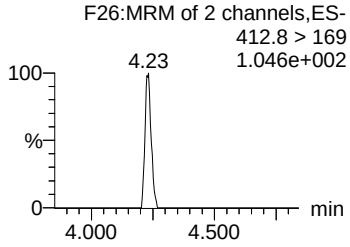

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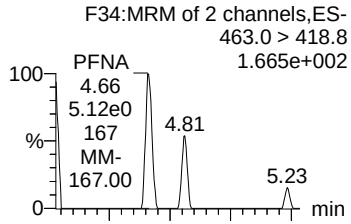
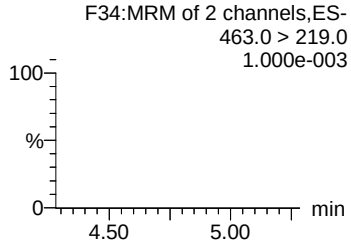
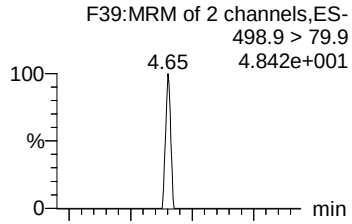
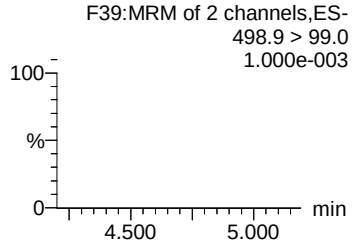




L-PFOS





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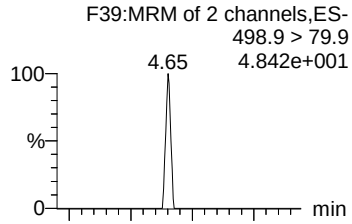

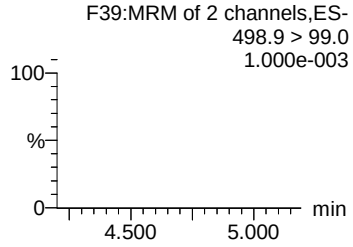

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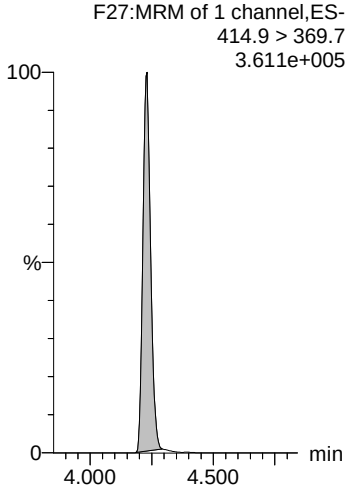

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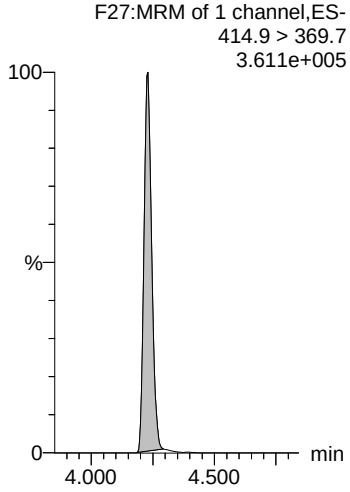

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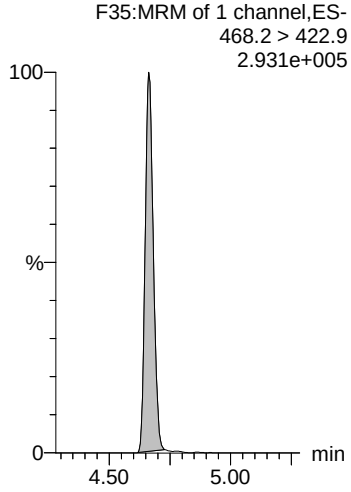

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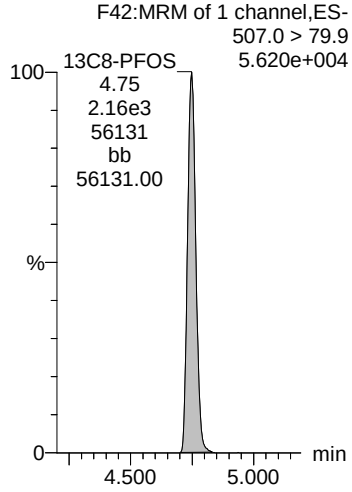
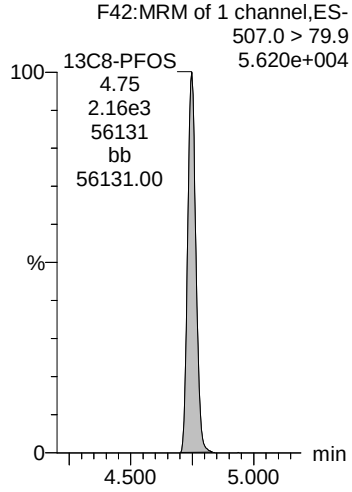


13C8-PFOS



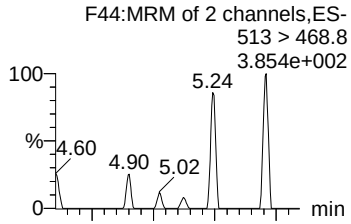
MSF 7/7/2019

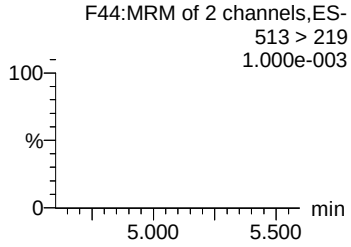
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

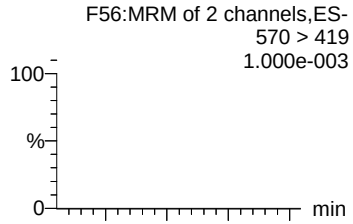
Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

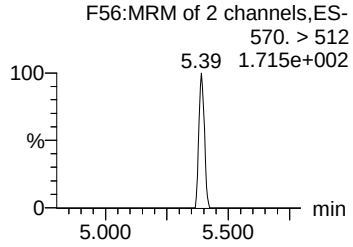
PFDA



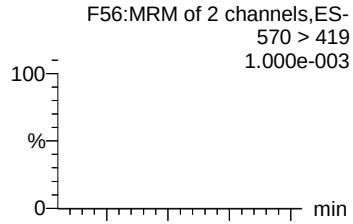


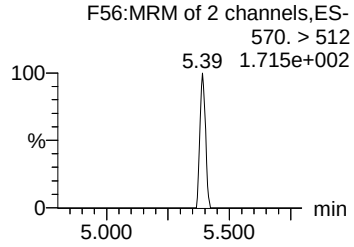
L-MeFOSAA



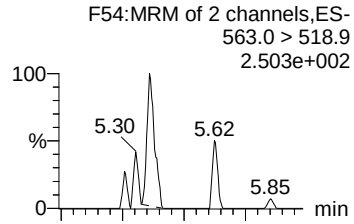


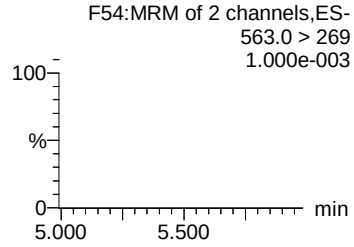
Total N-MeFOSAA



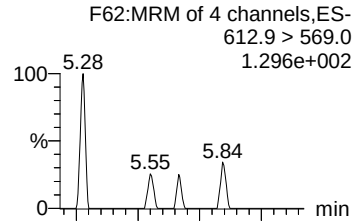


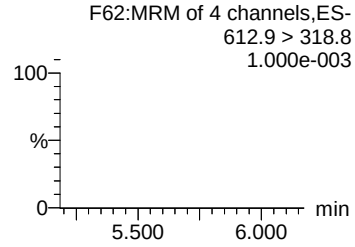
PFUdA



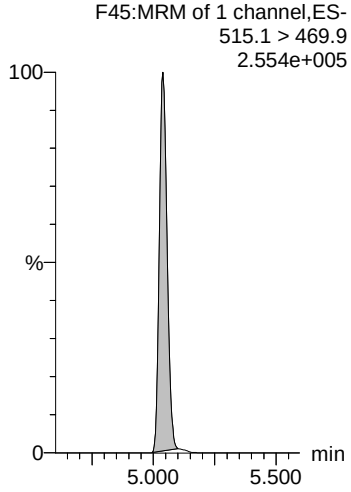


PFDoA

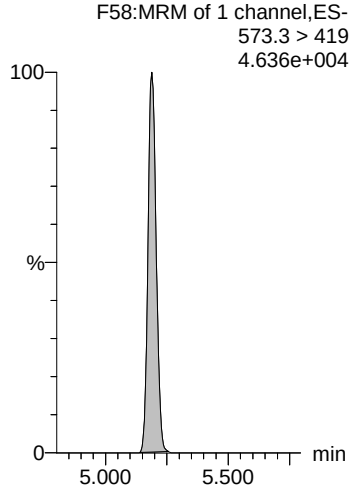




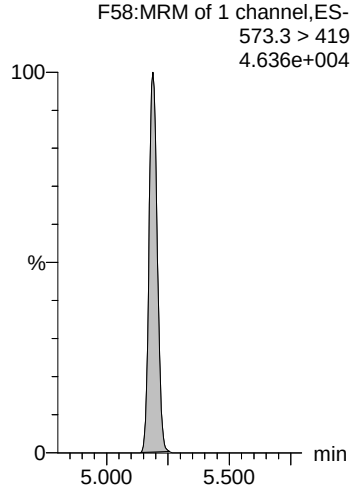
13C2-PFDA



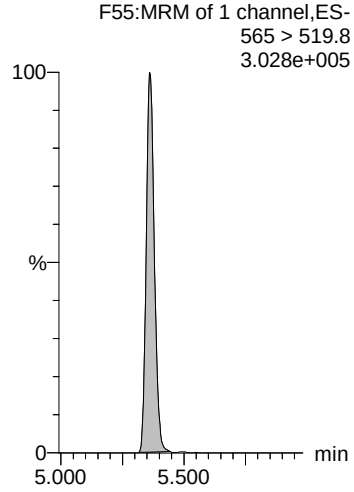
d3-N-MeFOSAA



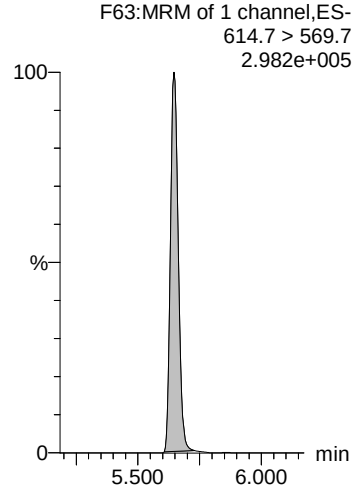
d3-N-MeFOSAA



13C2-PFUdA



13C2-PFDoA



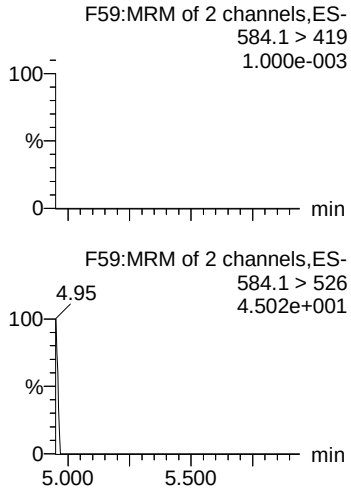
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

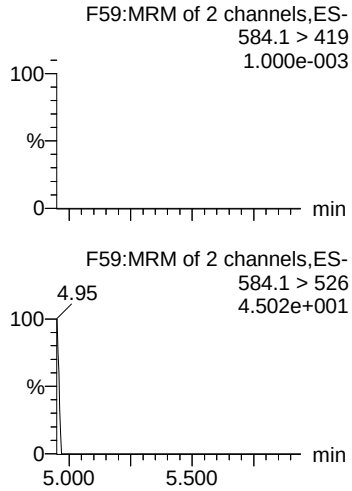
Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

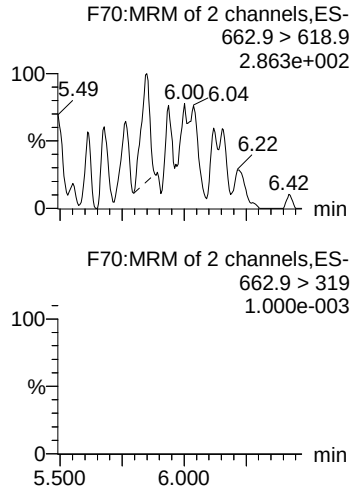
L-EtFOSAA



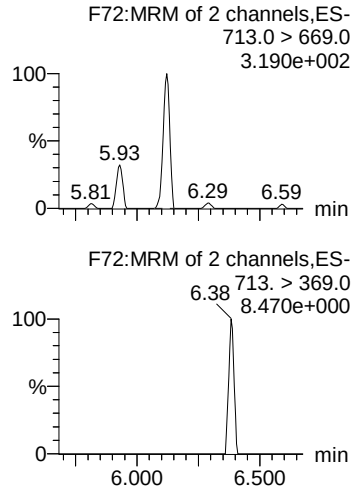
Total N-EtFOSAA



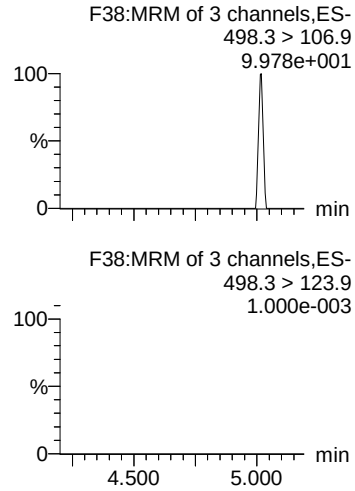
PFTrDA



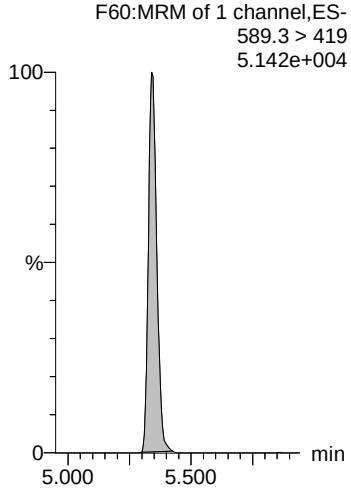
PFTeDA



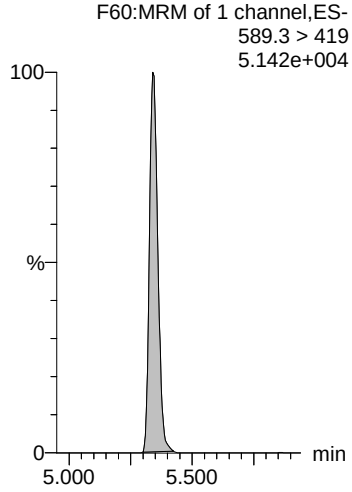
TDCA



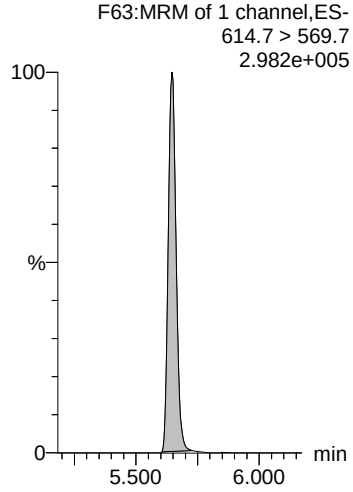
d5-N-EtFOSAA



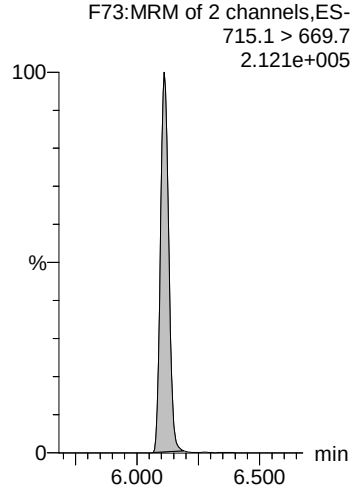
d5-N-EtFOSAA



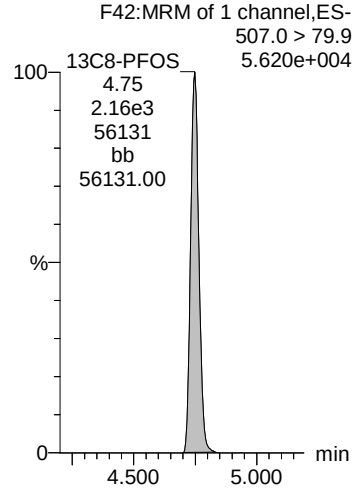
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



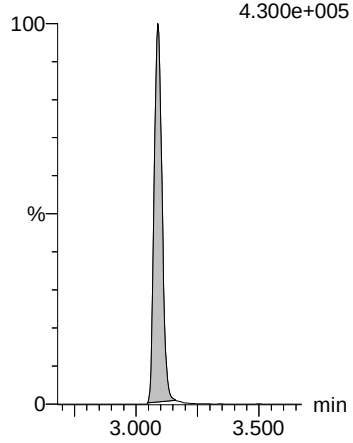
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-27.qld

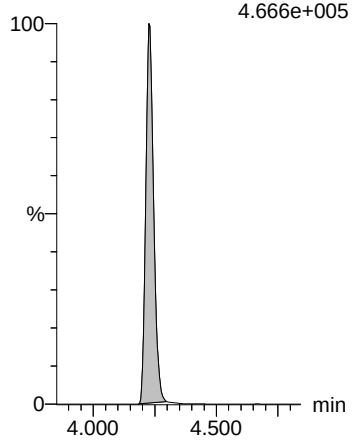
Last Altered: Sunday, July 07, 2019 14:35:41 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:36:04 Pacific Daylight Time

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

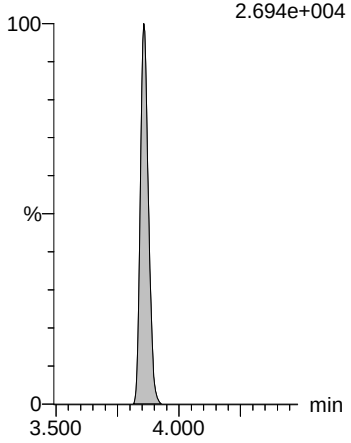
13C5-PFHxA



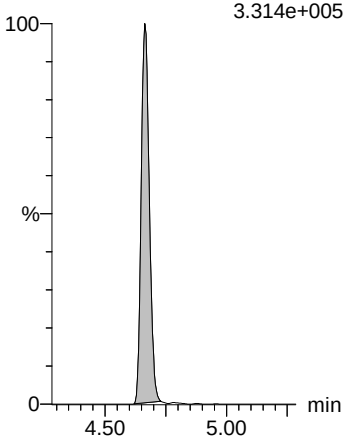
13C8-PFOA



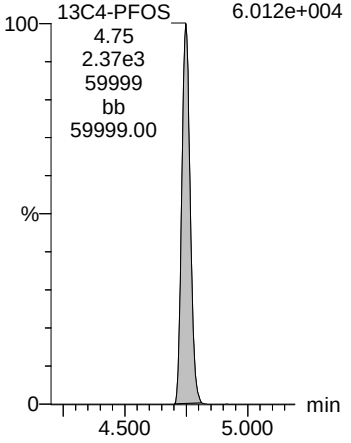
18O2-PFHxS



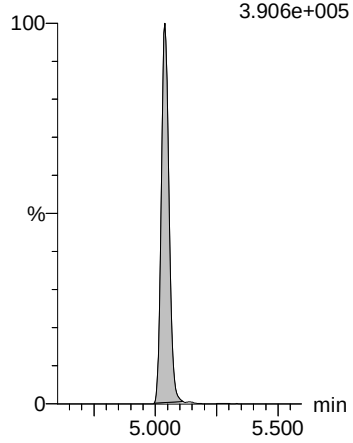
13C9-PFNA



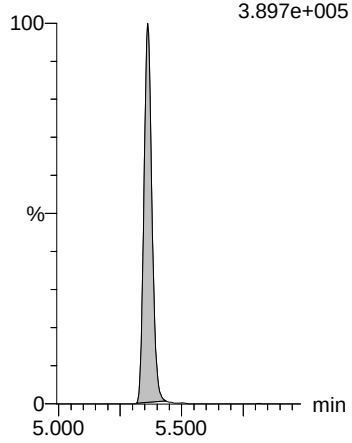
13C4-PFOS



13C6-PFDA



13C7-PFUdA



MSF 7/7/2019

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MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-28.qld

Last Altered: Sunday, July 07, 2019 14:39:11 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:39:40 Pacific Daylight Time

Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

	#	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	1.81e2	1.01e3	0.118		2.59	2.59	2.25	9.1820		2.632	NO
2	7	PFHxA	313.0 > 269.0	4.76e3	5.31e3	0.118		3.09	3.09	4.49	43.9059		15.752	NO
3	11	PFHpA	363.0 > 318.9	2.44e2	7.01e3	0.118		3.71	3.71	0.436	3.3529		11.422	NO
4	13	L-PFHxS	398.9 > 79.6	5.59e2	2.06e3	0.118		3.86	3.86	3.39	29.8645		1.960	NO
5	80	Total PFHxS	398.9 > 79.6	5.59e2	2.06e3	0.118		3.83		3.39	29.8645			
6	49	13C3-PFBS	302.0 > 98.8	1.01e3	1.04e3	0.118	1.067	2.59	2.59	12.0	95.5589	90.2		
7	52	13C2-PFHxA	315.0 > 270.0	5.31e3	1.34e4	0.118	1.008	3.09	3.09	4.95	41.6174	98.3		
8	53	13C4-PFHpA	367.2 > 321.8	7.01e3	1.34e4	0.118	0.535	3.71	3.71	6.54	103.5659	97.8		
9	54	13C3-PFHxS	401.8 > 79.9	2.06e3	1.04e3	0.118	2.170	3.86	3.86	24.7	96.3935	91.0		
10	54	13C3-PFHxS	401.8 > 79.9	2.06e3	1.04e3	0.118	2.170	3.86	3.86	24.7	96.3935	91.0		
11	-1													
12	16	L-PFOA	412.8 > 368.9	3.15e3	1.18e4	0.118		4.23	4.23	3.33	19.5891		3.012	NO
13	81	Total PFOA	412.8 > 368.9	3.15e3	1.18e4	0.118		4.21		3.33	19.5891			
14	21	PFNA	463.0 > 418.8		1.24e4	0.118		4.66						
15	23	L-PFOS	498.9 > 79.9	3.86e2	2.34e3	0.118		4.75	4.75	2.06	17.5461		2.141	NO
16	82	Total PFOS	498.9 > 79.9	3.86e2	2.34e3	0.118		4.74		2.06	17.5461			
17	58	13C2-PFOA	414.9 > 369.7	1.18e4	1.73e4	0.118	0.744	4.23	4.23	8.53	97.1404	91.7		
18	58	13C2-PFOA	414.9 > 369.7	1.18e4	1.73e4	0.118	0.744	4.23	4.23	8.53	97.1404	91.7		
19	56	13C5-PFNA	468.2 > 422.9	1.24e4	1.32e4	0.118	1.014	4.66	4.66	11.7	97.8200	92.4		
20	59	13C8-PFOS	507.0 > 79.9	2.34e3	2.50e3	0.118	0.998	4.75	4.75	11.7	99.4754	93.9		
21	59	13C8-PFOS	507.0 > 79.9	2.34e3	2.50e3	0.118	0.998	4.75	4.75	11.7	99.4754	93.9		
22	-1													
23	26	PFDA	513 > 468.8		1.06e4	0.118		5.04						
24	29	L-MeFOSAA	570 > 419		1.89e3	0.118		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.89e3	0.118		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.36e4	0.118		5.36						
27	37	PFDoA	612.9 > 569.0		1.10e4	0.118		5.65						
28	60	13C2-PFDA	515.1 > 469.9	1.06e4	1.57e4	0.118	0.836	5.04	5.04	8.49	85.9848	81.2		
29	62	d3-N-MeFOSAA	573.3 > 419	1.89e3	1.68e4	0.118	0.163	5.19	5.19	1.40	72.9107	68.9		
30	62	d3-N-MeFOSAA	573.3 > 419	1.89e3	1.68e4	0.118	0.163	5.19	5.19	1.40	72.9107	68.9		
31	63	13C2-PFUdA	565 > 519.8	1.36e4	1.68e4	0.118	1.053	5.36	5.36	10.1	81.1464	76.6		
32	65	13C2-PFDoA	614.7 > 569.7	1.10e4	1.57e4	0.118	1.094	5.65	5.65	8.77	67.8825	64.1		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		2.08e3	0.118		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	2.08e3	0.118		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.10e4	0.118		5.89						

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Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-28.qld

Last Altered: Sunday, July 07, 2019 14:39:11 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:39:40 Pacific Daylight Time

Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		6.03e3	0.118		6.11						
38	85	TDCA	498.3>106.9			0.118		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	2.08e3	1.68e4	0.118	0.179	5.34	5.34	1.55	73.0375	69.0		
40	64	d5-N-EtFOSAA	589.3 > 419	2.08e3	1.68e4	0.118	0.179	5.34	5.34	1.55	73.0375	69.0		
41	65	13C2-PFDoA	614.7 > 569.7	1.10e4	1.57e4	0.118	1.094	5.65	5.65	8.77	67.8825	64.1		
42	67	13C2-PFTeDA	715.1 > 669.7	6.03e3	1.68e4	0.118	0.666	6.11	6.11	4.49	57.0345	53.9		
43	59	13C8-PFOS	507.0 > 79.9	2.34e3	2.50e3	0.118	0.998	4.75	4.75	11.7	99.4754	93.9		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.34e4	1.34e4	0.118	1.000	3.09	3.09	12.5	105.8963	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.73e4	1.73e4	0.118	1.000	4.23	4.23	12.5	105.8963	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	1.04e3	1.04e3	0.118	1.000	3.86	3.86	12.5	105.8963	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.32e4	1.32e4	0.118	1.000	4.66	4.66	12.5	105.8963	100.0		
49	77	13C4-PFOS	503 > 79.9	2.50e3	2.50e3	0.118	1.000	4.75	4.75	12.5	105.8963	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.57e4	1.57e4	0.118	1.000	5.04	5.04	12.5	105.8963	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.68e4	1.68e4	0.118	1.000	5.36	5.36	12.5	105.8963	100.0		

MSF 7/7/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-28.qld

Last Altered: Sunday, July 07, 2019 14:39:11 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:39:40 Pacific Daylight Time

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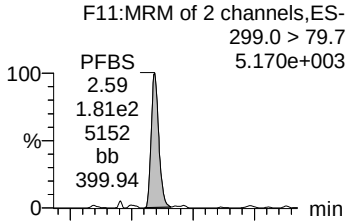
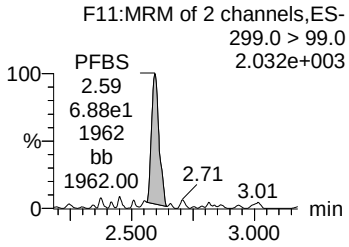
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

PFBS





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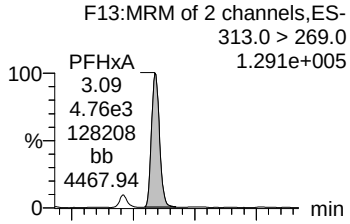

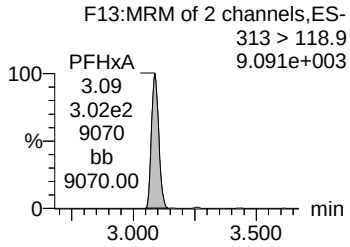

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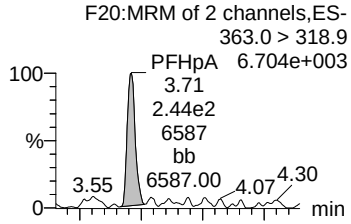

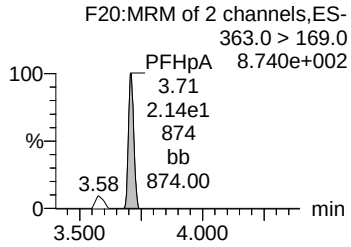

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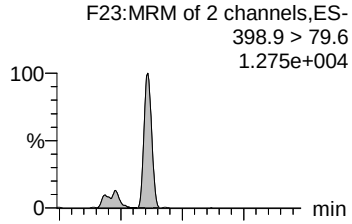

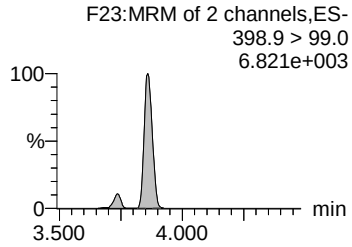

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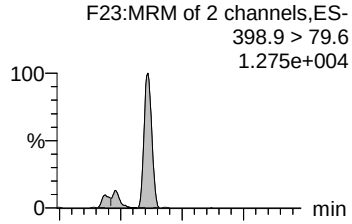

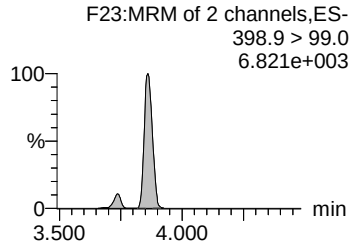

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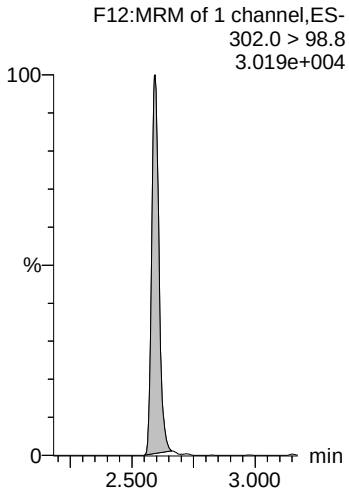

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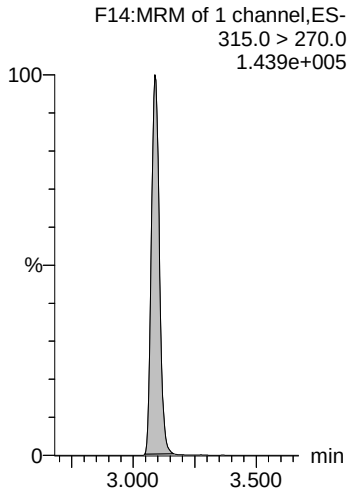

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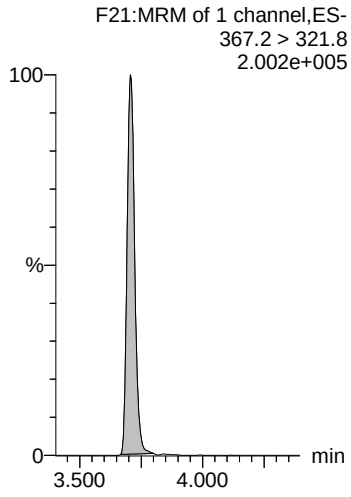

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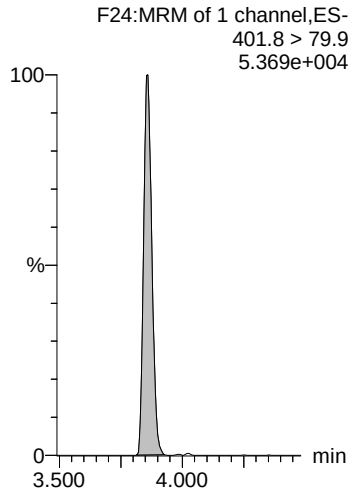

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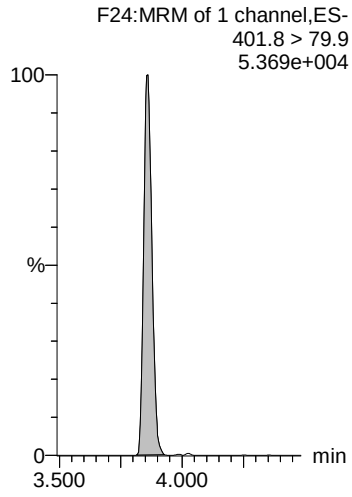

MSF 7/7/2019

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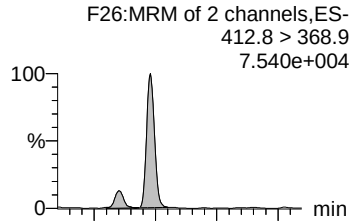
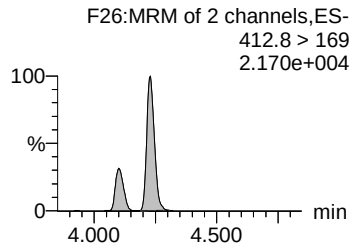
Printed: Sunday, July 07, 2019 14:39:40 Pacific Daylight Time

Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

L-PFOA





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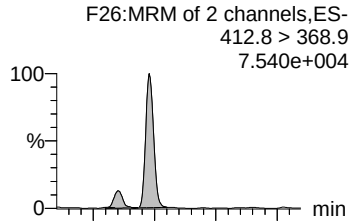

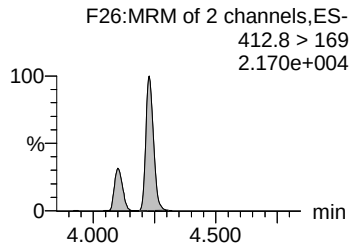

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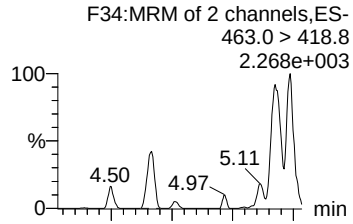

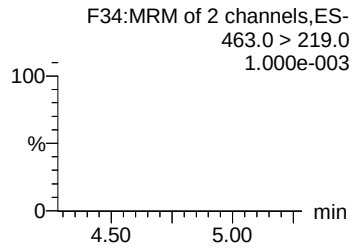

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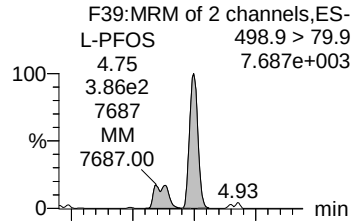

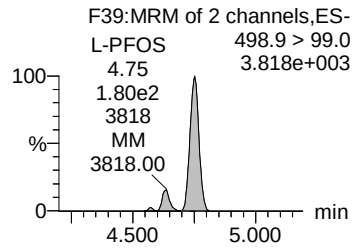

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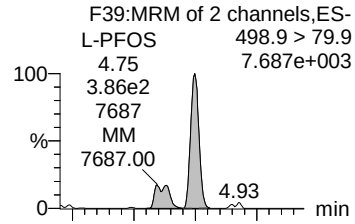

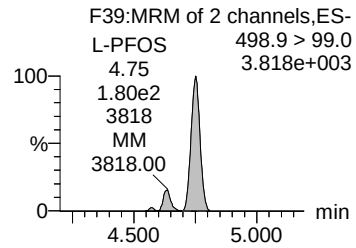

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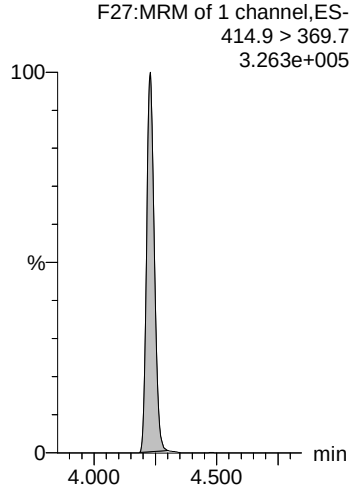

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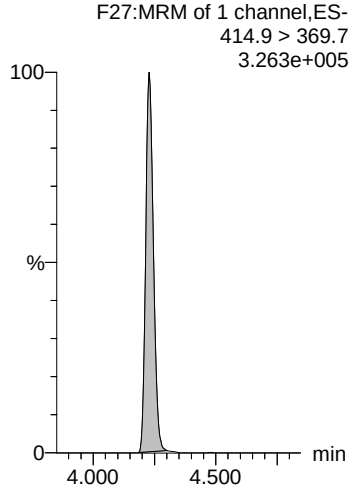

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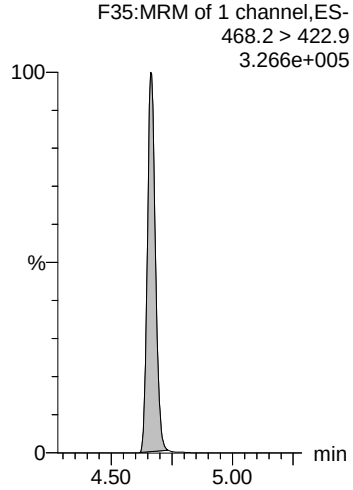

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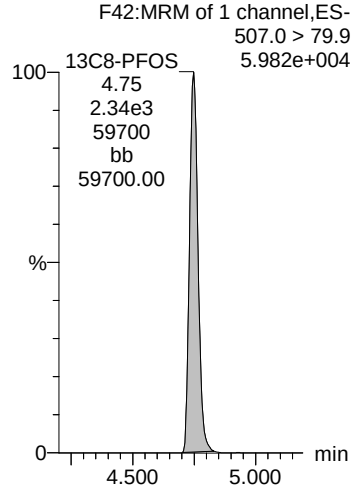

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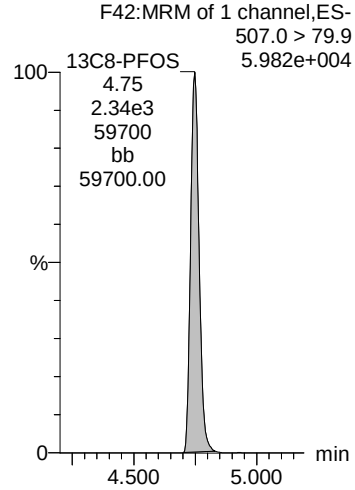

MSF 7/7/2019

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Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

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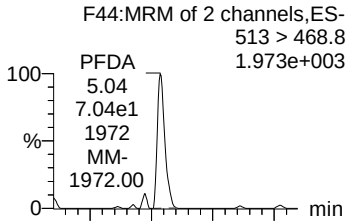
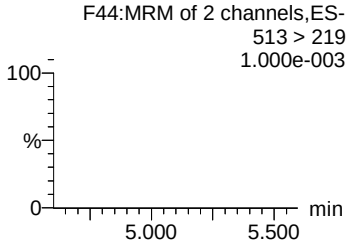
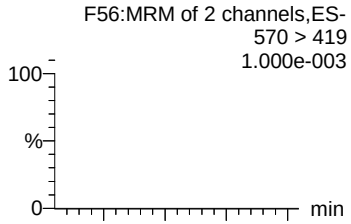
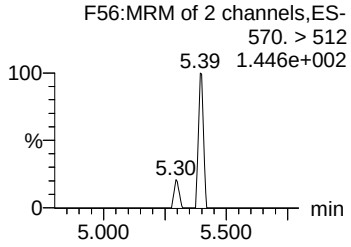




L-MeFOSAA





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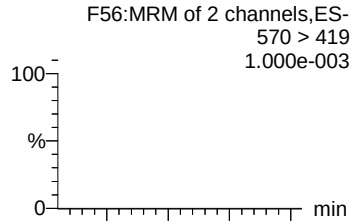

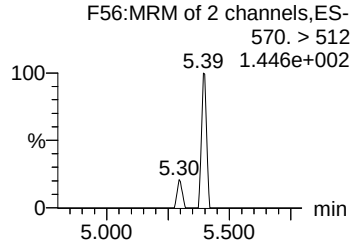

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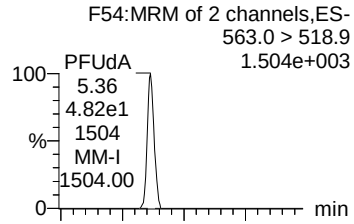
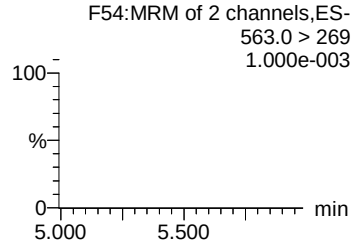
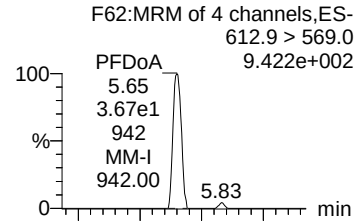
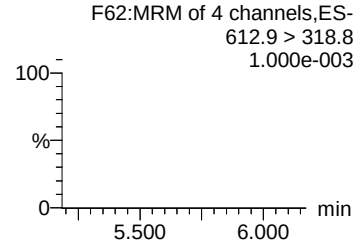




PFDoA





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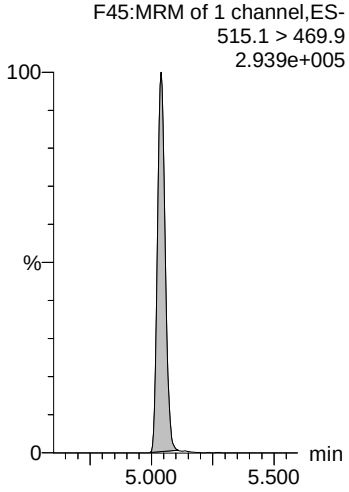

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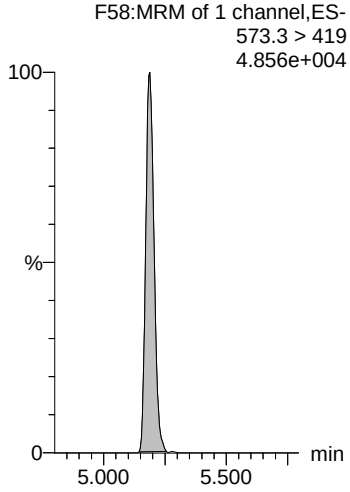

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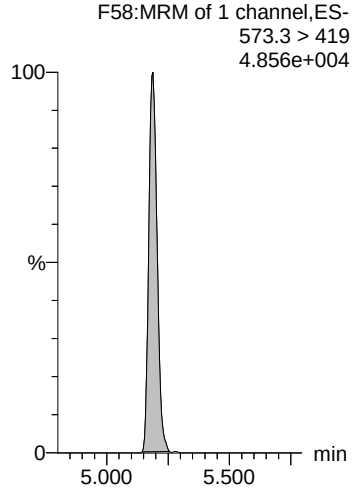

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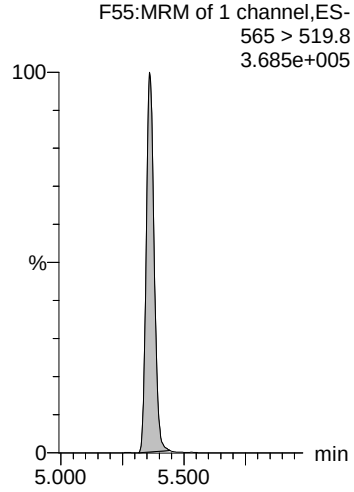

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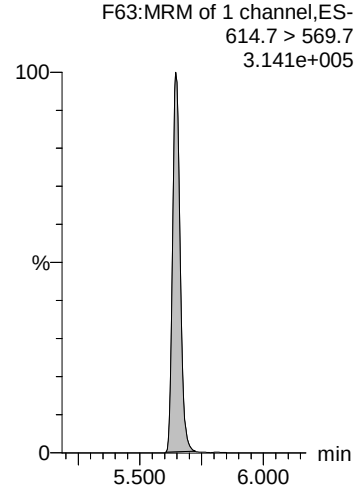

MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-28.qld

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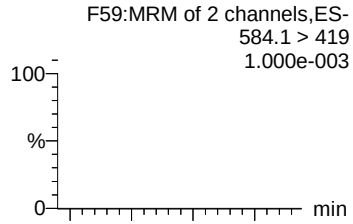
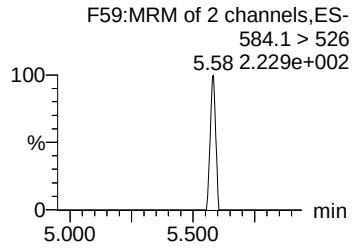
Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

L-EtFOSAA





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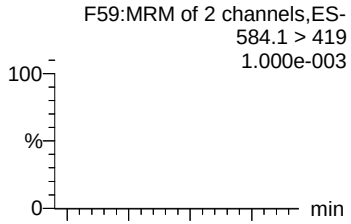
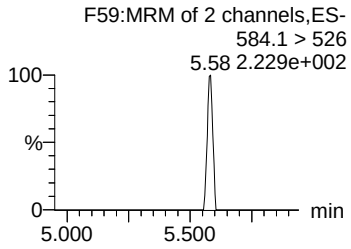
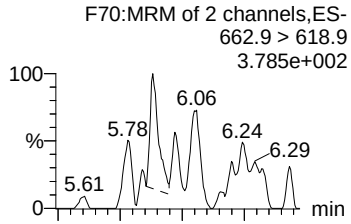
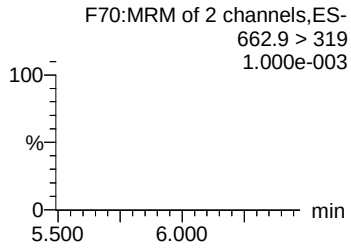


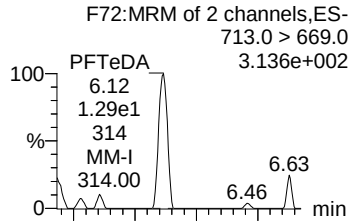


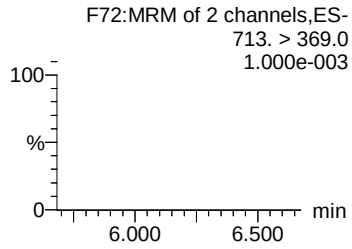
PFTrDA



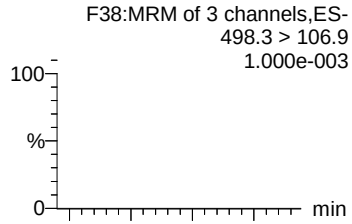


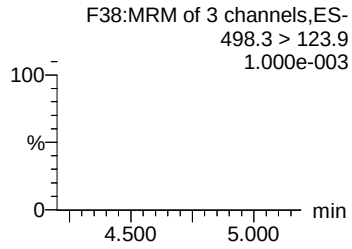
PFTeDA



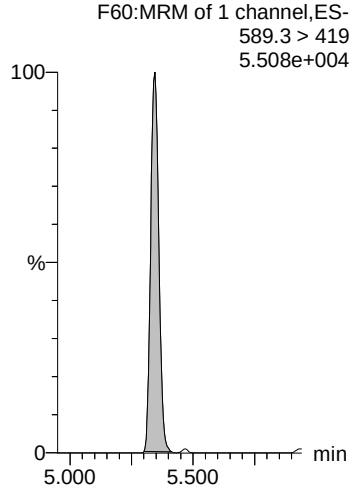


TDCA





d5-N-EtFOSAA



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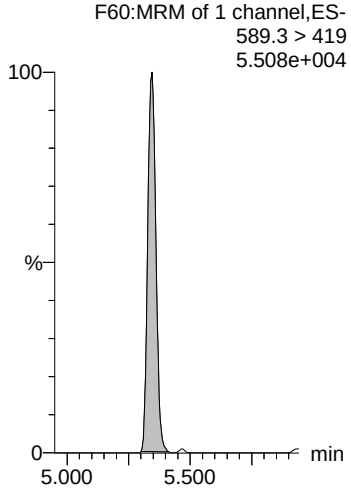
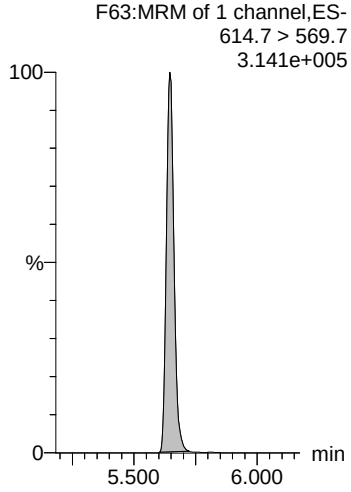
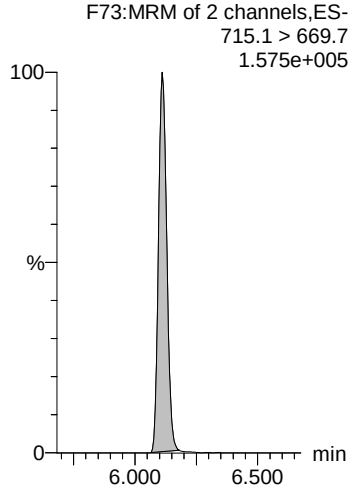


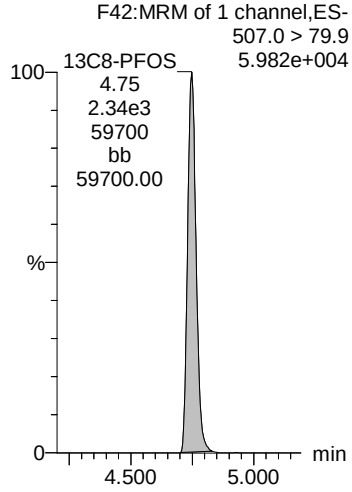
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



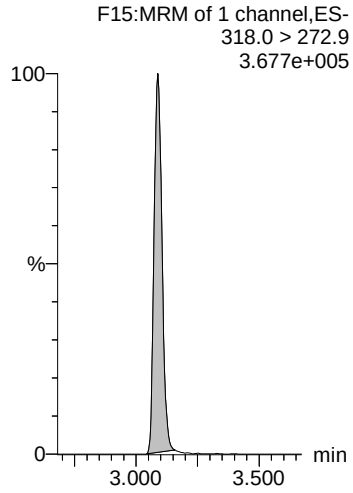
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-28.qld

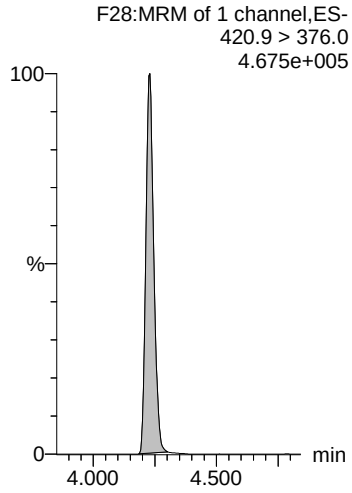
Last Altered: Sunday, July 07, 2019 14:39:11 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:39:40 Pacific Daylight Time

Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

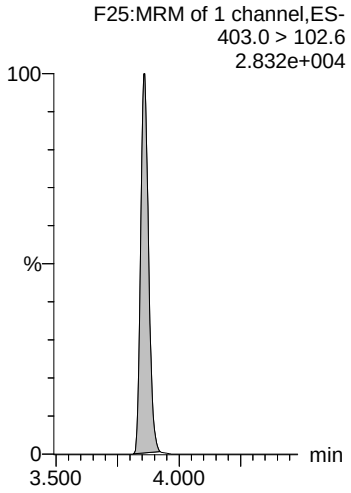
13C5-PFHxA



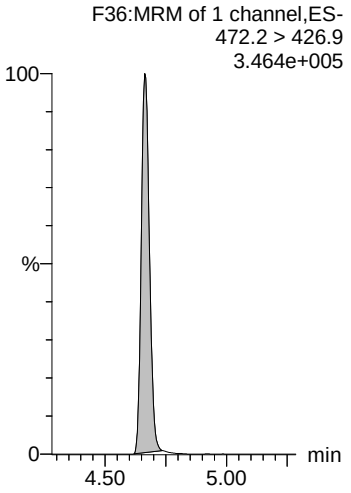
13C8-PFOA



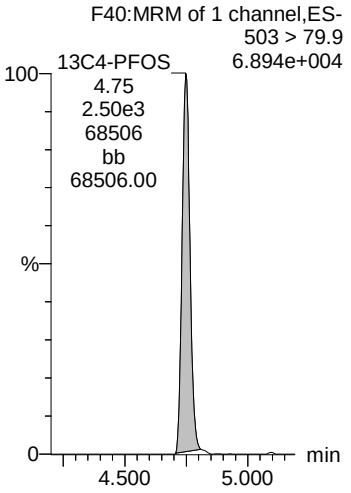
18O2-PFHxS



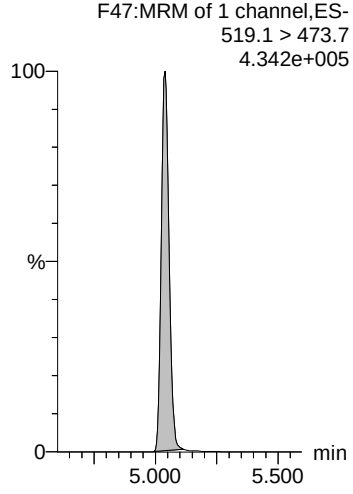
13C9-PFNA



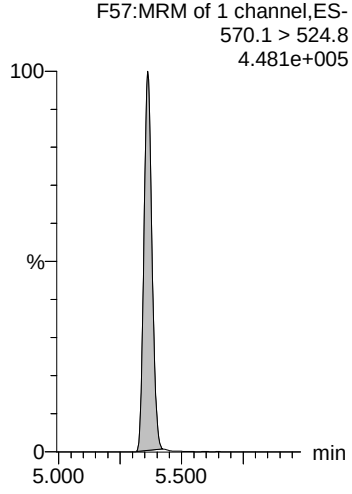
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

	#	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	1.02e2	8.37e2	0.124		2.59	2.60	1.53	5.9711		2.746	NO
2	7	PFHxA	313.0 > 269.0	4.44e3	4.69e3	0.124		3.09	3.09	4.73	43.8982		15.370	NO
3	11	PFHpA	363.0 > 318.9	3.88e2	6.47e3	0.124		3.71	3.71	0.748	5.0236		14.677	NO
4	13	L-PFHxS	398.9 > 79.6	6.47e2	1.76e3	0.124		3.86	3.86	4.60	38.2879		1.960	NO
5	80	Total PFHxS	398.9 > 79.6	6.47e2	1.76e3	0.124		3.83		4.60	38.2879			
6	49	13C3-PFBS	302.0 > 98.8	8.37e2	8.56e2	0.124	1.067	2.59	2.59	12.2	92.1151	91.7		
7	52	13C2-PFHxA	315.0 > 270.0	4.69e3	1.36e4	0.124	1.008	3.09	3.09	4.31	34.3554	85.5		
8	53	13C4-PFHpA	367.2 > 321.8	6.47e3	1.36e4	0.124	0.535	3.71	3.71	5.94	89.3497	88.9		
9	54	13C3-PFHxS	401.8 > 79.9	1.76e3	8.56e2	0.124	2.170	3.86	3.86	25.7	95.1241	94.6		
10	54	13C3-PFHxS	401.8 > 79.9	1.76e3	8.56e2	0.124	2.170	3.86	3.86	25.7	95.1241	94.6		
11	-1													
12	16	L-PFOA	412.8 > 368.9	5.40e3	1.11e4	0.124		4.23	4.23	6.11	34.2681		3.115	NO
13	81	Total PFOA	412.8 > 368.9	5.40e3	1.11e4	0.124		4.21		6.11	34.2681			
14	21	PFNA	463.0 > 418.8	1.34e2	1.04e4	0.124		4.67	4.66	0.161	1.4402		9.147	YES
15	23	L-PFOS	498.9 > 79.9	1.11e3	1.89e3	0.124		4.75	4.75	7.35	57.2600		2.241	NO
16	82	Total PFOS	498.9 > 79.9	1.11e3	1.89e3	0.124		4.74		7.35	57.2600			
17	58	13C2-PFOA	414.9 > 369.7	1.11e4	1.70e4	0.124	0.744	4.23	4.23	8.14	87.9638	87.5		
18	58	13C2-PFOA	414.9 > 369.7	1.11e4	1.70e4	0.124	0.744	4.23	4.23	8.14	87.9638	87.5		
19	56	13C5-PFNA	468.2 > 422.9	1.04e4	1.30e4	0.124	1.014	4.66	4.67	10.0	79.4666	79.1		
20	59	13C8-PFOS	507.0 > 79.9	1.89e3	2.28e3	0.124	0.998	4.75	4.75	10.4	83.6831	83.3		
21	59	13C8-PFOS	507.0 > 79.9	1.89e3	2.28e3	0.124	0.998	4.75	4.75	10.4	83.6831	83.3		
22	-1													
23	26	PFDA	513 > 468.8	1.22e2	8.96e3	0.124		5.04	5.04	0.170	1.0815		273.872	YES
24	29	L-MeFOSAA	570 > 419		1.57e3	0.124		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.57e3	0.124		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.12e4	0.124		5.36						
27	37	PFDoA	612.9 > 569.0		8.85e3	0.124		5.65						
28	60	13C2-PFDA	515.1 > 469.9	8.96e3	1.45e4	0.124	0.836	5.04	5.04	7.73	74.3159	73.9		
29	62	d3-N-MeFOSAA	573.3 > 419	1.57e3	1.56e4	0.124	0.163	5.19	5.19	1.26	61.9987	61.7		
30	62	d3-N-MeFOSAA	573.3 > 419	1.57e3	1.56e4	0.124	0.163	5.19	5.19	1.26	61.9987	61.7		
31	63	13C2-PFUdA	565 > 519.8	1.12e4	1.56e4	0.124	1.053	5.36	5.36	8.95	68.3603	68.0		
32	65	13C2-PFDoA	614.7 > 569.7	8.85e3	1.45e4	0.124	1.094	5.65	5.65	7.63	56.0598	55.8		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		1.85e3	0.124		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.85e3	0.124		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		8.85e3	0.124		5.89						

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Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		2.76e3	0.124		6.11						
38	85	TDCA	498.3>106.9			0.124		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.85e3	1.56e4	0.124	0.179	5.34	5.34	1.48	66.2869	66.0		
40	64	d5-N-EtFOSAA	589.3 > 419	1.85e3	1.56e4	0.124	0.179	5.34	5.34	1.48	66.2869	66.0		
41	65	13C2-PFDoA	614.7 > 569.7	8.85e3	1.45e4	0.124	1.094	5.65	5.65	7.63	56.0598	55.8		
42	67	13C2-PFTeDA	715.1 > 669.7	2.76e3	1.56e4	0.124	0.666	6.11	6.11	2.21	26.6136	26.5		
43	59	13C8-PFOS	507.0 > 79.9	1.89e3	2.28e3	0.124	0.998	4.75	4.75	10.4	83.6831	83.3		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.36e4	1.36e4	0.124	1.000	3.09	3.09	12.5	100.5066	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.70e4	1.70e4	0.124	1.000	4.23	4.23	12.5	100.5066	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	8.56e2	8.56e2	0.124	1.000	3.86	3.86	12.5	100.5066	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.30e4	1.30e4	0.124	1.000	4.66	4.67	12.5	100.5066	100.0		
49	77	13C4-PFOS	503 > 79.9	2.28e3	2.28e3	0.124	1.000	4.75	4.75	12.5	100.5066	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.45e4	1.45e4	0.124	1.000	5.04	5.04	12.5	100.5066	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.56e4	1.56e4	0.124	1.000	5.36	5.36	12.5	100.5066	100.0		

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MM 7/10/2019

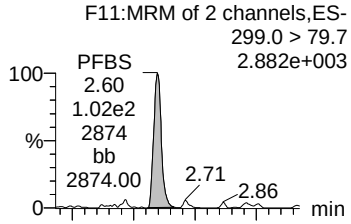
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

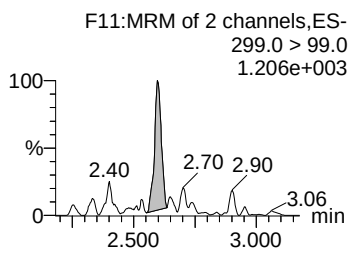
Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

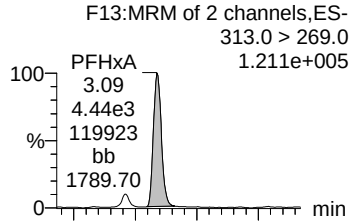
Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

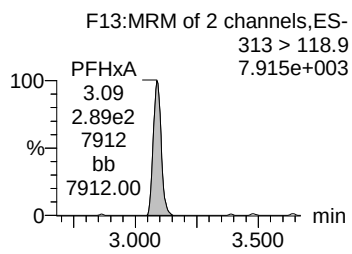
PFBS



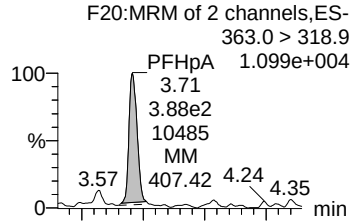


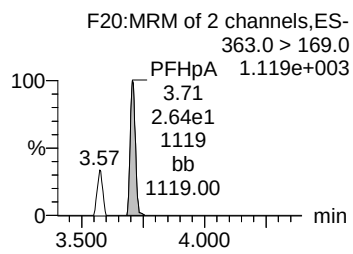
PFHxA



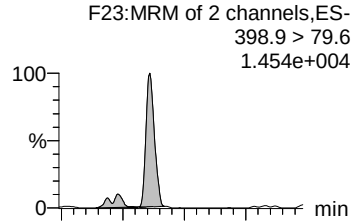


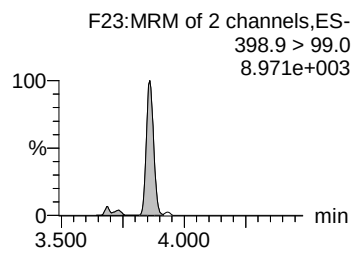
PFHpA



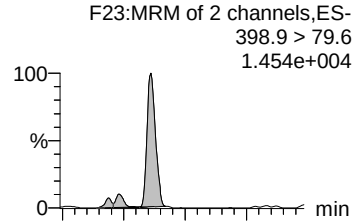


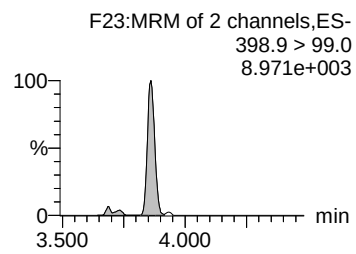
L-PFHxS



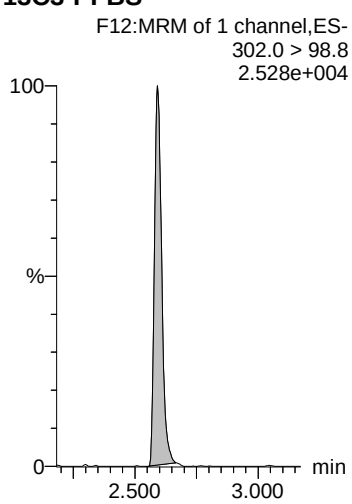


Total PFHxS

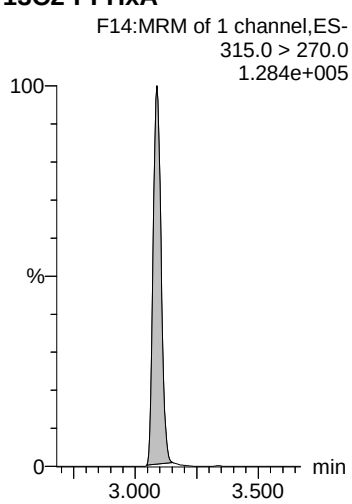




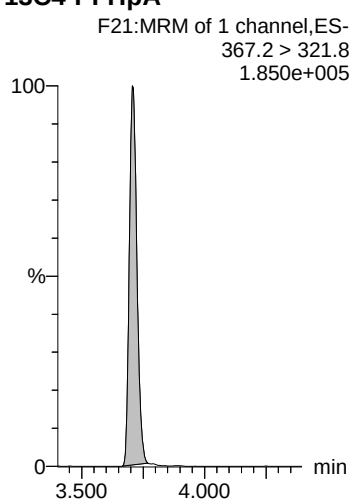
13C3-PFBS



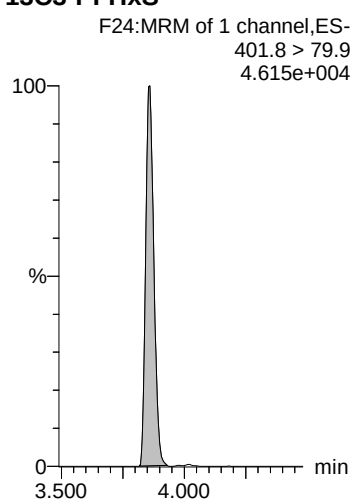
13C2-PFHxA



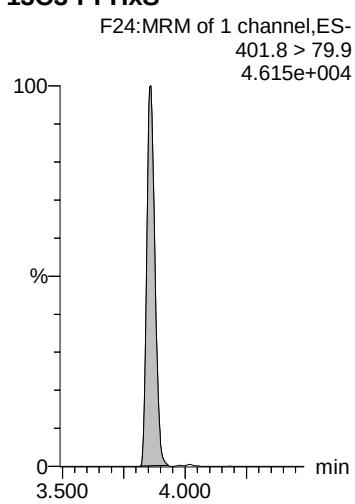
13C4-PFHpA



13C3-PFHxS



13C3-PFHxS



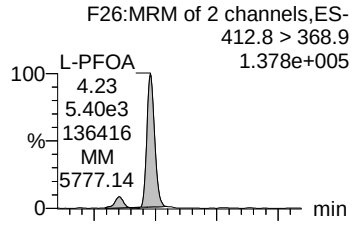
MSF 7/7/2019

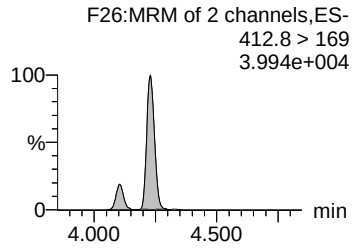
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

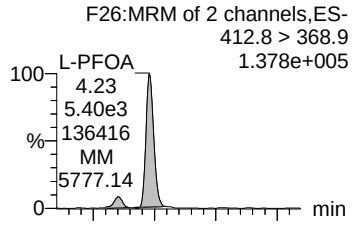
Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

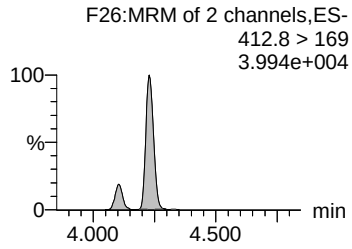
L-PFOA





Total PFOA





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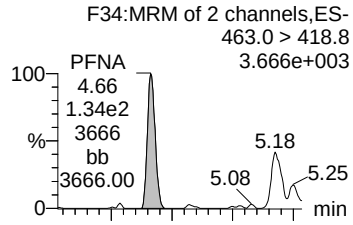
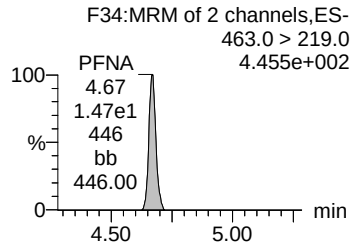
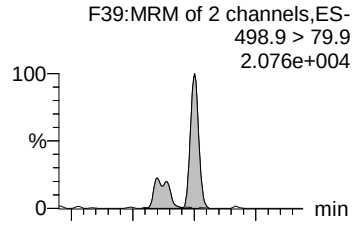
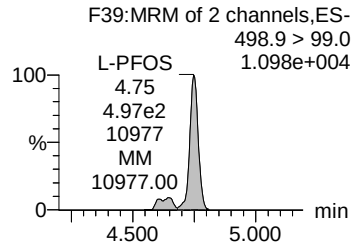


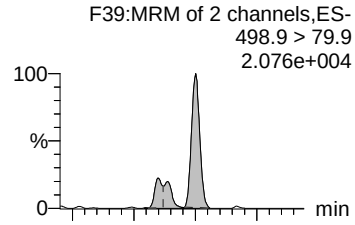


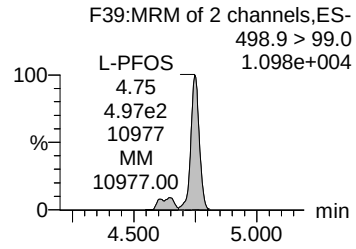
L-PFOS



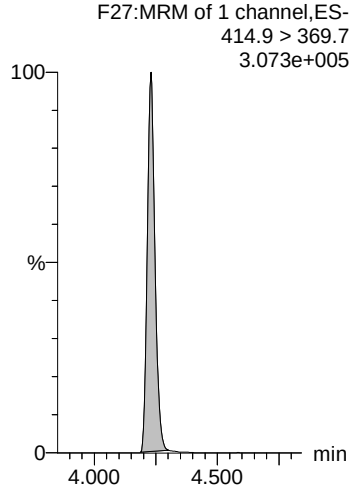


Total PFOS





13C2-PFOA



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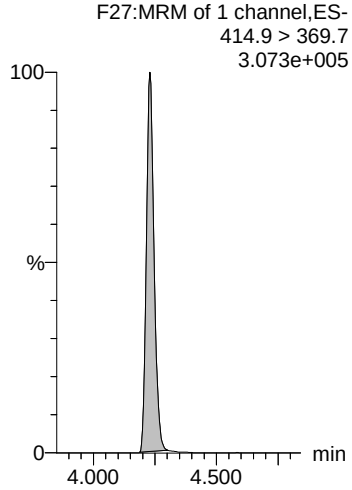
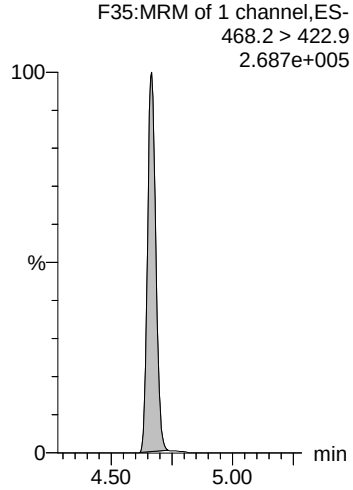
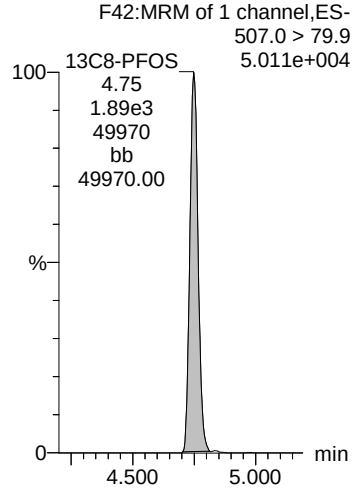


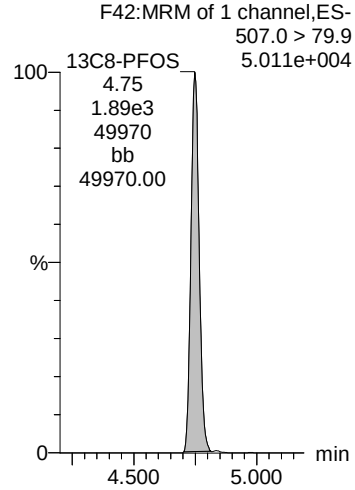
13C5-PFNA



13C8-PFOS



13C8-PFOS



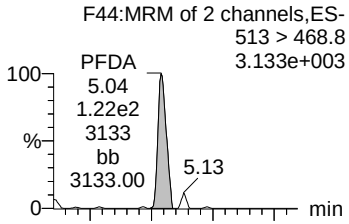
MSF 7/7/2019

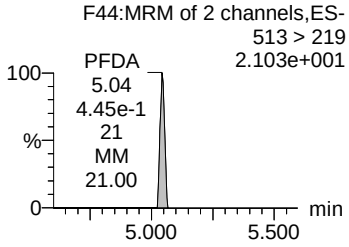
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

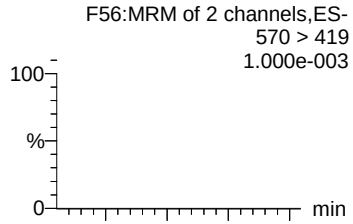
Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

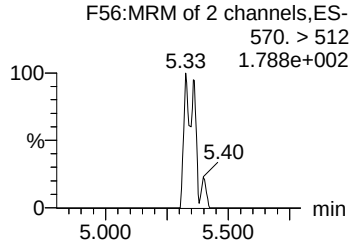
PFDA





L-MeFOSAA





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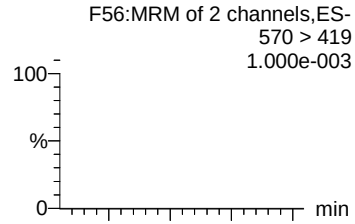
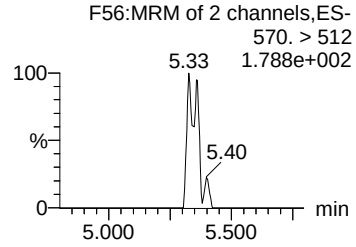
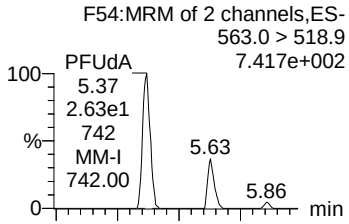
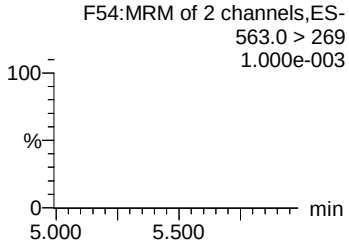


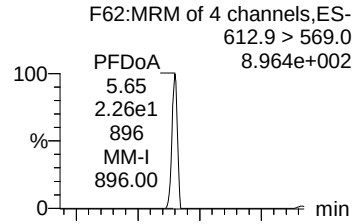


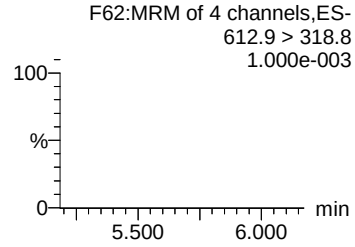
PFUdA



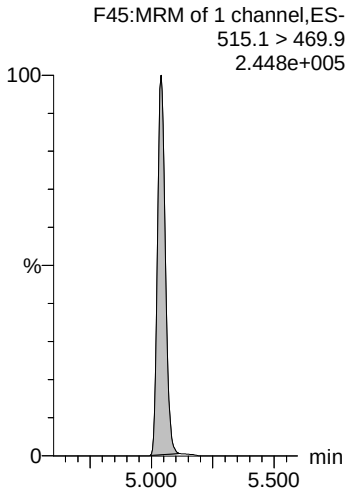


PFDoA

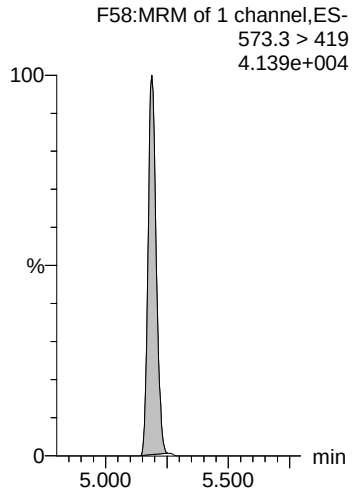




13C2-PFDA



d3-N-MeFOSAA



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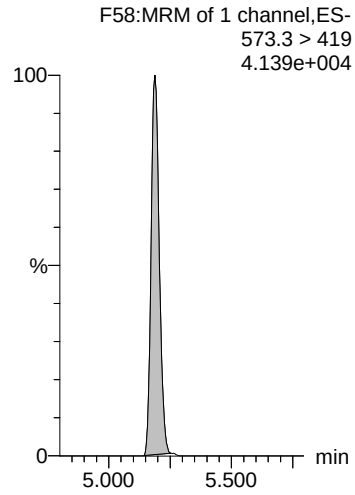
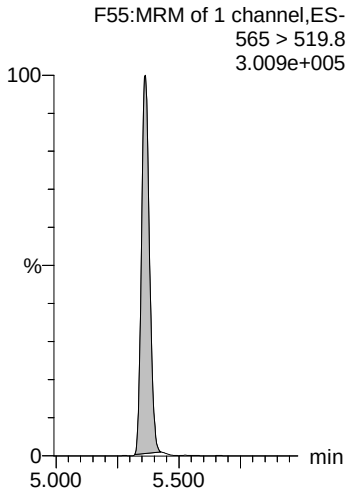


13C2-PFUdA



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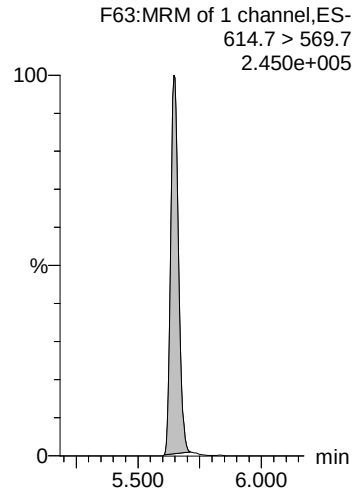


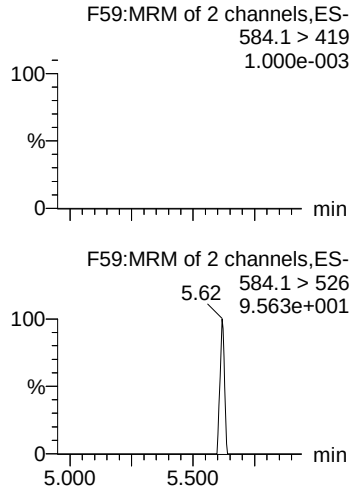
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

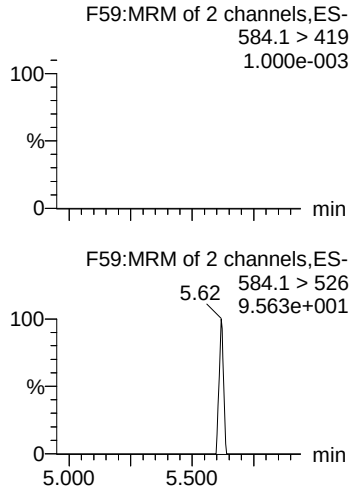
Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

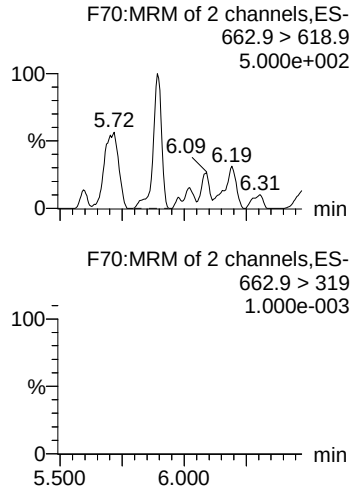
L-EtFOSAA



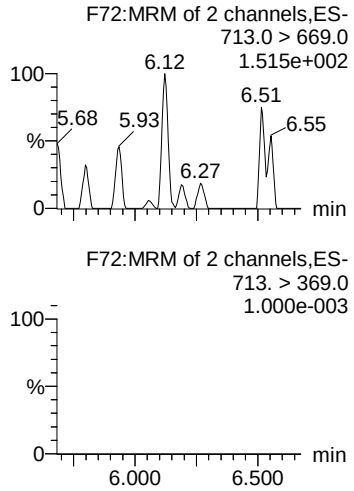
Total N-EtFOSAA



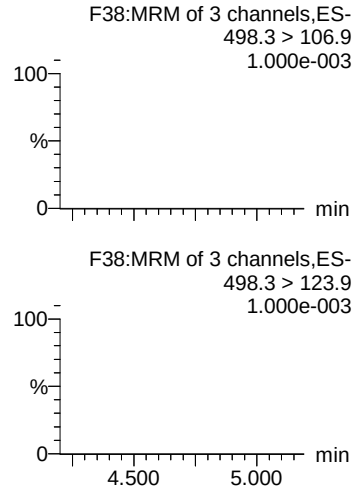
PFTrDA



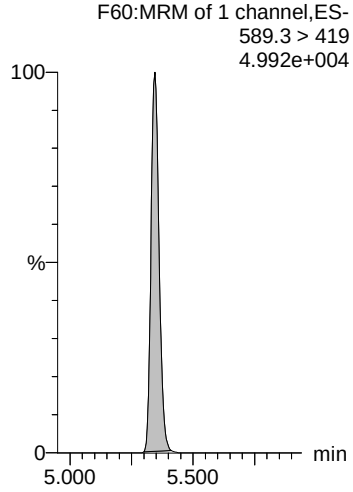
PFTeDA



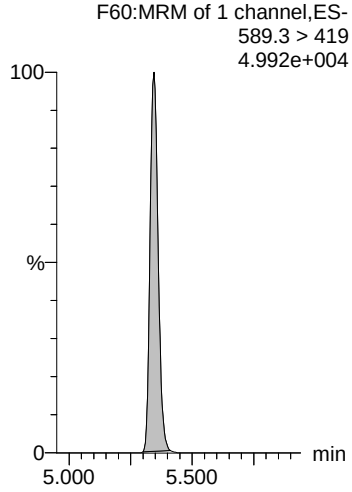
TDCA



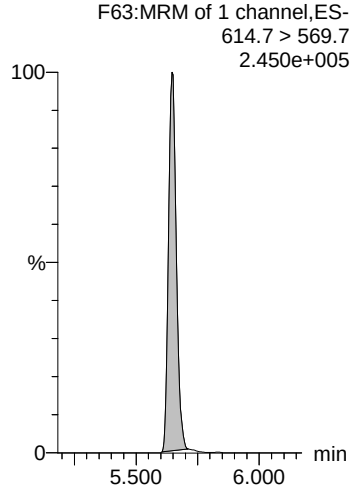
d5-N-EtFOSAA



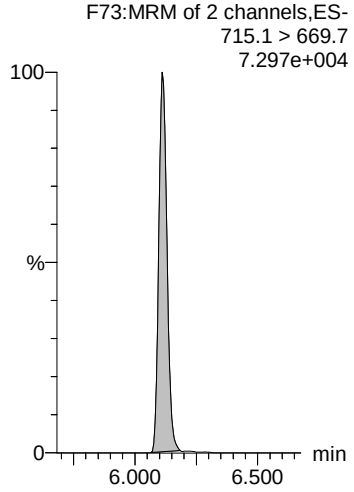
d5-N-EtFOSAA



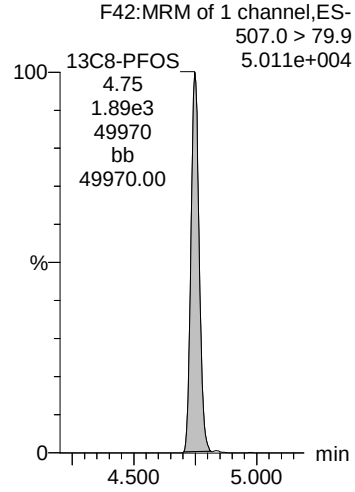
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



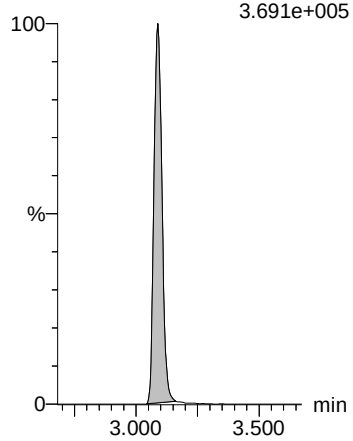
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-29.qld

Last Altered: Sunday, July 07, 2019 14:42:43 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:43:16 Pacific Daylight Time

Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

13C5-PFHxA



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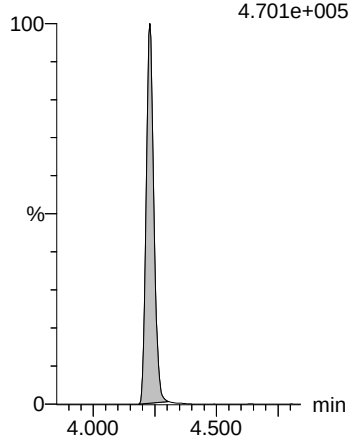
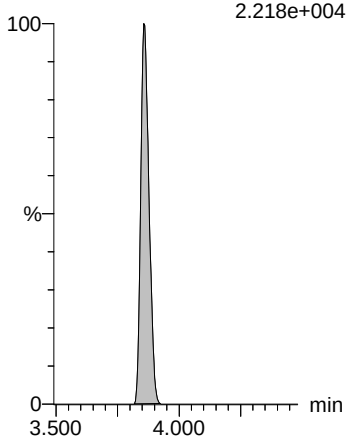
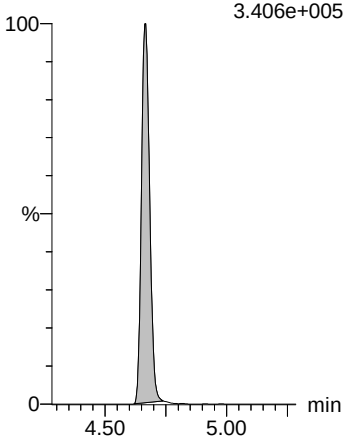


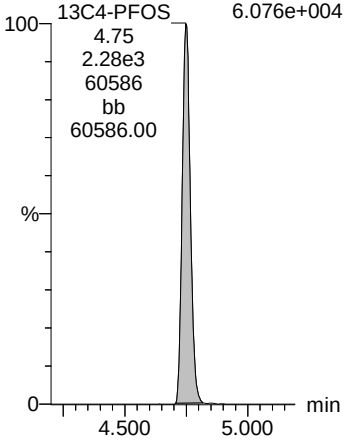
18O2-PFHxS



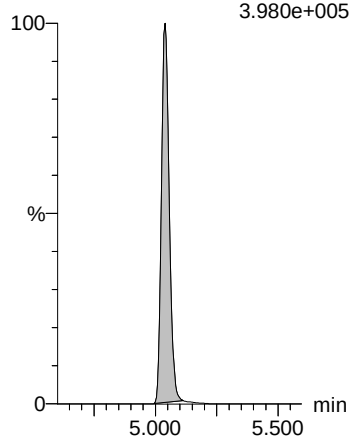
13C9-PFNA



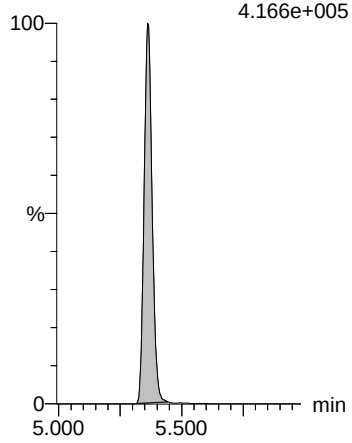
13C4-PFOS



13C6-PFDA



13C7-PFUdA



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Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	5	PFBS	299.0 > 79.7		9.16e2	0.119		2.59						
2	7	PFHxA	313.0 > 269.0		5.28e3	0.119		3.09						
3	11	PFHpA	363.0 > 318.9		6.95e3	0.119		3.71						
4	13	L-PFHxS	398.9 > 79.6	4.05e0	1.80e3	0.119		3.86	3.86	0.0282	0.8391		6.508	YES
5	80	Total PFHxS	398.9 > 79.6	4.05e0	1.80e3	0.119		3.83		0.0282	0.8391			
6	49	13C3-PFBS	302.0 > 98.8	9.16e2	9.41e2	0.119	1.067	2.59	2.59	12.2	95.9102	91.2		
7	52	13C2-PFHxA	315.0 > 270.0	5.28e3	1.57e4	0.119	1.008	3.09	3.09	4.21	35.1547	83.6		
8	53	13C4-PFHpA	367.2 > 321.8	6.95e3	1.57e4	0.119	0.535	3.71	3.71	5.54	87.1848	82.9		
9	54	13C3-PFHxS	401.8 > 79.9	1.80e3	9.41e2	0.119	2.170	3.86	3.86	23.9	92.5451	88.0		
10	54	13C3-PFHxS	401.8 > 79.9	1.80e3	9.41e2	0.119	2.170	3.86	3.86	23.9	92.5451	88.0		
11	-1													
12	16	L-PFOA	412.8 > 368.9		1.20e4	0.119		4.23						
13	81	Total PFOA	412.8 > 368.9	0.00e0	1.20e4	0.119		4.21		0.000				
14	21	PFNA	463.0 > 418.8		1.17e4	0.119		4.66						
15	23	L-PFOS	498.9 > 79.9	1.58e1	2.00e3	0.119		4.75	4.75	0.0986	1.4778		2.582	NO
16	82	Total PFOS	498.9 > 79.9	1.58e1	2.00e3	0.119		4.74		0.0986	1.4778			
17	58	13C2-PFOA	414.9 > 369.7	1.20e4	1.96e4	0.119	0.744	4.23	4.23	7.66	86.6814	82.4		
18	58	13C2-PFOA	414.9 > 369.7	1.20e4	1.96e4	0.119	0.744	4.23	4.23	7.66	86.6814	82.4		
19	56	13C5-PFNA	468.2 > 422.9	1.17e4	1.45e4	0.119	1.014	4.66	4.66	10.1	83.7293	79.6		
20	59	13C8-PFOS	507.0 > 79.9	2.00e3	2.49e3	0.119	0.998	4.75	4.75	10.1	84.7495	80.6		
21	59	13C8-PFOS	507.0 > 79.9	2.00e3	2.49e3	0.119	0.998	4.75	4.75	10.1	84.7495	80.6		
22	-1													
23	26	PFDA	513 > 468.8	2.24e1	9.45e3	0.119		5.04	5.05	0.0296	0.2882		12.564	YES
24	29	L-MeFOSAA	570 > 419		1.70e3	0.119		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.70e3	0.119		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.17e4	0.119		5.36						
27	37	PFDoA	612.9 > 569.0		1.05e4	0.119		5.65						
28	60	13C2-PFDA	515.1 > 469.9	9.45e3	1.67e4	0.119	0.836	5.04	5.04	7.06	71.0513	67.6		
29	62	d3-N-MeFOSAA	573.3 > 419	1.70e3	1.78e4	0.119	0.163	5.19	5.19	1.20	61.8614	58.8		
30	62	d3-N-MeFOSAA	573.3 > 419	1.70e3	1.78e4	0.119	0.163	5.19	5.19	1.20	61.8614	58.8		
31	63	13C2-PFUdA	565 > 519.8	1.17e4	1.78e4	0.119	1.053	5.36	5.36	8.26	66.0285	62.8		
32	65	13C2-PFDoA	614.7 > 569.7	1.05e4	1.67e4	0.119	1.094	5.65	5.65	7.83	60.1656	57.2		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		1.79e3	0.119		5.35						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.79e3	0.119		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		1.05e4	0.119		5.89						

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Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		7.33e3	0.119		6.11						
38	85	TDCA	498.3>106.9			0.119		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.79e3	1.78e4	0.119	0.179	5.34	5.35	1.26	58.9475	56.1		
40	64	d5-N-EtFOSAA	589.3 > 419	1.79e3	1.78e4	0.119	0.179	5.34	5.35	1.26	58.9475	56.1		
41	65	13C2-PFDoA	614.7 > 569.7	1.05e4	1.67e4	0.119	1.094	5.65	5.65	7.83	60.1656	57.2		
42	67	13C2-PFTeDA	715.1 > 669.7	7.33e3	1.78e4	0.119	0.666	6.11	6.11	5.15	65.0421	61.8		
43	59	13C8-PFOS	507.0 > 79.9	2.00e3	2.49e3	0.119	0.998	4.75	4.75	10.1	84.7495	80.6		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.57e4	1.57e4	0.119	1.000	3.09	3.09	12.5	105.1657	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.96e4	1.96e4	0.119	1.000	4.23	4.23	12.5	105.1657	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	9.41e2	9.41e2	0.119	1.000	3.86	3.86	12.5	105.1657	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.45e4	1.45e4	0.119	1.000	4.66	4.66	12.5	105.1657	100.0		
49	77	13C4-PFOS	503 > 79.9	2.49e3	2.49e3	0.119	1.000	4.75	4.75	12.5	105.1657	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.67e4	1.67e4	0.119	1.000	5.04	5.04	12.5	105.1657	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.78e4	1.78e4	0.119	1.000	5.36	5.36	12.5	105.1657	100.0		

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Vista Analytical Laboratory L14

MM 7/10/2019

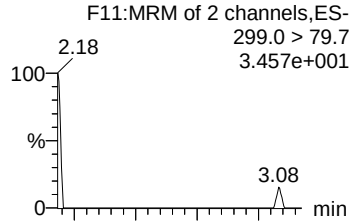
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

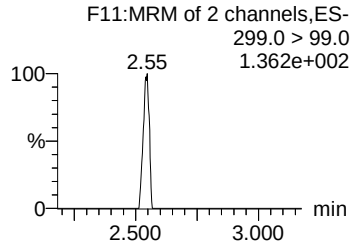
Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

PFBS





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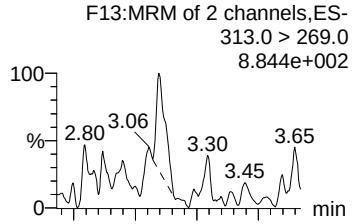

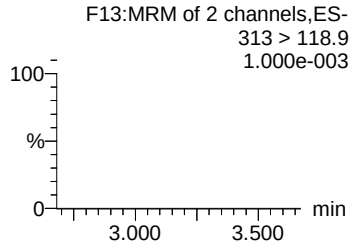

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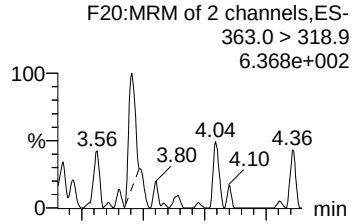

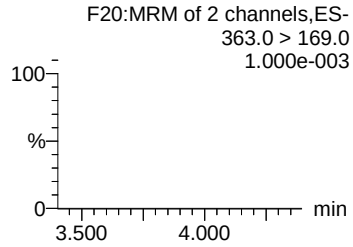

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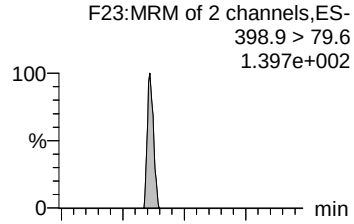

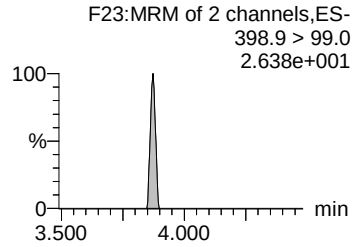

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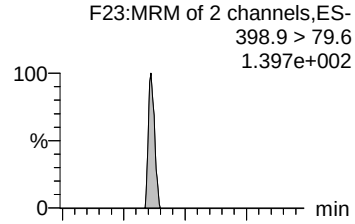

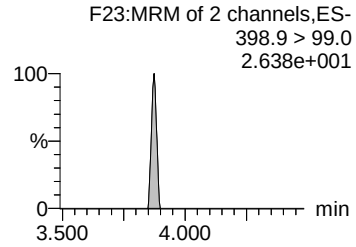

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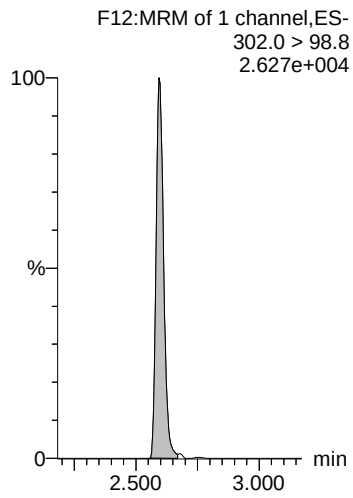

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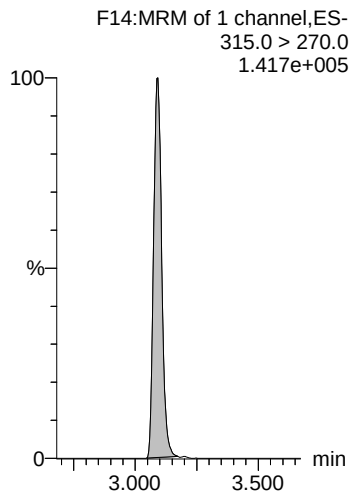

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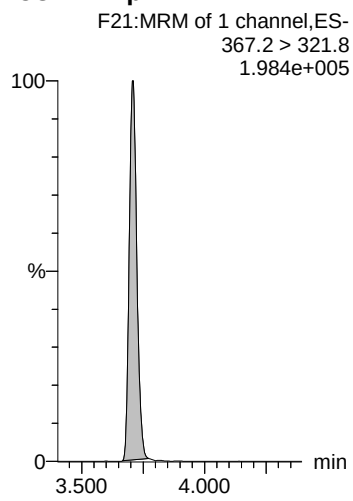

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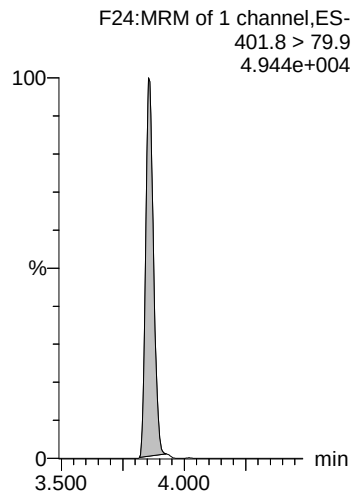

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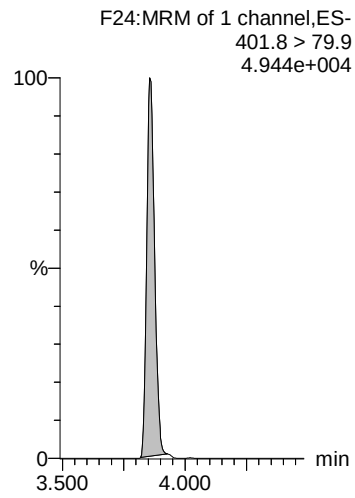


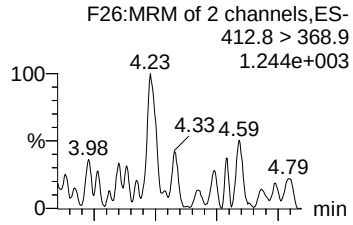
MSF 7/7/2019

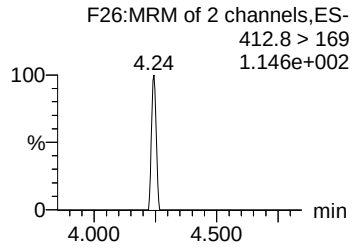
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

L-PFOA





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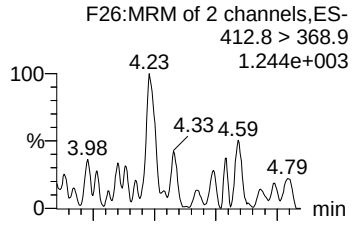

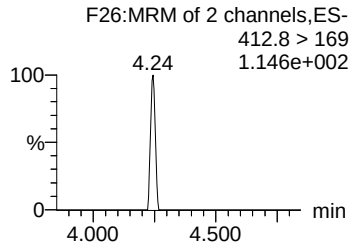

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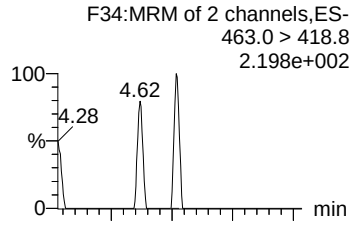
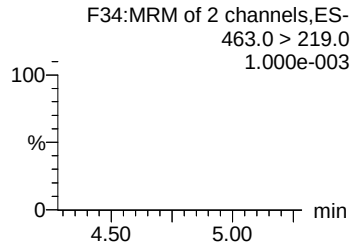
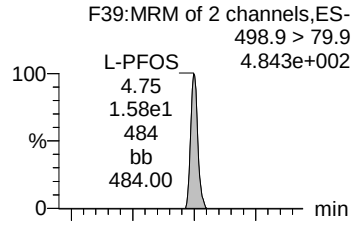
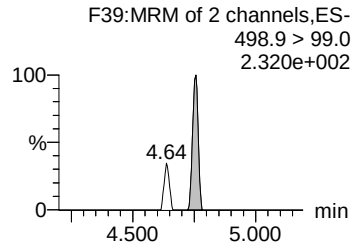


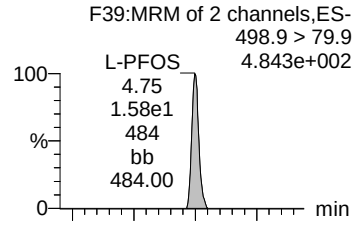


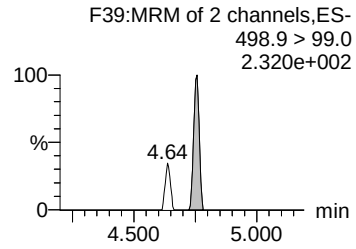
L-PFOS





Total PFOS





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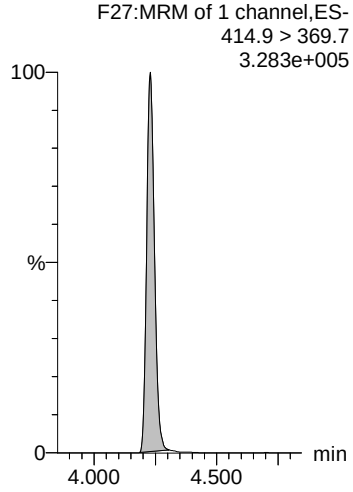

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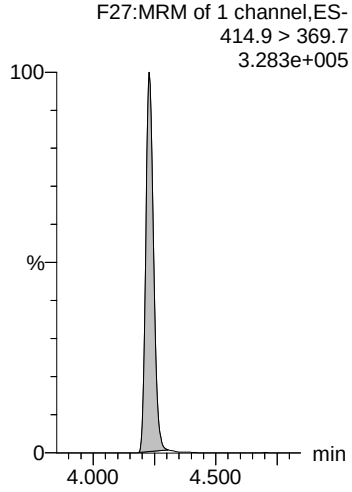

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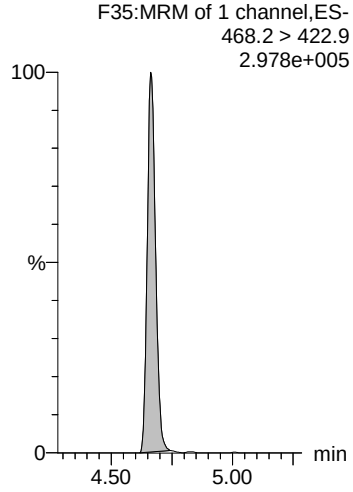

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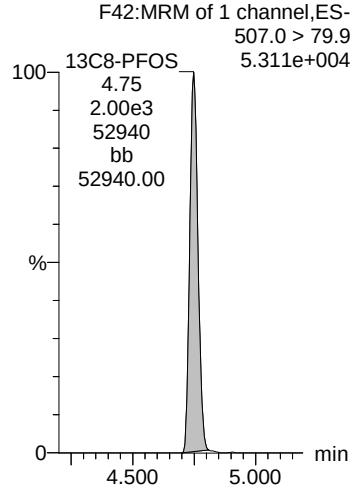

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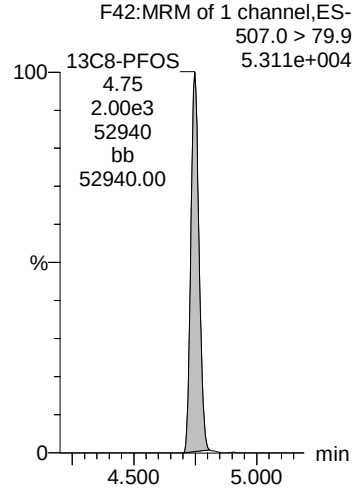

MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

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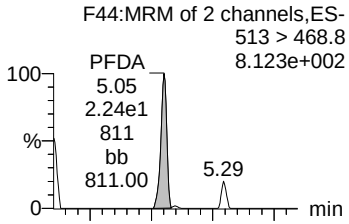
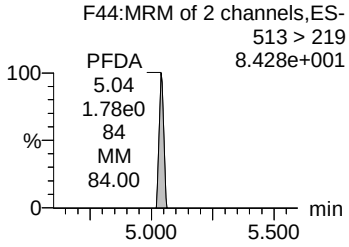
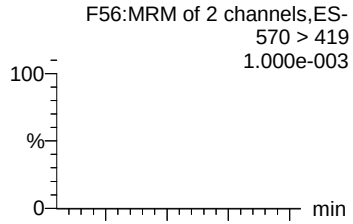
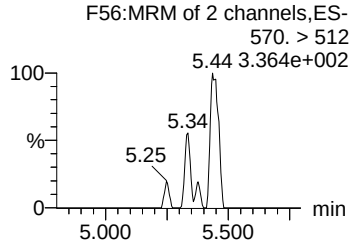




L-MeFOSAA





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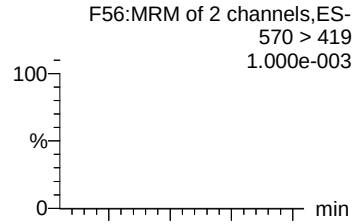

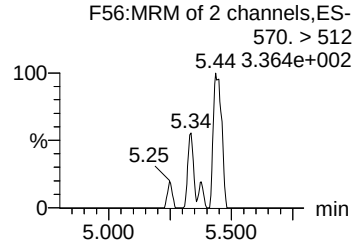

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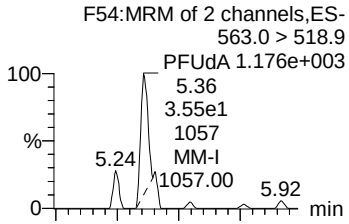
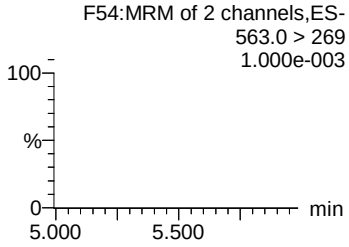
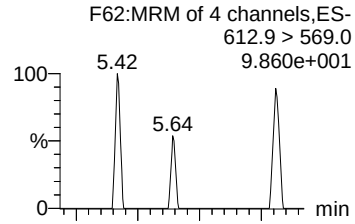
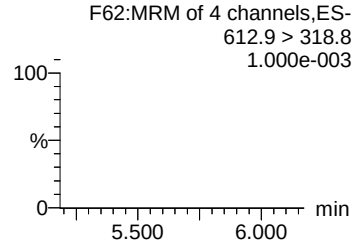


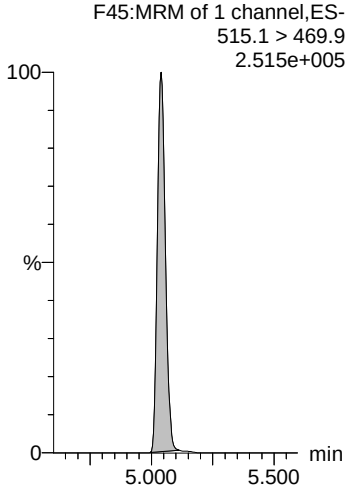


PFDoA

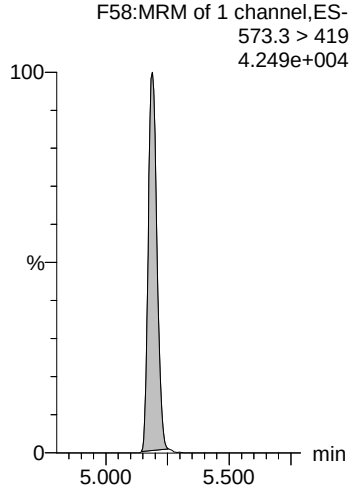




13C2-PFDA



d3-N-MeFOSAA



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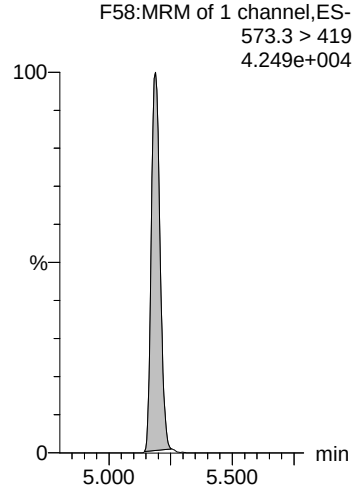
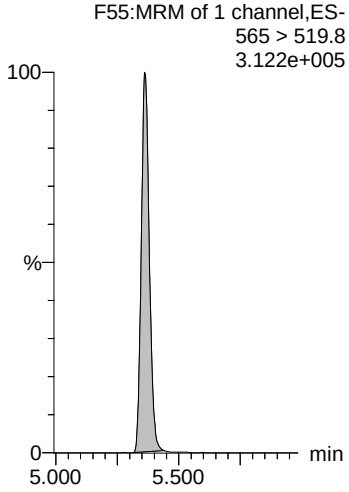


13C2-PFUdA



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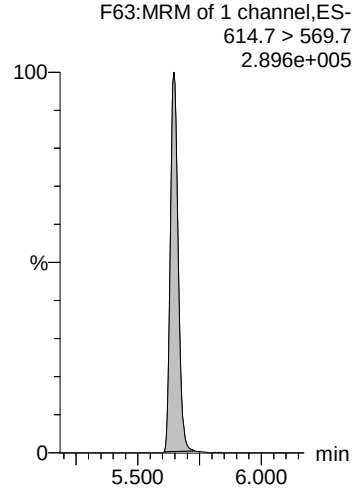


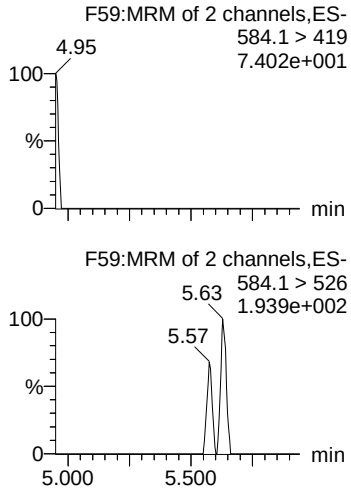
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

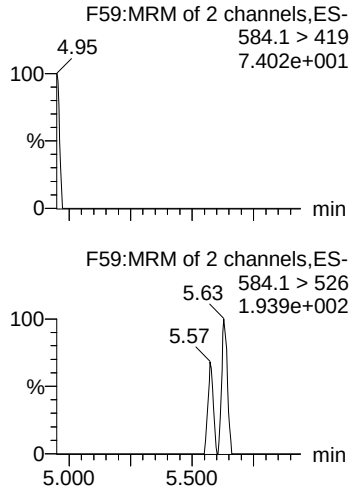
Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

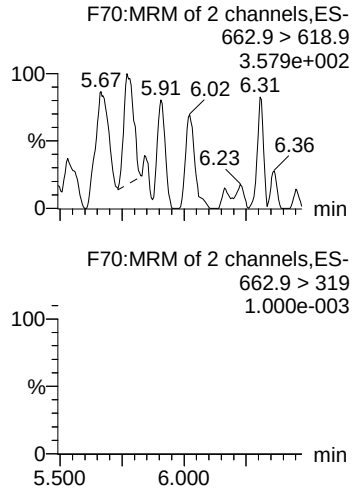
L-EtFOSAA



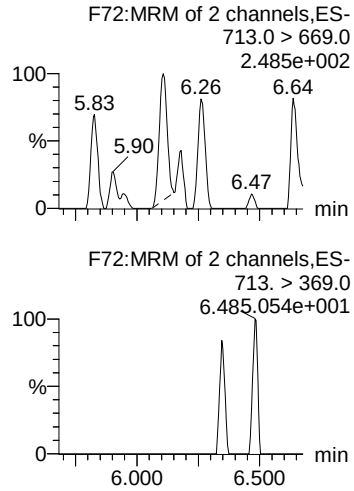
Total N-EtFOSAA



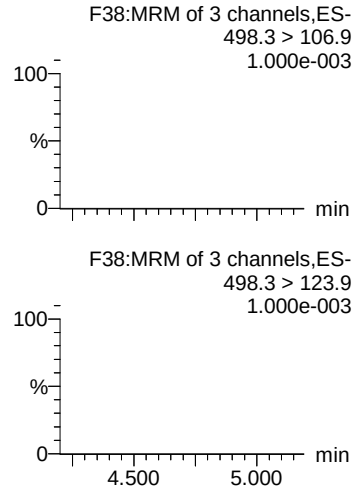
PFTrDA



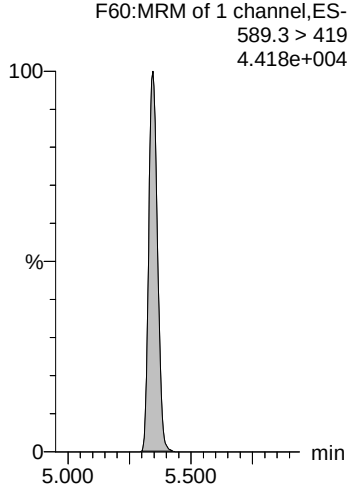
PFTeDA



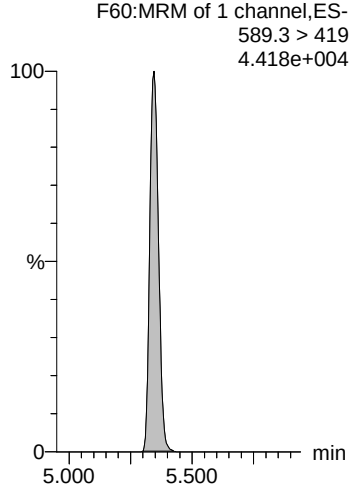
TDCA



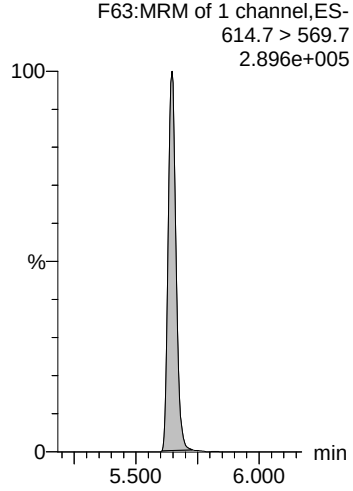
d5-N-EtFOSAA



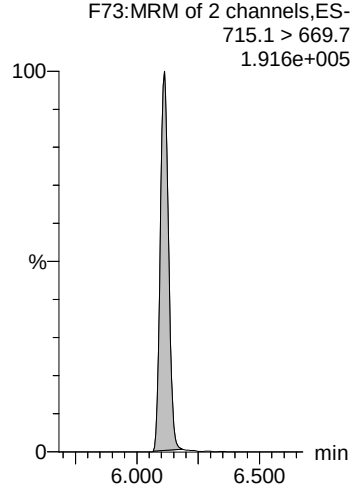
d5-N-EtFOSAA



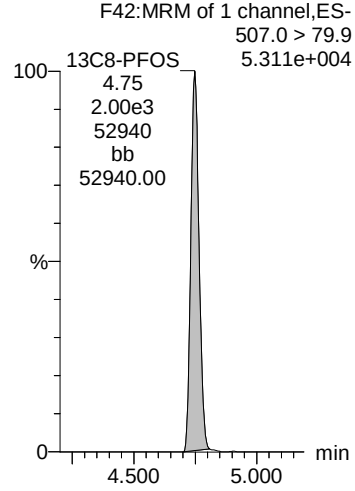
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



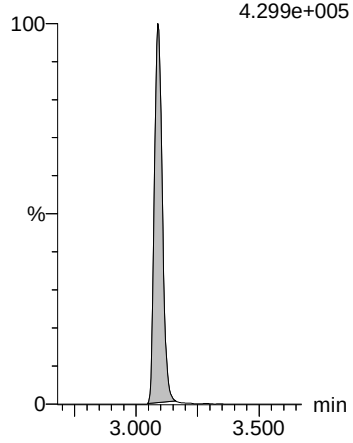
MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-30.qld

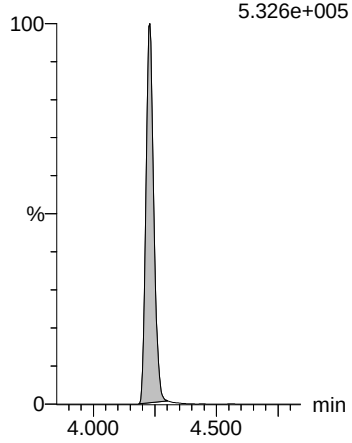
Last Altered: Sunday, July 07, 2019 14:45:21 Pacific Daylight Time
Printed: Sunday, July 07, 2019 14:46:32 Pacific Daylight Time

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

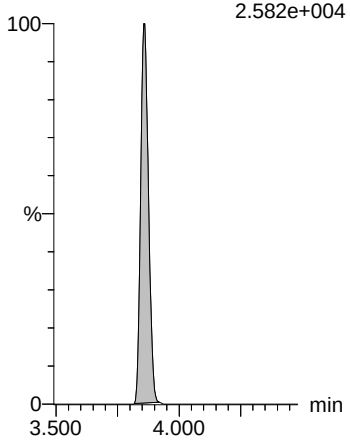
13C5-PFHxA



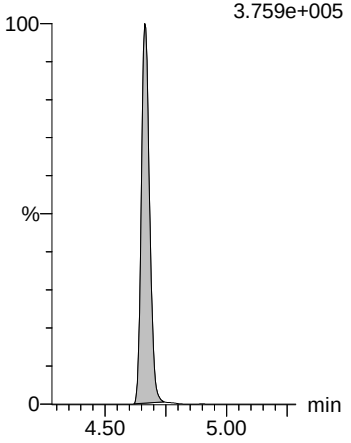
13C8-PFOA



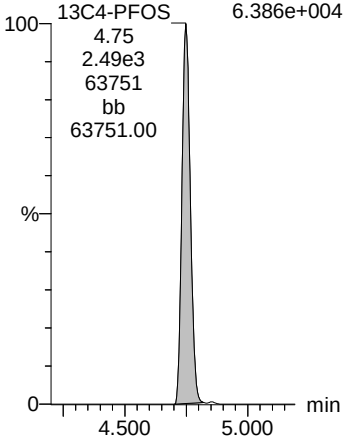
18O2-PFHxS



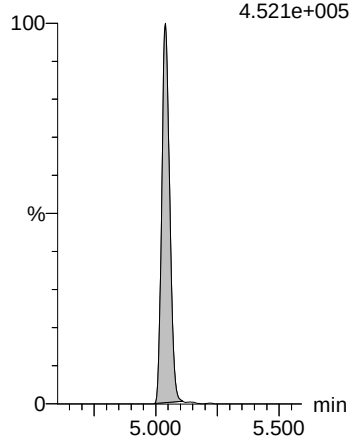
13C9-PFNA



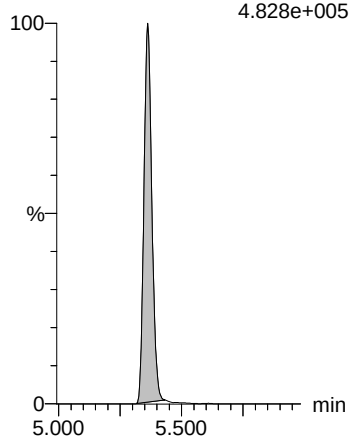
13C4-PFOS



13C6-PFDA



13C7-PFUdA



MSF 7/7/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-31.qld

Last Altered: Friday, July 05, 2019 15:56:13 Pacific Daylight Time
Printed: Friday, July 05, 2019 15:57:00 Pacific Daylight Time

Name: 190702M2_31, Date: 02-Jul-2019, Time: 19:27:58, ID: 1901766-10 FRB-06252019 0.11191, Description: FRB-06252019

	#	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		1.13e3	0.112		2.59						
2	7	PFHxA	313.0 > 269.0		6.38e3	0.112		3.09						
3	11	PFHpA	363.0 > 318.9		8.51e3	0.112		3.71						
4	13	L-PFHxS	398.9 > 79.6	1.02e0	2.16e3	0.112		3.86	3.85	0.00591	0.6885		0.363	YES
5	80	Total PFHxS	398.9 > 79.6	1.02e0	2.16e3	0.112		3.83		0.00591	0.6885			
6	49	13C3-PFBS	302.0 > 98.8	1.13e3	1.06e3	0.112	1.067	2.59	2.59	13.3	111.3463	99.7		
7	52	13C2-PFHxA	315.0 > 270.0	6.38e3	1.71e4	0.112	1.008	3.09	3.09	4.66	41.2855	92.4		
8	53	13C4-PFHpA	367.2 > 321.8	8.51e3	1.71e4	0.112	0.535	3.71	3.71	6.21	103.7911	92.9		
9	54	13C3-PFHxS	401.8 > 79.9	2.16e3	1.06e3	0.112	2.170	3.86	3.86	25.4	104.4829	93.5		
10	54	13C3-PFHxS	401.8 > 79.9	2.16e3	1.06e3	0.112	2.170	3.86	3.86	25.4	104.4829	93.5		
11	-1													
12	16	L-PFOA	412.8 > 368.9		1.46e4	0.112		4.23						
13	81	Total PFOA	412.8 > 368.9	0.00e0	1.46e4	0.112		4.21		0.000				
14	21	PFNA	463.0 > 418.8		1.33e4	0.112		4.66						
15	23	L-PFOS	498.9 > 79.9		2.30e3	0.112		4.75						
16	82	Total PFOS	498.9 > 79.9	0.00e0	2.30e3	0.112		4.74		0.000				
17	58	13C2-PFOA	414.9 > 369.7	1.46e4	2.05e4	0.112	0.744	4.23	4.23	8.90	106.9088	95.7		
18	58	13C2-PFOA	414.9 > 369.7	1.46e4	2.05e4	0.112	0.744	4.23	4.23	8.90	106.9088	95.7		
19	56	13C5-PFNA	468.2 > 422.9	1.33e4	1.58e4	0.112	1.014	4.66	4.66	10.5	92.3243	82.7		
20	59	13C8-PFOS	507.0 > 79.9	2.30e3	2.55e3	0.112	0.998	4.75	4.75	11.3	100.8528	90.3		
21	59	13C8-PFOS	507.0 > 79.9	2.30e3	2.55e3	0.112	0.998	4.75	4.75	11.3	100.8528	90.3		
22	-1													
23	26	PFDA	513 > 468.8		1.00e4	0.112		5.04						
24	29	L-MeFOSAA	570 > 419		1.37e3	0.112		5.19						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.37e3	0.112		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		1.09e4	0.112		5.36						
27	37	PFDoA	612.9 > 569.0		9.99e3	0.112		5.65						
28	60	13C2-PFDA	515.1 > 469.9	1.00e4	1.75e4	0.112	0.836	5.04	5.04	7.16	76.5153	68.5		
29	62	d3-N-MeFOSAA	573.3 > 419	1.37e3	1.92e4	0.112	0.163	5.19	5.19	0.891	48.8804	43.8		
30	62	d3-N-MeFOSAA	573.3 > 419	1.37e3	1.92e4	0.112	0.163	5.19	5.19	0.891	48.8804	43.8		
31	63	13C2-PFUdA	565 > 519.8	1.09e4	1.92e4	0.112	1.053	5.36	5.36	7.09	60.1706	53.9		
32	65	13C2-PFDoA	614.7 > 569.7	9.99e3	1.75e4	0.112	1.094	5.65	5.65	7.14	58.2566	52.2		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		1.82e3	0.112		5.34						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.82e3	0.112		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		9.99e3	0.112		5.89						

GM 7/5/2019

Vista Analytical Laboratory L14

MM 7/10/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-31.qld

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Printed: Friday, July 05, 2019 15:57:00 Pacific Daylight Time

Name: 190702M2_31, Date: 02-Jul-2019, Time: 19:27:58, ID: 1901766-10 FRB-06252019 0.11191, Description: FRB-06252019

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		8.63e3	0.112		6.11						
38	85	TDCA	498.3>106.9			0.112		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.82e3	1.92e4	0.112	0.179	5.34	5.34	1.18	58.7637	52.6		
40	64	d5-N-EtFOSAA	589.3 > 419	1.82e3	1.92e4	0.112	0.179	5.34	5.34	1.18	58.7637	52.6		
41	65	13C2-PFDoA	614.7 > 569.7	9.99e3	1.75e4	0.112	1.094	5.65	5.65	7.14	58.2566	52.2		
42	67	13C2-PFTeDA	715.1 > 669.7	8.63e3	1.92e4	0.112	0.666	6.11	6.11	5.61	75.2538	67.4		
43	59	13C8-PFOS	507.0 > 79.9	2.30e3	2.55e3	0.112	0.998	4.75	4.75	11.3	100.8528	90.3		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.71e4	1.71e4	0.112	1.000	3.09	3.09	12.5	111.6969	100.0		
46	75	13C8-PFOA	420.9 > 376.0	2.05e4	2.05e4	0.112	1.000	4.23	4.23	12.5	111.6969	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	1.06e3	1.06e3	0.112	1.000	3.86	3.86	12.5	111.6969	100.0		
48	76	13C9-PFNA	472.2 > 426.9	1.58e4	1.58e4	0.112	1.000	4.66	4.66	12.5	111.6969	100.0		
49	77	13C4-PFOS	503 > 79.9	2.55e3	2.55e3	0.112	1.000	4.75	4.75	12.5	111.6969	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.75e4	1.75e4	0.112	1.000	5.04	5.04	12.5	111.6969	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.92e4	1.92e4	0.112	1.000	5.36	5.36	12.5	111.6969	100.0		

GM 7/5/2019

Vista Analytical Laboratory L14

MM 7/10/2019

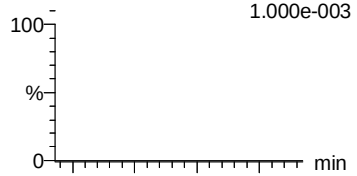
Dataset: Z:\Projects\PFAS.PRO\Results\190702M2\190702M2-31.qld

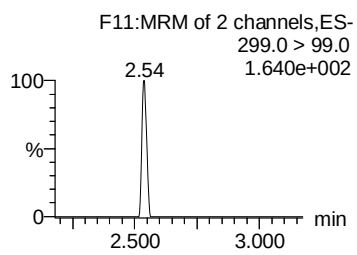
Last Altered: Friday, July 05, 2019 15:56:13 Pacific Daylight Time
Printed: Friday, July 05, 2019 15:57:00 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_31, Date: 02-Jul-2019, Time: 19:27:58, ID: 1901766-10 FRB-06252019 0.11191, Description: FRB-06252019

PFBS





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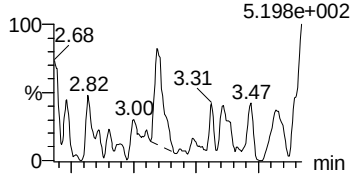

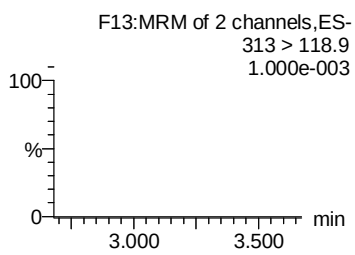

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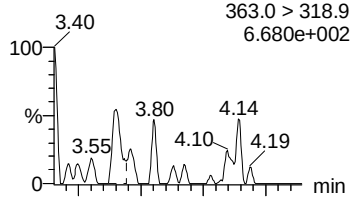
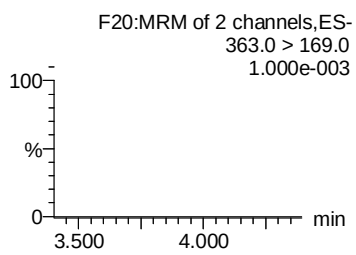
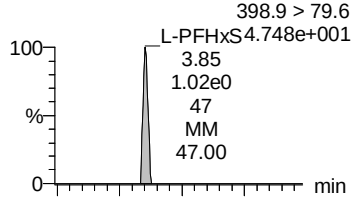
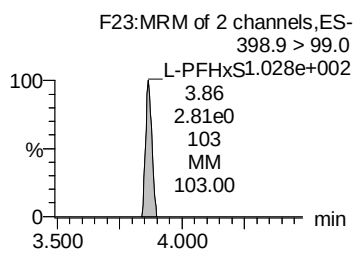


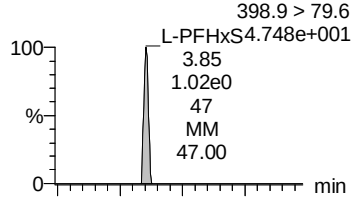


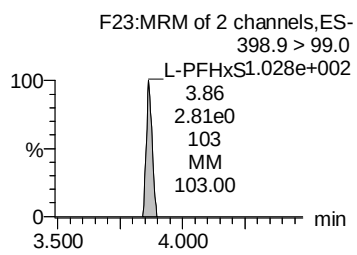
L-PFHxS



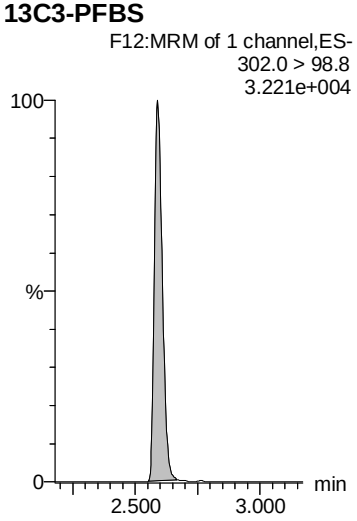


Total PFHxS





13C3-PFBS



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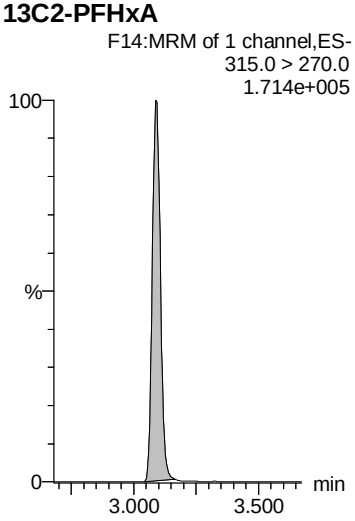

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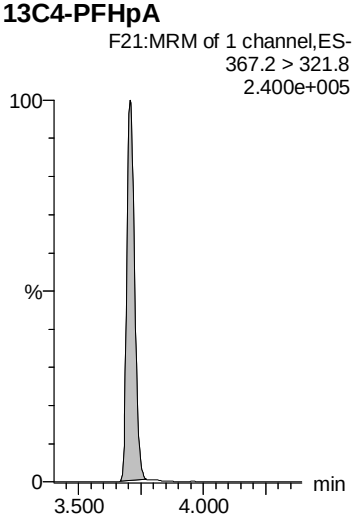

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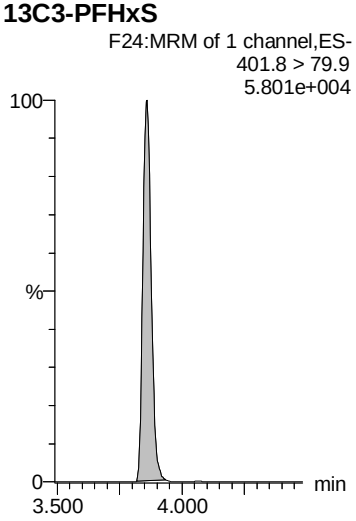

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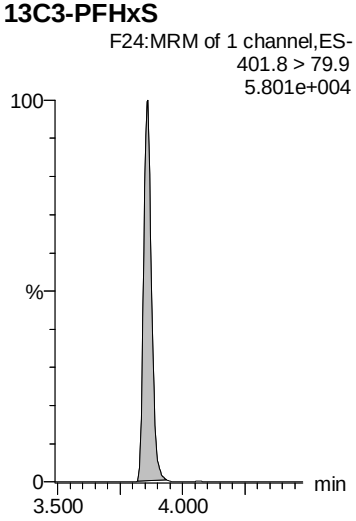

GM 7/5/2019

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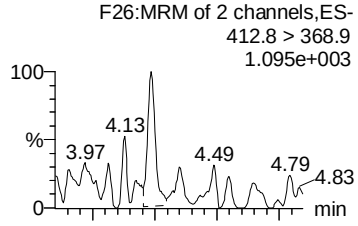

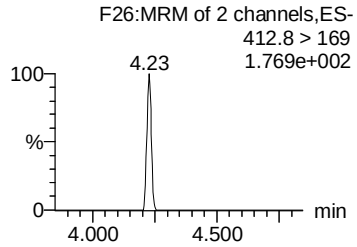

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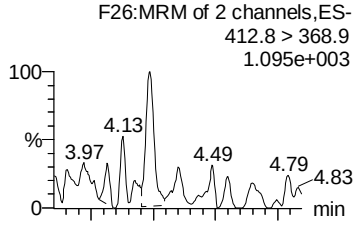

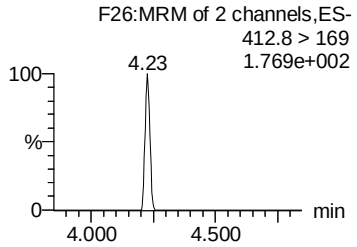

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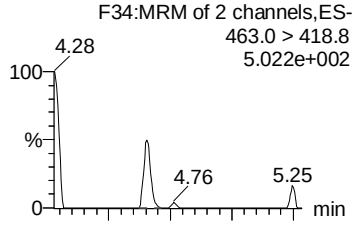

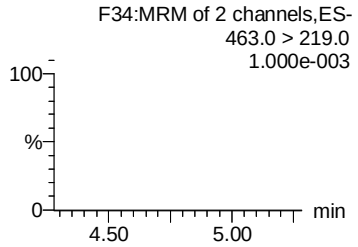

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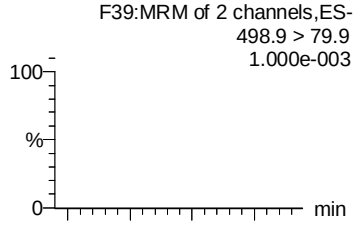

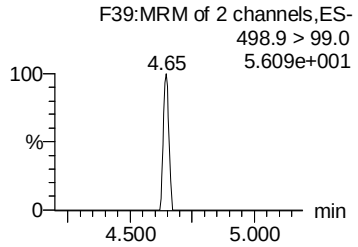

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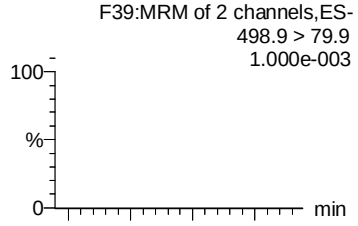
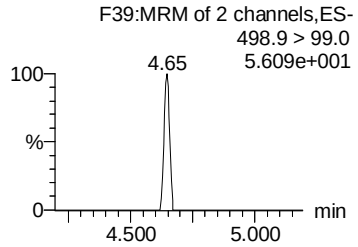
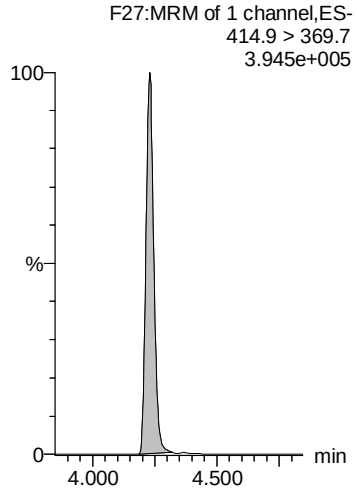




13C2-PFOA



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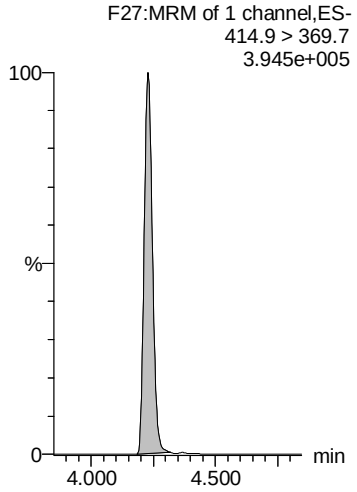

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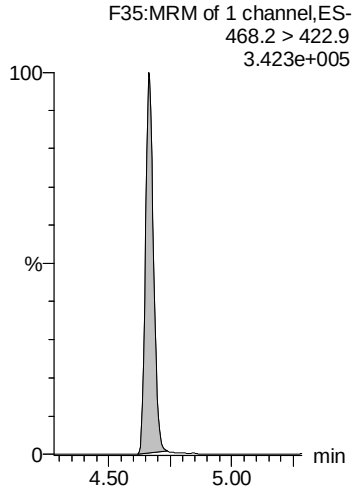

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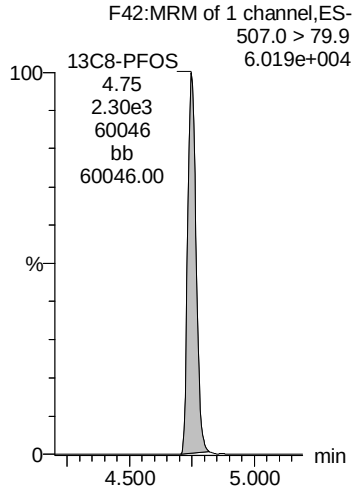

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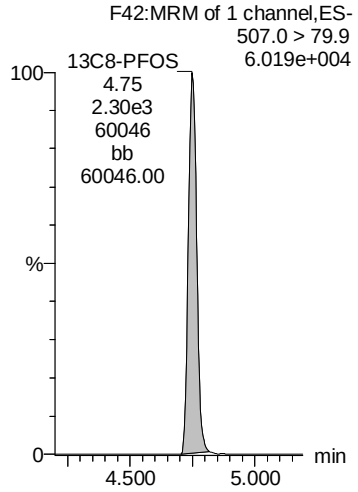

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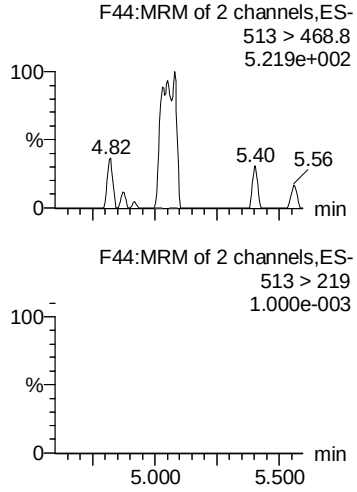
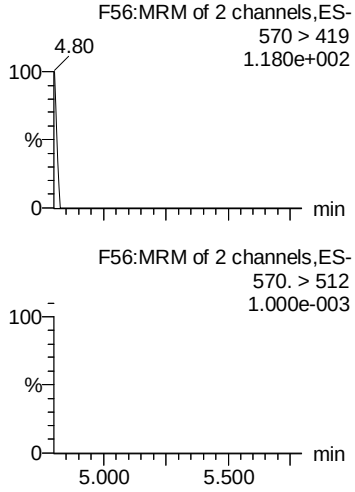
Name: 190702M2_31, Date: 02-Jul-2019, Time: 19:27:58, ID: 1901766-10 FRB-06252019 0.11191, Description: FRB-06252019

PFDA



L-MeFOSAA



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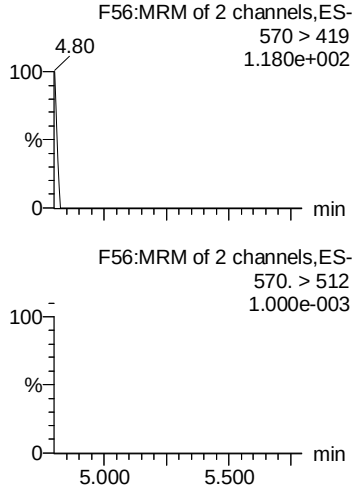

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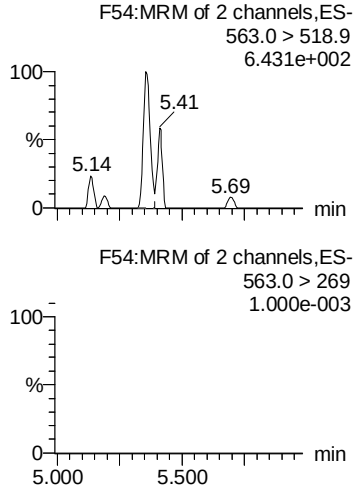

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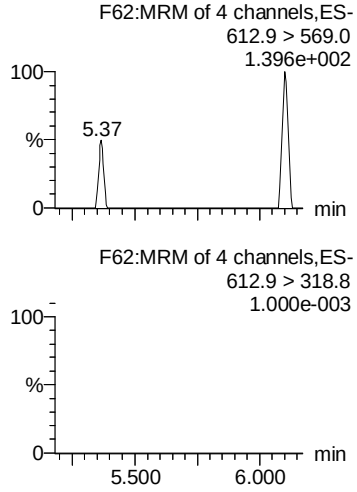

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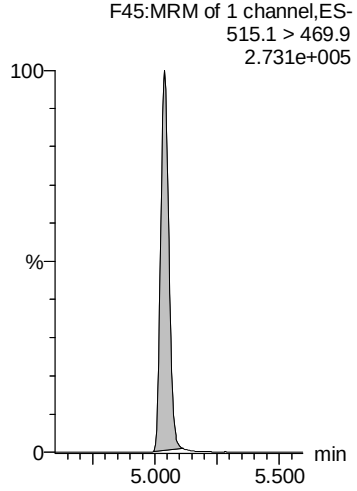

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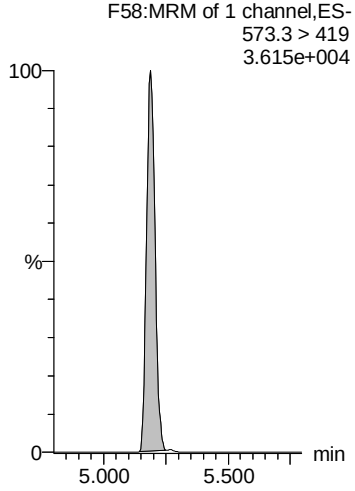

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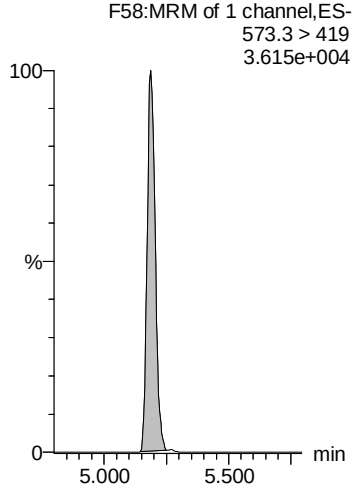

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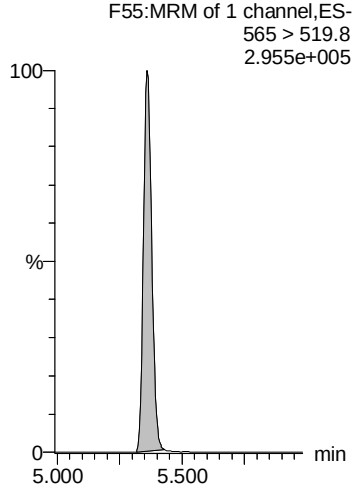

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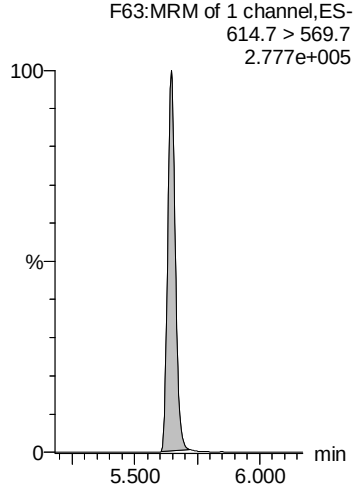

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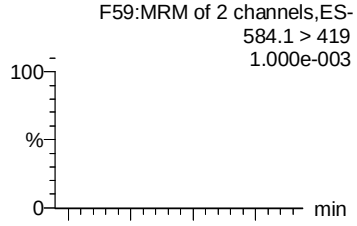
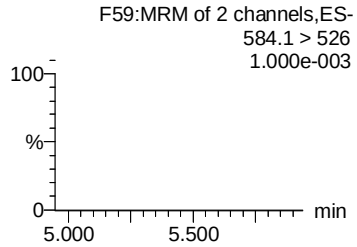
L-EtFOSAA





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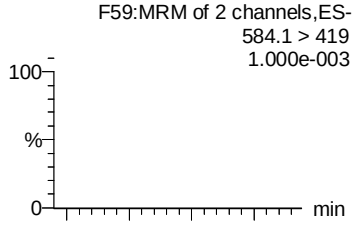

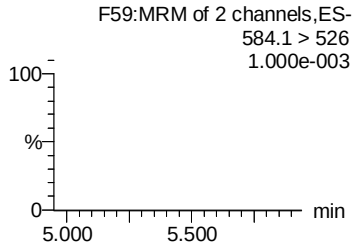

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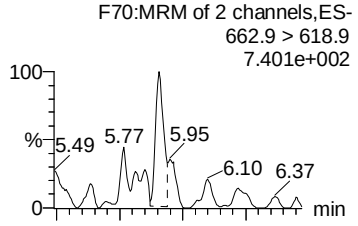

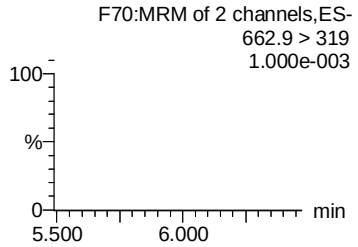

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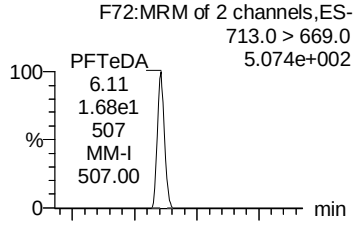

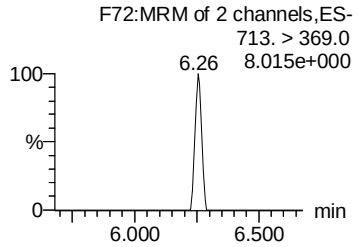

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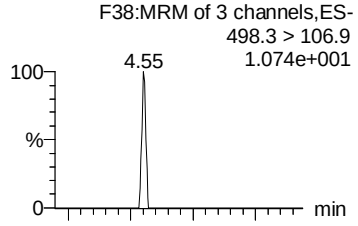

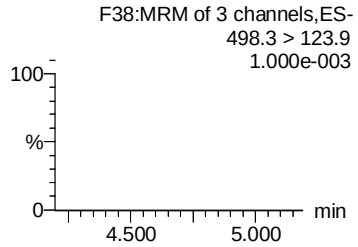

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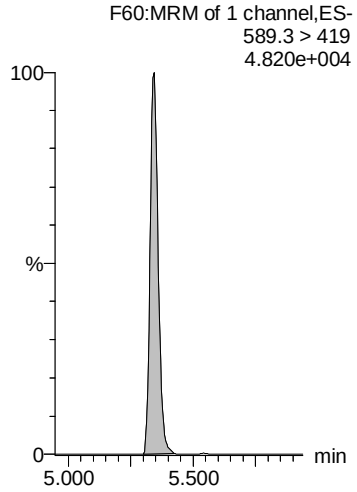

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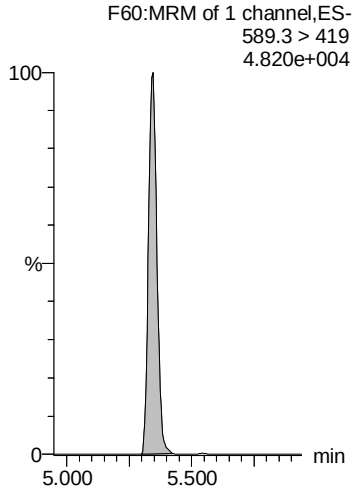

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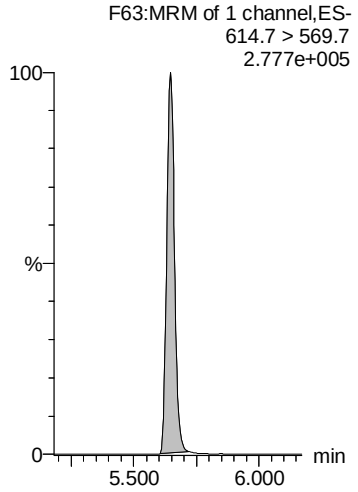

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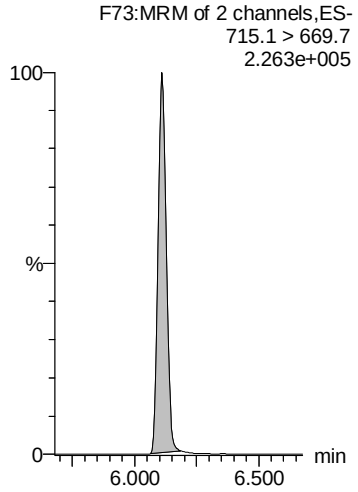

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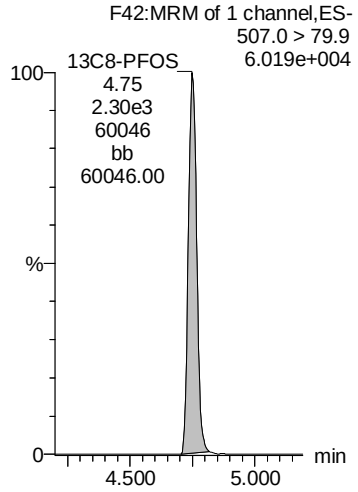

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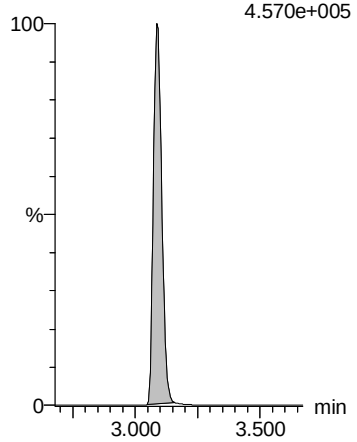

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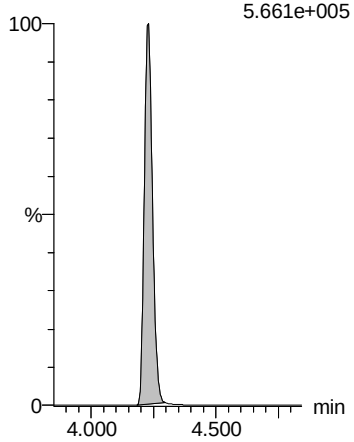

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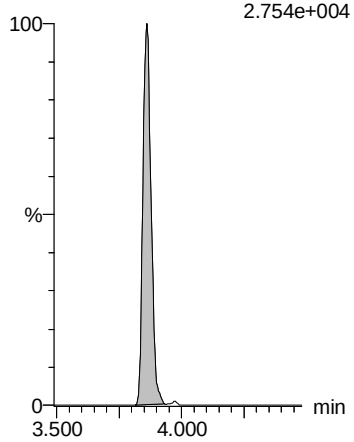

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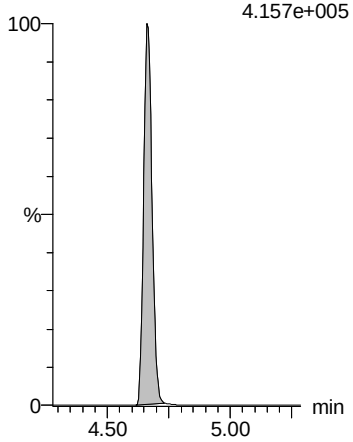

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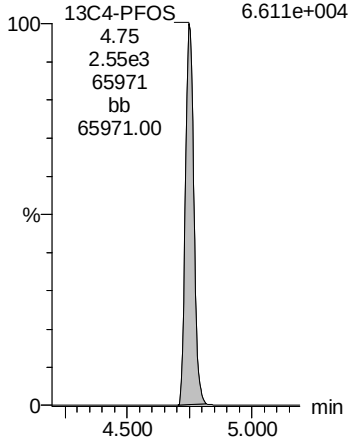
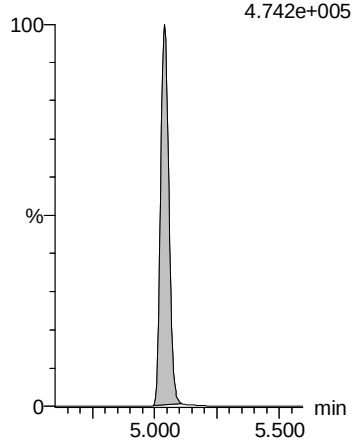
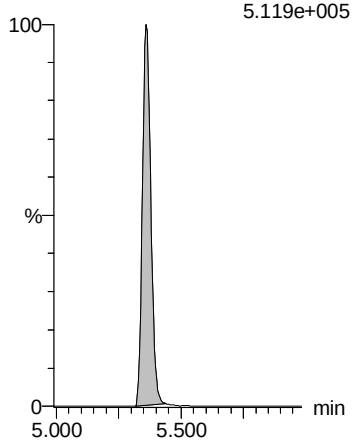


13C6-PFDA



13C7-PFUdA



SAMPLE DATA – VAL - PFAS

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		3.57e3	1.00		1.18						
2	4	PFPeA	263.1 > 218.9		4.44e3	1.00		2.16						
3	5	PFBS	299.0 > 79.7		6.54e2	1.00		2.47						
4	6	4:2 FTS	327.0 > 306.9		1.25e3	1.00		2.89						
5	7	PFHxA	313.0 > 269.0		3.14e3	1.00		2.97						
6	47	13C3-PFBA	216.1 > 171.8	3.57e3	5.88e3	1.00	0.650	1.18	1.18	7.59	11.6752	93.4		
7	48	13C3-PFPeA	266.0 > 221.8	4.44e3	1.06e4	1.00	0.408	2.17	2.16	5.22	12.8132	102.5		
8	49	13C3-PFBS	302.0 > 98.8	6.54e2	5.98e2	1.00	1.035	2.47	2.47	13.7	13.2076	105.7		
9	51	13C2-4:2 FTS	329.0 >79.9	1.25e3	5.98e2	1.00	2.239	2.89	2.89	26.1	11.6568	93.3		
10	52	13C2-PFHxA	315.0 > 270.0	3.14e3	1.06e4	1.00	0.792	2.97	2.97	3.69	4.6575	93.2		
11	-1													
12	8	PFPeS	349.1>80.1		6.54e2	1.00		3.17						
13	11	PFHpA	363.0 > 318.9		3.58e3	1.00		3.59						
14	13	L-PFHxS	398.9 > 79.6		1.43e3	1.00		3.75						
15	80	Total PFHxS	398.9 > 79.6	0.00e0	1.43e3	1.00		3.83		0.000				
16	15	6:2 FTS	427.0 > 406.9		1.03e3	1.00		4.06						
17	49	13C3-PFBS	302.0 > 98.8	6.54e2	5.98e2	1.00	1.035	2.47	2.47	13.7	13.2076	105.7		
18	53	13C4-PFHpA	367.2 > 321.8	3.58e3	1.06e4	1.00	0.391	3.59	3.59	4.21	10.7548	86.0		
19	54	13C3-PFHxS	401.8 > 79.9	1.43e3	5.98e2	1.00	2.547	3.75	3.75	29.9	11.7525	94.0		
20	54	13C3-PFHxS	401.8 > 79.9	1.43e3	5.98e2	1.00	2.547	3.75	3.75	29.9	11.7525	94.0		
21	55	13C2-6:2 FTS	429.0 >79.9	1.03e3	1.53e3	1.00	0.736	4.06	4.06	8.41	11.4189	91.4		
22	-1													
23	16	L-PFOA	412.8 > 368.9	2.22e1	7.58e3	1.00		4.12	4.12	0.0366			32.0	YES
24	81	Total PFOA	412.8 > 368.9	2.22e1	7.58e3	1.00		4.21		0.000				
25	19	PFHpS	449.0 > 80.0		1.40e3	1.00		4.23						
26	23	L-PFOS	498.9 > 79.9		1.40e3	1.00		4.64						
27	82	Total PFOS	498.9 > 79.9	0.00e0	1.40e3	1.00		4.74		0.000				
28	58	13C2-PFOA	414.9 > 369.7	7.58e3	1.49e4	1.00	0.564	4.12	4.12	6.38	11.2991	90.4		
29	58	13C2-PFOA	414.9 > 369.7	7.58e3	1.49e4	1.00	0.564	4.12	4.12	6.38	11.2991	90.4		
30	59	13C8-PFOS	507.0 > 79.9	1.40e3	1.53e3	1.00	1.060	4.65	4.64	11.5	10.8047	86.4		
31	59	13C8-PFOS	507.0 > 79.9	1.40e3	1.53e3	1.00	1.060	4.65	4.64	11.5	10.8047	86.4		
32	59	13C8-PFOS	507.0 > 79.9	1.40e3	1.53e3	1.00	1.060	4.65	4.64	11.5	10.8047	86.4		
33	-1													
34	21	PFNA	463.0 > 418.8		6.97e3	1.00		4.56						
35	22	PFOSA	497.9 > 77.9		7.17e2	1.00		4.62						
36	26	PFDA	513 > 468.8		4.71e3	1.00		4.93						

GM 7/11/2019

Vista Analytical Laboratory L24

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	27	8:2 FTS	527.0 > 506.9		8.73e2	1.00		4.91						
38	28	PFNS	549.1 > 80.1		1.40e3	1.00		5.01						
39	56	13C5-PFNA	468.2 > 422.9	6.97e3	9.21e3	1.00	0.983	4.56	4.56	9.45	9.6203	77.0		
40	57	13C8-PFOSA	506.1 > 77.7	7.17e2	1.30e4	1.00	0.130	4.62	4.62	0.690	5.2968	42.4		
41	60	13C2-PFDA	515.1 > 469.9	4.71e3	1.13e4	1.00	0.662	4.94	4.93	5.20	7.8569	62.9		
42	61	13C2-8:2 FTS	529 > 79.9	8.73e2	1.53e3	1.00	0.695	4.91	4.91	7.15	10.2884	82.3		
43	59	13C8-PFOS	507.0 > 79.9	1.40e3	1.53e3	1.00	1.060	4.65	4.64	11.5	10.8047	86.4		
44	-1													
45	29	L-MeFOSAA	570 > 419		9.33e2	1.00		5.09						
46	83	Total N-MeFOSAA	570. > 419	0.00e0	9.33e2	1.00		5.19		0.000				
47	31	L-EtFOSAA	584.1 > 419		1.12e3	1.00		5.25						
48	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.12e3	1.00		5.33		0.000				
49	33	PFUdA	563.0 > 518.9		6.46e3	1.00		5.26						
50	62	d3-N-MeFOSAA	573.3 > 419	9.33e2	1.30e4	1.00	0.129	5.09	5.09	0.898	6.9598	55.7		
51	62	d3-N-MeFOSAA	573.3 > 419	9.33e2	1.30e4	1.00	0.129	5.09	5.09	0.898	6.9598	55.7		
52	64	d5-N-EtFOSAA	589.3 > 419	1.12e3	1.30e4	1.00	0.147	5.25	5.25	1.08	7.3090	58.5		
53	64	d5-N-EtFOSAA	589.3 > 419	1.12e3	1.30e4	1.00	0.147	5.25	5.25	1.08	7.3090	58.5		
54	63	13C2-PFUdA	565 > 519.8	6.46e3	1.30e4	1.00	0.857	5.27	5.26	6.22	7.2530	58.0		
55	-1													
56	34	PFDS	598.8 > 79.9		8.73e2	1.00		5.32						
57	37	PFDoA	612.9 > 569.0		7.40e3	1.00		5.55						
58	39	PFTrDA	662.9 > 618.9		7.40e3	1.00		5.80						
59	41	PFTeDA	713.0 > 669.0		4.80e3	1.00		6.03						
60	85	TDCA	498.3>106.9			1.00		5.45						
61	61	13C2-8:2 FTS	529 > 79.9	8.73e2	1.53e3	1.00	0.695	4.91	4.91	7.15	10.2884	82.3		
62	65	13C2-PFDoA	614.7 > 569.7	7.40e3	1.13e4	1.00	1.229	5.56	5.55	8.16	6.6422	53.1		
63	65	13C2-PFDoA	614.7 > 569.7	7.40e3	1.13e4	1.00	1.229	5.56	5.55	8.16	6.6422	53.1		
64	67	13C2-PFTeDA	715.1 > 669.7	4.80e3	1.30e4	1.00	0.511	6.03	6.03	4.62	9.0385	72.3		
65	59	13C8-PFOS	507.0 > 79.9	1.40e3	1.53e3	1.00	1.060	4.65	4.64	11.5	10.8047	86.4		
66	-1													
67	73	13C5-PFHxA	318.0 > 272.9	1.06e4	1.06e4	1.00	1.000	2.97	2.97	12.5	12.5000	100.0		
68	72	13C4-PFBA	217.0 > 172.0	5.88e3	5.88e3	1.00	1.000	1.19	1.19	12.5	12.5000	100.0		
69	74	18O2-PFHxS	403.0 > 102.6	5.98e2	5.98e2	1.00	1.000	3.75	3.75	12.5	12.5000	100.0		
70	75	13C8-PFOA	420.9 > 376.0	1.49e4	1.49e4	1.00	1.000	4.12	4.12	12.5	12.5000	100.0		
71	76	13C9-PFNA	472.2 > 426.9	9.21e3	9.21e3	1.00	1.000	4.56	4.56	12.5	12.5000	100.0		
72	77	13C4-PFOS	503 > 79.9	1.53e3	1.53e3	1.00	1.000	4.65	4.65	12.5	12.5000	100.0		

GM 7/11/2019

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
73	78	13C6-PFDA	519.1 > 473.7	1.13e4	1.13e4	1.00	1.000	4.94	4.93	12.5	12.5000	100.0		
74	79	13C7-PFUdA	570.1 > 524.8	1.30e4	1.30e4	1.00	1.000	5.27	5.26	12.5	12.5000	100.0		

GM 7/11/2019

Vista Analytical Laboratory L24

Review: AMR 7/11/2019

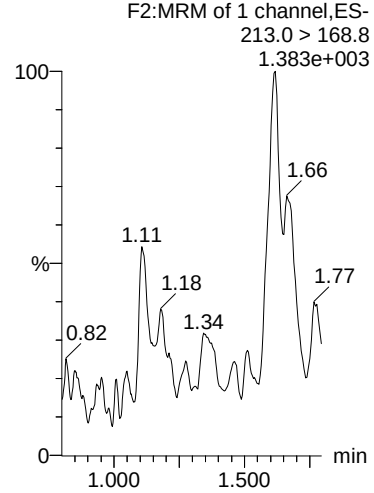
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Method: Z:\Projects\PFAS.pro\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

PFBA



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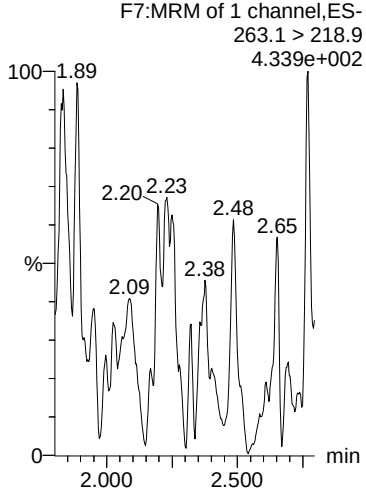
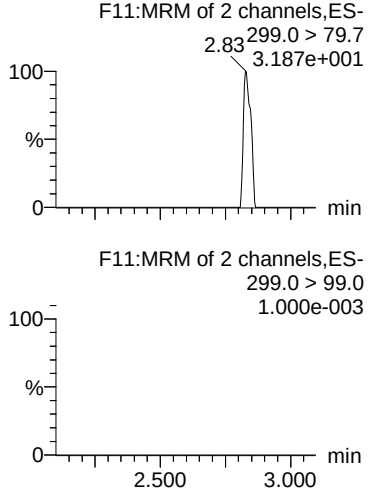


PFBS



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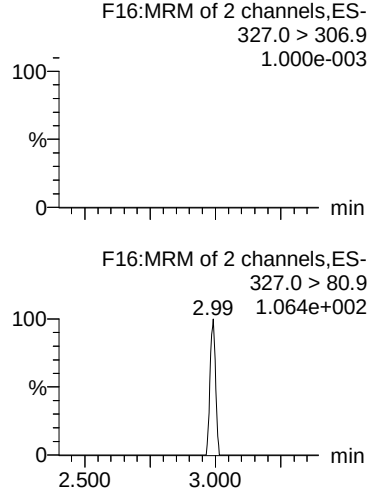
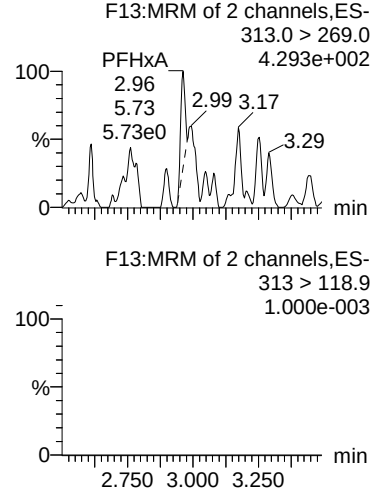
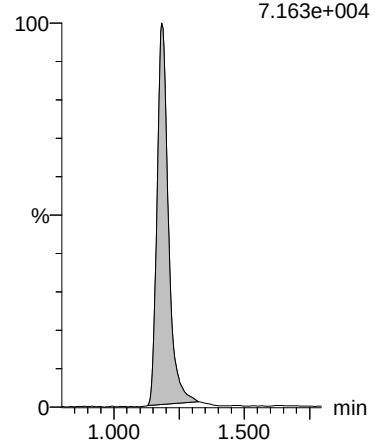


PFHxA



13C3-PFBA



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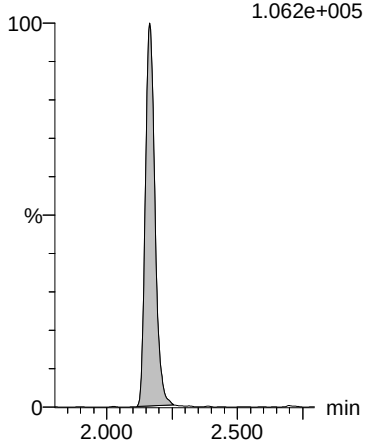

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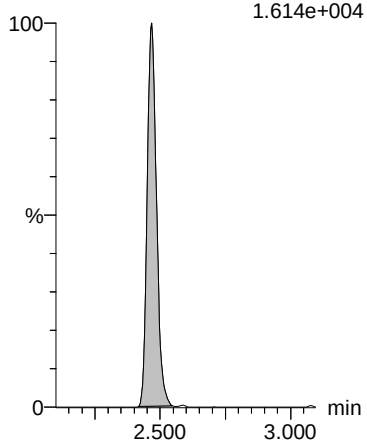
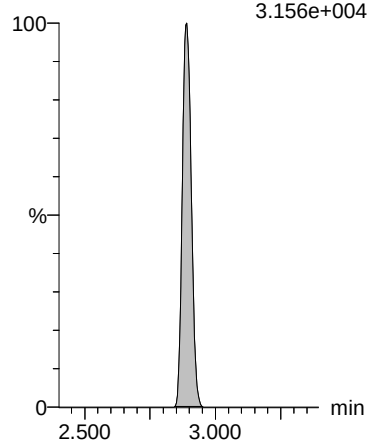


13C2-4:2 FTS



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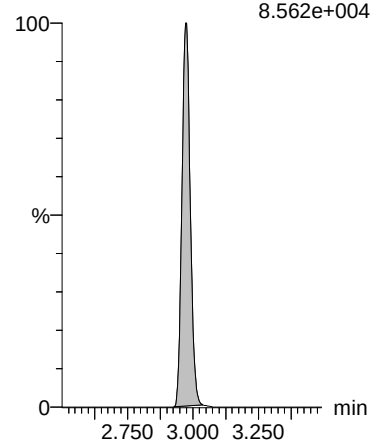


GM 7/11/2019

Vista Analytical Laboratory L24

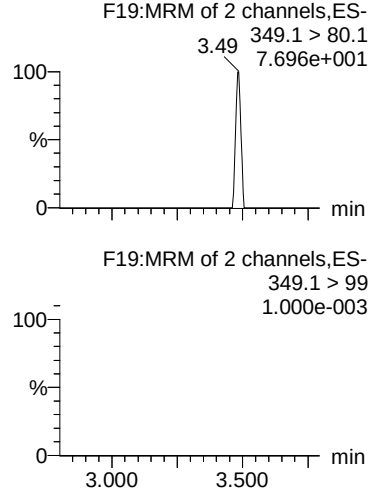
Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

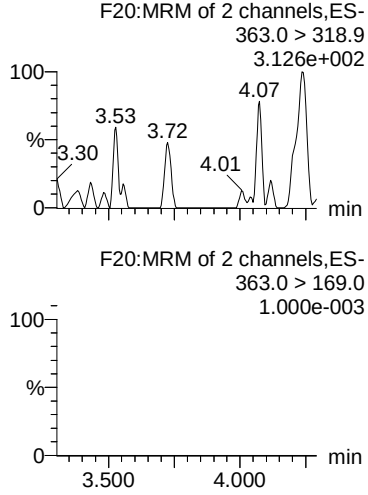
Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

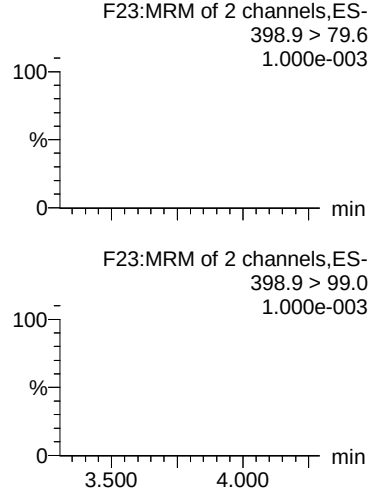
PFPeS



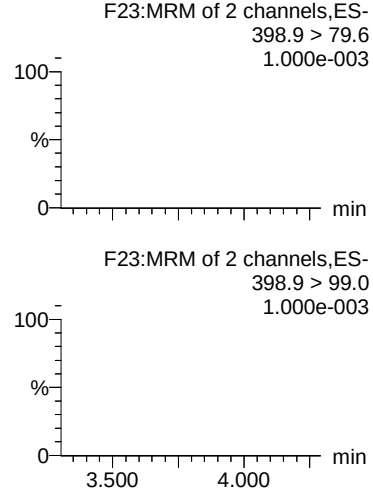
PFHpA



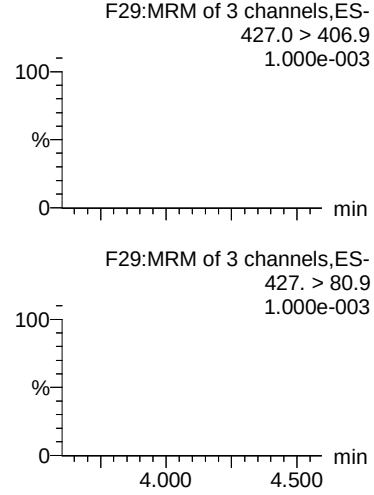
L-PFHxS



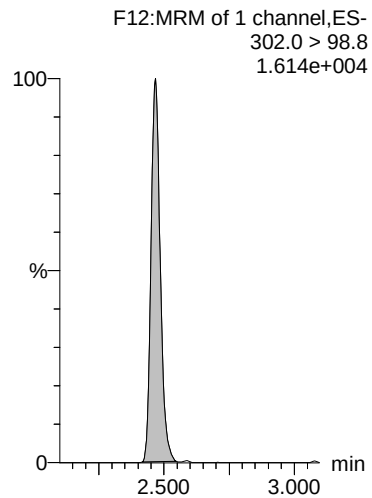
Total PFHxS



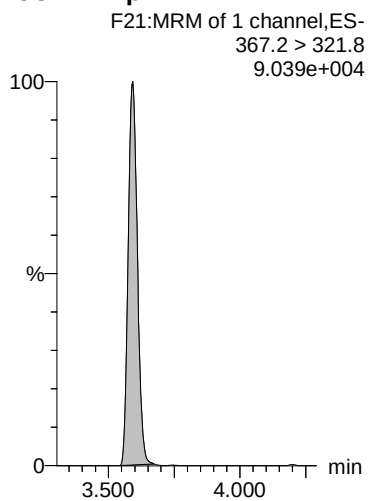
6:2 FTS



13C3-PFBS



13C4-PFHpA



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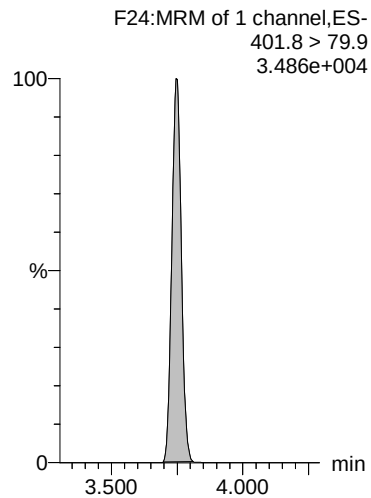

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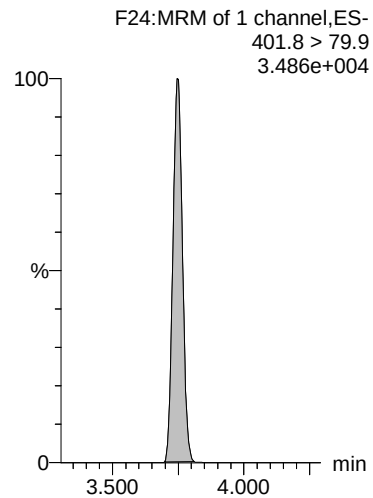

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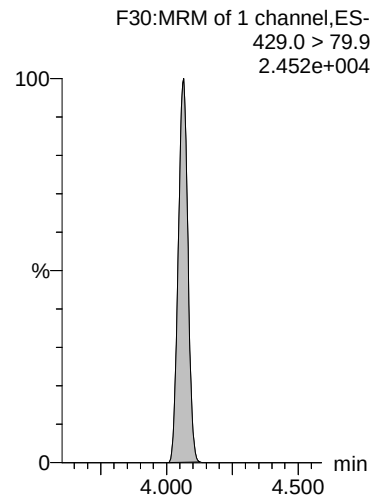

GM 7/11/2019

Vista Analytical Laboratory L24

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
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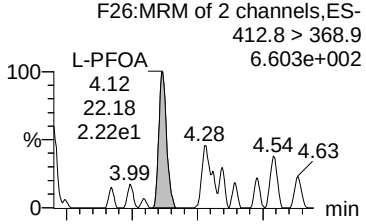
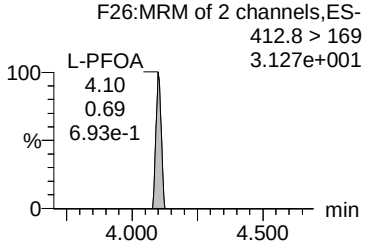
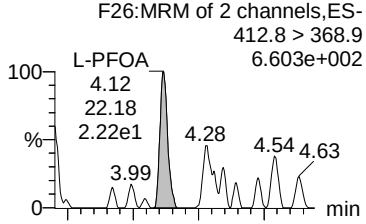
Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

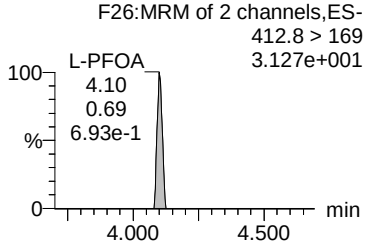
L-PFOA



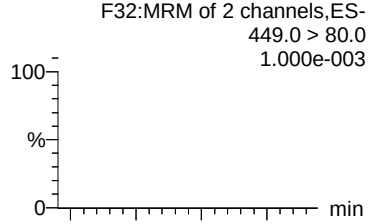


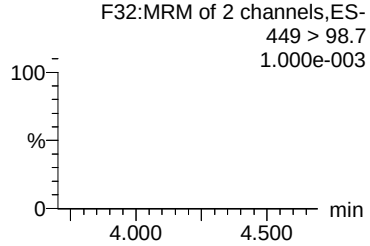
Total PFOA



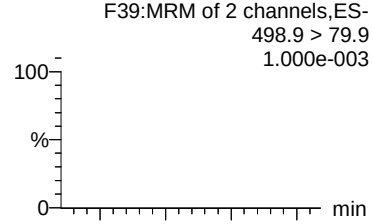


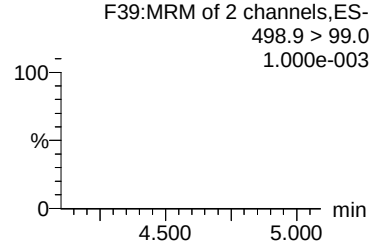
PFHpS



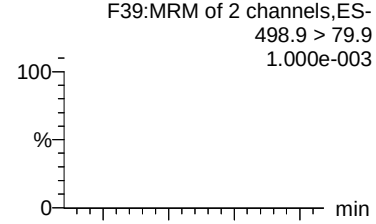


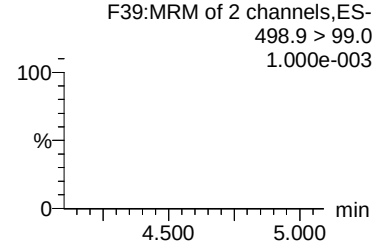
L-PFOS



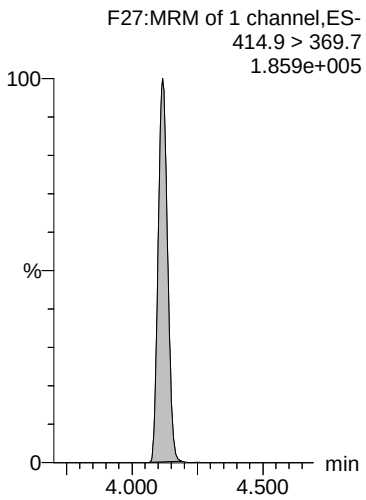


Total PFOS

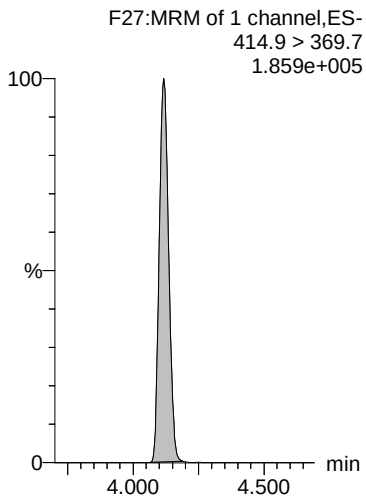




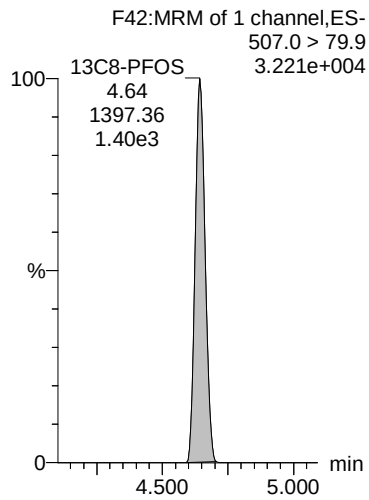
13C2-PFOA



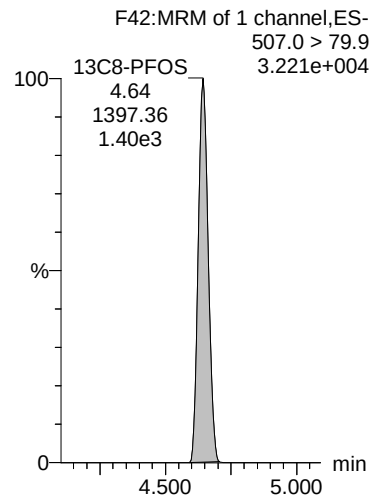
13C2-PFOA



13C8-PFOS



13C8-PFOS



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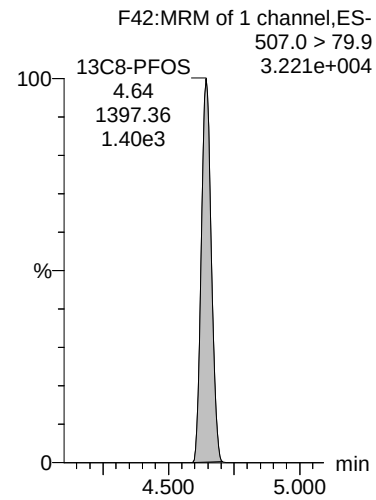


GM 7/11/2019

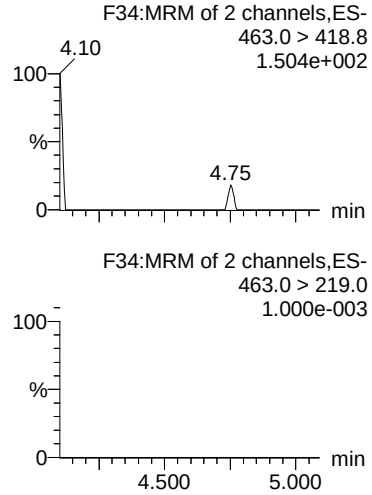
Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

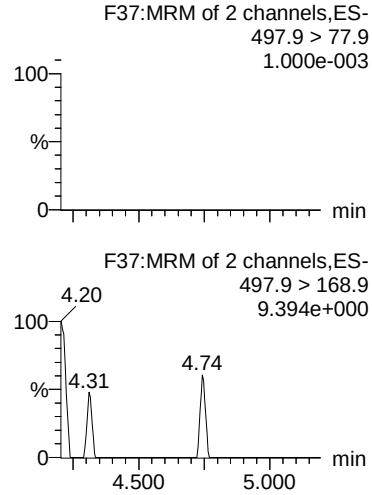
Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

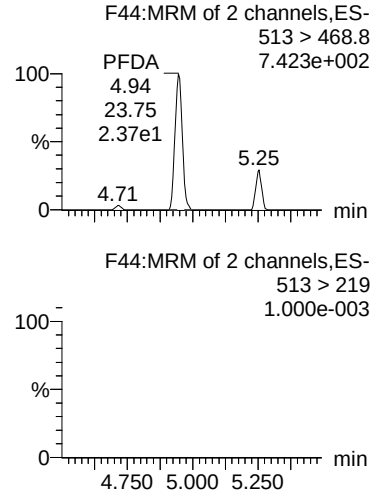
PFNA



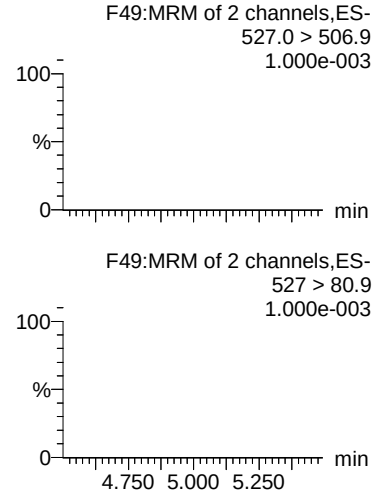
PFOSA



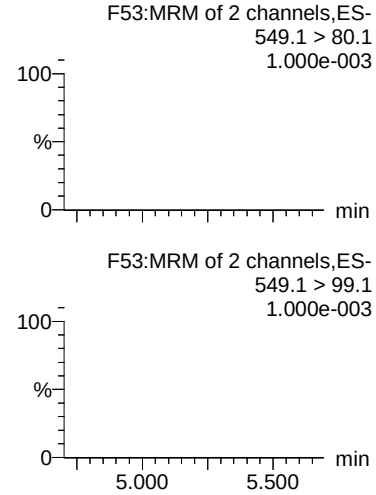
PFDA



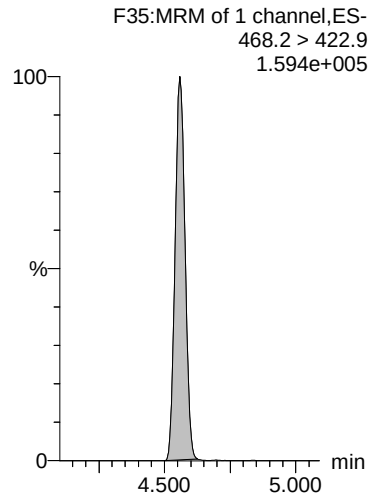
8:2 FTS



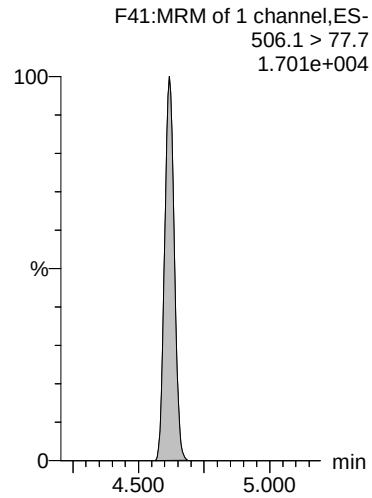
PFNS



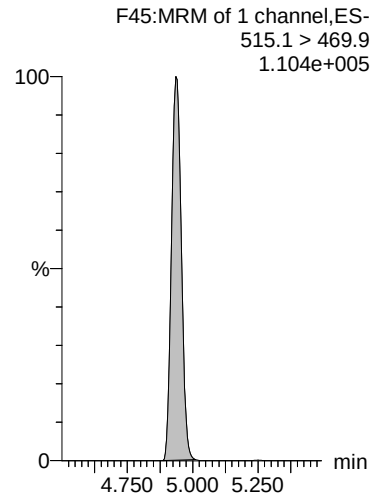
13C5-PFNA



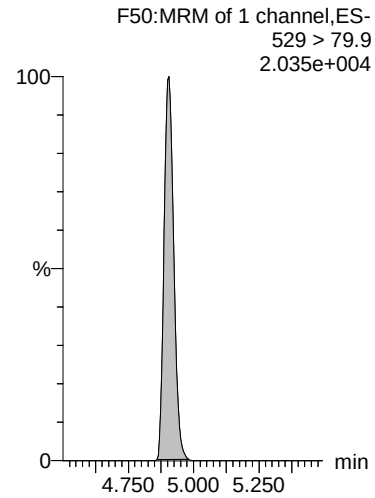
13C8-PFOSA



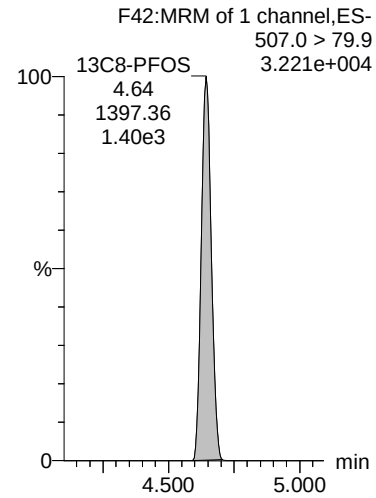
13C2-PFDA



13C2-8:2 FTS



13C8-PFOS



GM 7/11/2019

Vista Analytical Laboratory L24

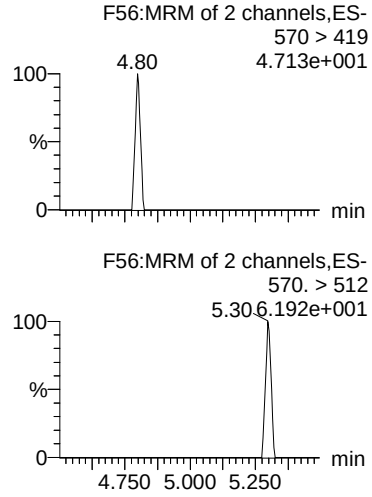
Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

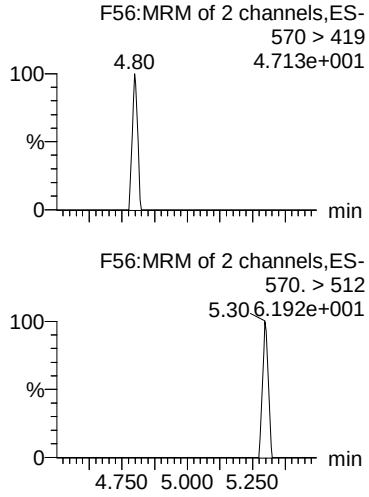
Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

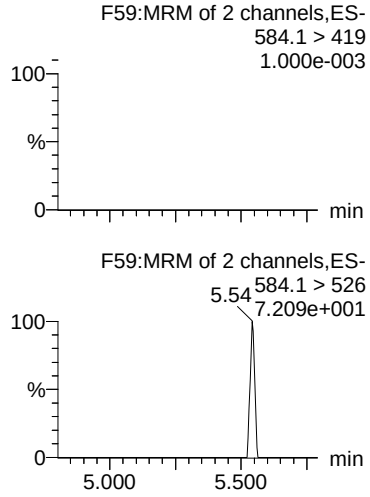
L-MeFOSAA



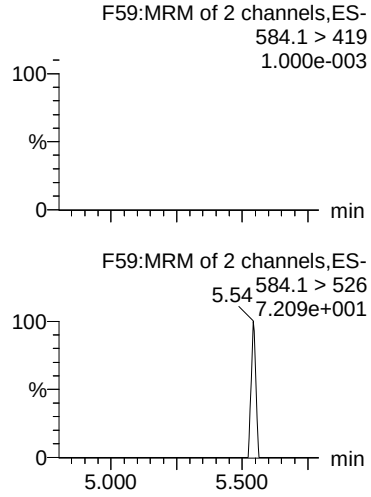
Total N-MeFOSAA



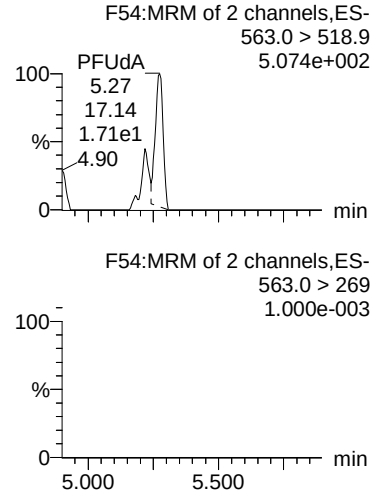
L-EtFOSAA



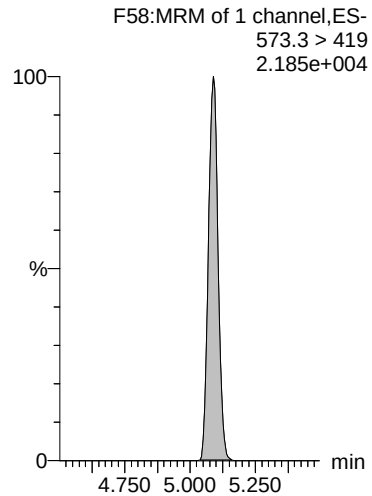
Total N-EtFOSAA



PFUdA



d3-N-MeFOSAA



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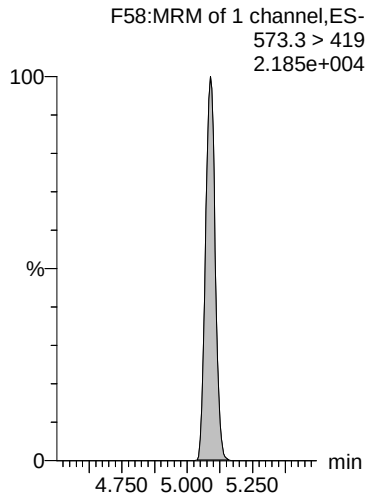
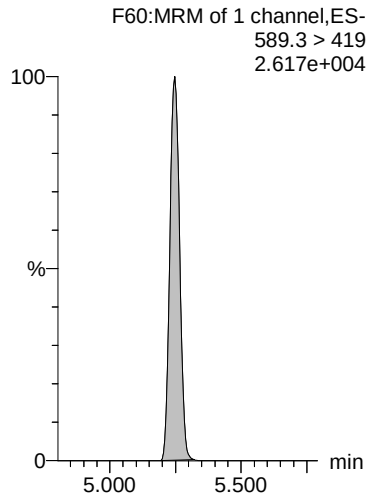
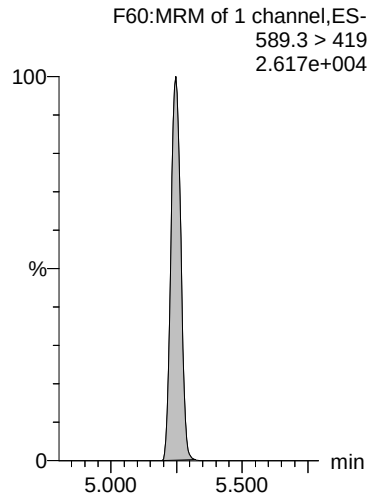


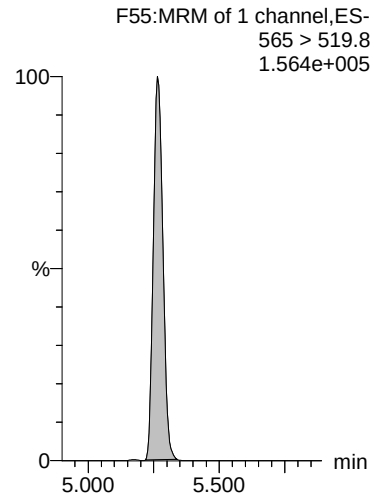
d5-N-EtFOSAA



d5-N-EtFOSAA



13C2-PFUdA



GM 7/11/2019

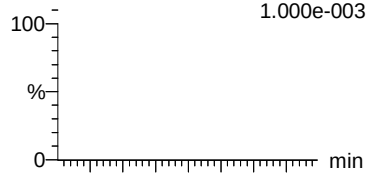
Review: AMR 7/11/2019

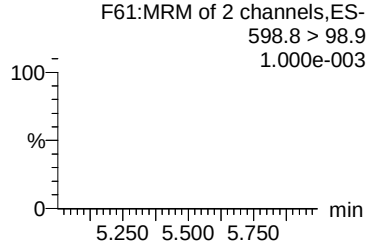
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

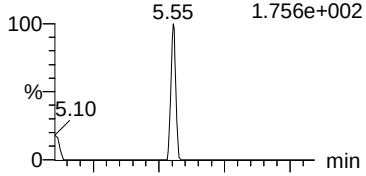
Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

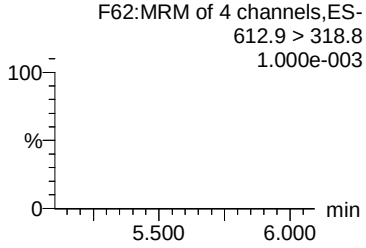
PFDS



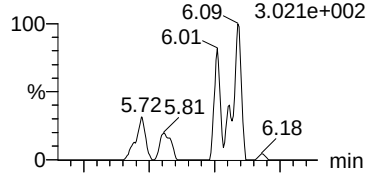


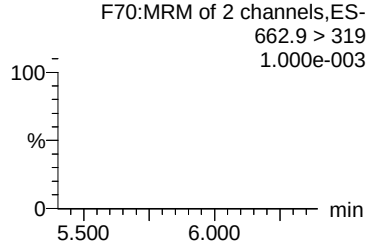
PFDoA



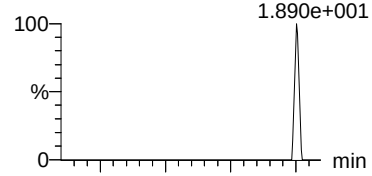


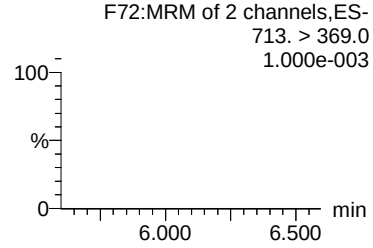
PFTrDA



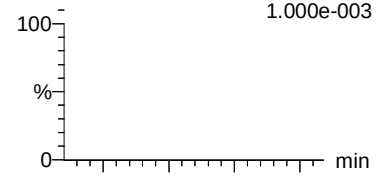


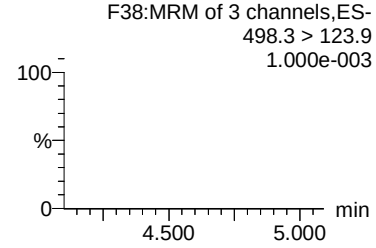
PFTeDA



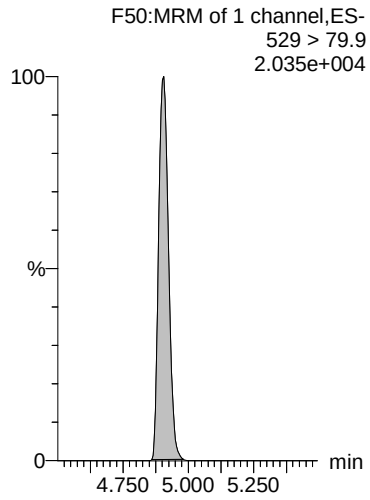


TDCA

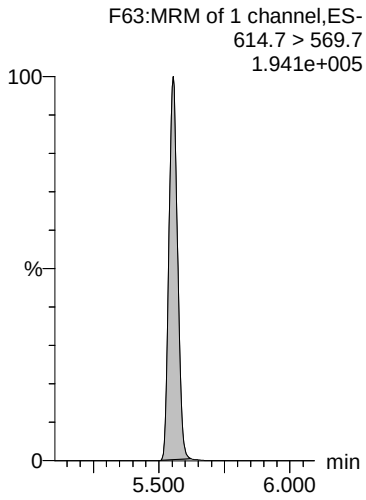




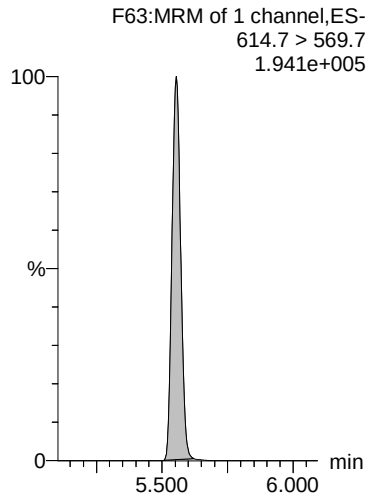
13C2-8:2 FTS



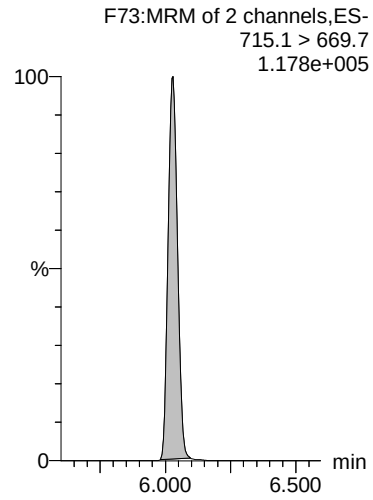
13C2-PFDoA



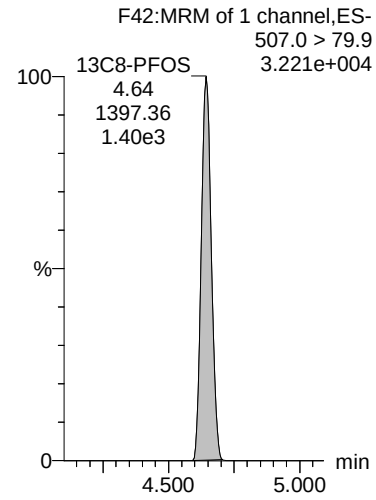
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



GM 7/11/2019

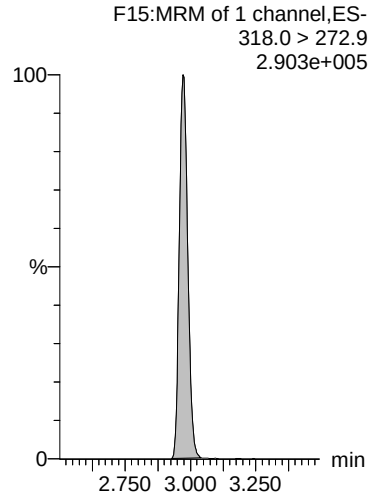
Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-20.qld

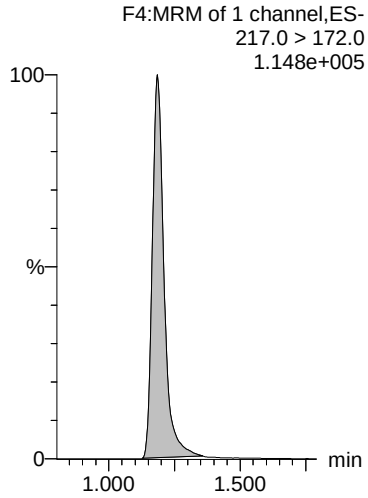
Last Altered: Thursday, July 11, 2019 12:01:25 Pacific Daylight Time
Printed: Thursday, July 11, 2019 12:01:49 Pacific Daylight Time

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

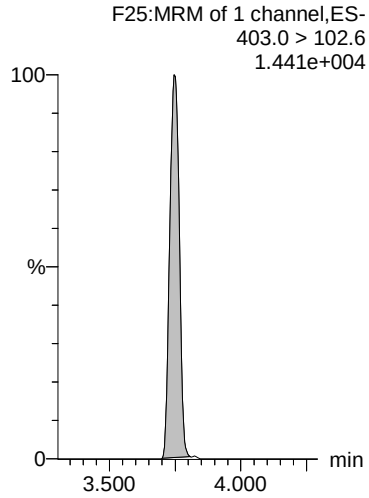
13C5-PFHxA



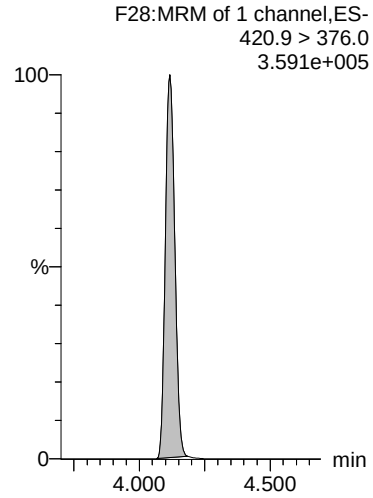
13C4-PFBA



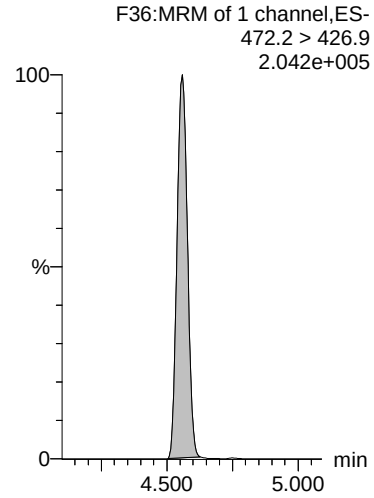
18O2-PFHxS



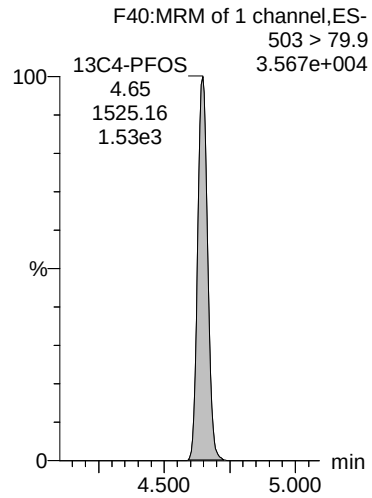
13C8-PFOA



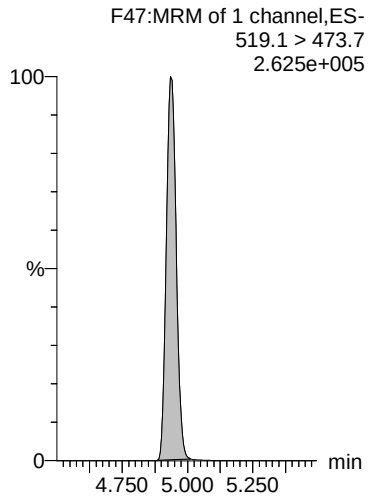
13C9-PFNA



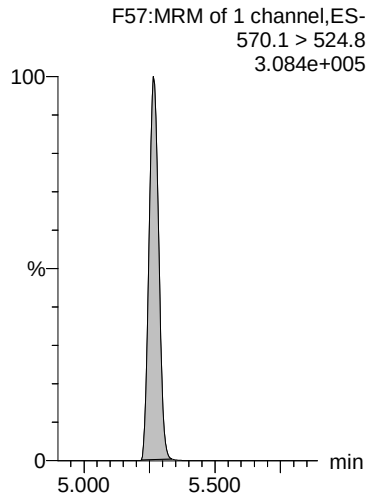
13C4-PFOS



13C6-PFDA



13C7-PFUdA



GM 7/11/2019

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	4.20e3	3.55e3	1.00		1.18	1.18	14.8	10.4153	104.2		
2	4	PFPeA	263.1 > 218.9	3.40e3	4.25e3	1.00		2.16	2.16	9.99	10.4828	104.8		
3	5	PFBS	299.0 > 79.7	1.12e3	5.93e2	1.00		2.47	2.46	23.5	10.2527	102.5	3.04	NO
4	6	4:2 FTS	327.0 > 306.9	2.63e3	1.20e3	1.00		2.89	2.89	27.4	11.2283	112.3	1.83	NO
5	7	PFHxA	313.0 > 269.0	7.37e3	3.05e3	1.00		2.97	2.97	12.1	10.4076	104.1	15.0	NO
6	47	13C3-PFBA	216.1 > 171.8	3.55e3	5.70e3	1.00	0.650	1.18	1.18	7.77	11.9601	95.7		
7	48	13C3-PFPeA	266.0 > 221.8	4.25e3	1.01e4	1.00	0.408	2.17	2.16	5.23	12.8396	102.7		
8	49	13C3-PFBS	302.0 > 98.8	5.93e2	6.74e2	1.00	1.035	2.47	2.47	11.0	10.6333	85.1		
9	51	13C2-4:2 FTS	329.0 >79.9	1.20e3	6.74e2	1.00	2.239	2.89	2.89	22.2	9.9291	79.4		
10	52	13C2-PFHxA	315.0 > 270.0	3.05e3	1.01e4	1.00	0.792	2.97	2.97	3.76	4.7397	94.8		
11	-1													
12	8	PFPeS	349.1>80.1	1.14e3	5.93e2	1.00		3.17	3.18	24.0	11.2358	112.4	1.56	NO
13	11	PFHpA	363.0 > 318.9	3.84e3	3.87e3	1.00		3.59	3.59	12.4	10.1177	101.2	5.50	NO
14	13	L-PFHxS	398.9 > 79.6	9.55e2	1.43e3	1.00		3.75	3.75	8.36	9.9901	99.9	1.90	NO
15	80	Total PFHxS	398.9 > 79.6	9.55e2	1.43e3	1.00		3.83		8.36	9.9901			
16	15	6:2 FTS	427.0 > 406.9	2.29e3	1.04e3	1.00		4.06	4.06	27.4	9.4004	94.0	2.08	NO
17	49	13C3-PFBS	302.0 > 98.8	5.93e2	6.74e2	1.00	1.035	2.47	2.47	11.0	10.6333	85.1		
18	53	13C4-PFHpA	367.2 > 321.8	3.87e3	1.01e4	1.00	0.391	3.59	3.59	4.77	12.1861	97.5		
19	54	13C3-PFHxS	401.8 > 79.9	1.43e3	6.74e2	1.00	2.547	3.75	3.75	26.5	10.4101	83.3		
20	54	13C3-PFHxS	401.8 > 79.9	1.43e3	6.74e2	1.00	2.547	3.75	3.75	26.5	10.4101	83.3		
21	55	13C2-6:2 FTS	429.0 >79.9	1.04e3	1.39e3	1.00	0.736	4.06	4.06	9.37	12.7332	101.9		
22	-1													
23	16	L-PFOA	412.8 > 368.9	1.14e4	7.50e3	1.00		4.12	4.12	19.0	10.2859	102.9	3.49	NO
24	81	Total PFOA	412.8 > 368.9	1.14e4	7.50e3	1.00		4.21		19.0	10.2859			
25	19	PFHpS	449.0 > 80.0	1.09e3	1.34e3	1.00		4.23	4.23	10.2	11.6114	116.1	1.86	NO
26	23	L-PFOS	498.9 > 79.9	1.41e3	1.34e3	1.00		4.65	4.65	13.2	10.5267	105.3	2.14	NO
27	82	Total PFOS	498.9 > 79.9	1.41e3	1.34e3	1.00		4.74		13.2	10.5267			
28	58	13C2-PFOA	414.9 > 369.7	7.50e3	1.50e4	1.00	0.564	4.12	4.12	6.27	11.1052	88.8		
29	58	13C2-PFOA	414.9 > 369.7	7.50e3	1.50e4	1.00	0.564	4.12	4.12	6.27	11.1052	88.8		
30	59	13C8-PFOS	507.0 > 79.9	1.34e3	1.39e3	1.00	1.060	4.65	4.65	12.0	11.3386	90.7		
31	59	13C8-PFOS	507.0 > 79.9	1.34e3	1.39e3	1.00	1.060	4.65	4.65	12.0	11.3386	90.7		
32	59	13C8-PFOS	507.0 > 79.9	1.34e3	1.39e3	1.00	1.060	4.65	4.65	12.0	11.3386	90.7		
33	-1													
34	21	PFNA	463.0 > 418.8	6.51e3	7.02e3	1.00		4.56	4.56	11.6	10.5448	105.4	2.95	NO
35	22	PFOSA	497.9 > 77.9	5.47e2	5.17e2	1.00		4.62	4.62	13.2	10.3489	103.5	32.5	NO
36	26	PFDA	513 > 468.8	6.91e3	4.99e3	1.00		4.94	4.94	17.3	10.4196	104.2	4.54	NO

GM 7/11/2019

Vista Analytical Laboratory L24

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	27	8:2 FTS	527.0 > 506.9	1.70e3	1.01e3	1.00		4.91	4.91	21.1	9.3728	93.7	1.28	NO
38	28	PFNS	549.1 > 80.1	9.79e2	1.34e3	1.00		5.01	5.01	9.17	10.4686	104.7	1.73	NO
39	56	13C5-PFNA	468.2 > 422.9	7.02e3	8.58e3	1.00	0.983	4.56	4.56	10.2	10.4062	83.2		
40	57	13C8-PFOSA	506.1 > 77.7	5.17e2	1.29e4	1.00	0.130	4.62	4.62	0.500	3.8396	30.7		
41	60	13C2-PFDA	515.1 > 469.9	4.99e3	1.08e4	1.00	0.662	4.94	4.94	5.75	8.6830	69.5		
42	61	13C2-8:2 FTS	529 > 79.9	1.01e3	1.39e3	1.00	0.695	4.91	4.91	9.07	13.0484	104.4		
43	59	13C8-PFOS	507.0 > 79.9	1.34e3	1.39e3	1.00	1.060	4.65	4.65	12.0	11.3386	90.7		
44	-1													
45	29	L-MeFOSAA	570 > 419	2.69e3	9.37e2	1.00		5.09	5.09	35.9	11.9813	119.8	2.51	NO
46	83	Total N-MeFOSAA	570. > 419	2.69e3	9.37e2	1.00		5.19		35.9	11.9813			
47	31	L-EtFOSAA	584.1 > 419	1.97e3	1.14e3	1.00		5.25	5.25	21.7	10.9240	109.2	1.36	NO
48	84	Total N-EtFOSAA	584.1 > 419	1.97e3	1.14e3	1.00		5.33		21.7	10.9240			
49	33	PFUdA	563.0 > 518.9	5.29e3	6.89e3	1.00		5.26	5.26	9.59	10.2931	102.9	6.35	NO
50	62	d3-N-MeFOSAA	573.3 > 419	9.37e2	1.29e4	1.00	0.129	5.09	5.09	0.906	7.0221	56.2		
51	62	d3-N-MeFOSAA	573.3 > 419	9.37e2	1.29e4	1.00	0.129	5.09	5.09	0.906	7.0221	56.2		
52	64	d5-N-EtFOSAA	589.3 > 419	1.14e3	1.29e4	1.00	0.147	5.25	5.25	1.10	7.4586	59.7		
53	64	d5-N-EtFOSAA	589.3 > 419	1.14e3	1.29e4	1.00	0.147	5.25	5.25	1.10	7.4586	59.7		
54	63	13C2-PFUdA	565 > 519.8	6.89e3	1.29e4	1.00	0.857	5.27	5.26	6.67	7.7777	62.2		
55	-1													
56	34	PFDS	598.8 > 79.9	1.27e3	1.01e3	1.00		5.32	5.32	15.7	7.7967	78.0	1.72	NO
57	37	PFDoA	612.9 > 569.0	6.36e3	8.28e3	1.00		5.55	5.55	9.61	10.0699	100.7	6.86	NO
58	39	PFTrDA	662.9 > 618.9	8.19e3	8.28e3	1.00		5.80	5.81	12.4	11.6714	116.7	14.2	NO
59	41	PFTeDA	713.0 > 669.0	6.52e3	5.07e3	1.00		6.03	6.03	16.1	10.7257	107.3	17.6	NO
60	85	TDCA	498.3>106.9			1.00		5.45						
61	61	13C2-8:2 FTS	529 > 79.9	1.01e3	1.39e3	1.00	0.695	4.91	4.91	9.07	13.0484	104.4		
62	65	13C2-PFDoA	614.7 > 569.7	8.28e3	1.08e4	1.00	1.229	5.56	5.55	9.54	7.7646	62.1		
63	65	13C2-PFDoA	614.7 > 569.7	8.28e3	1.08e4	1.00	1.229	5.56	5.55	9.54	7.7646	62.1		
64	67	13C2-PFTeDA	715.1 > 669.7	5.07e3	1.29e4	1.00	0.511	6.03	6.03	4.91	9.5933	76.7		
65	59	13C8-PFOS	507.0 > 79.9	1.34e3	1.39e3	1.00	1.060	4.65	4.65	12.0	11.3386	90.7		
66	-1													
67	73	13C5-PFHxA	318.0 > 272.9	1.01e4	1.01e4	1.00	1.000	2.97	2.97	12.5	12.5000	100.0		
68	72	13C4-PFBA	217.0 > 172.0	5.70e3	5.70e3	1.00	1.000	1.19	1.18	12.5	12.5000	100.0		
69	74	18O2-PFHxS	403.0 > 102.6	6.74e2	6.74e2	1.00	1.000	3.75	3.75	12.5	12.5000	100.0		
70	75	13C8-PFOA	420.9 > 376.0	1.50e4	1.50e4	1.00	1.000	4.12	4.12	12.5	12.5000	100.0		
71	76	13C9-PFNA	472.2 > 426.9	8.58e3	8.58e3	1.00	1.000	4.56	4.56	12.5	12.5000	100.0		
72	77	13C4-PFOS	503 > 79.9	1.39e3	1.39e3	1.00	1.000	4.65	4.64	12.5	12.5000	100.0		

GM 7/11/2019

Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
73	78	13C6-PFDA	519.1 > 473.7	1.08e4	1.08e4	1.00	1.000	4.94	4.94	12.5	12.5000	100.0		
74	79	13C7-PFUdA	570.1 > 524.8	1.29e4	1.29e4	1.00	1.000	5.27	5.26	12.5	12.5000	100.0		

GM 7/11/2019

Vista Analytical Laboratory L24

Review: AMR 7/11/2019

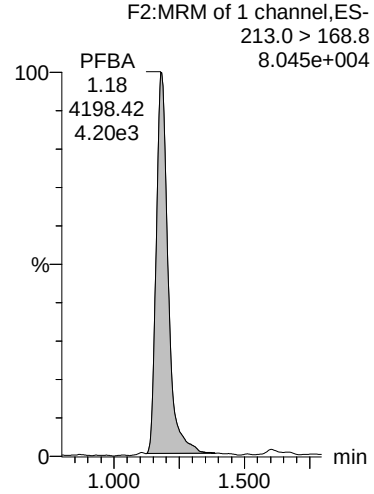
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

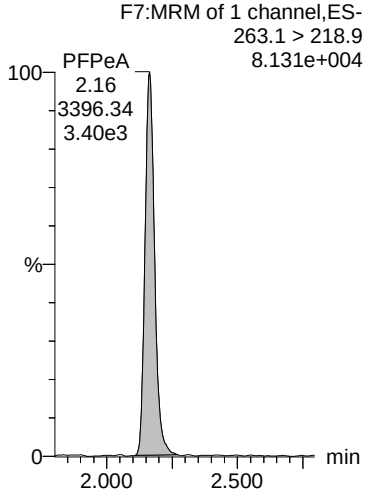
Method: Z:\Projects\PFAS.pro\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

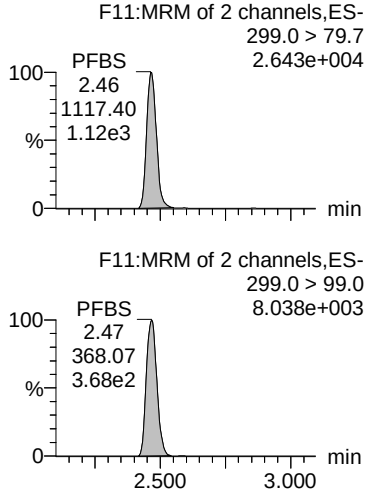
PFBA



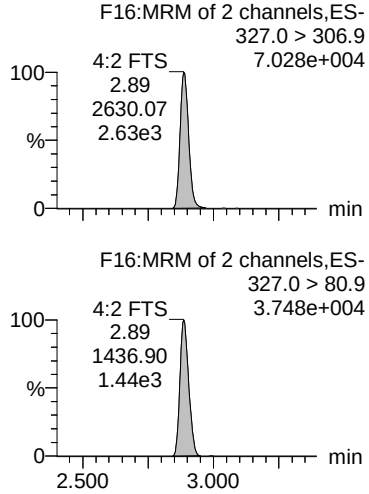
PFPeA



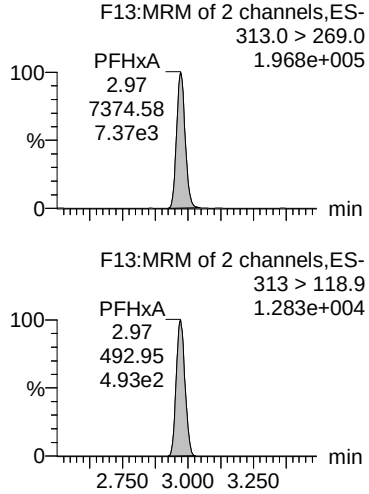
PFBS



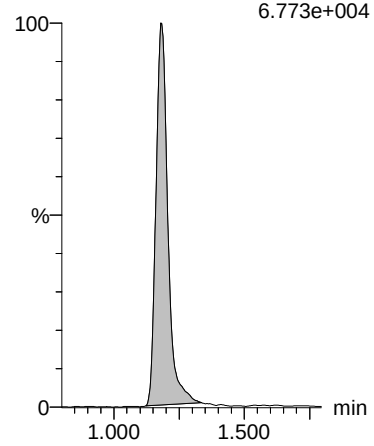
4:2 FTS



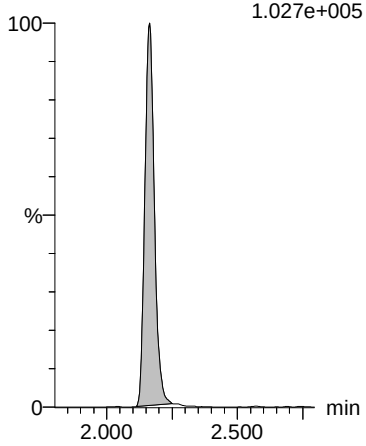
PFHxA



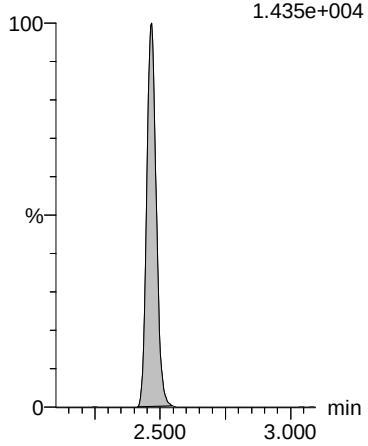
13C3-PFBA



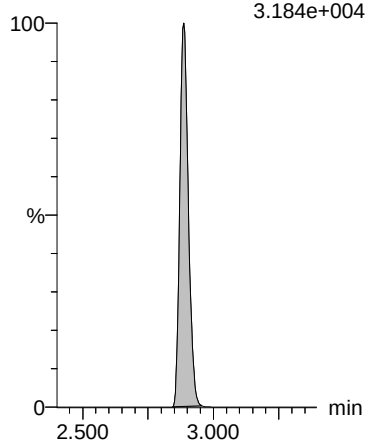
13C3-PFPeA



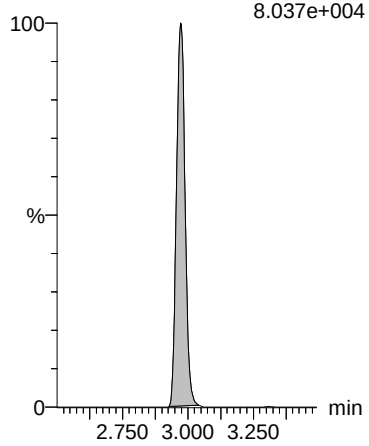
13C3-PFBS



13C2-4:2 FTS



13C2-PFHxA



GM 7/11/2019

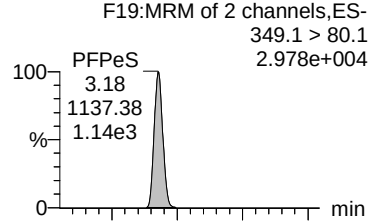
Review: AMR 7/11/2019

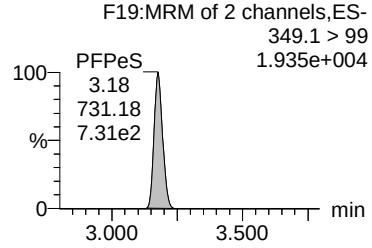
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

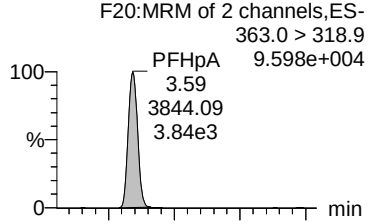
Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

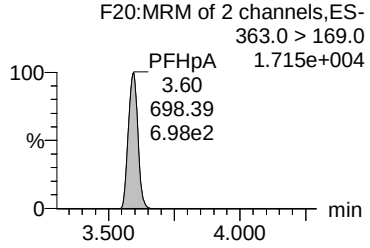
PFPeS



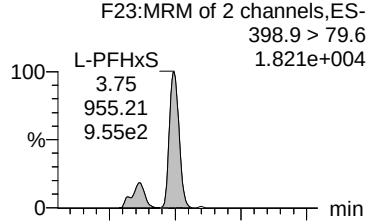


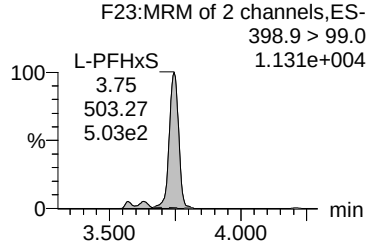
PFHpA



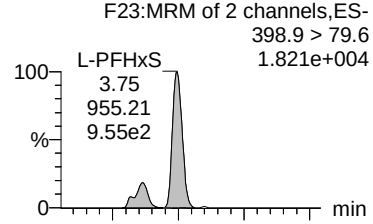


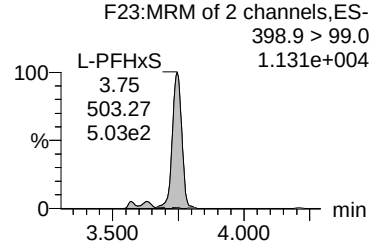
L-PFHxS



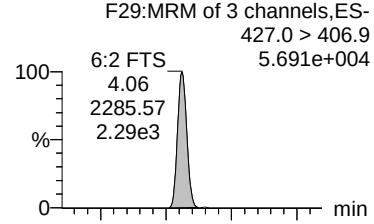


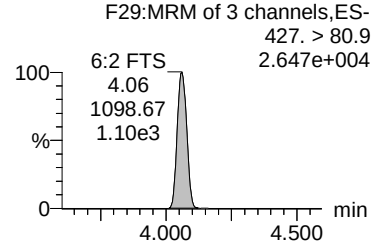
Total PFHxS



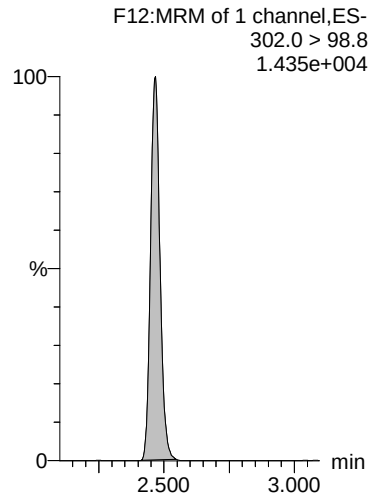


6:2 FTS

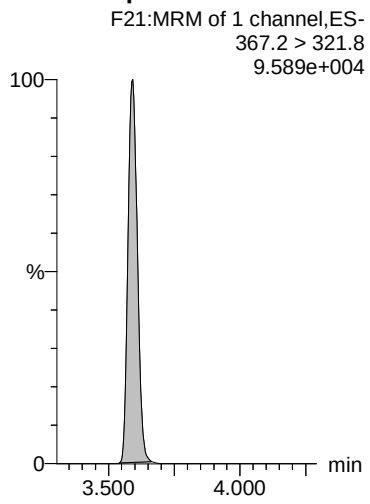




13C3-PFBS



13C4-PFHpA



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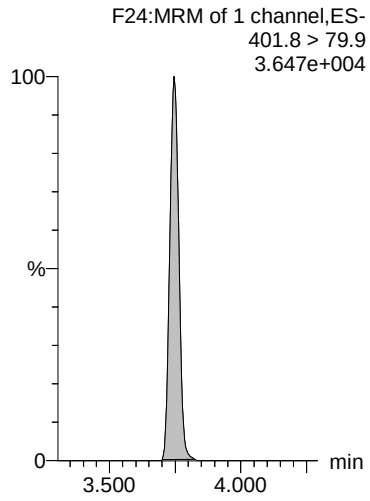

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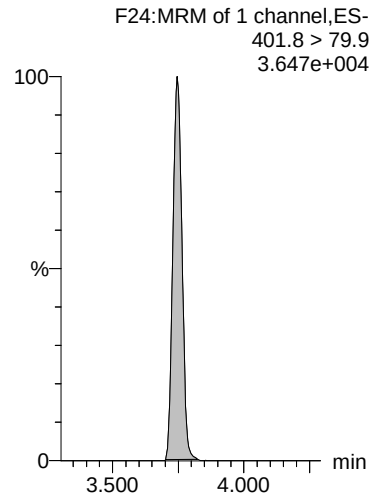
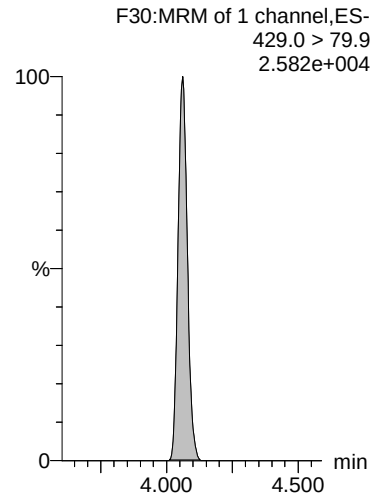


13C2-6:2 FTS



GM 7/11/2019

Vista Analytical Laboratory L24

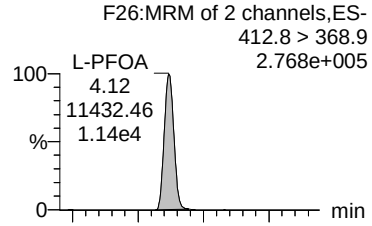
Review: AMR 7/11/2019

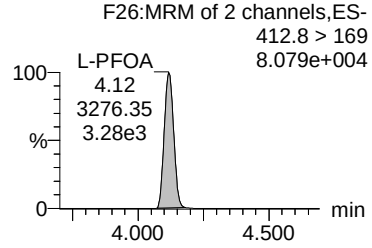
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

L-PFOA





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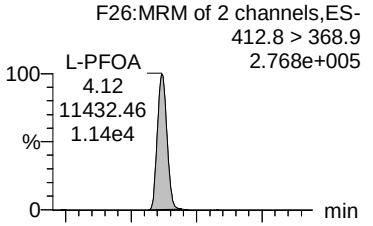
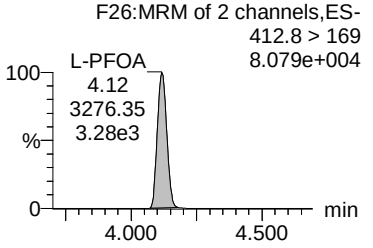
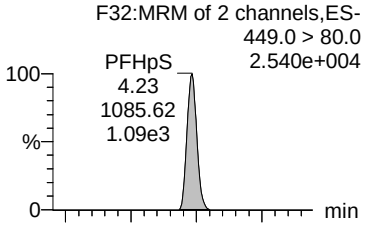
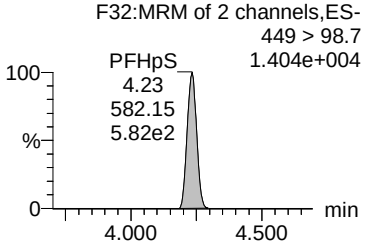


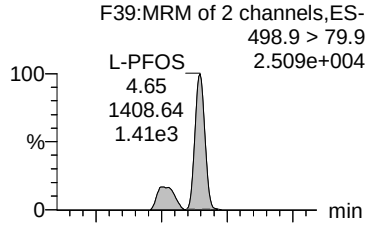


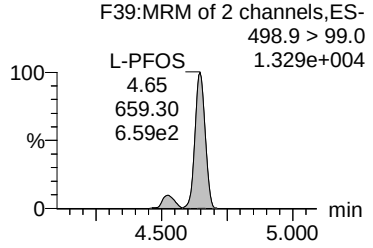
PFHpS





L-PFOS





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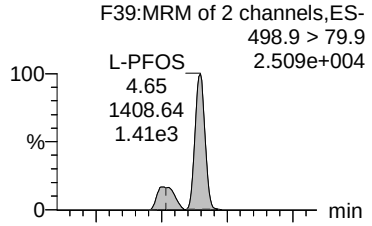
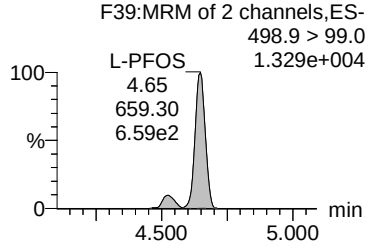
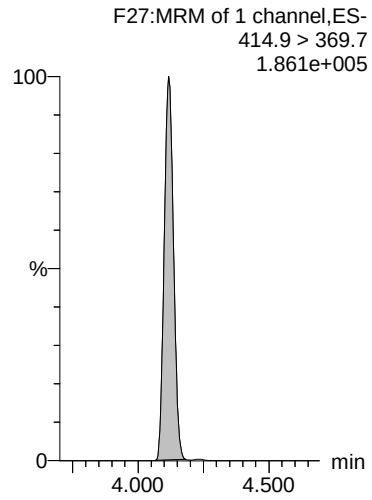




13C2-PFOA



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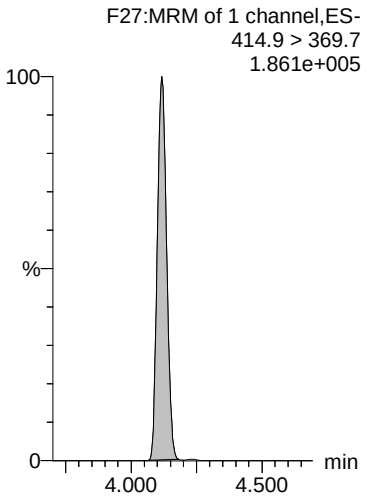
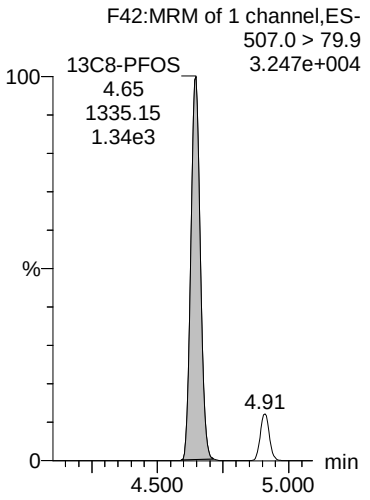


13C8-PFOS



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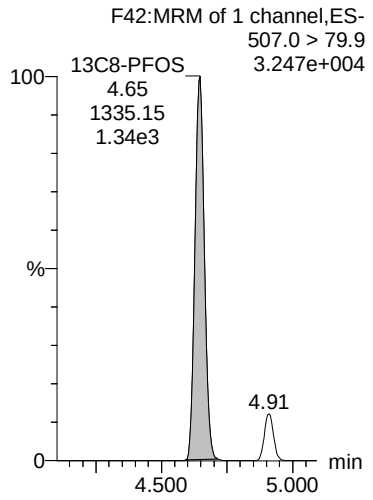

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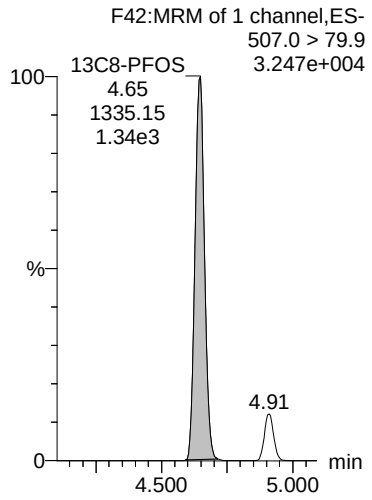


GM 7/11/2019

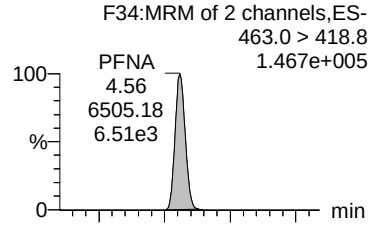
Review: AMR 7/11/2019

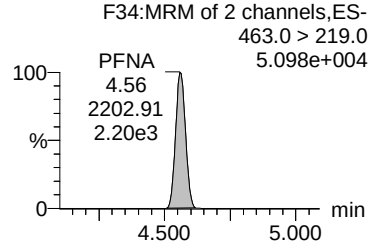
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

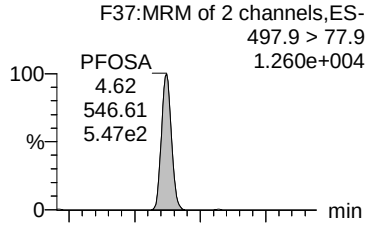
Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

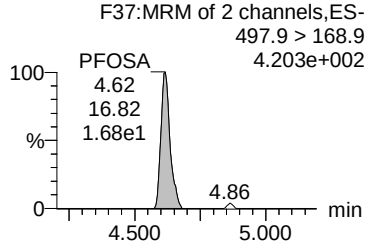
PFNA



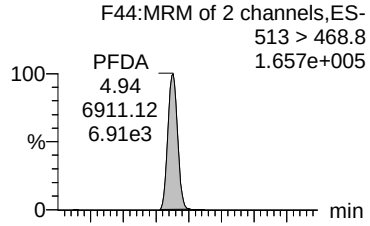


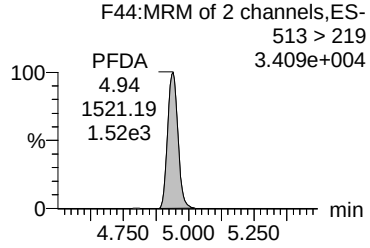
PFOSA



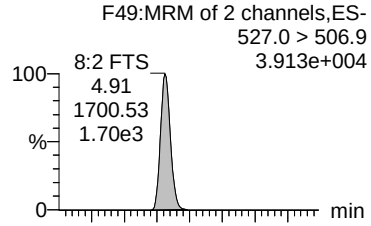


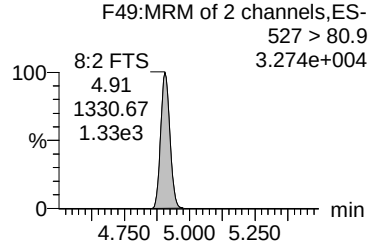
PFDA



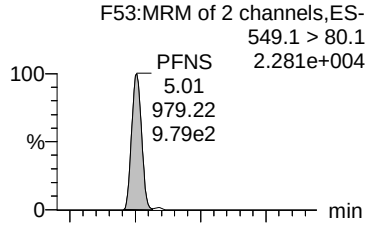


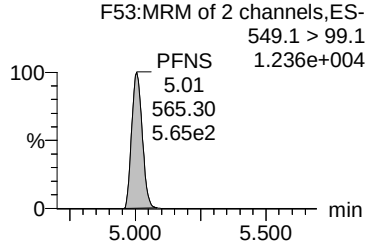
8:2 FTS



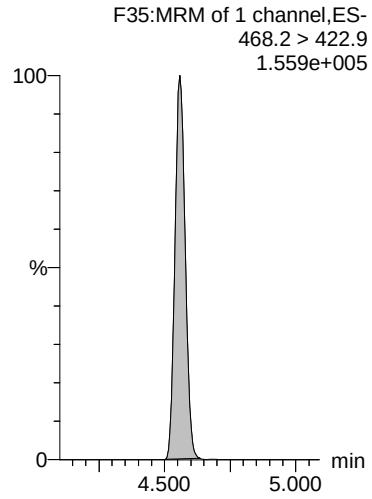


PFNS

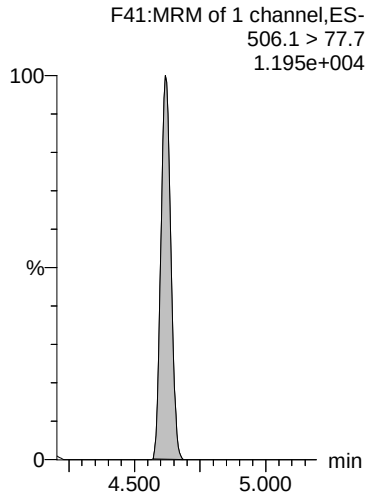




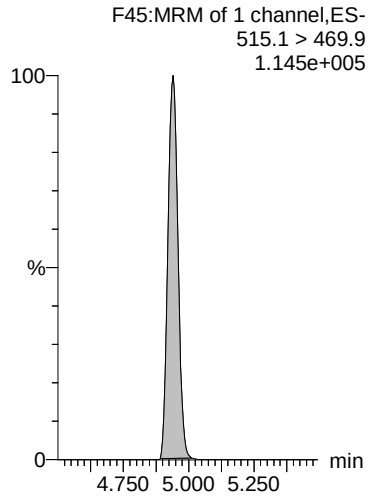
13C5-PFNA



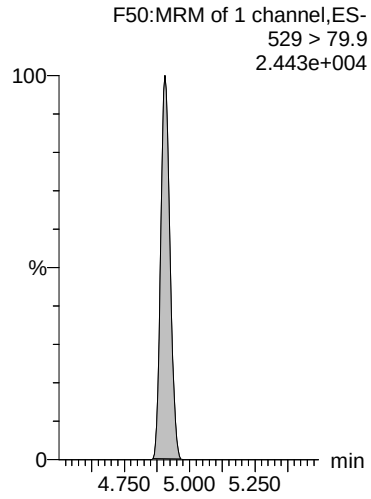
13C8-PFOSA



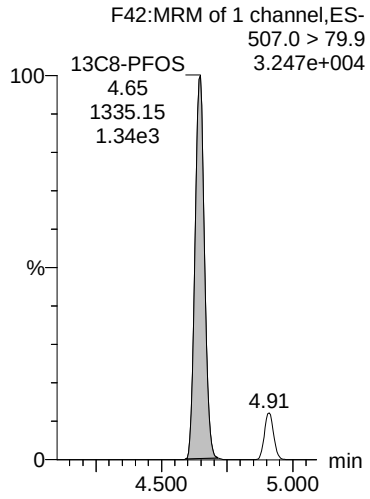
13C2-PFDA



13C2-8:2 FTS



13C8-PFOS



GM 7/11/2019

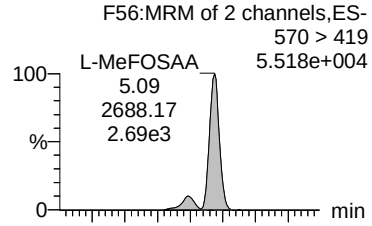
Review: AMR 7/11/2019

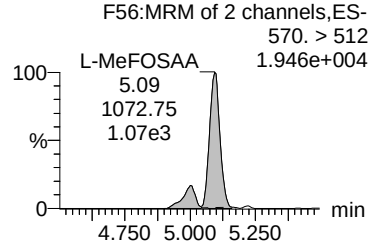
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

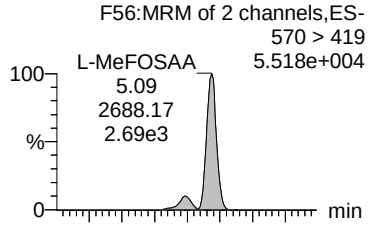
Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

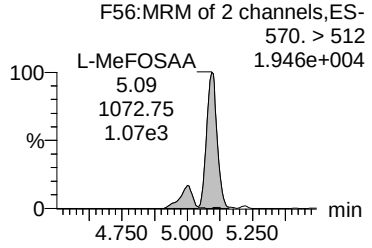
L-MeFOSAA



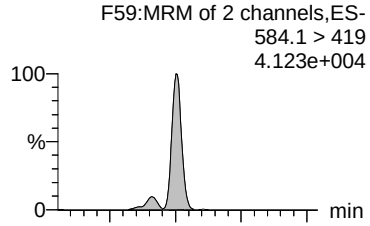


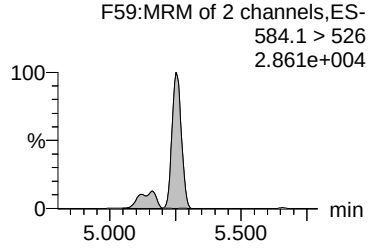
Total N-MeFOSAA





L-EtFOSAA





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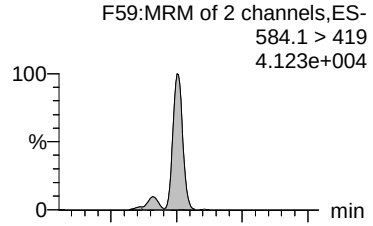
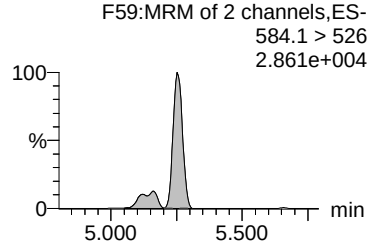
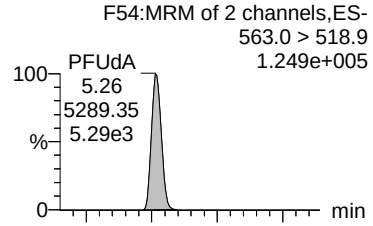
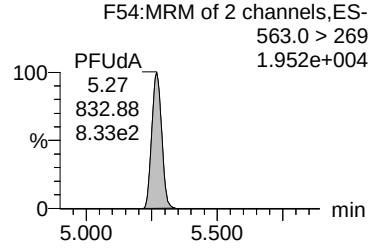


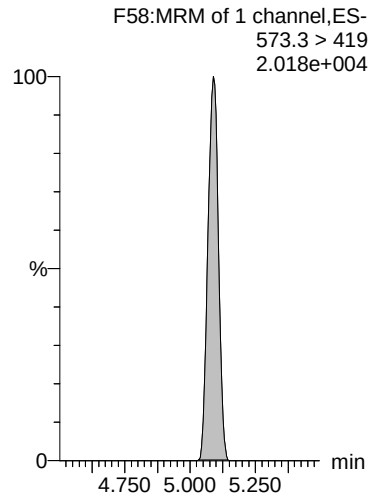


PFUdA

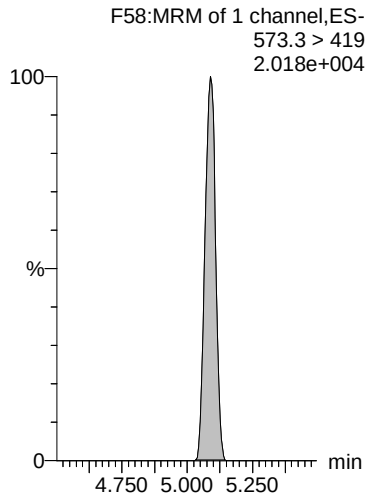




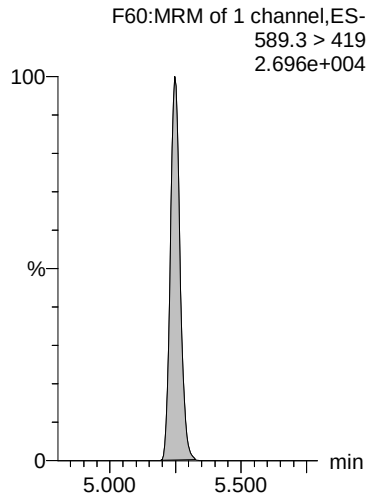
d3-N-MeFOSAA



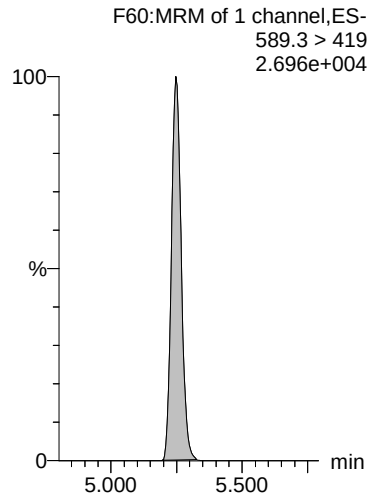
d3-N-MeFOSAA



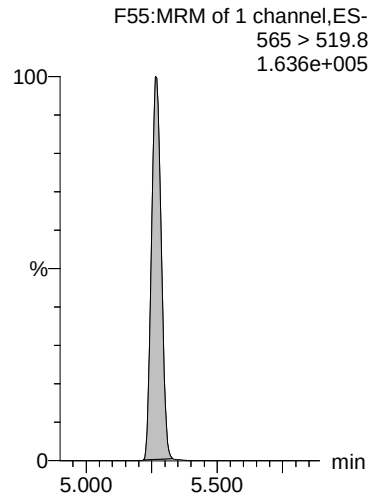
d5-N-EtFOSAA



d5-N-EtFOSAA



13C2-PFUdA



GM 7/11/2019

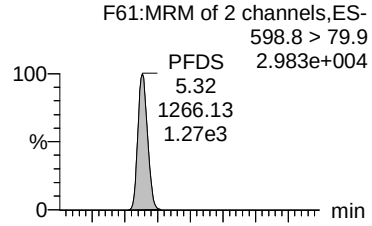
Review: AMR 7/11/2019

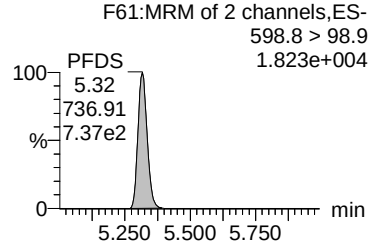
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

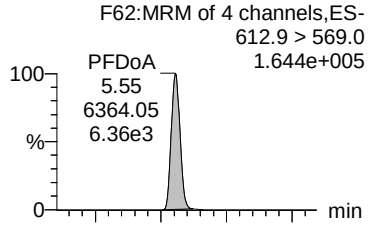
Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

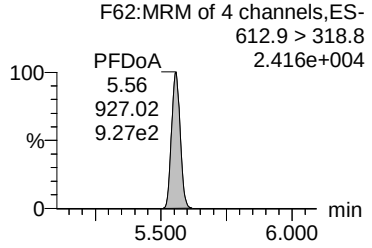
PFDS



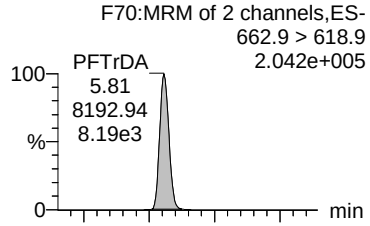


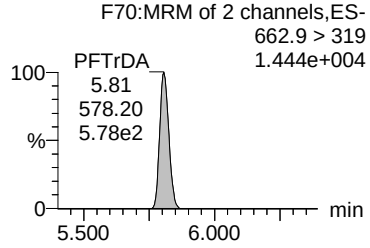
PFDoA



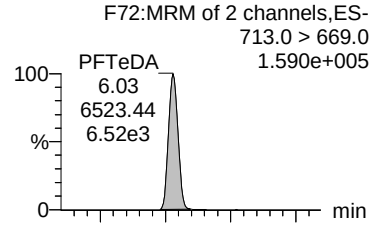


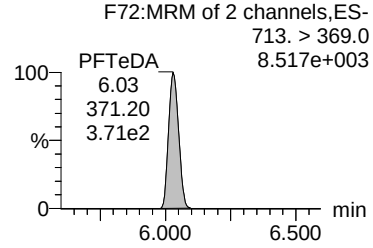
PFTrDA



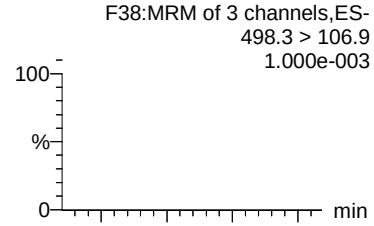


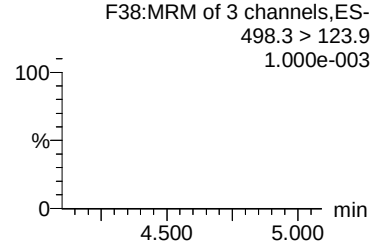
PFTeDA



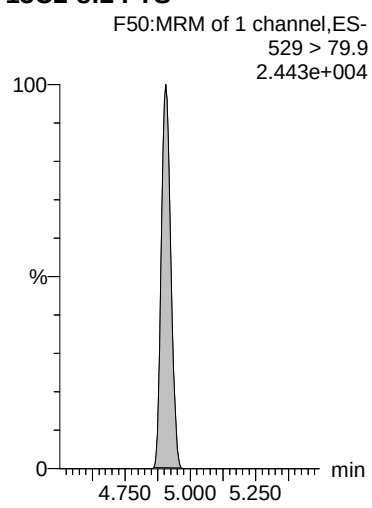


TDCA

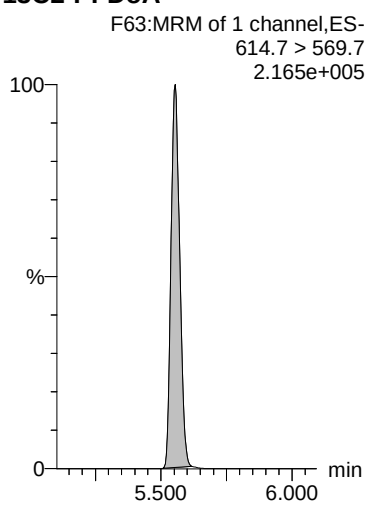




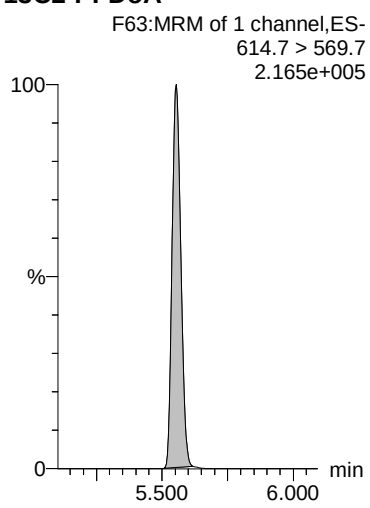
13C2-8:2 FTS



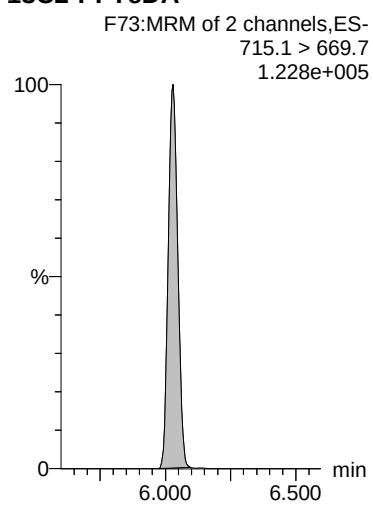
13C2-PFDoA



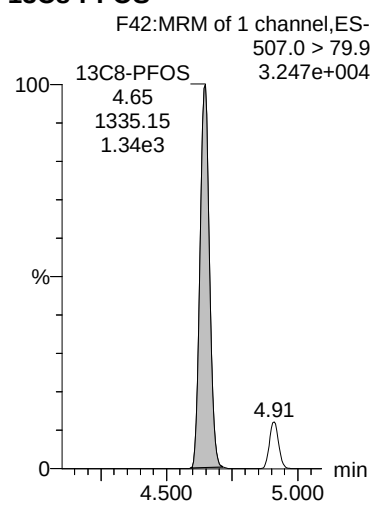
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



GM 7/11/2019

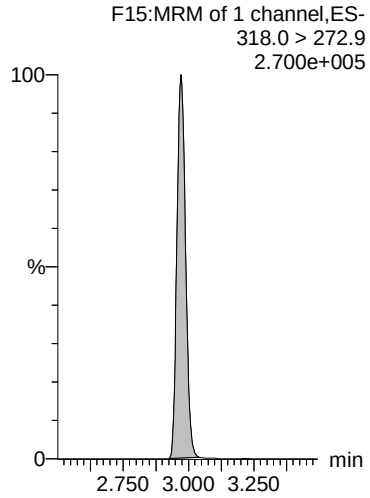
Review: AMR 7/11/2019

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-17.qld

Last Altered: Thursday, July 11, 2019 11:58:54 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:59:41 Pacific Daylight Time

Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

13C5-PFHxA



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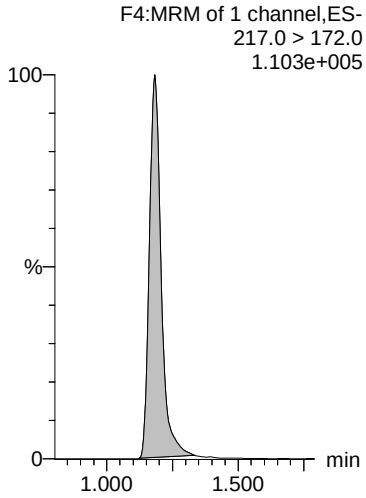
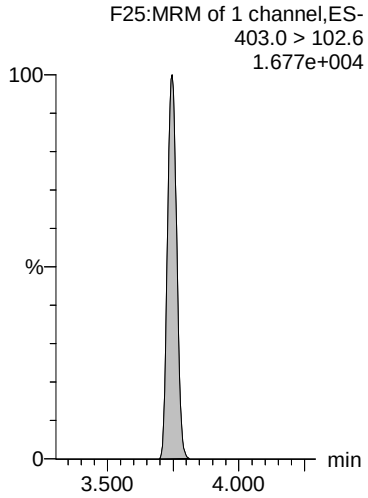
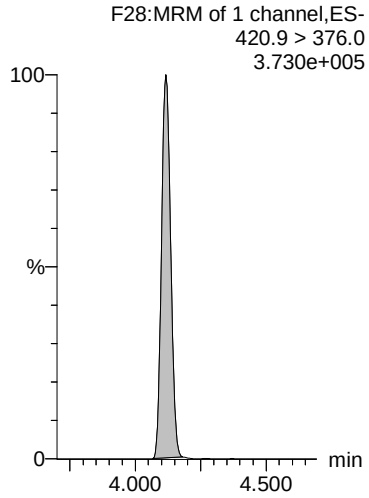


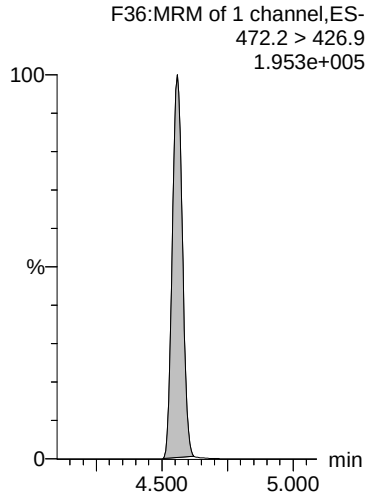
18O2-PFHxS



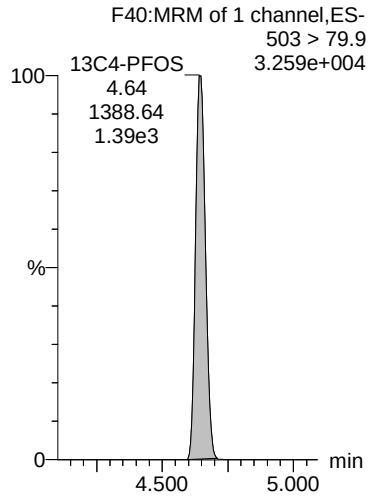
13C8-PFOA



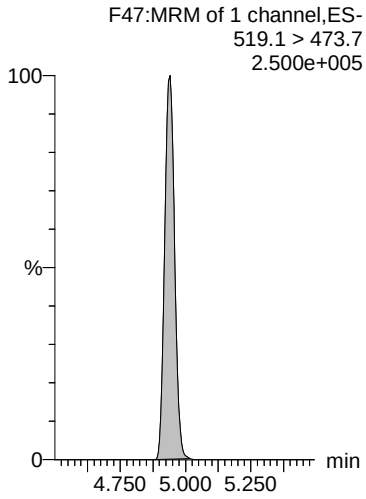
13C9-PFNA



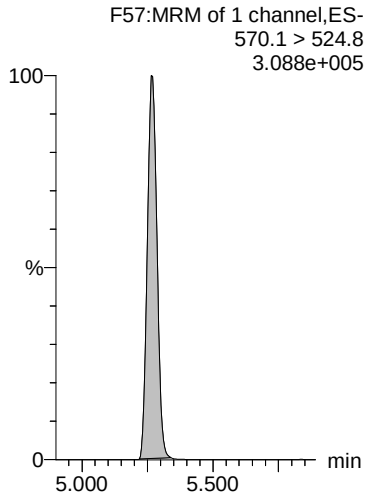
13C4-PFOS



13C6-PFDA



13C7-PFUdA



GM 7/11/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

	#	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	2.82e1	5.41e2	1.04		2.47	2.46	0.650	0.3768		1.804	NO
2	7	PFHxA	313.0 > 269.0	5.92e3	2.64e3	1.04		2.97	2.97	11.2	9.2368		16.093	NO
3	11	PFHpA	363.0 > 318.9	2.37e3	3.06e3	1.04		3.59	3.59	9.68	7.5600		4.915	NO
4	13	L-PFHxS	398.9 > 79.6	9.09e2	1.19e3	1.04		3.75	3.75	9.53	10.8783		2.105	NO
5	80	Total PFHxS	398.9 > 79.6	9.09e2	1.19e3	1.04		3.83		9.53	10.8783			
6	49	13C3-PFBS	302.0 > 98.8	5.41e2	5.44e2	1.04	1.035	2.47	2.47	12.4	11.4988	96.1		
7	52	13C2-PFHxA	315.0 > 270.0	2.64e3	9.72e3	1.04	0.792	2.97	2.97	3.40	4.1045	85.7		
8	53	13C4-PFHpA	367.2 > 321.8	3.06e3	9.72e3	1.04	0.391	3.59	3.59	3.94	9.6480	80.6		
9	54	13C3-PFHxS	401.8 > 79.9	1.19e3	5.44e2	1.04	2.547	3.75	3.75	27.4	10.2958	86.0		
10	54	13C3-PFHxS	401.8 > 79.9	1.19e3	5.44e2	1.04	2.547	3.75	3.75	27.4	10.2958	86.0		
11	-1													
12	16	L-PFOA	412.8 > 368.9	5.43e3	6.69e3	1.04		4.12	4.12	10.1	5.2308		3.416	NO
13	81	Total PFOA	412.8 > 368.9	5.43e3	6.69e3	1.04		4.21		10.1	5.2308			
14	21	PFNA	463.0 > 418.8	9.21e2	6.20e3	1.04		4.56	4.56	1.86	1.5956		3.455	NO
15	23	L-PFOS	498.9 > 79.9	1.15e4	1.19e3	1.04		4.65	4.65	121	91.1307		2.077	NO
16	82	Total PFOS	498.9 > 79.9	1.15e4	1.19e3	1.04		4.74		121	91.1307			
17	58	13C2-PFOA	414.9 > 369.7	6.69e3	1.31e4	1.04	0.564	4.12	4.12	6.38	10.8304	90.5		
18	58	13C2-PFOA	414.9 > 369.7	6.69e3	1.31e4	1.04	0.564	4.12	4.12	6.38	10.8304	90.5		
19	56	13C5-PFNA	468.2 > 422.9	6.20e3	8.05e3	1.04	0.983	4.56	4.56	9.63	9.3823	78.4		
20	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.21e3	1.04	1.060	4.65	4.65	12.3	11.0711	92.5		
21	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.21e3	1.04	1.060	4.65	4.65	12.3	11.0711	92.5		
22	-1													
23	26	PFDA	513 > 468.8	1.78e2	4.80e3	1.04		4.94	4.93	0.462	0.3309		4.140	NO
24	29	L-MeFOSAA	570 > 419		1.03e3	1.04		5.09						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	1.03e3	1.04		5.19		0.000				
26	33	PFUdA	563.0 > 518.9	2.98e1	7.22e3	1.04		5.27	5.28	0.0516	0.0399		4.423	NO
27	37	PFDoA	612.9 > 569.0		8.39e3	1.04		5.55						
28	60	13C2-PFDA	515.1 > 469.9	4.80e3	1.01e4	1.04	0.662	4.94	4.94	5.94	8.5878	71.7		
29	62	d3-N-MeFOSAA	573.3 > 419	1.03e3	1.17e4	1.04	0.129	5.09	5.09	1.09	8.1214	67.8		
30	62	d3-N-MeFOSAA	573.3 > 419	1.03e3	1.17e4	1.04	0.129	5.09	5.09	1.09	8.1214	67.8		
31	63	13C2-PFUdA	565 > 519.8	7.22e3	1.17e4	1.04	0.857	5.27	5.27	7.69	8.5883	71.7		
32	65	13C2-PFDoA	614.7 > 569.7	8.39e3	1.01e4	1.04	1.229	5.56	5.55	10.4	8.0884	67.6		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		1.35e3	1.04		5.25						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	1.35e3	1.04		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		8.39e3	1.04		5.80						

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		4.43e3	1.04		6.03						
38	85	TDCA	498.3>106.9			1.04		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.35e3	1.17e4	1.04	0.147	5.25	5.25	1.44	9.3447	78.1		
40	64	d5-N-EtFOSAA	589.3 > 419	1.35e3	1.17e4	1.04	0.147	5.25	5.25	1.44	9.3447	78.1		
41	65	13C2-PFDoA	614.7 > 569.7	8.39e3	1.01e4	1.04	1.229	5.56	5.55	10.4	8.0884	67.6		
42	67	13C2-PFTeDA	715.1 > 669.7	4.43e3	1.17e4	1.04	0.511	6.03	6.03	4.71	8.8203	73.7		
43	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.21e3	1.04	1.060	4.65	4.65	12.3	11.0711	92.5		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	9.72e3	9.72e3	1.04	1.000	2.97	2.97	12.5	11.9700	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.31e4	1.31e4	1.04	1.000	4.12	4.12	12.5	11.9700	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	5.44e2	5.44e2	1.04	1.000	3.75	3.75	12.5	11.9700	100.0		
48	76	13C9-PFNA	472.2 > 426.9	8.05e3	8.05e3	1.04	1.000	4.56	4.56	12.5	11.9700	100.0		
49	77	13C4-PFOS	503 > 79.9	1.21e3	1.21e3	1.04	1.000	4.65	4.65	12.5	11.9700	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.01e4	1.01e4	1.04	1.000	4.94	4.94	12.5	11.9700	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.17e4	1.17e4	1.04	1.000	5.27	5.27	12.5	11.9700	100.0		

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

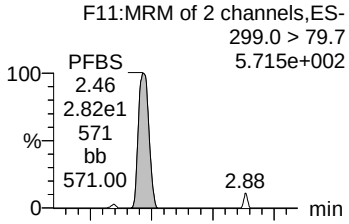
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

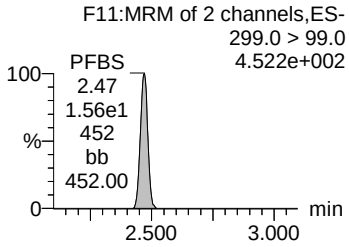
Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Method: Z:\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

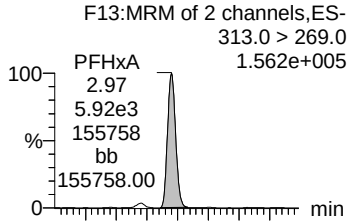
Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

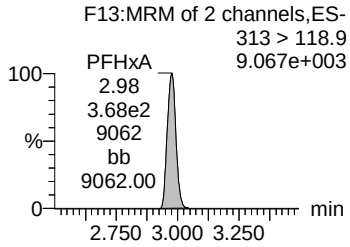
PFBS





PFHxA





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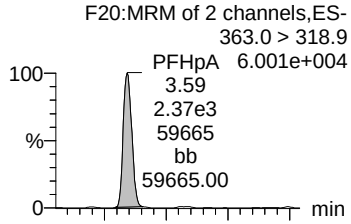
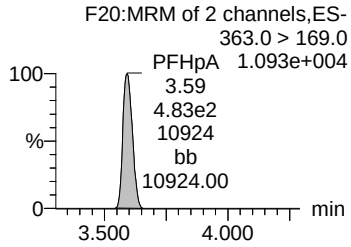
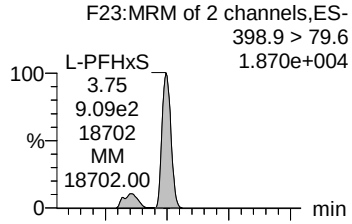
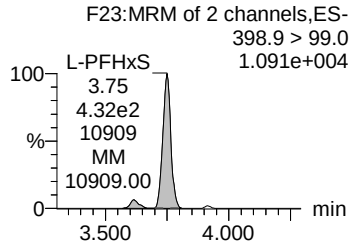


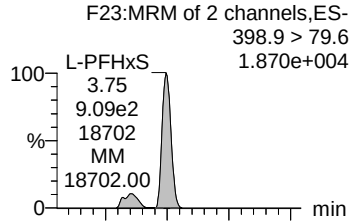


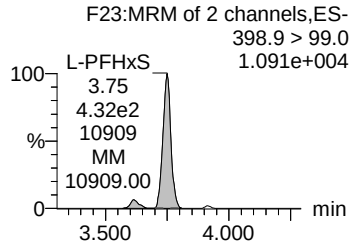
L-PFHxS



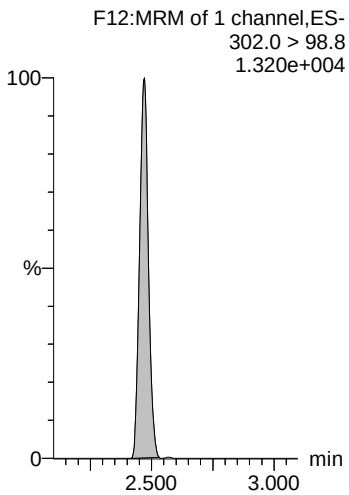


Total PFHxS





13C3-PFBS



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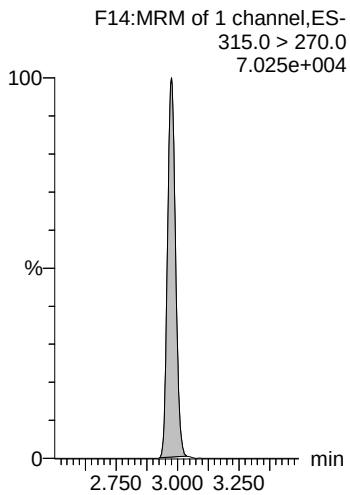

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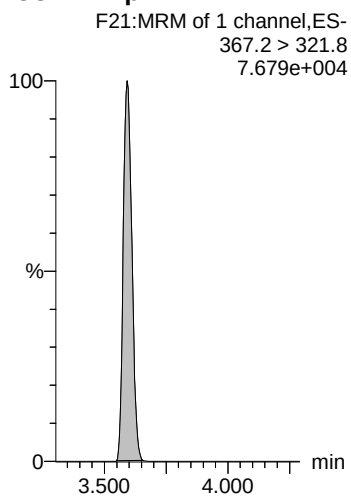

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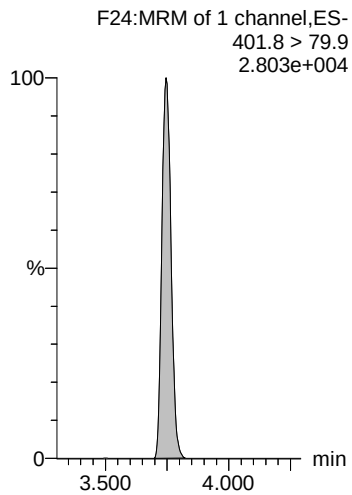

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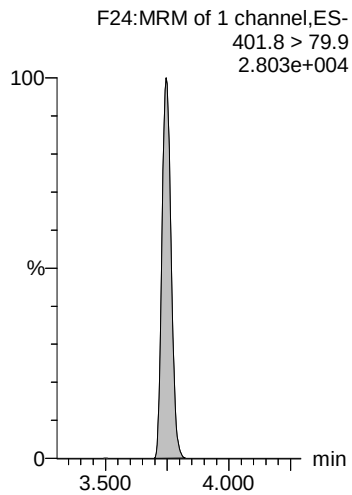


FBR 7/12/2019

Vista Analytical Laboratory L14

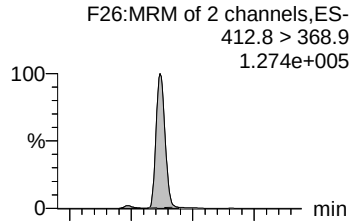
Review: AMR 7/12/2019

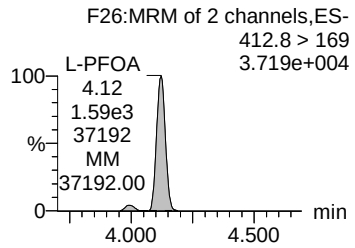
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

L-PFOA





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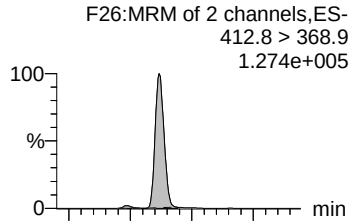

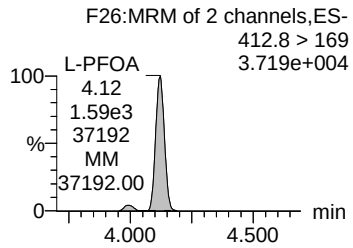

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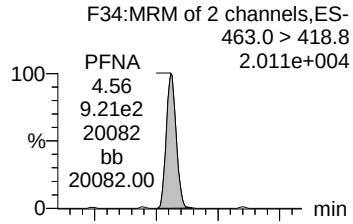
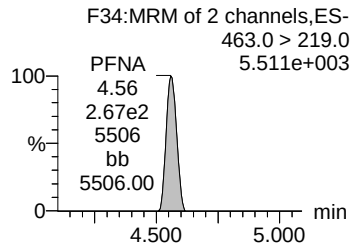
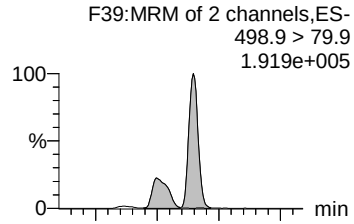
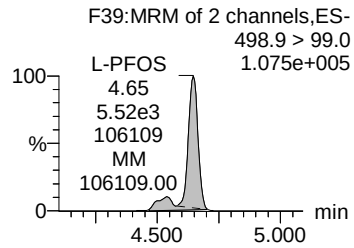




L-PFOS





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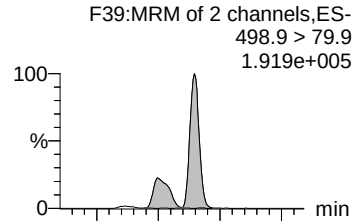

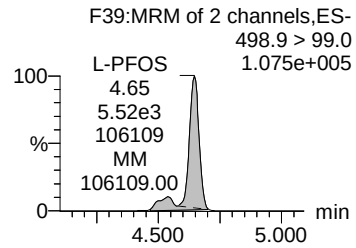

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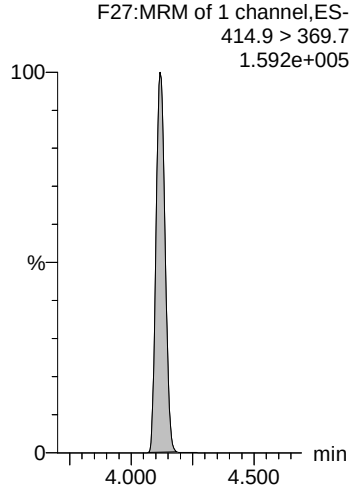

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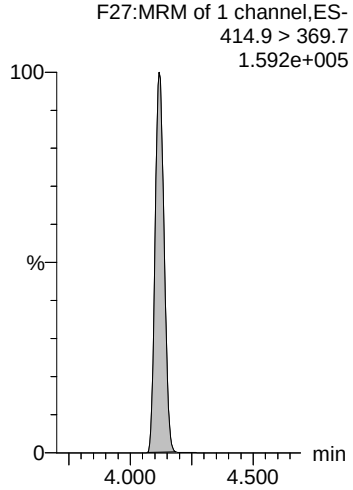

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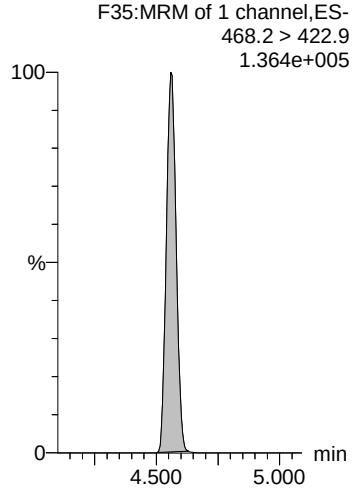

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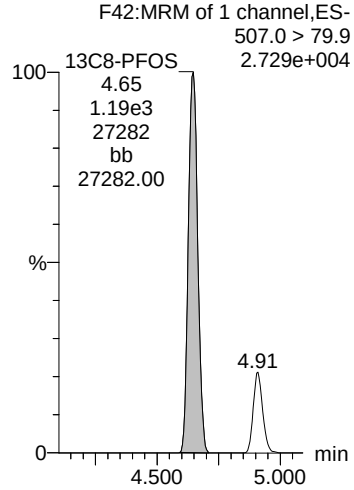

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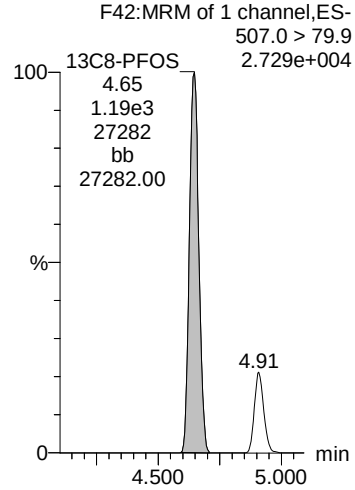


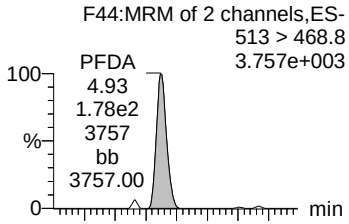
FBR 7/12/2019

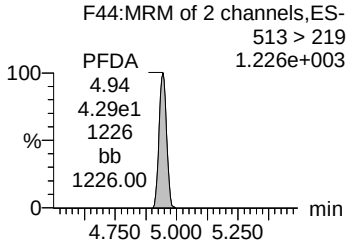
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

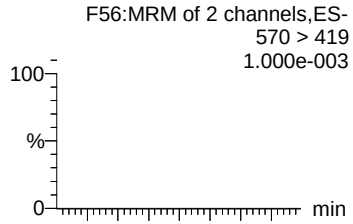
Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

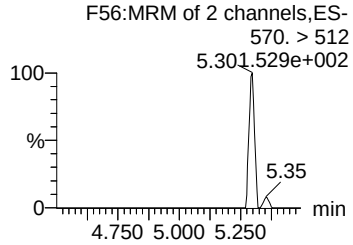
PFDA





L-MeFOSAA





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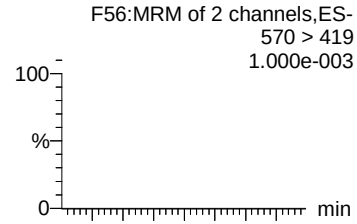

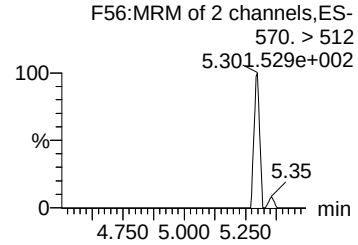

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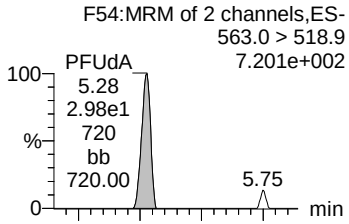
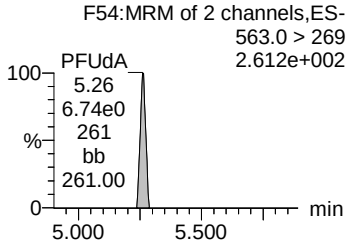
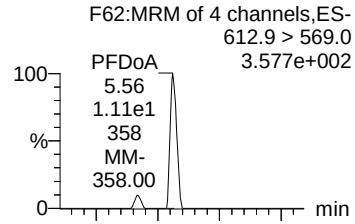
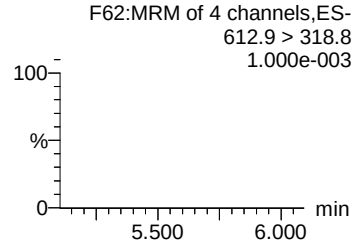




PFDoA





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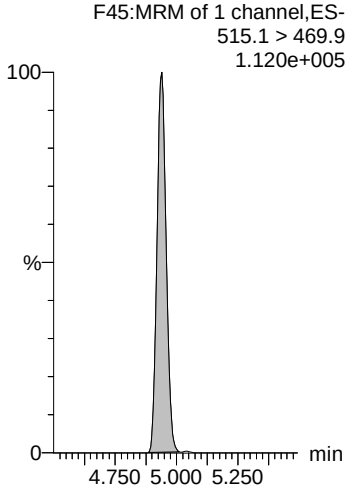

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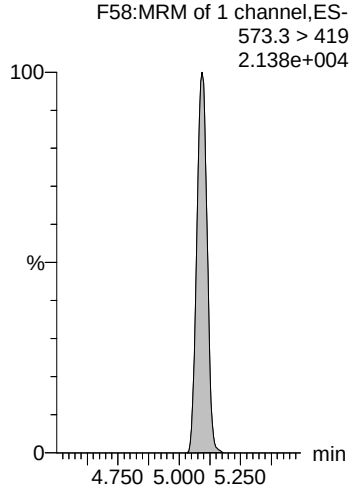

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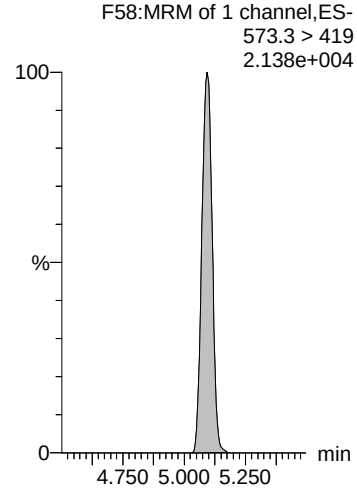

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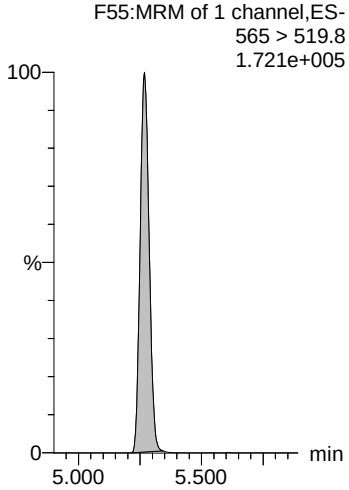

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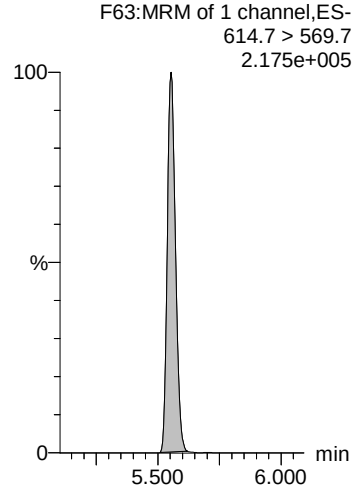

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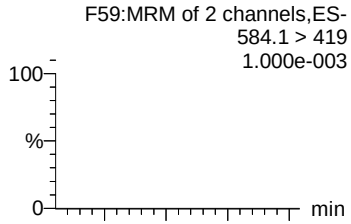
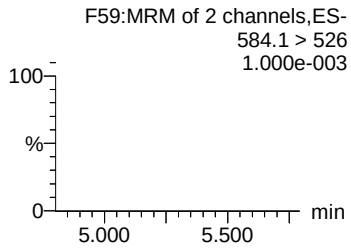
Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

L-EtFOSAA





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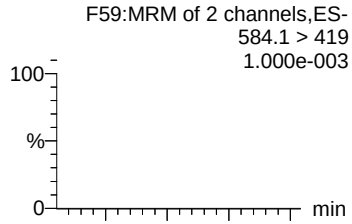

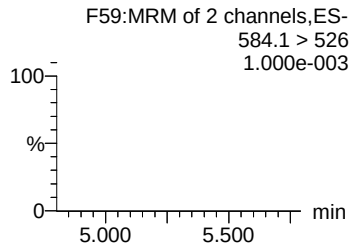

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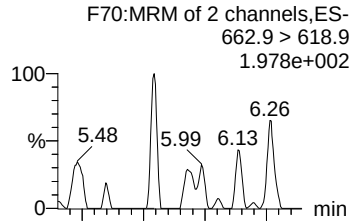

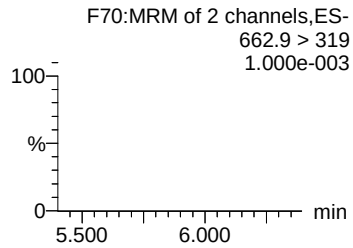

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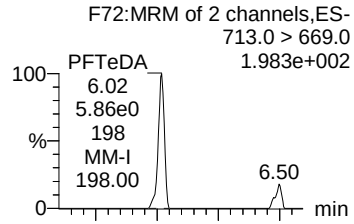

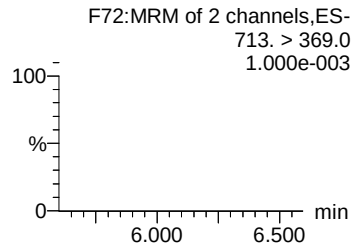

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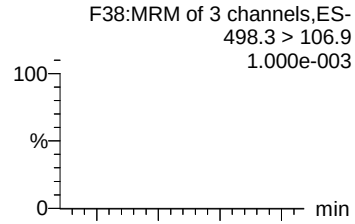

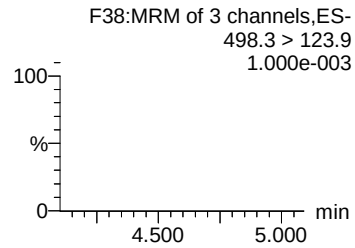

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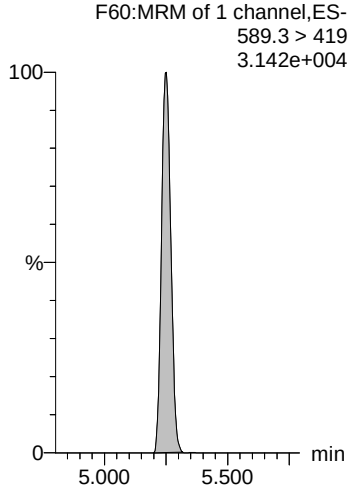

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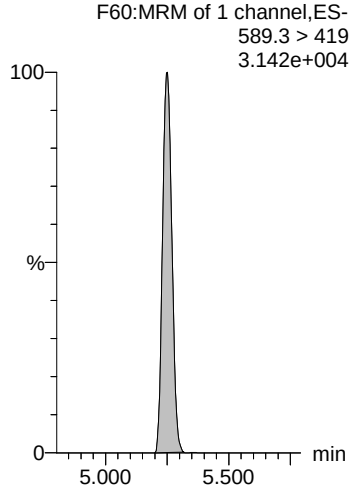
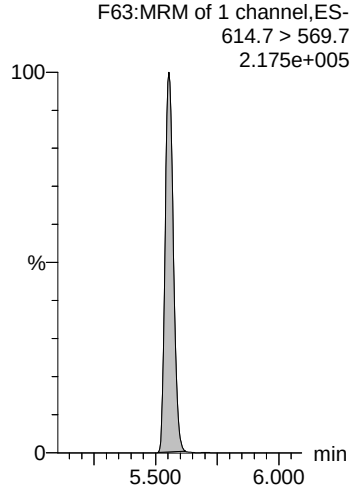
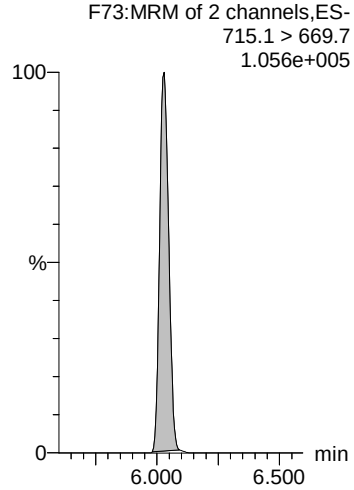


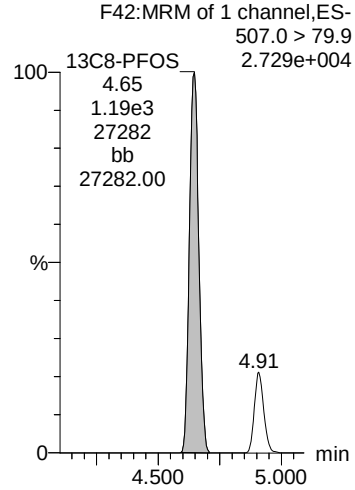
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



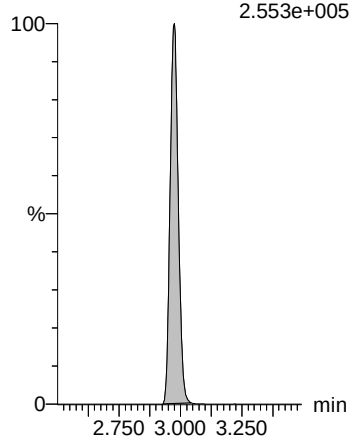
FBR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-27.qld

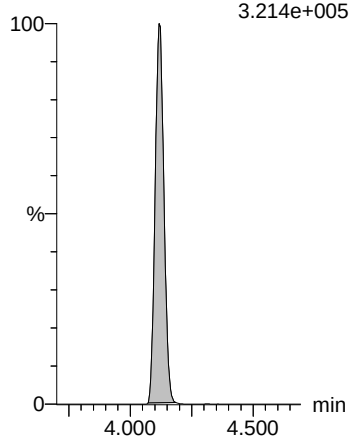
Last Altered: Friday, July 12, 2019 11:31:04 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:32:24 Pacific Daylight Time

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

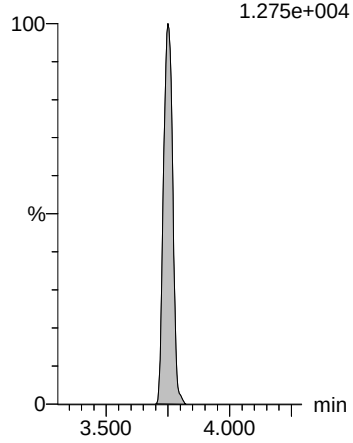
13C5-PFHxA



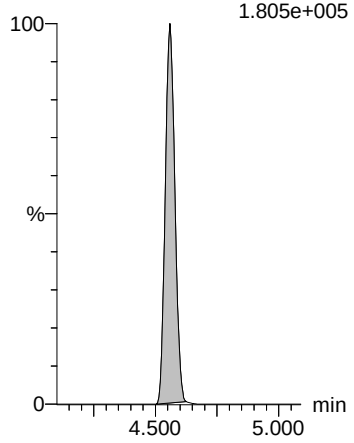
13C8-PFOA



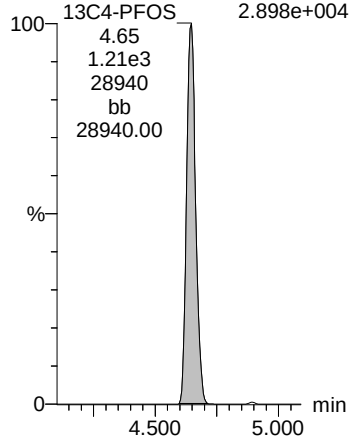
18O2-PFHxS



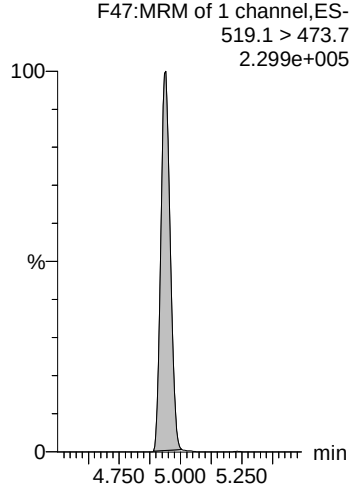
13C9-PFNA



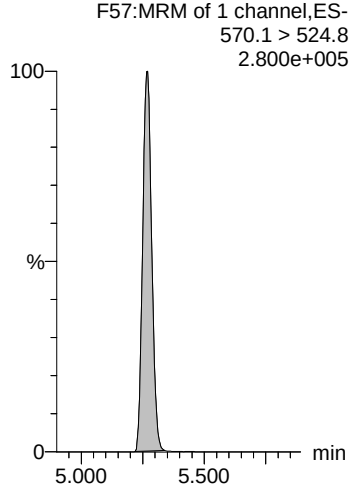
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

*See Dilution

Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, 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	1.25e3	5.65e2	1.04		2.47	2.47	27.7	11.5216		2.806	NO	
2	7	PFHxA	313.0 > 269.0	1.70e4	3.10e3	1.04		2.97	2.97	27.4	22.5785		14.091	NO	
3	11	PFHpA	363.0 > 318.9	7.82e3	3.62e3	1.04		3.59	3.59	27.0	20.9973		4.950	NO	
4	13	L-PFHxS	398.9 > 79.6	2.56e3	1.40e3	1.04		3.75	3.75	22.8	25.4707		1.844	NO	
5	80	Total PFHxS	398.9 > 79.6	2.56e3	1.40e3	1.04		3.83		22.8	25.4707				
6	49	13C3-PFBS	302.0 > 98.8	5.65e2	5.88e2	1.04	1.035	2.47	2.47	12.0	11.1045	92.8			
7	52	13C2-PFHxA	315.0 > 270.0	3.10e3	1.09e4	1.04	0.792	2.97	2.97	3.57	4.3137	90.1			
8	53	13C4-PFHpA	367.2 > 321.8	3.62e3	1.09e4	1.04	0.391	3.59	3.59	4.17	10.2133	85.3			
9	54	13C3-PFHxS	401.8 > 79.9	1.40e3	5.88e2	1.04	2.547	3.75	3.75	29.8	11.2062	93.6			
10	54	13C3-PFHxS	401.8 > 79.9	1.40e3	5.88e2	1.04	2.547	3.75	3.75	29.8	11.2062	93.6			
11	-1														
12	16	L-PFOA	412.8 > 368.9	2.00e4	6.95e3	1.04		4.12	4.12	35.9	18.5983		3.459	NO	
13	81	Total PFOA	412.8 > 368.9	2.00e4	6.95e3	1.04		4.21		35.9	18.5983				
14	21	PFNA	463.0 > 418.8	7.15e3	6.06e3	1.04		4.56	4.56	14.7	12.8573		2.816	NO	
15	23	L-PFOS	498.9 > 79.9	1.65e4	1.35e3	1.04		4.64	4.65	153	115.3400		2.006	NO	*
16	82	Total PFOS	498.9 > 79.9	1.65e4	1.35e3	1.04		4.74		153	115.3400				
17	58	13C2-PFOA	414.9 > 369.7	6.95e3	1.49e4	1.04	0.564	4.12	4.12	5.81	9.8627	82.4			
18	58	13C2-PFOA	414.9 > 369.7	6.95e3	1.49e4	1.04	0.564	4.12	4.12	5.81	9.8627	82.4			
19	56	13C5-PFNA	468.2 > 422.9	6.06e3	9.26e3	1.04	0.983	4.56	4.56	8.18	7.9728	66.6			
20	59	13C8-PFOS	507.0 > 79.9	1.35e3	1.43e3	1.04	1.060	4.65	4.64	11.8	10.6375	88.9			
21	59	13C8-PFOS	507.0 > 79.9	1.35e3	1.43e3	1.04	1.060	4.65	4.64	11.8	10.6375	88.9			
22	-1														
23	26	PFDA	513 > 468.8	6.73e3	4.70e3	1.04		4.94	4.94	17.9	10.3126		4.330	NO	
24	29	L-MeFOSAA	570 > 419	3.30e3	1.12e3	1.04		5.09	5.09	36.9	11.7893		2.962	NO	
25	83	Total N-MeFOSAA	570. > 419	3.30e3	1.12e3	1.04		5.19		36.9	11.7893				
26	33	PFUdA	563.0 > 518.9	6.13e3	7.78e3	1.04		5.26	5.26	9.85	10.1185		5.913	NO	
27	37	PFDoA	612.9 > 569.0	7.64e3	9.00e3	1.04		5.55	5.55	10.6	10.6402		6.832	NO	
28	60	13C2-PFDA	515.1 > 469.9	4.70e3	1.11e4	1.04	0.662	4.94	4.94	5.29	7.6544	63.9			
29	62	d3-N-MeFOSAA	573.3 > 419	1.12e3	1.33e4	1.04	0.129	5.09	5.09	1.05	7.7853	65.0			
30	62	d3-N-MeFOSAA	573.3 > 419	1.12e3	1.33e4	1.04	0.129	5.09	5.09	1.05	7.7853	65.0			
31	63	13C2-PFUdA	565 > 519.8	7.78e3	1.33e4	1.04	0.857	5.27	5.26	7.29	8.1504	68.1			
32	65	13C2-PFDoA	614.7 > 569.7	9.00e3	1.11e4	1.04	1.229	5.56	5.55	10.1	7.9069	66.1			
33	-1														
34	31	L-EtFOSAA	584.1 > 419	2.31e3	1.25e3	1.04		5.25	5.25	23.1	11.1553		1.450	NO	
35	84	Total N-EtFOSAA	584.1 > 419	2.31e3	1.25e3	1.04		5.33		23.1	11.1553				
36	39	PFTrDA	662.9 > 618.9	9.31e3	9.00e3	1.04		5.80	5.81	12.9	11.6824		16.072	NO	

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	7.52e3	5.31e3	1.04		6.03	6.03	17.7	11.3133		17.837	NO
38	85	TDCA	498.3>106.9			1.04		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.25e3	1.33e4	1.04	0.147	5.25	5.25	1.17	7.5964	63.5		
40	64	d5-N-EtFOSAA	589.3 > 419	1.25e3	1.33e4	1.04	0.147	5.25	5.25	1.17	7.5964	63.5		
41	65	13C2-PFDoA	614.7 > 569.7	9.00e3	1.11e4	1.04	1.229	5.56	5.55	10.1	7.9069	66.1		
42	67	13C2-PFTeDA	715.1 > 669.7	5.31e3	1.33e4	1.04	0.511	6.03	6.03	4.98	9.3273	77.9		
43	59	13C8-PFOS	507.0 > 79.9	1.35e3	1.43e3	1.04	1.060	4.65	4.64	11.8	10.6375	88.9		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.09e4	1.09e4	1.04	1.000	2.97	2.97	12.5	11.9697	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.49e4	1.49e4	1.04	1.000	4.12	4.12	12.5	11.9697	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	5.88e2	5.88e2	1.04	1.000	3.75	3.75	12.5	11.9697	100.0		
48	76	13C9-PFNA	472.2 > 426.9	9.26e3	9.26e3	1.04	1.000	4.56	4.56	12.5	11.9697	100.0		
49	77	13C4-PFOS	503 > 79.9	1.43e3	1.43e3	1.04	1.000	4.65	4.65	12.5	11.9697	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.11e4	1.11e4	1.04	1.000	4.94	4.93	12.5	11.9697	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.33e4	1.33e4	1.04	1.000	5.27	5.26	12.5	11.9697	100.0		

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

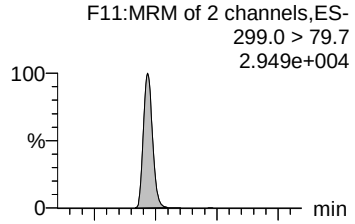
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

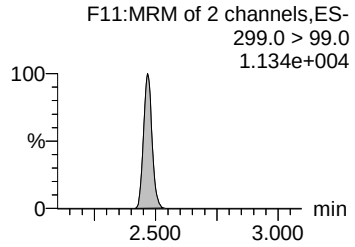
Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

Method: Z:\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

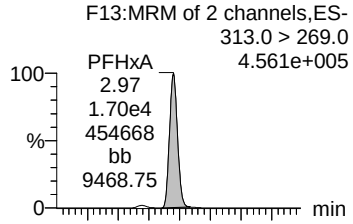
Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

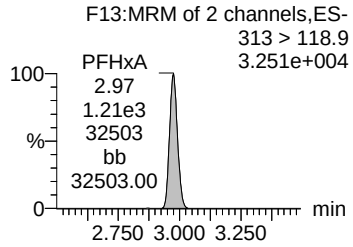
PFBS



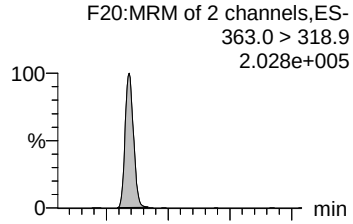


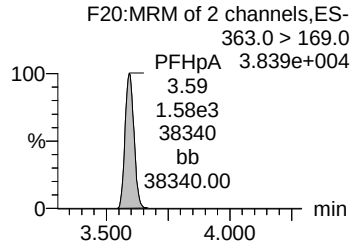
PFHxA



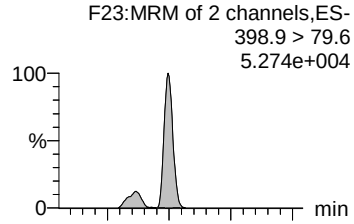


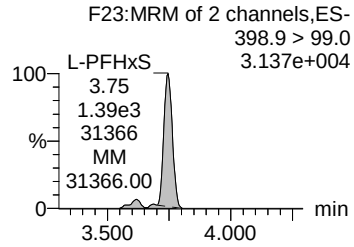
PFHpA



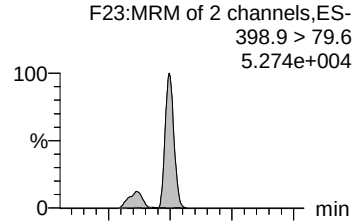


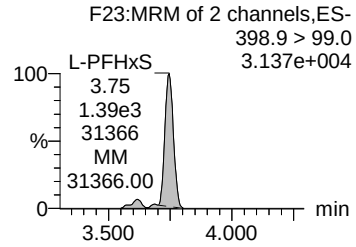
L-PFHxS



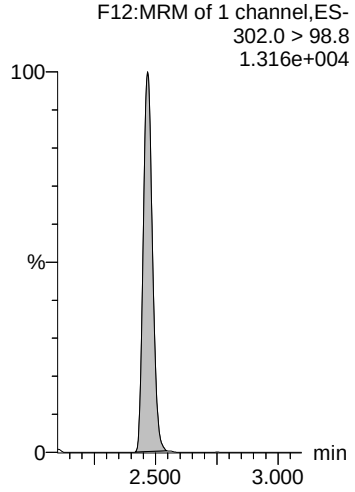


Total PFHxS

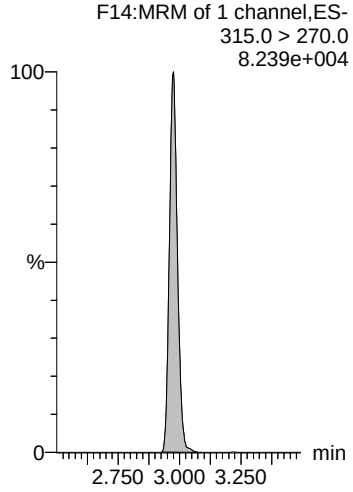




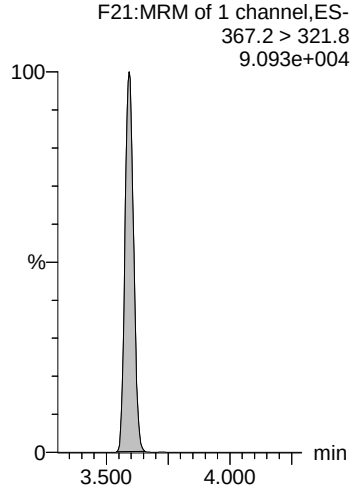
13C3-PFBS



13C2-PFHxA



13C4-PFHpA



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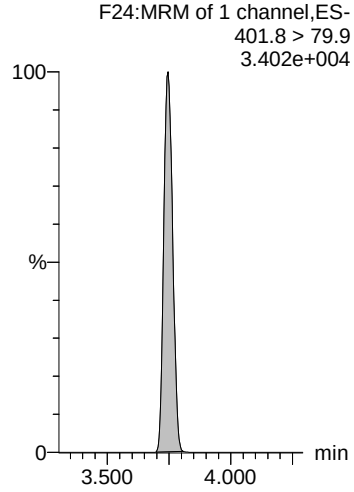
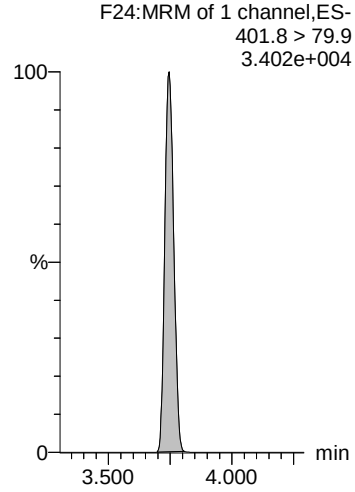


13C3-PFHxS



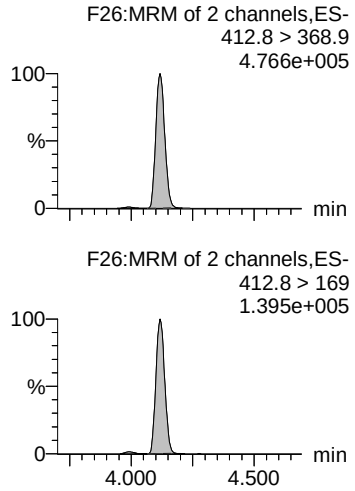
FBR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

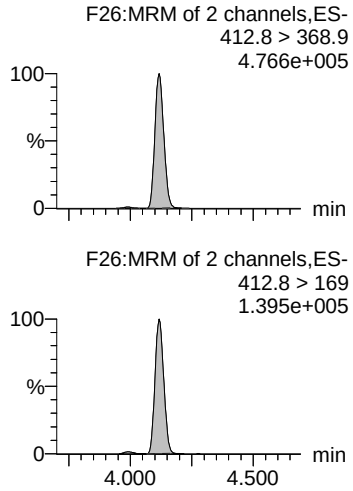
Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

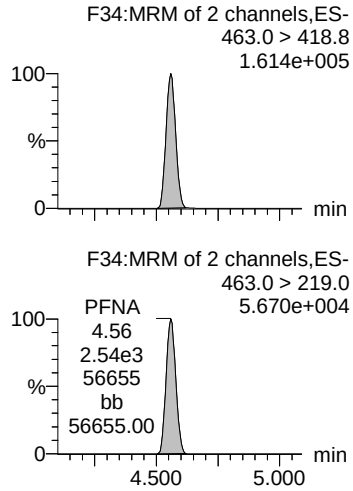
L-PFOA



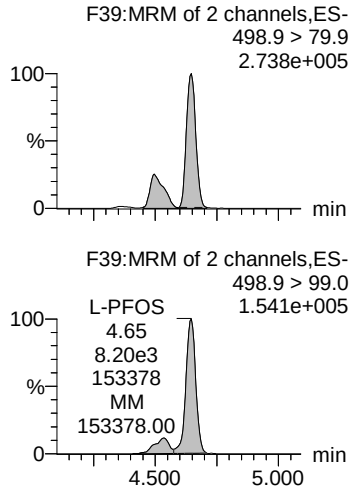
Total PFOA



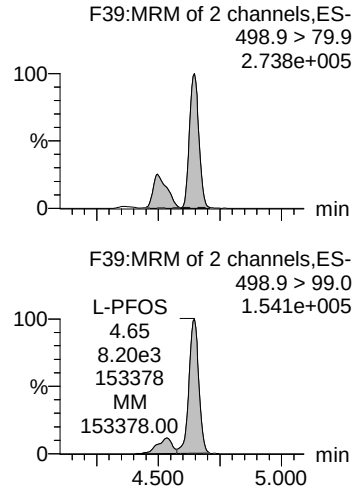
PFNA



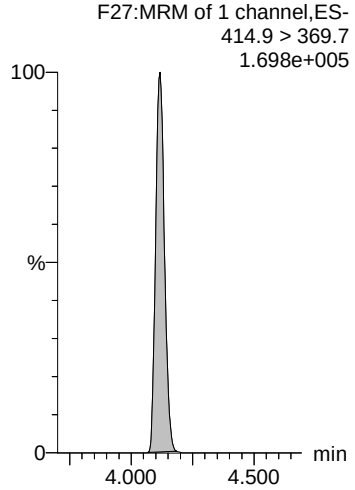
L-PFOS



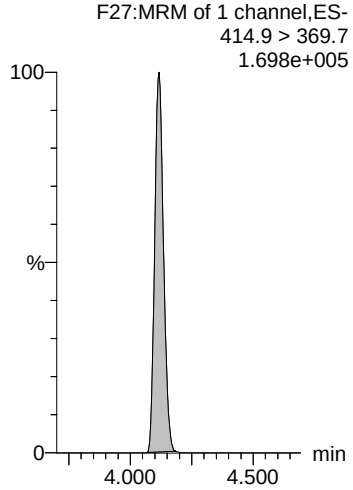
Total PFOS



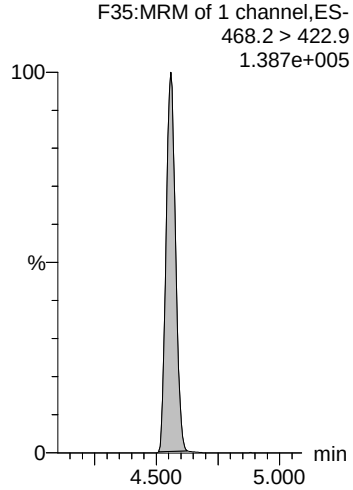
13C2-PFOA



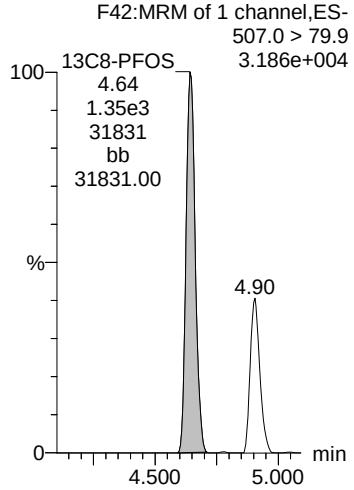
13C2-PFOA



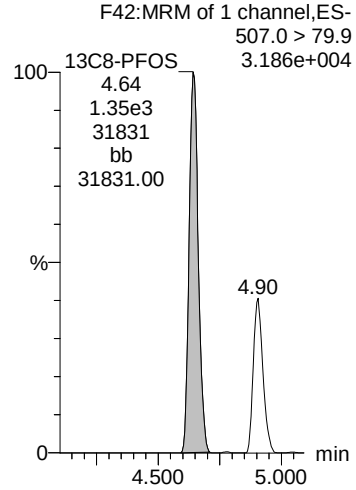
13C5-PFNA



13C8-PFOS



13C8-PFOS



FBR 7/12/2019

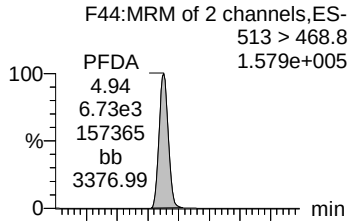
Review: AMR 7/12/2019

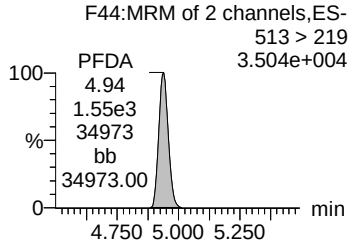
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

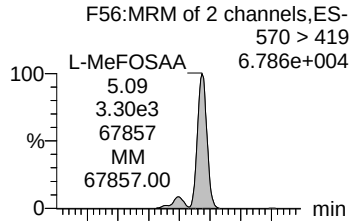
Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

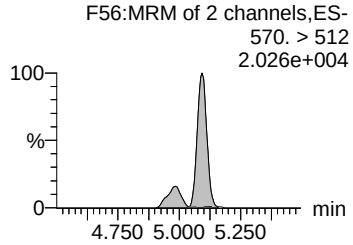
PFDA



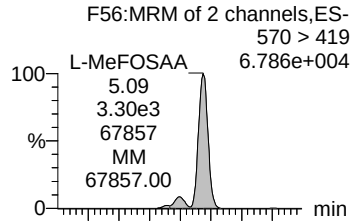


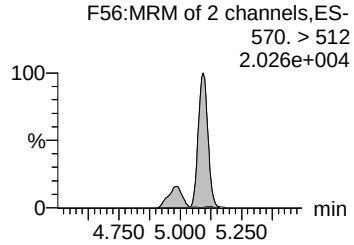
L-MeFOSAA



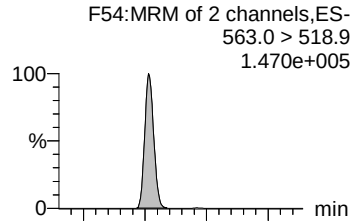


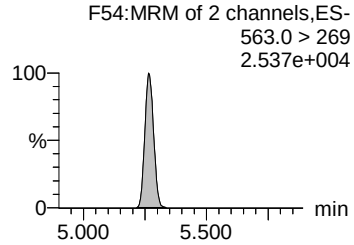
Total N-MeFOSAA



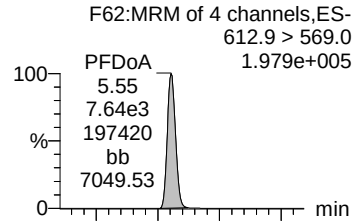


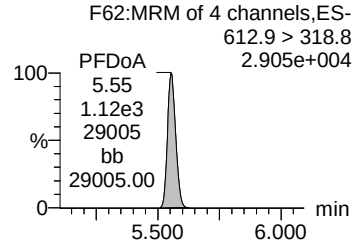
PFUdA



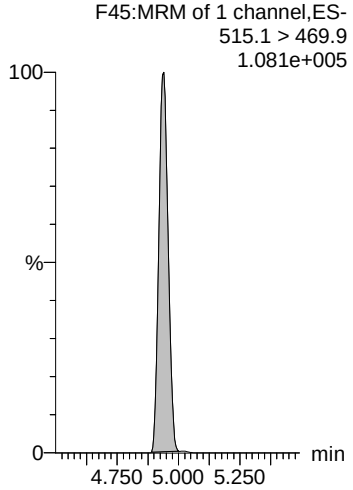


PFDoA

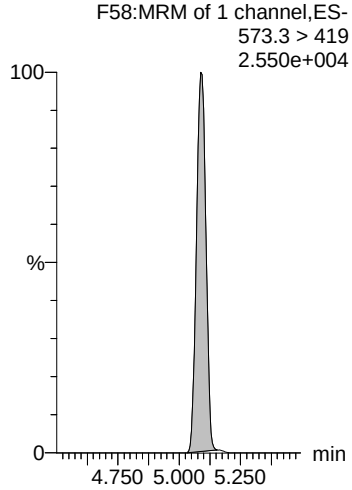




13C2-PFDA



d3-N-MeFOSAA



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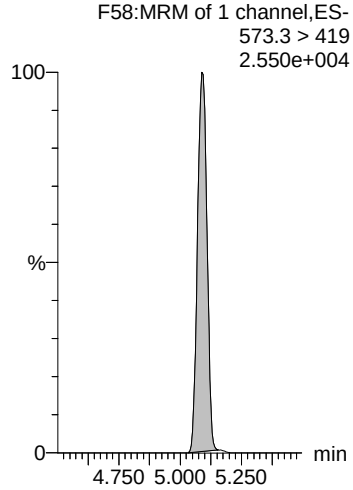
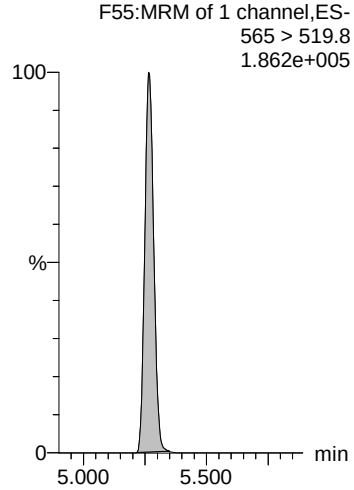
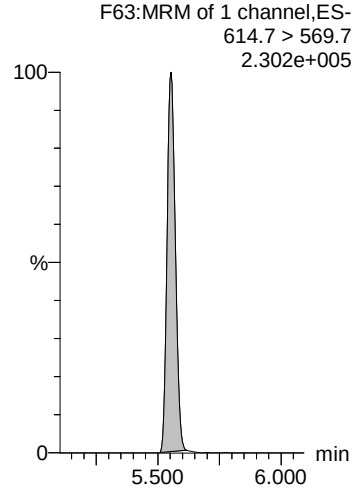


13C2-PFUdA



13C2-PFDoA



FBR 7/12/2019

Vista Analytical Laboratory L14

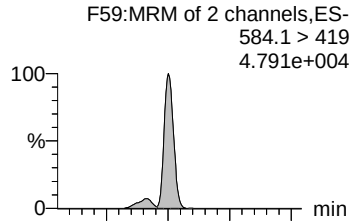
Review: AMR 7/12/2019

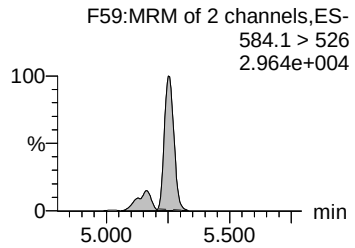
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

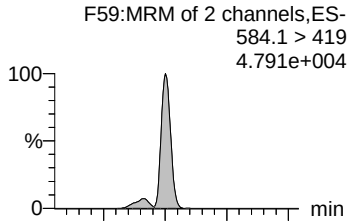
Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

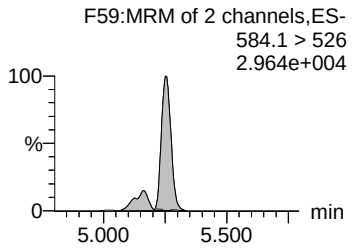
L-EtFOSAA



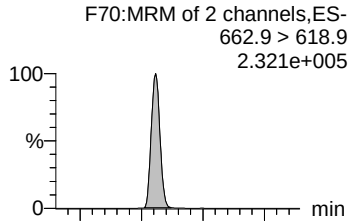


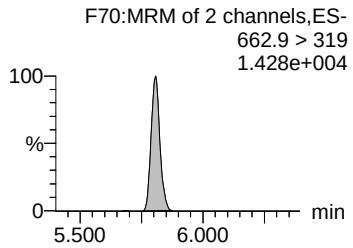
Total N-EtFOSAA



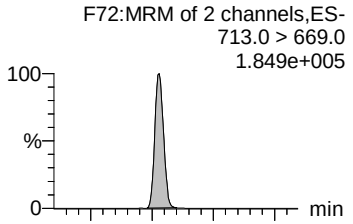


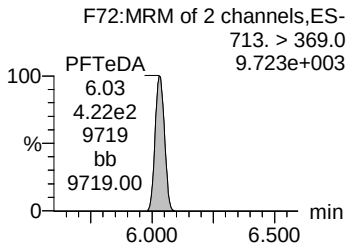
PFTrDA



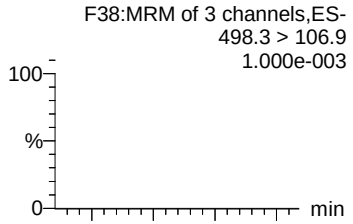


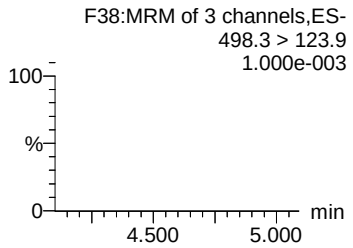
PFTeDA



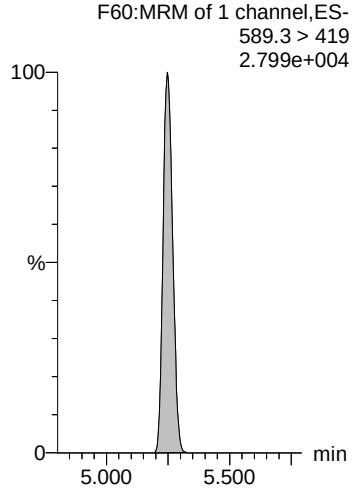


TDCA

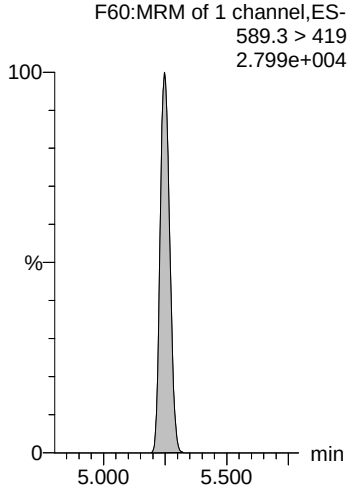




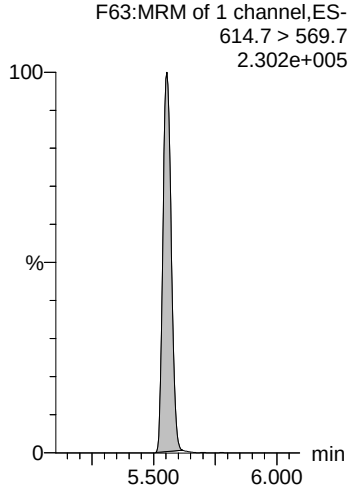
d5-N-EtFOSAA



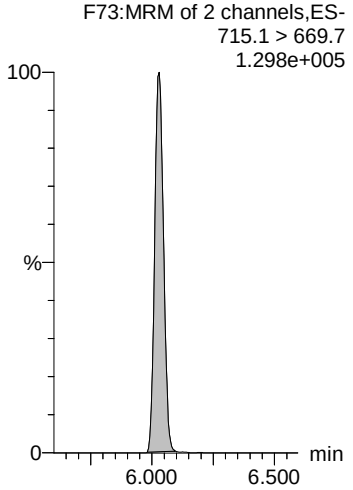
d5-N-EtFOSAA



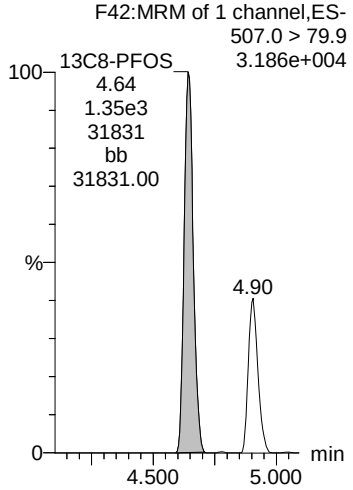
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



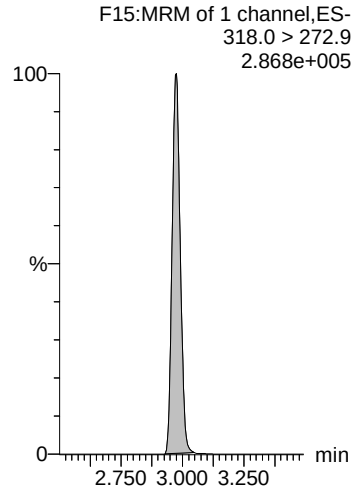
FBR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-18.qld

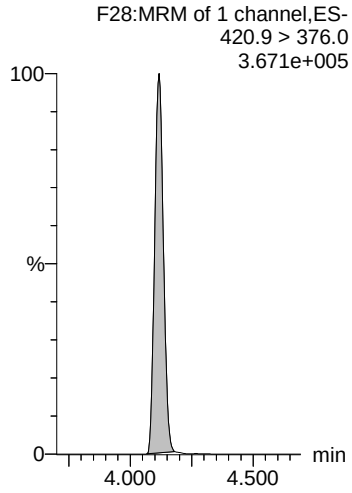
Last Altered: Friday, July 12, 2019 11:21:19 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:22:35 Pacific Daylight Time

Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

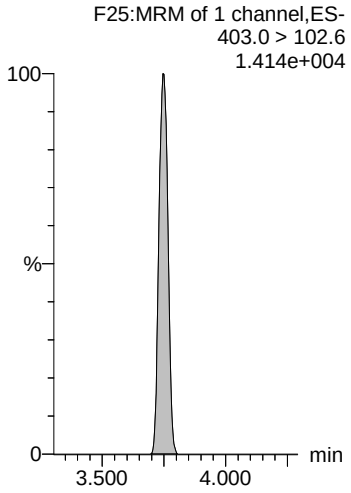
13C5-PFHxA



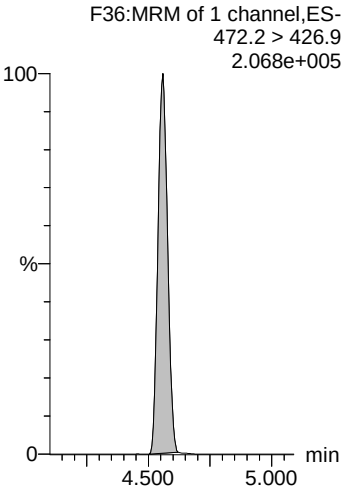
13C8-PFOA



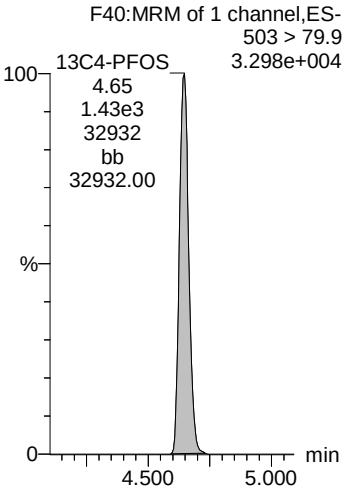
18O2-PFHxS



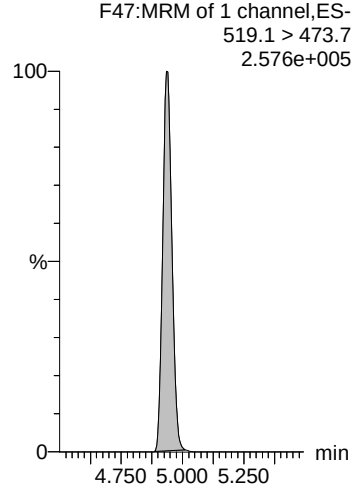
13C9-PFNA



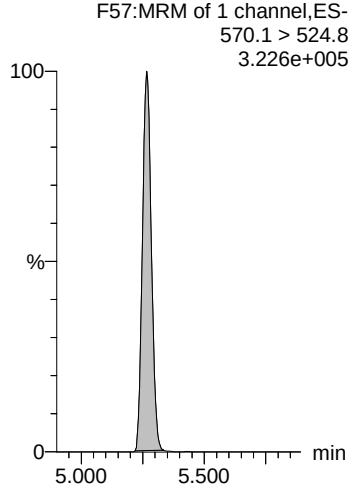
13C4-PFOS



13C6-PFDA



13C7-PFUdA



FBR 7/12/2019

Vista Analytical Laboratory

Review: AMR 7/12/2019

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-11.qld

Last Altered: Friday, July 12, 2019 13:07:38 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:08:09 Pacific Daylight Time

Name: 190712M1_11, Date: 12-Jul-2019, Time: 12:42:12, ID: B9F0280-MS1@5X Matrix Spike 1.08, Description: Matrix Spike

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
1	23	L-PFOS	498.9 > 79.9	3.59e3	2.78e2	1.04		4.63	4.63	161	121.8793		1.972	NO
2	82	Total PFOS	498.9 > 79.9	3.59e3	2.78e2	1.04		4.74		161	121.8793			
3	85	TDCA	498.3>106.9			1.04		5.45						
4	77	13C4-PFOS	503 > 79.9	2.73e2	2.73e2	1.04	1.000	4.64	4.63	12.5	11.9697	100.0		
5	59	13C8-PFOS	507.0 > 79.9	2.78e2	2.73e2	1.04	1.060	4.64	4.63	12.7	11.4930	96.0		
6	59	13C8-PFOS	507.0 > 79.9	2.78e2	2.73e2	1.04	1.060	4.64	4.63	12.7	11.4930	96.0		
7	59	13C8-PFOS	507.0 > 79.9	2.78e2	2.73e2	1.04	1.060	4.64	4.63	12.7	11.4930	96.0		

CGH 7/12/2019

Vista Analytical Laboratory

Review: AMR 7/12/2019

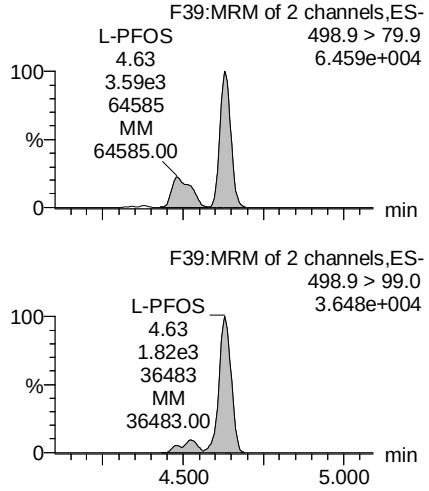
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-11.qld

Last Altered: Friday, July 12, 2019 13:07:38 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:08:09 Pacific Daylight Time

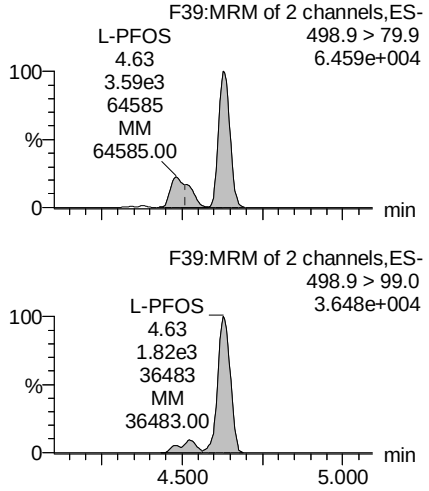
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_11, Date: 12-Jul-2019, Time: 12:42:12, ID: B9F0280-MS1@5X Matrix Spike 1.08, Description: Matrix Spike

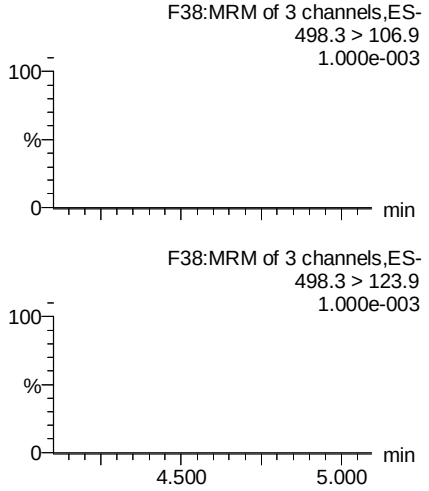
L-PFOS



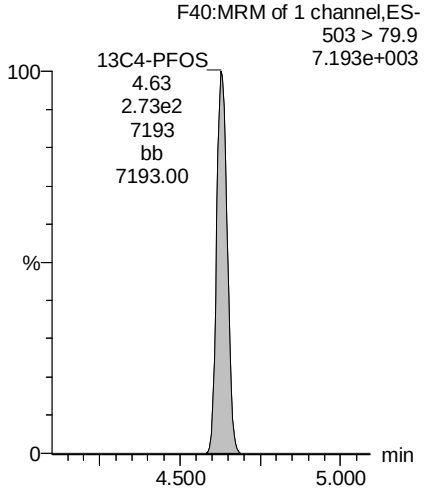
Total PFOS



TDCA



13C4-PFOS



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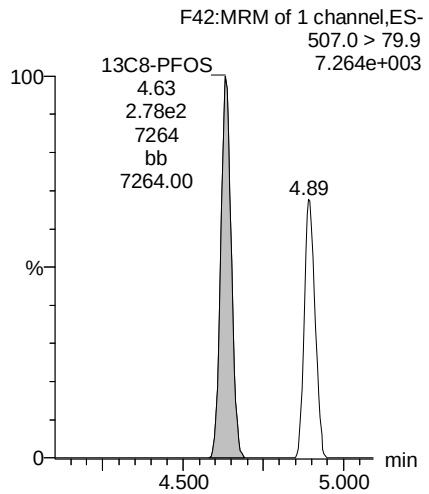
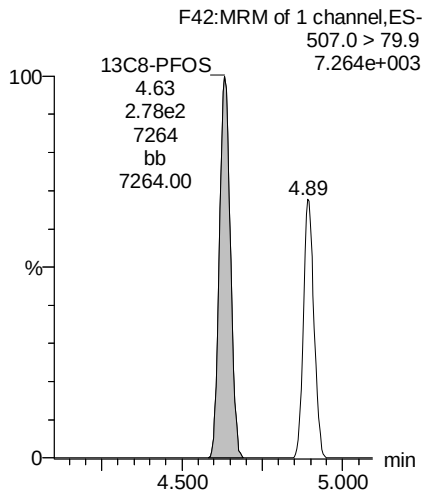


13C8-PFOS



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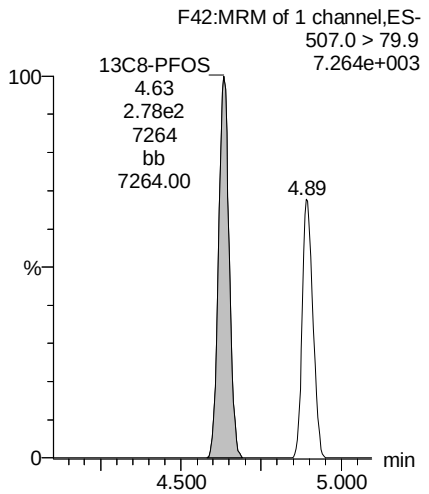

CGH 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, 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	1.10e3	5.16e2	1.01		2.47	2.47	26.6	11.5007		2.510	NO
2	7	PFHxA	313.0 > 269.0	1.13e4	2.89e3	1.01		2.97	2.97	19.6	16.7436		13.464	NO
3	11	PFHpA	363.0 > 318.9	5.36e3	3.32e3	1.01		3.59	3.59	20.2	16.3520		5.129	NO
4	13	L-PFHxS	398.9 > 79.6	1.57e3	1.26e3	1.01		3.75	3.75	15.6	18.2900		2.008	NO
5	80	Total PFHxS	398.9 > 79.6	1.57e3	1.26e3	1.01		3.83		15.6	18.2900			
6	49	13C3-PFBS	302.0 > 98.8	5.16e2	5.79e2	1.01	1.035	2.47	2.47	11.1	10.6940	86.0		
7	52	13C2-PFHxA	315.0 > 270.0	2.89e3	9.41e3	1.01	0.792	2.97	2.97	3.84	4.8185	96.9		
8	53	13C4-PFHpA	367.2 > 321.8	3.32e3	9.41e3	1.01	0.391	3.59	3.59	4.41	11.2020	90.1		
9	54	13C3-PFHxS	401.8 > 79.9	1.26e3	5.79e2	1.01	2.547	3.75	3.75	27.3	10.6415	85.6		
10	54	13C3-PFHxS	401.8 > 79.9	1.26e3	5.79e2	1.01	2.547	3.75	3.75	27.3	10.6415	85.6		
11	-1													
12	16	L-PFOA	412.8 > 368.9	1.42e4	6.51e3	1.01		4.12	4.12	27.3	14.6840		3.448	NO
13	81	Total PFOA	412.8 > 368.9	1.42e4	6.51e3	1.01		4.21		27.3	14.6840			
14	21	PFNA	463.0 > 418.8	6.82e3	6.37e3	1.01		4.56	4.56	13.4	12.1178		2.975	NO
15	23	L-PFOS	498.9 > 79.9	9.15e3	1.04e3	1.01		4.65	4.65	110	86.3065		1.971	NO
16	82	Total PFOS	498.9 > 79.9	9.15e3	1.04e3	1.01		4.74		110	86.3065			
17	58	13C2-PFOA	414.9 > 369.7	6.51e3	1.29e4	1.01	0.564	4.12	4.12	6.32	11.1372	89.6		
18	58	13C2-PFOA	414.9 > 369.7	6.51e3	1.29e4	1.01	0.564	4.12	4.12	6.32	11.1372	89.6		
19	56	13C5-PFNA	468.2 > 422.9	6.37e3	7.98e3	1.01	0.983	4.56	4.56	9.98	10.0961	81.2		
20	59	13C8-PFOS	507.0 > 79.9	1.04e3	1.23e3	1.01	1.060	4.65	4.65	10.5	9.8903	79.6		
21	59	13C8-PFOS	507.0 > 79.9	1.04e3	1.23e3	1.01	1.060	4.65	4.65	10.5	9.8903	79.6		
22	-1													
23	26	PFDA	513 > 468.8	6.35e3	4.42e3	1.01		4.94	4.94	17.9	10.7328		4.539	NO
24	29	L-MeFOSAA	570 > 419	2.89e3	9.99e2	1.01		5.09	5.10	36.1	12.0089		2.437	NO
25	83	Total N-MeFOSAA	570. > 419	2.89e3	9.99e2	1.01		5.19		36.1	12.0089			
26	33	PFUdA	563.0 > 518.9	5.79e3	6.65e3	1.01		5.27	5.27	10.9	11.6222		6.171	NO
27	37	PFDoA	612.9 > 569.0	7.00e3	8.45e3	1.01		5.55	5.55	10.3	10.7822		7.080	NO
28	60	13C2-PFDA	515.1 > 469.9	4.42e3	9.50e3	1.01	0.662	4.94	4.94	5.82	8.7435	70.3		
29	62	d3-N-MeFOSAA	573.3 > 419	9.99e2	1.14e4	1.01	0.129	5.09	5.09	1.09	8.4162	67.7		
30	62	d3-N-MeFOSAA	573.3 > 419	9.99e2	1.14e4	1.01	0.129	5.09	5.09	1.09	8.4162	67.7		
31	63	13C2-PFUdA	565 > 519.8	6.65e3	1.14e4	1.01	0.857	5.27	5.27	7.27	8.4294	67.8		
32	65	13C2-PFDoA	614.7 > 569.7	8.45e3	9.50e3	1.01	1.229	5.56	5.55	11.1	9.0003	72.4		
33	-1													
34	31	L-EtFOSAA	584.1 > 419	2.34e3	1.29e3	1.01		5.25	5.26	22.7	11.3542		1.662	NO
35	84	Total N-EtFOSAA	584.1 > 419	2.34e3	1.29e3	1.01		5.33		22.7	11.3542			
36	39	PFTrDA	662.9 > 618.9	8.61e3	8.45e3	1.01		5.80	5.81	12.7	11.9537		16.158	NO

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0	6.56e3	4.72e3	1.01		6.03	6.03	17.4	11.5345		12.459	NO
38	85	TDCA	498.3>106.9			1.01		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	1.29e3	1.14e4	1.01	0.147	5.25	5.25	1.41	9.5110	76.5		
40	64	d5-N-EtFOSAA	589.3 > 419	1.29e3	1.14e4	1.01	0.147	5.25	5.25	1.41	9.5110	76.5		
41	65	13C2-PFDoA	614.7 > 569.7	8.45e3	9.50e3	1.01	1.229	5.56	5.55	11.1	9.0003	72.4		
42	67	13C2-PFTeDA	715.1 > 669.7	4.72e3	1.14e4	1.01	0.511	6.03	6.03	5.16	10.0298	80.7		
43	59	13C8-PFOS	507.0 > 79.9	1.04e3	1.23e3	1.01	1.060	4.65	4.65	10.5	9.8903	79.6		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	9.41e3	9.41e3	1.01	1.000	2.97	2.97	12.5	12.4304	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.29e4	1.29e4	1.01	1.000	4.12	4.12	12.5	12.4304	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	5.79e2	5.79e2	1.01	1.000	3.75	3.75	12.5	12.4304	100.0		
48	76	13C9-PFNA	472.2 > 426.9	7.98e3	7.98e3	1.01	1.000	4.56	4.56	12.5	12.4304	100.0		
49	77	13C4-PFOS	503 > 79.9	1.23e3	1.23e3	1.01	1.000	4.65	4.65	12.5	12.4304	100.0		
50	78	13C6-PFDA	519.1 > 473.7	9.50e3	9.50e3	1.01	1.000	4.94	4.94	12.5	12.4304	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.14e4	1.14e4	1.01	1.000	5.27	5.27	12.5	12.4304	100.0		

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

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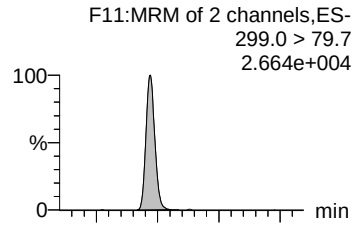
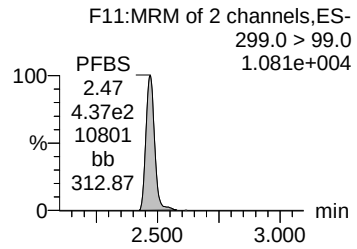
Calibration: Z:\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

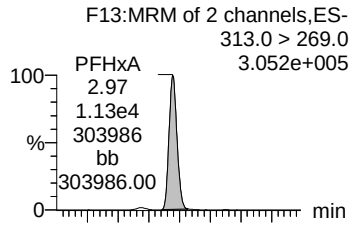
Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

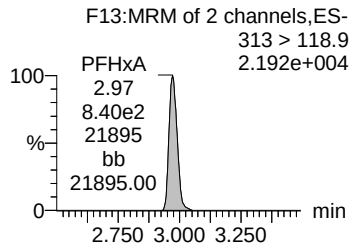
PFBS





PFHxA





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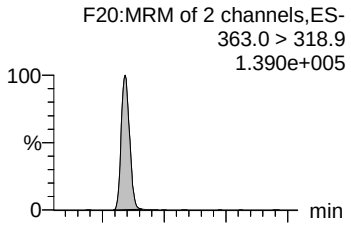

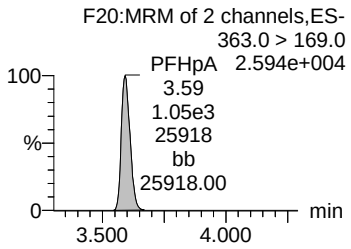

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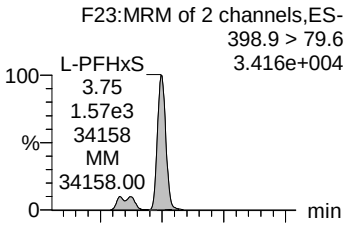
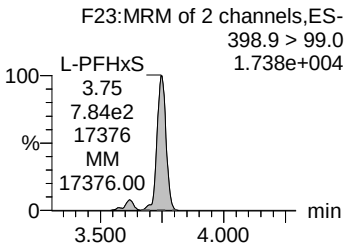
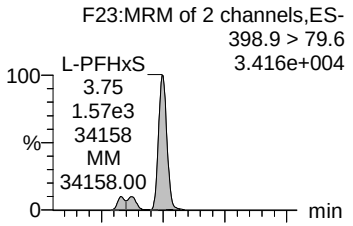
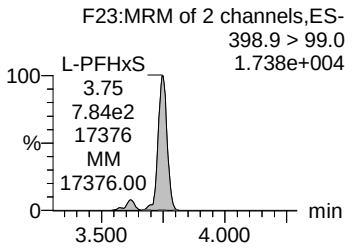




Total PFHxS





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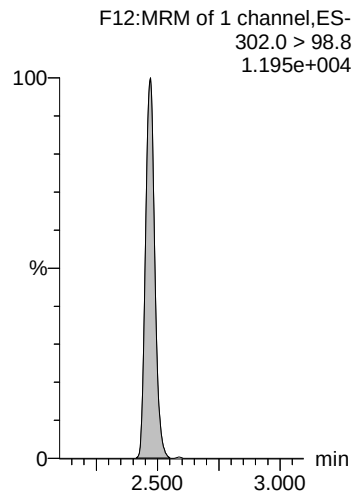

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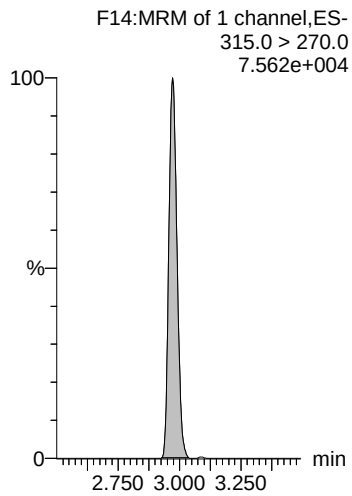

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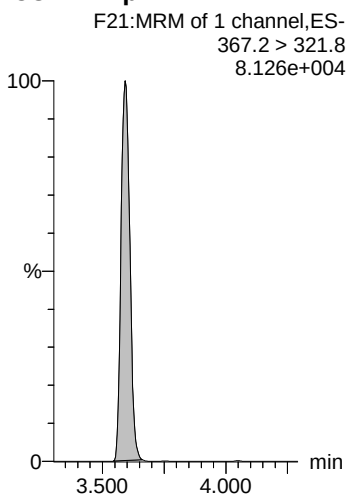

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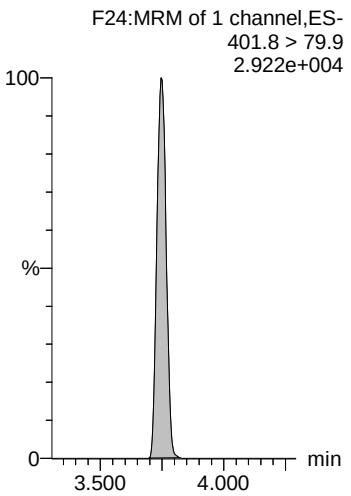

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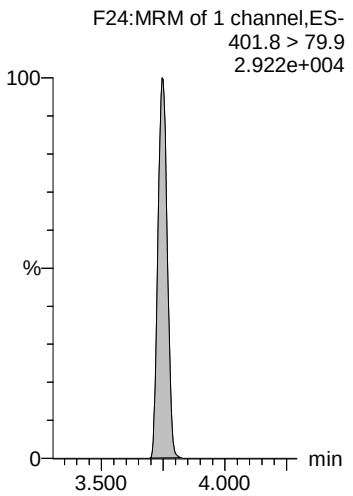


FBR 7/12/2019

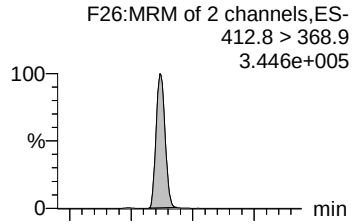
Review: AMR 7/12/2019

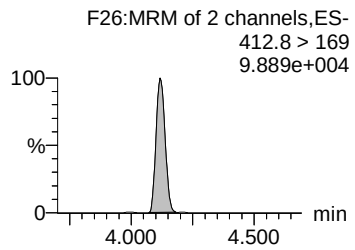
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

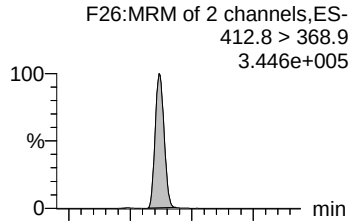
Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

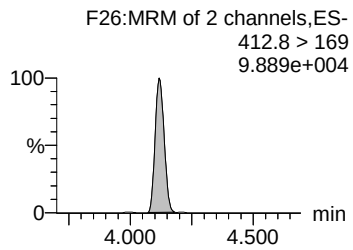
L-PFOA





Total PFOA





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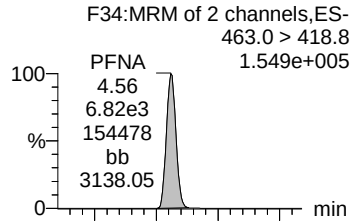
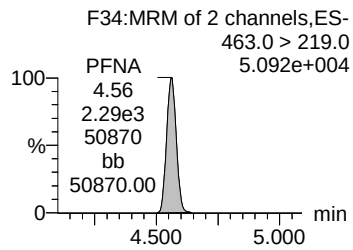
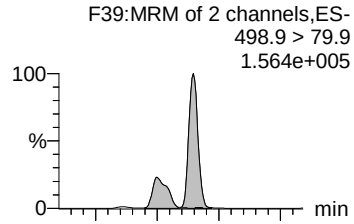
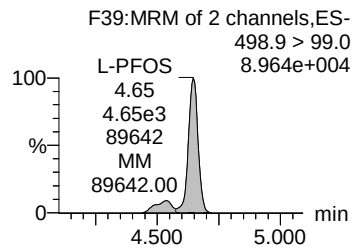


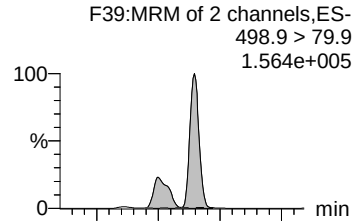


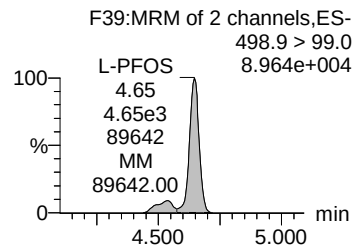
L-PFOS





Total PFOS





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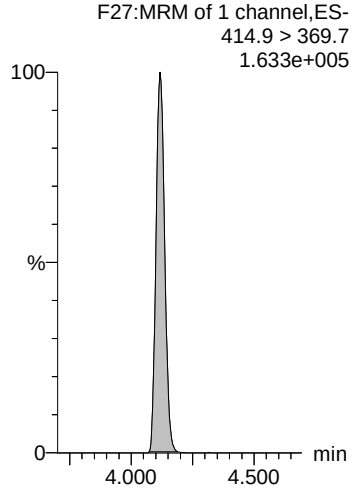

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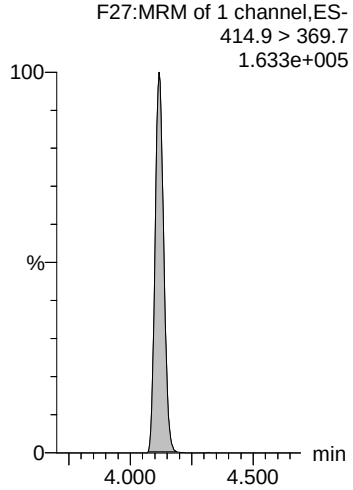

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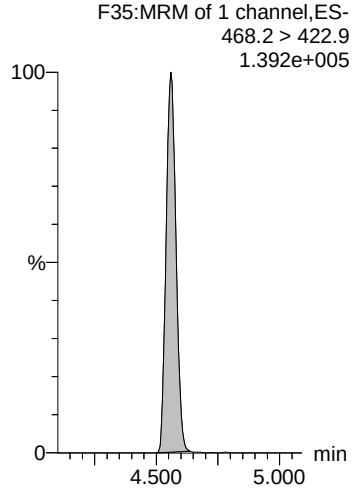

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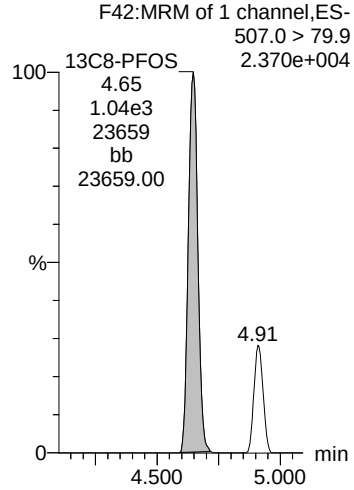
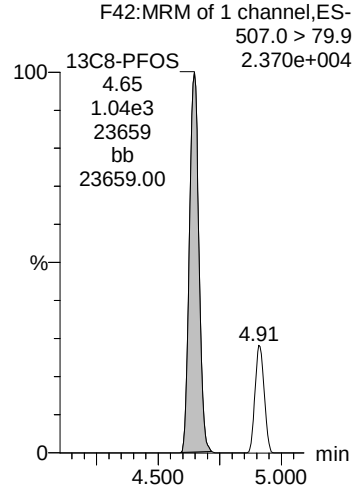


13C8-PFOS



FBR 7/12/2019

Vista Analytical Laboratory L14

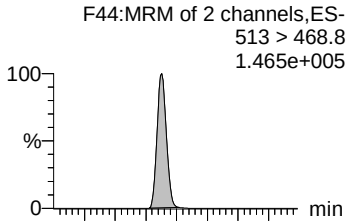
Review: AMR 7/12/2019

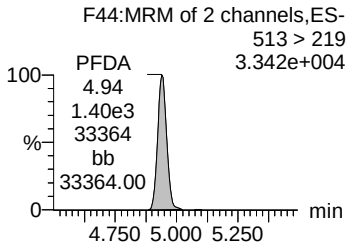
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

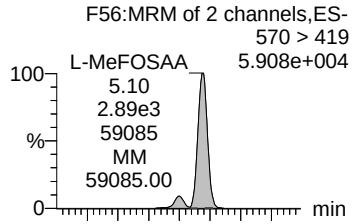
Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

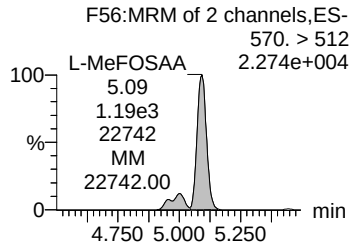
PFDA



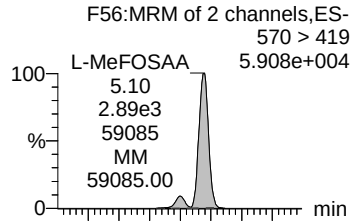


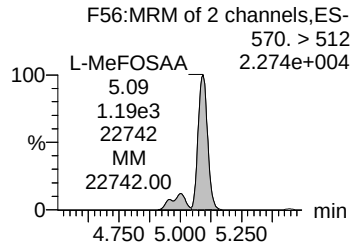
L-MeFOSAA



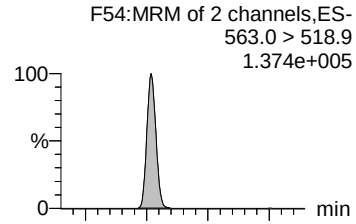


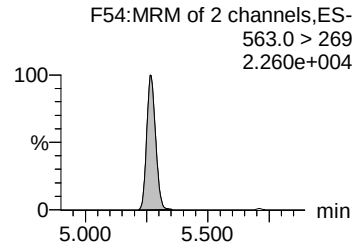
Total N-MeFOSAA



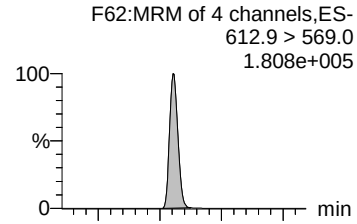


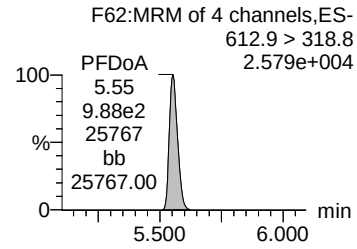
PFUdA



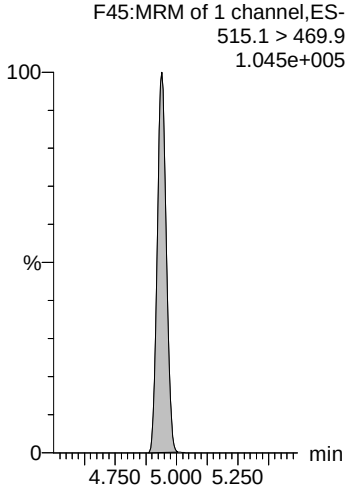


PFDoA

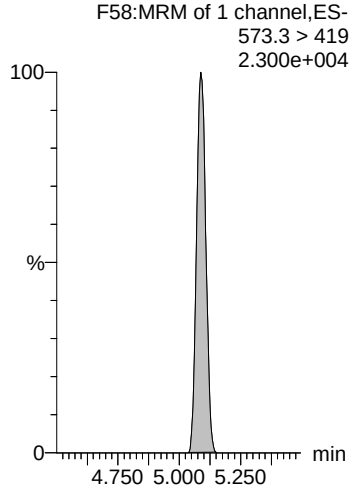




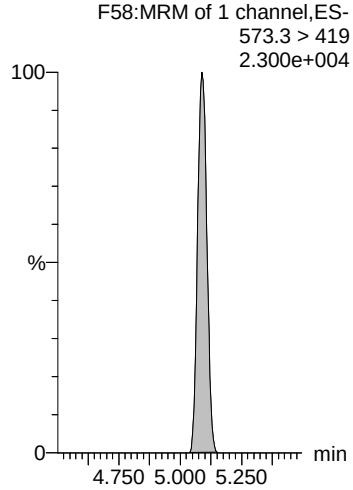
13C2-PFDA



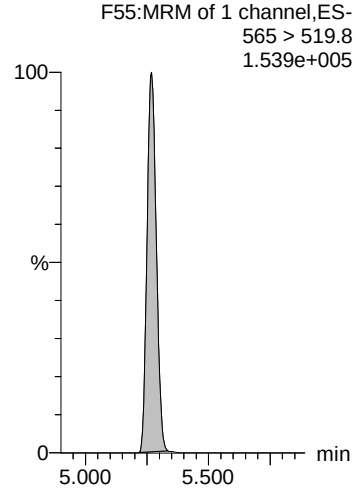
d3-N-MeFOSAA



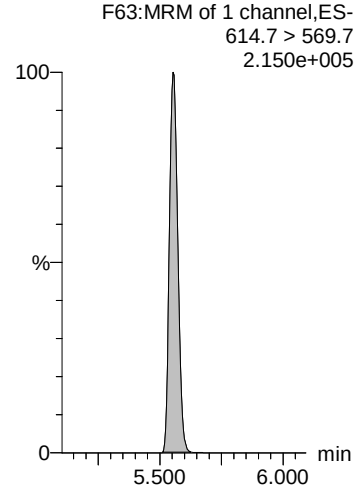
d3-N-MeFOSAA



13C2-PFUdA



13C2-PFDoA



FBR 7/12/2019

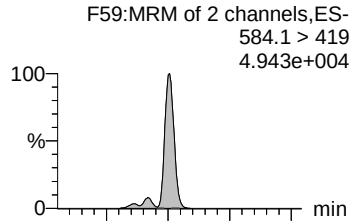
Review: AMR 7/12/2019

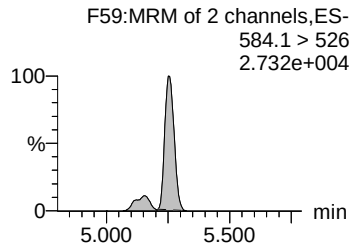
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

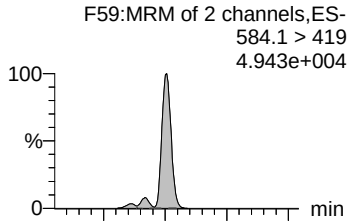
Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

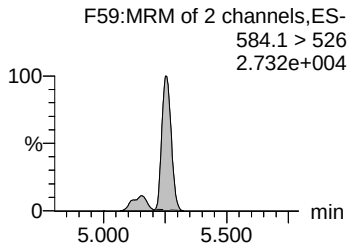
L-EtFOSAA



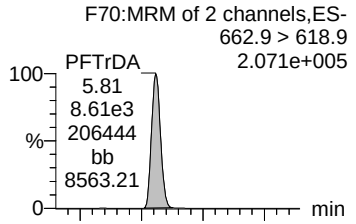


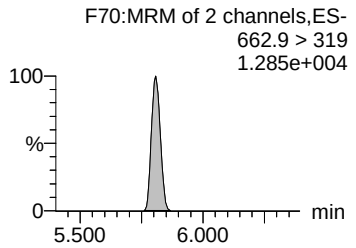
Total N-EtFOSAA



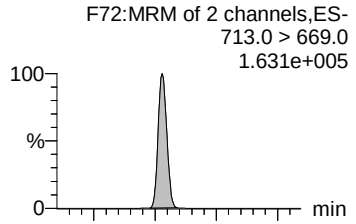


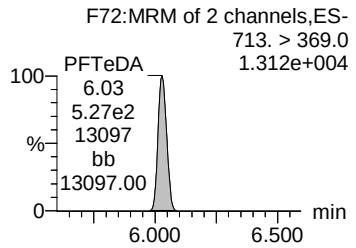
PFTrDA



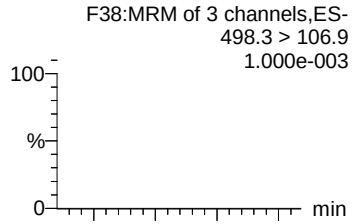


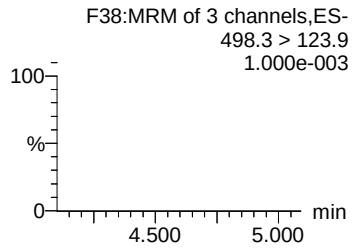
PFTeDA



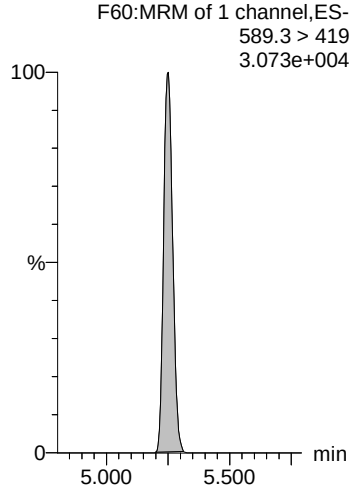


TDCA

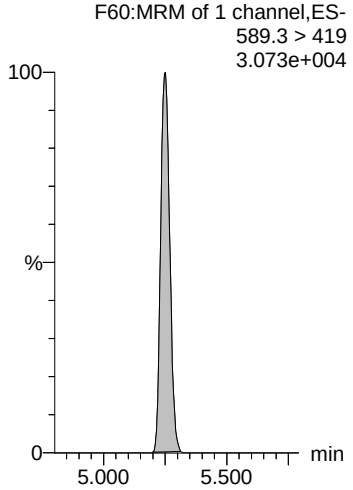




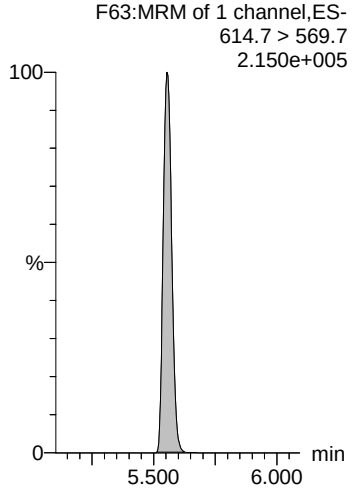
d5-N-EtFOSAA



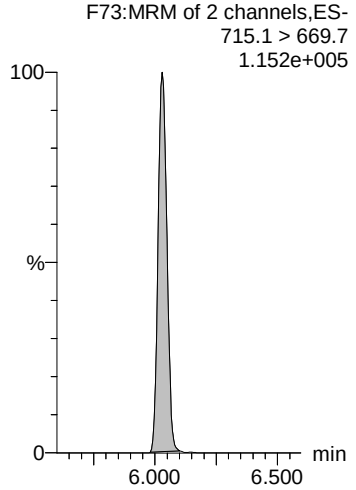
d5-N-EtFOSAA



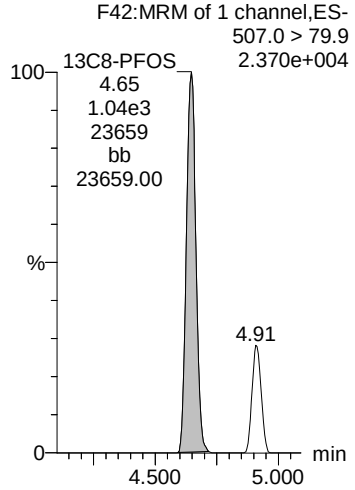
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



FBR 7/12/2019

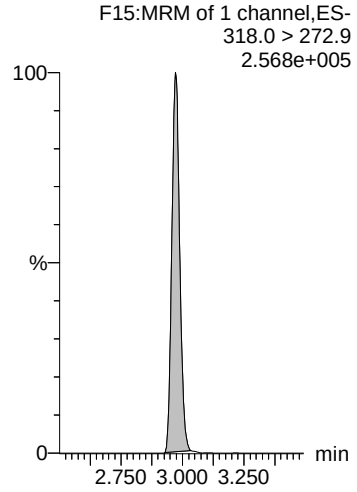
Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-19.qld

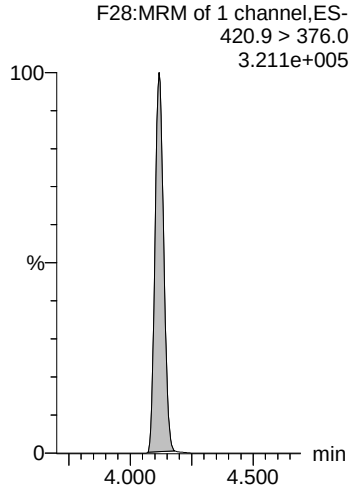
Last Altered: Friday, July 12, 2019 11:26:18 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:27:43 Pacific Daylight Time

Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

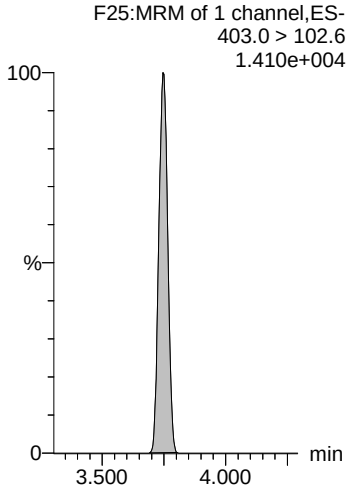
13C5-PFHxA



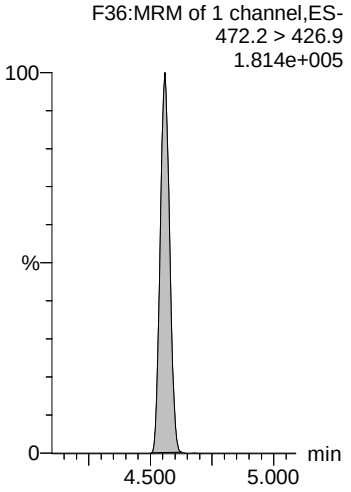
13C8-PFOA



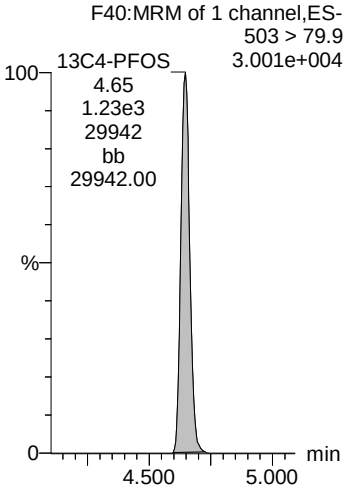
18O2-PFHxS



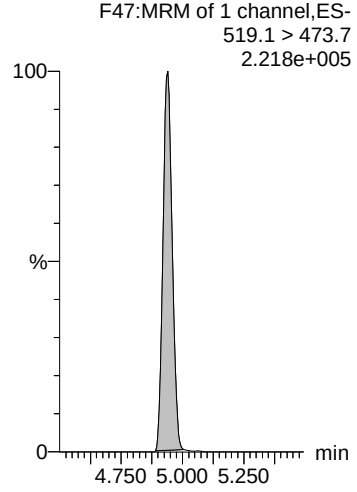
13C9-PFNA



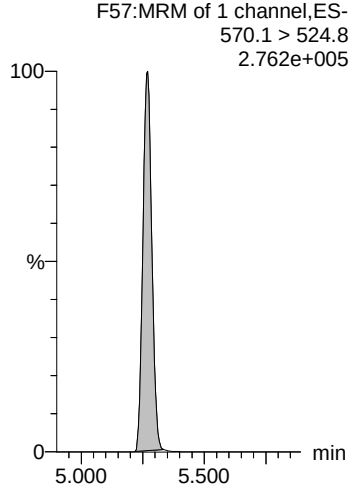
13C4-PFOS



13C6-PFDA



13C7-PFUdA



FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:37:35 Pacific Daylight Time

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

	#	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	8.29e1	3.77e2	1.00		2.47	2.47	2.75	1.2947		3.381	NO
2	7	PFHxA	313.0 > 269.0	8.18e3	2.07e3	1.00		2.97	2.97	19.8	16.9888		15.084	NO
3	11	PFHpA	363.0 > 318.9	3.74e2	2.26e3	1.00		3.59	3.59	2.06	1.7061		5.633	NO
4	13	L-PFHxS	398.9 > 79.6	2.56e2	9.04e2	1.00		3.75	3.75	3.53	4.2887		1.853	NO
5	80	Total PFHxS	398.9 > 79.6	2.56e2	9.04e2	1.00		3.83		3.53	4.2887			
6	49	13C3-PFBS	302.0 > 98.8	3.77e2	4.99e2	1.00	1.035	2.47	2.47	9.44	9.0922	72.9		
7	52	13C2-PFHxA	315.0 > 270.0	2.07e3	8.92e3	1.00	0.792	2.97	2.97	2.90	3.6447	73.1		
8	53	13C4-PFHpA	367.2 > 321.8	2.26e3	8.92e3	1.00	0.391	3.59	3.59	3.17	8.0934	64.9		
9	54	13C3-PFHxS	401.8 > 79.9	9.04e2	4.99e2	1.00	2.547	3.75	3.75	22.7	8.8736	71.2		
10	54	13C3-PFHxS	401.8 > 79.9	9.04e2	4.99e2	1.00	2.547	3.75	3.75	22.7	8.8736	71.2		
11	-1													
12	16	L-PFOA	412.8 > 368.9	3.66e2	5.00e3	1.00		4.12	4.12	0.913	0.4719		4.741	NO
13	81	Total PFOA	412.8 > 368.9	3.66e2	5.00e3	1.00		4.21		0.913	0.4719			
14	21	PFNA	463.0 > 418.8		4.54e3	1.00		4.56						
15	23	L-PFOS	498.9 > 79.9	1.82e2	9.33e2	1.00		4.65	4.65	2.44	2.0565		1.919	NO
16	82	Total PFOS	498.9 > 79.9	1.82e2	9.33e2	1.00		4.74		2.44	2.0565			
17	58	13C2-PFOA	414.9 > 369.7	5.00e3	1.28e4	1.00	0.564	4.12	4.12	4.90	8.6604	69.5		
18	58	13C2-PFOA	414.9 > 369.7	5.00e3	1.28e4	1.00	0.564	4.12	4.12	4.90	8.6604	69.5		
19	56	13C5-PFNA	468.2 > 422.9	4.54e3	7.82e3	1.00	0.983	4.56	4.56	7.26	7.3643	59.1		
20	59	13C8-PFOS	507.0 > 79.9	9.33e2	1.20e3	1.00	1.060	4.65	4.65	9.69	9.1197	73.1		
21	59	13C8-PFOS	507.0 > 79.9	9.33e2	1.20e3	1.00	1.060	4.65	4.65	9.69	9.1197	73.1		
22	-1													
23	26	PFDA	513 > 468.8		2.99e3	1.00		4.94						
24	29	L-MeFOSAA	570 > 419		6.92e2	1.00		5.09						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	6.92e2	1.00		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		3.92e3	1.00		5.27						
27	37	PFDoA	612.9 > 569.0		4.68e3	1.00		5.56						
28	60	13C2-PFDA	515.1 > 469.9	2.99e3	9.28e3	1.00	0.662	4.94	4.94	4.02	6.0625	48.6		
29	62	d3-N-MeFOSAA	573.3 > 419	6.92e2	1.11e4	1.00	0.129	5.09	5.09	0.778	6.0111	48.2		
30	62	d3-N-MeFOSAA	573.3 > 419	6.92e2	1.11e4	1.00	0.129	5.09	5.09	0.778	6.0111	48.2		
31	63	13C2-PFUdA	565 > 519.8	3.92e3	1.11e4	1.00	0.857	5.27	5.27	4.40	5.1236	41.1		
32	65	13C2-PFDoA	614.7 > 569.7	4.68e3	9.28e3	1.00	1.229	5.56	5.56	6.30	5.1161	41.0		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		7.65e2	1.00		5.25						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	7.65e2	1.00		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		4.68e3	1.00		5.81						

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:37:35 Pacific Daylight Time

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		2.08e3	1.00		6.03						
38	85	TDCA	498.3>106.9			1.00		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	7.65e2	1.11e4	1.00	0.147	5.25	5.25	0.860	5.8203	46.7		
40	64	d5-N-EtFOSAA	589.3 > 419	7.65e2	1.11e4	1.00	0.147	5.25	5.25	0.860	5.8203	46.7		
41	65	13C2-PFDoA	614.7 > 569.7	4.68e3	9.28e3	1.00	1.229	5.56	5.56	6.30	5.1161	41.0		
42	67	13C2-PFTeDA	715.1 > 669.7	2.08e3	1.11e4	1.00	0.511	6.03	6.03	2.34	4.5695	36.6		
43	59	13C8-PFOS	507.0 > 79.9	9.33e2	1.20e3	1.00	1.060	4.65	4.65	9.69	9.1197	73.1		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	8.92e3	8.92e3	1.00	1.000	2.97	2.97	12.5	12.4680	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.28e4	1.28e4	1.00	1.000	4.12	4.12	12.5	12.4680	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	4.99e2	4.99e2	1.00	1.000	3.75	3.75	12.5	12.4680	100.0		
48	76	13C9-PFNA	472.2 > 426.9	7.82e3	7.82e3	1.00	1.000	4.56	4.56	12.5	12.4680	100.0		
49	77	13C4-PFOS	503 > 79.9	1.20e3	1.20e3	1.00	1.000	4.65	4.65	12.5	12.4680	100.0		
50	78	13C6-PFDA	519.1 > 473.7	9.28e3	9.28e3	1.00	1.000	4.94	4.94	12.5	12.4680	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.11e4	1.11e4	1.00	1.000	5.27	5.27	12.5	12.4680	100.0		

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:37:35 Pacific Daylight Time

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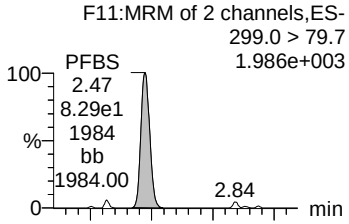
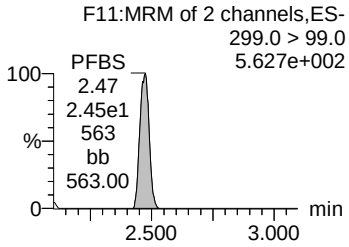
Calibration: Z:\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

PFBS





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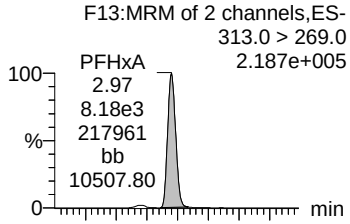

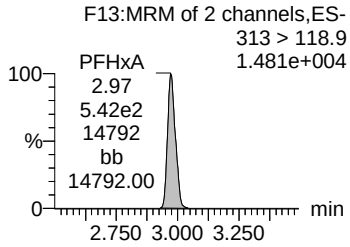

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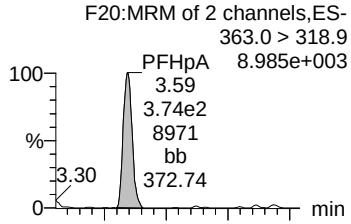

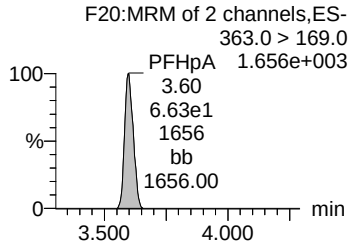

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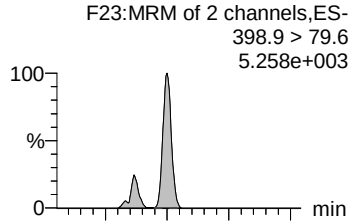

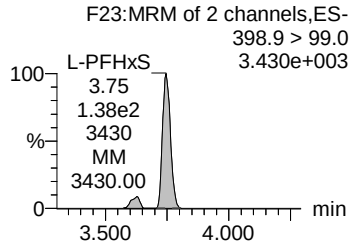

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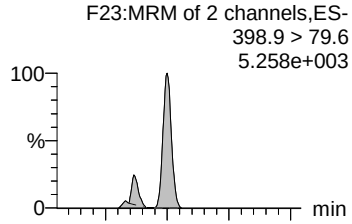

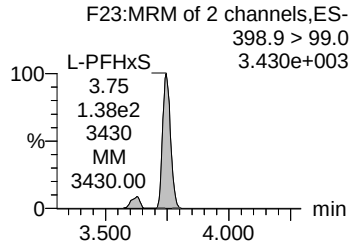

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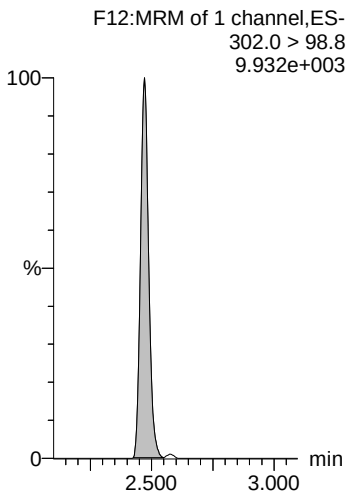

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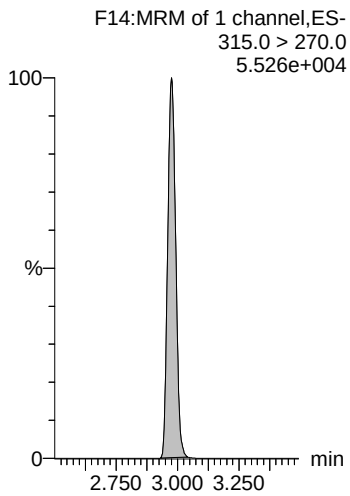

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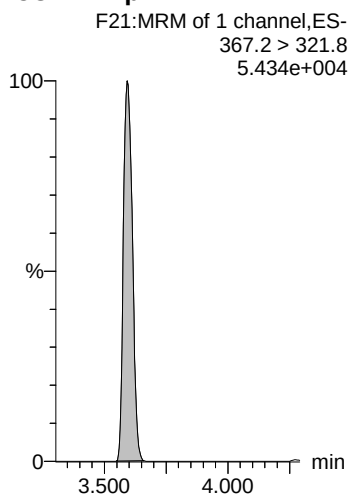

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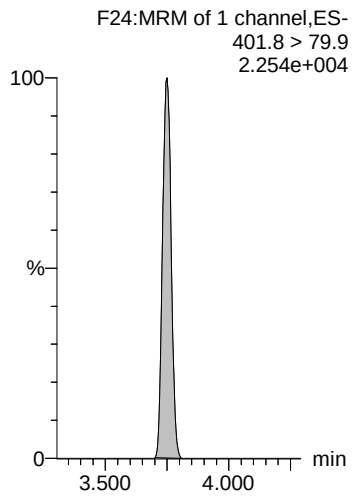

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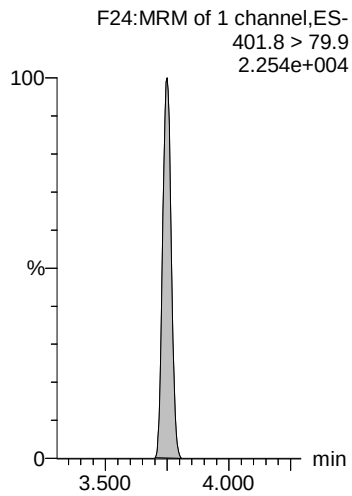


FBR 7/12/2019

Vista Analytical Laboratory L14

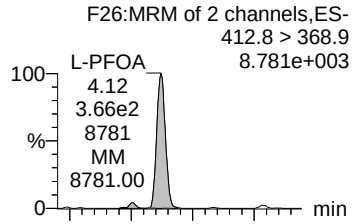
Review: AMR 7/12/2019

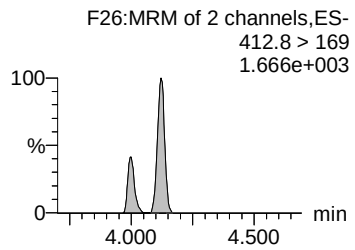
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:37:35 Pacific Daylight Time

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

L-PFOA





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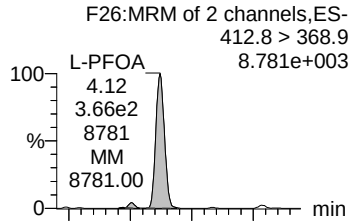

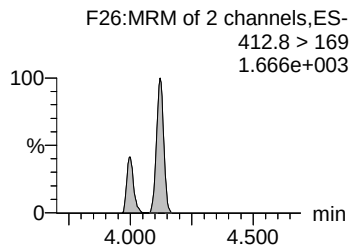

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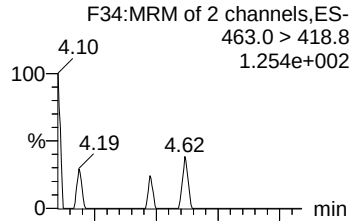

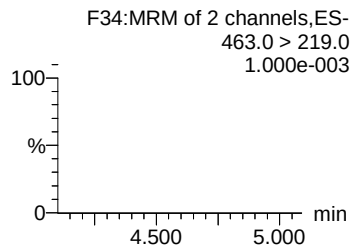

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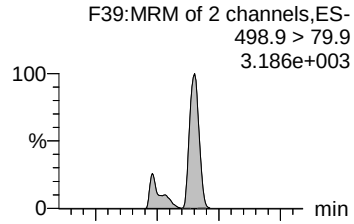

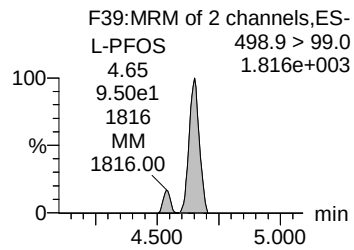

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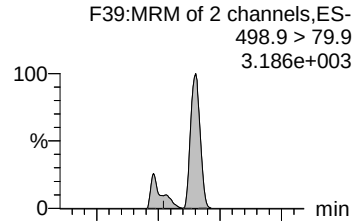

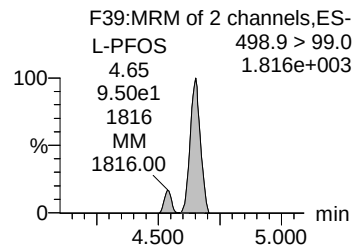

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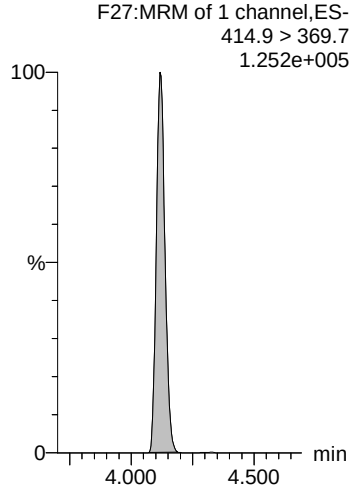

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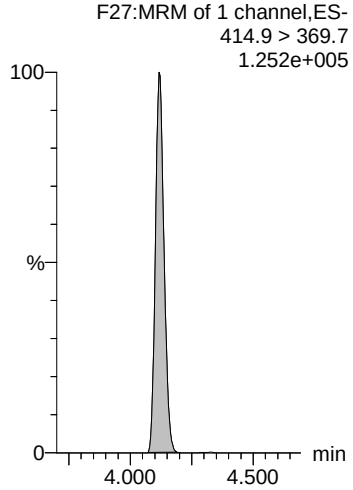

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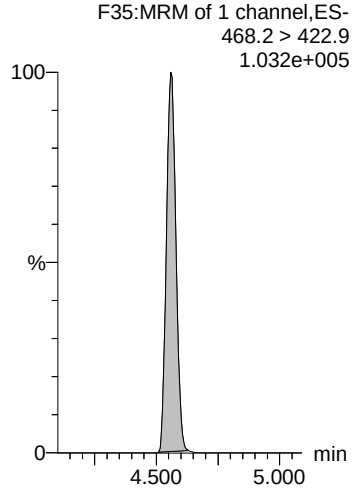

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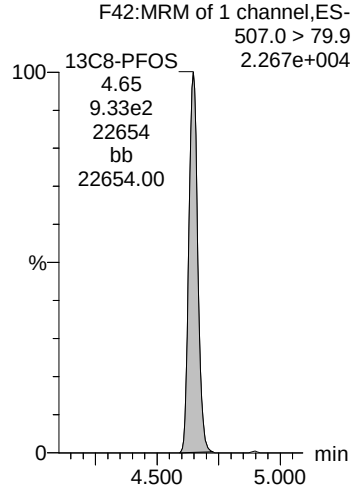

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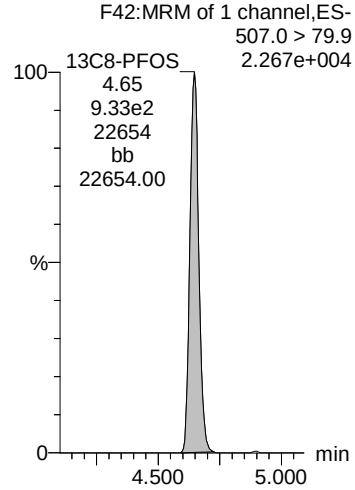

FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

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Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

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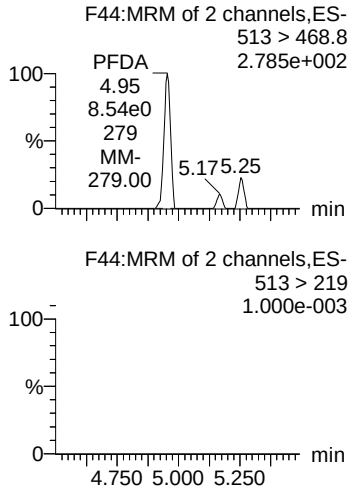

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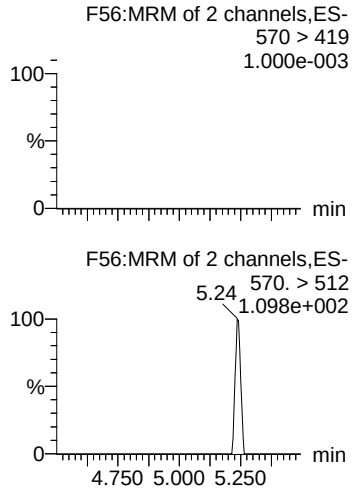

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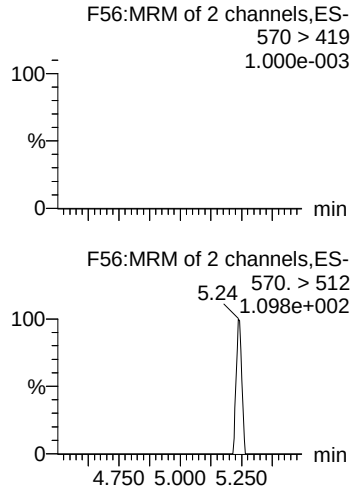

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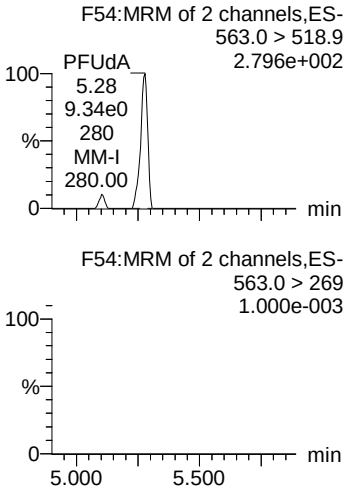

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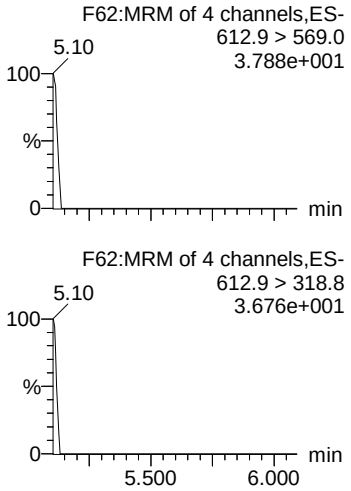

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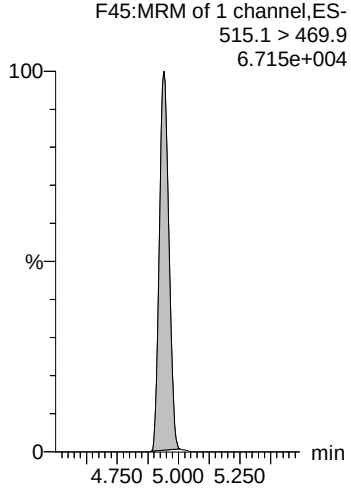

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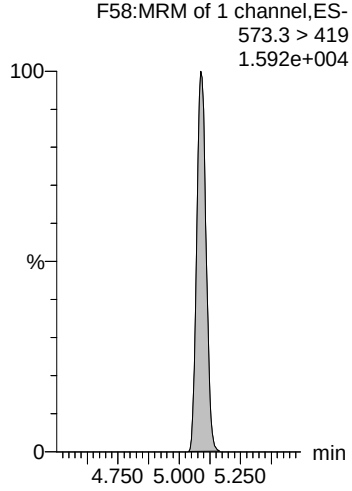

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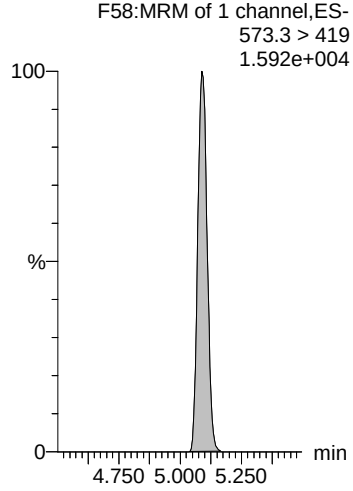

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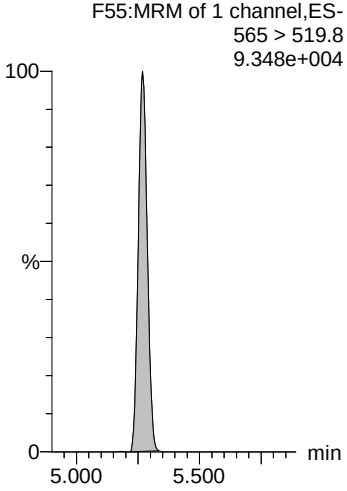

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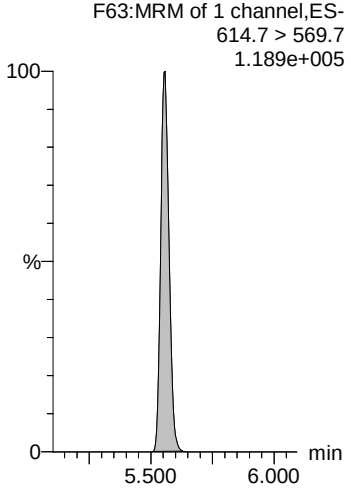

FBR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
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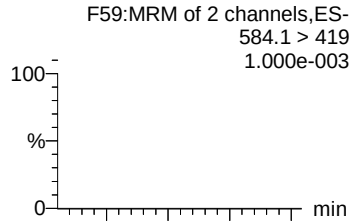
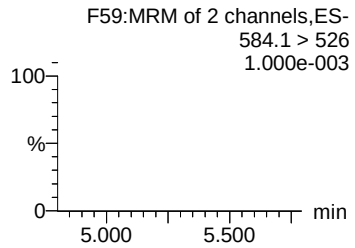
Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

L-EtFOSAA





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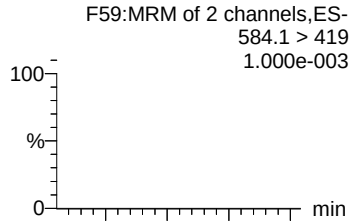
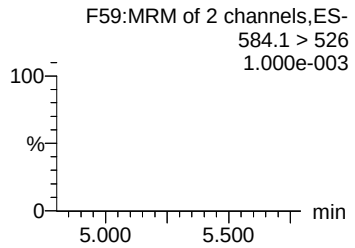
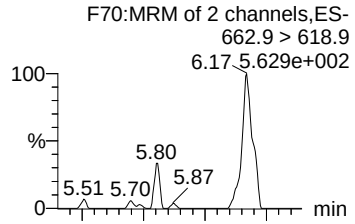
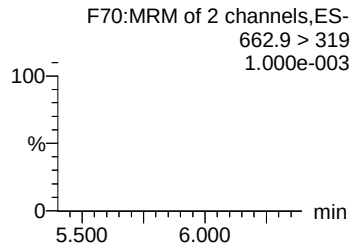


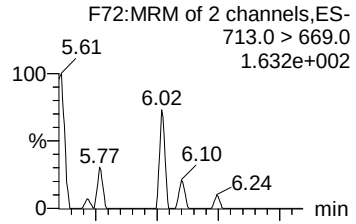


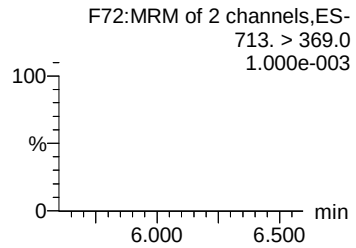
PFTrDA



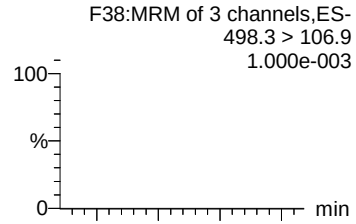


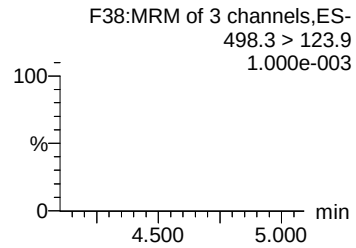
PFTeDA



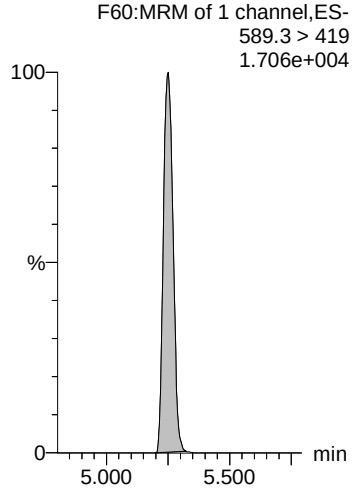


TDCA

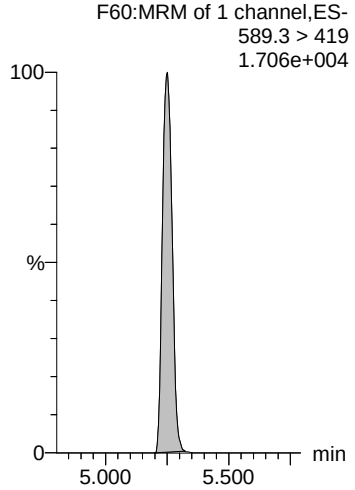




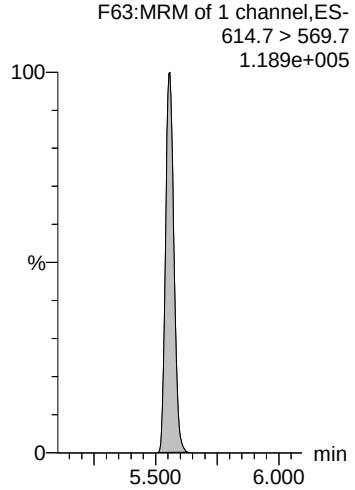
d5-N-EtFOSAA



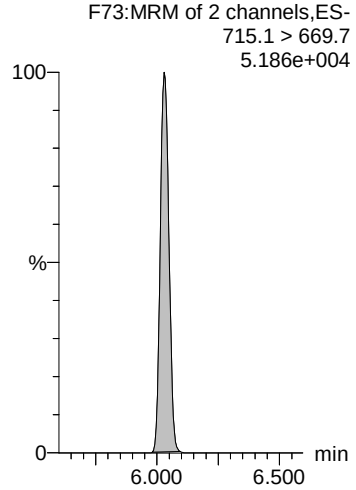
d5-N-EtFOSAA



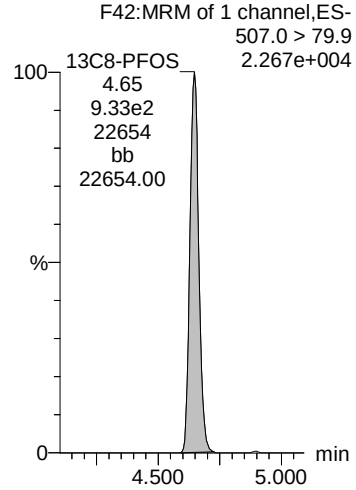
13C2-PFDoA



13C2-PFTeDA



13C8-PFOS



FBR 7/12/2019

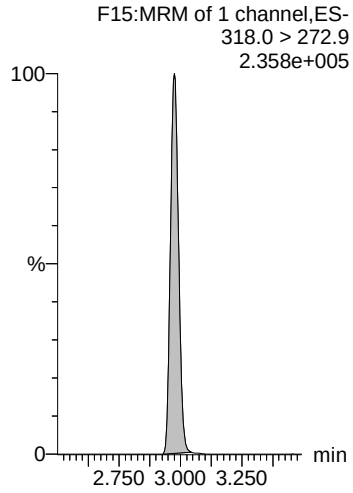
Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-28.qld

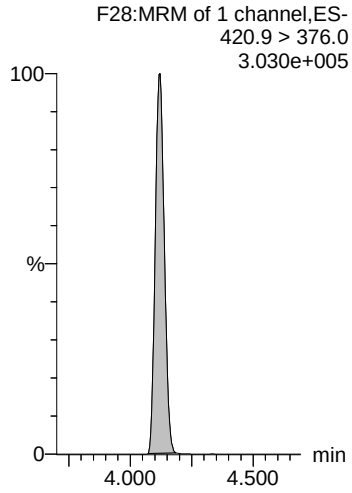
Last Altered: Friday, July 12, 2019 11:35:11 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:37:35 Pacific Daylight Time

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

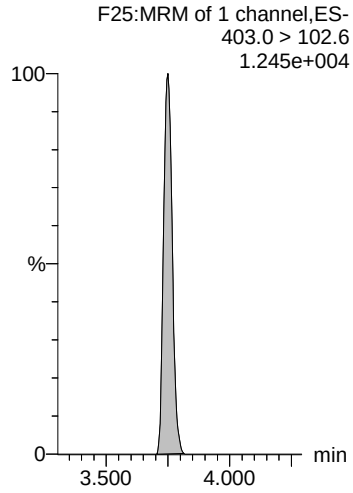
13C5-PFHxA



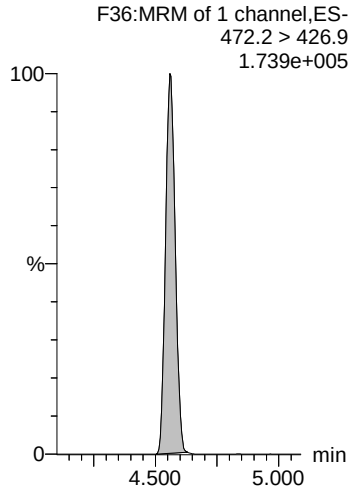
13C8-PFOA



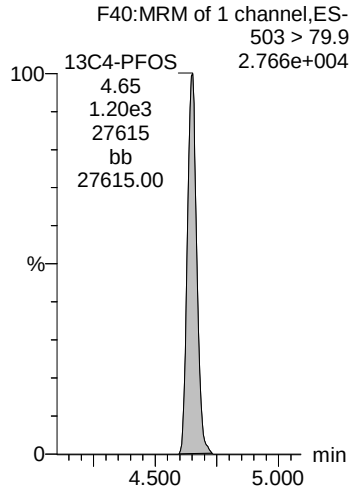
18O2-PFHxS



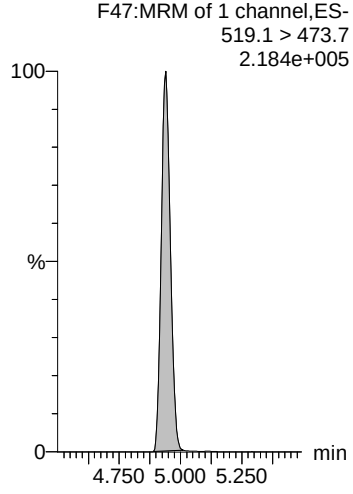
13C9-PFNA



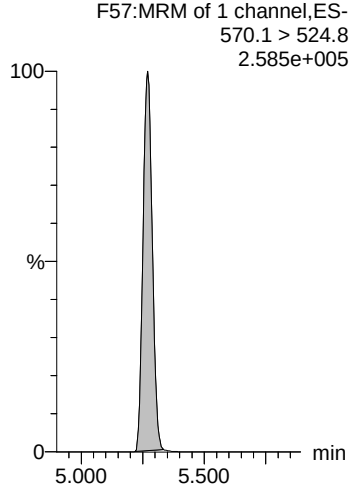
13C4-PFOS



13C6-PFDA



13C7-PFUdA



FBR 7/12/2019

Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

	#	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	5.17e0	6.08e2	1.02		2.47	2.46	0.106	0.1558		11.110	YES
2	7	PFHxA	313.0 > 269.0	7.66e1	3.20e3	1.02		2.97	2.98	0.120	0.1000		70.439	YES
3	11	PFHpA	363.0 > 318.9		3.45e3	1.02		3.59						
4	13	L-PFHxS	398.9 > 79.6		1.36e3	1.02		3.75						
5	80	Total PFHxS	398.9 > 79.6	0.00e0	1.36e3	1.02		3.83		0.000				
6	49	13C3-PFBS	302.0 > 98.8	6.08e2	6.27e2	1.02	1.035	2.47	2.47	12.1	11.4817	93.8		
7	52	13C2-PFHxA	315.0 > 270.0	3.20e3	1.05e4	1.02	0.792	2.97	2.97	3.81	4.7110	96.2		
8	53	13C4-PFHpA	367.2 > 321.8	3.45e3	1.05e4	1.02	0.391	3.59	3.59	4.11	10.2810	84.0		
9	54	13C3-PFHxS	401.8 > 79.9	1.36e3	6.27e2	1.02	2.547	3.75	3.75	27.2	10.4650	85.5		
10	54	13C3-PFHxS	401.8 > 79.9	1.36e3	6.27e2	1.02	2.547	3.75	3.75	27.2	10.4650	85.5		
11	-1													
12	16	L-PFOA	412.8 > 368.9	5.00e1	7.44e3	1.02		4.12	4.13	0.0841	0.0241		4.393	NO
13	81	Total PFOA	412.8 > 368.9	5.00e1	7.44e3	1.02		4.21		0.0841	0.0241			
14	21	PFNA	463.0 > 418.8		6.67e3	1.02		4.56						
15	23	L-PFOS	498.9 > 79.9		1.19e3	1.02		4.65						
16	82	Total PFOS	498.9 > 79.9	0.00e0	1.19e3	1.02		4.74		0.000				
17	58	13C2-PFOA	414.9 > 369.7	7.44e3	1.53e4	1.02	0.564	4.12	4.12	6.07	10.5272	86.0		
18	58	13C2-PFOA	414.9 > 369.7	7.44e3	1.53e4	1.02	0.564	4.12	4.12	6.07	10.5272	86.0		
19	56	13C5-PFNA	468.2 > 422.9	6.67e3	8.34e3	1.02	0.983	4.56	4.56	10.0	9.9613	81.4		
20	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.46e3	1.02	1.060	4.65	4.65	10.2	9.4363	77.1		
21	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.46e3	1.02	1.060	4.65	4.65	10.2	9.4363	77.1		
22	-1													
23	26	PFDA	513 > 468.8		4.48e3	1.02		4.94						
24	29	L-MeFOSAA	570 > 419		8.85e2	1.02		5.09						
25	83	Total N-MeFOSAA	570. > 419	0.00e0	8.85e2	1.02		5.19		0.000				
26	33	PFUdA	563.0 > 518.9		6.24e3	1.02		5.27						
27	37	PFDoA	612.9 > 569.0		6.82e3	1.02		5.55						
28	60	13C2-PFDA	515.1 > 469.9	4.48e3	1.00e4	1.02	0.662	4.94	4.94	5.60	8.2876	67.7		
29	62	d3-N-MeFOSAA	573.3 > 419	8.85e2	1.24e4	1.02	0.129	5.09	5.09	0.890	6.7536	55.2		
30	62	d3-N-MeFOSAA	573.3 > 419	8.85e2	1.24e4	1.02	0.129	5.09	5.09	0.890	6.7536	55.2		
31	63	13C2-PFUdA	565 > 519.8	6.24e3	1.24e4	1.02	0.857	5.27	5.27	6.28	7.1720	58.6		
32	65	13C2-PFDoA	614.7 > 569.7	6.82e3	1.00e4	1.02	1.229	5.56	5.55	8.53	6.7941	55.5		
33	-1													
34	31	L-EtFOSAA	584.1 > 419		9.43e2	1.02		5.25						
35	84	Total N-EtFOSAA	584.1 > 419	0.00e0	9.43e2	1.02		5.33		0.000				
36	39	PFTrDA	662.9 > 618.9		6.82e3	1.02		5.80						

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Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

	#	Name	Trace	Area	IS Area	wt/vol	RRF Mean	Pred.RT	RT	Response	Conc.	%Rec	Ion Ratio	Ratio Out?
37	41	PFTeDA	713.0 > 669.0		4.76e3	1.02		6.03						
38	85	TDCA	498.3>106.9			1.02		5.45						
39	64	d5-N-EtFOSAA	589.3 > 419	9.43e2	1.24e4	1.02	0.147	5.25	5.25	0.948	6.3002	51.5		
40	64	d5-N-EtFOSAA	589.3 > 419	9.43e2	1.24e4	1.02	0.147	5.25	5.25	0.948	6.3002	51.5		
41	65	13C2-PFDoA	614.7 > 569.7	6.82e3	1.00e4	1.02	1.229	5.56	5.55	8.53	6.7941	55.5		
42	67	13C2-PFTeDA	715.1 > 669.7	4.76e3	1.24e4	1.02	0.511	6.03	6.03	4.78	9.1625	74.8		
43	59	13C8-PFOS	507.0 > 79.9	1.19e3	1.46e3	1.02	1.060	4.65	4.65	10.2	9.4363	77.1		
44	-1													
45	73	13C5-PFHxA	318.0 > 272.9	1.05e4	1.05e4	1.02	1.000	2.97	2.97	12.5	12.2421	100.0		
46	75	13C8-PFOA	420.9 > 376.0	1.53e4	1.53e4	1.02	1.000	4.12	4.12	12.5	12.2421	100.0		
47	74	18O2-PFHxS	403.0 > 102.6	6.27e2	6.27e2	1.02	1.000	3.75	3.75	12.5	12.2421	100.0		
48	76	13C9-PFNA	472.2 > 426.9	8.34e3	8.34e3	1.02	1.000	4.56	4.56	12.5	12.2421	100.0		
49	77	13C4-PFOS	503 > 79.9	1.46e3	1.46e3	1.02	1.000	4.65	4.65	12.5	12.2421	100.0		
50	78	13C6-PFDA	519.1 > 473.7	1.00e4	1.00e4	1.02	1.000	4.94	4.94	12.5	12.2421	100.0		
51	79	13C7-PFUdA	570.1 > 524.8	1.24e4	1.24e4	1.02	1.000	5.27	5.27	12.5	12.2421	100.0		

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Vista Analytical Laboratory L14

Review: AMR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

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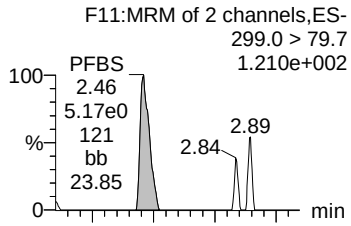
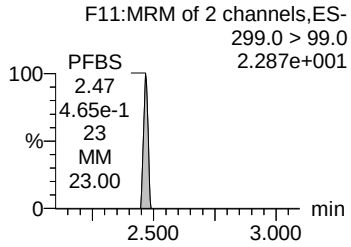
Calibration: Z:\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

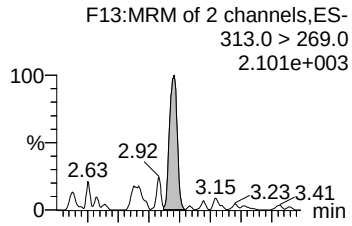
Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

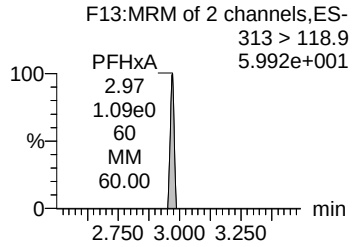
PFBS



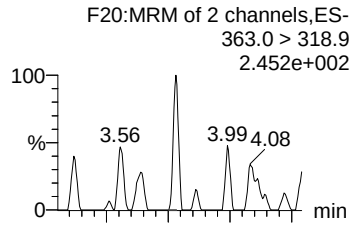


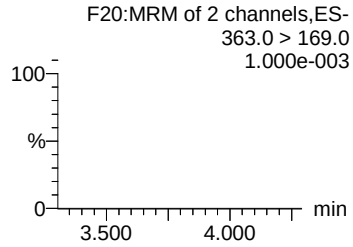
PFHxA



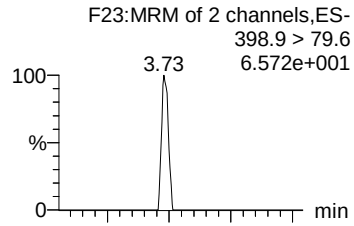


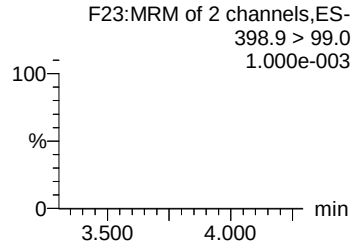
PFHpA



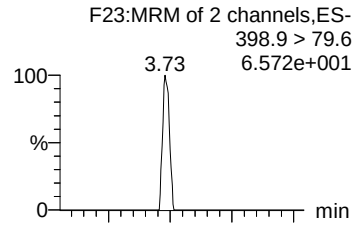


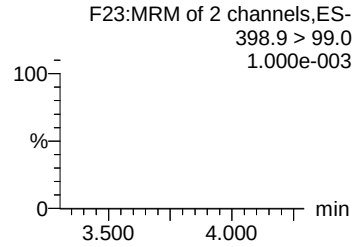
L-PFHxS



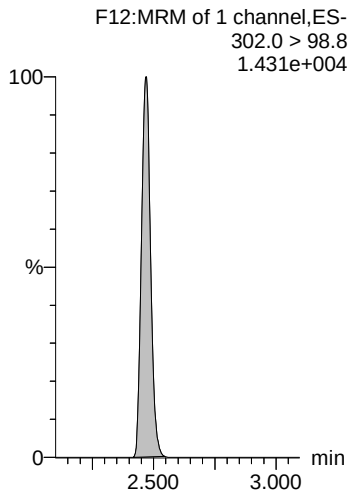


Total PFHxS

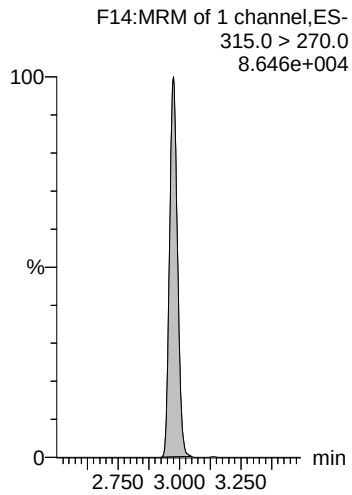




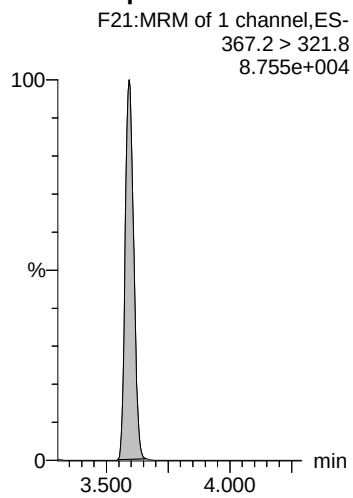
13C3-PFBS



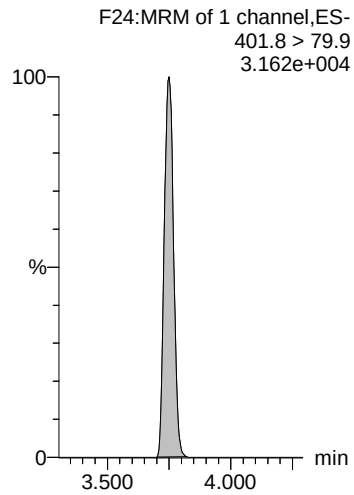
13C2-PFHxA



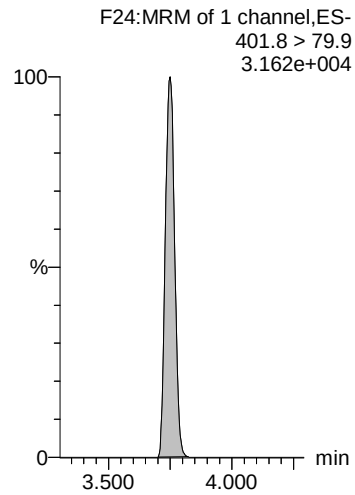
13C4-PFHpA



13C3-PFHxS



13C3-PFHxS



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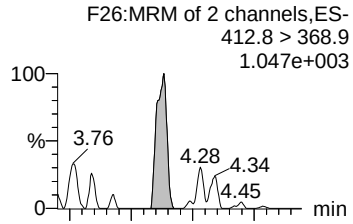
Review: AMR 7/12/2019

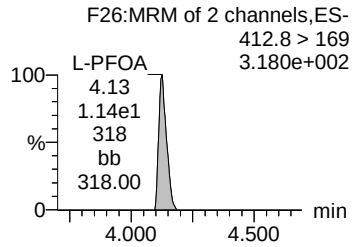
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

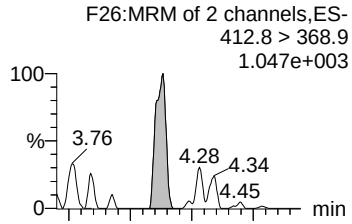
Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

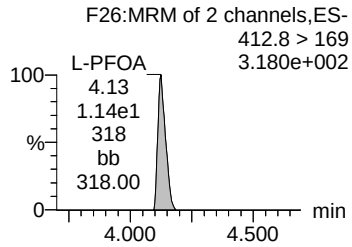
L-PFOA





Total PFOA





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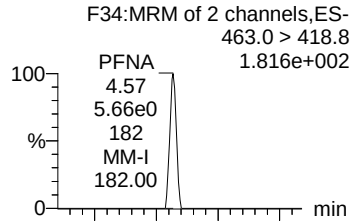

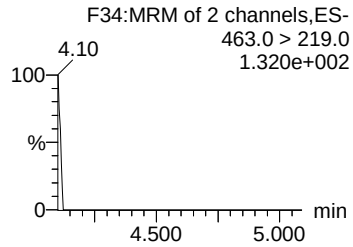

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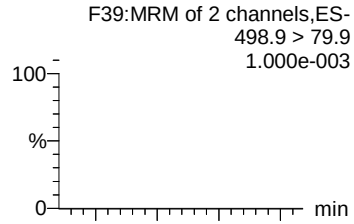

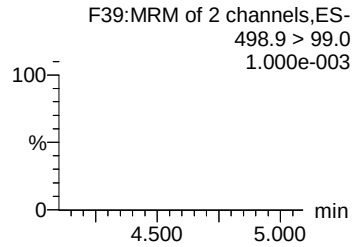

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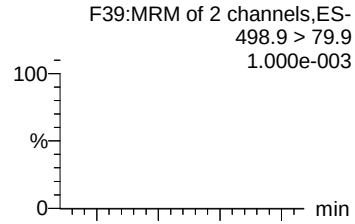

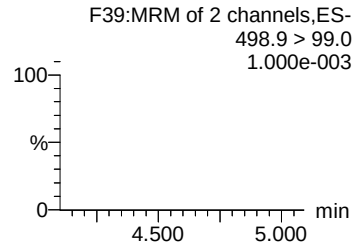

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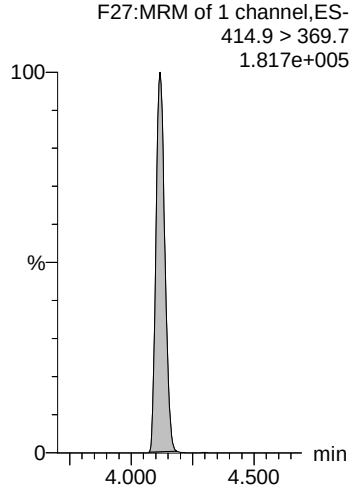

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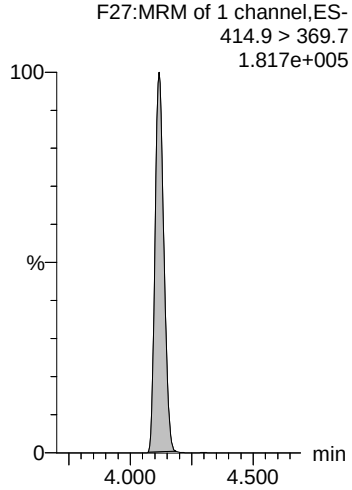

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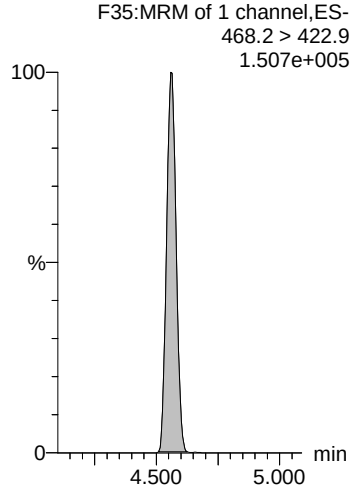
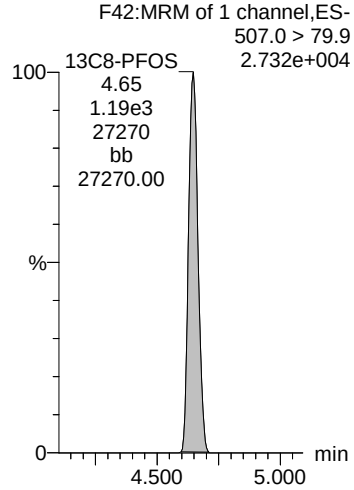


13C8-PFOS



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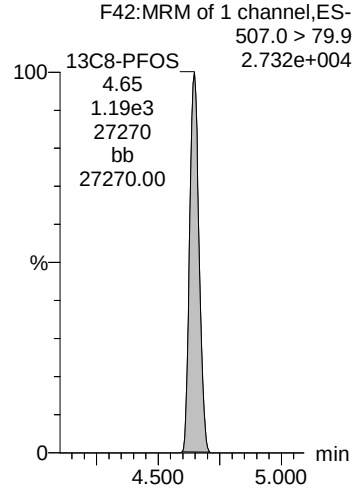


FBR 7/12/2019

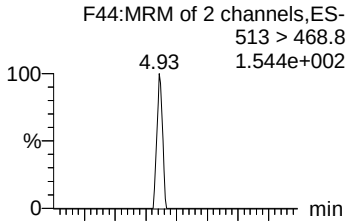
Review: AMR 7/12/2019

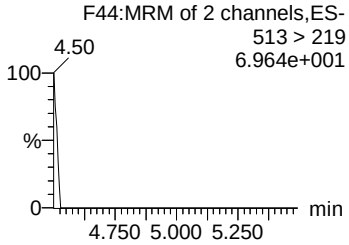
Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

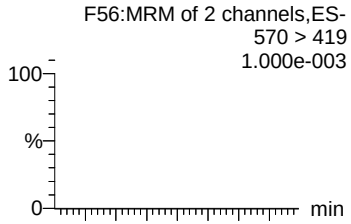
Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

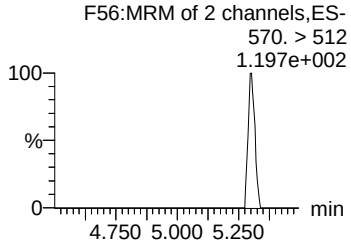
PFDA





L-MeFOSAA





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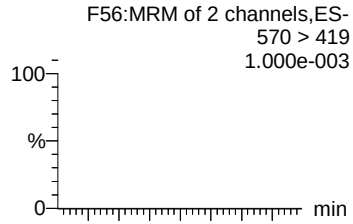

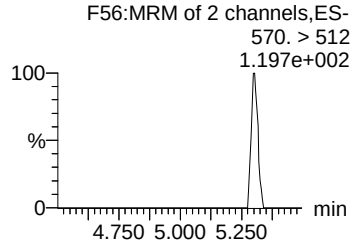

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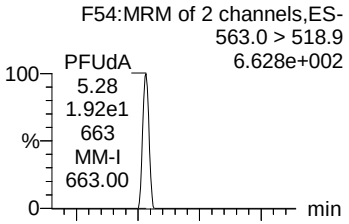

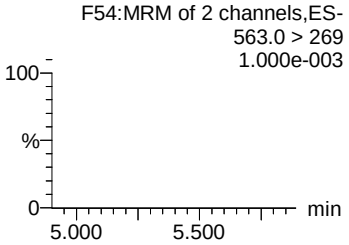

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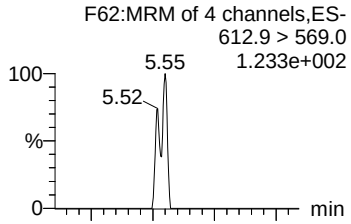

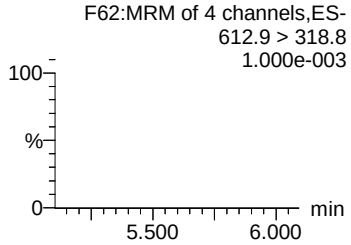

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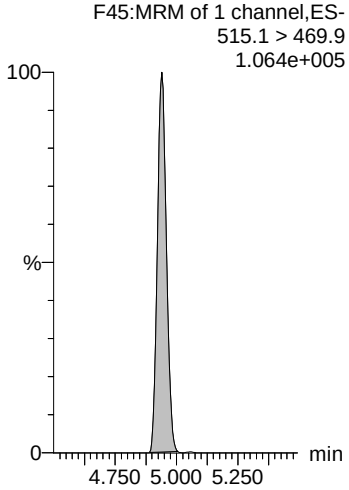

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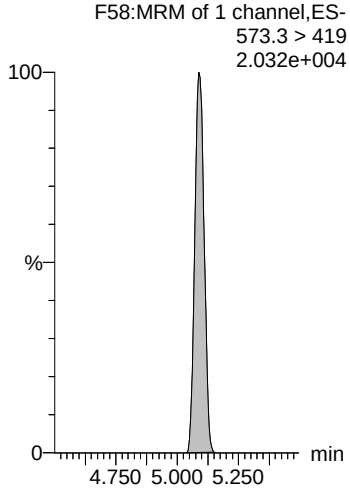

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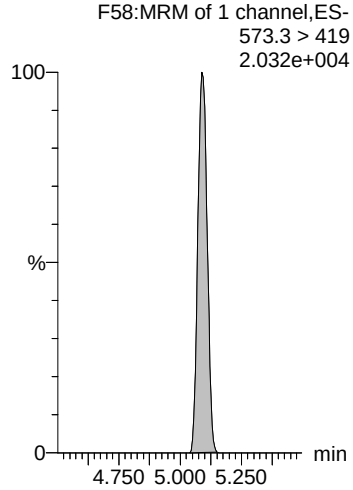

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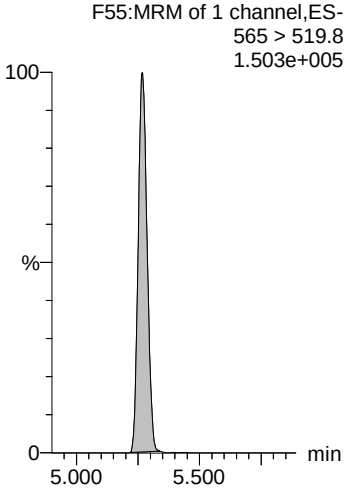

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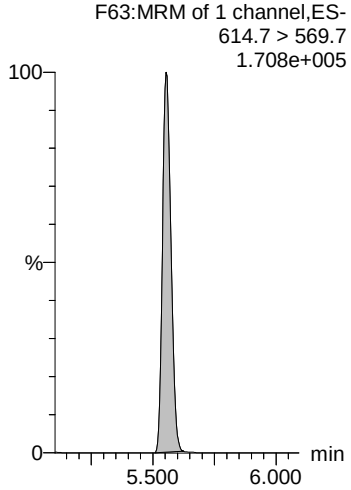

FBR 7/12/2019

Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
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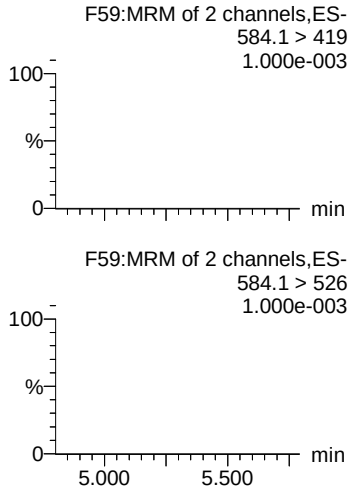
Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

L-EtFOSAA



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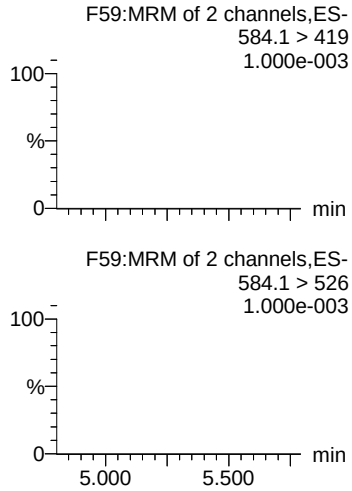

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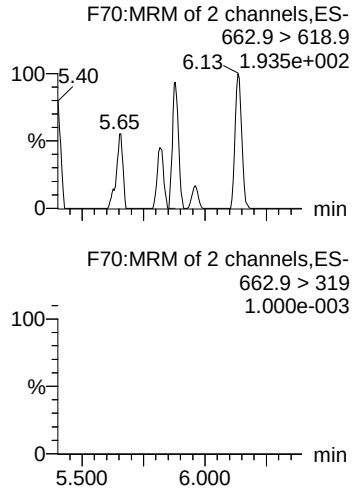

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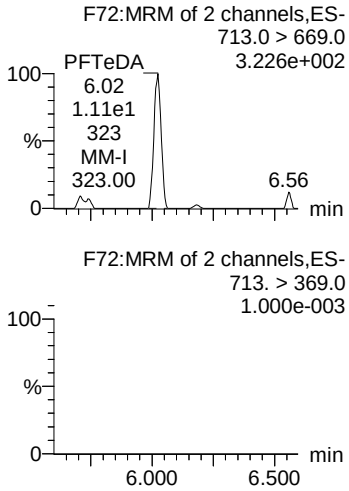

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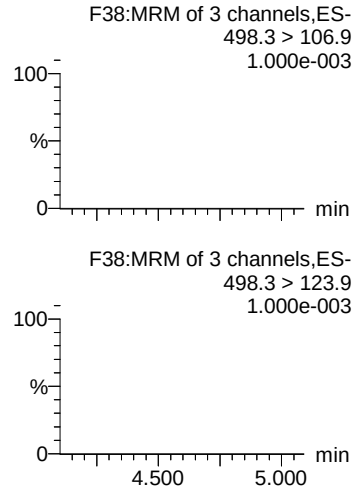

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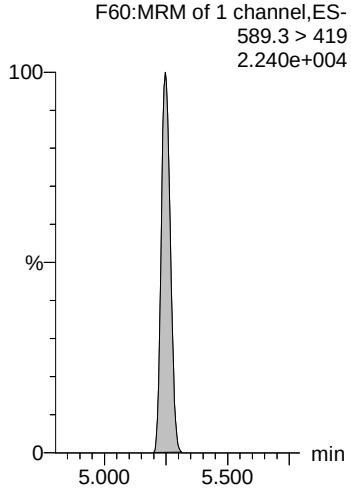

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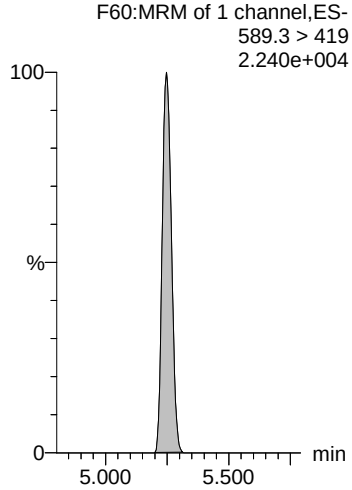

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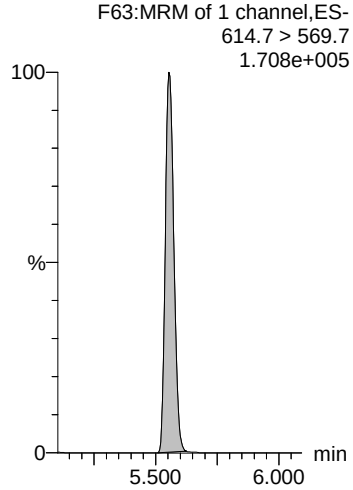
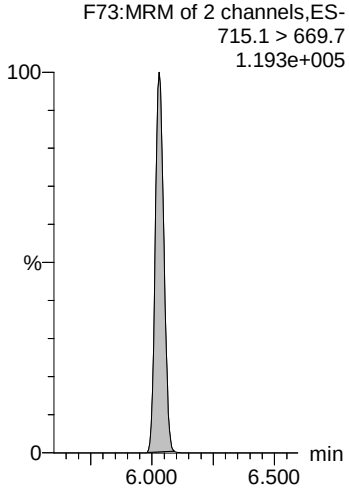


13C2-PFTeDA



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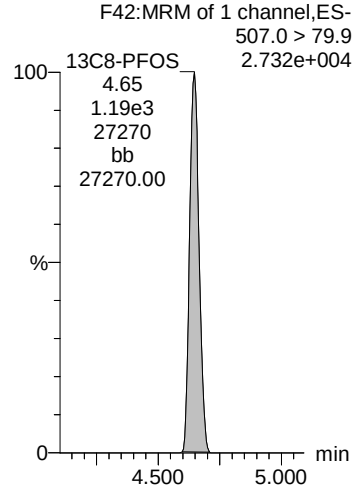
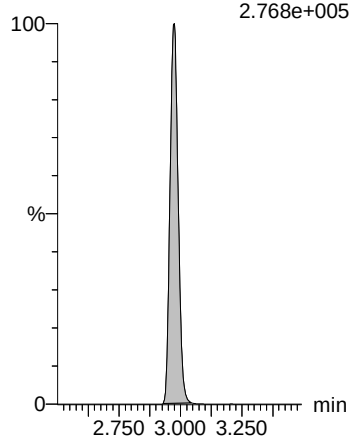


Dataset: Z:\PFAS.PRO\Results\190710M3\190710M3-29.qld

Last Altered: Friday, July 12, 2019 11:39:16 Pacific Daylight Time
Printed: Friday, July 12, 2019 11:40:24 Pacific Daylight Time

Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

13C5-PFHxA



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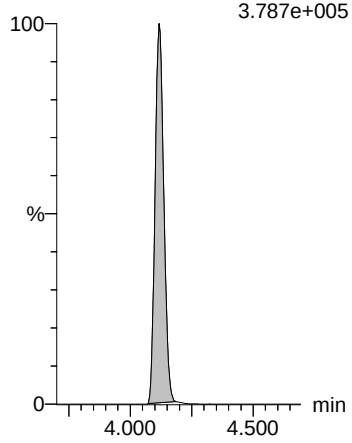

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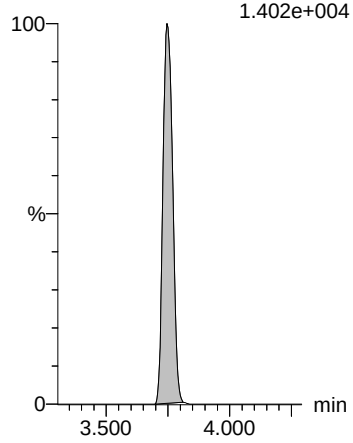

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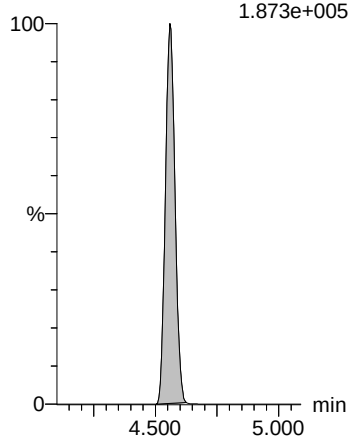

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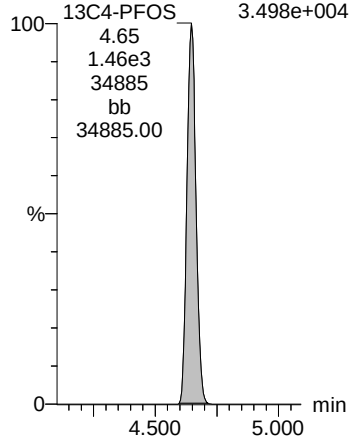

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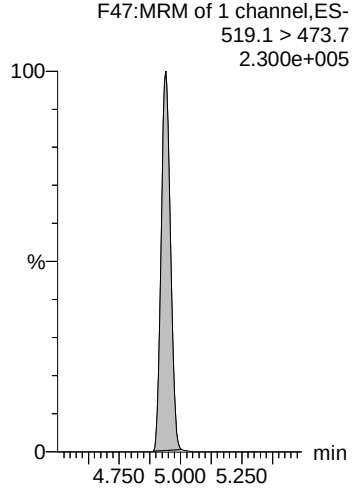

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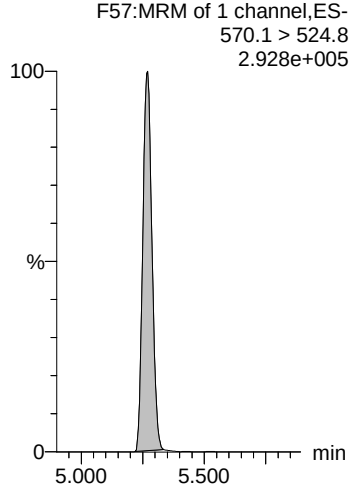

INJECTION INTERNAL STANDARD (IIS) AREAS,

INSTRUMENT BLANKS (IB)

AND

CONTINUTING CALIBRATION VERIFICATIONS CCV)

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 03, 2019 09:17:35 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:17:50 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_RS-06-08-19.mdb 25 Jun 2019 12:18:52
Calibration: 03 Jul 2019 09:17:35

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

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2	2	13C5-PFHxA	ST190702M2-3 PFC CS0 19F2414	1.90e4	100.0	NO
3	3	18O2-PFHxS	ST190702M2-3 PFC CS0 19F2414	1.20e3	100.0	NO
4	4	13C8-PFOA	ST190702M2-3 PFC CS0 19F2414	2.32e4	100.0	NO
5	5	13C9-PFNA	ST190702M2-3 PFC CS0 19F2414	1.75e4	100.0	NO
6	6	13C4-PFOS	ST190702M2-3 PFC CS0 19F2414	2.72e3	100.0	NO
7	7	13C6-PFDA	ST190702M2-3 PFC CS0 19F2414	2.06e4	100.0	NO
8	8	13C7-PFUdA	ST190702M2-3 PFC CS0 19F2414	2.11e4	100.0	NO

Name: 190702M2_5, Date: 02-Jul-2019, Time: 10:47:30, ID: ST190702M2-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

	#	Name	ID	Area	%Rec	Area Out
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2	2	13C5-PFHxA	ST190702M2-4 PFC CS1 19F2415	1.93e4	101.7	NO
3	3	18O2-PFHxS	ST190702M2-4 PFC CS1 19F2415	1.27e3	105.6	NO
4	4	13C8-PFOA	ST190702M2-4 PFC CS1 19F2415	2.30e4	99.1	NO
5	5	13C9-PFNA	ST190702M2-4 PFC CS1 19F2415	1.79e4	102.5	NO
6	6	13C4-PFOS	ST190702M2-4 PFC CS1 19F2415	2.80e3	102.8	NO
7	7	13C6-PFDA	ST190702M2-4 PFC CS1 19F2415	2.06e4	100.1	NO
8	8	13C7-PFUdA	ST190702M2-4 PFC CS1 19F2415	2.10e4	99.6	NO

Name: 190702M2_6, Date: 02-Jul-2019, Time: 10:58:08, ID: ST190702M2-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-5 PFC CS2 19F2416	9.16e3	111.7	NO
2	2	13C5-PFHxA	ST190702M2-5 PFC CS2 19F2416	2.05e4	107.8	NO
3	3	18O2-PFHxS	ST190702M2-5 PFC CS2 19F2416	1.30e3	107.6	NO
4	4	13C8-PFOA	ST190702M2-5 PFC CS2 19F2416	2.50e4	107.7	NO
5	5	13C9-PFNA	ST190702M2-5 PFC CS2 19F2416	1.90e4	108.7	NO
6	6	13C4-PFOS	ST190702M2-5 PFC CS2 19F2416	2.95e3	108.3	NO
7	7	13C6-PFDA	ST190702M2-5 PFC CS2 19F2416	2.08e4	101.1	NO
8	8	13C7-PFUdA	ST190702M2-5 PFC CS2 19F2416	2.22e4	105.2	NO

Name: 190702M2_7, Date: 02-Jul-2019, Time: 11:08:46, ID: ST190702M2-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-6 PFC CS3 19F2417	8.40e3	102.5	NO
2	2	13C5-PFHxA	ST190702M2-6 PFC CS3 19F2417	1.97e4	103.7	NO
3	3	18O2-PFHxS	ST190702M2-6 PFC CS3 19F2417	1.16e3	96.1	NO
4	4	13C8-PFOA	ST190702M2-6 PFC CS3 19F2417	2.33e4	100.3	NO
5	5	13C9-PFNA	ST190702M2-6 PFC CS3 19F2417	1.81e4	103.2	NO
6	6	13C4-PFOS	ST190702M2-6 PFC CS3 19F2417	2.95e3	108.2	NO
7	7	13C6-PFDA	ST190702M2-6 PFC CS3 19F2417	2.01e4	97.4	NO
8	8	13C7-PFUdA	ST190702M2-6 PFC CS3 19F2417	2.13e4	100.8	NO

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Name: 190702M2_8, Date: 02-Jul-2019, Time: 11:19:20, ID: ST190702M2-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-7 PFC CS4 19F2418	8.43e3	102.8	NO
2	2	13C5-PFHxA	ST190702M2-7 PFC CS4 19F2418	1.91e4	100.7	NO
3	3	18O2-PFHxS	ST190702M2-7 PFC CS4 19F2418	1.25e3	103.5	NO
4	4	13C8-PFOA	ST190702M2-7 PFC CS4 19F2418	2.27e4	97.8	NO
5	5	13C9-PFNA	ST190702M2-7 PFC CS4 19F2418	1.82e4	103.8	NO
6	6	13C4-PFOS	ST190702M2-7 PFC CS4 19F2418	2.80e3	102.9	NO
7	7	13C6-PFDA	ST190702M2-7 PFC CS4 19F2418	2.04e4	99.0	NO
8	8	13C7-PFUdA	ST190702M2-7 PFC CS4 19F2418	2.06e4	97.4	NO

Name: 190702M2_9, Date: 02-Jul-2019, Time: 11:29:58, ID: ST190702M2-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-8 PFC CS5 19F2419	8.12e3	99.1	NO
2	2	13C5-PFHxA	ST190702M2-8 PFC CS5 19F2419	1.70e4	89.7	NO
3	3	18O2-PFHxS	ST190702M2-8 PFC CS5 19F2419	1.21e3	100.1	NO
4	4	13C8-PFOA	ST190702M2-8 PFC CS5 19F2419	2.14e4	92.1	NO
5	5	13C9-PFNA	ST190702M2-8 PFC CS5 19F2419	1.59e4	90.7	NO
6	6	13C4-PFOS	ST190702M2-8 PFC CS5 19F2419	2.73e3	100.3	NO
7	7	13C6-PFDA	ST190702M2-8 PFC CS5 19F2419	1.78e4	86.3	NO
8	8	13C7-PFUdA	ST190702M2-8 PFC CS5 19F2419	1.96e4	93.0	NO

Name: 190702M2_10, Date: 02-Jul-2019, Time: 11:40:32, ID: ST190702M2-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-9 PFC CS6 19F2420	8.82e3	107.7	NO
2	2	13C5-PFHxA	ST190702M2-9 PFC CS6 19F2420	1.75e4	92.4	NO
3	3	18O2-PFHxS	ST190702M2-9 PFC CS6 19F2420	1.07e3	88.7	NO
4	4	13C8-PFOA	ST190702M2-9 PFC CS6 19F2420	1.96e4	84.7	NO
5	5	13C9-PFNA	ST190702M2-9 PFC CS6 19F2420	1.63e4	92.9	NO
6	6	13C4-PFOS	ST190702M2-9 PFC CS6 19F2420	2.85e3	104.6	NO
7	7	13C6-PFDA	ST190702M2-9 PFC CS6 19F2420	1.83e4	89.1	NO
8	8	13C7-PFUdA	ST190702M2-9 PFC CS6 19F2420	1.85e4	87.5	NO

Name: 190702M2_11, Date: 02-Jul-2019, Time: 11:51:09, ID: ST190702M2-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-10 PFC CS7 19F2421	8.13e3	99.2	NO
2	2	13C5-PFHxA	ST190702M2-10 PFC CS7 19F2421	1.43e4	75.4	NO
3	3	18O2-PFHxS	ST190702M2-10 PFC CS7 19F2421	8.35e2	69.3	NO
4	4	13C8-PFOA	ST190702M2-10 PFC CS7 19F2421	1.54e4	66.4	NO
5	5	13C9-PFNA	ST190702M2-10 PFC CS7 19F2421	1.37e4	78.3	NO
6	6	13C4-PFOS	ST190702M2-10 PFC CS7 19F2421	2.09e3	76.6	NO
7	7	13C6-PFDA	ST190702M2-10 PFC CS7 19F2421	1.42e4	68.9	NO
8	8	13C7-PFUdA	ST190702M2-10 PFC CS7 19F2421	1.45e4	68.6	NO

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Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IB	1.01e4	122.9	NO
2	2	13C5-PFHxA	IB	1.95e4	103.0	NO
3	3	18O2-PFHxS	IB	1.12e3	92.7	NO
4	4	13C8-PFOA	IB	2.32e4	99.9	NO
5	5	13C9-PFNA	IB	1.84e4	105.3	NO
6	6	13C4-PFOS	IB	2.90e3	106.4	NO
7	7	13C6-PFDA	IB	2.00e4	97.2	NO
8	8	13C7-PFUdA	IB	1.80e4	85.1	NO

Name: 190702M2_13, Date: 02-Jul-2019, Time: 12:12:21, ID: ICV190702M2-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ICV190702M2-1 PFC ICV 19F2422	8.95e3	109.2	NO
2	2	13C5-PFHxA	ICV190702M2-1 PFC ICV 19F2422	1.97e4	103.8	NO
3	3	18O2-PFHxS	ICV190702M2-1 PFC ICV 19F2422	1.33e3	110.7	NO
4	4	13C8-PFOA	ICV190702M2-1 PFC ICV 19F2422	2.46e4	106.3	NO
5	5	13C9-PFNA	ICV190702M2-1 PFC ICV 19F2422	1.87e4	107.0	NO
6	6	13C4-PFOS	ICV190702M2-1 PFC ICV 19F2422	2.98e3	109.5	NO
7	7	13C6-PFDA	ICV190702M2-1 PFC ICV 19F2422	2.06e4	100.3	NO
8	8	13C7-PFUdA	ICV190702M2-1 PFC ICV 19F2422	2.12e4	100.4	NO

Name: 190702M2_14, Date: 02-Jul-2019, Time: 12:22:54, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190702M2_15, Date: 02-Jul-2019, Time: 16:38:12, ID: B9F0253-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-BS1 OPR 0.125	7.94e3	96.9	NO
2	2	13C5-PFHxA	B9F0253-BS1 OPR 0.125	1.50e4	79.3	NO
3	3	18O2-PFHxS	B9F0253-BS1 OPR 0.125	9.22e2	76.5	NO
4	4	13C8-PFOA	B9F0253-BS1 OPR 0.125	1.85e4	79.9	NO
5	5	13C9-PFNA	B9F0253-BS1 OPR 0.125	1.41e4	80.4	NO
6	6	13C4-PFOS	B9F0253-BS1 OPR 0.125	2.38e3	87.3	NO
7	7	13C6-PFDA	B9F0253-BS1 OPR 0.125	1.65e4	80.1	NO
8	8	13C7-PFUdA	B9F0253-BS1 OPR 0.125	1.63e4	77.3	NO

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Name: 190702M2_16, Date: 02-Jul-2019, Time: 16:48:54, ID: B9F0253-MS1 Matrix Spike 0.11802, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-MS1 Matrix Spike 0.11802	7.30e3	89.1	NO
2	2	13C5-PFHxA	B9F0253-MS1 Matrix Spike 0.11802	1.50e4	78.9	NO
3	3	18O2-PFHxS	B9F0253-MS1 Matrix Spike 0.11802	9.29e2	77.2	NO
4	4	13C8-PFOA	B9F0253-MS1 Matrix Spike 0.11802	1.84e4	79.5	NO
5	5	13C9-PFNA	B9F0253-MS1 Matrix Spike 0.11802	1.32e4	75.4	NO
6	6	13C4-PFOS	B9F0253-MS1 Matrix Spike 0.11802	2.16e3	79.3	NO
7	7	13C6-PFDA	B9F0253-MS1 Matrix Spike 0.11802	1.65e4	80.0	NO
8	8	13C7-PFUdA	B9F0253-MS1 Matrix Spike 0.11802	1.69e4	80.1	NO

Name: 190702M2_17, Date: 02-Jul-2019, Time: 16:59:32, ID: B9F0253-MSD1 Matrix Spike Dup 0.11415, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-MSD1 Matrix Spike Dup 0.114...	7.80e3	95.2	NO
2	2	13C5-PFHxA	B9F0253-MSD1 Matrix Spike Dup 0.114...	1.54e4	81.4	NO
3	3	18O2-PFHxS	B9F0253-MSD1 Matrix Spike Dup 0.114...	9.85e2	81.8	NO
4	4	13C8-PFOA	B9F0253-MSD1 Matrix Spike Dup 0.114...	1.86e4	80.2	NO
5	5	13C9-PFNA	B9F0253-MSD1 Matrix Spike Dup 0.114...	1.44e4	82.4	NO
6	6	13C4-PFOS	B9F0253-MSD1 Matrix Spike Dup 0.114...	2.42e3	88.9	NO
7	7	13C6-PFDA	B9F0253-MSD1 Matrix Spike Dup 0.114...	1.70e4	82.6	NO
8	8	13C7-PFUdA	B9F0253-MSD1 Matrix Spike Dup 0.114...	1.70e4	80.4	NO

Name: 190702M2_18, Date: 02-Jul-2019, Time: 17:10:05, ID: B9F0253-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-BLK1 Method Blank 0.125	7.10e3	86.6	NO
2	2	13C5-PFHxA	B9F0253-BLK1 Method Blank 0.125	1.40e4	73.9	NO
3	3	18O2-PFHxS	B9F0253-BLK1 Method Blank 0.125	8.36e2	69.4	NO
4	4	13C8-PFOA	B9F0253-BLK1 Method Blank 0.125	1.73e4	74.8	NO
5	5	13C9-PFNA	B9F0253-BLK1 Method Blank 0.125	1.28e4	73.2	NO
6	6	13C4-PFOS	B9F0253-BLK1 Method Blank 0.125	2.10e3	77.1	NO
7	7	13C6-PFDA	B9F0253-BLK1 Method Blank 0.125	1.55e4	75.3	NO
8	8	13C7-PFUdA	B9F0253-BLK1 Method Blank 0.125	1.61e4	76.0	NO

Name: 190702M2_19, Date: 02-Jul-2019, Time: 17:20:43, ID: 1901705-02 FRB-06182019 0.11453, Description: FRB-06182019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-02 FRB-06182019 0.11453	7.57e3	92.3	NO
2	2	13C5-PFHxA	1901705-02 FRB-06182019 0.11453	1.46e4	76.9	NO
3	3	18O2-PFHxS	1901705-02 FRB-06182019 0.11453	9.33e2	77.5	NO
4	4	13C8-PFOA	1901705-02 FRB-06182019 0.11453	1.78e4	76.6	NO
5	5	13C9-PFNA	1901705-02 FRB-06182019 0.11453	1.34e4	76.6	NO
6	6	13C4-PFOS	1901705-02 FRB-06182019 0.11453	2.49e3	91.5	NO
7	7	13C6-PFDA	1901705-02 FRB-06182019 0.11453	1.50e4	72.9	NO
8	8	13C7-PFUdA	1901705-02 FRB-06182019 0.11453	1.53e4	72.6	NO

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Name: 190702M2_20, Date: 02-Jul-2019, Time: 17:31:17, ID: 1901705-08 EB-06192019 0.11426, Description: EB-06192019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-08 EB-06192019 0.11426	9.12e3	111.3	NO
2	2	13C5-PFHxA	1901705-08 EB-06192019 0.11426	1.77e4	93.5	NO
3	3	18O2-PFHxS	1901705-08 EB-06192019 0.11426	1.05e3	87.3	NO
4	4	13C8-PFOA	1901705-08 EB-06192019 0.11426	1.86e4	80.0	NO
5	5	13C9-PFNA	1901705-08 EB-06192019 0.11426	1.33e4	75.8	NO
6	6	13C4-PFOS	1901705-08 EB-06192019 0.11426	2.69e3	98.6	NO
7	7	13C6-PFDA	1901705-08 EB-06192019 0.11426	1.50e4	72.6	NO
8	8	13C7-PFUdA	1901705-08 EB-06192019 0.11426	1.66e4	78.6	NO

Name: 190702M2_21, Date: 02-Jul-2019, Time: 17:41:56, ID: 1901705-16 FRB-06192019 0.11764, Description: FRB-06192019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-16 FRB-06192019 0.11764	8.44e3	102.9	NO
2	2	13C5-PFHxA	1901705-16 FRB-06192019 0.11764	1.64e4	86.5	NO
3	3	18O2-PFHxS	1901705-16 FRB-06192019 0.11764	1.06e3	88.0	NO
4	4	13C8-PFOA	1901705-16 FRB-06192019 0.11764	2.04e4	87.9	NO
5	5	13C9-PFNA	1901705-16 FRB-06192019 0.11764	1.52e4	86.9	NO
6	6	13C4-PFOS	1901705-16 FRB-06192019 0.11764	2.44e3	89.5	NO
7	7	13C6-PFDA	1901705-16 FRB-06192019 0.11764	1.80e4	87.4	NO
8	8	13C7-PFUdA	1901705-16 FRB-06192019 0.11764	1.89e4	89.6	NO

Name: 190702M2_22, Date: 02-Jul-2019, Time: 17:52:29, ID: 1901705-17 EB-06202019 0.11443, Description: EB-06202019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-17 EB-06202019 0.11443	7.96e3	97.1	NO
2	2	13C5-PFHxA	1901705-17 EB-06202019 0.11443	1.58e4	83.3	NO
3	3	18O2-PFHxS	1901705-17 EB-06202019 0.11443	9.90e2	82.2	NO
4	4	13C8-PFOA	1901705-17 EB-06202019 0.11443	1.97e4	85.0	NO
5	5	13C9-PFNA	1901705-17 EB-06202019 0.11443	1.56e4	89.3	NO
6	6	13C4-PFOS	1901705-17 EB-06202019 0.11443	2.55e3	93.6	NO
7	7	13C6-PFDA	1901705-17 EB-06202019 0.11443	1.83e4	88.8	NO
8	8	13C7-PFUdA	1901705-17 EB-06202019 0.11443	1.93e4	91.2	NO

Name: 190702M2_23, Date: 02-Jul-2019, Time: 18:03:07, ID: 1901705-18 FRB-06202019 0.12, Description: FRB-06202019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-18 FRB-06202019 0.12	7.45e3	90.9	NO
2	2	13C5-PFHxA	1901705-18 FRB-06202019 0.12	1.47e4	77.4	NO
3	3	18O2-PFHxS	1901705-18 FRB-06202019 0.12	8.60e2	71.4	NO
4	4	13C8-PFOA	1901705-18 FRB-06202019 0.12	1.84e4	79.3	NO
5	5	13C9-PFNA	1901705-18 FRB-06202019 0.12	1.37e4	78.0	NO
6	6	13C4-PFOS	1901705-18 FRB-06202019 0.12	2.19e3	80.5	NO
7	7	13C6-PFDA	1901705-18 FRB-06202019 0.12	1.57e4	76.3	NO
8	8	13C7-PFUdA	1901705-18 FRB-06202019 0.12	1.67e4	79.0	NO

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Name: 190702M2_24, Date: 02-Jul-2019, Time: 18:13:46, ID: 1901705-19 NAOA-B07-GW 0.11889, Description: NAOA-B07-GW

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901705-19 NAOA-B07-GW 0.11889	6.54e3	79.8	NO
2	2	13C5-PFHxA	1901705-19 NAOA-B07-GW 0.11889	1.31e4	69.1	NO
3	3	18O2-PFHxS	1901705-19 NAOA-B07-GW 0.11889	8.65e2	71.8	NO
4	4	13C8-PFOA	1901705-19 NAOA-B07-GW 0.11889	1.65e4	71.2	NO
5	5	13C9-PFNA	1901705-19 NAOA-B07-GW 0.11889	1.28e4	72.9	NO
6	6	13C4-PFOS	1901705-19 NAOA-B07-GW 0.11889	2.20e3	80.8	NO
7	7	13C6-PFDA	1901705-19 NAOA-B07-GW 0.11889	1.48e4	72.0	NO
8	8	13C7-PFUdA	1901705-19 NAOA-B07-GW 0.11889	1.60e4	75.6	NO

Name: 190702M2_25, Date: 02-Jul-2019, Time: 18:24:19, ID: 1901766-01 EB-GW-06202019 0.11296, Description: EB-GW-06202019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-01 EB-GW-06202019 0.11296	8.70e3	106.1	NO
2	2	13C5-PFHxA	1901766-01 EB-GW-06202019 0.11296	1.69e4	89.2	NO
3	3	18O2-PFHxS	1901766-01 EB-GW-06202019 0.11296	9.89e2	82.1	NO
4	4	13C8-PFOA	1901766-01 EB-GW-06202019 0.11296	2.10e4	90.5	NO
5	5	13C9-PFNA	1901766-01 EB-GW-06202019 0.11296	1.57e4	89.6	NO
6	6	13C4-PFOS	1901766-01 EB-GW-06202019 0.11296	2.45e3	90.1	NO
7	7	13C6-PFDA	1901766-01 EB-GW-06202019 0.11296	1.69e4	82.3	NO
8	8	13C7-PFUdA	1901766-01 EB-GW-06202019 0.11296	1.79e4	84.7	NO

Name: 190702M2_26, Date: 02-Jul-2019, Time: 18:34:57, ID: 1901766-02 SAOA-B06-GW 0.11745, Description: SAOA-B06-GW

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-02 SAOA-B06-GW 0.11745	7.57e3	92.4	NO
2	2	13C5-PFHxA	1901766-02 SAOA-B06-GW 0.11745	1.55e4	81.5	NO
3	3	18O2-PFHxS	1901766-02 SAOA-B06-GW 0.11745	1.03e3	85.9	NO
4	4	13C8-PFOA	1901766-02 SAOA-B06-GW 0.11745	1.84e4	79.3	NO
5	5	13C9-PFNA	1901766-02 SAOA-B06-GW 0.11745	1.39e4	79.4	NO
6	6	13C4-PFOS	1901766-02 SAOA-B06-GW 0.11745	2.40e3	88.0	NO
7	7	13C6-PFDA	1901766-02 SAOA-B06-GW 0.11745	1.62e4	78.8	NO
8	8	13C7-PFUdA	1901766-02 SAOA-B06-GW 0.11745	1.73e4	81.9	NO

Name: 190702M2_27, Date: 02-Jul-2019, Time: 18:45:30, ID: 1901766-03 FRB-06242019 0.11389, Description: FRB-06242019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-03 FRB-06242019 0.11389	7.88e3	96.1	NO
2	2	13C5-PFHxA	1901766-03 FRB-06242019 0.11389	1.56e4	82.2	NO
3	3	18O2-PFHxS	1901766-03 FRB-06242019 0.11389	1.02e3	85.0	NO
4	4	13C8-PFOA	1901766-03 FRB-06242019 0.11389	1.73e4	74.6	NO
5	5	13C9-PFNA	1901766-03 FRB-06242019 0.11389	1.26e4	71.7	NO
6	6	13C4-PFOS	1901766-03 FRB-06242019 0.11389	2.37e3	87.2	NO
7	7	13C6-PFDA	1901766-03 FRB-06242019 0.11389	1.41e4	68.6	NO
8	8	13C7-PFUdA	1901766-03 FRB-06242019 0.11389	1.45e4	68.9	NO

Dataset: Untitled

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Name: 190702M2_28, Date: 02-Jul-2019, Time: 18:56:09, ID: 1901766-04 SAOA-B07-GW 0.11804, Description: SAOA-B07-GW

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-04 SAOA-B07-GW 0.11804	7.35e3	89.7	NO
2	2	13C5-PFHxA	1901766-04 SAOA-B07-GW 0.11804	1.34e4	70.6	NO
3	3	18O2-PFHxS	1901766-04 SAOA-B07-GW 0.11804	1.04e3	86.7	NO
4	4	13C8-PFOA	1901766-04 SAOA-B07-GW 0.11804	1.73e4	74.7	NO
5	5	13C9-PFNA	1901766-04 SAOA-B07-GW 0.11804	1.32e4	75.6	NO
6	6	13C4-PFOS	1901766-04 SAOA-B07-GW 0.11804	2.50e3	91.7	NO
7	7	13C6-PFDA	1901766-04 SAOA-B07-GW 0.11804	1.57e4	76.1	NO
8	8	13C7-PFUdA	1901766-04 SAOA-B07-GW 0.11804	1.68e4	79.6	NO

Name: 190702M2_29, Date: 02-Jul-2019, Time: 19:06:42, ID: 1901766-08 SAOA-B04-GW 0.12437, Description: SAOA-B04-GW

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-08 SAOA-B04-GW 0.12437	7.00e3	85.5	NO
2	2	13C5-PFHxA	1901766-08 SAOA-B04-GW 0.12437	1.36e4	71.8	NO
3	3	18O2-PFHxS	1901766-08 SAOA-B04-GW 0.12437	8.56e2	71.1	NO
4	4	13C8-PFOA	1901766-08 SAOA-B04-GW 0.12437	1.70e4	73.3	NO
5	5	13C9-PFNA	1901766-08 SAOA-B04-GW 0.12437	1.30e4	74.5	NO
6	6	13C4-PFOS	1901766-08 SAOA-B04-GW 0.12437	2.28e3	83.7	NO
7	7	13C6-PFDA	1901766-08 SAOA-B04-GW 0.12437	1.45e4	70.4	NO
8	8	13C7-PFUdA	1901766-08 SAOA-B04-GW 0.12437	1.56e4	74.1	NO

Name: 190702M2_30, Date: 02-Jul-2019, Time: 19:17:20, ID: 1901766-09 EB-06252019 0.11886, Description: EB-06252019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-09 EB-06252019 0.11886	7.76e3	94.7	NO
2	2	13C5-PFHxA	1901766-09 EB-06252019 0.11886	1.57e4	82.6	NO
3	3	18O2-PFHxS	1901766-09 EB-06252019 0.11886	9.41e2	78.2	NO
4	4	13C8-PFOA	1901766-09 EB-06252019 0.11886	1.96e4	84.7	NO
5	5	13C9-PFNA	1901766-09 EB-06252019 0.11886	1.45e4	82.7	NO
6	6	13C4-PFOS	1901766-09 EB-06252019 0.11886	2.49e3	91.4	NO
7	7	13C6-PFDA	1901766-09 EB-06252019 0.11886	1.67e4	81.2	NO
8	8	13C7-PFUdA	1901766-09 EB-06252019 0.11886	1.78e4	84.1	NO

Name: 190702M2_31, Date: 02-Jul-2019, Time: 19:27:58, ID: 1901766-10 FRB-06252019 0.11191, Description: FRB-06252019

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-10 FRB-06252019 0.11191	8.40e3	102.6	NO
2	2	13C5-PFHxA	1901766-10 FRB-06252019 0.11191	1.71e4	90.2	NO
3	3	18O2-PFHxS	1901766-10 FRB-06252019 0.11191	1.06e3	88.4	NO
4	4	13C8-PFOA	1901766-10 FRB-06252019 0.11191	2.05e4	88.3	NO
5	5	13C9-PFNA	1901766-10 FRB-06252019 0.11191	1.58e4	90.1	NO
6	6	13C4-PFOS	1901766-10 FRB-06252019 0.11191	2.55e3	93.6	NO
7	7	13C6-PFDA	1901766-10 FRB-06252019 0.11191	1.75e4	85.0	NO
8	8	13C7-PFUdA	1901766-10 FRB-06252019 0.11191	1.92e4	91.0	NO

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Name: 190702M2_32, Date: 02-Jul-2019, Time: 19:38:31, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190702M2-11 PFC CS3 19F2417	8.49e3	103.6	NO
2	2	13C5-PFHxA	ST190702M2-11 PFC CS3 19F2417	2.03e4	106.8	NO
3	3	18O2-PFHxS	ST190702M2-11 PFC CS3 19F2417	1.12e3	93.1	NO
4	4	13C8-PFOA	ST190702M2-11 PFC CS3 19F2417	2.39e4	103.1	NO
5	5	13C9-PFNA	ST190702M2-11 PFC CS3 19F2417	1.86e4	106.1	NO
6	6	13C4-PFOS	ST190702M2-11 PFC CS3 19F2417	3.09e3	113.4	NO
7	7	13C6-PFDA	ST190702M2-11 PFC CS3 19F2417	2.22e4	107.9	NO
8	8	13C7-PFUdA	ST190702M2-11 PFC CS3 19F2417	2.33e4	110.2	NO

Name: 190702M2_34, Date: 02-Jul-2019, Time: 19:59:42, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-IB.qld

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Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		7340.147	1.00					NO		
2	2	PFPrS	248.9 > 79.9		1342.602	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		10281.473	1.00					NO		
4	4	PFPeA	263.1 > 218.9		10281.473	1.00					NO		
5	5	PFBS	299.0 > 79.7		1342.602	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		2226.379	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	7340.147	10068.264	1.00	1.33	9.113	11.8	94.7	NO		
8	49	13C3-PFBS	302.0 > 98.8	1342.602	1116.867	1.00	2.60	15.026	14.1	112.6	NO		
9	48	13C3-PFPeA	266.0 > 221.8	10281.473	19540.723	1.00	2.31	6.577	12.5	100.3	NO		
10	48	13C3-PFPeA	266.0 > 221.8	10281.473	19540.723	1.00	2.31	6.577	12.5	100.3	NO		
11	49	13C3-PFBS	302.0 > 98.8	1342.602	1116.867	1.00	2.60	15.026	14.1	112.6	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2226.379	1116.867	1.00	3.01	24.918	14.2	113.4	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0		7649.745	1.00					NO		
15	8	PFPeS	349.1>80.1		1342.602	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1624.185	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		10704.430	1.00					NO		
18	11	PFHpA	363.0 > 318.9		10704.430	1.00					NO		
19	12	ADONA	376.8 > 250.9		10704.430	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	7649.745	19540.723	1.00	3.10	4.893	4.9	97.1	NO		
21	49	13C3-PFBS	302.0 > 98.8	1342.602	1116.867	1.00	2.60	15.026	14.1	112.6	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1624.185	19540.723	1.00	3.31	1.039	5.3	106.5	NO		
23	53	13C4-PFHpA	367.2 > 321.8	10704.430	19540.723	1.00	3.71	6.848	12.8	102.4	NO		
24	53	13C4-PFHpA	367.2 > 321.8	10704.430	19540.723	1.00	3.71	6.848	12.8	102.4	NO		
25	53	13C4-PFHpA	367.2 > 321.8	10704.430	19540.723	1.00	3.71	6.848	12.8	102.4	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6		2543.786	1.00					NO		
28	15	6:2 FTS	427.0 > 406.9		1855.454	1.00					NO		
29	16	L-PFOA	412.8 > 368.9		18158.609	1.00					NO		
30	18	PFecHS	460.8 > 381.0		18158.609	1.00					NO		
31	19	PFHpS	449.0 > 80.0		2737.562	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		17839.941	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	2543.786	1116.867	1.00	3.86	28.470	13.1	105.0	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1855.454	2896.066	1.00	4.18	8.009	13.3	106.1	NO		
35	58	13C2-PFOA	414.9 > 369.7	18158.609	23167.389	1.00	4.23	9.798	13.2	105.4	NO		
36	58	13C2-PFOA	414.9 > 369.7	18158.609	23167.389	1.00	4.23	9.798	13.2	105.4	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-IB.qld

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Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2737.562	2896.066	1.00	4.76	11.816	11.8	94.7	NO		
38	56	13C5-PFNA	468.2 > 422.9	17839.941	18434.352	1.00	4.67	12.097	11.9	95.4	NO		
39	-1												
40	21	PFNA	463.0 > 418.8		17839.941	1.00					NO		
41	22	PFOSA	497.9 > 77.9		1802.618	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		2737.562	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		2737.562	1.00					NO		
44	26	PFDA	513 > 468.8		16065.065	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		1663.574	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	17839.941	18434.352	1.00	4.67	12.097	11.9	95.4	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1802.618	17970.762	1.00	4.73	1.254	8.0	64.2	NO		
48	59	13C8-PFOS	507.0 > 79.9	2737.562	2896.066	1.00	4.76	11.816	11.8	94.7	NO		
49	59	13C8-PFOS	507.0 > 79.9	2737.562	2896.066	1.00	4.76	11.816	11.8	94.7	NO		
50	60	13C2-PFDA	515.1 > 469.9	16065.065	20019.861	1.00	5.04	10.031	12.0	96.0	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1663.574	2896.066	1.00	5.02	7.180	12.0	96.2	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		2737.562	1.00					NO		
54	29	L-MeFOSAA	570 > 419		2880.969	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		3233.441	1.00					NO		
56	33	PFUdA	563.0 > 518.9		19258.521	1.00					NO		
57	34	PFDS	598.8 > 79.9		1663.574	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		10286.949	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	2737.562	2896.066	1.00	4.76	11.816	11.8	94.7	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	2880.969	17970.762	1.00	5.19	2.004	12.3	98.4	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	3233.441	17970.762	1.00	5.35	2.249	12.5	100.3	NO		
62	63	13C2-PFUdA	565 > 519.8	19258.521	17970.762	1.00	5.37	13.396	12.7	101.8	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1663.574	2896.066	1.00	5.02	7.180	12.0	96.2	NO		
64	65	13C2-PFDoA	614.7 > 569.7	10286.949	20019.861	1.00	5.65	6.423	5.9	46.9	YES		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1663.574	1.00					NO		
67	37	PFDoA	612.9 > 569.0		10286.949	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9		8.673	1.00					NO		
69	39	PFTrDA	662.9 > 618.9		10286.949	1.00					NO		
70	40	PFDoS	698.8 > 79.9		1595.422	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		1595.422	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	10286.949	20019.861	1.00	5.65	6.423	5.9	46.9	YES		

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Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	10286.949	20019.861	1.00	5.65	6.423	5.9	46.9	YES		
74	66	d3-N-MeFOSA	515.2 > 168.9	8.673	17970.762	1.00	5.83	0.006	0.2	0.1	YES		
75	65	13C2-PFDoA	614.7 > 569.7	10286.949	20019.861	1.00	5.65	6.423	5.9	46.9	YES		
76	67	13C2-PFTeDA	715.1 > 669.7	1595.422	17970.762	1.00	6.12	1.110	1.7	13.3	YES		
77	67	13C2-PFTeDA	715.1 > 669.7	1595.422	17970.762	1.00	6.12	1.110	1.7	13.3	YES		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		16.396	1.00					NO		
80	43	PFHxDA	813.1 > 768.6		1043.835	1.00					NO		
81	44	PFODA	913.1 > 868.8	77.783	1043.835	1.00	6.69	0.373	0.5		NO		
82	45	N-MeFOSE	616.1 > 58.9		757.870	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		596.647	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	10068.264	10068.264	1.00	1.33	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	16.396	17970.762	1.00	6.22	0.011	0.2	0.2	YES		
86	69	13C2-PFHxDA	815 > 769.7	1043.835	17970.762	1.00	6.46	0.726	0.9	17.2	YES		
87	69	13C2-PFHxDA	815 > 769.7	1043.835	17970.762	1.00	6.46	0.726	0.9	17.2	YES		
88	70	d7-N-MeFOSE	623.1 > 58.9	757.870	17970.762	1.00	6.34	0.527	18.3	12.2	YES		
89	71	d9-N-EtFOSE	639.2 > 58.8	596.647	17970.762	1.00	6.49	0.415	14.5	9.6	YES		
90	73	13C5-PFHxA	318.0 > 272.9	19540.723	19540.723	1.00	3.09	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	23167.389	23167.389	1.00	4.23	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1116.867	1116.867	1.00	3.86	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	18434.352	18434.352	1.00	4.67	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2896.066	2896.066	1.00	4.75	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	20019.861	20019.861	1.00	5.04	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	17970.762	17970.762	1.00	5.37	12.500	12.5	100.0	NO		

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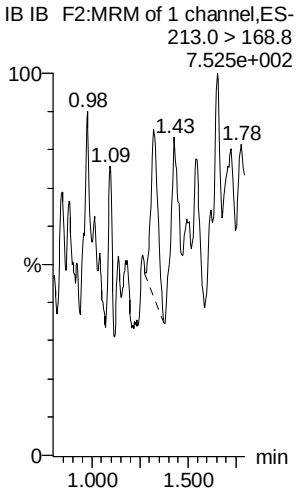
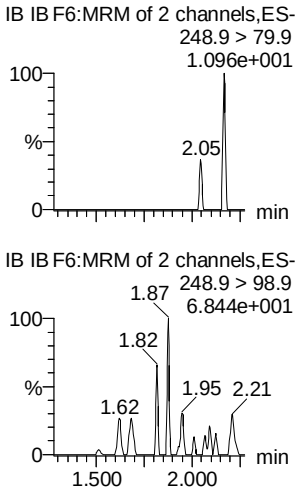
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

PFBA



PFPrS



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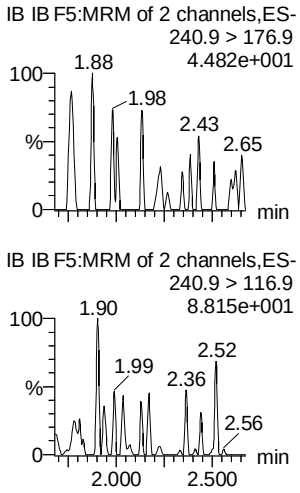

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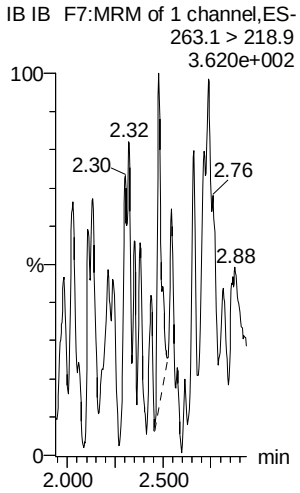
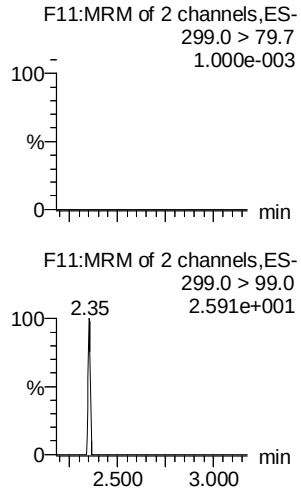
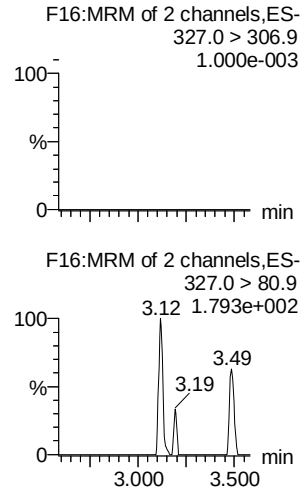


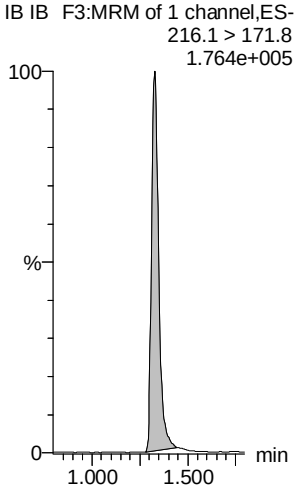
PFBS



4:2 FTS



13C3-PFBA



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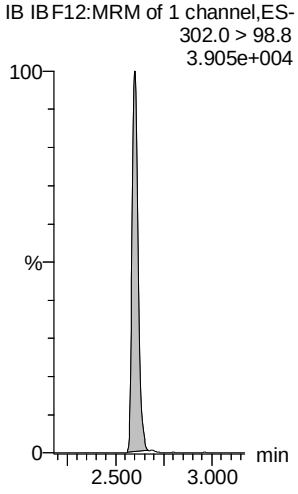

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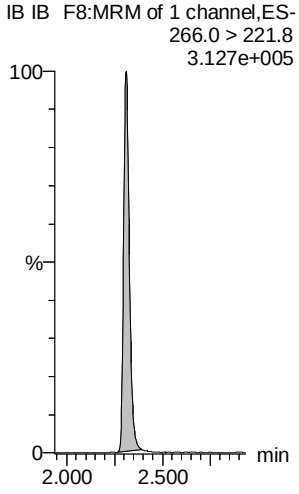

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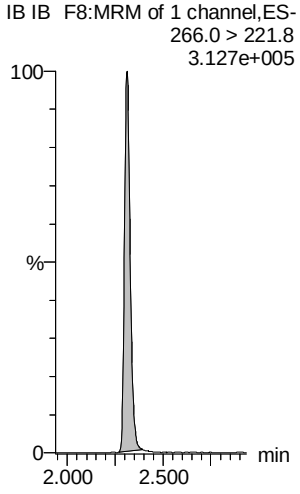

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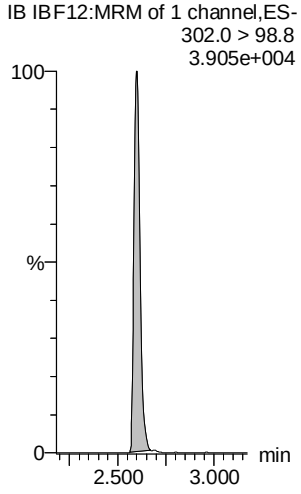
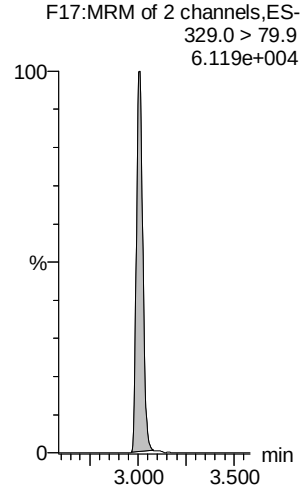


13C2-4:2 FTS



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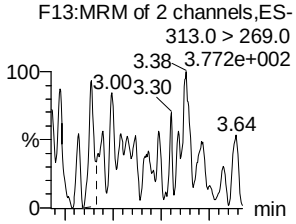
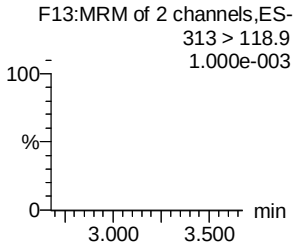
Printed: Wednesday, July 03, 2019 09:38:27 Pacific Daylight Time

Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

PFHxA





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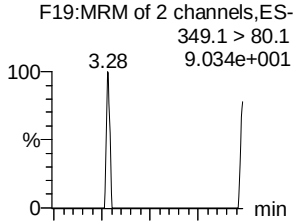
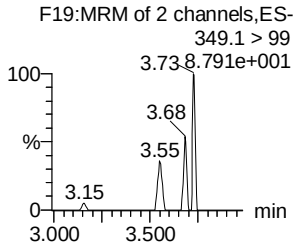
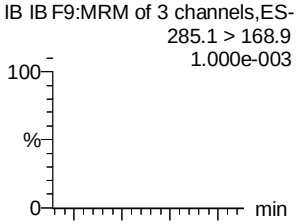
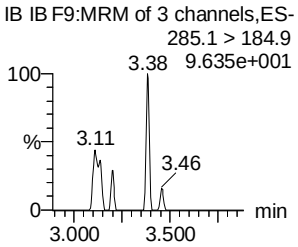


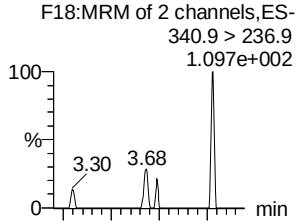


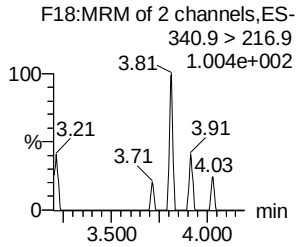
HFPO-DA





5:3 FTCA





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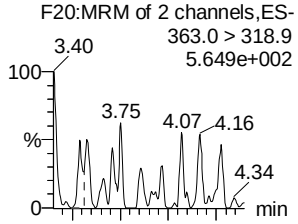

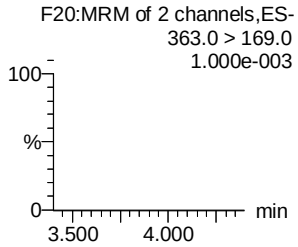

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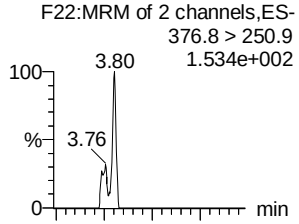

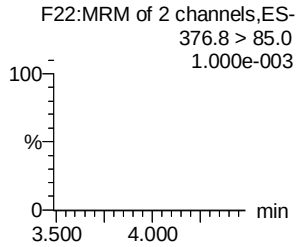

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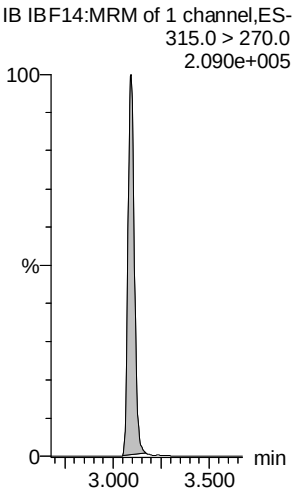
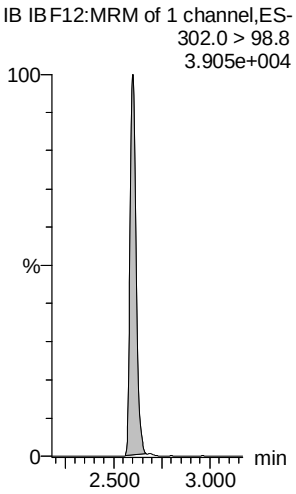
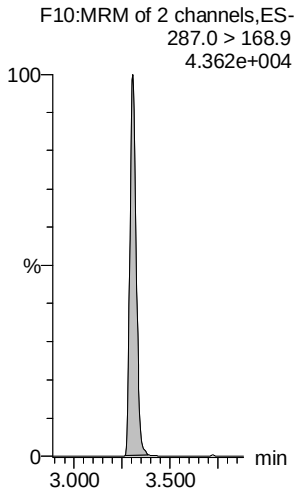


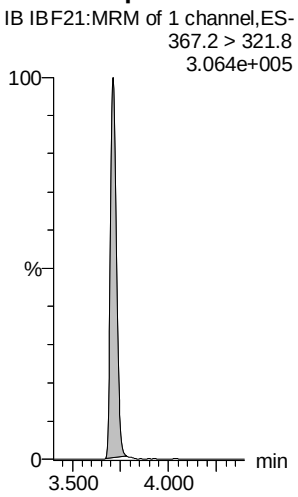
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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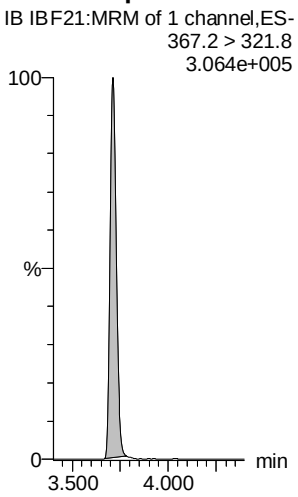

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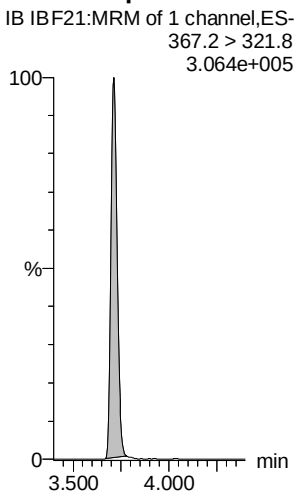

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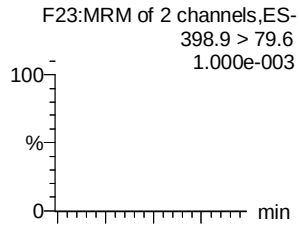
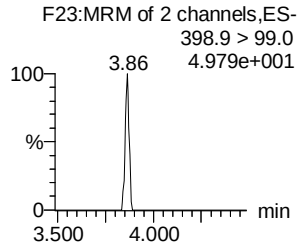
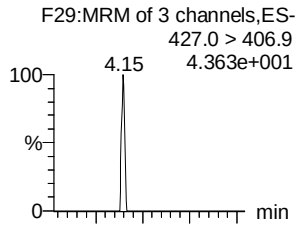
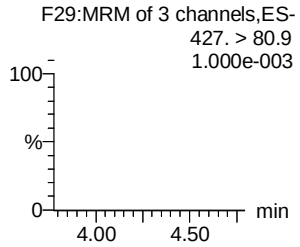
L-PFHxS



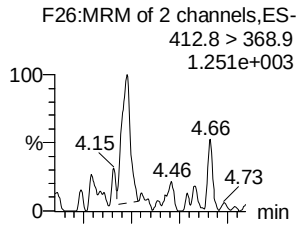


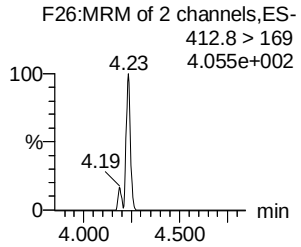
6:2 FTS





L-PFOA





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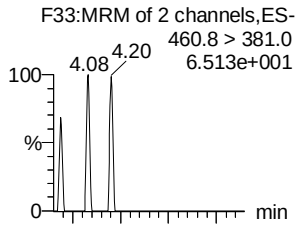
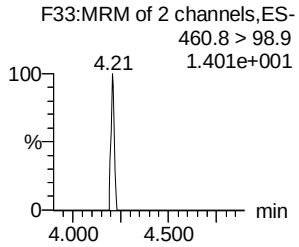
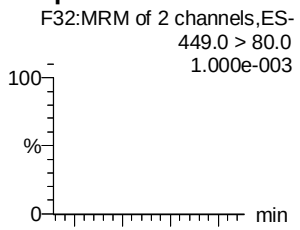
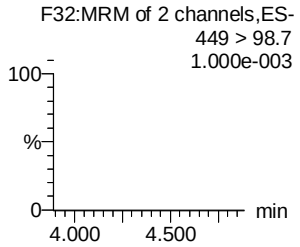


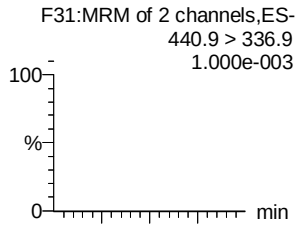


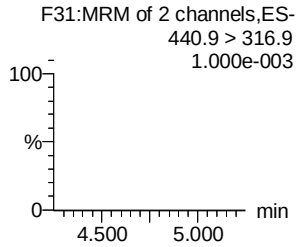
PFHpS



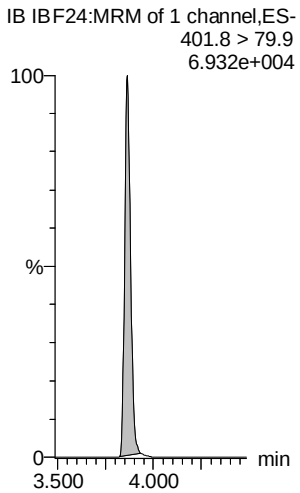


7:3 FTCA

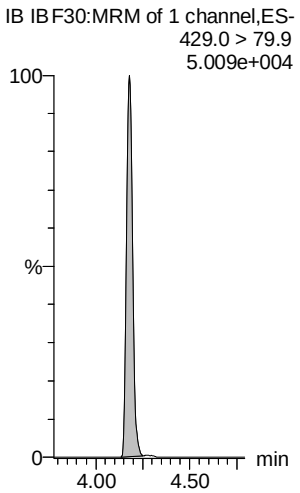




13C3-PFHxS



13C2-6:2 FTS



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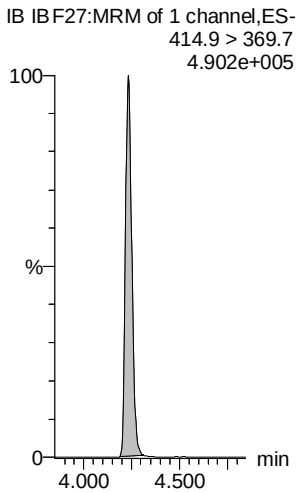

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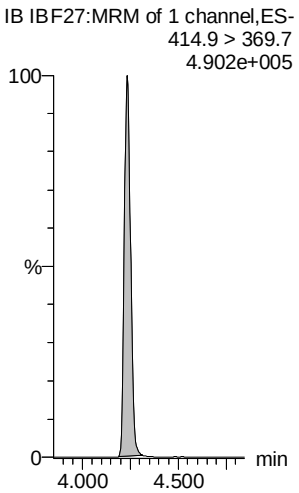

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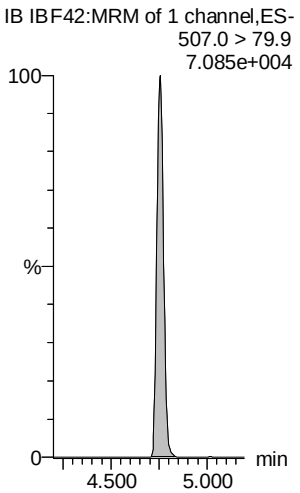

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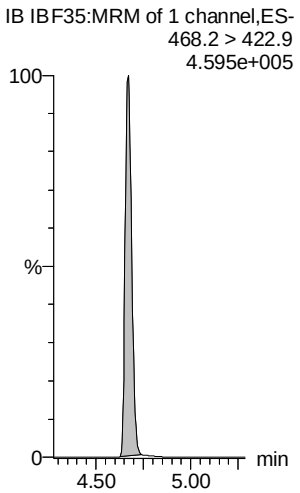

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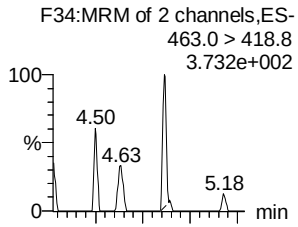
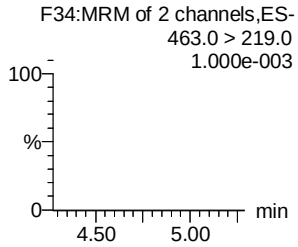
Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

PFNA





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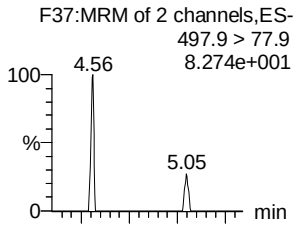
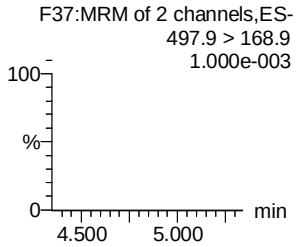
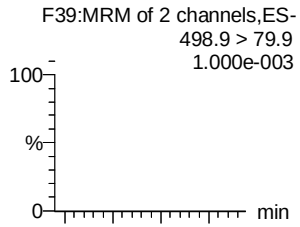
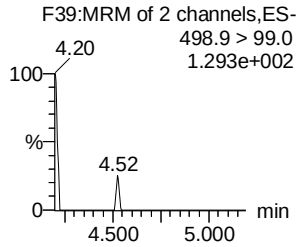


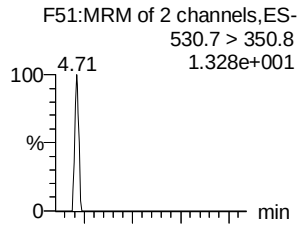


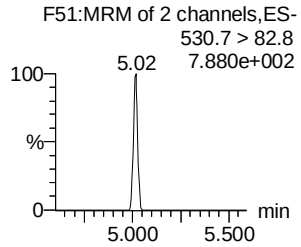
L-PFOS





9Cl-PF30NS





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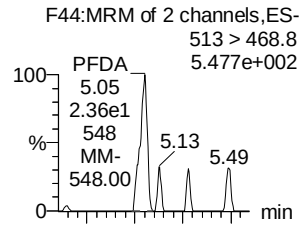

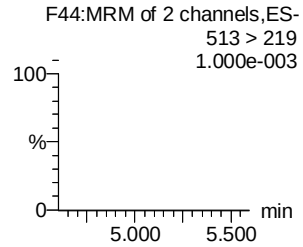

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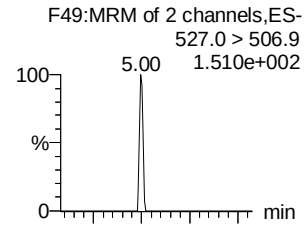

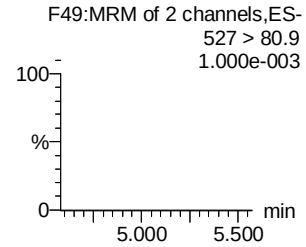

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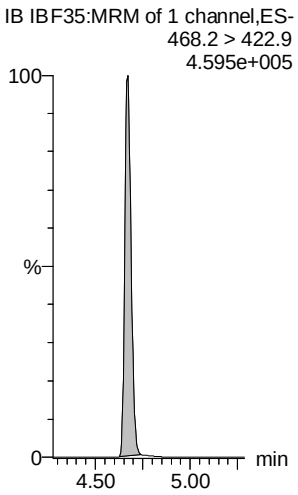
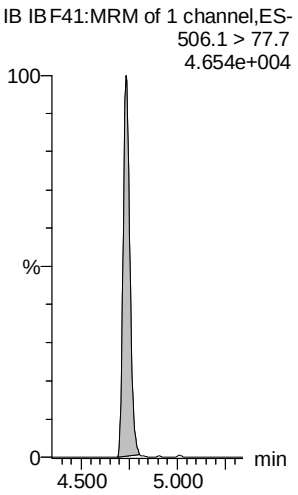


13C8-PFOSA



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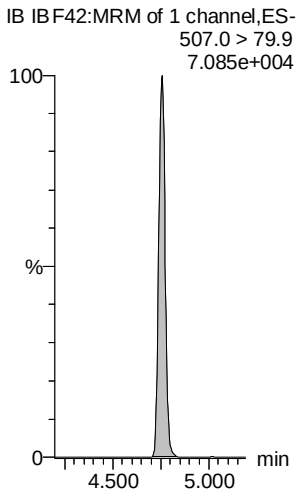

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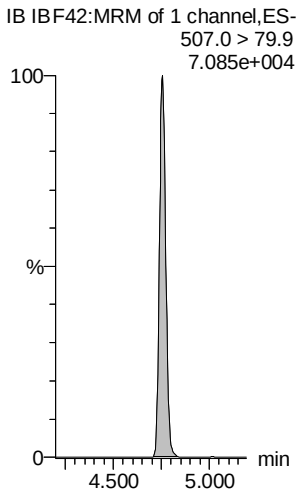

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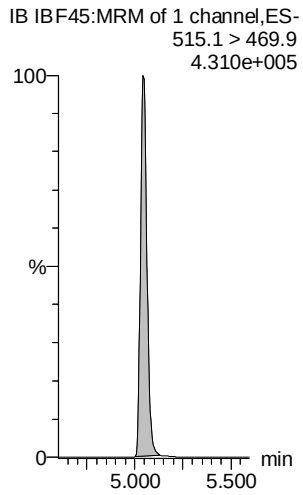
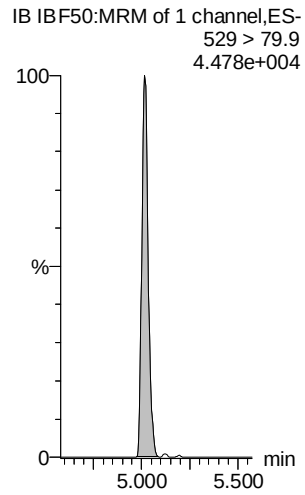


13C2-8:2 FTS



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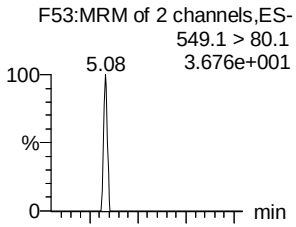
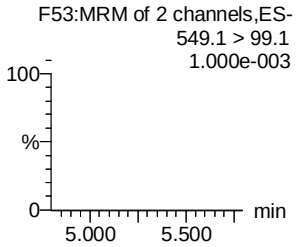
Printed: Wednesday, July 03, 2019 09:38:27 Pacific Daylight Time

Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

PFNS





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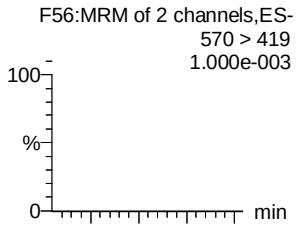

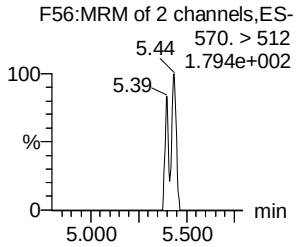

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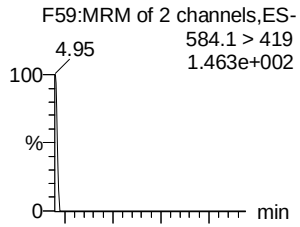

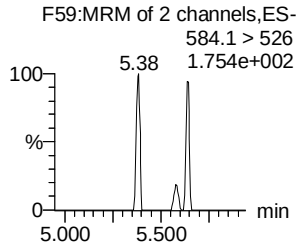

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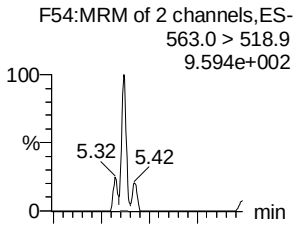

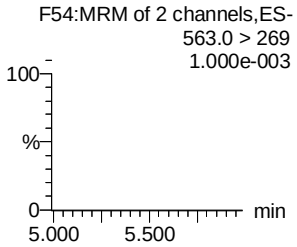

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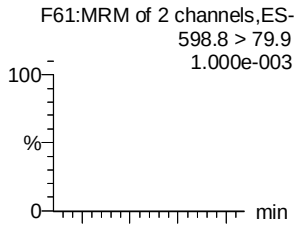

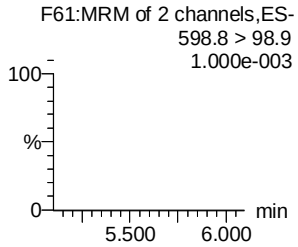

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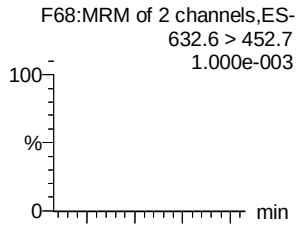
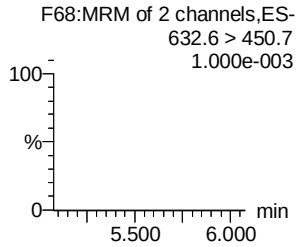
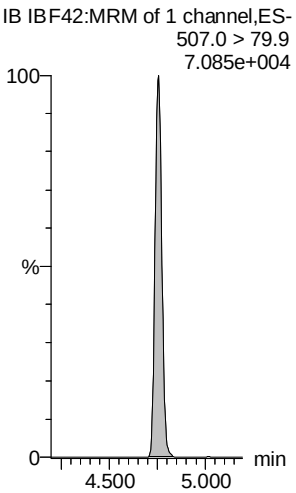
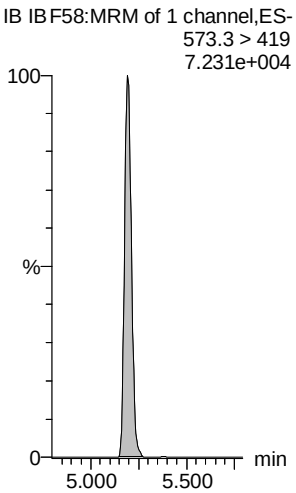




13C8-PFOS



d3-N-MeFOSAA



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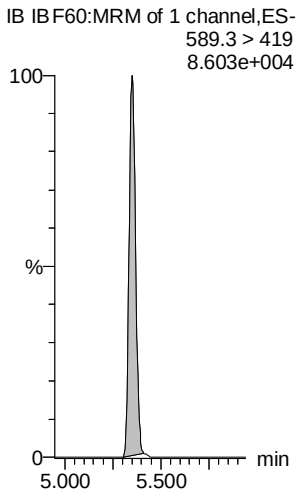
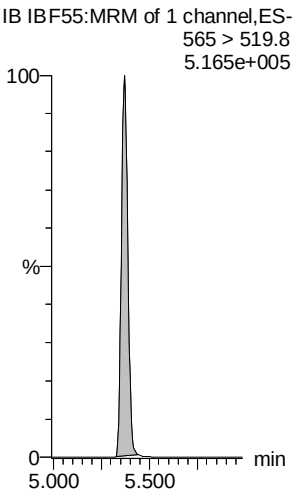


13C2-PFUdA



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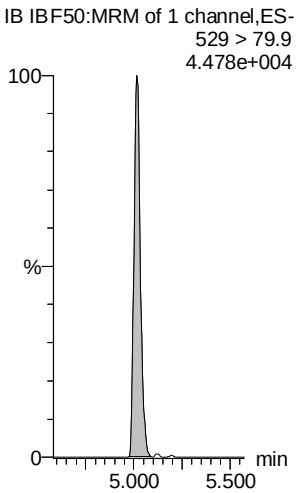

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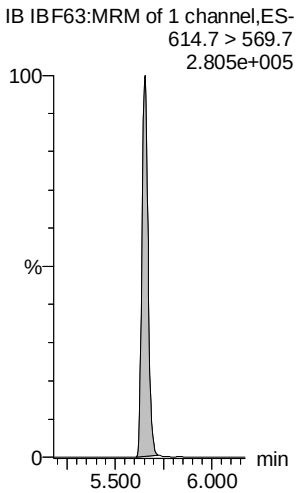

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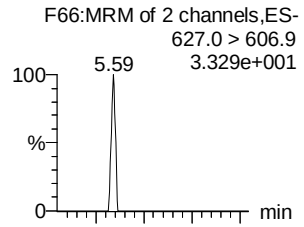
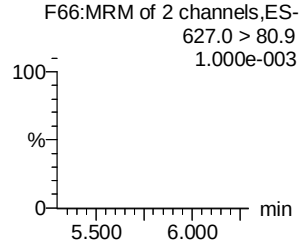
10:2 FTS





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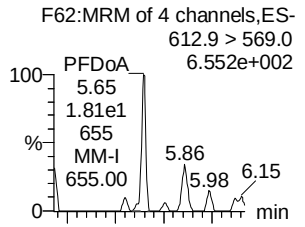
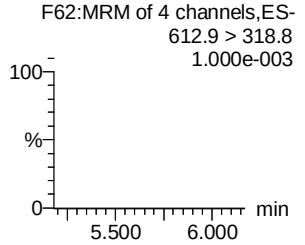
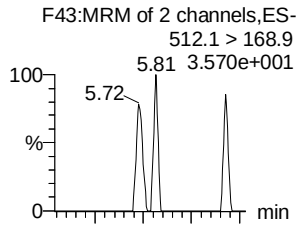
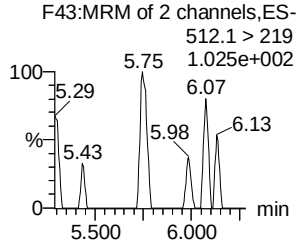




N-MeFOSA





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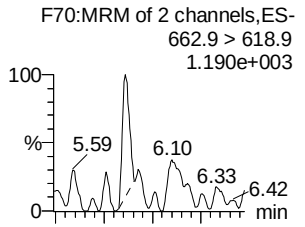

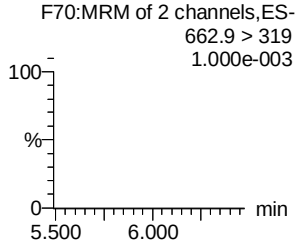

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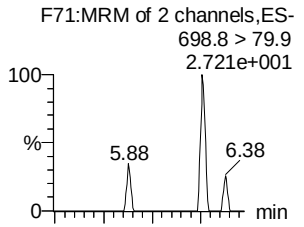

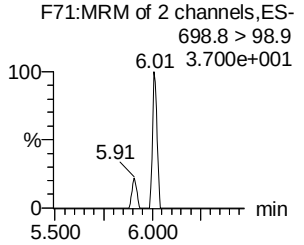

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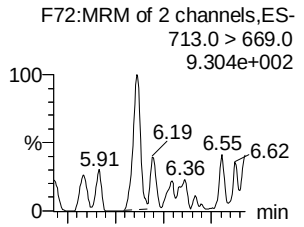

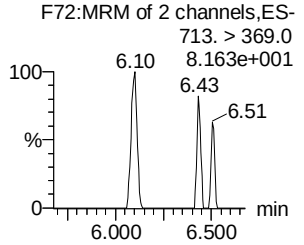

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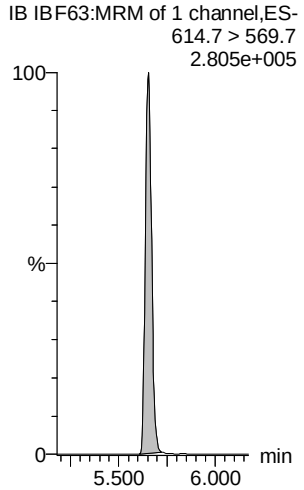

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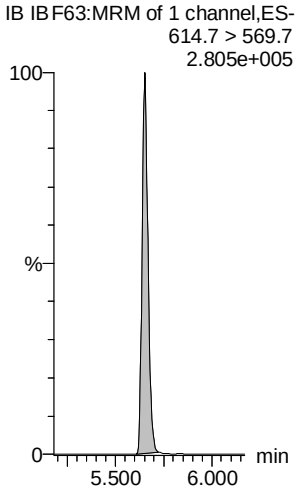

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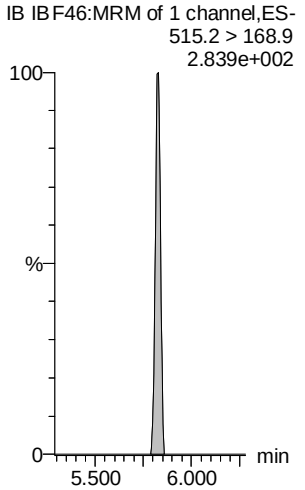

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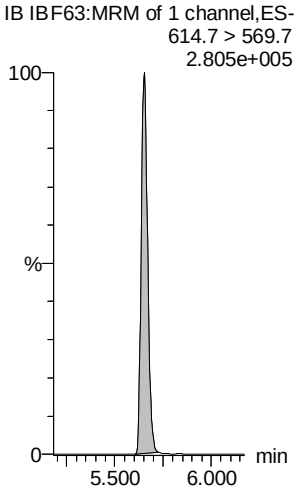

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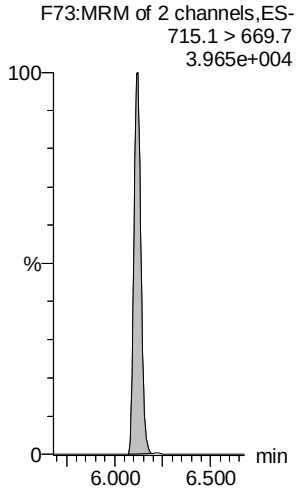

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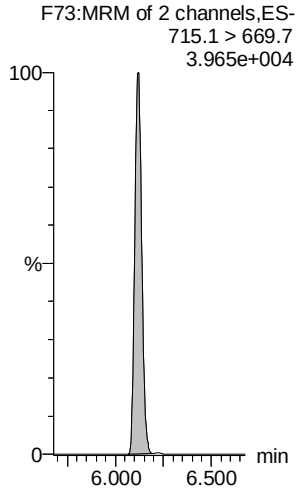

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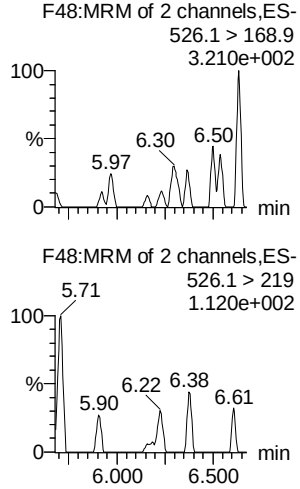
Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

N-EtFOSA



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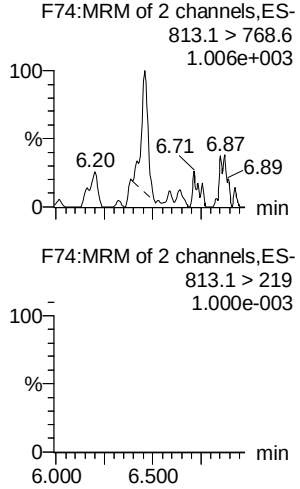

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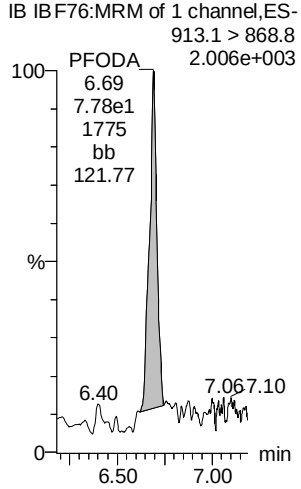
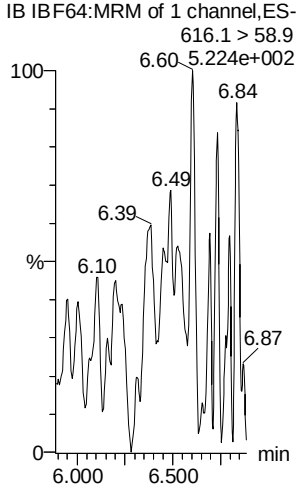


N-MeFOSE



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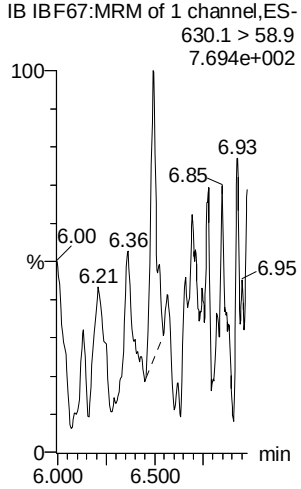
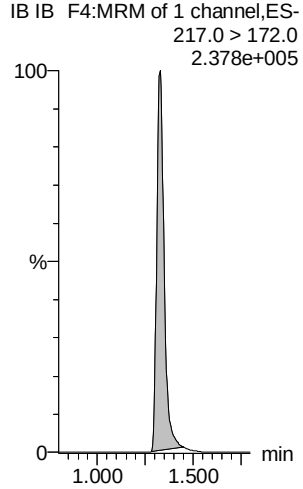
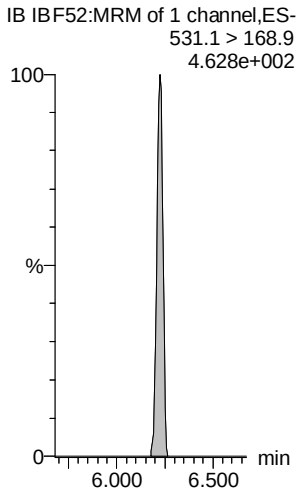


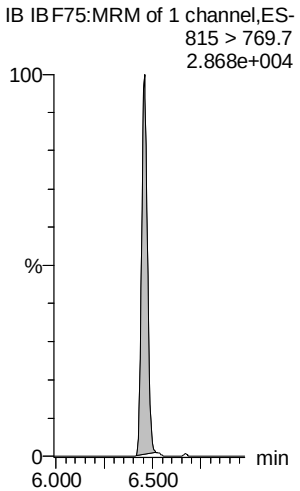
13C4-PFBA



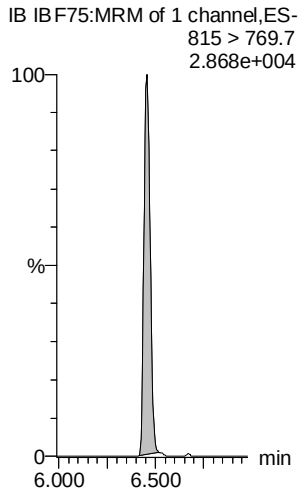
d5-N-ETFOSA



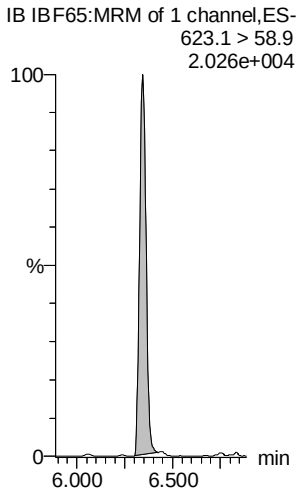
13C2-PFHxDA



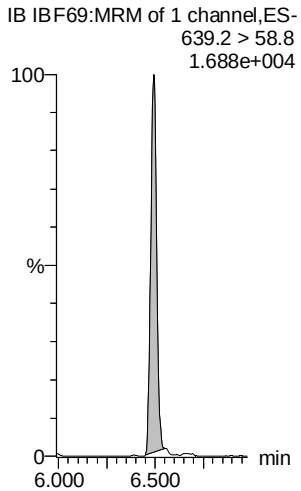
13C2-PFHxDA



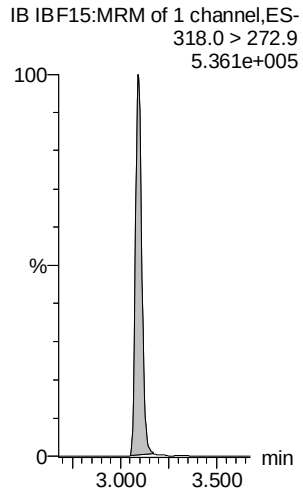
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

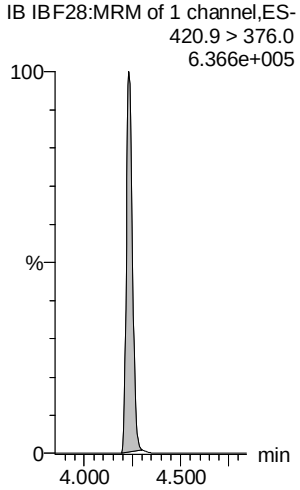


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-IB.qld

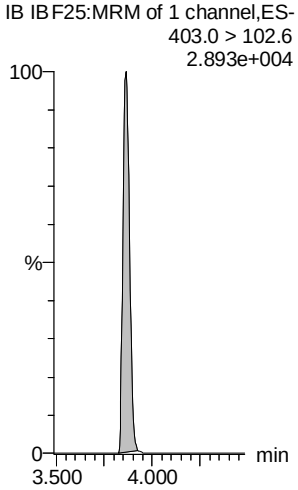
Last Altered: Wednesday, July 03, 2019 09:38:01 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:38:27 Pacific Daylight Time

Name: 190702M2_12, Date: 02-Jul-2019, Time: 12:01:43, ID: IB, Description: IB

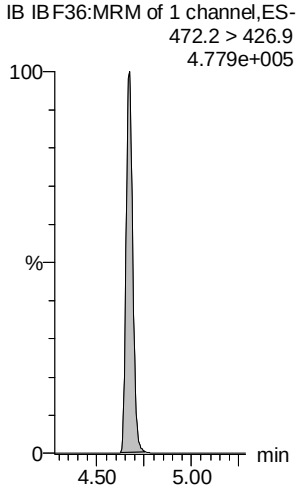
13C8-PFOA



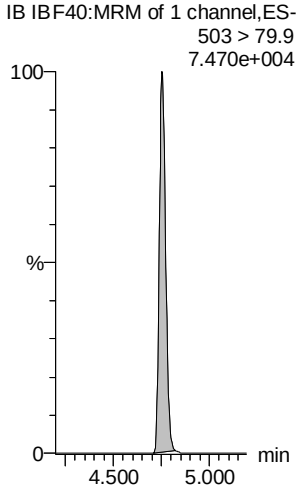
18O2-PFHxS



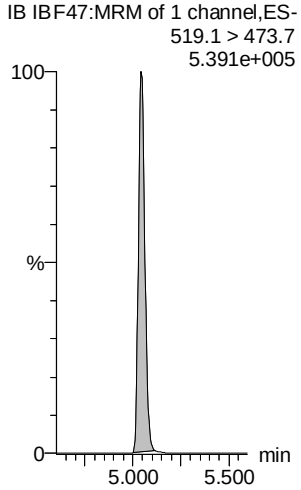
13C9-PFNA



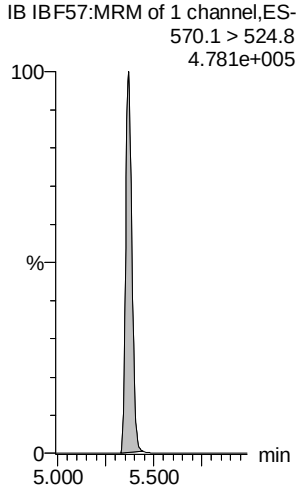
13C4-PFOS



13C6-PFDA



13C7-PFUdA



LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	ST190702M2-3	L M H	☑	☐	☒	☑	☒	☒	☐
Calibration ID:	↓ -11	L M H	☑	☒	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐ N/A Calib 7/5/19	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 07/02/19

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: [illegible] 7/5/19
Initials/Date

Comments:

ID: LR - LCSRC *Rev. No.: 2* *Rev. Date: 04/29/2019* *Page: 1 of 1*

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:12:49 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.33	1.33			
2	PFPrS	1.68	1.68	2.497	2.497	NO
3	3:3 FTCA	2.16	2.15	1.870	1.870	NO
4	PFPeA	2.30	2.30			
5	PFBS	2.59	2.59	2.803	2.803	NO
6	4:2 FTS	3.00	3.00	1.571	1.571	NO
7	PFHxA	3.09	3.09	15.087	15.087	NO
8	PFPeS	3.29	3.29	1.726	1.726	NO
9	HFPO-DA	3.30	3.30	2.021	2.021	NO
10	5:3 FTCA	3.63	3.64	1.413	1.413	NO
11	PFHpA	3.71	3.71	12.927	12.927	NO
12	ADONA	3.82	3.82	3.505	3.505	NO
13	L-PFHxS	3.86	3.86	1.880	1.880	NO
14	6:2 FTS	4.17	4.17	2.045	2.045	NO
15	L-PFOA	4.23	4.23	3.565	3.565	NO
16	PFecHS	4.25	4.25	0.868	0.868	NO
17	PFHpS	4.34	4.34	1.847	1.847	NO
18	7:3 FTCA	4.65	4.65	2.077	2.077	NO
19	PFNA	4.66	4.67	4.823	4.823	NO
20	PFOSA	4.73	4.73	26.627	26.627	NO
21	L-PFOS	4.75	4.75	2.050	2.050	NO
22	9Cl-PF30NS	4.96	4.96	18.248	18.248	NO
23	PFDA	5.04	5.04	5.775	5.775	NO
24	8:2 FTS	5.01	5.01	1.024	1.024	NO
25	PFNS	5.10	5.10	1.566	1.566	NO
26	L-MeFOSAA	5.19	5.19	2.585	2.585	NO

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:13:04 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.34	5.35	1.417	1.417	NO
2	PFUdA	5.36	5.36	10.286	10.286	NO
3	PFDS	5.41	5.41	1.646	1.646	NO
4	11Cl-PF30UdS	5.57	5.57	6.344	6.344	NO
5	10:2 FTS	5.63	5.63	1.464	1.464	NO
6	PFDoA	5.65	5.65	8.425	8.425	NO
7	N-MeFOSA	5.80	5.80	1.537	1.537	NO
8	PFTrDA	5.89	5.89	22.953	22.953	NO
9	PFDoS	5.92	5.92	1.766	1.766	NO
10	PFTeDA	6.11	6.11	13.648	13.648	NO
11	N-EtFOSA	6.20	6.20	1.566	1.566	NO
12	PFHxDA	6.45	6.45	36.083	36.083	NO
13	PFODA	6.69	6.69			
14	N-MeFOSE	6.35	6.35			
15	N-EtFOSE	6.50	6.50			

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

7/3/19

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	598.999	6045.691	1.00	1.33	1.238	1.1	109.0	NO		
2	2	PFPrS	248.9 > 79.9	108.963	1208.811	1.00	1.68	1.127	0.9	89.9	NO	1.948	NO
3	3	3:3 FTCA	240.9 > 176.9	23.821	9984.217	1.00	2.16	0.030	1.0	104.5	NO	3.584	YES
4	4	PFPeA	263.1 > 218.9	704.680	9984.217	1.00	2.31	0.882	0.9	92.8	NO		
5	5	PFBS	299.0 > 79.7	199.111	1208.811	1.00	2.60	2.059	1.0	99.3	NO	2.971	NO
6	6	4:2 FTS	327.0 > 306.9	357.190	2115.461	1.00	3.00	2.111	1.0	98.6	NO	1.508	NO
7	47	13C3-PFBA	216.1 > 171.8	6045.691	8169.024	1.00	1.33	9.251	12.0	96.2	NO		
8	49	13C3-PFBS	302.0 > 98.8	1208.811	1204.299	1.00	2.59	12.547	11.8	94.1	NO		
9	48	13C3-PFPeA	266.0 > 221.8	9984.217	18975.092	1.00	2.31	6.577	12.5	100.3	NO		
10	48	13C3-PFPeA	266.0 > 221.8	9984.217	18975.092	1.00	2.31	6.577	12.5	100.3	NO		
11	49	13C3-PFBS	302.0 > 98.8	1208.811	1204.299	1.00	2.59	12.547	11.8	94.1	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2115.461	1204.299	1.00	3.00	21.957	12.5	100.0	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	1247.354	7657.464	1.00	3.09	0.814	0.9	92.1	NO	12.468	NO
15	8	PFPeS	349.1>80.1	132.849	1208.811	1.00	3.30	1.374	0.8	81.3	NO	1.210	NO
16	9	HFPO-DA	285.1 > 168.9	137.874	1716.685	1.00	3.31	0.402	0.8	80.5	NO	2.015	NO
17	10	5:3 FTCA	340.9 > 236.9	86.983	10573.868	1.00	3.65	0.103	0.8	78.8	NO	1.184	NO
18	11	PFHpA	363.0 > 318.9	1060.259	10573.868	1.00	3.71	1.253	1.0	99.5	NO	26.580	YES
19	12	ADONA	376.8 > 250.9	2315.485	10573.868	1.00	3.83	2.737	1.0	97.5	NO	3.383	NO
20	52	13C2-PFHxA	315.0 > 270.0	7657.464	18975.092	1.00	3.09	5.044	5.0	100.1	NO		
21	49	13C3-PFBS	302.0 > 98.8	1208.811	1204.299	1.00	2.59	12.547	11.8	94.1	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1716.685	18975.092	1.00	3.31	1.131	5.8	116.0	NO		
23	53	13C4-PFHpA	367.2 > 321.8	10573.868	18975.092	1.00	3.71	6.966	13.0	104.2	NO		
24	53	13C4-PFHpA	367.2 > 321.8	10573.868	18975.092	1.00	3.71	6.966	13.0	104.2	NO		
25	53	13C4-PFHpA	367.2 > 321.8	10573.868	18975.092	1.00	3.71	6.966	13.0	104.2	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	168.698	2621.425	1.00	3.86	0.804	0.9	89.1	NO	2.032	NO
28	15	6:2 FTS	427.0 > 406.9	466.626	1641.685	1.00	4.18	3.553	1.2	122.7	NO	2.240	NO
29	16	L-PFOA	412.8 > 368.9	2011.208	17959.391	1.00	4.23	1.400	1.0	96.0	NO	3.640	NO
30	18	PFecHS	460.8 > 381.0	281.126	17959.391	1.00	4.25	0.196	1.1	107.1	NO	0.916	NO
31	19	PFHpS	449.0 > 80.0	204.338	2555.114	1.00	4.34	1.000	1.0	104.4	NO	2.351	NO
32	20	7:3 FTCA	440.9 > 336.9	144.225	16727.760	1.00	4.66	0.108	1.2	122.2	NO	2.827	NO
33	54	13C3-PFHxS	401.8 > 79.9	2621.425	1204.299	1.00	3.86	27.209	12.5	100.3	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1641.685	2722.563	1.00	4.18	7.537	12.5	99.9	NO		
35	58	13C2-PFOA	414.9 > 369.7	17959.391	23184.428	1.00	4.23	9.683	13.0	104.1	NO		
36	58	13C2-PFOA	414.9 > 369.7	17959.391	23184.428	1.00	4.23	9.683	13.0	104.1	NO		

CAH 7/3/19

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2555.114	2722.563	1.00	4.75	11.731	11.8	94.0	NO		
38	56	13C5-PFNA	468.2 > 422.9	16727.760	17543.143	1.00	4.67	11.919	11.8	94.0	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	1623.964	16727.760	1.00	4.67	1.214	1.0	104.8	NO	5.323	NO
41	22	PFOSA	497.9 > 77.9	327.913	3522.574	1.00	4.73	1.164	1.0	100.7	NO	63.145	YES
42	23	L-PFOS	498.9 > 79.9	180.881	2555.114	1.00	4.76	0.885	0.9	93.6	NO	2.106	NO
43	25	9Cl-PF30NS	530.7 > 350.8	386.239	2555.114	1.00	4.97	1.890	1.0	102.3	NO	30.480	YES
44	26	PFDA	513 > 468.8	1779.113	16427.949	1.00	5.04	1.354	1.0	98.0	NO	6.249	NO
45	27	8:2 FTS	527.0 > 506.9	218.282	1742.502	1.00	5.02	1.566	1.0	99.9	NO	0.891	NO
46	56	13C5-PFNA	468.2 > 422.9	16727.760	17543.143	1.00	4.67	11.919	11.8	94.0	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3522.574	21124.453	1.00	4.73	2.084	13.3	106.8	NO		
48	59	13C8-PFOS	507.0 > 79.9	2555.114	2722.563	1.00	4.75	11.731	11.8	94.0	NO		
49	59	13C8-PFOS	507.0 > 79.9	2555.114	2722.563	1.00	4.75	11.731	11.8	94.0	NO		
50	60	13C2-PFDA	515.1 > 469.9	16427.949	20588.582	1.00	5.04	9.974	11.9	95.4	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1742.502	2722.563	1.00	5.02	8.000	13.4	107.2	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	136.233	2555.114	1.00	5.11	0.666	1.0	97.9	NO	1.807	NO
54	29	L-MeFOSAA	570 > 419	633.360	3363.117	1.00	5.20	2.354	1.0	101.7	NO	2.792	NO
55	31	L-EtFOSAA	584.1 > 419	449.279	3709.700	1.00	5.35	1.514	1.0	96.2	NO	1.390	NO
56	33	PFUdA	563.0 > 518.9	1754.537	22502.814	1.00	5.37	0.975	1.0	100.1	NO	10.275	NO
57	34	PFDS	598.8 > 79.9	178.766	1742.502	1.00	5.42	1.282	0.8	77.3	NO	1.668	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	70.156	22282.691	1.00	5.58	0.039	0.8	81.4	NO	17.752	YES
59	59	13C8-PFOS	507.0 > 79.9	2555.114	2722.563	1.00	4.75	11.731	11.8	94.0	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3363.117	21124.453	1.00	5.19	1.990	12.2	97.7	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	3709.700	21124.453	1.00	5.35	2.195	12.2	97.8	NO		
62	63	13C2-PFUdA	565 > 519.8	22502.814	21124.453	1.00	5.37	13.316	12.6	101.2	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1742.502	2722.563	1.00	5.02	8.000	13.4	107.2	NO		
64	65	13C2-PFDoA	614.7 > 569.7	22282.691	20588.582	1.00	5.65	13.529	12.4	98.9	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	370.231	1742.502	1.00	5.64	2.656	1.0	102.9	NO	1.465	NO
67	37	PFDoA	612.9 > 569.0	1882.374	22282.691	1.00	5.65	1.056	0.9	93.3	NO	9.606	NO
68	38	N-MeFOSA	512.1 > 168.9	350.580	9664.071	1.00	5.80	5.441	4.8	95.3	NO	1.544	NO
69	39	PFTrDA	662.9 > 618.9	1871.680	22282.691	1.00	5.90	1.050	0.9	88.9	NO	28.009	NO
70	40	PFDoS	698.8 > 79.9	212.595	15409.369	1.00	5.93	0.172	1.1	109.0	NO	1.855	NO
71	41	PFTeDA	713.0 > 669.0	1706.653	15409.369	1.00	6.12	1.384	0.9	90.9	NO	14.015	NO
72	65	13C2-PFDoA	614.7 > 569.7	22282.691	20588.582	1.00	5.65	13.529	12.4	98.9	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	22282.691	20588.582	1.00	5.65	13.529	12.4	98.9	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	9664.071	21124.453	1.00	5.82	5.719	149.6	99.8	NO		
75	65	13C2-PFDoA	614.7 > 569.7	22282.691	20588.582	1.00	5.65	13.529	12.4	98.9	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	15409.369	21124.453	1.00	6.12	9.118	13.7	109.4	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	15409.369	21124.453	1.00	6.12	9.118	13.7	109.4	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	371.365	13248.526	1.00	6.20	4.205	4.4	87.1	NO	1.322	NO
80	43	PFHxDA	813.1 > 768.6	1060.868	7801.135	1.00	6.46	0.680	1.1	105.8	NO	83.989	YES
81	44	PFODA	913.1 > 868.8	1159.593	7801.135	1.00	6.69	0.743	0.9	94.2	NO		
82	45	N-MeFOSE	616.1 > 58.9	244.571	7718.363	1.00	6.35	4.753	4.3	86.1	NO		
83	46	N-EtFOSE	630.1 > 58.9	313.030	7561.181	1.00	6.50	6.210	4.7	94.0	NO		
84	72	13C4-PFBA	217.0 > 172.0	8169.024	8169.024	1.00	1.33	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	13248.526	21124.453	1.00	6.22	7.840	161.6	107.8	NO		
86	69	13C2-PFHxDA	815 > 769.7	7801.135	21124.453	1.00	6.46	4.616	5.5	109.4	NO		
87	69	13C2-PFHxDA	815 > 769.7	7801.135	21124.453	1.00	6.46	4.616	5.5	109.4	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	7718.363	21124.453	1.00	6.34	4.567	158.8	105.9	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	7561.181	21124.453	1.00	6.49	4.474	156.0	104.0	NO		
90	73	13C5-PFHxA	318.0 > 272.9	18975.092	18975.092	1.00	3.09	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	23184.428	23184.428	1.00	4.23	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1204.299	1204.299	1.00	3.86	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	17543.143	17543.143	1.00	4.67	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2722.563	2722.563	1.00	4.75	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	20588.582	20588.582	1.00	5.04	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	21124.453	21124.453	1.00	5.37	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 03, 2019 09:29:54 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:30:04 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time		
1	1	190702M2_1	IPA	02-Jul-19	10:05:11		
2	2	190702M2_2	ST190702M2-1 PFC CS-2 19F2412	02-Jul-19	10:15:46		
3	3	190702M2_3	ST190702M2-2 PFC CS-1 19F2413	02-Jul-19	10:26:19		
4	4	190702M2_4	ST190702M2-3 PFC CS0 19F2414	02-Jul-19	10:36:57	A	CRV NOT USED
5	5	190702M2_5	ST190702M2-4 PFC CS1 19F2415	02-Jul-19	10:47:30		
6	6	190702M2_6	ST190702M2-5 PFC CS2 19F2416	02-Jul-19	10:58:08		
7	7	190702M2_7	ST190702M2-6 PFC CS3 19F2417	02-Jul-19	11:08:46		
8	8	190702M2_8	ST190702M2-7 PFC CS4 19F2418	02-Jul-19	11:19:20		
9	9	190702M2_9	ST190702M2-8 PFC CS5 19F2419	02-Jul-19	11:29:58		
10	10	190702M2_10	ST190702M2-9 PFC CS6 19F2420	02-Jul-19	11:40:32		
11	11	190702M2_11	ST190702M2-10 PFC CS7 19F2421	02-Jul-19	11:51:09		
12	12	190702M2_12	IB	02-Jul-19	12:01:43		
13	13	190702M2_13	ICV190702M2-1 PFC ICV 19F2422	02-Jul-19	12:12:21		
14	14	190702M2_14	IPA	02-Jul-19	12:22:54		
15	15	190702M2_15	B9F0253-BS1 OPR 0.125	02-Jul-19	16:38:12		
16	16	190702M2_16	B9F0253-MS1 Matrix Spike 0.11802	02-Jul-19	16:48:54		
17	17	190702M2_17	B9F0253-MSD1 Matrix Spike Dup 0.11415	02-Jul-19	16:59:32		
18	18	190702M2_18	B9F0253-BLK1 Method Blank 0.125	02-Jul-19	17:10:05		
19	19	190702M2_19	1901705-02 FRB-06182019 0.11453	02-Jul-19	17:20:43		
20	20	190702M2_20	1901705-08 EB-06192019 0.11426	02-Jul-19	17:31:17		
21	21	190702M2_21	1901705-16 FRB-06192019 0.11764	02-Jul-19	17:41:56		
22	22	190702M2_22	1901705-17 EB-06202019 0.11443	02-Jul-19	17:52:29		
23	23	190702M2_23	1901705-18 FRB-06202019 0.12	02-Jul-19	18:03:07		
24	24	190702M2_24	1901705-19 NAOA-B07-GW 0.11889	02-Jul-19	18:13:46		
25	25	190702M2_25	1901766-01 EB-GW-06202019 0.11296	02-Jul-19	18:24:19		
26	26	190702M2_26	1901766-02 SAOA-B06-GW 0.11745	02-Jul-19	18:34:57		
27	27	190702M2_27	1901766-03 FRB-06242019 0.11389	02-Jul-19	18:45:30		
28	28	190702M2_28	1901766-04 SAOA-B07-GW 0.11804	02-Jul-19	18:56:09		
29	29	190702M2_29	1901766-08 SAOA-B04-GW 0.12437	02-Jul-19	19:06:42		
30	30	190702M2_30	1901766-09 EB-06252019 0.11886	02-Jul-19	19:17:20		
31	31	190702M2_31	1901766-10 FRB-06252019 0.11191	02-Jul-19	19:27:58		
32	32	190702M2_32	IPA	02-Jul-19	19:38:31		

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 03, 2019 09:29:54 Pacific Daylight Time
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Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
33	33 190702M2_33	ST190702M2-11 PFC CS3 19F2417	02-Jul-19	19:49:09
34	34 190702M2_34	IPA	02-Jul-19	19:59:42

Vista Analytical Laboratory

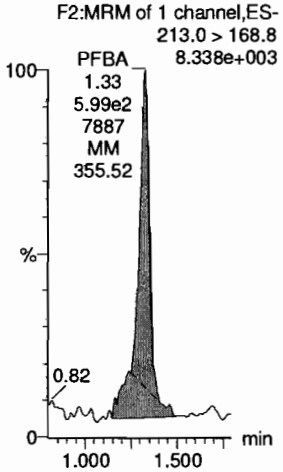
Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

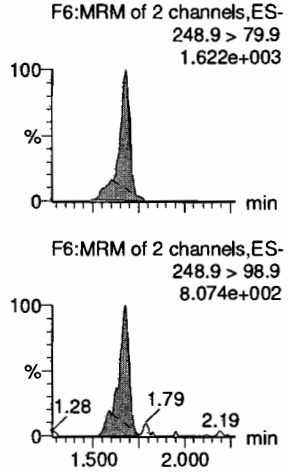
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

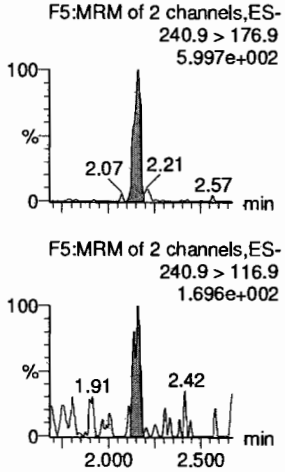
PFBA



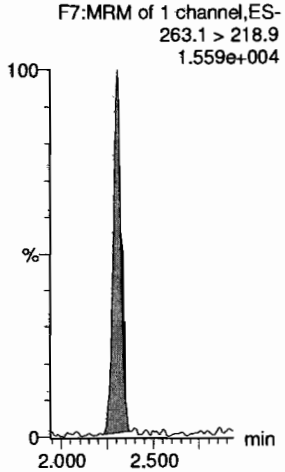
PFPrS



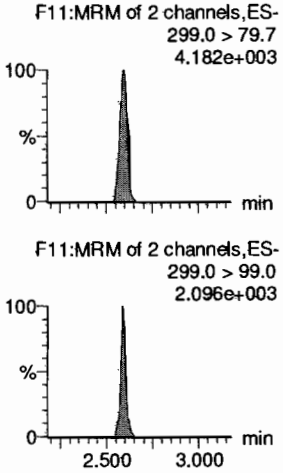
3:3 FTCA



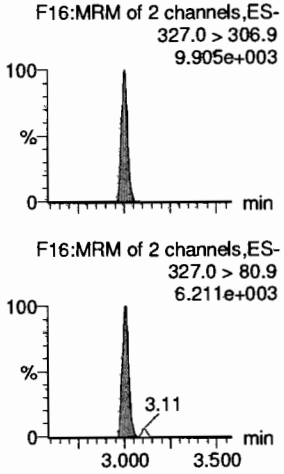
PFPeA



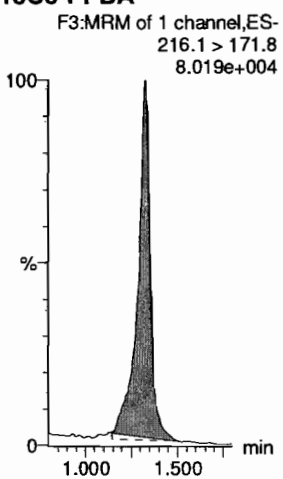
PFBS



4:2 FTS



13C3-PFBA



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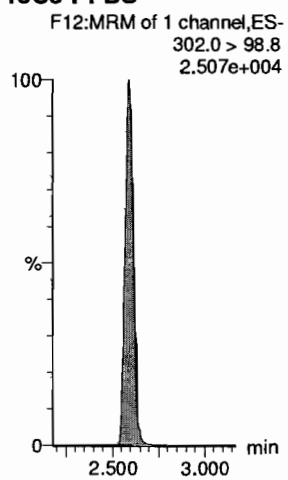

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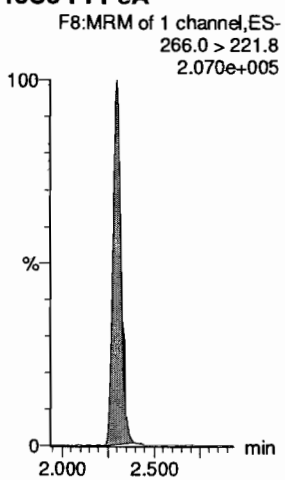

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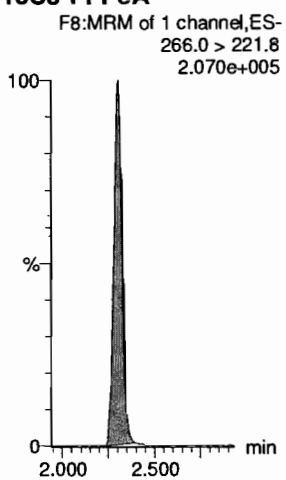

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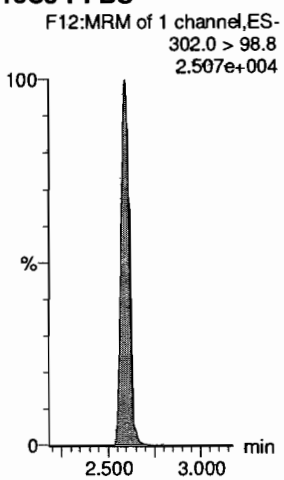
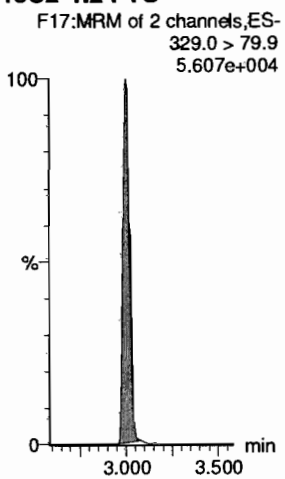


13C2-4:2 FTS

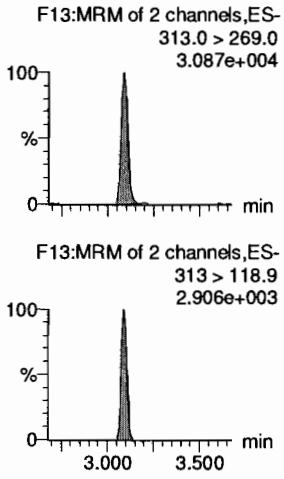


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

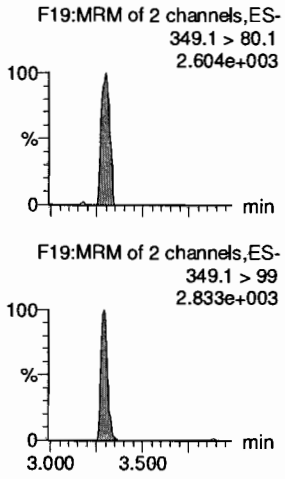
Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

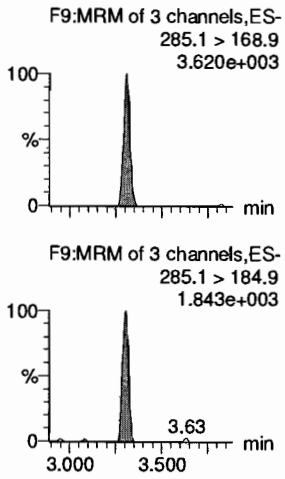
PFHxA



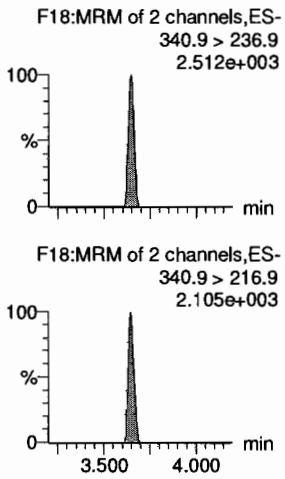
PFPeS



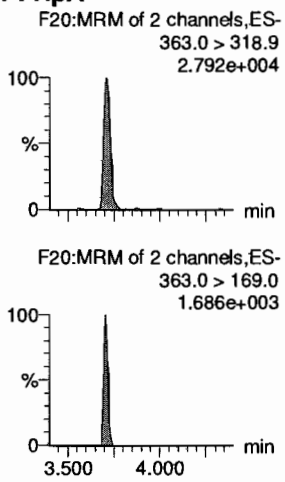
HFPO-DA



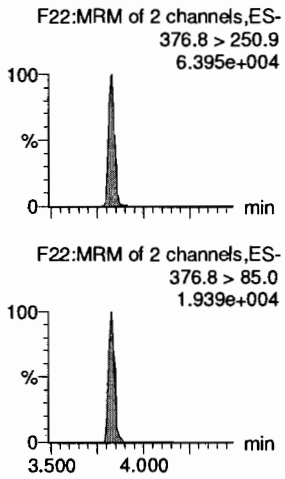
5:3 FTCA



PFHpA



ADONA



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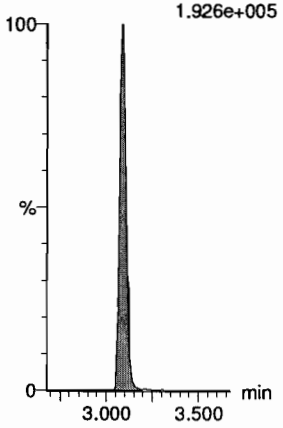
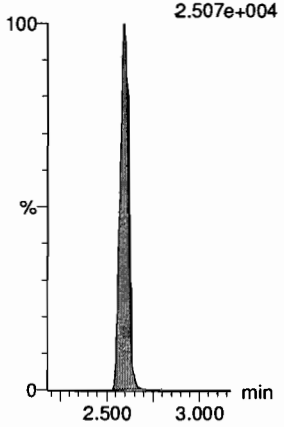


13C3-PFBS



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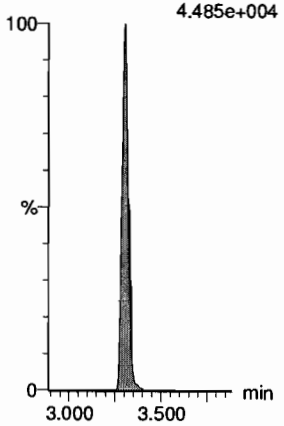

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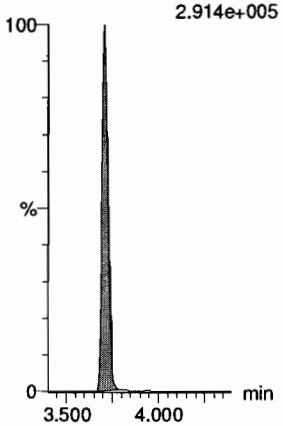

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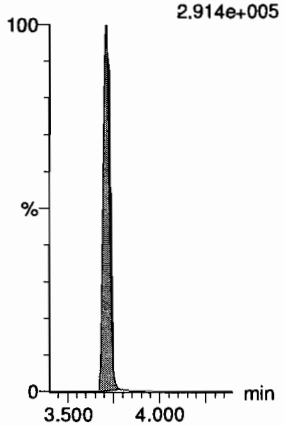

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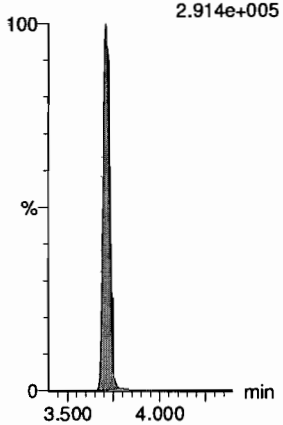
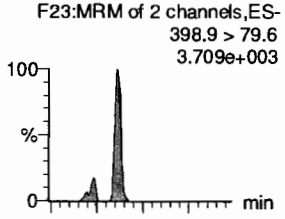


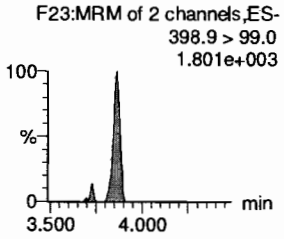
Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

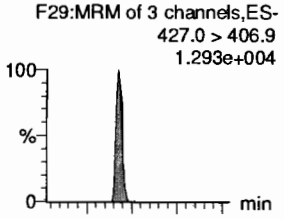
Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

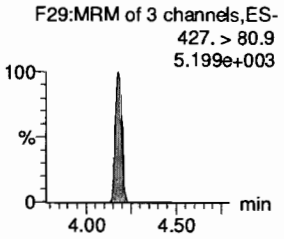
L-PFHxS



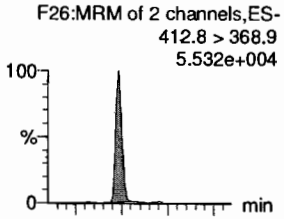


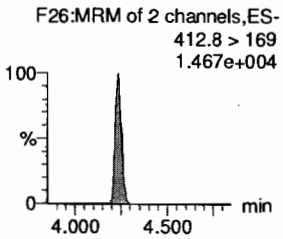
6:2 FTS



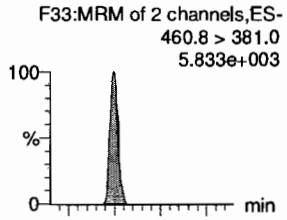


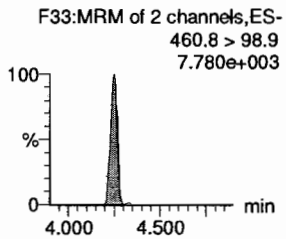
L-PFOA



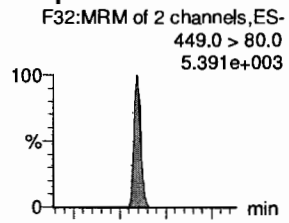


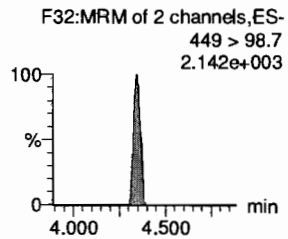
PFEChS



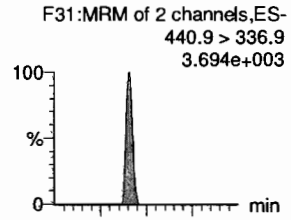


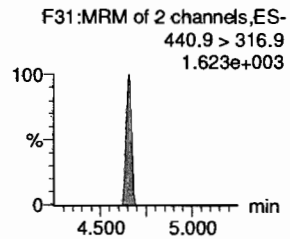
PFHpS



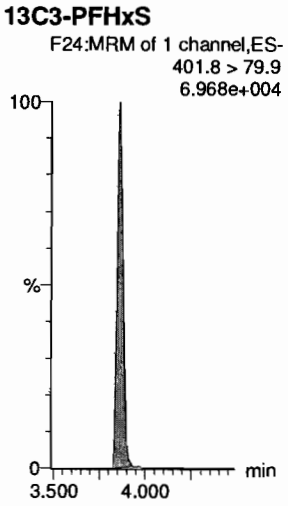


7:3 FTCA

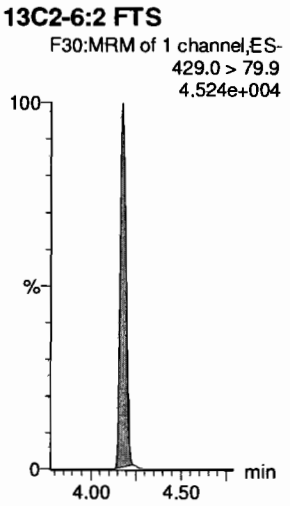




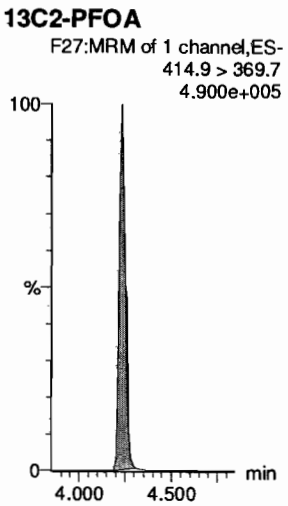
13C3-PFHxS



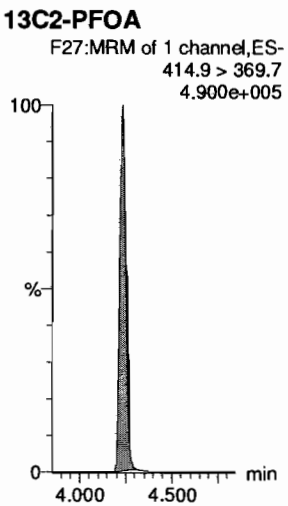
13C2-6:2 FTS



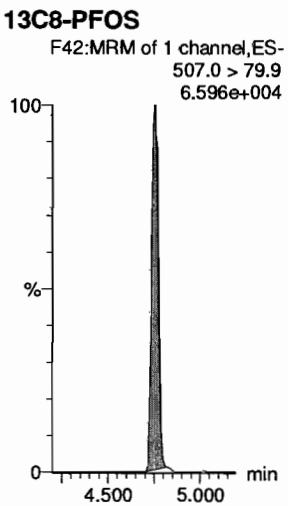
13C2-PFOA



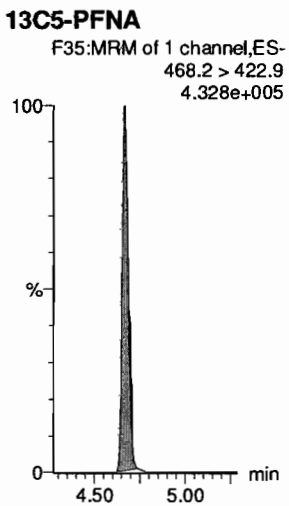
13C2-PFOA



13C8-PFOS



13C5-PFNA



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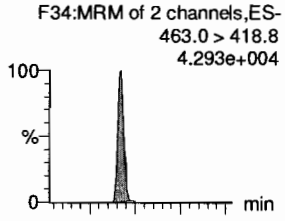
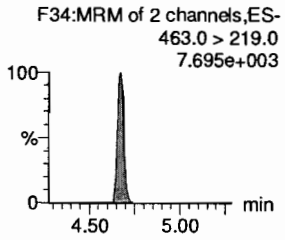
Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

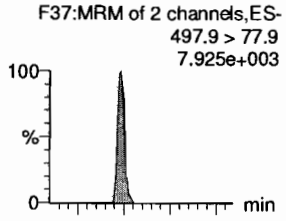
Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

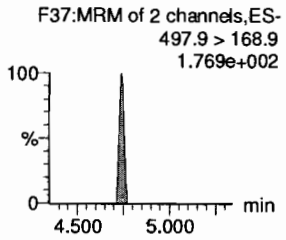
PFNA



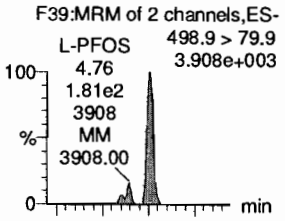


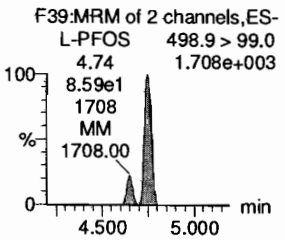
PFOSA



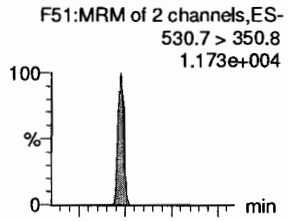


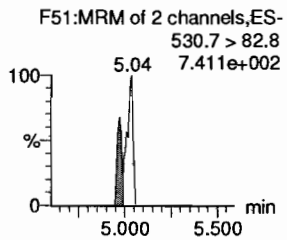
L-PFOS



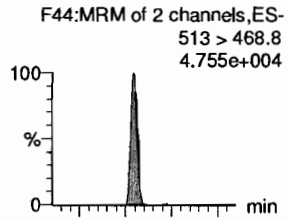


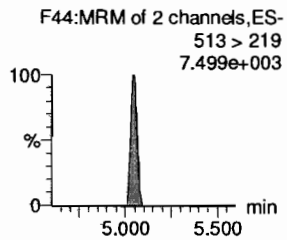
9Cl-PF30NS



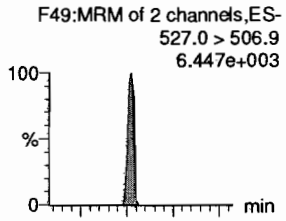


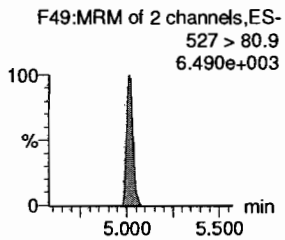
PFDA



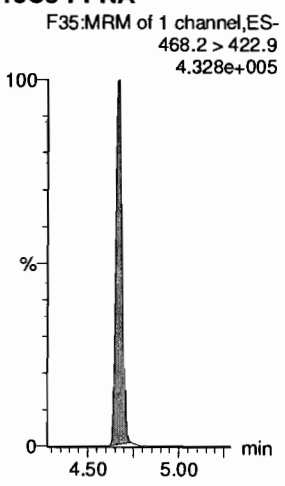


8:2 FTS

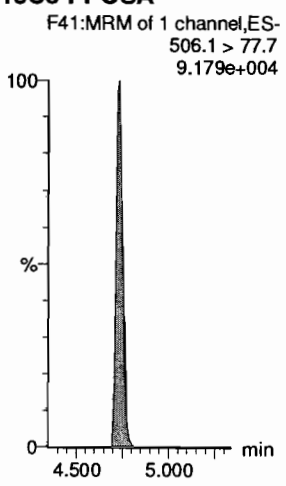




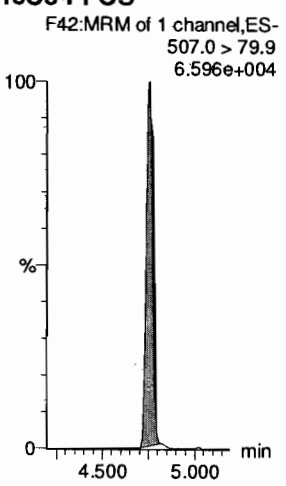
13C5-PFNA



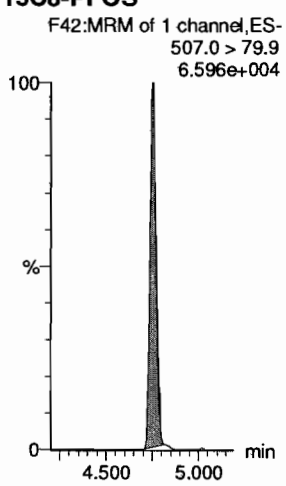
13C8-PFOSA



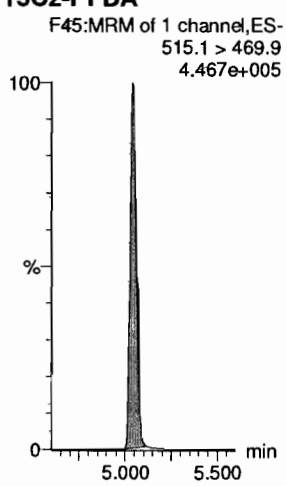
13C8-PFOS



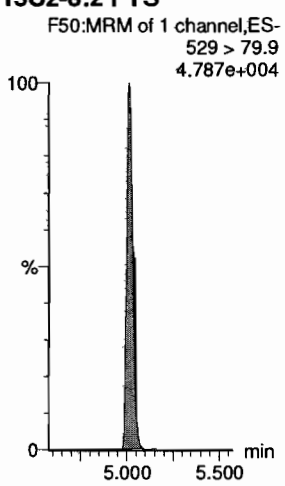
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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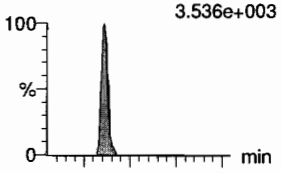
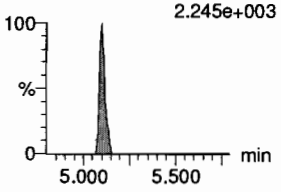
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

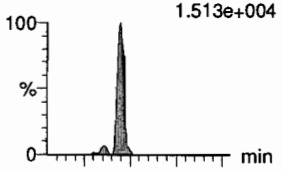
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
3.536e+003



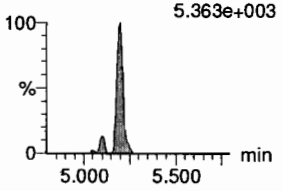
F53:MRM of 2 channels,ES-
549.1 > 99.1
2.245e+003



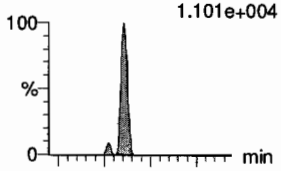
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.513e+004



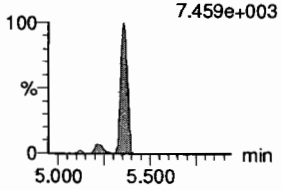
F56:MRM of 2 channels,ES-
570. > 512
5.363e+003



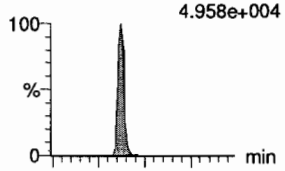
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.101e+004



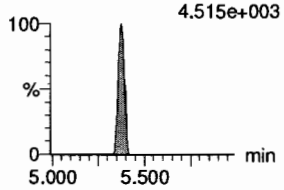
F59:MRM of 2 channels,ES-
584.1 > 526
7.459e+003



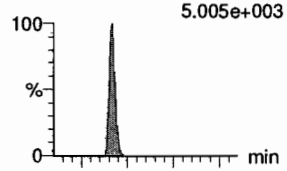
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.958e+004



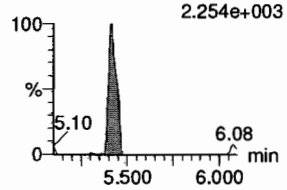
F54:MRM of 2 channels,ES-
563.0 > 269
4.515e+003



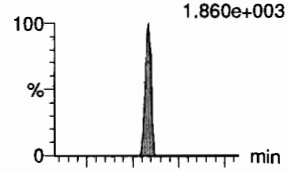
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
5.005e+003



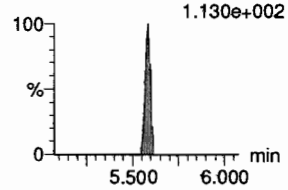
F61:MRM of 2 channels,ES-
598.8 > 98.9
2.254e+003



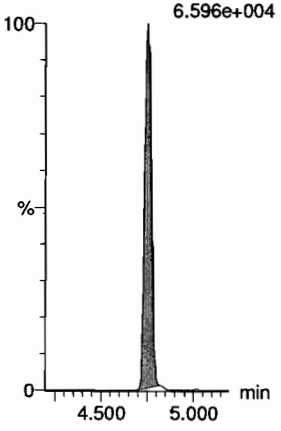
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.860e+003



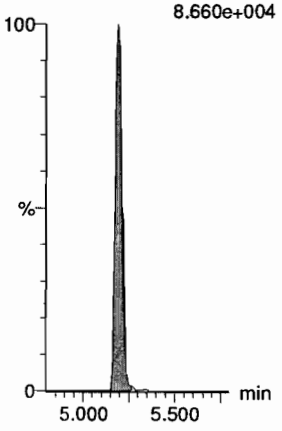
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.130e+002



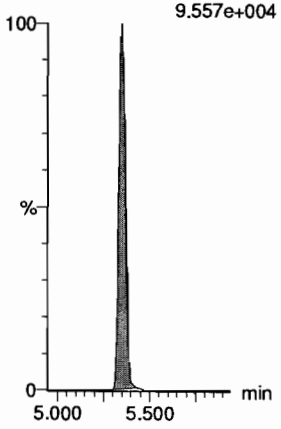
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.596e+004



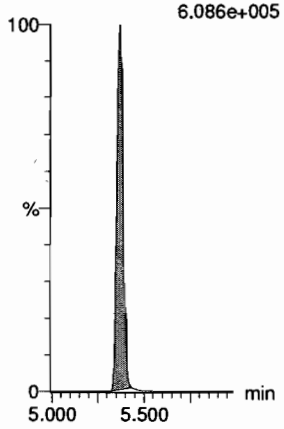
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.660e+004



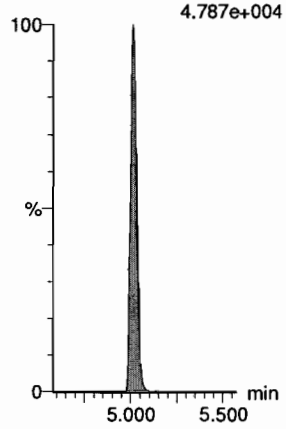
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
9.557e+004



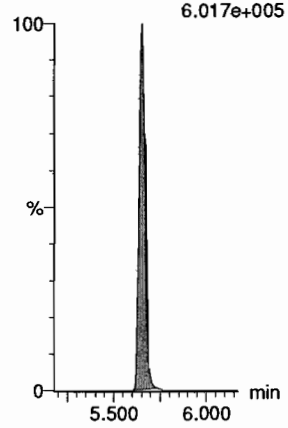
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.086e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.787e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.017e+005



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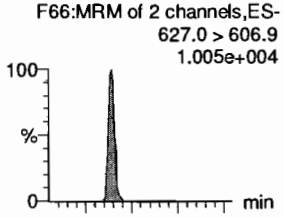
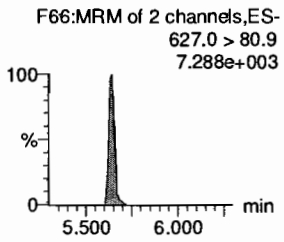
Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

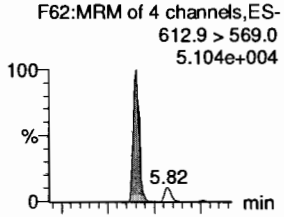
Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

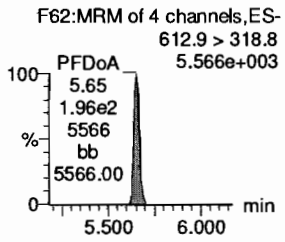
10:2 FTS



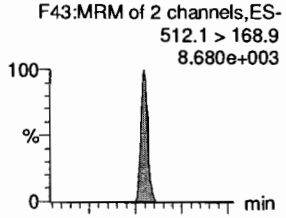


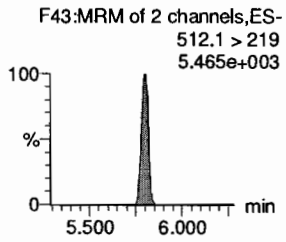
PFDoA



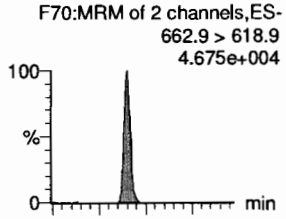


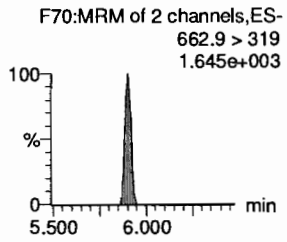
N-MeFOSA



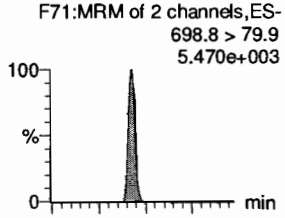


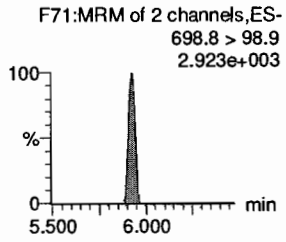
PFTrDA



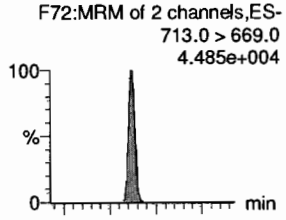


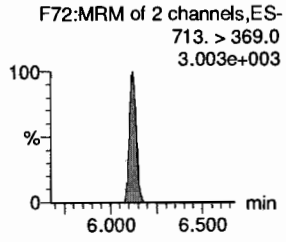
PFDoS



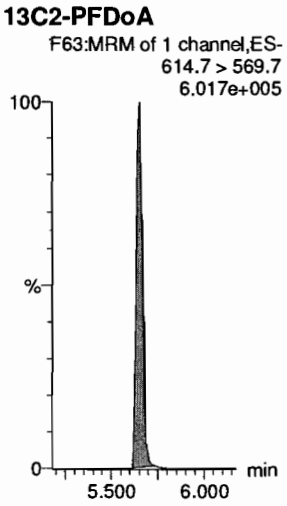


PFTeDA

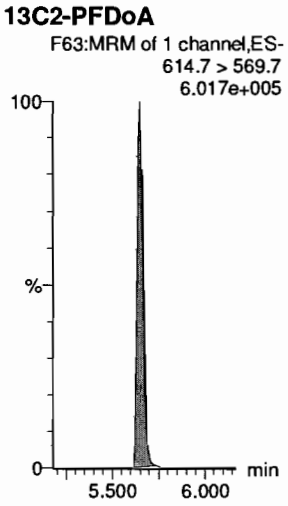




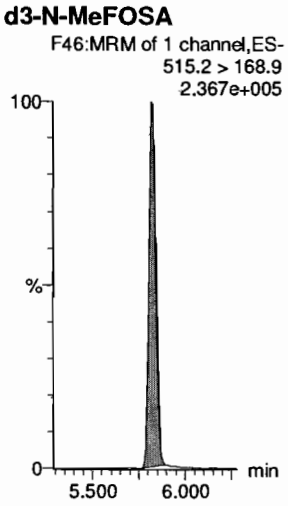
13C2-PFDoA



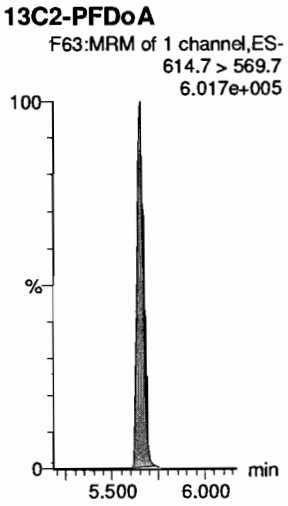
13C2-PFDoA



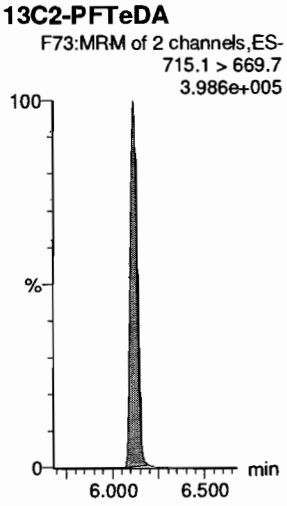
d3-N-MeFOSA



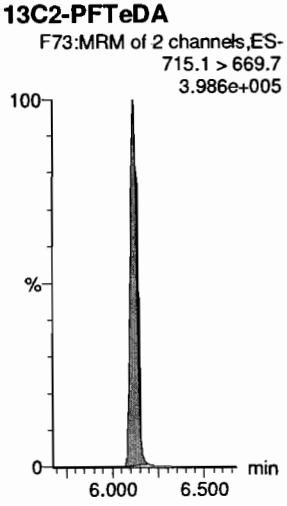
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

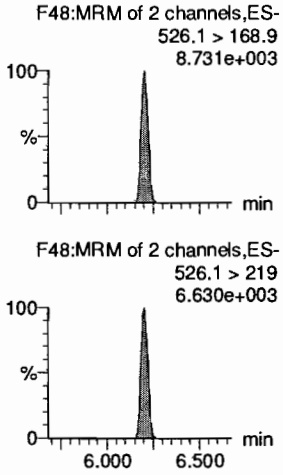


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

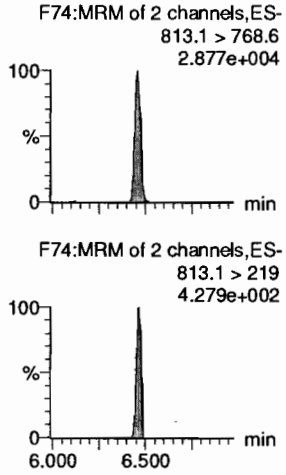
Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

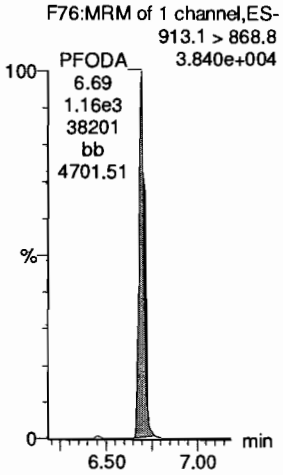
N-EtFOSA



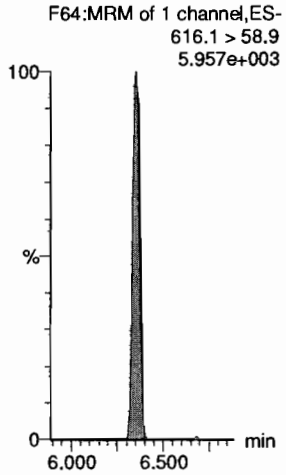
PFHxDA



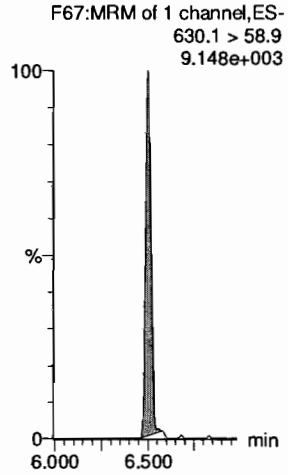
PFODA



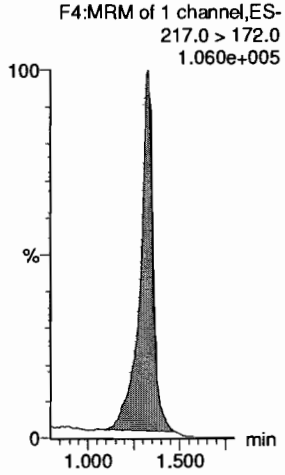
N-MeFOSE



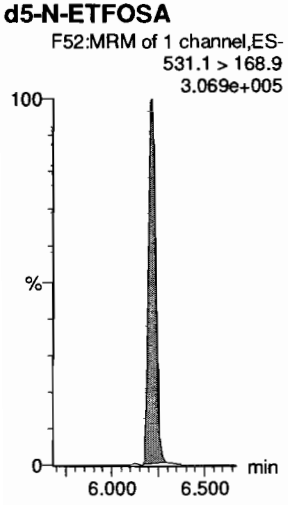
N-EtFOSE



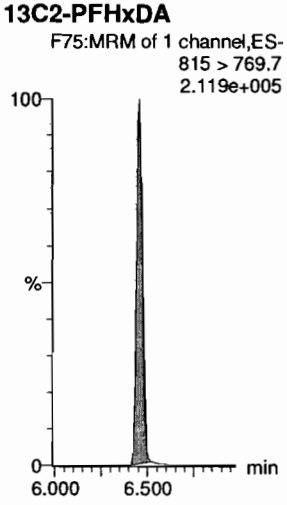
13C4-PFBA



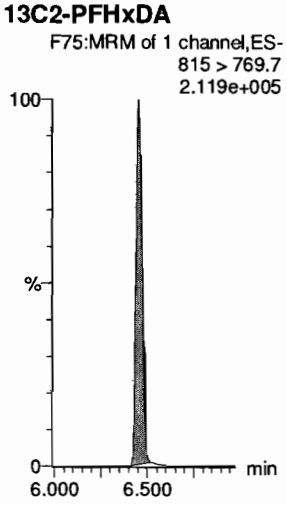
d5-N-ETFOSA



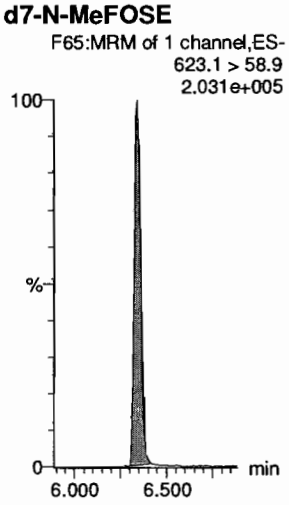
13C2-PFHxDA



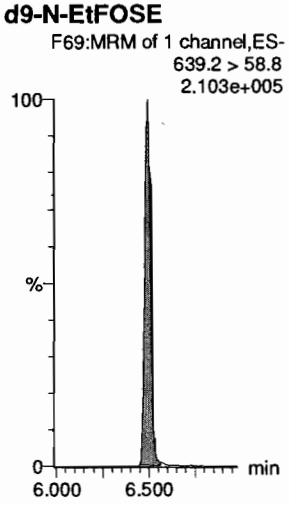
13C2-PFHxDA



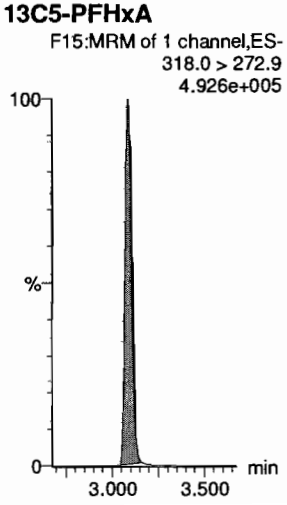
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

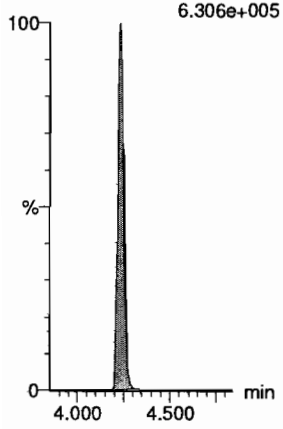


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-4.qld

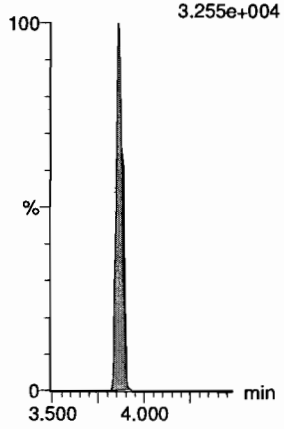
Last Altered: Wednesday, July 03, 2019 09:15:58 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:16:14 Pacific Daylight Time

Name: 190702M2_4, Date: 02-Jul-2019, Time: 10:36:57, ID: ST190702M2-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

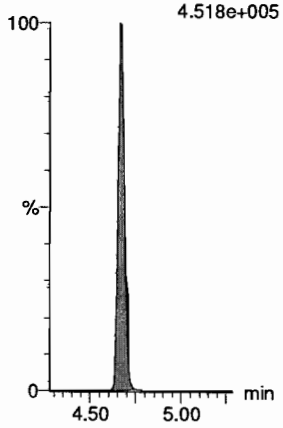
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
6.306e+005



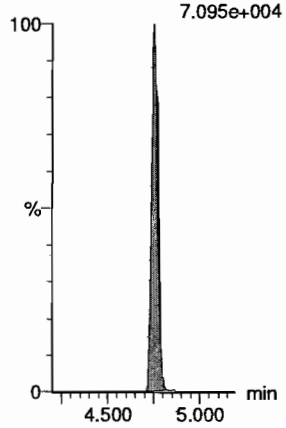
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.255e+004



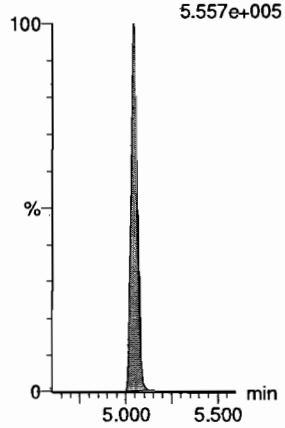
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.518e+005



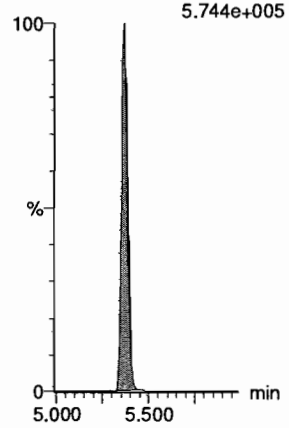
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
7.095e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
5.557e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.744e+005



Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

JAM 7/3/19

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	5905.542	5979.282	1.00	1.33	12.346	9.8	97.7	NO		
2	2	PFPrS	248.9 > 79.9	1357.431	1394.365	1.00	1.68	12.169	9.5	95.2	NO	2.497	NO
3	3	3:3 FTCA	240.9 > 176.9	264.203	10787.034	1.00	2.15	0.306	9.5	94.7	NO	1.870	NO
4	4	PFPeA	263.1 > 218.9	8075.613	10787.034	1.00	2.30	9.358	9.4	94.3	NO		
5	5	PFBS	299.0 > 79.7	2271.600	1394.365	1.00	2.59	20.364	9.6	95.6	NO	2.803	NO
6	6	4:2 FTS	327.0 > 306.9	3890.867	2308.714	1.00	3.00	21.066	9.8	98.1	NO	1.571	NO
7	47	13C3-PFBA	216.1 > 171.8	5979.282	8488.881	1.00	1.33	8.805	11.4	91.5	NO		
8	49	13C3-PFBS	302.0 > 98.8	1394.365	1121.577	1.00	2.59	15.540	14.6	116.5	NO		
9	48	13C3-PFPeA	266.0 > 221.8	10787.034	20264.627	1.00	2.30	6.654	12.7	101.5	NO		
10	48	13C3-PFPeA	266.0 > 221.8	10787.034	20264.627	1.00	2.30	6.654	12.7	101.5	NO		
11	49	13C3-PFBS	302.0 > 98.8	1394.365	1121.577	1.00	2.59	15.540	14.6	116.5	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2308.714	1121.577	1.00	3.00	25.731	14.6	117.1	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	14108.841	8017.801	1.00	3.09	8.798	10.2	101.8	NO	15.087	NO
15	8	PFPeS	349.1>80.1	1932.497	1394.365	1.00	3.29	17.324	10.2	102.2	NO	1.726	NO
16	9	HFPO-DA	285.1 > 168.9	1523.353	1525.593	1.00	3.30	4.993	10.5	105.1	NO	2.021	NO
17	10	5:3 FTCA	340.9 > 236.9	1259.520	10806.912	1.00	3.64	1.457	9.4	93.5	NO	1.413	NO
18	11	PFHpA	363.0 > 318.9	11180.582	10806.912	1.00	3.71	12.932	9.6	95.5	NO	12.927	NO
19	12	ADONA	376.8 > 250.9	24983.100	10806.912	1.00	3.82	28.897	10.4	104.3	NO	3.505	NO
20	52	13C2-PFHxA	315.0 > 270.0	8017.801	20264.627	1.00	3.09	4.946	4.9	98.1	NO		
21	49	13C3-PFBS	302.0 > 98.8	1394.365	1121.577	1.00	2.59	15.540	14.6	116.5	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1525.593	20264.627	1.00	3.30	0.941	4.8	96.5	NO		
23	53	13C4-PFHpA	367.2 > 321.8	10806.912	20264.627	1.00	3.71	6.666	12.5	99.7	NO		
24	53	13C4-PFHpA	367.2 > 321.8	10806.912	20264.627	1.00	3.71	6.666	12.5	99.7	NO		
25	53	13C4-PFHpA	367.2 > 321.8	10806.912	20264.627	1.00	3.71	6.666	12.5	99.7	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	1843.135	2827.456	1.00	3.86	8.148	8.4	83.8	NO	1.880	NO
28	15	6:2 FTS	427.0 > 406.9	4117.350	1766.234	1.00	4.17	29.139	10.3	103.3	NO	2.045	NO
29	16	L-PFOA	412.8 > 368.9	20254.402	18287.379	1.00	4.23	13.845	9.7	96.9	NO	3.565	NO
30	18	PFecHS	460.8 > 381.0	2941.415	18287.379	1.00	4.25	2.011	9.9	99.2	NO	0.868	NO
31	19	PFHpS	449.0 > 80.0	2278.553	2822.580	1.00	4.34	10.091	10.4	104.0	NO	1.847	NO
32	20	7:3 FTCA	440.9 > 336.9	1420.277	18452.432	1.00	4.65	0.962	10.1	100.7	NO	2.077	NO
33	54	13C3-PFHxS	401.8 > 79.9	2827.456	1121.577	1.00	3.86	31.512	14.5	116.2	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1766.234	3088.746	1.00	4.17	7.148	11.8	94.7	NO		
35	58	13C2-PFOA	414.9 > 369.7	18287.379	23903.967	1.00	4.23	9.563	12.9	102.8	NO		
36	58	13C2-PFOA	414.9 > 369.7	18287.379	23903.967	1.00	4.23	9.563	12.9	102.8	NO		

CAH 7/2/19

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2822.580	3088.746	1.00	4.75	11.423	11.4	91.6	NO		
38	56	13C5-PFNA	468.2 > 422.9	18452.432	18572.129	1.00	4.66	12.419	12.2	98.0	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	17612.063	18452.432	1.00	4.67	11.931	9.9	98.9	NO	4.823	NO
41	22	PFOSA	497.9 > 77.9	3095.375	3600.276	1.00	4.73	10.747	9.8	97.7	NO	26.627	NO
42	23	L-PFOS	498.9 > 79.9	2494.240	2822.580	1.00	4.75	11.046	10.6	106.0	NO	2.050	NO
43	25	9Cl-PF30NS	530.7 > 350.8	4787.660	2822.580	1.00	4.96	21.202	10.8	108.1	NO	18.248	NO
44	26	PFDA	513 > 468.8	19651.920	17123.789	1.00	5.04	14.345	10.3	102.5	NO	5.775	NO
45	27	8:2 FTS	527.0 > 506.9	2347.693	1681.713	1.00	5.01	17.450	10.1	101.1	NO	1.024	NO
46	56	13C5-PFNA	468.2 > 422.9	18452.432	18572.129	1.00	4.66	12.419	12.2	98.0	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3600.276	23284.705	1.00	4.73	1.933	12.4	99.0	NO		
48	59	13C8-PFOS	507.0 > 79.9	2822.580	3088.746	1.00	4.75	11.423	11.4	91.6	NO		
49	59	13C8-PFOS	507.0 > 79.9	2822.580	3088.746	1.00	4.75	11.423	11.4	91.6	NO		
50	60	13C2-PFDA	515.1 > 469.9	17123.789	22211.363	1.00	5.04	9.637	11.5	92.2	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1681.713	3088.746	1.00	5.01	6.806	11.4	91.2	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1812.617	2822.580	1.00	5.10	8.027	10.5	104.7	NO	1.566	NO
54	29	L-MeFOSAA	570 > 419	7534.697	3579.206	1.00	5.19	26.314	10.5	105.3	NO	2.585	NO
55	31	L-EtFOSAA	584.1 > 419	5492.416	3963.878	1.00	5.35	17.320	10.1	101.5	NO	1.417	NO
56	33	PFUdA	563.0 > 518.9	17653.061	25047.879	1.00	5.36	8.810	9.3	92.7	NO	10.286	NO
57	34	PFDS	598.8 > 79.9	2351.974	1681.713	1.00	5.41	17.482	9.7	97.0	NO	1.646	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	1157.992	21684.359	1.00	5.57	0.668	10.3	102.8	NO	6.344	NO
59	59	13C8-PFOS	507.0 > 79.9	2822.580	3088.746	1.00	4.75	11.423	11.4	91.6	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3579.206	23284.705	1.00	5.19	1.921	11.8	94.3	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	3963.878	23284.705	1.00	5.34	2.128	11.9	94.8	NO		
62	63	13C2-PFUdA	565 > 519.8	25047.879	23284.705	1.00	5.36	13.447	12.8	102.2	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1681.713	3088.746	1.00	5.01	6.806	11.4	91.2	NO		
64	65	13C2-PFDoA	614.7 > 569.7	21684.359	22211.363	1.00	5.65	12.203	11.1	89.2	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	3349.299	1681.713	1.00	5.63	24.895	10.5	104.7	NO	1.464	NO
67	37	PFDoA	612.9 > 569.0	19325.926	21684.359	1.00	5.65	11.140	10.3	103.3	NO	8.425	NO
68	38	N-MeFOSA	512.1 > 168.9	3805.775	10041.216	1.00	5.80	56.852	50.1	100.1	NO	1.537	NO
69	39	PFTrDA	662.9 > 618.9	21027.773	21684.359	1.00	5.89	12.122	10.3	102.7	NO	22.953	NO
70	40	PFDoS	698.8 > 79.9	2050.004	15972.396	1.00	5.92	1.604	9.2	92.5	NO	1.766	NO
71	41	PFTeDA	713.0 > 669.0	17351.471	15972.396	1.00	6.11	13.579	9.1	90.9	NO	13.648	NO
72	65	13C2-PFDoA	614.7 > 569.7	21684.359	22211.363	1.00	5.65	12.203	11.1	89.2	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	21684.359	22211.363	1.00	5.65	12.203	11.1	89.2	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	10041.216	23284.705	1.00	5.82	5.390	141.1	94.0	NO		
75	65	13C2-PFDoA	614.7 > 569.7	21684.359	22211.363	1.00	5.65	12.203	11.1	89.2	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	15972.396	23284.705	1.00	6.11	8.575	12.9	102.9	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	15972.396	23284.705	1.00	6.11	8.575	12.9	102.9	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	4251.120	12945.997	1.00	6.20	49.256	52.9	105.7	NO	1.566	NO
80	43	PFHxDA	813.1 > 768.6	11362.827	8867.689	1.00	6.45	6.407	10.4	103.6	NO	36.083	NO
81	44	PFODA	913.1 > 868.8	12609.572	8867.689	1.00	6.69	7.110	9.3	93.5	NO		
82	45	N-MeFOSE	616.1 > 58.9	2662.373	7712.962	1.00	6.35	51.777	45.6	91.3	NO		
83	46	N-EtFOSE	630.1 > 58.9	3437.124	7614.014	1.00	6.50	67.713	47.8	95.6	NO		
84	72	13C4-PFBA	217.0 > 172.0	8488.881	8488.881	1.00	1.33	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	12945.997	23284.705	1.00	6.21	6.950	143.3	95.5	NO		
86	69	13C2-PFHxDA	815 > 769.7	8867.689	23284.705	1.00	6.45	4.760	5.6	112.8	NO		
87	69	13C2-PFHxDA	815 > 769.7	8867.689	23284.705	1.00	6.45	4.760	5.6	112.8	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	7712.962	23284.705	1.00	6.34	4.141	144.0	96.0	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	7614.014	23284.705	1.00	6.49	4.087	142.5	95.0	NO		
90	73	13C5-PFHxA	318.0 > 272.9	20264.627	20264.627	1.00	3.09	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	23903.967	23903.967	1.00	4.23	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1121.577	1121.577	1.00	3.86	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	18572.129	18572.129	1.00	4.66	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	3088.746	3088.746	1.00	4.75	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	22211.363	22211.363	1.00	5.04	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	23284.705	23284.705	1.00	5.36	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 03, 2019 09:29:54 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:30:04 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time	
1	1	190702M2_1	IPA	02-Jul-19	10:05:11	
2	2	190702M2_2	ST190702M2-1 PFC CS-2 19F2412	02-Jul-19	10:15:46	
3	3	190702M2_3	ST190702M2-2 PFC CS-1 19F2413	02-Jul-19	10:26:19	
4	4	190702M2_4	(A) ST190702M2-3 PFC CS0 19F2414	02-Jul-19	10:36:57	(A) CRV NOT USED
5	5	190702M2_5	ST190702M2-4 PFC CS1 19F2415	02-Jul-19	10:47:30	
6	6	190702M2_6	ST190702M2-5 PFC CS2 19F2416	02-Jul-19	10:58:08	
7	7	190702M2_7	ST190702M2-6 PFC CS3 19F2417	02-Jul-19	11:08:46	
8	8	190702M2_8	ST190702M2-7 PFC CS4 19F2418	02-Jul-19	11:19:20	
9	9	190702M2_9	ST190702M2-8 PFC CS5 19F2419	02-Jul-19	11:29:58	
10	10	190702M2_10	ST190702M2-9 PFC CS6 19F2420	02-Jul-19	11:40:32	
11	11	190702M2_11	ST190702M2-10 PFC CS7 19F2421	02-Jul-19	11:51:09	
12	12	190702M2_12	IB	02-Jul-19	12:01:43	
13	13	190702M2_13	ICV190702M2-1 PFC ICV 19F2422	02-Jul-19	12:12:21	
14	14	190702M2_14	IPA	02-Jul-19	12:22:54	
15	15	190702M2_15	B9F0253-BS1 OPR 0.125	02-Jul-19	16:38:12	
16	16	190702M2_16	B9F0253-MS1 Matrix Spike 0.11802	02-Jul-19	16:48:54	
17	17	190702M2_17	B9F0253-MSD1 Matrix Spike Dup 0.11415	02-Jul-19	16:59:32	
18	18	190702M2_18	B9F0253-BLK1 Method Blank 0.125	02-Jul-19	17:10:05	
19	19	190702M2_19	1901705-02 FRB-06182019 0.11453	02-Jul-19	17:20:43	
20	20	190702M2_20	1901705-08 EB-06192019 0.11426	02-Jul-19	17:31:17	
21	21	190702M2_21	1901705-16 FRB-06192019 0.11764	02-Jul-19	17:41:56	
22	22	190702M2_22	1901705-17 EB-06202019 0.11443	02-Jul-19	17:52:29	
23	23	190702M2_23	1901705-18 FRB-06202019 0.12	02-Jul-19	18:03:07	
24	24	190702M2_24	1901705-19 NAOA-B07-GW 0.11889	02-Jul-19	18:13:46	
25	25	190702M2_25	1901766-01 EB-GW-06202019 0.11296	02-Jul-19	18:24:19	
26	26	190702M2_26	1901766-02 SAOA-B06-GW 0.11745	02-Jul-19	18:34:57	
27	27	190702M2_27	1901766-03 FRB-06242019 0.11389	02-Jul-19	18:45:30	
28	28	190702M2_28	1901766-04 SAOA-B07-GW 0.11804	02-Jul-19	18:56:09	
29	29	190702M2_29	1901766-08 SAOA-B04-GW 0.12437	02-Jul-19	19:06:42	
30	30	190702M2_30	1901766-09 EB-06252019 0.11886	02-Jul-19	19:17:20	
31	31	190702M2_31	1901766-10 FRB-06252019 0.11191	02-Jul-19	19:27:58	
32	32	190702M2_32	IPA	02-Jul-19	19:38:31	

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 03, 2019 09:29:54 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:30:04 Pacific Daylight Time

Compound name: PFBA

	# Name	ID	Acq.Date	Acq.Time
33	33 190702M2_33	ST190702M2-11 PFC CS3 19F2417	02-Jul-19	19:49:09
34	34 190702M2_34	IPA	02-Jul-19	19:59:42

Vista Analytical Laboratory

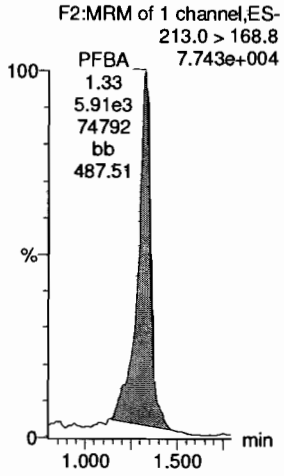
Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

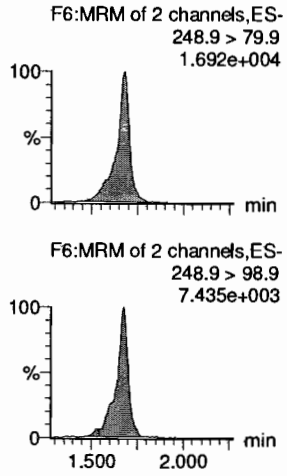
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070219.mdb 03 Jul 2019 09:10:48
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

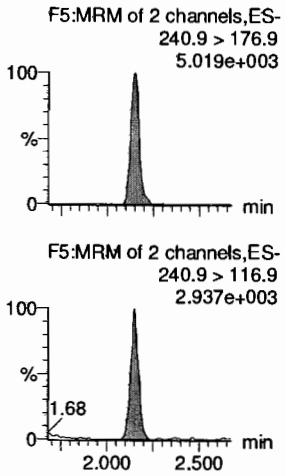
PFBA



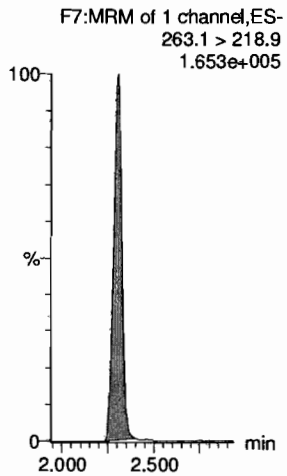
PFPrS



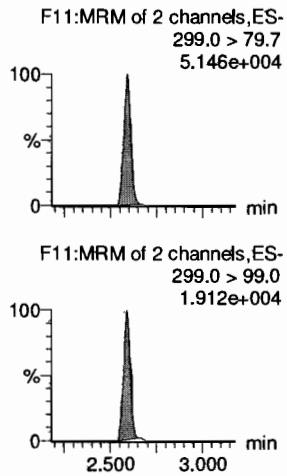
3:3 FTCA



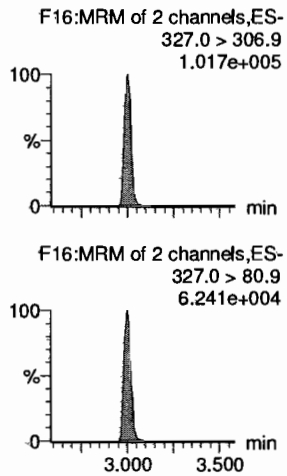
PFPeA



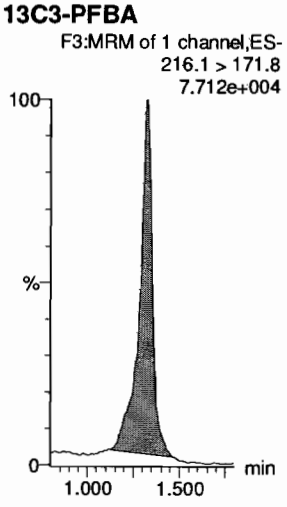
PFBS



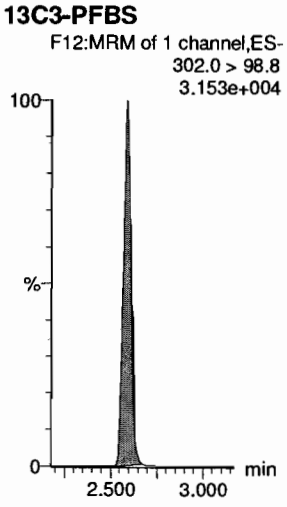
4:2 FTS



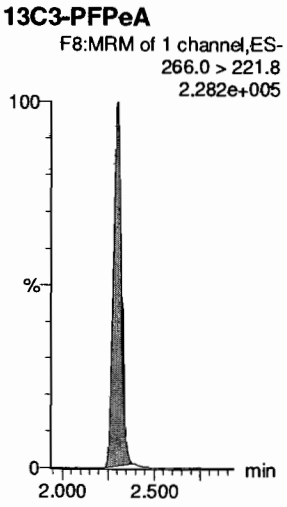
13C3-PFBA



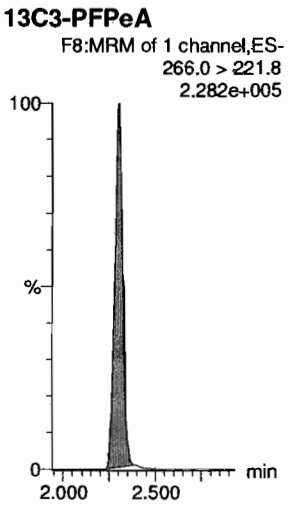
13C3-PFBS



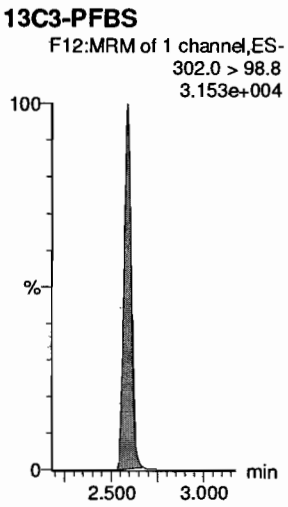
13C3-PFPeA



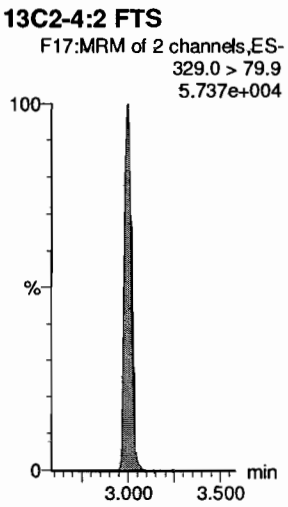
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

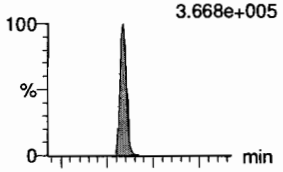


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

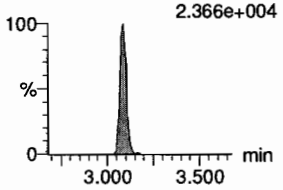
Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

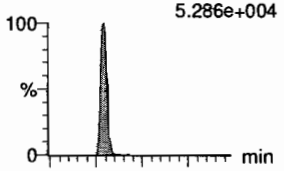
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
3.668e+005



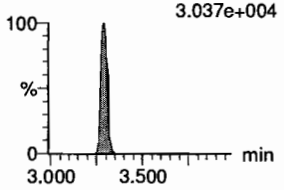
F13:MRM of 2 channels,ES-
313 > 118.9
2.366e+004



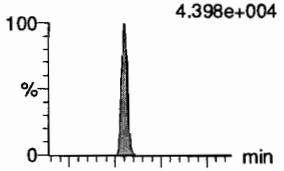
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
5.286e+004



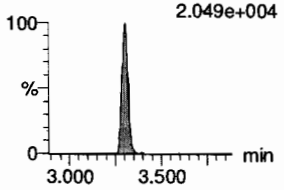
F19:MRM of 2 channels,ES-
349.1 > 99
3.037e+004



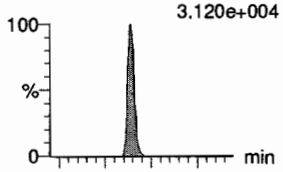
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
4.398e+004



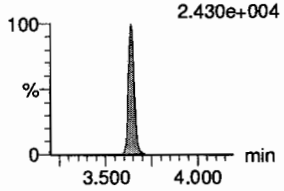
F9:MRM of 3 channels,ES-
285.1 > 184.9
2.049e+004



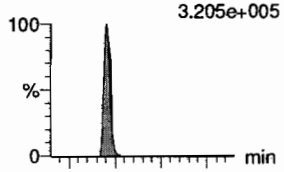
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
3.120e+004



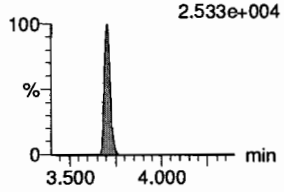
F18:MRM of 2 channels,ES-
340.9 > 216.9
2.430e+004



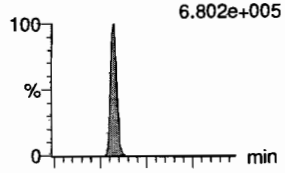
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
3.205e+005



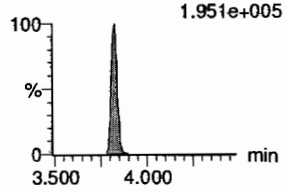
F20:MRM of 2 channels,ES-
363.0 > 169.0
2.533e+004



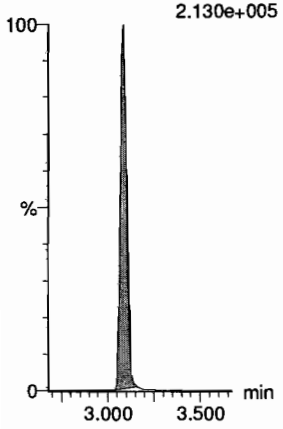
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
6.802e+005



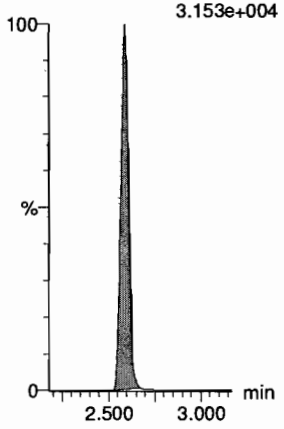
F22:MRM of 2 channels,ES-
376.8 > 85.0
1.951e+005



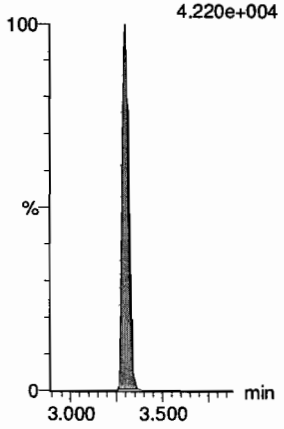
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
2.130e+005



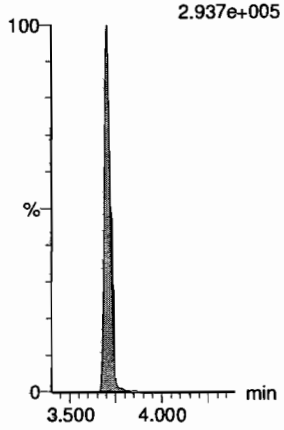
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.153e+004



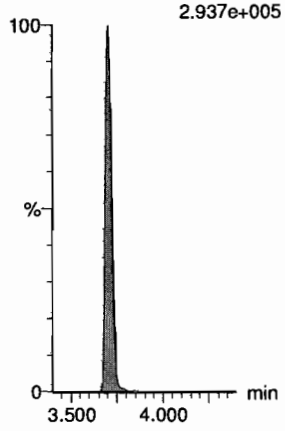
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
4.220e+004



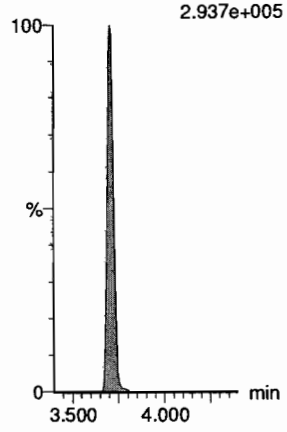
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.937e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.937e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.937e+005

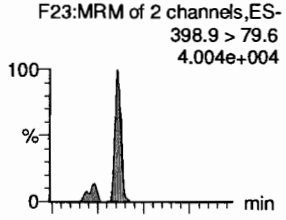


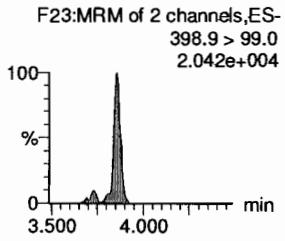
Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

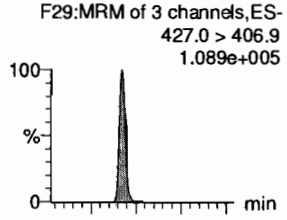
Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

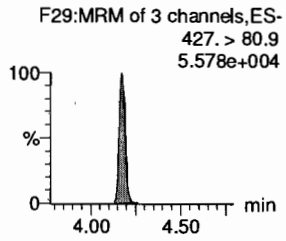
L-PFHxS



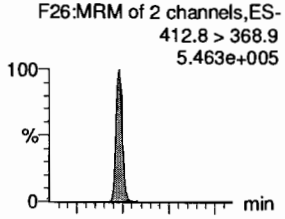


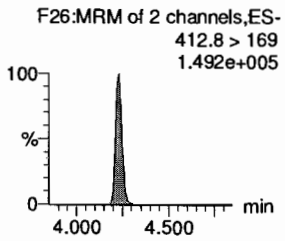
6:2 FTS



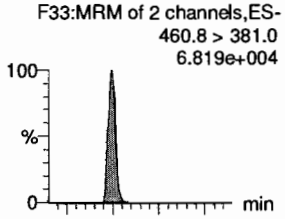


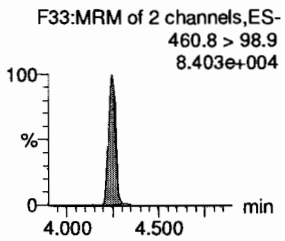
L-PFOA



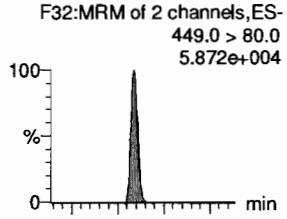


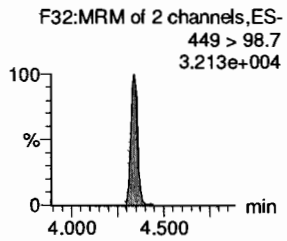
PFEChS



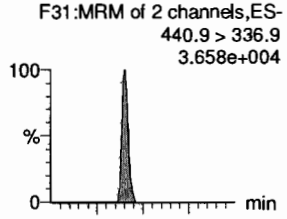


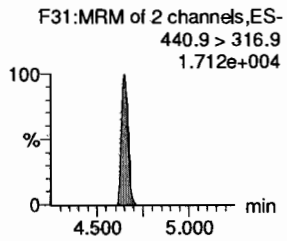
PFHpS



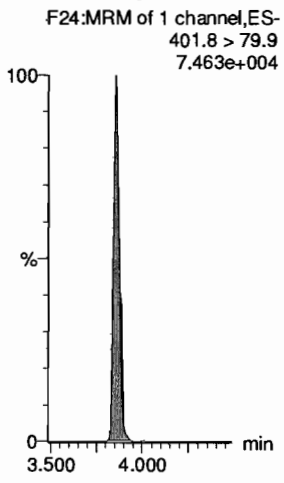


7:3 FTCA

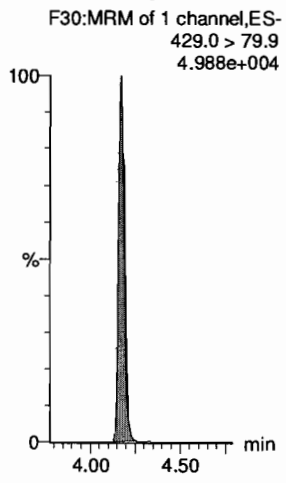




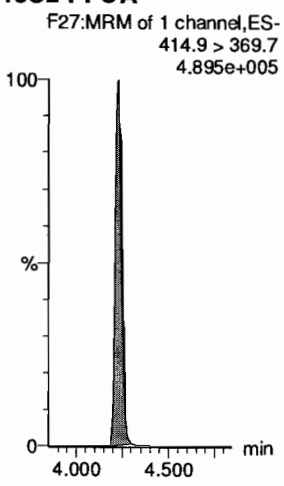
13C3-PFHxS



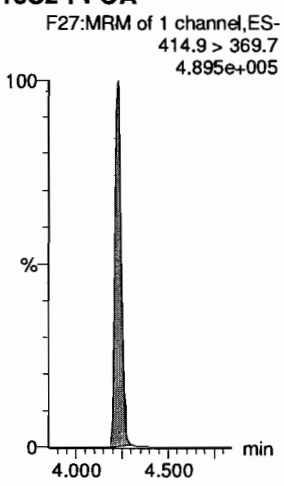
13C2-6:2 FTS



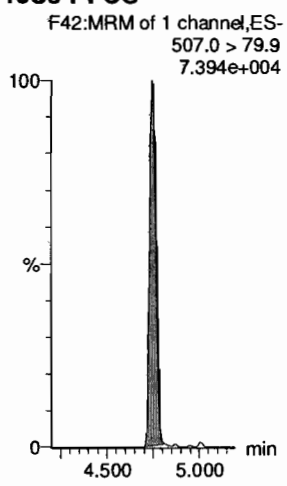
13C2-PFOA



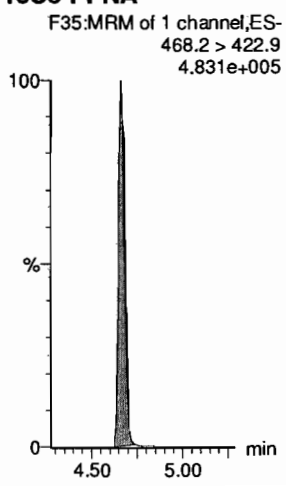
13C2-PFOA



13C8-PFOS



13C5-PFNA



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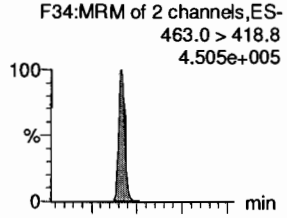
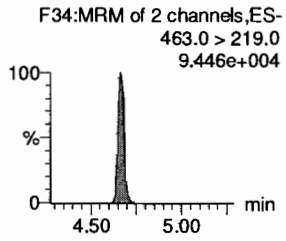
Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

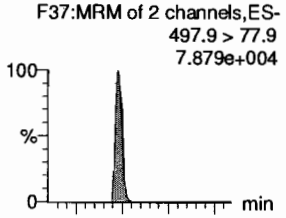
Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

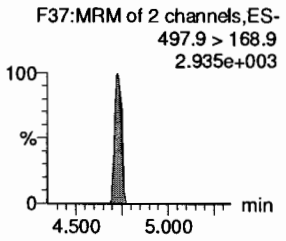
PFNA



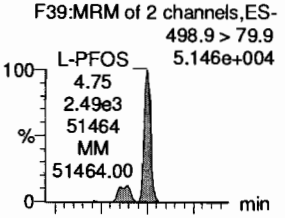


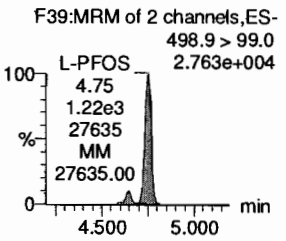
PFOSA



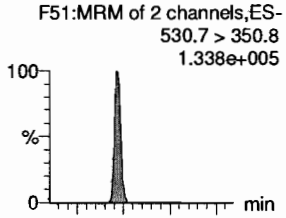


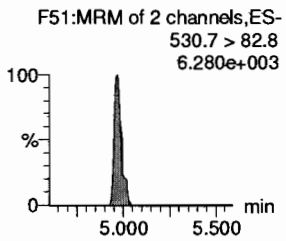
L-PFOS



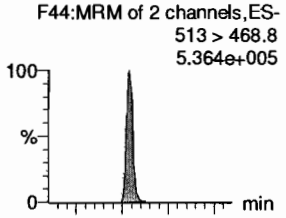


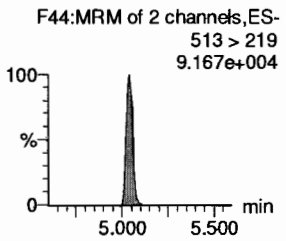
9Cl-PF30NS



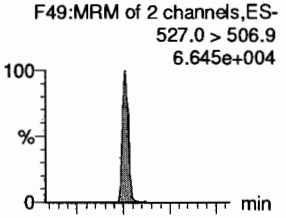


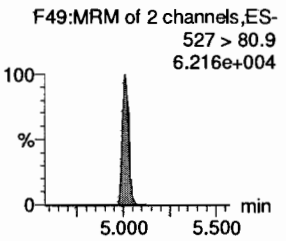
PFDA



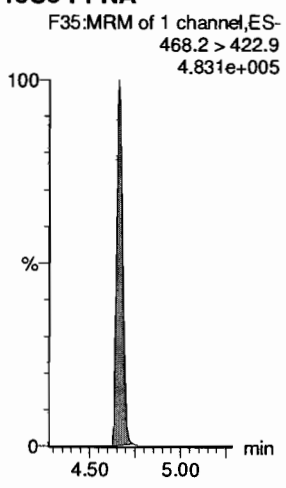


8:2 FTS

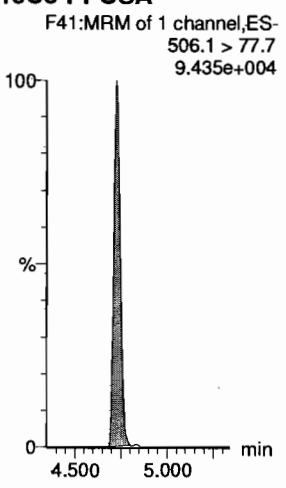




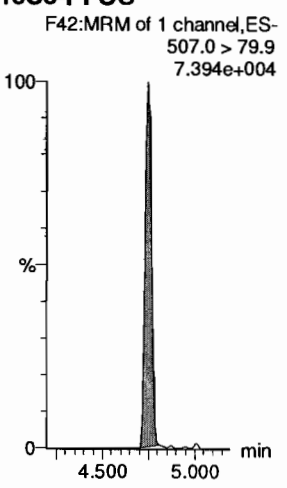
13C5-PFNA



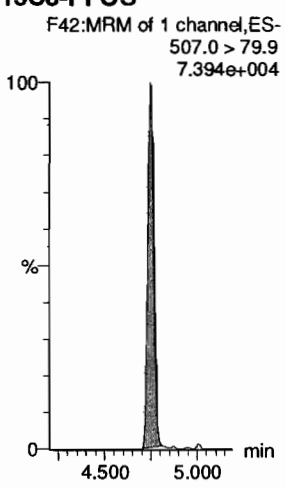
13C8-PFOSA



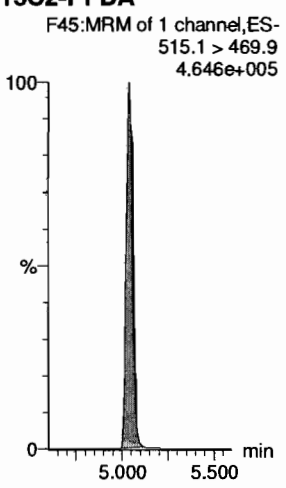
13C8-PFOS



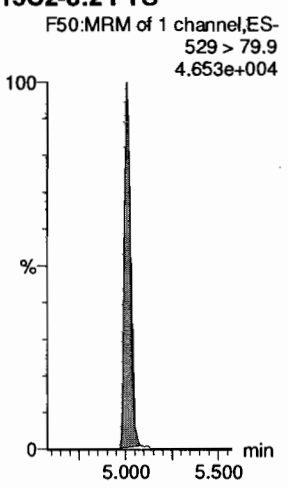
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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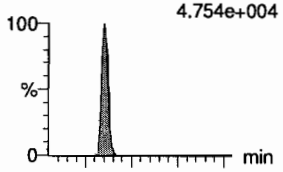
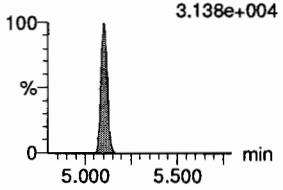
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

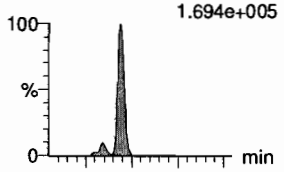
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
4.754e+004



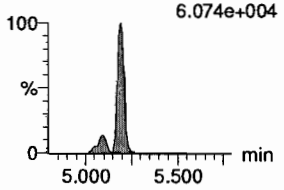
F53:MRM of 2 channels,ES-
549.1 > 99.1
3.138e+004



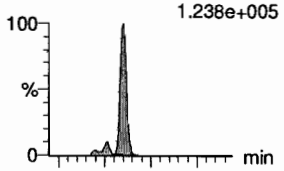
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.694e+005



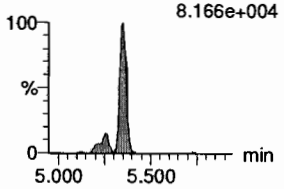
F56:MRM of 2 channels,ES-
570. > 512
6.074e+004



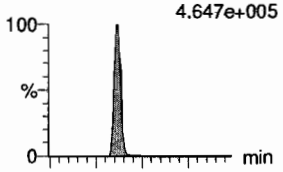
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.238e+005



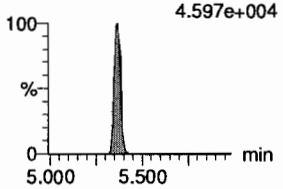
F59:MRM of 2 channels,ES-
584.1 > 526
8.166e+004



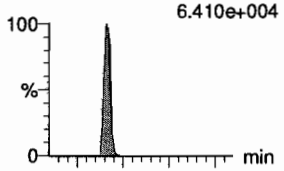
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.647e+005



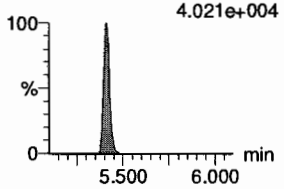
F54:MRM of 2 channels,ES-
563.0 > 269
4.597e+004



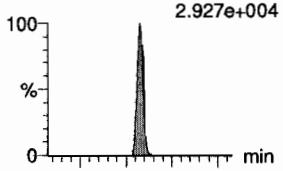
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
6.410e+004



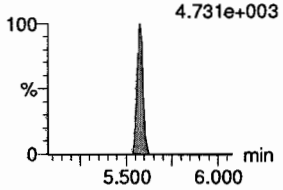
F61:MRM of 2 channels,ES-
598.8 > 98.9
4.021e+004



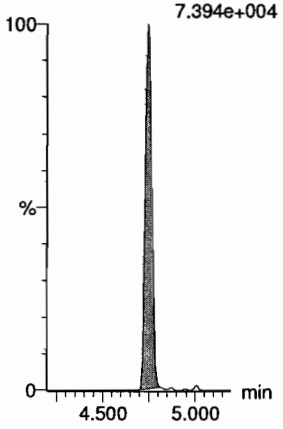
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
2.927e+004



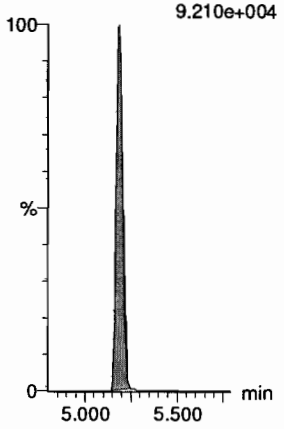
F68:MRM of 2 channels,ES-
632.6 > 450.7
4.731e+003



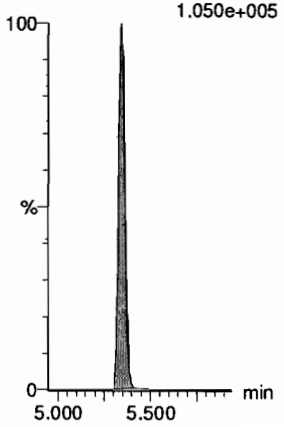
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.394e+004



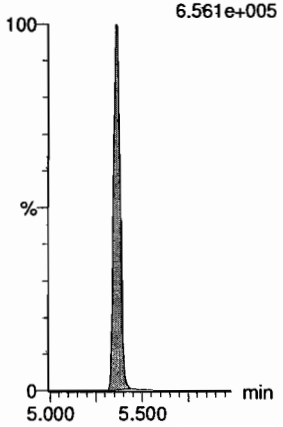
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
9.210e+004



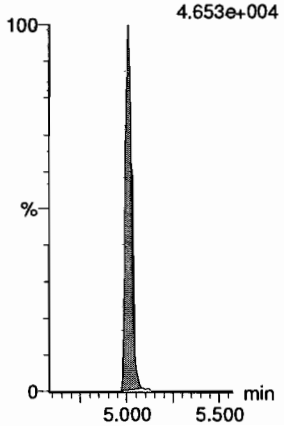
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.050e+005



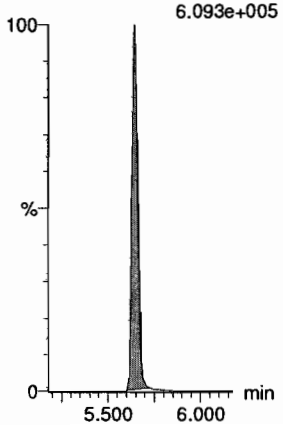
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.561e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.653e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.093e+005

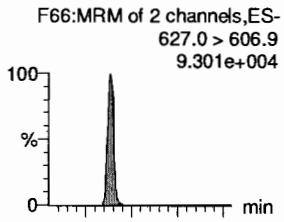


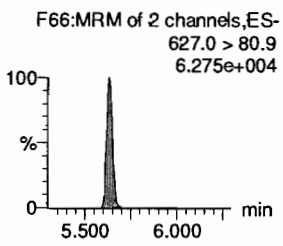
Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

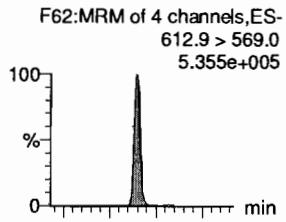
Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

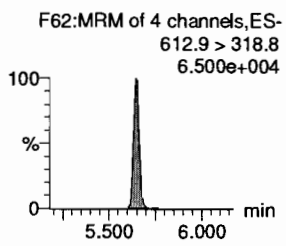
10:2 FTS



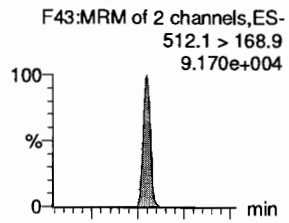


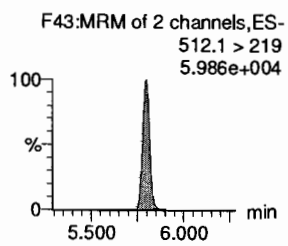
PFDoA



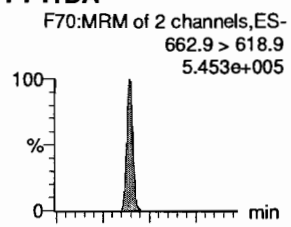


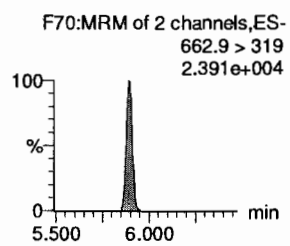
N-MeFOSA



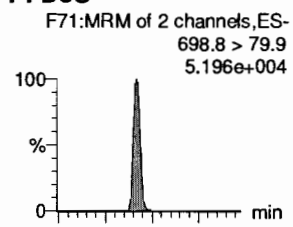


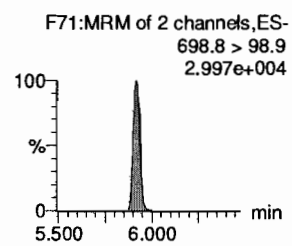
PFTrDA



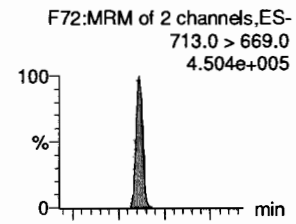


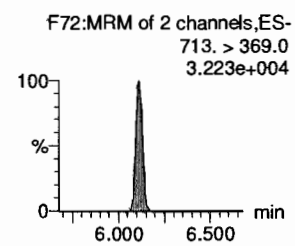
PFDoS



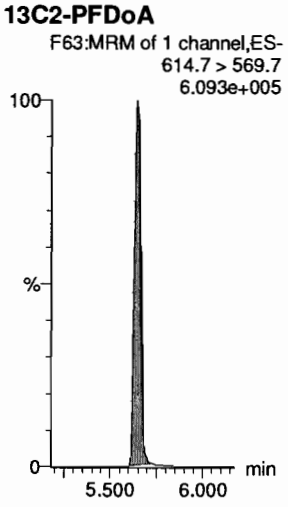


PFTeDA

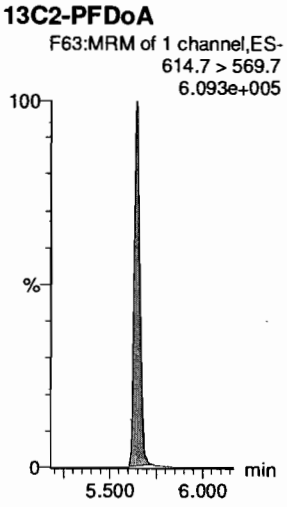




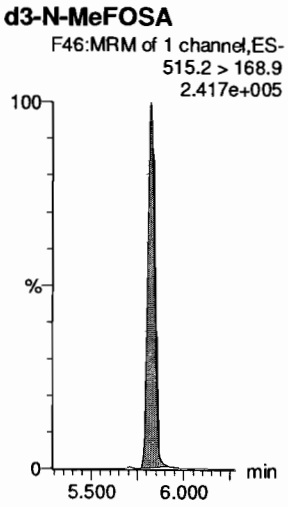
13C2-PFDoA



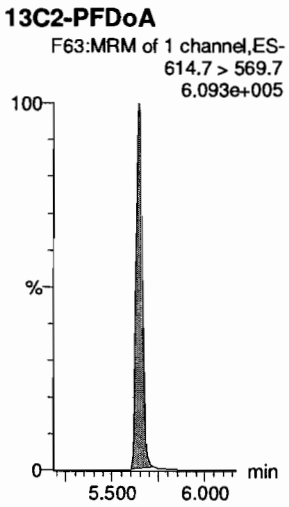
13C2-PFDoA



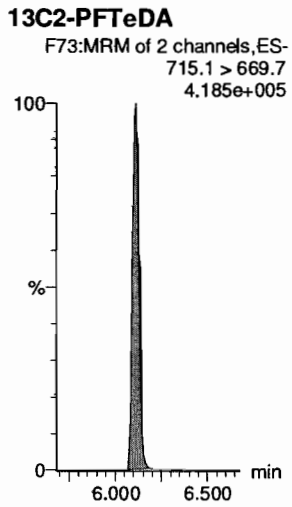
d3-N-MeFOSA



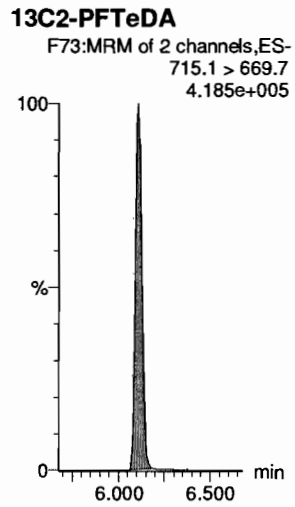
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

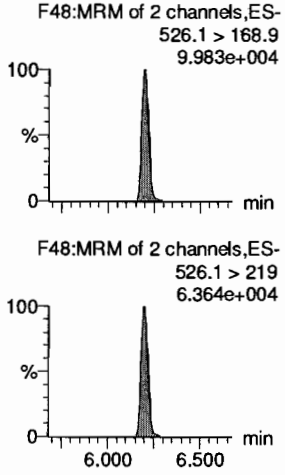


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

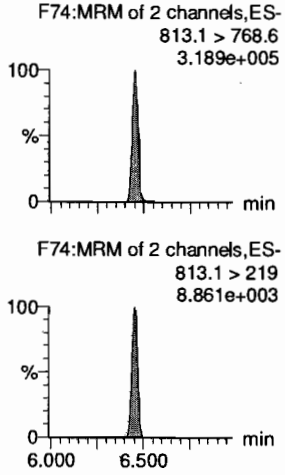
Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

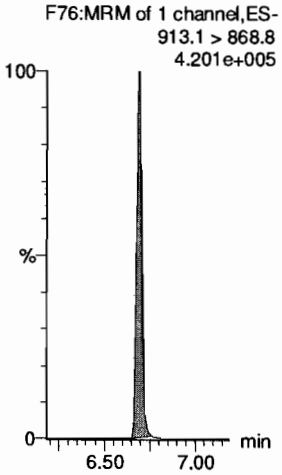
N-EtFOSA



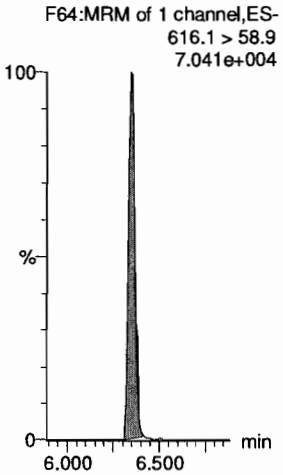
PFHxDA



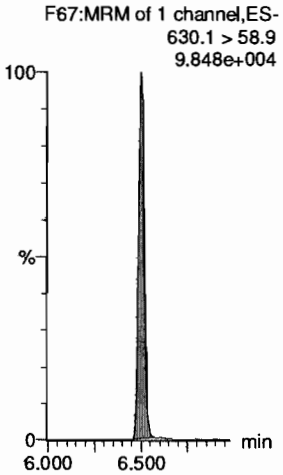
PFODA



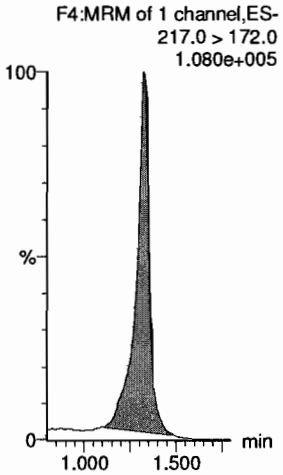
N-MeFOSE



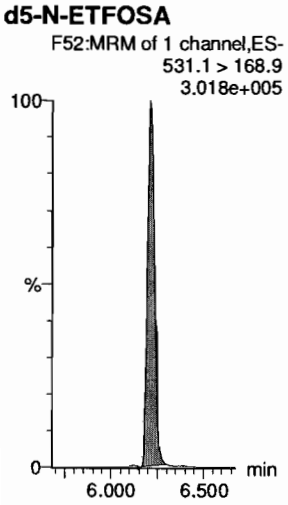
N-EtFOSE



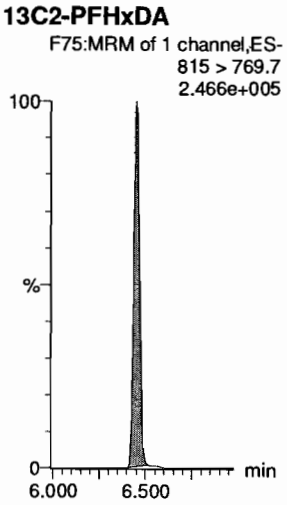
13C4-PFBA



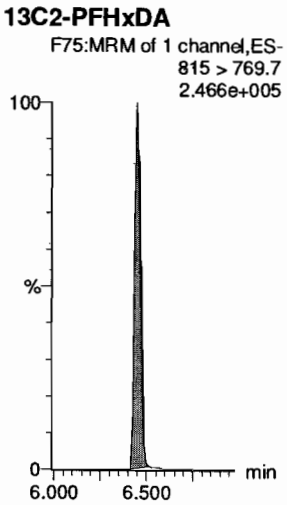
d5-N-ETFOSA



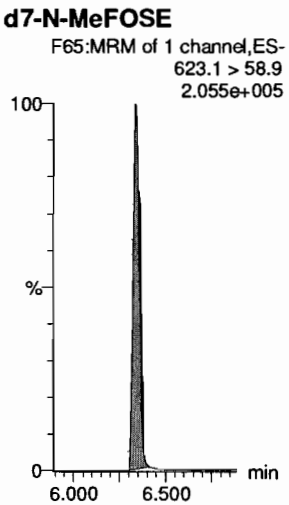
13C2-PFHxDA



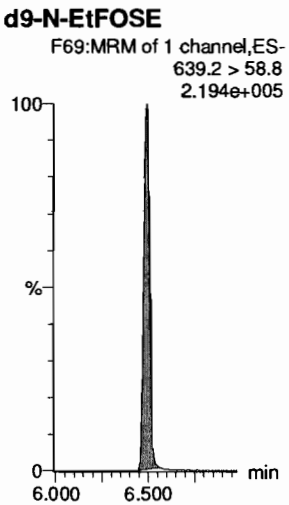
13C2-PFHxDA



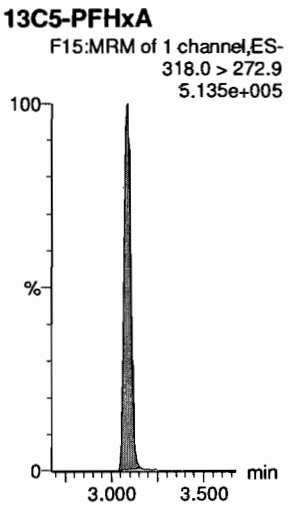
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

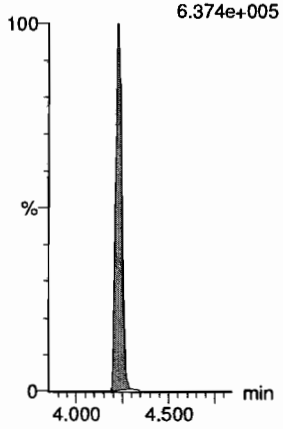


Dataset: F:\Projects\PFAS.PRO\Results\190702M2\190702M2-33.qld

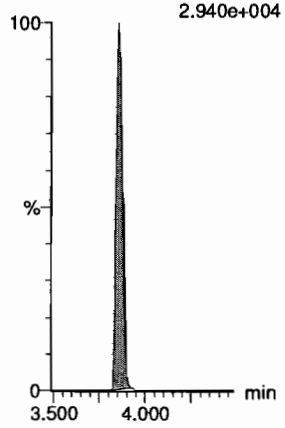
Last Altered: Wednesday, July 03, 2019 09:10:49 Pacific Daylight Time
Printed: Wednesday, July 03, 2019 09:11:15 Pacific Daylight Time

Name: 190702M2_33, Date: 02-Jul-2019, Time: 19:49:09, ID: ST190702M2-11 PFC CS3 19F2417, Description: PFC CS3 19F2417

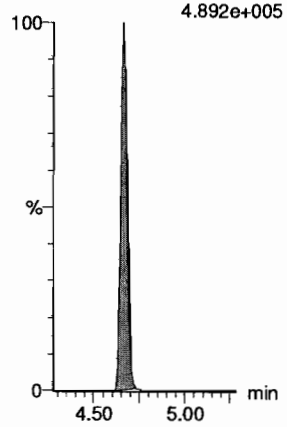
13C8-PFOA



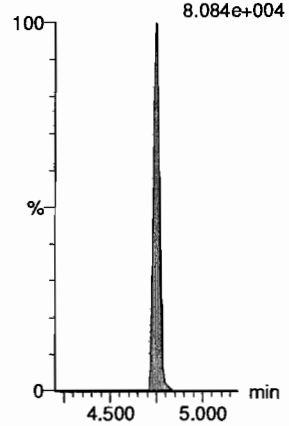
18O2-PFHxS



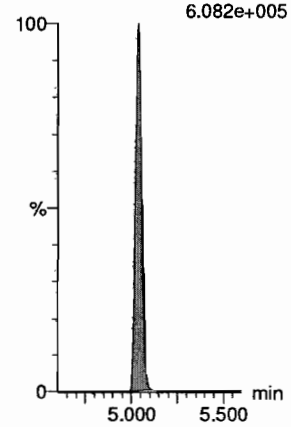
13C9-PFNA



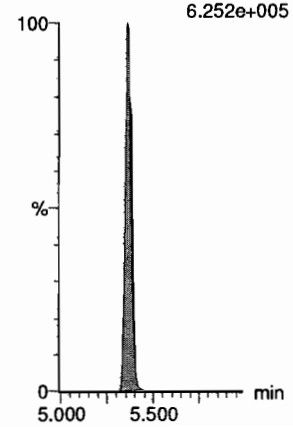
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\areas.qld

Last Altered: Thursday, July 11, 2019 09:53:56 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:14:26 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_RS-07-05-19.mdb 05 Jul 2019 12:04:14
Calibration: 11 Jul 2019 09:41:10

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

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2	2	13C5-PFHxA	ST190710M3-3 PFC CS0 19G0803	1.01e4	100.0	NO
3	3	18O2-PFHxS	ST190710M3-3 PFC CS0 19G0803	5.70e2	100.0	NO
4	4	13C8-PFOA	ST190710M3-3 PFC CS0 19G0803	1.43e4	100.0	NO
5	5	13C9-PFNA	ST190710M3-3 PFC CS0 19G0803	7.93e3	100.0	NO
6	6	13C4-PFOS	ST190710M3-3 PFC CS0 19G0803	1.29e3	100.0	NO
7	7	13C6-PFDA	ST190710M3-3 PFC CS0 19G0803	9.98e3	100.0	NO
8	8	13C7-PFUdA	ST190710M3-3 PFC CS0 19G0803	1.20e4	100.0	NO

Name: 190710M3_6, Date: 10-Jul-2019, Time: 16:45:08, ID: ST190710M3-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-4 PFC CS1 19G0804	3.16e3	103.2	NO
2	2	13C5-PFHxA	ST190710M3-4 PFC CS1 19G0804	9.86e3	97.9	NO
3	3	18O2-PFHxS	ST190710M3-4 PFC CS1 19G0804	5.49e2	96.3	NO
4	4	13C8-PFOA	ST190710M3-4 PFC CS1 19G0804	1.41e4	99.0	NO
5	5	13C9-PFNA	ST190710M3-4 PFC CS1 19G0804	8.30e3	104.7	NO
6	6	13C4-PFOS	ST190710M3-4 PFC CS1 19G0804	1.41e3	108.9	NO
7	7	13C6-PFDA	ST190710M3-4 PFC CS1 19G0804	9.95e3	99.7	NO
8	8	13C7-PFUdA	ST190710M3-4 PFC CS1 19G0804	1.23e4	102.4	NO

Name: 190710M3_7, Date: 10-Jul-2019, Time: 16:55:41, ID: ST190710M3-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-5 PFC CS2 19G0805	3.86e3	126.1	NO
2	2	13C5-PFHxA	ST190710M3-5 PFC CS2 19G0805	1.22e4	120.9	NO
3	3	18O2-PFHxS	ST190710M3-5 PFC CS2 19G0805	6.71e2	117.8	NO
4	4	13C8-PFOA	ST190710M3-5 PFC CS2 19G0805	1.63e4	114.0	NO
5	5	13C9-PFNA	ST190710M3-5 PFC CS2 19G0805	9.90e3	125.0	NO
6	6	13C4-PFOS	ST190710M3-5 PFC CS2 19G0805	1.63e3	126.0	NO
7	7	13C6-PFDA	ST190710M3-5 PFC CS2 19G0805	1.16e4	116.0	NO
8	8	13C7-PFUdA	ST190710M3-5 PFC CS2 19G0805	1.45e4	120.5	NO

Name: 190710M3_8, Date: 10-Jul-2019, Time: 17:06:19, ID: ST190710M3-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-6 PFC CS3 19G0806	2.90e3	94.8	NO
2	2	13C5-PFHxA	ST190710M3-6 PFC CS3 19G0806	9.53e3	94.5	NO
3	3	18O2-PFHxS	ST190710M3-6 PFC CS3 19G0806	5.73e2	100.7	NO
4	4	13C8-PFOA	ST190710M3-6 PFC CS3 19G0806	1.32e4	92.7	NO
5	5	13C9-PFNA	ST190710M3-6 PFC CS3 19G0806	8.28e3	104.5	NO
6	6	13C4-PFOS	ST190710M3-6 PFC CS3 19G0806	1.28e3	99.4	NO
7	7	13C6-PFDA	ST190710M3-6 PFC CS3 19G0806	9.82e3	98.5	NO
8	8	13C7-PFUdA	ST190710M3-6 PFC CS3 19G0806	1.20e4	99.6	NO

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Name: 190710M3_9, Date: 10-Jul-2019, Time: 17:16:53, ID: ST190710M3-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-7 PFC CS4 19G0807	4.95e3	162.0	YES
2	2	13C5-PFHxA	ST190710M3-7 PFC CS4 19G0807	1.58e4	156.3	YES
3	3	18O2-PFHxS	ST190710M3-7 PFC CS4 19G0807	8.68e2	152.3	YES
4	4	13C8-PFOA	ST190710M3-7 PFC CS4 19G0807	2.11e4	147.9	NO
5	5	13C9-PFNA	ST190710M3-7 PFC CS4 19G0807	1.30e4	164.6	YES
6	6	13C4-PFOS	ST190710M3-7 PFC CS4 19G0807	2.27e3	175.8	YES
7	7	13C6-PFDA	ST190710M3-7 PFC CS4 19G0807	1.61e4	161.2	YES
8	8	13C7-PFUdA	ST190710M3-7 PFC CS4 19G0807	1.76e4	146.6	NO

Name: 190710M3_10, Date: 10-Jul-2019, Time: 17:27:30, ID: ST190710M3-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-8 PFC CS5 19G0808	2.75e3	89.9	NO
2	2	13C5-PFHxA	ST190710M3-8 PFC CS5 19G0808	8.75e3	86.8	NO
3	3	18O2-PFHxS	ST190710M3-8 PFC CS5 19G0808	5.51e2	96.8	NO
4	4	13C8-PFOA	ST190710M3-8 PFC CS5 19G0808	1.18e4	82.8	NO
5	5	13C9-PFNA	ST190710M3-8 PFC CS5 19G0808	7.21e3	91.0	NO
6	6	13C4-PFOS	ST190710M3-8 PFC CS5 19G0808	1.05e3	81.1	NO
7	7	13C6-PFDA	ST190710M3-8 PFC CS5 19G0808	8.44e3	84.5	NO
8	8	13C7-PFUdA	ST190710M3-8 PFC CS5 19G0808	1.02e4	84.8	NO

Name: 190710M3_11, Date: 10-Jul-2019, Time: 17:38:02, ID: ST190710M3-9 PFC CS6 19G0809, Description: PFC CS6 19G0809

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-9 PFC CS6 19G0809	3.00e3	97.9	NO
2	2	13C5-PFHxA	ST190710M3-9 PFC CS6 19G0809	8.11e3	80.4	NO
3	3	18O2-PFHxS	ST190710M3-9 PFC CS6 19G0809	4.88e2	85.6	NO
4	4	13C8-PFOA	ST190710M3-9 PFC CS6 19G0809	1.05e4	73.8	NO
5	5	13C9-PFNA	ST190710M3-9 PFC CS6 19G0809	6.92e3	87.3	NO
6	6	13C4-PFOS	ST190710M3-9 PFC CS6 19G0809	1.06e3	81.9	NO
7	7	13C6-PFDA	ST190710M3-9 PFC CS6 19G0809	8.67e3	86.9	NO
8	8	13C7-PFUdA	ST190710M3-9 PFC CS6 19G0809	9.49e3	78.9	NO

Name: 190710M3_12, Date: 10-Jul-2019, Time: 17:48:41, ID: ST190710M3-10 PFC CS7 19G0810, Description: PFC CS7 19G0810

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-10 PFC CS7 19G0810	2.75e3	90.0	NO
2	2	13C5-PFHxA	ST190710M3-10 PFC CS7 19G0810	7.23e3	71.7	NO
3	3	18O2-PFHxS	ST190710M3-10 PFC CS7 19G0810	4.26e2	74.7	NO
4	4	13C8-PFOA	ST190710M3-10 PFC CS7 19G0810	8.39e3	58.9	NO
5	5	13C9-PFNA	ST190710M3-10 PFC CS7 19G0810	5.51e3	69.5	NO
6	6	13C4-PFOS	ST190710M3-10 PFC CS7 19G0810	9.33e2	72.2	NO
7	7	13C6-PFDA	ST190710M3-10 PFC CS7 19G0810	6.36e3	63.7	NO
8	8	13C7-PFUdA	ST190710M3-10 PFC CS7 19G0810	7.95e3	66.1	NO

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Name: 190710M3_13, Date: 10-Jul-2019, Time: 17:59:14, ID: IB, Description: IB

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IB	3.23e3	105.4	NO
2	2	13C5-PFHxA	IB	1.03e4	102.4	NO
3	3	18O2-PFHxS	IB	6.08e2	106.7	NO
4	4	13C8-PFOA	IB	1.46e4	102.5	NO
5	5	13C9-PFNA	IB	8.24e3	104.0	NO
6	6	13C4-PFOS	IB	1.36e3	105.1	NO
7	7	13C6-PFDA	IB	1.00e4	100.6	NO
8	8	13C7-PFUdA	IB	1.32e4	110.0	NO

Name: 190710M3_14, Date: 10-Jul-2019, Time: 18:09:52, ID: ST190710M3-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-1 PFC ICV 19G0811	3.13e3	102.5	NO
2	2	13C5-PFHxA	ST190710M3-1 PFC ICV 19G0811	1.03e4	102.7	NO
3	3	18O2-PFHxS	ST190710M3-1 PFC ICV 19G0811	5.95e2	104.5	NO
4	4	13C8-PFOA	ST190710M3-1 PFC ICV 19G0811	1.46e4	102.7	NO
5	5	13C9-PFNA	ST190710M3-1 PFC ICV 19G0811	8.45e3	106.6	NO
6	6	13C4-PFOS	ST190710M3-1 PFC ICV 19G0811	1.32e3	102.5	NO
7	7	13C6-PFDA	ST190710M3-1 PFC ICV 19G0811	1.01e4	101.4	NO
8	8	13C7-PFUdA	ST190710M3-1 PFC ICV 19G0811	1.24e4	103.0	NO

Name: 190710M3_15, Date: 10-Jul-2019, Time: 18:20:26, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_16, Date: 10-Jul-2019, Time: 18:31:07, ID: B9G0061-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0061-BS1 OPR 0.125	7.75e3	126.7	NO
2	2	13C5-PFHxA	B9G0061-BS1 OPR 0.125	1.45e4	71.8	NO
3	3	18O2-PFHxS	B9G0061-BS1 OPR 0.125	8.77e2	77.0	NO
4	4	13C8-PFOA	B9G0061-BS1 OPR 0.125	1.96e4	68.6	NO
5	5	13C9-PFNA	B9G0061-BS1 OPR 0.125	1.19e4	74.9	NO
6	6	13C4-PFOS	B9G0061-BS1 OPR 0.125	1.96e3	76.0	NO
7	7	13C6-PFDA	B9G0061-BS1 OPR 0.125	1.45e4	72.8	NO
8	8	13C7-PFUdA	B9G0061-BS1 OPR 0.125	1.77e4	73.4	NO

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Name: 190710M3_17, Date: 10-Jul-2019, Time: 18:41:42, ID: B9F0280-BS1 OPR 1, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0280-BS1 OPR 1	5.70e3	186.4	YES
2	2	13C5-PFHxA	B9F0280-BS1 OPR 1	1.01e4	100.7	NO
3	3	18O2-PFHxS	B9F0280-BS1 OPR 1	6.70e2	117.7	NO
4	4	13C8-PFOA	B9F0280-BS1 OPR 1	1.50e4	105.0	NO
5	5	13C9-PFNA	B9F0280-BS1 OPR 1	8.58e3	108.2	NO
6	6	13C4-PFOS	B9F0280-BS1 OPR 1	1.39e3	107.5	NO
7	7	13C6-PFDA	B9F0280-BS1 OPR 1	1.08e4	108.7	NO
8	8	13C7-PFUdA	B9F0280-BS1 OPR 1	1.29e4	107.4	NO

Name: 190710M3_18, Date: 10-Jul-2019, Time: 18:52:16, ID: B9F0280-MS1 Matrix Spike 1.08, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0280-MS1 Matrix Spike 1.08	6.22e3	203.4	YES
2	2	13C5-PFHxA	B9F0280-MS1 Matrix Spike 1.08	1.09e4	107.8	NO
3	3	18O2-PFHxS	B9F0280-MS1 Matrix Spike 1.08	5.88e2	103.3	NO
4	4	13C8-PFOA	B9F0280-MS1 Matrix Spike 1.08	1.49e4	104.8	NO
5	5	13C9-PFNA	B9F0280-MS1 Matrix Spike 1.08	9.26e3	116.8	NO
6	6	13C4-PFOS	B9F0280-MS1 Matrix Spike 1.08	1.43e3	110.6	NO
7	7	13C6-PFDA	B9F0280-MS1 Matrix Spike 1.08	1.11e4	111.1	NO
8	8	13C7-PFUdA	B9F0280-MS1 Matrix Spike 1.08	1.33e4	110.7	NO

Name: 190710M3_19, Date: 10-Jul-2019, Time: 19:02:54, ID: B9F0280-MSD1 Matrix Spike Dup 1.04, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0280-MSD1 Matrix Spike Dup 1.04	5.40e3	176.7	YES
2	2	13C5-PFHxA	B9F0280-MSD1 Matrix Spike Dup 1.04	9.41e3	93.4	NO
3	3	18O2-PFHxS	B9F0280-MSD1 Matrix Spike Dup 1.04	5.79e2	101.6	NO
4	4	13C8-PFOA	B9F0280-MSD1 Matrix Spike Dup 1.04	1.29e4	90.3	NO
5	5	13C9-PFNA	B9F0280-MSD1 Matrix Spike Dup 1.04	7.98e3	100.7	NO
6	6	13C4-PFOS	B9F0280-MSD1 Matrix Spike Dup 1.04	1.23e3	95.5	NO
7	7	13C6-PFDA	B9F0280-MSD1 Matrix Spike Dup 1.04	9.50e3	95.2	NO
8	8	13C7-PFUdA	B9F0280-MSD1 Matrix Spike Dup 1.04	1.14e4	95.0	NO

Name: 190710M3_20, Date: 10-Jul-2019, Time: 19:13:27, ID: B9F0280-BLK1 Method Blank 1, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0280-BLK1 Method Blank 1	5.88e3	192.2	YES
2	2	13C5-PFHxA	B9F0280-BLK1 Method Blank 1	1.06e4	105.5	NO
3	3	18O2-PFHxS	B9F0280-BLK1 Method Blank 1	5.98e2	105.0	NO
4	4	13C8-PFOA	B9F0280-BLK1 Method Blank 1	1.49e4	104.3	NO
5	5	13C9-PFNA	B9F0280-BLK1 Method Blank 1	9.21e3	116.2	NO
6	6	13C4-PFOS	B9F0280-BLK1 Method Blank 1	1.53e3	118.1	NO
7	7	13C6-PFDA	B9F0280-BLK1 Method Blank 1	1.13e4	113.5	NO
8	8	13C7-PFUdA	B9F0280-BLK1 Method Blank 1	1.30e4	107.9	NO

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Name: 190710M3_21, Date: 10-Jul-2019, Time: 19:24:06, ID: 1901683-01 Northern 1 3.56, Description: Northern 1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-01 Northern 1 3.56	4.88e3	159.5	YES
2	2	13C5-PFHxA	1901683-01 Northern 1 3.56	8.54e3	84.7	NO
3	3	18O2-PFHxS	1901683-01 Northern 1 3.56	5.82e2	102.3	NO
4	4	13C8-PFOA	1901683-01 Northern 1 3.56	1.23e4	86.5	NO
5	5	13C9-PFNA	1901683-01 Northern 1 3.56	7.34e3	92.7	NO
6	6	13C4-PFOS	1901683-01 Northern 1 3.56	1.31e3	101.1	NO
7	7	13C6-PFDA	1901683-01 Northern 1 3.56	8.31e3	83.3	NO
8	8	13C7-PFUdA	1901683-01 Northern 1 3.56	5.98e3	49.6	YES

Name: 190710M3_22, Date: 10-Jul-2019, Time: 19:34:44, ID: 1901683-02 Northern 2 3.6, Description: Northern 2

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-02 Northern 2 3.6	5.02e3	164.0	YES
2	2	13C5-PFHxA	1901683-02 Northern 2 3.6	9.18e3	91.1	NO
3	3	18O2-PFHxS	1901683-02 Northern 2 3.6	4.72e2	82.9	NO
4	4	13C8-PFOA	1901683-02 Northern 2 3.6	1.36e4	95.4	NO
5	5	13C9-PFNA	1901683-02 Northern 2 3.6	8.07e3	101.9	NO
6	6	13C4-PFOS	1901683-02 Northern 2 3.6	1.42e3	109.8	NO
7	7	13C6-PFDA	1901683-02 Northern 2 3.6	8.61e3	86.3	NO
8	8	13C7-PFUdA	1901683-02 Northern 2 3.6	6.63e3	55.0	NO

Name: 190710M3_23, Date: 10-Jul-2019, Time: 19:45:18, ID: 1901683-03 Hagatna 1 3.93, Description: Hagatna 1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-03 Hagatna 1 3.93	4.70e3	153.7	YES
2	2	13C5-PFHxA	1901683-03 Hagatna 1 3.93	8.70e3	86.3	NO
3	3	18O2-PFHxS	1901683-03 Hagatna 1 3.93	6.29e2	110.5	NO
4	4	13C8-PFOA	1901683-03 Hagatna 1 3.93	1.30e4	91.5	NO
5	5	13C9-PFNA	1901683-03 Hagatna 1 3.93	7.57e3	95.5	NO
6	6	13C4-PFOS	1901683-03 Hagatna 1 3.93	1.34e3	103.5	NO
7	7	13C6-PFDA	1901683-03 Hagatna 1 3.93	9.07e3	90.9	NO
8	8	13C7-PFUdA	1901683-03 Hagatna 1 3.93	6.72e3	55.8	NO

Name: 190710M3_24, Date: 10-Jul-2019, Time: 19:55:56, ID: 1901683-04 Hagatna 2 3.99, Description: Hagatna 2

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-04 Hagatna 2 3.99	5.20e3	169.9	YES
2	2	13C5-PFHxA	1901683-04 Hagatna 2 3.99	9.51e3	94.4	NO
3	3	18O2-PFHxS	1901683-04 Hagatna 2 3.99	5.95e2	104.5	NO
4	4	13C8-PFOA	1901683-04 Hagatna 2 3.99	1.42e4	100.0	NO
5	5	13C9-PFNA	1901683-04 Hagatna 2 3.99	8.71e3	109.9	NO
6	6	13C4-PFOS	1901683-04 Hagatna 2 3.99	1.51e3	116.5	NO
7	7	13C6-PFDA	1901683-04 Hagatna 2 3.99	9.16e3	91.8	NO
8	8	13C7-PFUdA	1901683-04 Hagatna 2 3.99	6.70e3	55.6	NO

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Name: 190710M3_25, Date: 10-Jul-2019, Time: 20:06:29, ID: 1901683-05 Agat Santarita 1 2.51, Description: Agat Santarita 1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-05 Agat Santarita 1 2.51	7.06e3	230.8	YES
2	2	13C5-PFHxA	1901683-05 Agat Santarita 1 2.51	1.25e4	123.9	NO
3	3	18O2-PFHxS	1901683-05 Agat Santarita 1 2.51	6.63e2	116.4	NO
4	4	13C8-PFOA	1901683-05 Agat Santarita 1 2.51	1.74e4	122.0	NO
5	5	13C9-PFNA	1901683-05 Agat Santarita 1 2.51	1.08e4	135.7	NO
6	6	13C4-PFOS	1901683-05 Agat Santarita 1 2.51	1.80e3	139.2	NO
7	7	13C6-PFDA	1901683-05 Agat Santarita 1 2.51	1.26e4	126.5	NO
8	8	13C7-PFUdA	1901683-05 Agat Santarita 1 2.51	1.62e4	134.7	NO

Name: 190710M3_26, Date: 10-Jul-2019, Time: 20:17:07, ID: 1901683-06 Agat Santarita 2 2.47, Description: Agat Santarita 2

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901683-06 Agat Santarita 2 2.47	6.10e3	199.5	YES
2	2	13C5-PFHxA	1901683-06 Agat Santarita 2 2.47	1.04e4	103.0	NO
3	3	18O2-PFHxS	1901683-06 Agat Santarita 2 2.47	6.50e2	114.1	NO
4	4	13C8-PFOA	1901683-06 Agat Santarita 2 2.47	1.41e4	98.6	NO
5	5	13C9-PFNA	1901683-06 Agat Santarita 2 2.47	8.68e3	109.5	NO
6	6	13C4-PFOS	1901683-06 Agat Santarita 2 2.47	1.33e3	102.9	NO
7	7	13C6-PFDA	1901683-06 Agat Santarita 2 2.47	1.00e4	100.6	NO
8	8	13C7-PFUdA	1901683-06 Agat Santarita 2 2.47	1.34e4	111.1	NO

Name: 190710M3_27, Date: 10-Jul-2019, Time: 20:27:41, ID: 1901766-05 SAOA-B04-SO-5-5.5 1.08, Description: SAOA-B04-SO-5-5.5

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-05 SAOA-B04-SO-5-5.5 1.08	5.52e3	180.4	YES
2	2	13C5-PFHxA	1901766-05 SAOA-B04-SO-5-5.5 1.08	9.72e3	96.4	NO
3	3	18O2-PFHxS	1901766-05 SAOA-B04-SO-5-5.5 1.08	5.44e2	95.6	NO
4	4	13C8-PFOA	1901766-05 SAOA-B04-SO-5-5.5 1.08	1.31e4	91.9	NO
5	5	13C9-PFNA	1901766-05 SAOA-B04-SO-5-5.5 1.08	8.05e3	101.6	NO
6	6	13C4-PFOS	1901766-05 SAOA-B04-SO-5-5.5 1.08	1.21e3	93.9	NO
7	7	13C6-PFDA	1901766-05 SAOA-B04-SO-5-5.5 1.08	1.01e4	101.3	NO
8	8	13C7-PFUdA	1901766-05 SAOA-B04-SO-5-5.5 1.08	1.17e4	97.6	NO

Name: 190710M3_28, Date: 10-Jul-2019, Time: 20:38:19, ID: 1901766-06 SAOA-B04-SO-20-20.5 1.2, Description: SAOA-B04-SO-20-20.5

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-06 SAOA-B04-SO-20-20.5 1.2	5.22e3	170.8	YES
2	2	13C5-PFHxA	1901766-06 SAOA-B04-SO-20-20.5 1.2	8.92e3	88.5	NO
3	3	18O2-PFHxS	1901766-06 SAOA-B04-SO-20-20.5 1.2	4.99e2	87.6	NO
4	4	13C8-PFOA	1901766-06 SAOA-B04-SO-20-20.5 1.2	1.28e4	89.6	NO
5	5	13C9-PFNA	1901766-06 SAOA-B04-SO-20-20.5 1.2	7.79e3	98.3	NO
6	6	13C4-PFOS	1901766-06 SAOA-B04-SO-20-20.5 1.2	1.20e3	93.1	NO
7	7	13C6-PFDA	1901766-06 SAOA-B04-SO-20-20.5 1.2	9.28e3	93.0	NO
8	8	13C7-PFUdA	1901766-06 SAOA-B04-SO-20-20.5 1.2	1.11e4	92.4	NO

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Name: 190710M3_29, Date: 10-Jul-2019, Time: 20:48:52, ID: 1901766-07 SAOA-B04-SO-47-47.5 1.19, Description: SAOA-B04-SO-47-47.5

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901766-07 SAOA-B04-SO-47-47.5 1.19	6.21e3	203.0	YES
2	2	13C5-PFHxA	1901766-07 SAOA-B04-SO-47-47.5 1.19	1.05e4	104.2	NO
3	3	18O2-PFHxS	1901766-07 SAOA-B04-SO-47-47.5 1.19	6.27e2	110.0	NO
4	4	13C8-PFOA	1901766-07 SAOA-B04-SO-47-47.5 1.19	1.53e4	107.6	NO
5	5	13C9-PFNA	1901766-07 SAOA-B04-SO-47-47.5 1.19	8.34e3	105.3	NO
6	6	13C4-PFOS	1901766-07 SAOA-B04-SO-47-47.5 1.19	1.46e3	112.9	NO
7	7	13C6-PFDA	1901766-07 SAOA-B04-SO-47-47.5 1.19	1.00e4	100.2	NO
8	8	13C7-PFUdA	1901766-07 SAOA-B04-SO-47-47.5 1.19	1.24e4	103.3	NO

Name: 190710M3_30, Date: 10-Jul-2019, Time: 20:59:30, ID: 1901768-01 Sludge 8.59, Description: Sludge

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901768-01 Sludge 8.59	5.07e3	165.9	YES
2	2	13C5-PFHxA	1901768-01 Sludge 8.59	9.27e3	92.0	NO
3	3	18O2-PFHxS	1901768-01 Sludge 8.59	5.73e2	100.6	NO
4	4	13C8-PFOA	1901768-01 Sludge 8.59	1.35e4	94.4	NO
5	5	13C9-PFNA	1901768-01 Sludge 8.59	7.62e3	96.2	NO
6	6	13C4-PFOS	1901768-01 Sludge 8.59	1.35e3	104.2	NO
7	7	13C6-PFDA	1901768-01 Sludge 8.59	9.96e3	99.8	NO
8	8	13C7-PFUdA	1901768-01 Sludge 8.59	1.08e4	89.7	NO

Name: 190710M3_31, Date: 10-Jul-2019, Time: 21:10:09, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-11 PFC CS3 19G0806	3.12e3	102.1	NO
2	2	13C5-PFHxA	ST190710M3-11 PFC CS3 19G0806	1.04e4	102.7	NO
3	3	18O2-PFHxS	ST190710M3-11 PFC CS3 19G0806	6.35e2	111.5	NO
4	4	13C8-PFOA	ST190710M3-11 PFC CS3 19G0806	1.42e4	99.6	NO
5	5	13C9-PFNA	ST190710M3-11 PFC CS3 19G0806	8.55e3	107.8	NO
6	6	13C4-PFOS	ST190710M3-11 PFC CS3 19G0806	1.42e3	109.9	NO
7	7	13C6-PFDA	ST190710M3-11 PFC CS3 19G0806	1.06e4	105.9	NO
8	8	13C7-PFUdA	ST190710M3-11 PFC CS3 19G0806	1.32e4	109.7	NO

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Name: 190710M3_33, Date: 10-Jul-2019, Time: 21:31:20, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_34, Date: 10-Jul-2019, Time: 21:41:54, ID: B9G0092-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0092-BS1 OPR 0.25	3.80e3	124.1	NO
2	2	13C5-PFHxA	B9G0092-BS1 OPR 0.25	6.78e3	67.3	NO
3	3	18O2-PFHxS	B9G0092-BS1 OPR 0.25	5.07e2	89.0	NO
4	4	13C8-PFOA	B9G0092-BS1 OPR 0.25	1.00e4	70.4	NO
5	5	13C9-PFNA	B9G0092-BS1 OPR 0.25	6.31e3	79.6	NO
6	6	13C4-PFOS	B9G0092-BS1 OPR 0.25	1.19e3	92.3	NO
7	7	13C6-PFDA	B9G0092-BS1 OPR 0.25	8.11e3	81.3	NO
8	8	13C7-PFUdA	B9G0092-BS1 OPR 0.25	9.59e3	79.7	NO

Name: 190710M3_35, Date: 10-Jul-2019, Time: 21:52:23, ID: B9G0092-BSD1 LCSD 0.25, Description: LCSD

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0092-BSD1 LCSD 0.25	4.15e3	135.6	NO
2	2	13C5-PFHxA	B9G0092-BSD1 LCSD 0.25	7.25e3	72.0	NO
3	3	18O2-PFHxS	B9G0092-BSD1 LCSD 0.25	4.75e2	83.4	NO
4	4	13C8-PFOA	B9G0092-BSD1 LCSD 0.25	1.06e4	74.3	NO
5	5	13C9-PFNA	B9G0092-BSD1 LCSD 0.25	6.52e3	82.2	NO
6	6	13C4-PFOS	B9G0092-BSD1 LCSD 0.25	1.28e3	98.8	NO
7	7	13C6-PFDA	B9G0092-BSD1 LCSD 0.25	8.35e3	83.7	NO
8	8	13C7-PFUdA	B9G0092-BSD1 LCSD 0.25	1.05e4	87.0	NO

Name: 190710M3_36, Date: 10-Jul-2019, Time: 22:03:02, ID: B9G0092-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0092-BLK1 Method Blank 0.25	3.01e3	98.4	NO
2	2	13C5-PFHxA	B9G0092-BLK1 Method Blank 0.25	5.43e3	53.9	NO
3	3	18O2-PFHxS	B9G0092-BLK1 Method Blank 0.25	4.06e2	71.3	NO
4	4	13C8-PFOA	B9G0092-BLK1 Method Blank 0.25	7.80e3	54.7	NO
5	5	13C9-PFNA	B9G0092-BLK1 Method Blank 0.25	5.20e3	65.6	NO
6	6	13C4-PFOS	B9G0092-BLK1 Method Blank 0.25	1.02e3	78.7	NO
7	7	13C6-PFDA	B9G0092-BLK1 Method Blank 0.25	6.25e3	62.7	NO
8	8	13C7-PFUdA	B9G0092-BLK1 Method Blank 0.25	8.26e3	68.6	NO

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Name: 190710M3_37, Date: 10-Jul-2019, Time: 22:13:40, ID: 1901784-01RE1 BWS-1 0.23881, Description: BWS-1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901784-01RE1 BWS-1 0.23881	3.15e3	102.9	NO
2	2	13C5-PFHxA	1901784-01RE1 BWS-1 0.23881	5.51e3	54.6	NO
3	3	18O2-PFHxS	1901784-01RE1 BWS-1 0.23881	5.07e2	89.0	NO
4	4	13C8-PFOA	1901784-01RE1 BWS-1 0.23881	7.83e3	54.9	NO
5	5	13C9-PFNA	1901784-01RE1 BWS-1 0.23881	4.98e3	62.8	NO
6	6	13C4-PFOS	1901784-01RE1 BWS-1 0.23881	9.20e2	71.2	NO
7	7	13C6-PFDA	1901784-01RE1 BWS-1 0.23881	6.22e3	62.4	NO
8	8	13C7-PFUdA	1901784-01RE1 BWS-1 0.23881	7.52e3	62.5	NO

Name: 190710M3_38, Date: 10-Jul-2019, Time: 22:24:13, ID: 1901784-02RE1 FRB-1 0.24972, Description: FRB-1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901784-02RE1 FRB-1 0.24972	2.70e3	88.3	NO
2	2	13C5-PFHxA	1901784-02RE1 FRB-1 0.24972	4.86e3	48.2	YES
3	3	18O2-PFHxS	1901784-02RE1 FRB-1 0.24972	3.97e2	69.8	NO
4	4	13C8-PFOA	1901784-02RE1 FRB-1 0.24972	7.08e3	49.7	YES
5	5	13C9-PFNA	1901784-02RE1 FRB-1 0.24972	4.41e3	55.6	NO
6	6	13C4-PFOS	1901784-02RE1 FRB-1 0.24972	1.00e3	77.8	NO
7	7	13C6-PFDA	1901784-02RE1 FRB-1 0.24972	5.64e3	56.6	NO
8	8	13C7-PFUdA	1901784-02RE1 FRB-1 0.24972	7.22e3	59.9	NO

Name: 190710M3_39, Date: 10-Jul-2019, Time: 22:34:44, ID: B9F0281-BS1 OPR 1, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0281-BS1 OPR 1	3.70e3	121.1	NO
2	2	13C5-PFHxA	B9F0281-BS1 OPR 1	6.43e3	63.8	NO
3	3	18O2-PFHxS	B9F0281-BS1 OPR 1	5.12e2	89.8	NO
4	4	13C8-PFOA	B9F0281-BS1 OPR 1	9.65e3	67.7	NO
5	5	13C9-PFNA	B9F0281-BS1 OPR 1	6.32e3	79.8	NO
6	6	13C4-PFOS	B9F0281-BS1 OPR 1	1.28e3	99.0	NO
7	7	13C6-PFDA	B9F0281-BS1 OPR 1	7.83e3	78.4	NO
8	8	13C7-PFUdA	B9F0281-BS1 OPR 1	1.01e4	83.6	NO

Name: 190710M3_40, Date: 10-Jul-2019, Time: 22:45:22, ID: B9F0281-BLK1 Method Blank 1, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0281-BLK1 Method Blank 1	4.12e3	134.5	NO
2	2	13C5-PFHxA	B9F0281-BLK1 Method Blank 1	7.92e3	78.6	NO
3	3	18O2-PFHxS	B9F0281-BLK1 Method Blank 1	5.50e2	96.6	NO
4	4	13C8-PFOA	B9F0281-BLK1 Method Blank 1	1.15e4	80.6	NO
5	5	13C9-PFNA	B9F0281-BLK1 Method Blank 1	7.22e3	91.1	NO
6	6	13C4-PFOS	B9F0281-BLK1 Method Blank 1	1.19e3	92.1	NO
7	7	13C6-PFDA	B9F0281-BLK1 Method Blank 1	8.97e3	89.9	NO
8	8	13C7-PFUdA	B9F0281-BLK1 Method Blank 1	1.07e4	89.1	NO

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Name: 190710M3_41, Date: 10-Jul-2019, Time: 22:55:56, ID: 1901680-02 #5 Pulper-02 (Fiber) 57.53, Description: #5 Pulper-02 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-02 #5 Pulper-02 (Fiber) 57.53	5.02e3	164.0	YES
2	2	13C5-PFHxA	1901680-02 #5 Pulper-02 (Fiber) 57.53	8.45e3	83.8	NO
3	3	18O2-PFHxS	1901680-02 #5 Pulper-02 (Fiber) 57.53	5.57e2	97.8	NO
4	4	13C8-PFOA	1901680-02 #5 Pulper-02 (Fiber) 57.53	1.20e4	83.8	NO
5	5	13C9-PFNA	1901680-02 #5 Pulper-02 (Fiber) 57.53	6.57e3	82.9	NO
6	6	13C4-PFOS	1901680-02 #5 Pulper-02 (Fiber) 57.53	1.31e3	101.1	NO
7	7	13C6-PFDA	1901680-02 #5 Pulper-02 (Fiber) 57.53	8.09e3	81.1	NO
8	8	13C7-PFUdA	1901680-02 #5 Pulper-02 (Fiber) 57.53	1.05e4	87.1	NO

Name: 190710M3_42, Date: 10-Jul-2019, Time: 23:06:34, ID: 1901680-04 #1 Pulper-02 (Fiber) 56.76, Description: #1 Pulper-02 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-04 #1 Pulper-02 (Fiber) 56.76	3.12e3	102.1	NO
2	2	13C5-PFHxA	1901680-04 #1 Pulper-02 (Fiber) 56.76	5.33e3	52.9	NO
3	3	18O2-PFHxS	1901680-04 #1 Pulper-02 (Fiber) 56.76	4.31e2	75.6	NO
4	4	13C8-PFOA	1901680-04 #1 Pulper-02 (Fiber) 56.76	7.88e3	55.2	NO
5	5	13C9-PFNA	1901680-04 #1 Pulper-02 (Fiber) 56.76	4.82e3	60.8	NO
6	6	13C4-PFOS	1901680-04 #1 Pulper-02 (Fiber) 56.76	1.17e3	90.3	NO
7	7	13C6-PFDA	1901680-04 #1 Pulper-02 (Fiber) 56.76	6.01e3	60.2	NO
8	8	13C7-PFUdA	1901680-04 #1 Pulper-02 (Fiber) 56.76	7.97e3	66.2	NO

Name: 190710M3_43, Date: 10-Jul-2019, Time: 23:17:07, ID: 1901680-06 Sludge Press 2.88, Description: Sludge Press

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-06 Sludge Press 2.88	3.78e3	123.6	NO
2	2	13C5-PFHxA	1901680-06 Sludge Press 2.88	6.92e3	68.7	NO
3	3	18O2-PFHxS	1901680-06 Sludge Press 2.88	4.89e2	85.8	NO
4	4	13C8-PFOA	1901680-06 Sludge Press 2.88	1.08e4	75.6	NO
5	5	13C9-PFNA	1901680-06 Sludge Press 2.88	6.58e3	83.0	NO
6	6	13C4-PFOS	1901680-06 Sludge Press 2.88	1.16e3	90.1	NO
7	7	13C6-PFDA	1901680-06 Sludge Press 2.88	7.43e3	74.4	NO
8	8	13C7-PFUdA	1901680-06 Sludge Press 2.88	1.01e4	83.5	NO

Name: 190710M3_44, Date: 10-Jul-2019, Time: 23:27:45, ID: 1901680-07 Landfill-01 1.85, Description: Landfill-01

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-07 Landfill-01 1.85	4.43e3	144.8	NO
2	2	13C5-PFHxA	1901680-07 Landfill-01 1.85	7.72e3	76.6	NO
3	3	18O2-PFHxS	1901680-07 Landfill-01 1.85	6.75e2	118.6	NO
4	4	13C8-PFOA	1901680-07 Landfill-01 1.85	1.13e4	79.5	NO
5	5	13C9-PFNA	1901680-07 Landfill-01 1.85	6.87e3	86.6	NO
6	6	13C4-PFOS	1901680-07 Landfill-01 1.85	9.61e2	74.4	NO
7	7	13C6-PFDA	1901680-07 Landfill-01 1.85	8.94e3	89.6	NO
8	8	13C7-PFUdA	1901680-07 Landfill-01 1.85	1.04e4	86.2	NO

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Name: 190710M3_45, Date: 10-Jul-2019, Time: 23:38:18, ID: 1901680-08 Landfill-02 2.17, Description: Landfill-02

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-08 Landfill-02 2.17	5.08e3	166.1	YES
2	2	13C5-PFHxA	1901680-08 Landfill-02 2.17	8.80e3	87.3	NO
3	3	18O2-PFHxS	1901680-08 Landfill-02 2.17	6.39e2	112.3	NO
4	4	13C8-PFOA	1901680-08 Landfill-02 2.17	1.30e4	91.3	NO
5	5	13C9-PFNA	1901680-08 Landfill-02 2.17	7.44e3	93.9	NO
6	6	13C4-PFOS	1901680-08 Landfill-02 2.17	1.32e3	101.9	NO
7	7	13C6-PFDA	1901680-08 Landfill-02 2.17	9.06e3	90.8	NO
8	8	13C7-PFUdA	1901680-08 Landfill-02 2.17	1.09e4	90.5	NO

Name: 190710M3_46, Date: 10-Jul-2019, Time: 23:48:57, ID: 1901680-10 #5 Pulper-03 (Fiber) 46.58, Description: #5 Pulper-03 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-10 #5 Pulper-03 (Fiber) 46.58	4.89e3	159.9	YES
2	2	13C5-PFHxA	1901680-10 #5 Pulper-03 (Fiber) 46.58	8.47e3	84.0	NO
3	3	18O2-PFHxS	1901680-10 #5 Pulper-03 (Fiber) 46.58	4.72e2	82.8	NO
4	4	13C8-PFOA	1901680-10 #5 Pulper-03 (Fiber) 46.58	1.11e4	78.1	NO
5	5	13C9-PFNA	1901680-10 #5 Pulper-03 (Fiber) 46.58	6.35e3	80.2	NO
6	6	13C4-PFOS	1901680-10 #5 Pulper-03 (Fiber) 46.58	1.41e3	109.0	NO
7	7	13C6-PFDA	1901680-10 #5 Pulper-03 (Fiber) 46.58	7.30e3	73.1	NO
8	8	13C7-PFUdA	1901680-10 #5 Pulper-03 (Fiber) 46.58	9.69e3	80.5	NO

Name: 190710M3_47, Date: 10-Jul-2019, Time: 23:59:35, ID: 1901680-12 #1 Pulper-03 (Fiber) 63.69, Description: #1 Pulper-03 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-12 #1 Pulper-03 (Fiber) 63.69	3.34e3	109.2	NO
2	2	13C5-PFHxA	1901680-12 #1 Pulper-03 (Fiber) 63.69	6.06e3	60.2	NO
3	3	18O2-PFHxS	1901680-12 #1 Pulper-03 (Fiber) 63.69	4.73e2	83.0	NO
4	4	13C8-PFOA	1901680-12 #1 Pulper-03 (Fiber) 63.69	8.15e3	57.1	NO
5	5	13C9-PFNA	1901680-12 #1 Pulper-03 (Fiber) 63.69	5.04e3	63.6	NO
6	6	13C4-PFOS	1901680-12 #1 Pulper-03 (Fiber) 63.69	1.07e3	82.8	NO
7	7	13C6-PFDA	1901680-12 #1 Pulper-03 (Fiber) 63.69	5.95e3	59.7	NO
8	8	13C7-PFUdA	1901680-12 #1 Pulper-03 (Fiber) 63.69	8.68e3	72.1	NO

Name: 190710M3_48, Date: 11-Jul-2019, Time: 00:10:08, ID: 1901680-14 Primary Sludge-02 21.01, Description: Primary Sludge-02

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901680-14 Primary Sludge-02 21.01	3.80e3	124.2	NO
2	2	13C5-PFHxA	1901680-14 Primary Sludge-02 21.01	7.23e3	71.8	NO
3	3	18O2-PFHxS	1901680-14 Primary Sludge-02 21.01	4.24e2	74.4	NO
4	4	13C8-PFOA	1901680-14 Primary Sludge-02 21.01	1.09e4	76.4	NO
5	5	13C9-PFNA	1901680-14 Primary Sludge-02 21.01	6.86e3	86.5	NO
6	6	13C4-PFOS	1901680-14 Primary Sludge-02 21.01	1.18e3	91.4	NO
7	7	13C6-PFDA	1901680-14 Primary Sludge-02 21.01	7.71e3	77.3	NO
8	8	13C7-PFUdA	1901680-14 Primary Sludge-02 21.01	9.94e3	82.5	NO

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Name: 190710M3_49, Date: 11-Jul-2019, Time: 00:20:46, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_50, Date: 11-Jul-2019, Time: 00:31:24, ID: ST190710M3-12 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-12 PFC CS3 19G0806	3.21e3	104.8	NO
2	2	13C5-PFHxA	ST190710M3-12 PFC CS3 19G0806	1.02e4	101.1	NO
3	3	18O2-PFHxS	ST190710M3-12 PFC CS3 19G0806	6.19e2	108.7	NO
4	4	13C8-PFOA	ST190710M3-12 PFC CS3 19G0806	1.49e4	104.2	NO
5	5	13C9-PFNA	ST190710M3-12 PFC CS3 19G0806	8.69e3	109.6	NO
6	6	13C4-PFOS	ST190710M3-12 PFC CS3 19G0806	1.39e3	107.2	NO
7	7	13C6-PFDA	ST190710M3-12 PFC CS3 19G0806	1.06e4	106.5	NO
8	8	13C7-PFUdA	ST190710M3-12 PFC CS3 19G0806	1.25e4	104.1	NO

Name: 190710M3_51, Date: 11-Jul-2019, Time: 00:41:57, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_52, Date: 11-Jul-2019, Time: 00:52:35, ID: B9G0063-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0063-BS1 OPR 0.25	4.33e3	141.5	NO
2	2	13C5-PFHxA	B9G0063-BS1 OPR 0.25	7.41e3	73.5	NO
3	3	18O2-PFHxS	B9G0063-BS1 OPR 0.25	4.88e2	85.6	NO
4	4	13C8-PFOA	B9G0063-BS1 OPR 0.25	1.02e4	71.5	NO
5	5	13C9-PFNA	B9G0063-BS1 OPR 0.25	6.30e3	79.4	NO
6	6	13C4-PFOS	B9G0063-BS1 OPR 0.25	1.17e3	90.5	NO
7	7	13C6-PFDA	B9G0063-BS1 OPR 0.25	7.55e3	75.7	NO
8	8	13C7-PFUdA	B9G0063-BS1 OPR 0.25	9.85e3	81.8	NO

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Name: 190710M3_53, Date: 11-Jul-2019, Time: 01:03:14, ID: B9G0063-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0063-BLK1 Method Blank 0.25	4.51e3	147.5	NO
2	2	13C5-PFHxA	B9G0063-BLK1 Method Blank 0.25	7.67e3	76.1	NO
3	3	18O2-PFHxS	B9G0063-BLK1 Method Blank 0.25	4.69e2	82.3	NO
4	4	13C8-PFOA	B9G0063-BLK1 Method Blank 0.25	1.06e4	74.3	NO
5	5	13C9-PFNA	B9G0063-BLK1 Method Blank 0.25	6.71e3	84.6	NO
6	6	13C4-PFOS	B9G0063-BLK1 Method Blank 0.25	1.16e3	89.4	NO
7	7	13C6-PFDA	B9G0063-BLK1 Method Blank 0.25	7.68e3	77.0	NO
8	8	13C7-PFUdA	B9G0063-BLK1 Method Blank 0.25	9.76e3	81.1	NO

Name: 190710M3_54, Date: 11-Jul-2019, Time: 01:13:47, ID: 1901896-01 12013 0.23851, Description: 12013

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901896-01 12013 0.23851	3.78e3	123.6	NO
2	2	13C5-PFHxA	1901896-01 12013 0.23851	7.28e3	72.2	NO
3	3	18O2-PFHxS	1901896-01 12013 0.23851	4.76e2	83.6	NO
4	4	13C8-PFOA	1901896-01 12013 0.23851	1.05e4	73.8	NO
5	5	13C9-PFNA	1901896-01 12013 0.23851	6.13e3	77.3	NO
6	6	13C4-PFOS	1901896-01 12013 0.23851	1.12e3	86.5	NO
7	7	13C6-PFDA	1901896-01 12013 0.23851	7.50e3	75.1	NO
8	8	13C7-PFUdA	1901896-01 12013 0.23851	9.83e3	81.7	NO

Name: 190710M3_55, Date: 11-Jul-2019, Time: 01:24:25, ID: 1901910-01 SW1906280950KME 0.24336, Description: SW1906280950KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-01 SW1906280950KME 0.243...	4.20e3	137.3	NO
2	2	13C5-PFHxA	1901910-01 SW1906280950KME 0.243...	7.59e3	75.3	NO
3	3	18O2-PFHxS	1901910-01 SW1906280950KME 0.243...	4.75e2	83.3	NO
4	4	13C8-PFOA	1901910-01 SW1906280950KME 0.243...	1.06e4	74.1	NO
5	5	13C9-PFNA	1901910-01 SW1906280950KME 0.243...	5.99e3	75.6	NO
6	6	13C4-PFOS	1901910-01 SW1906280950KME 0.243...	1.05e3	81.0	NO
7	7	13C6-PFDA	1901910-01 SW1906280950KME 0.243...	7.57e3	75.9	NO
8	8	13C7-PFUdA	1901910-01 SW1906280950KME 0.243...	9.04e3	75.1	NO

Name: 190710M3_56, Date: 11-Jul-2019, Time: 01:34:59, ID: 1901910-02 SW1906281025KME 0.24464, Description: SW1906281025KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-02 SW1906281025KME 0.244...	3.48e3	113.7	NO
2	2	13C5-PFHxA	1901910-02 SW1906281025KME 0.244...	6.60e3	65.5	NO
3	3	18O2-PFHxS	1901910-02 SW1906281025KME 0.244...	4.68e2	82.2	NO
4	4	13C8-PFOA	1901910-02 SW1906281025KME 0.244...	9.48e3	66.5	NO
5	5	13C9-PFNA	1901910-02 SW1906281025KME 0.244...	5.68e3	71.7	NO
6	6	13C4-PFOS	1901910-02 SW1906281025KME 0.244...	1.13e3	87.3	NO
7	7	13C6-PFDA	1901910-02 SW1906281025KME 0.244...	7.01e3	70.2	NO
8	8	13C7-PFUdA	1901910-02 SW1906281025KME 0.244...	8.87e3	73.7	NO

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Name: 190710M3_57, Date: 11-Jul-2019, Time: 01:45:37, ID: 1901910-03 SW1906281035KME 0.24318, Description: SW1906281035KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-03 SW1906281035KME 0.243...	4.25e3	139.0	NO
2	2	13C5-PFHxA	1901910-03 SW1906281035KME 0.243...	7.32e3	72.6	NO
3	3	18O2-PFHxS	1901910-03 SW1906281035KME 0.243...	4.61e2	80.9	NO
4	4	13C8-PFOA	1901910-03 SW1906281035KME 0.243...	1.01e4	71.1	NO
5	5	13C9-PFNA	1901910-03 SW1906281035KME 0.243...	6.06e3	76.5	NO
6	6	13C4-PFOS	1901910-03 SW1906281035KME 0.243...	1.06e3	81.8	NO
7	7	13C6-PFDA	1901910-03 SW1906281035KME 0.243...	7.39e3	74.1	NO
8	8	13C7-PFUdA	1901910-03 SW1906281035KME 0.243...	8.68e3	72.1	NO

Name: 190710M3_58, Date: 11-Jul-2019, Time: 01:56:10, ID: 1901911-01 WMP1907010855JSJ 0.2509, Description: WMP1907010855JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901911-01 WMP1907010855JSJ 0.2509	3.45e3	112.9	NO
2	2	13C5-PFHxA	1901911-01 WMP1907010855JSJ 0.2509	5.70e3	56.5	NO
3	3	18O2-PFHxS	1901911-01 WMP1907010855JSJ 0.2509	4.97e2	87.2	NO
4	4	13C8-PFOA	1901911-01 WMP1907010855JSJ 0.2509	6.93e3	48.6	YES
5	5	13C9-PFNA	1901911-01 WMP1907010855JSJ 0.2509	5.03e3	63.5	NO
6	6	13C4-PFOS	1901911-01 WMP1907010855JSJ 0.2509	1.17e3	90.7	NO
7	7	13C6-PFDA	1901911-01 WMP1907010855JSJ 0.2509	6.40e3	64.1	NO
8	8	13C7-PFUdA	1901911-01 WMP1907010855JSJ 0.2509	8.21e3	68.2	NO

Name: 190710M3_59, Date: 11-Jul-2019, Time: 02:06:48, ID: 1901911-02 WMP1907010906JSJ 0.2559, Description: WMP1907010906JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901911-02 WMP1907010906JSJ 0.2559	3.56e3	116.4	NO
2	2	13C5-PFHxA	1901911-02 WMP1907010906JSJ 0.2559	5.96e3	59.1	NO
3	3	18O2-PFHxS	1901911-02 WMP1907010906JSJ 0.2559	5.58e2	98.0	NO
4	4	13C8-PFOA	1901911-02 WMP1907010906JSJ 0.2559	7.82e3	54.9	NO
5	5	13C9-PFNA	1901911-02 WMP1907010906JSJ 0.2559	5.15e3	65.0	NO
6	6	13C4-PFOS	1901911-02 WMP1907010906JSJ 0.2559	1.30e3	100.4	NO
7	7	13C6-PFDA	1901911-02 WMP1907010906JSJ 0.2559	6.31e3	63.2	NO
8	8	13C7-PFUdA	1901911-02 WMP1907010906JSJ 0.2559	8.13e3	67.5	NO

Name: 190710M3_60, Date: 11-Jul-2019, Time: 02:17:26, ID: 1901911-03 WMP1907010915JSJ 0.25216, Description: WMP1907010915JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901911-03 WMP1907010915JSJ 0.25...	4.51e3	147.5	NO
2	2	13C5-PFHxA	1901911-03 WMP1907010915JSJ 0.25...	7.88e3	78.1	NO
3	3	18O2-PFHxS	1901911-03 WMP1907010915JSJ 0.25...	4.67e2	82.0	NO
4	4	13C8-PFOA	1901911-03 WMP1907010915JSJ 0.25...	1.08e4	75.6	NO
5	5	13C9-PFNA	1901911-03 WMP1907010915JSJ 0.25...	6.47e3	81.6	NO
6	6	13C4-PFOS	1901911-03 WMP1907010915JSJ 0.25...	1.07e3	83.1	NO
7	7	13C6-PFDA	1901911-03 WMP1907010915JSJ 0.25...	8.06e3	80.7	NO
8	8	13C7-PFUdA	1901911-03 WMP1907010915JSJ 0.25...	9.42e3	78.2	NO

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Name: 190710M3_61, Date: 11-Jul-2019, Time: 02:27:59, ID: B9F0279-BS1 OPR 1, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0279-BS1 OPR 1	3.73e3	122.1	NO
2	2	13C5-PFHxA	B9F0279-BS1 OPR 1	6.87e3	68.2	NO
3	3	18O2-PFHxS	B9F0279-BS1 OPR 1	4.66e2	81.9	NO
4	4	13C8-PFOA	B9F0279-BS1 OPR 1	1.07e4	74.7	NO
5	5	13C9-PFNA	B9F0279-BS1 OPR 1	6.82e3	86.0	NO
6	6	13C4-PFOS	B9F0279-BS1 OPR 1	1.12e3	86.7	NO
7	7	13C6-PFDA	B9F0279-BS1 OPR 1	8.52e3	85.4	NO
8	8	13C7-PFUdA	B9F0279-BS1 OPR 1	1.01e4	83.9	NO

Name: 190710M3_62, Date: 11-Jul-2019, Time: 02:38:38, ID: B9F0279-BLK1 Method Blank 1, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0279-BLK1 Method Blank 1	3.88e3	127.0	NO
2	2	13C5-PFHxA	B9F0279-BLK1 Method Blank 1	7.04e3	69.9	NO
3	3	18O2-PFHxS	B9F0279-BLK1 Method Blank 1	4.75e2	83.4	NO
4	4	13C8-PFOA	B9F0279-BLK1 Method Blank 1	1.09e4	76.6	NO
5	5	13C9-PFNA	B9F0279-BLK1 Method Blank 1	6.87e3	86.7	NO
6	6	13C4-PFOS	B9F0279-BLK1 Method Blank 1	1.24e3	96.0	NO
7	7	13C6-PFDA	B9F0279-BLK1 Method Blank 1	8.42e3	84.4	NO
8	8	13C7-PFUdA	B9F0279-BLK1 Method Blank 1	1.04e4	86.0	NO

Name: 190710M3_63, Date: 11-Jul-2019, Time: 02:49:11, ID: 1901679-03 #5A Pulper-01 (Fiber) 41.24, Description: #5A Pulper-01 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901679-03 #5A Pulper-01 (Fiber) 41.24	4.84e3	158.4	YES
2	2	13C5-PFHxA	1901679-03 #5A Pulper-01 (Fiber) 41.24	8.47e3	84.0	NO
3	3	18O2-PFHxS	1901679-03 #5A Pulper-01 (Fiber) 41.24	5.57e2	97.8	NO
4	4	13C8-PFOA	1901679-03 #5A Pulper-01 (Fiber) 41.24	1.16e4	81.0	NO
5	5	13C9-PFNA	1901679-03 #5A Pulper-01 (Fiber) 41.24	6.94e3	87.5	NO
6	6	13C4-PFOS	1901679-03 #5A Pulper-01 (Fiber) 41.24	1.26e3	97.9	NO
7	7	13C6-PFDA	1901679-03 #5A Pulper-01 (Fiber) 41.24	8.22e3	82.3	NO
8	8	13C7-PFUdA	1901679-03 #5A Pulper-01 (Fiber) 41.24	1.01e4	83.5	NO

Name: 190710M3_64, Date: 11-Jul-2019, Time: 02:59:49, ID: 1901679-05 #1 Pulper-01 (Fiber) 34.15, Description: #1 Pulper-01 (Fiber)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901679-05 #1 Pulper-01 (Fiber) 34.15	5.97e3	195.1	YES
2	2	13C5-PFHxA	1901679-05 #1 Pulper-01 (Fiber) 34.15	1.04e4	103.0	NO
3	3	18O2-PFHxS	1901679-05 #1 Pulper-01 (Fiber) 34.15	6.92e2	121.5	NO
4	4	13C8-PFOA	1901679-05 #1 Pulper-01 (Fiber) 34.15	1.50e4	105.4	NO
5	5	13C9-PFNA	1901679-05 #1 Pulper-01 (Fiber) 34.15	8.33e3	105.0	NO
6	6	13C4-PFOS	1901679-05 #1 Pulper-01 (Fiber) 34.15	1.28e3	99.1	NO
7	7	13C6-PFDA	1901679-05 #1 Pulper-01 (Fiber) 34.15	7.55e3	75.6	NO
8	8	13C7-PFUdA	1901679-05 #1 Pulper-01 (Fiber) 34.15	4.90e3	40.7	YES

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Name: 190710M3_65, Date: 11-Jul-2019, Time: 03:10:22, ID: 1901679-07 Primary Sludge-01 24.04, Description: Primary Sludge-01

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901679-07 Primary Sludge-01 24.04	5.04e3	164.9	YES
2	2	13C5-PFHxA	1901679-07 Primary Sludge-01 24.04	8.37e3	83.1	NO
3	3	18O2-PFHxS	1901679-07 Primary Sludge-01 24.04	4.80e2	84.2	NO
4	4	13C8-PFOA	1901679-07 Primary Sludge-01 24.04	1.20e4	84.5	NO
5	5	13C9-PFNA	1901679-07 Primary Sludge-01 24.04	7.67e3	96.8	NO
6	6	13C4-PFOS	1901679-07 Primary Sludge-01 24.04	1.29e3	100.0	NO
7	7	13C6-PFDA	1901679-07 Primary Sludge-01 24.04	8.22e3	82.4	NO
8	8	13C7-PFUdA	1901679-07 Primary Sludge-01 24.04	1.05e4	87.0	NO

Name: 190710M3_66, Date: 11-Jul-2019, Time: 03:21:00, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_67, Date: 11-Jul-2019, Time: 03:31:34, ID: ST190710M3-13 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-13 PFC CS3 19G0806	3.41e3	111.3	NO
2	2	13C5-PFHxA	ST190710M3-13 PFC CS3 19G0806	1.09e4	107.9	NO
3	3	18O2-PFHxS	ST190710M3-13 PFC CS3 19G0806	5.78e2	101.5	NO
4	4	13C8-PFOA	ST190710M3-13 PFC CS3 19G0806	1.42e4	99.8	NO
5	5	13C9-PFNA	ST190710M3-13 PFC CS3 19G0806	9.10e3	114.9	NO
6	6	13C4-PFOS	ST190710M3-13 PFC CS3 19G0806	1.41e3	109.4	NO
7	7	13C6-PFDA	ST190710M3-13 PFC CS3 19G0806	1.08e4	108.3	NO
8	8	13C7-PFUdA	ST190710M3-13 PFC CS3 19G0806	1.29e4	107.4	NO

Name: 190710M3_68, Date: 11-Jul-2019, Time: 03:42:12, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Name: 190710M3_69, Date: 11-Jul-2019, Time: 03:52:46, ID: 1901679-08 Secondary Sludge-01 3.7, Description: Secondary Sludge-01

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901679-08 Secondary Sludge-01 3.7	3.38e3	110.5	NO
2	2	13C5-PFHxA	1901679-08 Secondary Sludge-01 3.7	7.06e3	70.0	NO
3	3	18O2-PFHxS	1901679-08 Secondary Sludge-01 3.7	5.04e2	88.4	NO
4	4	13C8-PFOA	1901679-08 Secondary Sludge-01 3.7	1.02e4	71.9	NO
5	5	13C9-PFNA	1901679-08 Secondary Sludge-01 3.7	6.31e3	79.6	NO
6	6	13C4-PFOS	1901679-08 Secondary Sludge-01 3.7	1.12e3	86.7	NO
7	7	13C6-PFDA	1901679-08 Secondary Sludge-01 3.7	8.35e3	83.7	NO
8	8	13C7-PFUdA	1901679-08 Secondary Sludge-01 3.7	9.67e3	80.3	NO

Name: 190710M3_70, Date: 11-Jul-2019, Time: 04:03:24, ID: 1901681-01 Secondary Sludge-02 4.43, Description: Secondary Sludge-02

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901681-01 Secondary Sludge-02 4.43	3.64e3	119.1	NO
2	2	13C5-PFHxA	1901681-01 Secondary Sludge-02 4.43	7.68e3	76.3	NO
3	3	18O2-PFHxS	1901681-01 Secondary Sludge-02 4.43	5.74e2	100.8	NO
4	4	13C8-PFOA	1901681-01 Secondary Sludge-02 4.43	1.19e4	83.2	NO
5	5	13C9-PFNA	1901681-01 Secondary Sludge-02 4.43	7.50e3	94.7	NO
6	6	13C4-PFOS	1901681-01 Secondary Sludge-02 4.43	1.38e3	106.8	NO
7	7	13C6-PFDA	1901681-01 Secondary Sludge-02 4.43	9.38e3	94.0	NO
8	8	13C7-PFUdA	1901681-01 Secondary Sludge-02 4.43	1.02e4	85.0	NO

Name: 190710M3_71, Date: 11-Jul-2019, Time: 04:13:56, ID: 1901681-06 #1 Pulper-04 (Filter) 75.63, Description: #1 Pulper-04 (Filter)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901681-06 #1 Pulper-04 (Filter) 75.63	4.11e3	134.4	NO
2	2	13C5-PFHxA	1901681-06 #1 Pulper-04 (Filter) 75.63	7.87e3	78.1	NO
3	3	18O2-PFHxS	1901681-06 #1 Pulper-04 (Filter) 75.63	5.51e2	96.7	NO
4	4	13C8-PFOA	1901681-06 #1 Pulper-04 (Filter) 75.63	1.10e4	77.2	NO
5	5	13C9-PFNA	1901681-06 #1 Pulper-04 (Filter) 75.63	7.21e3	91.0	NO
6	6	13C4-PFOS	1901681-06 #1 Pulper-04 (Filter) 75.63	1.33e3	103.0	NO
7	7	13C6-PFDA	1901681-06 #1 Pulper-04 (Filter) 75.63	8.11e3	81.3	NO
8	8	13C7-PFUdA	1901681-06 #1 Pulper-04 (Filter) 75.63	1.05e4	87.2	NO

Name: 190710M3_72, Date: 11-Jul-2019, Time: 04:24:35, ID: 1901681-08 #5 Pulper-04 (Filter) 49.06, Description: #5 Pulper-04 (Filter)

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901681-08 #5 Pulper-04 (Filter) 49.06	4.77e3	156.0	YES
2	2	13C5-PFHxA	1901681-08 #5 Pulper-04 (Filter) 49.06	8.54e3	84.7	NO
3	3	18O2-PFHxS	1901681-08 #5 Pulper-04 (Filter) 49.06	5.52e2	96.9	NO
4	4	13C8-PFOA	1901681-08 #5 Pulper-04 (Filter) 49.06	1.17e4	82.0	NO
5	5	13C9-PFNA	1901681-08 #5 Pulper-04 (Filter) 49.06	7.01e3	88.5	NO
6	6	13C4-PFOS	1901681-08 #5 Pulper-04 (Filter) 49.06	1.10e3	85.2	NO
7	7	13C6-PFDA	1901681-08 #5 Pulper-04 (Filter) 49.06	8.44e3	84.6	NO
8	8	13C7-PFUdA	1901681-08 #5 Pulper-04 (Filter) 49.06	1.05e4	87.0	NO

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Name: 190710M3_73, Date: 11-Jul-2019, Time: 04:35:08, ID: B9G0022-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0022-BS1 OPR 0.125	5.81e3	190.0	YES
2	2	13C5-PFHxA	B9G0022-BS1 OPR 0.125	9.84e3	97.6	NO
3	3	18O2-PFHxS	B9G0022-BS1 OPR 0.125	5.68e2	99.6	NO
4	4	13C8-PFOA	B9G0022-BS1 OPR 0.125	1.21e4	85.2	NO
5	5	13C9-PFNA	B9G0022-BS1 OPR 0.125	5.56e3	70.1	NO
6	6	13C4-PFOS	B9G0022-BS1 OPR 0.125	4.06e2	31.4	YES
7	7	13C6-PFDA	B9G0022-BS1 OPR 0.125	2.31e3	23.1	YES
8	8	13C7-PFUdA	B9G0022-BS1 OPR 0.125	8.05e2	6.7	YES

Name: 190710M3_74, Date: 11-Jul-2019, Time: 04:45:46, ID: B9G0022-MS1 Matrix Spike 0.11809, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0022-MS1 Matrix Spike 0.11809	5.62e3	183.6	YES
2	2	13C5-PFHxA	B9G0022-MS1 Matrix Spike 0.11809	9.69e3	96.1	NO
3	3	18O2-PFHxS	B9G0022-MS1 Matrix Spike 0.11809	5.75e2	101.0	NO
4	4	13C8-PFOA	B9G0022-MS1 Matrix Spike 0.11809	1.28e4	89.9	NO
5	5	13C9-PFNA	B9G0022-MS1 Matrix Spike 0.11809	7.45e3	94.0	NO
6	6	13C4-PFOS	B9G0022-MS1 Matrix Spike 0.11809	1.12e3	86.8	NO
7	7	13C6-PFDA	B9G0022-MS1 Matrix Spike 0.11809	7.73e3	77.5	NO
8	8	13C7-PFUdA	B9G0022-MS1 Matrix Spike 0.11809	5.94e3	49.3	YES

Name: 190710M3_75, Date: 11-Jul-2019, Time: 04:56:19, ID: B9G0022-MSD1 Matrix Spike Dup 0.11917, Description: Matrix Spike Dup

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0022-MSD1 Matrix Spike Dup 0.119...	6.02e3	196.8	YES
2	2	13C5-PFHxA	B9G0022-MSD1 Matrix Spike Dup 0.119...	1.00e4	99.6	NO
3	3	18O2-PFHxS	B9G0022-MSD1 Matrix Spike Dup 0.119...	5.34e2	93.8	NO
4	4	13C8-PFOA	B9G0022-MSD1 Matrix Spike Dup 0.119...	1.30e4	91.0	NO
5	5	13C9-PFNA	B9G0022-MSD1 Matrix Spike Dup 0.119...	6.82e3	86.1	NO
6	6	13C4-PFOS	B9G0022-MSD1 Matrix Spike Dup 0.119...	1.14e3	88.6	NO
7	7	13C6-PFDA	B9G0022-MSD1 Matrix Spike Dup 0.119...	6.79e3	68.1	NO
8	8	13C7-PFUdA	B9G0022-MSD1 Matrix Spike Dup 0.119...	5.79e3	48.1	YES

Name: 190710M3_76, Date: 11-Jul-2019, Time: 05:06:57, ID: B9G0022-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0022-BLK1 Method Blank 0.125	5.60e3	183.1	YES
2	2	13C5-PFHxA	B9G0022-BLK1 Method Blank 0.125	9.32e3	92.5	NO
3	3	18O2-PFHxS	B9G0022-BLK1 Method Blank 0.125	3.86e2	67.7	NO
4	4	13C8-PFOA	B9G0022-BLK1 Method Blank 0.125	1.09e4	76.8	NO
5	5	13C9-PFNA	B9G0022-BLK1 Method Blank 0.125	3.89e3	49.1	YES
6	6	13C4-PFOS	B9G0022-BLK1 Method Blank 0.125	2.74e2	21.2	YES
7	7	13C6-PFDA	B9G0022-BLK1 Method Blank 0.125	1.60e3	16.1	YES
8	8	13C7-PFUdA	B9G0022-BLK1 Method Blank 0.125	7.07e2	5.9	YES

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Name: 190710M3_77, Date: 11-Jul-2019, Time: 05:17:31, ID: 1901806-01 GW-PT-MW24-120-126 0.11537, Description: GW-PT-MW24-120-126

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-01 GW-PT-MW24-120-126 0.1...	5.68e3	185.6	YES
2	2	13C5-PFHxA	1901806-01 GW-PT-MW24-120-126 0.1...	1.02e4	100.8	NO
3	3	18O2-PFHxS	1901806-01 GW-PT-MW24-120-126 0.1...	6.42e2	112.8	NO
4	4	13C8-PFOA	1901806-01 GW-PT-MW24-120-126 0.1...	1.37e4	95.9	NO
5	5	13C9-PFNA	1901806-01 GW-PT-MW24-120-126 0.1...	7.32e3	92.4	NO
6	6	13C4-PFOS	1901806-01 GW-PT-MW24-120-126 0.1...	1.17e3	90.7	NO
7	7	13C6-PFDA	1901806-01 GW-PT-MW24-120-126 0.1...	7.74e3	77.5	NO
8	8	13C7-PFUdA	1901806-01 GW-PT-MW24-120-126 0.1...	6.19e3	51.4	NO

Name: 190710M3_78, Date: 11-Jul-2019, Time: 05:28:01, ID: 1901806-02 GW-PT-MW24-106-112 0.11614, Description: GW-PT-MW24-106-112

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-02 GW-PT-MW24-106-112 0.1...	5.65e3	184.7	YES
2	2	13C5-PFHxA	1901806-02 GW-PT-MW24-106-112 0.1...	9.94e3	98.6	NO
3	3	18O2-PFHxS	1901806-02 GW-PT-MW24-106-112 0.1...	5.97e2	104.8	NO
4	4	13C8-PFOA	1901806-02 GW-PT-MW24-106-112 0.1...	1.31e4	92.2	NO
5	5	13C9-PFNA	1901806-02 GW-PT-MW24-106-112 0.1...	6.92e3	87.4	NO
6	6	13C4-PFOS	1901806-02 GW-PT-MW24-106-112 0.1...	8.19e2	63.4	NO
7	7	13C6-PFDA	1901806-02 GW-PT-MW24-106-112 0.1...	4.78e3	47.9	YES
8	8	13C7-PFUdA	1901806-02 GW-PT-MW24-106-112 0.1...	1.85e3	15.4	YES

Name: 190710M3_79, Date: 11-Jul-2019, Time: 05:38:39, ID: 1901806-03 GW-PT-MW24-98-104 0.11569, Description: GW-PT-MW24-98-104

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-03 GW-PT-MW24-98-104 0.11...	5.65e3	184.6	YES
2	2	13C5-PFHxA	1901806-03 GW-PT-MW24-98-104 0.11...	1.00e4	99.7	NO
3	3	18O2-PFHxS	1901806-03 GW-PT-MW24-98-104 0.11...	5.47e2	96.0	NO
4	4	13C8-PFOA	1901806-03 GW-PT-MW24-98-104 0.11...	1.32e4	92.9	NO
5	5	13C9-PFNA	1901806-03 GW-PT-MW24-98-104 0.11...	7.06e3	89.1	NO
6	6	13C4-PFOS	1901806-03 GW-PT-MW24-98-104 0.11...	9.43e2	73.0	NO
7	7	13C6-PFDA	1901806-03 GW-PT-MW24-98-104 0.11...	6.03e3	60.5	NO
8	8	13C7-PFUdA	1901806-03 GW-PT-MW24-98-104 0.11...	3.08e3	25.6	YES

Name: 190710M3_80, Date: 11-Jul-2019, Time: 05:49:17, ID: 1901806-04 GW-PT-MW24-86-92 0.1179, Description: GW-PT-MW24-86-92

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-04 GW-PT-MW24-86-92 0.1179	5.87e3	191.8	YES
2	2	13C5-PFHxA	1901806-04 GW-PT-MW24-86-92 0.1179	1.03e4	102.6	NO
3	3	18O2-PFHxS	1901806-04 GW-PT-MW24-86-92 0.1179	6.01e2	105.5	NO
4	4	13C8-PFOA	1901806-04 GW-PT-MW24-86-92 0.1179	1.41e4	99.0	NO
5	5	13C9-PFNA	1901806-04 GW-PT-MW24-86-92 0.1179	7.45e3	94.1	NO
6	6	13C4-PFOS	1901806-04 GW-PT-MW24-86-92 0.1179	1.13e3	87.7	NO
7	7	13C6-PFDA	1901806-04 GW-PT-MW24-86-92 0.1179	7.51e3	75.2	NO
8	8	13C7-PFUdA	1901806-04 GW-PT-MW24-86-92 0.1179	5.57e3	46.3	YES

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Name: 190710M3_81, Date: 11-Jul-2019, Time: 05:59:51, ID: 1901806-05 GW-PT-GZ110-179-185 0.11643, Description: GW-PT-GZ110-179-185

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-05 GW-PT-GZ110-179-185 0.1..	5.80e3	189.7	YES
2	2	13C5-PFHxA	1901806-05 GW-PT-GZ110-179-185 0.1..	1.04e4	103.5	NO
3	3	18O2-PFHxS	1901806-05 GW-PT-GZ110-179-185 0.1..	6.04e2	106.1	NO
4	4	13C8-PFOA	1901806-05 GW-PT-GZ110-179-185 0.1..	1.34e4	93.7	NO
5	5	13C9-PFNA	1901806-05 GW-PT-GZ110-179-185 0.1..	7.59e3	95.8	NO
6	6	13C4-PFOS	1901806-05 GW-PT-GZ110-179-185 0.1..	1.20e3	92.6	NO
7	7	13C6-PFDA	1901806-05 GW-PT-GZ110-179-185 0.1..	7.17e3	71.9	NO
8	8	13C7-PFUdA	1901806-05 GW-PT-GZ110-179-185 0.1..	4.67e3	38.8	YES

Name: 190710M3_82, Date: 11-Jul-2019, Time: 06:10:29, ID: 1901806-06 GW-PT-GZ110-170-176 0.11659, Description: GW-PT-GZ110-170-176

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-06 GW-PT-GZ110-170-176 0.1..	5.92e3	193.5	YES
2	2	13C5-PFHxA	1901806-06 GW-PT-GZ110-170-176 0.1..	1.02e4	101.0	NO
3	3	18O2-PFHxS	1901806-06 GW-PT-GZ110-170-176 0.1..	6.14e2	107.8	NO
4	4	13C8-PFOA	1901806-06 GW-PT-GZ110-170-176 0.1..	1.39e4	97.4	NO
5	5	13C9-PFNA	1901806-06 GW-PT-GZ110-170-176 0.1..	7.42e3	93.6	NO
6	6	13C4-PFOS	1901806-06 GW-PT-GZ110-170-176 0.1..	1.15e3	89.2	NO
7	7	13C6-PFDA	1901806-06 GW-PT-GZ110-170-176 0.1..	7.46e3	74.7	NO
8	8	13C7-PFUdA	1901806-06 GW-PT-GZ110-170-176 0.1..	6.32e3	52.5	NO

Name: 190710M3_83, Date: 11-Jul-2019, Time: 06:21:07, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_84, Date: 11-Jul-2019, Time: 06:31:40, ID: ST190710M3-14 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-14 PFC CS3 19G0806	3.28e3	107.2	NO
2	2	13C5-PFHxA	ST190710M3-14 PFC CS3 19G0806	1.04e4	102.9	NO
3	3	18O2-PFHxS	ST190710M3-14 PFC CS3 19G0806	5.82e2	102.2	NO
4	4	13C8-PFOA	ST190710M3-14 PFC CS3 19G0806	1.43e4	100.4	NO
5	5	13C9-PFNA	ST190710M3-14 PFC CS3 19G0806	8.72e3	110.1	NO
6	6	13C4-PFOS	ST190710M3-14 PFC CS3 19G0806	1.42e3	110.3	NO
7	7	13C6-PFDA	ST190710M3-14 PFC CS3 19G0806	1.05e4	105.0	NO
8	8	13C7-PFUdA	ST190710M3-14 PFC CS3 19G0806	1.24e4	102.9	NO

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Name: 190710M3_85, Date: 11-Jul-2019, Time: 06:42:18, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_86, Date: 11-Jul-2019, Time: 06:52:57, ID: 1901806-07 GW-PT-GZ110-155-166 0.11833, Description: GW-PT-GZ110-155-166

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-07 GW-PT-GZ110-155-166 0.1..	5.84e3	190.8	YES
2	2	13C5-PFHxA	1901806-07 GW-PT-GZ110-155-166 0.1..	9.83e3	97.6	NO
3	3	18O2-PFHxS	1901806-07 GW-PT-GZ110-155-166 0.1..	6.11e2	107.3	NO
4	4	13C8-PFOA	1901806-07 GW-PT-GZ110-155-166 0.1..	1.19e4	83.7	NO
5	5	13C9-PFNA	1901806-07 GW-PT-GZ110-155-166 0.1..	6.53e3	82.3	NO
6	6	13C4-PFOS	1901806-07 GW-PT-GZ110-155-166 0.1..	1.01e3	78.3	NO
7	7	13C6-PFDA	1901806-07 GW-PT-GZ110-155-166 0.1..	6.45e3	64.6	NO
8	8	13C7-PFUdA	1901806-07 GW-PT-GZ110-155-166 0.1..	4.50e3	37.4	YES

Name: 190710M3_87, Date: 11-Jul-2019, Time: 07:03:30, ID: 1901806-08 GW-PT-GZ110-140-151 0.11879, Description: GW-PT-GZ110-140-151

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-08 GW-PT-GZ110-140-151 0.1..	5.86e3	191.6	YES
2	2	13C5-PFHxA	1901806-08 GW-PT-GZ110-140-151 0.1..	1.03e4	102.7	NO
3	3	18O2-PFHxS	1901806-08 GW-PT-GZ110-140-151 0.1..	5.59e2	98.1	NO
4	4	13C8-PFOA	1901806-08 GW-PT-GZ110-140-151 0.1..	1.28e4	90.1	NO
5	5	13C9-PFNA	1901806-08 GW-PT-GZ110-140-151 0.1..	6.82e3	86.0	NO
6	6	13C4-PFOS	1901806-08 GW-PT-GZ110-140-151 0.1..	9.33e2	72.2	NO
7	7	13C6-PFDA	1901806-08 GW-PT-GZ110-140-151 0.1..	6.34e3	63.6	NO
8	8	13C7-PFUdA	1901806-08 GW-PT-GZ110-140-151 0.1..	2.84e3	23.6	YES

Name: 190710M3_88, Date: 11-Jul-2019, Time: 07:14:08, ID: 1901806-09 GW-PT-GZ110-121-132 0.11742, Description: GW-PT-GZ110-121-132

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-09 GW-PT-GZ110-121-132 0.1..	5.24e3	171.2	YES
2	2	13C5-PFHxA	1901806-09 GW-PT-GZ110-121-132 0.1..	9.18e3	91.1	NO
3	3	18O2-PFHxS	1901806-09 GW-PT-GZ110-121-132 0.1..	5.08e2	89.1	NO
4	4	13C8-PFOA	1901806-09 GW-PT-GZ110-121-132 0.1..	1.22e4	85.3	NO
5	5	13C9-PFNA	1901806-09 GW-PT-GZ110-121-132 0.1..	6.95e3	87.7	NO
6	6	13C4-PFOS	1901806-09 GW-PT-GZ110-121-132 0.1..	9.33e2	72.2	NO
7	7	13C6-PFDA	1901806-09 GW-PT-GZ110-121-132 0.1..	6.35e3	63.6	NO
8	8	13C7-PFUdA	1901806-09 GW-PT-GZ110-121-132 0.1..	3.22e3	26.7	YES

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\areas.qld

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Name: 190710M3_89, Date: 11-Jul-2019, Time: 07:24:41, ID: 1901806-10 GW-PT-GZ110-79-90 0.11878, Description: GW-PT-GZ110-79-90

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-10 GW-PT-GZ110-79-90 0.118..	6.08e3	198.7	YES
2	2	13C5-PFHxA	1901806-10 GW-PT-GZ110-79-90 0.118..	1.04e4	102.8	NO
3	3	18O2-PFHxS	1901806-10 GW-PT-GZ110-79-90 0.118..	6.52e2	114.5	NO
4	4	13C8-PFOA	1901806-10 GW-PT-GZ110-79-90 0.118..	1.36e4	95.1	NO
5	5	13C9-PFNA	1901806-10 GW-PT-GZ110-79-90 0.118..	7.75e3	97.7	NO
6	6	13C4-PFOS	1901806-10 GW-PT-GZ110-79-90 0.118..	1.25e3	97.1	NO
7	7	13C6-PFDA	1901806-10 GW-PT-GZ110-79-90 0.118..	7.75e3	77.6	NO
8	8	13C7-PFUdA	1901806-10 GW-PT-GZ110-79-90 0.118..	7.44e3	61.8	NO

Name: 190710M3_90, Date: 11-Jul-2019, Time: 07:35:19, ID: 1901806-11 GW-PT-GZ110-56-62 0.11653, Description: GW-PT-GZ110-56-62

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-11 GW-PT-GZ110-56-62 0.116..	5.50e3	179.8	YES
2	2	13C5-PFHxA	1901806-11 GW-PT-GZ110-56-62 0.116..	9.82e3	97.4	NO
3	3	18O2-PFHxS	1901806-11 GW-PT-GZ110-56-62 0.116..	5.67e2	99.6	NO
4	4	13C8-PFOA	1901806-11 GW-PT-GZ110-56-62 0.116..	1.27e4	88.8	NO
5	5	13C9-PFNA	1901806-11 GW-PT-GZ110-56-62 0.116..	7.32e3	92.4	NO
6	6	13C4-PFOS	1901806-11 GW-PT-GZ110-56-62 0.116..	1.01e3	77.9	NO
7	7	13C6-PFDA	1901806-11 GW-PT-GZ110-56-62 0.116..	6.96e3	69.7	NO
8	8	13C7-PFUdA	1901806-11 GW-PT-GZ110-56-62 0.116..	3.93e3	32.7	YES

Name: 190710M3_91, Date: 11-Jul-2019, Time: 07:45:58, ID: 1901806-12 GW-PT-GZ130-159-177 0.11929, Description: GW-PT-GZ130-159-177

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901806-12 GW-PT-GZ130-159-177 0....	5.54e3	181.2	YES
2	2	13C5-PFHxA	1901806-12 GW-PT-GZ130-159-177 0....	9.98e3	99.0	NO
3	3	18O2-PFHxS	1901806-12 GW-PT-GZ130-159-177 0....	6.17e2	108.3	NO
4	4	13C8-PFOA	1901806-12 GW-PT-GZ130-159-177 0....	1.35e4	94.9	NO
5	5	13C9-PFNA	1901806-12 GW-PT-GZ130-159-177 0....	7.76e3	98.0	NO
6	6	13C4-PFOS	1901806-12 GW-PT-GZ130-159-177 0....	9.85e2	76.2	NO
7	7	13C6-PFDA	1901806-12 GW-PT-GZ130-159-177 0....	6.87e3	68.8	NO
8	8	13C7-PFUdA	1901806-12 GW-PT-GZ130-159-177 0....	3.00e3	25.0	YES

Name: 190710M3_92, Date: 11-Jul-2019, Time: 07:56:31, ID: 1901828-01 EP-2 0.11348, Description: EP-2

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901828-01 EP-2 0.11348	5.78e3	189.0	YES
2	2	13C5-PFHxA	1901828-01 EP-2 0.11348	1.05e4	103.9	NO
3	3	18O2-PFHxS	1901828-01 EP-2 0.11348	6.02e2	105.6	NO
4	4	13C8-PFOA	1901828-01 EP-2 0.11348	1.38e4	97.0	NO
5	5	13C9-PFNA	1901828-01 EP-2 0.11348	7.04e3	88.8	NO
6	6	13C4-PFOS	1901828-01 EP-2 0.11348	8.85e2	68.5	NO
7	7	13C6-PFDA	1901828-01 EP-2 0.11348	4.91e3	49.2	YES
8	8	13C7-PFUdA	1901828-01 EP-2 0.11348	1.64e3	13.6	YES

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Name: 190710M3_93, Date: 11-Jul-2019, Time: 08:07:09, ID: 1901828-02 MW-11S 0.11603, Description: MW-11S

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901828-02 MW-11S 0.11603	4.58e3	149.6	NO
2	2	13C5-PFHxA	1901828-02 MW-11S 0.11603	8.57e3	85.1	NO
3	3	18O2-PFHxS	1901828-02 MW-11S 0.11603	5.02e2	88.2	NO
4	4	13C8-PFOA	1901828-02 MW-11S 0.11603	1.05e4	73.5	NO
5	5	13C9-PFNA	1901828-02 MW-11S 0.11603	5.35e3	67.5	NO
6	6	13C4-PFOS	1901828-02 MW-11S 0.11603	7.73e2	59.8	NO
7	7	13C6-PFDA	1901828-02 MW-11S 0.11603	4.43e3	44.4	YES
8	8	13C7-PFUdA	1901828-02 MW-11S 0.11603	1.78e3	14.8	YES

Name: 190710M3_94, Date: 11-Jul-2019, Time: 08:17:42, ID: 1901828-03 MW-12 0.11347, Description: MW-12

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901828-03 MW-12 0.11347	5.44e3	178.0	YES
2	2	13C5-PFHxA	1901828-03 MW-12 0.11347	9.93e3	98.5	NO
3	3	18O2-PFHxS	1901828-03 MW-12 0.11347	5.18e2	90.9	NO
4	4	13C8-PFOA	1901828-03 MW-12 0.11347	1.26e4	88.6	NO
5	5	13C9-PFNA	1901828-03 MW-12 0.11347	6.41e3	80.9	NO
6	6	13C4-PFOS	1901828-03 MW-12 0.11347	7.93e2	61.4	NO
7	7	13C6-PFDA	1901828-03 MW-12 0.11347	5.41e3	54.2	NO
8	8	13C7-PFUdA	1901828-03 MW-12 0.11347	1.93e3	16.0	YES

Name: 190710M3_95, Date: 11-Jul-2019, Time: 08:28:20, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190710M3_96, Date: 11-Jul-2019, Time: 08:38:53, ID: ST190710M3-15 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190710M3-15 PFC CS3 19G0806	3.36e3	109.8	NO
2	2	13C5-PFHxA	ST190710M3-15 PFC CS3 19G0806	1.00e4	99.2	NO
3	3	18O2-PFHxS	ST190710M3-15 PFC CS3 19G0806	5.20e2	91.2	NO
4	4	13C8-PFOA	ST190710M3-15 PFC CS3 19G0806	1.47e4	102.8	NO
5	5	13C9-PFNA	ST190710M3-15 PFC CS3 19G0806	8.85e3	111.7	NO
6	6	13C4-PFOS	ST190710M3-15 PFC CS3 19G0806	1.37e3	106.0	NO
7	7	13C6-PFDA	ST190710M3-15 PFC CS3 19G0806	1.09e4	109.6	NO
8	8	13C7-PFUdA	ST190710M3-15 PFC CS3 19G0806	1.29e4	107.3	NO

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Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		3665.172	1.00					NO		
2	2	PFPrS	248.9 > 79.9		564.050	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		4395.620	1.00					NO		
4	4	PFPeA	263.1 > 218.9		4395.620	1.00					NO		
5	5	PFBS	299.0 > 79.7		564.050	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		1123.940	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	3665.172	5748.722	1.00	1.21	7.970	12.3	98.1	NO		
8	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
9	48	13C3-PFPeA	266.0 > 221.8	4395.620	9796.685	1.00	2.20	5.609	13.8	110.1	NO		
10	48	13C3-PFPeA	266.0 > 221.8	4395.620	9796.685	1.00	2.20	5.609	13.8	110.1	NO		
11	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1123.940	553.194	1.00	2.91	25.397	11.3	90.8	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	7.800	3103.105	1.00	2.86	0.013	0.0		NO		
15	8	PFPeS	349.1>80.1		564.050	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1212.091	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		3834.397	1.00					NO		
18	11	PFHpA	363.0 > 318.9		3834.397	1.00					NO		
19	12	ADONA	376.8 > 250.9		3834.397	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	3103.105	9796.685	1.00	2.99	3.959	5.0	99.9	NO		
21	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1212.091	9796.685	1.00	3.20	1.547	5.0	100.9	NO		
23	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
24	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
25	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6		1448.751	1.00					NO		
28	15	6:2 FTS	427.0 > 406.9		1044.706	1.00					NO		
29	16	L-PFOA	412.8 > 368.9	37.351	8031.595	1.00	4.14	0.058	0.0		NO	4.911	NO
30	18	PFecHS	460.8 > 381.0		8031.595	1.00					NO		
31	19	PFHpS	449.0 > 80.0		1410.610	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		7616.705	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	1448.751	553.194	1.00	3.76	32.736	12.9	102.8	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1044.706	1293.104	1.00	4.08	10.099	13.7	109.7	NO		
35	58	13C2-PFOA	414.9 > 369.7	8031.595	13655.097	1.00	4.13	7.352	13.0	104.2	NO		
36	58	13C2-PFOA	414.9 > 369.7	8031.595	13655.097	1.00	4.13	7.352	13.0	104.2	NO		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
38	56	13C5-PFNA	468.2 > 422.9	7616.705	8145.557	1.00	4.57	11.688	11.9	95.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	8.783	7616.705	1.00	4.56	0.014			NO		
41	22	PFOSA	497.9 > 77.9		549.882	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		1410.610	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		1410.610	1.00					NO		
44	26	PFDA	513 > 468.8		6263.837	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		946.606	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	7616.705	8145.557	1.00	4.57	11.688	11.9	95.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	549.882	8175.738	1.00	4.63	0.841	6.5	51.6	NO		
48	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
49	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
50	60	13C2-PFDA	515.1 > 469.9	6263.837	9421.503	1.00	4.95	8.311	12.6	100.4	NO		
51	61	13C2-8:2 FTS	529 > 79.9	946.606	1293.104	1.00	4.92	9.151	13.2	105.3	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		1410.610	1.00					NO		
54	29	L-MeFOSAA	570 > 419		1235.898	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		1426.384	1.00					NO		
56	33	PFUdA	563.0 > 518.9	16.167	7494.523	1.00	5.27	0.027	0.0		NO		
57	34	PFDS	598.8 > 79.9		946.606	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		3698.353	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1235.898	8175.738	1.00	5.10	1.890	14.6	117.1	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1426.384	8175.738	1.00	5.26	2.181	14.8	118.4	NO		
62	63	13C2-PFUdA	565 > 519.8	7494.523	8175.738	1.00	5.28	11.458	13.4	107.0	NO		
63	61	13C2-8:2 FTS	529 > 79.9	946.606	1293.104	1.00	4.92	9.151	13.2	105.3	NO		
64	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		946.606	1.00					NO		
67	37	PFDoA	612.9 > 569.0		3698.353	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9			1.00					NO		
69	39	PFTrDA	662.9 > 618.9	6.069	3698.353	1.00	5.89	0.021	0.1		NO		
70	40	PFDoS	698.8 > 79.9		362.476	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		362.476	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		

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	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
74	66	d3-N-MeFOSA	515.2 > 168.9		8175.738	1.00					NO		
75	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
76	67	13C2-PFTeDA	715.1 > 669.7	362.476	8175.738	1.00	6.04	0.554	1.1	8.7	YES		
77	67	13C2-PFTeDA	715.1 > 669.7	362.476	8175.738	1.00	6.04	0.554	1.1	8.7	YES		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9			1.00					NO		
80	43	PFHxDA	813.1 > 768.6	12.580	384.845	1.00	6.40	0.163	0.1		NO		
81	44	PFODA	913.1 > 868.8	20.252	384.845	1.00	6.63	0.263	0.3		NO		
82	45	N-MeFOSE	616.1 > 58.9		287.485	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9	9.122	214.581	1.00	6.56	6.377	4.7		NO		
84	72	13C4-PFBA	217.0 > 172.0	5748.722	5748.722	1.00	1.21	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9		8175.738	1.00					NO		
86	69	13C2-PFHxDA	815 > 769.7	384.845	8175.738	1.00	6.39	0.588	0.8	16.0	YES		
87	69	13C2-PFHxDA	815 > 769.7	384.845	8175.738	1.00	6.39	0.588	0.8	16.0	YES		
88	70	d7-N-MeFOSE	623.1 > 58.9	287.485	8175.738	1.00	6.30	0.440	15.7	10.5	YES		
89	71	d9-N-EtFOSE	639.2 > 58.8	214.581	8175.738	1.00	6.45	0.328	11.9	8.0	YES		
90	73	13C5-PFHxA	318.0 > 272.9	9796.685	9796.685	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	13655.097	13655.097	1.00	4.13	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	553.194	553.194	1.00	3.76	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8145.557	8145.557	1.00	4.57	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1293.104	1293.104	1.00	4.66	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	9421.503	9421.503	1.00	4.95	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	8175.738	8175.738	1.00	5.27	12.500	12.5	100.0	NO		

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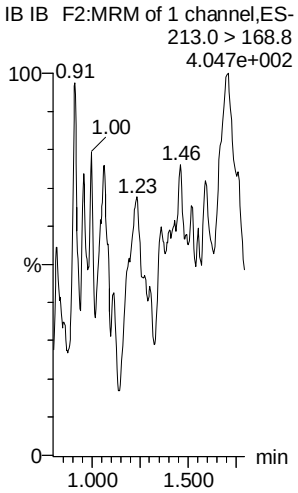
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

PFBA



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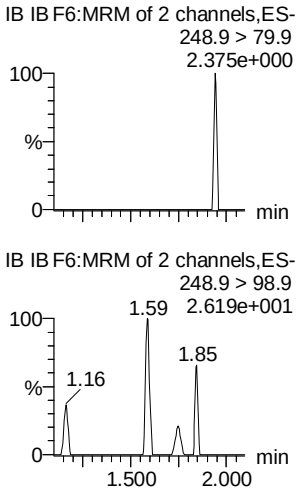
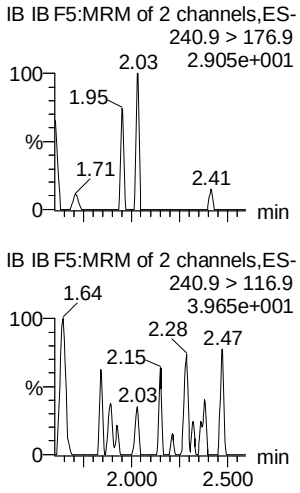


3:3 FTCA



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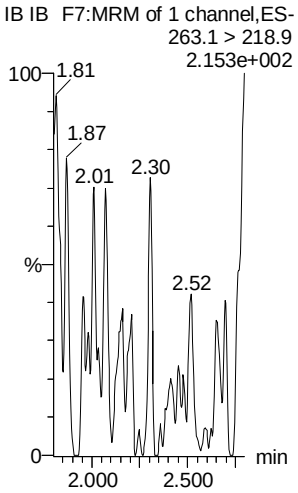

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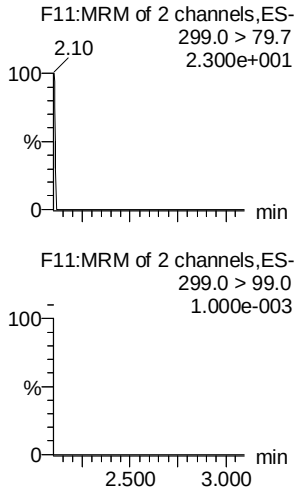
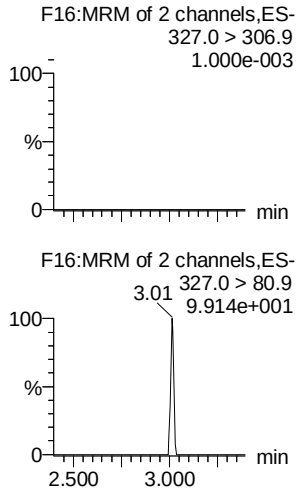
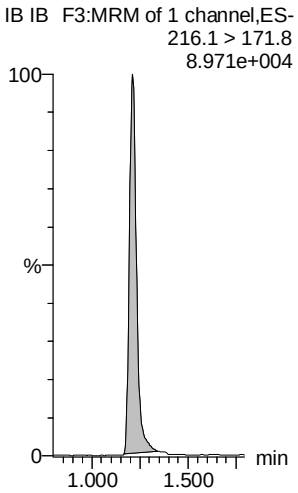


4:2 FTS



13C3-PFBA



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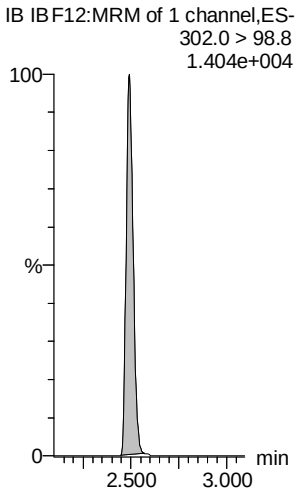

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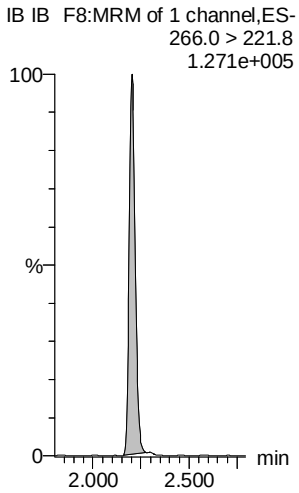

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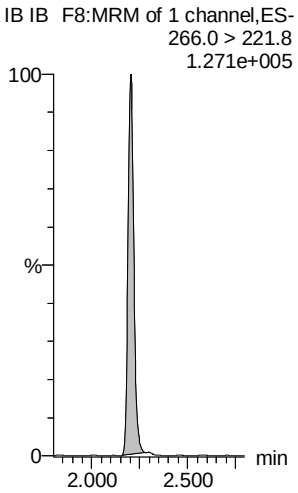

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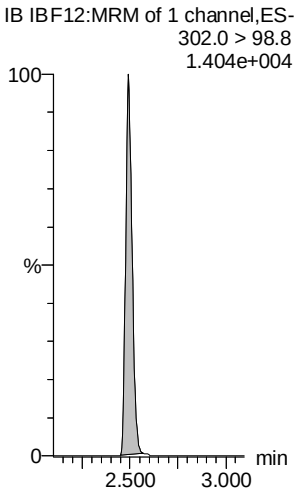
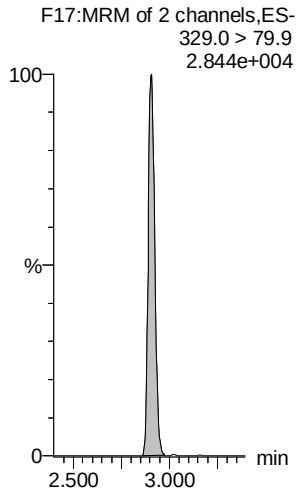


13C2-4:2 FTS



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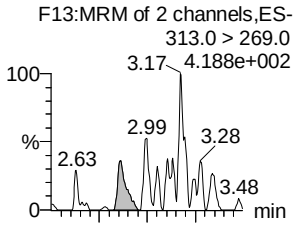
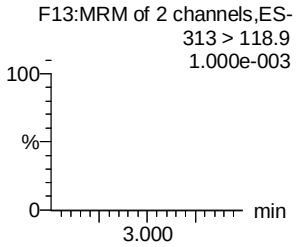
Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

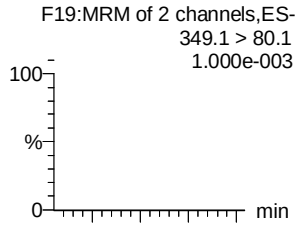
Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

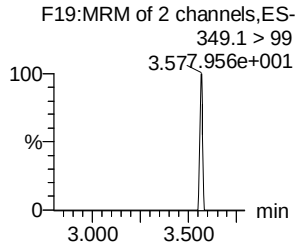
PFHxA



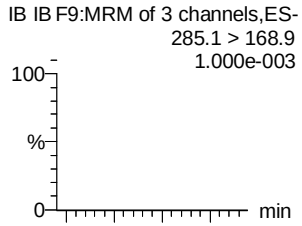


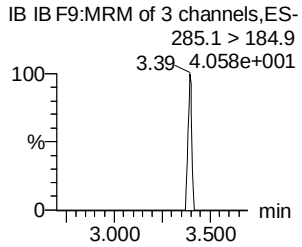
PFPeS



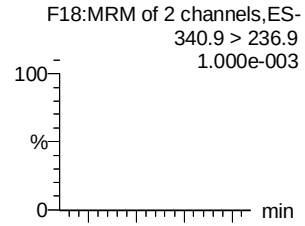


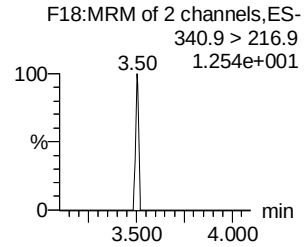
HFPO-DA





5:3 FTCA





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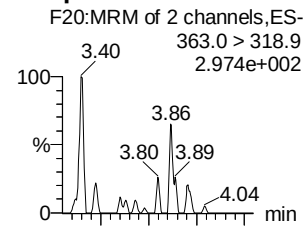

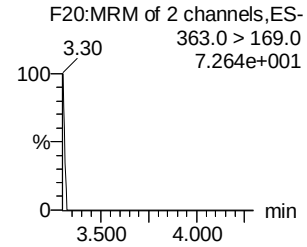

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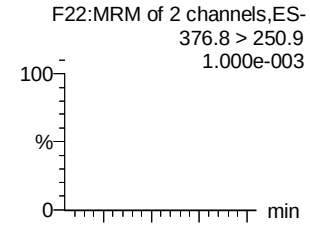

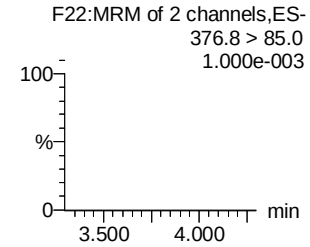

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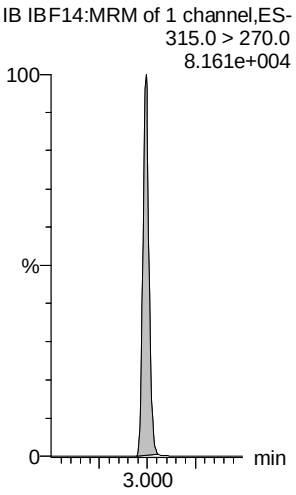
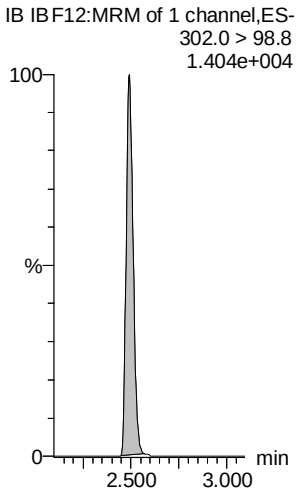


13C3-PFBS



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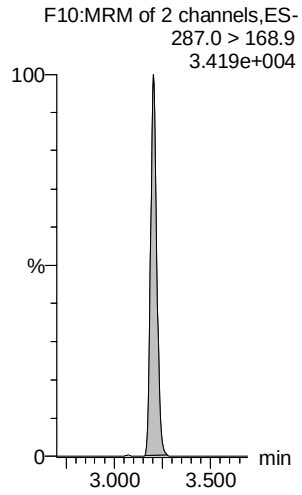
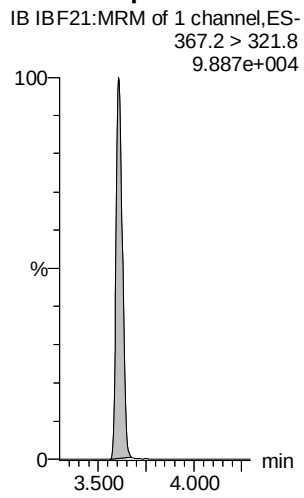


13C4-PFHpA



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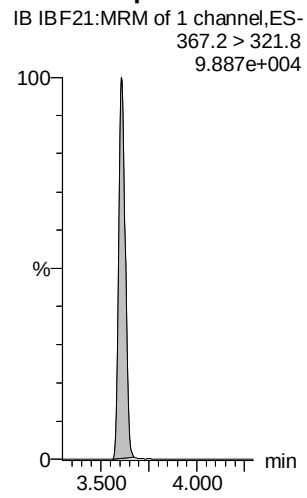

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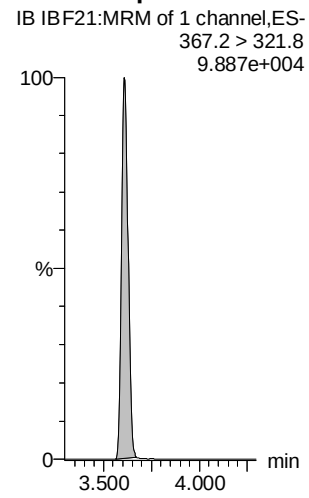

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Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
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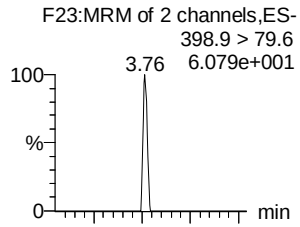
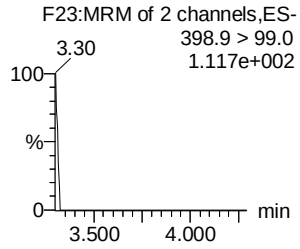
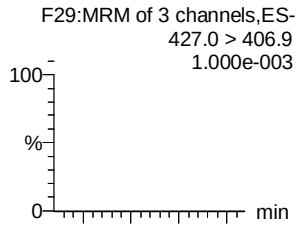
Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

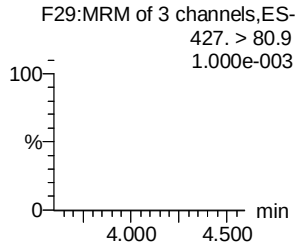
L-PFHxS



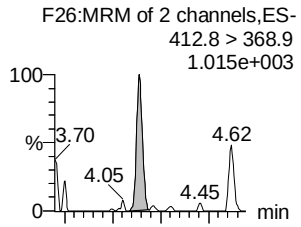


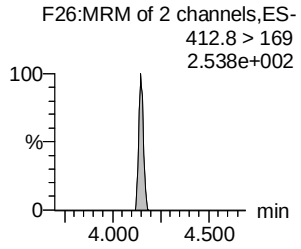
6:2 FTS





L-PFOA





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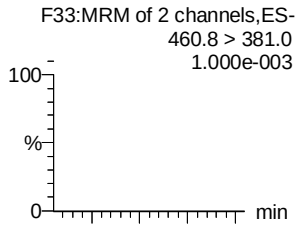

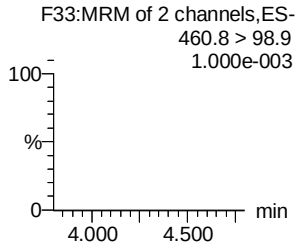

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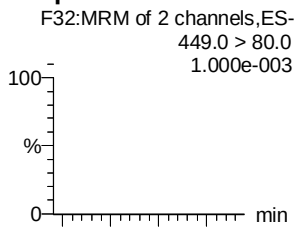
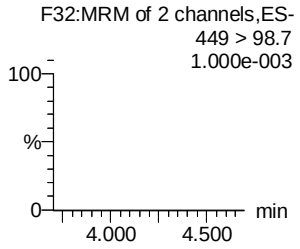
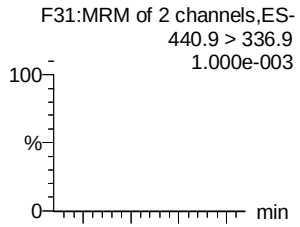
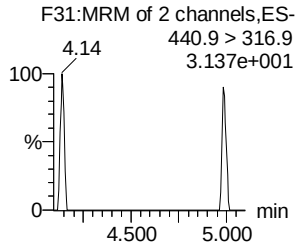


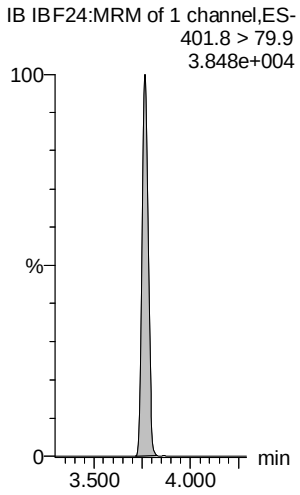


7:3 FTCA

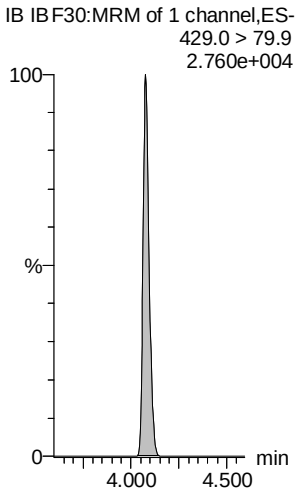




13C3-PFHxS



13C2-6:2 FTS



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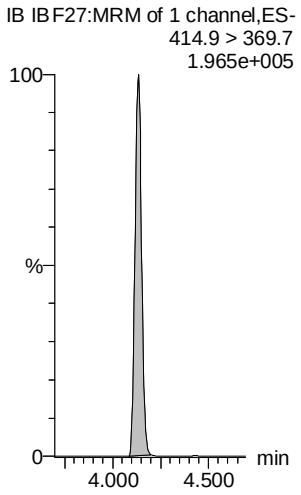

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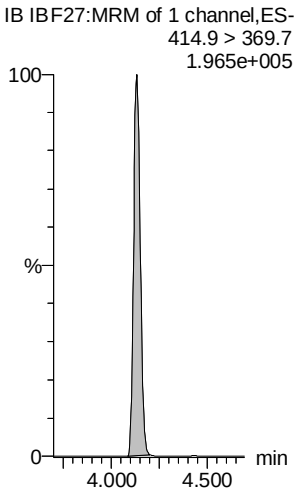

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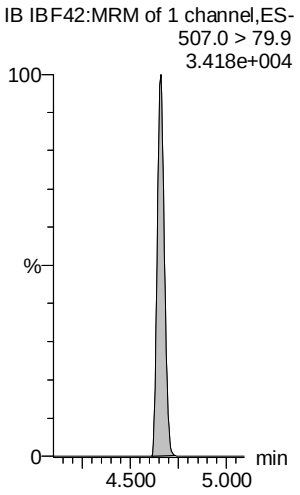

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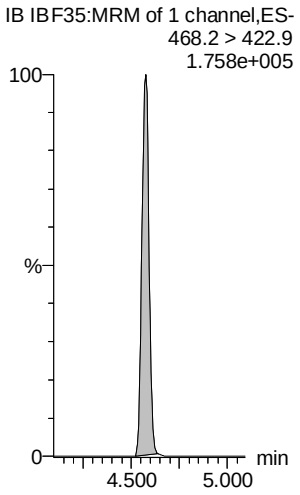

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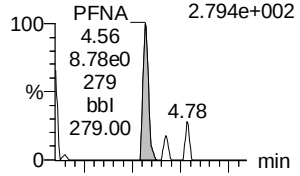
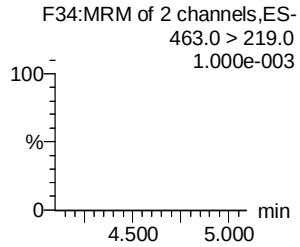
Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

PFNA





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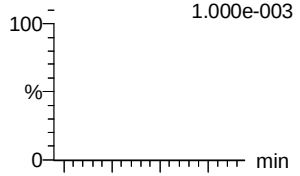
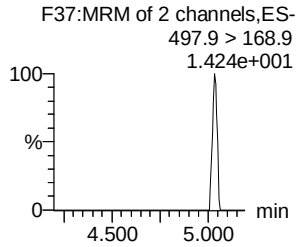
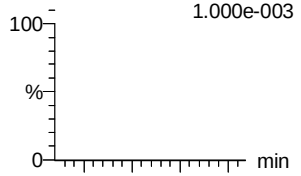
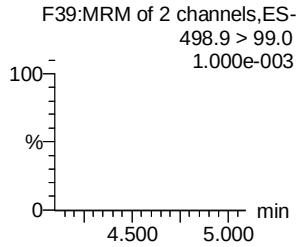




L-PFOS





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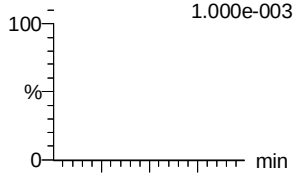

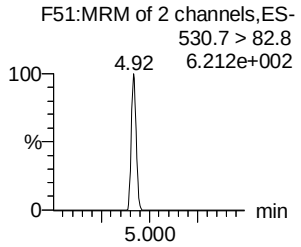

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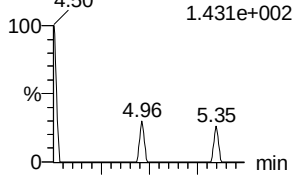

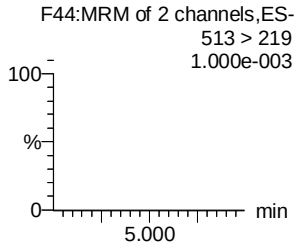

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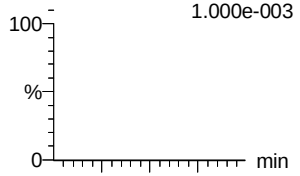
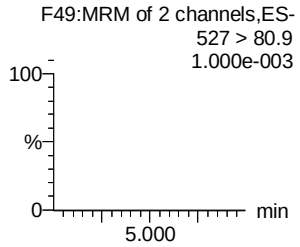
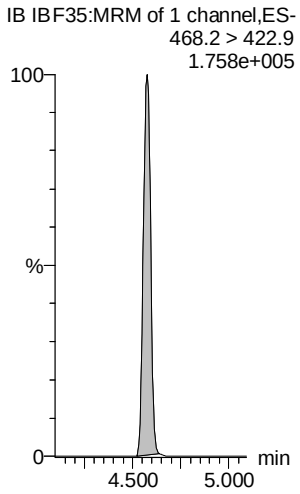




13C5-PFNA



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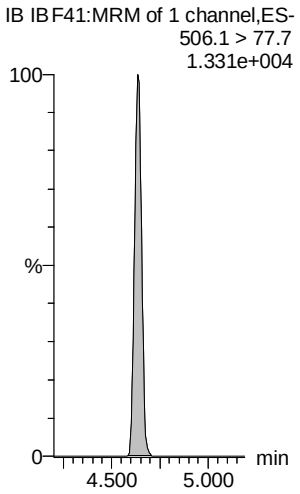

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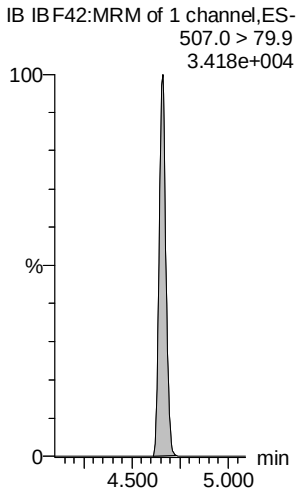

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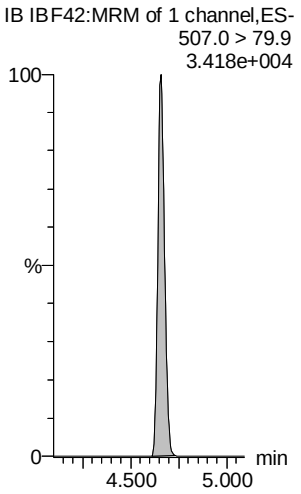

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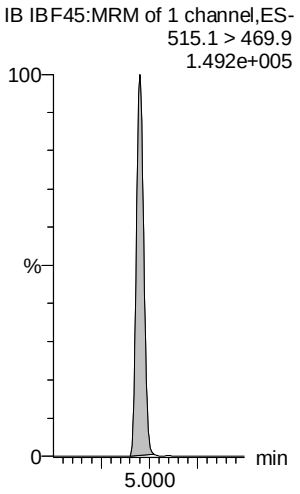
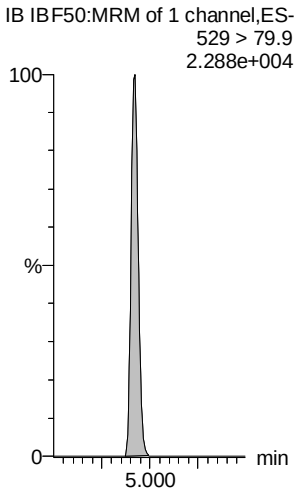


13C2-8:2 FTS



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Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

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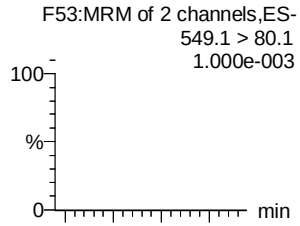

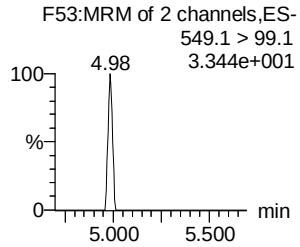

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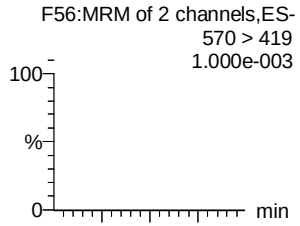

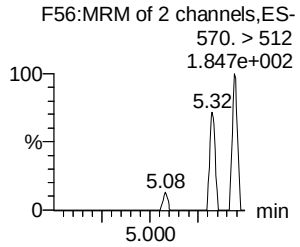

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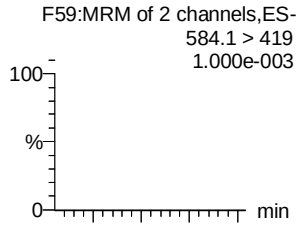

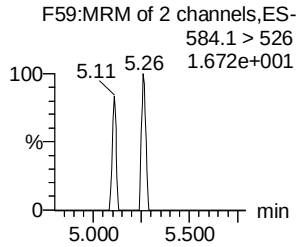

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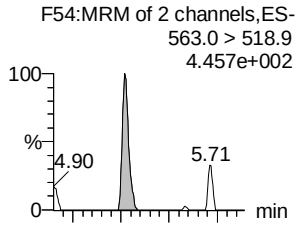

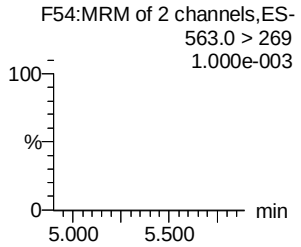

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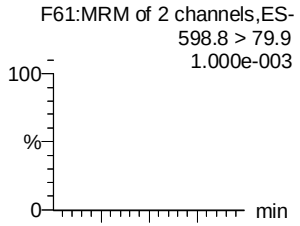

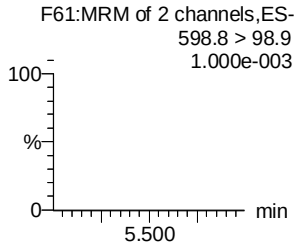

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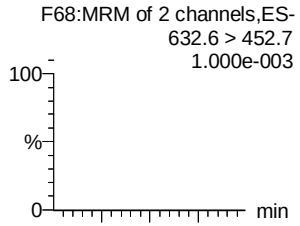

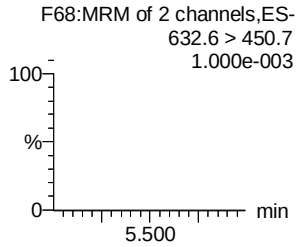

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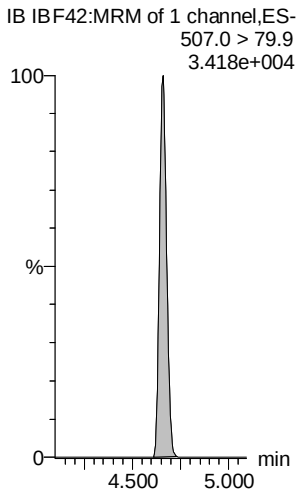

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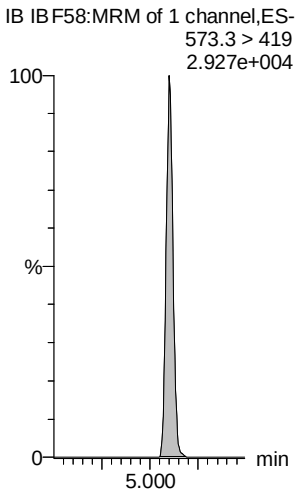

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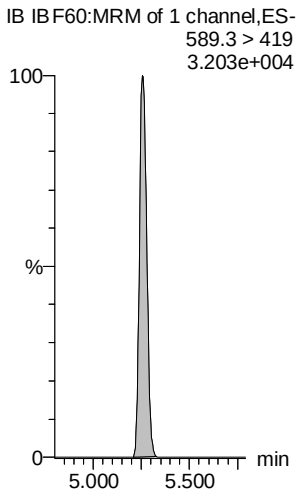

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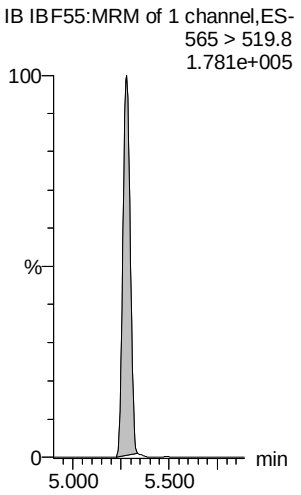

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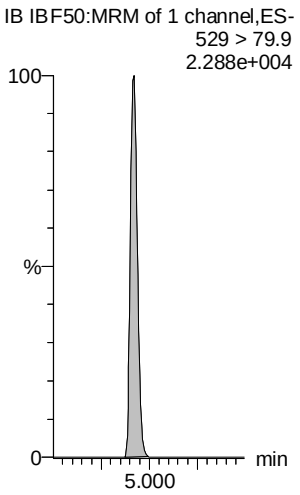

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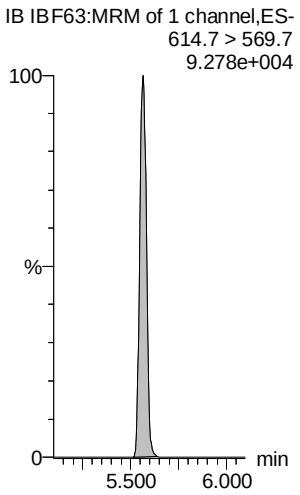

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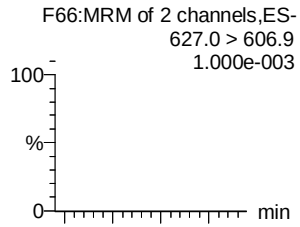
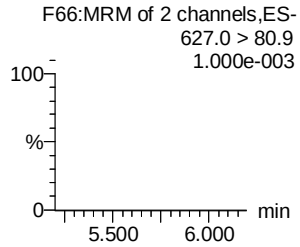
10:2 FTS





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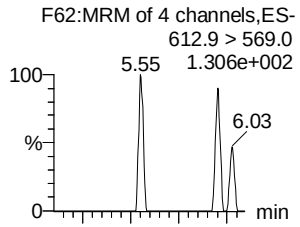

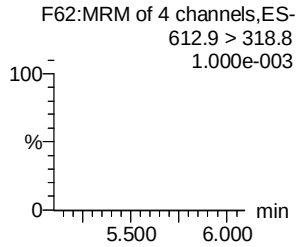

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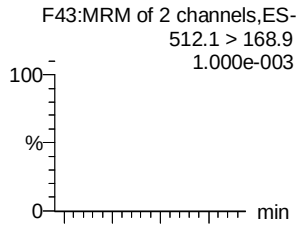

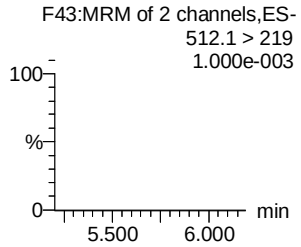

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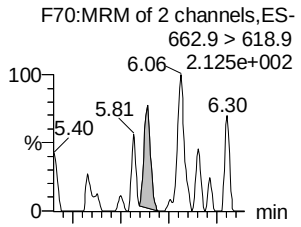

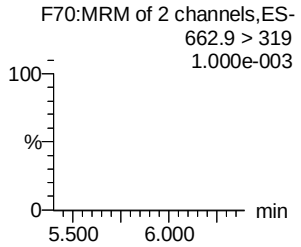

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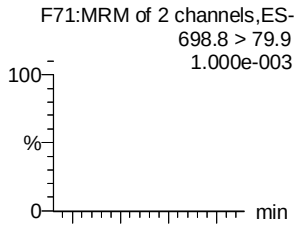

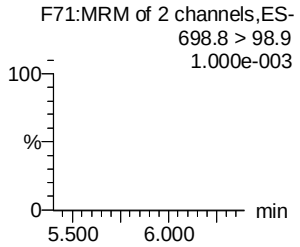

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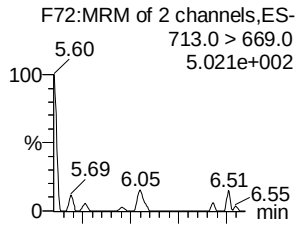

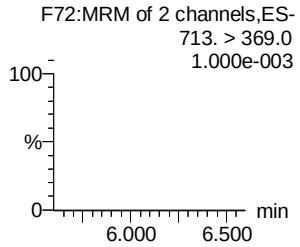

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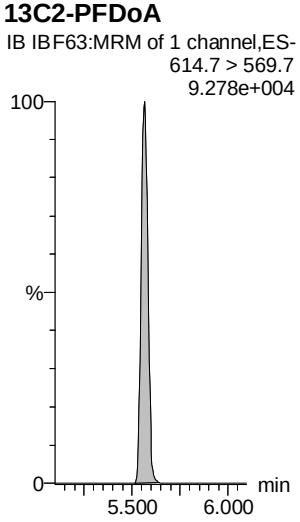

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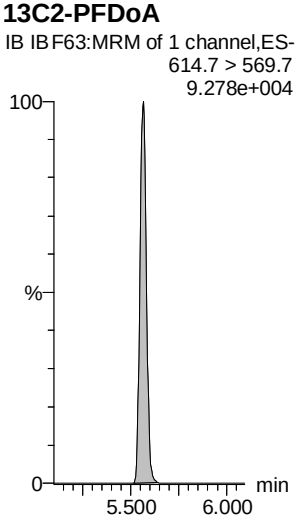
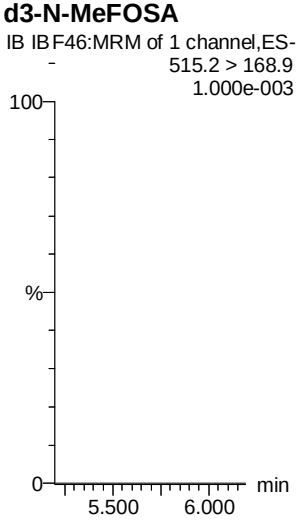


d3-N-MeFOSA



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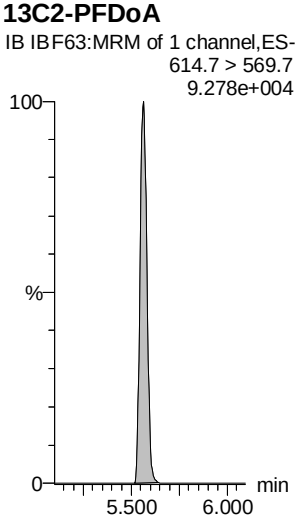

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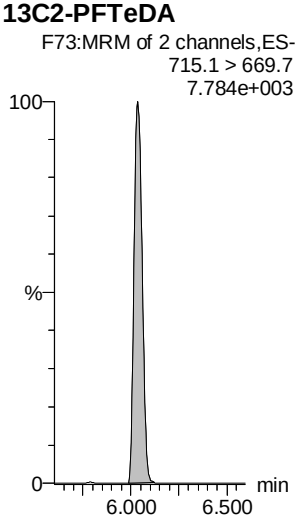

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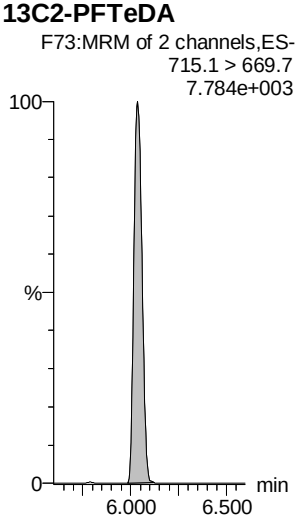

Vista Analytical Laboratory

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Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
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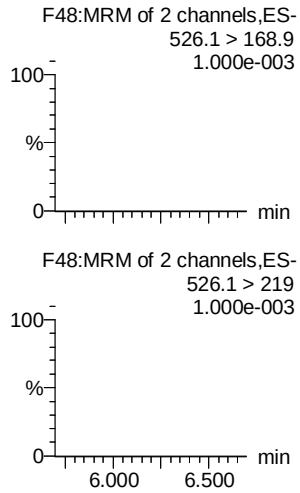
Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

N-EtFOSA



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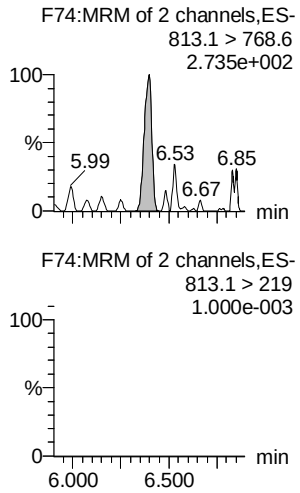

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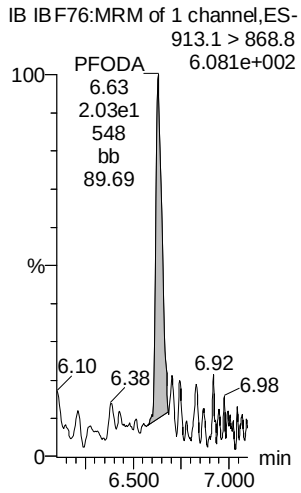

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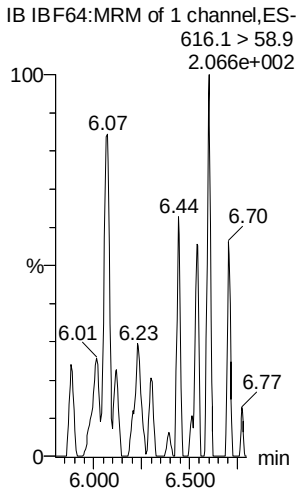

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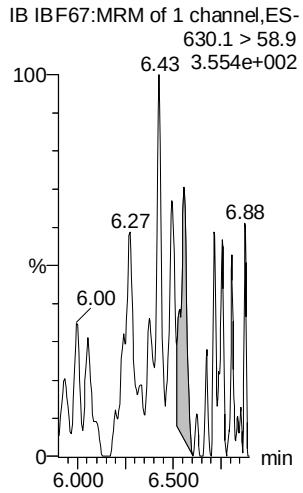

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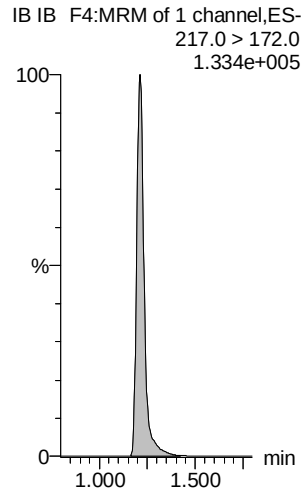
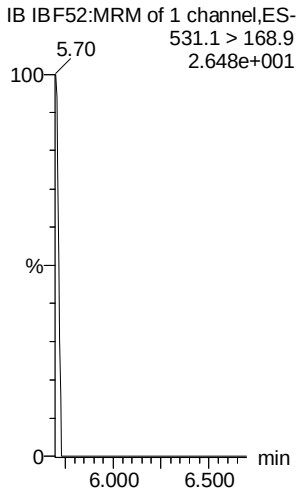
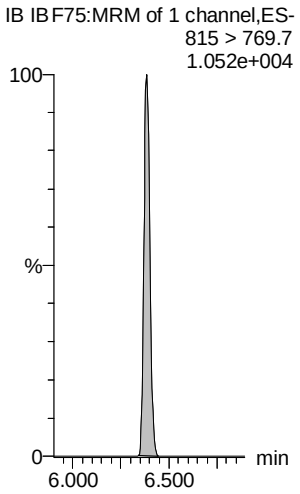


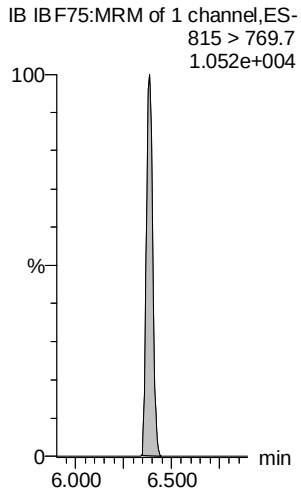
d5-N-ETFOSA



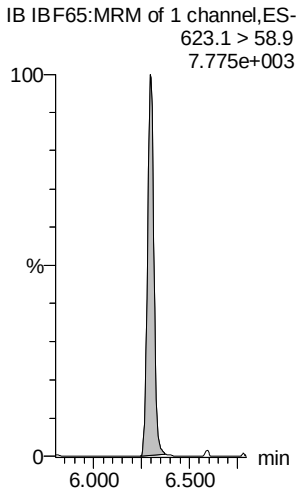
13C2-PFHxDA



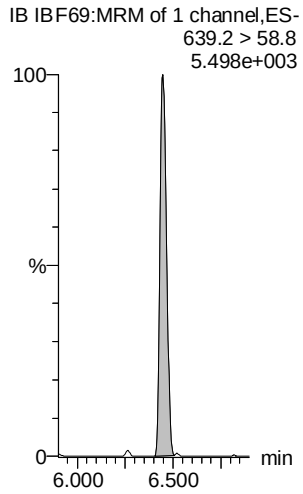
13C2-PFHxDA



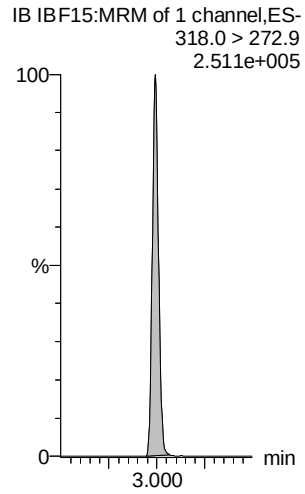
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



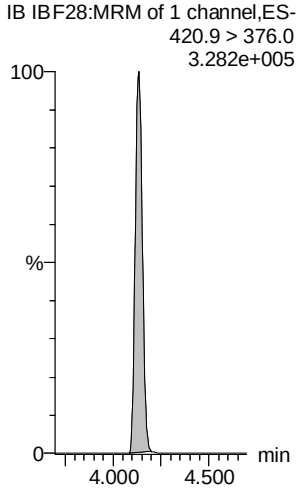
Vista Analytical Laboratory

Dataset: Untitled

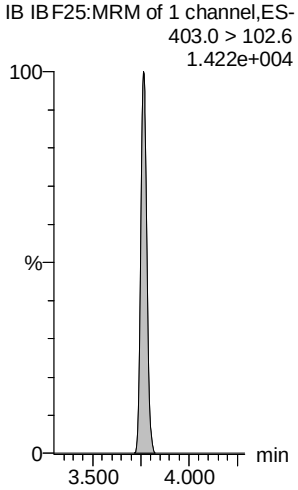
Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

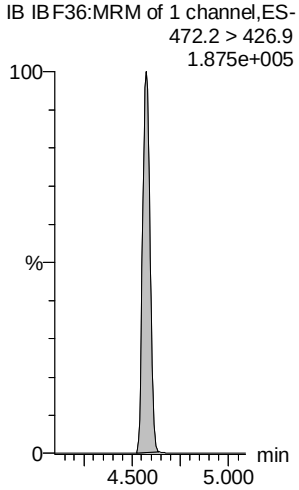
13C8-PFOA



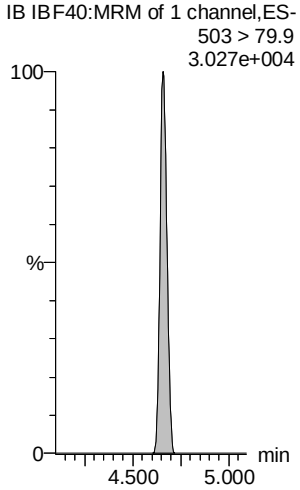
18O2-PFHxS



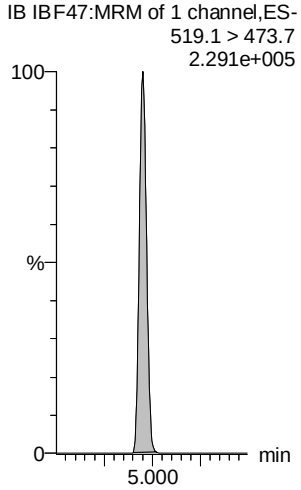
13C9-PFNA



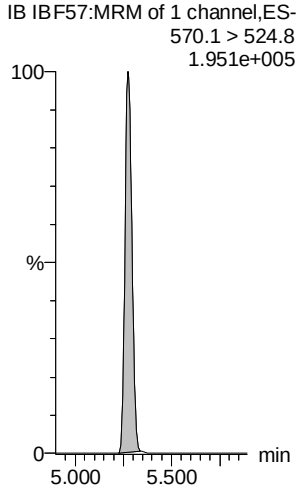
13C4-PFOS



13C6-PFDA



13C7-PFUdA



LC Calibration Standards Review Checklist Q4

3 gm 7/11/19

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	NA
Calibration ID:	ST190710U3-H	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-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:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 7/2/19

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Comments:

Reviewed By: FR 07/11/19

Initials/Date

ID: LR - LCSRC *Rev. No.: 2* *Rev. Date: 04/29/2019* *Page: 1 of 1*

Vista Analytical Laboratory

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:35:06 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.18	1.18			
2	PFPrS	1.55	1.55	2.785	2.785	NO
3	3:3 FTCA	2.03	2.02	1.712	1.712	NO
4	PFPeA	2.17	2.18			
5	PFBS	2.47	2.47	3.212	3.212	NO
6	4:2 FTS	2.89	2.89	1.842	1.842	NO
7	PFHxA	2.97	2.97	14.638	14.638	NO
8	PFPeS	3.18	3.18	1.516	1.516	NO
9	HFPO-DA	3.19	3.19	2.277	2.277	NO
10	5:3 FTCA	3.52	3.52	1.445	1.445	NO
11	PFHpA	3.59	3.59	5.621	5.621	NO
12	ADONA	3.71	3.71	3.202	3.202	NO
13	L-PFHxS	3.75	3.75	2.045	2.045	NO
14	6:2 FTS	4.06	4.07	2.112	2.112	NO
15	L-PFOA	4.12	4.12	3.568	3.568	NO
16	PFecHS	4.14	4.14	0.930	0.930	NO
17	PFHpS	4.23	4.23	2.379	2.379	NO
18	7:3 FTCA	4.56	4.55	1.871	1.871	NO
19	PFNA	4.56	4.56	3.167	3.167	NO
20	PFOSA	4.62	4.62	33.429	33.429	NO
21	L-PFOS	4.65	4.65	2.038	2.038	NO
22	9Cl-PF30NS	4.87	4.87	17.046	17.046	NO
23	PFDA	4.94	4.94	4.608	4.608	NO
24	8:2 FTS	4.91	4.91	1.371	1.371	NO
25	PFNS	5.01	5.01	1.569	1.569	NO
26	L-MeFOSAA	5.09	5.10	2.564	2.564	NO

Vista Analytical Laboratory

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:35:17 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.25	5.26	1.378	1.378	NO
2	PFUdA	5.27	5.27	5.924	5.924	NO
3	PFDS	5.32	5.32	1.781	1.781	NO
4	11Cl-PF30UdS	5.49	5.49	6.742	6.742	NO
5	10:2 FTS	5.54	5.54	1.543	1.543	NO
6	PFDoA	5.56	5.56	7.148	7.148	NO
7	N-MeFOSA	5.69	5.69	1.658	1.658	NO
8	PFTrDA	5.81	5.81	14.434	14.434	NO
9	PFDoS	5.84	5.84	1.884	1.884	NO
10	PFTeDA	6.03	6.03	14.556	14.556	NO
11	N-EtFOSA	6.12	6.12	2.006	2.006	NO
12	PFHxDA	6.39	6.39	17.754	17.754	NO
13	PFODA	6.63	6.63			
14	N-MeFOSE	6.31	6.31			
15	N-EtFOSE	6.46	6.46			

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	180.627	2030.302	1.00	1.21	1.112	0.8	82.6	NO		
2	2	PFPrS	248.9 > 79.9	42.191	568.443	1.00	1.58	0.928	0.9	87.4	NO	2.619	NO
3	3	3:3 FTCA	240.9 > 176.9	9.058	3854.083	1.00	2.05	0.029	0.8	83.0	NO	1.787	NO
4	4	PFPeA	263.1 > 218.9	265.917	3854.083	1.00	2.20	0.862	1.0	95.3	NO		
5	5	PFBS	299.0 > 79.7	77.552	568.443	1.00	2.50	1.705	0.8	84.8	NO	2.425	NO
6	6	4:2 FTS	327.0 > 306.9	206.689	1216.905	1.00	2.91	2.123	0.9	88.0	NO	2.194	NO
7	47	13C3-PFBA	216.1 > 171.8	2030.302	3058.692	1.00	1.21	8.297	12.8	102.1	NO		
8	49	13C3-PFBS	302.0 > 98.8	568.443	569.606	1.00	2.49	12.474	12.1	96.4	NO		
9	48	13C3-PFPeA	266.0 > 221.8	3854.083	10077.287	1.00	2.20	4.781	11.7	93.8	NO		
10	48	13C3-PFPeA	266.0 > 221.8	3854.083	10077.287	1.00	2.20	4.781	11.7	93.8	NO		
11	49	13C3-PFBS	302.0 > 98.8	568.443	569.606	1.00	2.49	12.474	12.1	96.4	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1216.905	569.606	1.00	2.90	26.705	11.9	95.4	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	683.655	3097.991	1.00	2.99	1.103	0.9	94.9	NO	20.016	NO
15	8	PFPeS	349.1>80.1	95.498	568.443	1.00	3.20	2.100	1.0	97.9	NO	3.526	YES
16	9	HFPO-DA	285.1 > 168.9	150.550	1251.296	1.00	3.20	0.602	1.1	110.5	NO	4.596	YES
17	10	5:3 FTCA	340.9 > 236.9	72.182	4075.649	1.00	3.54	0.221	1.0	96.2	NO	1.427	NO
18	11	PFHpA	363.0 > 318.9	360.636	4075.649	1.00	3.61	1.106	0.9	93.4	NO	6.422	NO
19	12	ADONA	376.8 > 250.9	1253.826	4075.649	1.00	3.73	3.845	0.9	89.1	NO	2.870	NO
20	52	13C2-PFHxA	315.0 > 270.0	3097.991	10077.287	1.00	2.99	3.843	4.8	97.0	NO		
21	49	13C3-PFBS	302.0 > 98.8	568.443	569.606	1.00	2.49	12.474	12.1	96.4	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1251.296	10077.287	1.00	3.20	1.552	5.1	101.3	NO		
23	53	13C4-PFHpA	367.2 > 321.8	4075.649	10077.287	1.00	3.61	5.055	12.9	103.4	NO		
24	53	13C4-PFHpA	367.2 > 321.8	4075.649	10077.287	1.00	3.61	5.055	12.9	103.4	NO		
25	53	13C4-PFHpA	367.2 > 321.8	4075.649	10077.287	1.00	3.61	5.055	12.9	103.4	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	88.856	1392.474	1.00	3.76	0.798	1.0	104.0	NO	3.476	YES
28	15	6:2 FTS	427.0 > 406.9	213.081	925.923	1.00	4.08	2.877	1.0	105.0	NO	2.809	NO
29	16	L-PFOA	412.8 > 368.9	1250.178	8285.238	1.00	4.14	1.886	1.0	100.0	NO	3.405	NO
30	18	PFecHS	460.8 > 381.0	158.893	8285.238	1.00	4.15	0.240	0.9	93.5	NO	0.898	NO
31	19	PFHpS	449.0 > 80.0	103.056	1338.543	1.00	4.25	0.962	1.1	113.6	NO	3.211	NO
32	20	7:3 FTCA	440.9 > 336.9	64.901	8423.939	1.00	4.56	0.096	0.8	84.1	NO	2.111	NO
33	54	13C3-PFHxS	401.8 > 79.9	1392.474	569.606	1.00	3.76	30.558	12.0	96.0	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	925.923	1291.865	1.00	4.08	8.959	12.2	97.4	NO		

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7/11/19

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
35	58	13C2-PFOA	414.9 > 369.7	8285.238	14254.760	1.00	4.13	7.265	12.9	103.0	NO		
36	58	13C2-PFOA	414.9 > 369.7	8285.238	14254.760	1.00	4.13	7.265	12.9	103.0	NO		
37	59	13C8-PFOS	507.0 > 79.9	1338.543	1291.865	1.00	4.66	12.952	12.2	97.8	NO		
38	56	13C5-PFNA	468.2 > 422.9	8423.939	7925.126	1.00	4.57	13.287	13.5	108.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	713.248	8423.939	1.00	4.57	1.058	0.9	93.8	NO	2.827	NO
41	22	PFOSA	497.9 > 77.9	148.847	1606.191	1.00	4.64	1.158	0.9	93.1	NO	84.958	YES
42	23	L-PFOS	498.9 > 79.9	83.856	1338.543	1.00	4.66	0.783	0.8	75.5	NO	2.435	NO
43	25	9Cl-PF30NS	530.7 > 350.8	306.078	1338.543	1.00	4.88	2.858	1.0	97.8	NO	5.858	YES
44	26	PFDA	513 > 468.8	882.912	6363.056	1.00	4.95	1.734	1.1	110.6	NO	4.299	NO
45	27	8:2 FTS	527.0 > 506.9	191.917	958.352	1.00	4.92	2.503	1.1	110.0	NO	1.992	NO
46	56	13C5-PFNA	468.2 > 422.9	8423.939	7925.126	1.00	4.57	13.287	13.5	108.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1606.191	12037.763	1.00	4.64	1.668	12.8	102.4	NO		
48	59	13C8-PFOS	507.0 > 79.9	1338.543	1291.865	1.00	4.66	12.952	12.2	97.8	NO		
49	59	13C8-PFOS	507.0 > 79.9	1338.543	1291.865	1.00	4.66	12.952	12.2	97.8	NO		
50	60	13C2-PFDA	515.1 > 469.9	6363.056	9978.271	1.00	4.95	7.971	12.0	96.3	NO		
51	61	13C2-8:2 FTS	529 > 79.9	958.352	1291.865	1.00	4.92	9.273	13.3	106.7	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	59.056	1338.543	1.00	5.02	0.551	0.7	70.7	NO	2.023	NO
54	29	L-MeFOSAA	570 > 419	372.317	1511.981	1.00	5.11	3.078	1.0	104.7	NO	2.632	NO
55	31	L-EtFOSAA	584.1 > 419	239.330	1847.122	1.00	5.27	1.620	0.9	93.5	NO	1.655	NO
56	33	PFUdA	563.0 > 518.9	763.126	10501.598	1.00	5.28	0.908	1.0	96.2	NO	6.739	NO
57	34	PFDS	598.8 > 79.9	119.425	958.352	1.00	5.33	1.558	0.9	94.4	NO	1.732	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	63.605	12204.465	1.00	5.50	0.065	1.0	100.3	NO	5.497	NO
59	59	13C8-PFOS	507.0 > 79.9	1338.543	1291.865	1.00	4.66	12.952	12.2	97.8	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1511.981	12037.763	1.00	5.10	1.570	12.2	97.3	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1847.122	12037.763	1.00	5.26	1.918	13.0	104.1	NO		
62	63	13C2-PFUdA	565 > 519.8	10501.598	12037.763	1.00	5.28	10.905	12.7	101.8	NO		
63	61	13C2-8:2 FTS	529 > 79.9	958.352	1291.865	1.00	4.92	9.273	13.3	106.7	NO		
64	65	13C2-PFDoA	614.7 > 569.7	12204.465	9978.271	1.00	5.57	15.289	12.4	99.5	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	165.817	958.352	1.00	5.55	2.163	0.8	83.0	NO	1.387	NO
67	37	PFDoA	612.9 > 569.0	916.419	12204.465	1.00	5.57	0.939	1.0	100.8	NO	8.050	NO
68	38	N-MeFOSA	512.1 > 168.9	128.859	3183.433	1.00	5.71	6.072	5.1	101.8	NO	2.101	NO

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
69	39	PFTrDA	662.9 > 618.9	1052.456	12204.465	1.00	5.82	1.078	1.1	105.1	NO	19.894	NO
70	40	PFDoS	698.8 > 79.9	92.162	6366.319	1.00	5.84	0.181	0.8	82.3	NO	1.199	NO
71	41	PFTeDA	713.0 > 669.0	790.448	6366.319	1.00	6.03	1.552	1.0	101.9	NO	16.459	NO
72	65	13C2-PFDoA	614.7 > 569.7	12204.465	9978.271	1.00	5.57	15.289	12.4	99.5	NO		
73	65	13C2-PFDoA	614.7 > 569.7	12204.465	9978.271	1.00	5.57	15.289	12.4	99.5	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3183.433	12037.763	1.00	5.73	3.306	149.2	99.4	NO		
75	65	13C2-PFDoA	614.7 > 569.7	12204.465	9978.271	1.00	5.57	15.289	12.4	99.5	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6366.319	12037.763	1.00	6.03	6.611	12.9	103.4	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6366.319	12037.763	1.00	6.03	6.611	12.9	103.4	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	126.700	4771.025	1.00	6.13	3.983	4.8	95.3	NO	2.396	NO
80	43	PFHxDA	813.1 > 768.6	530.298	3466.809	1.00	6.39	0.765	0.9	94.1	NO	42.773	YES
81	44	PFODA	913.1 > 868.8	576.986	3466.809	1.00	6.63	0.832	1.0	98.9	NO		
82	45	N-MeFOSE	616.1 > 58.9	112.601	3990.496	1.00	6.31	4.233	3.6	72.7	NO		
83	46	N-EtFOSE	630.1 > 58.9	161.542	3839.662	1.00	6.46	6.311	4.7	93.1	NO		
84	72	13C4-PFBA	217.0 > 172.0	3058.692	3058.692	1.00	1.22	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	4771.025	12037.763	1.00	6.14	4.954	159.0	106.0	NO		
86	69	13C2-PFHxDA	815 > 769.7	3466.809	12037.763	1.00	6.39	3.600	4.9	98.0	NO		
87	69	13C2-PFHxDA	815 > 769.7	3466.809	12037.763	1.00	6.39	3.600	4.9	98.0	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	3990.496	12037.763	1.00	6.30	4.144	148.2	98.8	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	3839.662	12037.763	1.00	6.45	3.987	145.0	96.6	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10077.287	10077.287	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	14254.760	14254.760	1.00	4.13	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	569.606	569.606	1.00	3.76	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	7925.126	7925.126	1.00	4.57	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1291.865	1291.865	1.00	4.66	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	9978.271	9978.271	1.00	4.95	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12037.763	12037.763	1.00	5.28	12.500	12.5	100.0	NO		

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Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA

	#	Name		ID	Acq.Date	Acq.Time
1	1	190710M3_1		Tester	10-Jul-19	15:51:59
2	2	190710M3_2		IPA	10-Jul-19	16:02:43
3	3	190710M3_3		ST190710M3-1 PFC CS-2 19G0801	10-Jul-19	16:13:19
4	4	190710M3_4		ST190710M3-2 PFC CS-1 19G0802	10-Jul-19	16:23:51
5	5	190710M3_5	A	ST190710M3-3 PFC CS0 19G0803	10-Jul-19	16:34:30
6	6	190710M3_6		ST190710M3-4 PFC CS1 19G0804	10-Jul-19	16:45:08
7	7	190710M3_7		ST190710M3-5 PFC CS2 19G0805	10-Jul-19	16:55:41
8	8	190710M3_8		ST190710M3-6 PFC CS3 19G0806	10-Jul-19	17:06:19
9	9	190710M3_9		ST190710M3-7 PFC CS4 19G0807	10-Jul-19	17:16:53
10	10	190710M3_10		ST190710M3-8 PFC CS5 19G0808	10-Jul-19	17:27:30
11	11	190710M3_11		ST190710M3-9 PFC CS6 19G0809	10-Jul-19	17:38:02
12	12	190710M3_12		ST190710M3-10 PFC CS7 19G0810	10-Jul-19	17:48:41
13	13	190710M3_13		IB	10-Jul-19	17:59:14
14	14	190710M3_14		ST190710M3-1 PFC ICV 19G0811	10-Jul-19	18:09:52
15	15	190710M3_15		IPA	10-Jul-19	18:20:26
16	16	190710M3_16		B9G0061-BS1 OPR 0.125	10-Jul-19	18:31:07
17	17	190710M3_17		B9F0280-BS1 OPR 1	10-Jul-19	18:41:42
18	18	190710M3_18		B9F0280-MS1 Matrix Spike 1.08	10-Jul-19	18:52:16
19	19	190710M3_19		B9F0280-MSD1 Matrix Spike Dup 1.04	10-Jul-19	19:02:54
20	20	190710M3_20		B9F0280-BLK1 Method Blank 1	10-Jul-19	19:13:27
21	21	190710M3_21		1901683-01 Northern 1 3.56	10-Jul-19	19:24:06
22	22	190710M3_22		1901683-02 Northern 2 3.6	10-Jul-19	19:34:44
23	23	190710M3_23		1901683-03 Hagatna 1 3.93	10-Jul-19	19:45:18
24	24	190710M3_24		1901683-04 Hagatna 2 3.99	10-Jul-19	19:55:56
25	25	190710M3_25		1901683-05 Agat Santarita 1 2.51	10-Jul-19	20:06:29
26	26	190710M3_26		1901683-06 Agat Santarita 2 2.47	10-Jul-19	20:17:07
27	27	190710M3_27		1901766-05 SAOA-B04-SO-5-5.5 1.08	10-Jul-19	20:27:41
28	28	190710M3_28		1901766-06 SAOA-B04-SO-20-20.5 1.2	10-Jul-19	20:38:19
29	29	190710M3_29		1901766-07 SAOA-B04-SO-47-47.5 1.19	10-Jul-19	20:48:52
30	30	190710M3_30		1901768-01 Sludge 8.59	10-Jul-19	20:59:30
31	31	190710M3_31		IPA	10-Jul-19	21:10:09
32	32	190710M3_32		ST190710M3-11 PFC CS3 19G0806	10-Jul-19	21:20:42

A CRV not used.

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Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
33	33	190710M3_33	IPA	10-Jul-19	21:31:20
34	34	190710M3_34	B9G0092-BS1 OPR 0.25	10-Jul-19	21:41:54
35	35	190710M3_35	B9G0092-BSD1 LCSD 0.25	10-Jul-19	21:52:23
36	36	190710M3_36	B9G0092-BLK1 Method Blank 0.25	10-Jul-19	22:03:02
37	37	190710M3_37	1901784-01RE1 BWS-1 0.23881	10-Jul-19	22:13:40
38	38	190710M3_38	1901784-02RE1 FRB-1 0.24972	10-Jul-19	22:24:13
39	39	190710M3_39	B9F0281-BS1 OPR 1	10-Jul-19	22:34:44
40	40	190710M3_40	B9F0281-BLK1 Method Blank 1	10-Jul-19	22:45:22
41	41	190710M3_41	1901680-02 #5 Pulper-02 (Fiber) 57.53	10-Jul-19	22:55:56
42	42	190710M3_42	1901680-04 #1 Pulper-02 (Fiber) 56.76	10-Jul-19	23:06:34
43	43	190710M3_43	1901680-06 Sludge Press 2.88	10-Jul-19	23:17:07
44	44	190710M3_44	1901680-07 Landfill-01 1.85	10-Jul-19	23:27:45
45	45	190710M3_45	1901680-08 Landfill-02 2.17	10-Jul-19	23:38:18
46	46	190710M3_46	1901680-10 #5 Pulper-03 (Fiber) 46.58	10-Jul-19	23:48:57
47	47	190710M3_47	1901680-12 #1 Pulper-03 (Fiber) 63.69	10-Jul-19	23:59:35
48	48	190710M3_48	1901680-14 Primary Sludge-02 21.01	11-Jul-19	00:10:08
49	49	190710M3_49	IPA	11-Jul-19	00:20:46
50	50	190710M3_50	ST190710M3-12 PFC CS3 19G0806	11-Jul-19	00:31:24
51	51	190710M3_51	IPA	11-Jul-19	00:41:57
52	52	190710M3_52	B9G0063-BS1 OPR 0.25	11-Jul-19	00:52:35
53	53	190710M3_53	B9G0063-BLK1 Method Blank 0.25	11-Jul-19	01:03:14
54	54	190710M3_54	1901896-01 12013 0.23851	11-Jul-19	01:13:47
55	55	190710M3_55	1901910-01 SW1906280950KME 0.24336	11-Jul-19	01:24:25
56	56	190710M3_56	1901910-02 SW1906281025KME 0.24464	11-Jul-19	01:34:59
57	57	190710M3_57	1901910-03 SW1906281035KME 0.24318	11-Jul-19	01:45:37
58	58	190710M3_58	1901911-01 WMP1907010855JSJ 0.2509	11-Jul-19	01:56:10
59	59	190710M3_59	1901911-02 WMP1907010906JSJ 0.2559	11-Jul-19	02:06:48
60	60	190710M3_60	1901911-03 WMP1907010915JSJ 0.25216	11-Jul-19	02:17:26
61	61	190710M3_61	B9F0279-BS1 OPR 1	11-Jul-19	02:27:59
62	62	190710M3_62	B9F0279-BLK1 Method Blank 1	11-Jul-19	02:38:38
63	63	190710M3_63	1901679-03 #5A Pulper-01 (Fiber) 41.24	11-Jul-19	02:49:11
64	64	190710M3_64	1901679-05 #1 Pulper-01 (Fiber) 34.15	11-Jul-19	02:59:49
65	65	190710M3_65	1901679-07 Primary Sludge-01 24.04	11-Jul-19	03:10:22
66	66	190710M3_66	IPA	11-Jul-19	03:21:00
67	67	190710M3_67	ST190710M3-13 PFC CS3 19G0806	11-Jul-19	03:31:34
68	68	190710M3_68	IPA	11-Jul-19	03:42:12

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Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
69	69	190710M3_69	1901679-08 Secondary Sludge-01 3.7	11-Jul-19	03:52:46
70	70	190710M3_70	1901681-01 Secondary Sludge-02 4.43	11-Jul-19	04:03:24
71	71	190710M3_71	1901681-06 #1 Pulper-04 (Filter) 75.63	11-Jul-19	04:13:56
72	72	190710M3_72	1901681-08 #5 Pulper-04 (Filter) 49.06	11-Jul-19	04:24:35
73	73	190710M3_73	B9G0022-BS1 OPR 0.125	11-Jul-19	04:35:08
74	74	190710M3_74	B9G0022-MS1 Matrix Spike 0.11809	11-Jul-19	04:45:46
75	75	190710M3_75	B9G0022-MSD1 Matrix Spike Dup 0.11917	11-Jul-19	04:56:19
76	76	190710M3_76	B9G0022-BLK1 Method Blank 0.125	11-Jul-19	05:06:57
77	77	190710M3_77	1901806-01 GW-PT-MW24-120-126 0.11537	11-Jul-19	05:17:31
78	78	190710M3_78	1901806-02 GW-PT-MW24-106-112 0.11614	11-Jul-19	05:28:01
79	79	190710M3_79	1901806-03 GW-PT-MW24-98-104 0.11569	11-Jul-19	05:38:39
80	80	190710M3_80	1901806-04 GW-PT-MW24-86-92 0.1179	11-Jul-19	05:49:17
81	81	190710M3_81	1901806-05 GW-PT-GZ110-179-185 0.11643	11-Jul-19	05:59:51
82	82	190710M3_82	1901806-06 GW-PT-GZ110-170-176 0.11659	11-Jul-19	06:10:29
83	83	190710M3_83	IPA	11-Jul-19	06:21:07
84	84	190710M3_84	ST190710M3-14 PFC CS3 19G0806	11-Jul-19	06:31:40
85	85	190710M3_85	IPA	11-Jul-19	06:42:18
86	86	190710M3_86	1901806-07 GW-PT-GZ110-155-166 0.11833	11-Jul-19	06:52:57
87	87	190710M3_87	1901806-08 GW-PT-GZ110-140-151 0.11879	11-Jul-19	07:03:30
88	88	190710M3_88	1901806-09 GW-PT-GZ110-121-132 0.11742	11-Jul-19	07:14:08
89	89	190710M3_89	1901806-10 GW-PT-GZ110-79-90 0.11878	11-Jul-19	07:24:41
90	90	190710M3_90	1901806-11 GW-PT-GZ110-56-62 0.11653	11-Jul-19	07:35:19
91	91	190710M3_91	1901806-12 GW-PT-GZ130-159-177 0.11929	11-Jul-19	07:45:58
92	92	190710M3_92	1901828-01 EP-2 0.11348	11-Jul-19	07:56:31
93	93	190710M3_93	1901828-02 MW-11S 0.11603	11-Jul-19	08:07:09
94	94	190710M3_94	1901828-03 MW-12 0.11347	11-Jul-19	08:17:42
95	95	190710M3_95	IPA	11-Jul-19	08:28:20
96	96	190710M3_96	ST190710M3-15 PFC CS3 19G0806	11-Jul-19	08:38:53
97	97	190710M3_97	IPA	11-Jul-19	08:49:24
98	98	190710M3_98	IB TESTER	11-Jul-19	09:00:02

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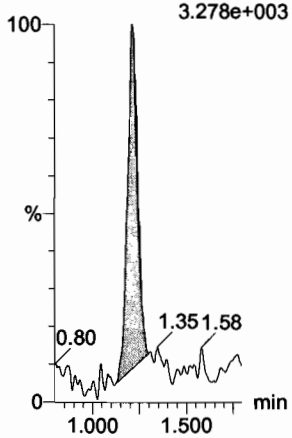
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

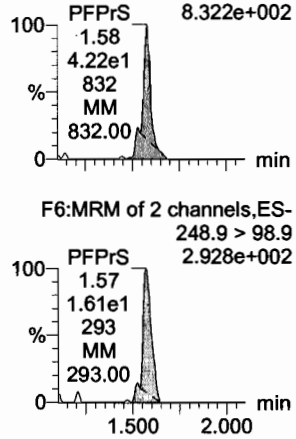
Method: Z:\Projects\PFAS.pro\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

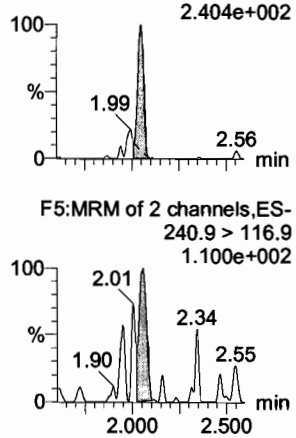
PFBA



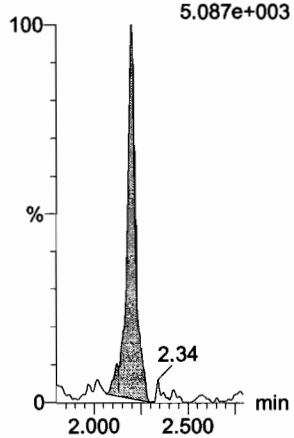
PFPrS



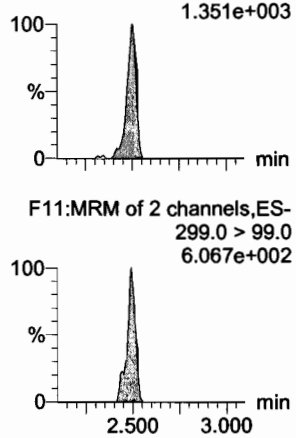
3:3 FTCA



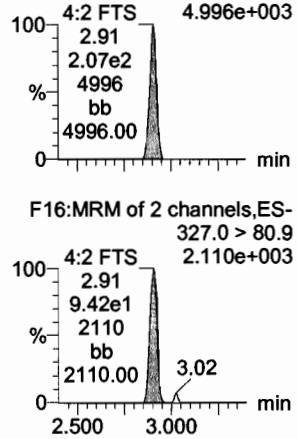
PFPeA



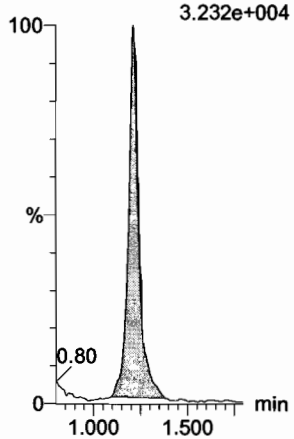
PFBS



4:2 FTS



13C3-PFBA



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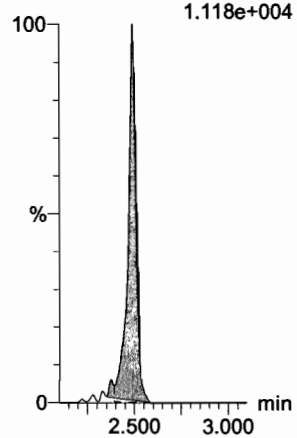

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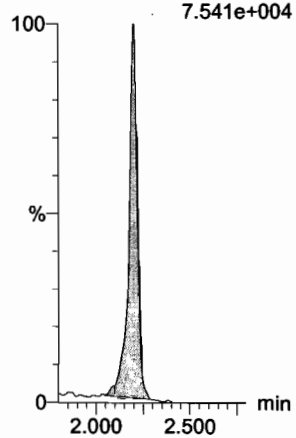

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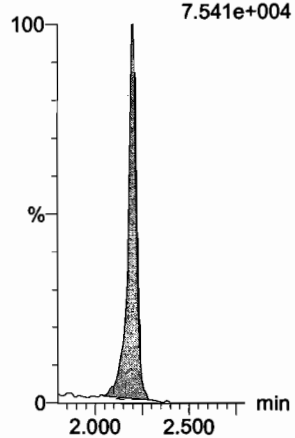
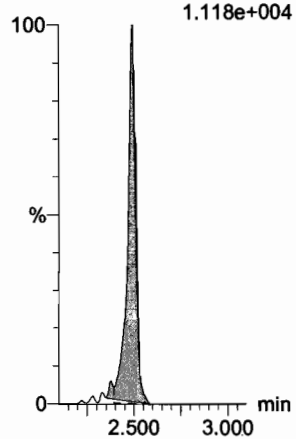
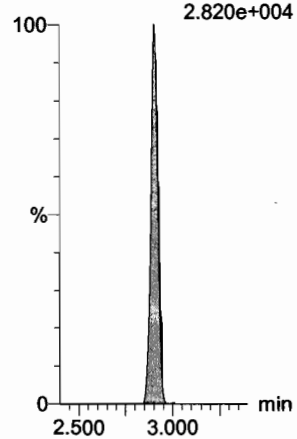


13C3-PFBS



13C2-4:2 FTS

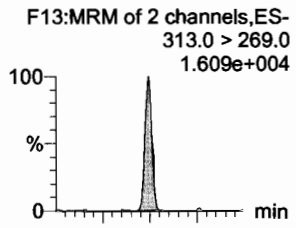


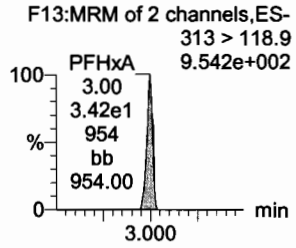
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

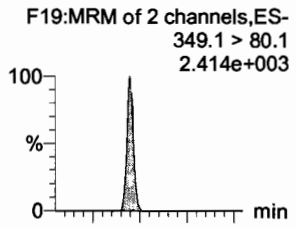
Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

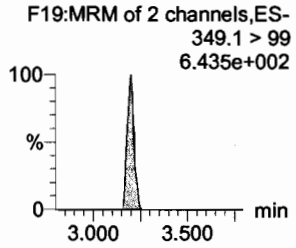
PFHxA



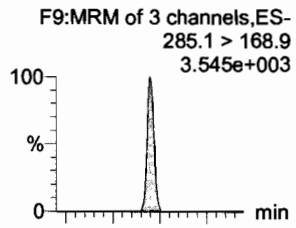


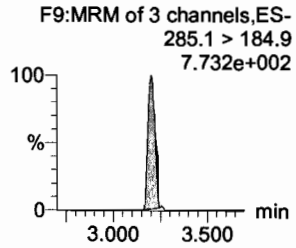
PFPeS



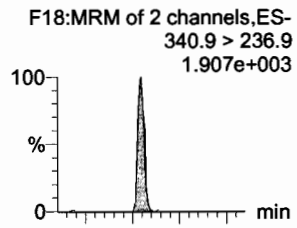


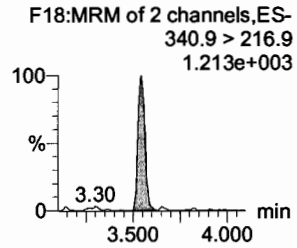
HFPO-DA





5:3 FTCA





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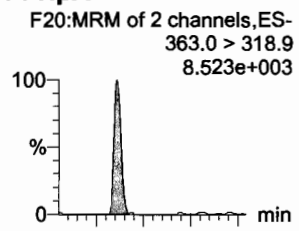

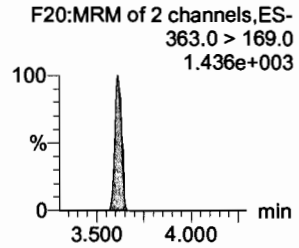

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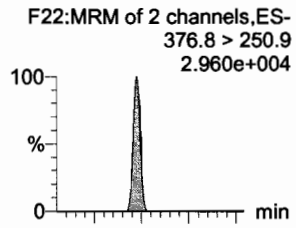
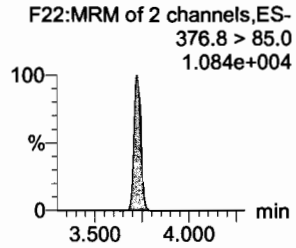
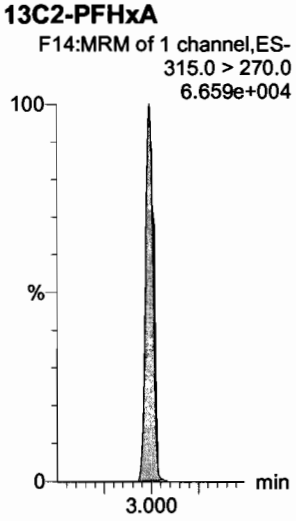
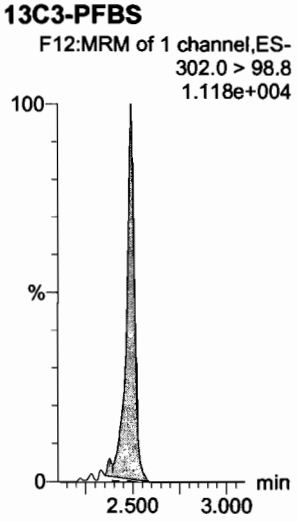




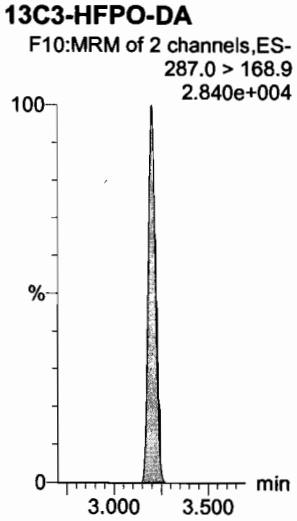
13C2-PFHxA



13C3-PFBS



13C3-HFPO-DA



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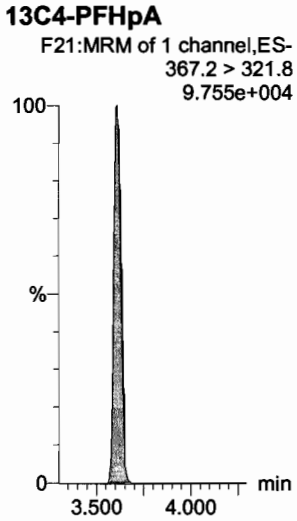

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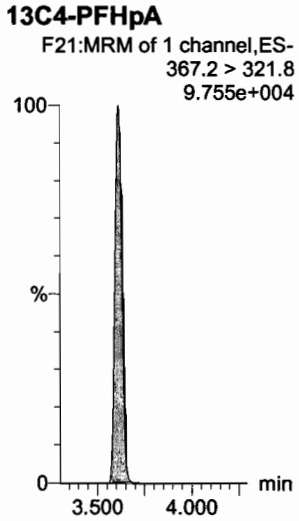

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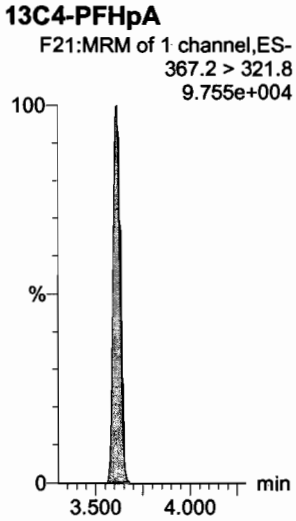
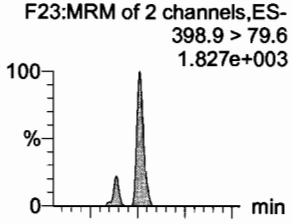


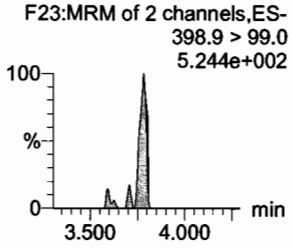
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

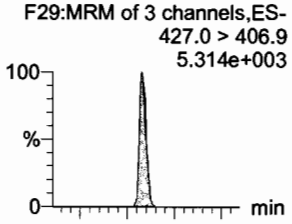
Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

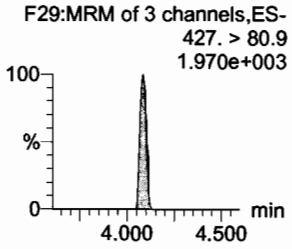
L-PFHxS





6:2 FTS





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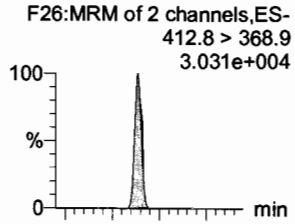

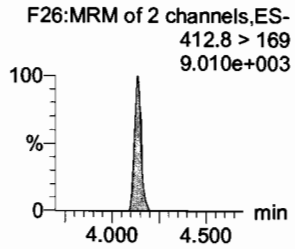

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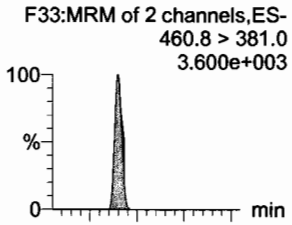

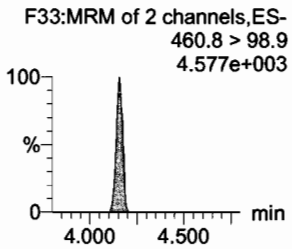

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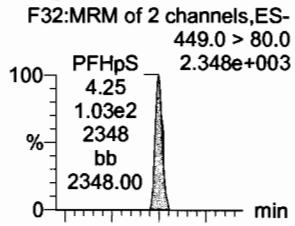
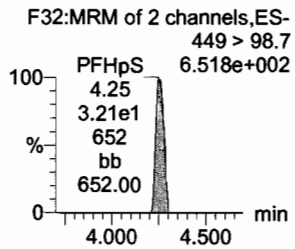
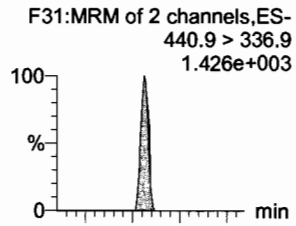
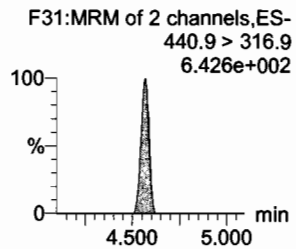




7:3 FTCA





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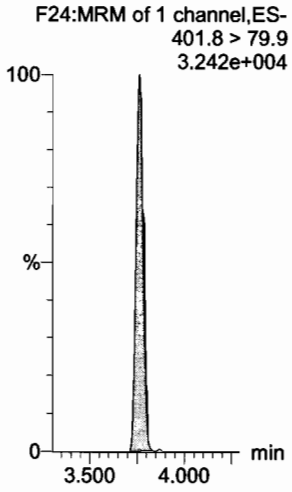
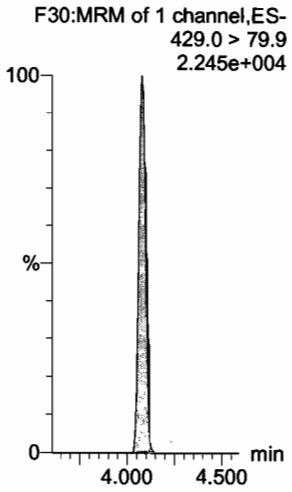


13C2-6:2 FTS



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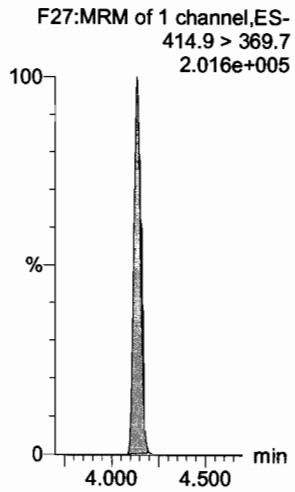
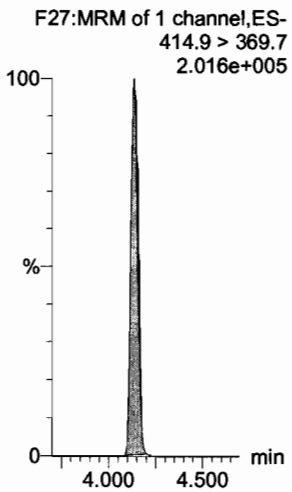
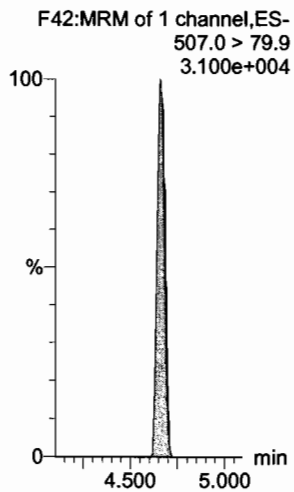


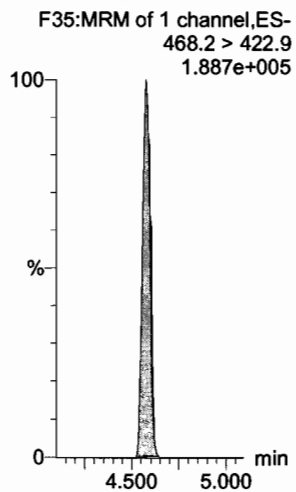
13C2-PFOA



13C8-PFOS



13C5-PFNA



Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

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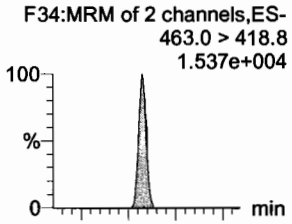
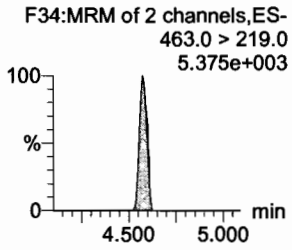
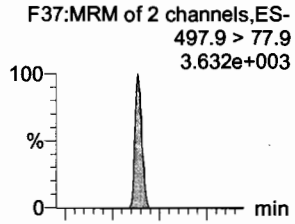
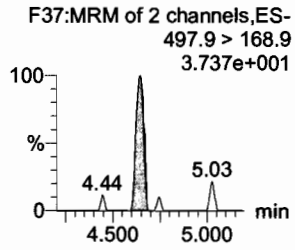


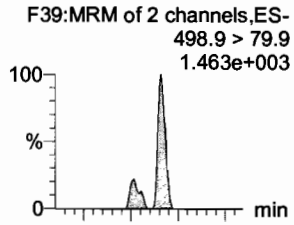


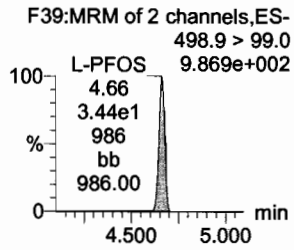
PFOSA



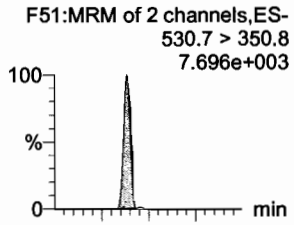


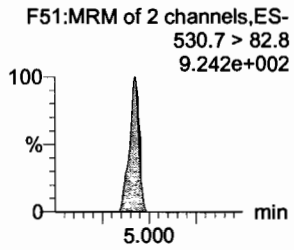
L-PFOS





9Cl-PF30NS





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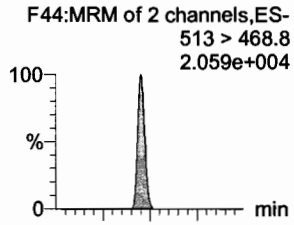
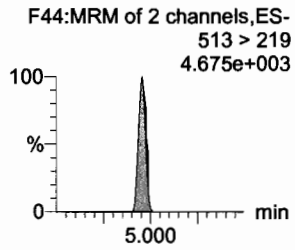
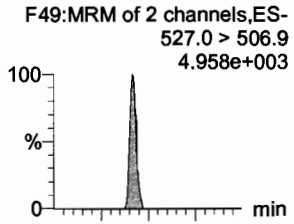
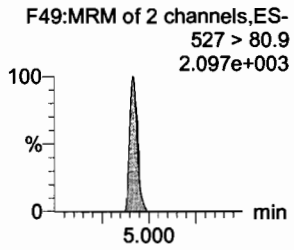


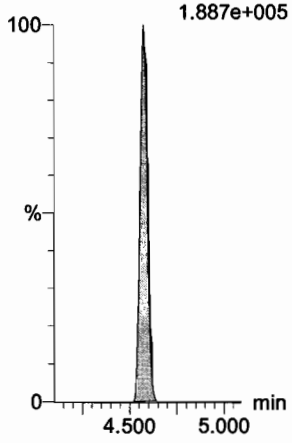


8:2 FTS

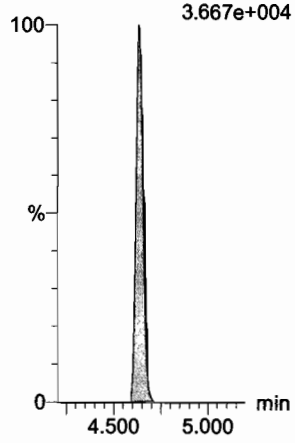




13C5-PFNA



13C8-PFOSA



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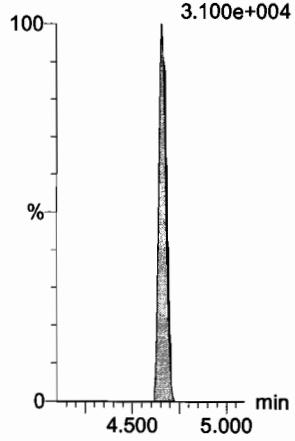
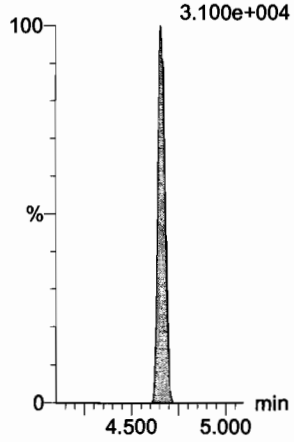
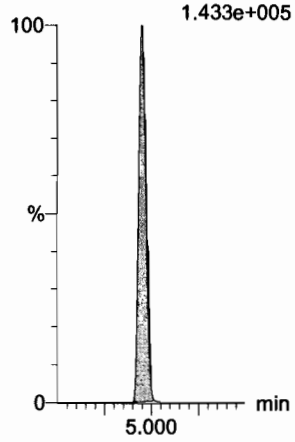


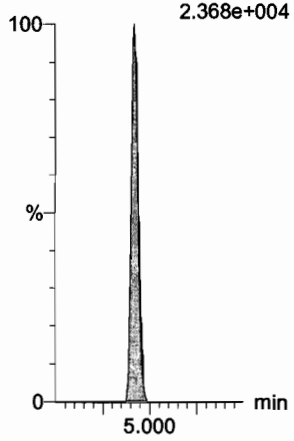
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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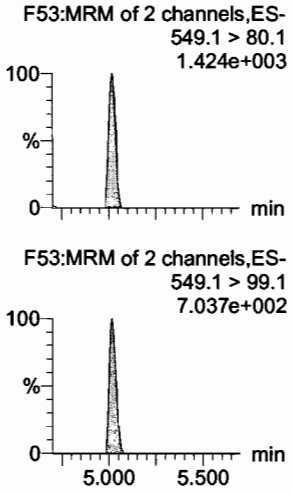
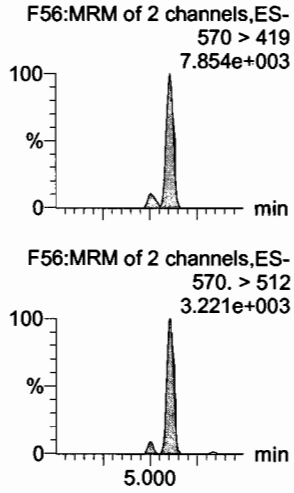
Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

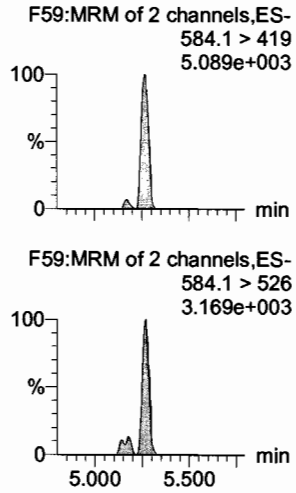
PFNS



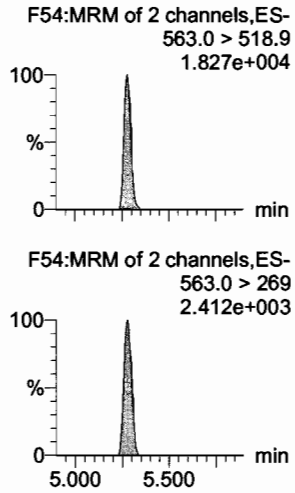
L-MeFOSAA



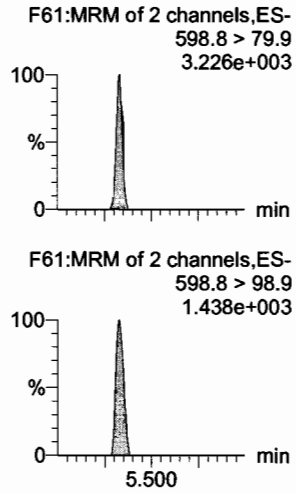
L-EtFOSAA



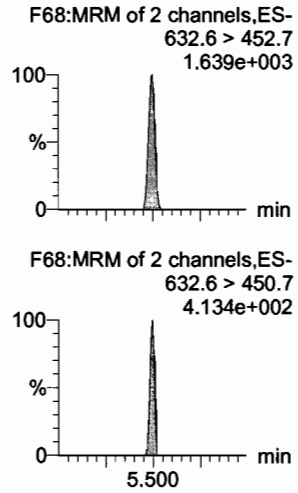
PFUdA



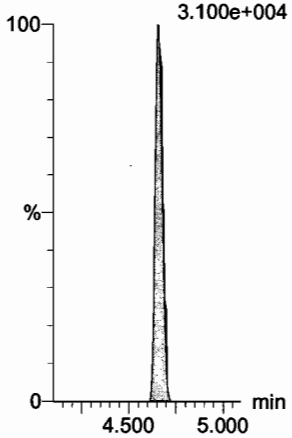
PFDS



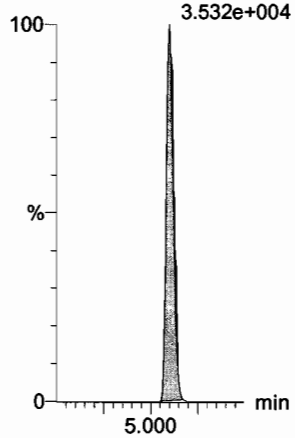
11Cl-PF30UdS



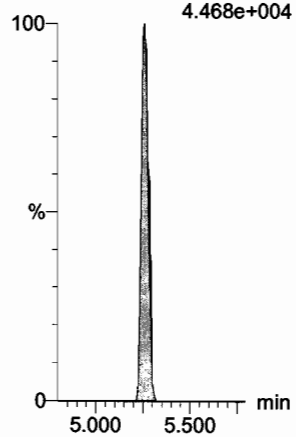
13C8-PFOS



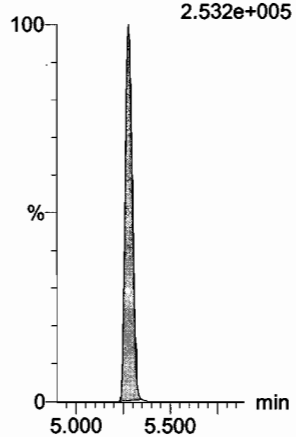
d3-N-MeFOSAA



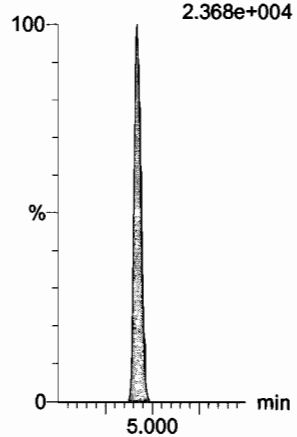
d5-N-EtFOSAA



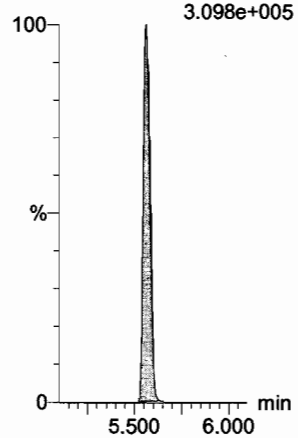
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

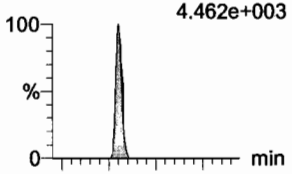


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

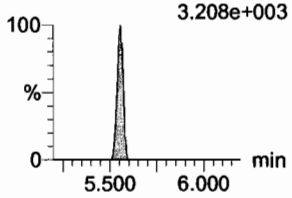
Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

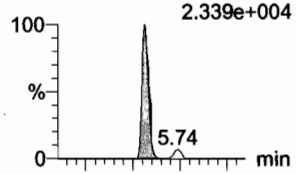
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
4.462e+003



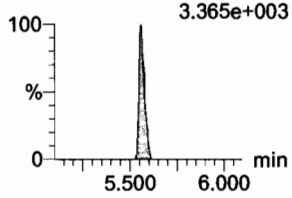
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.208e+003



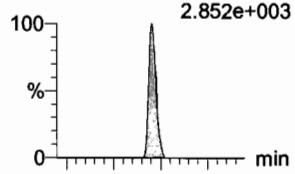
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.339e+004



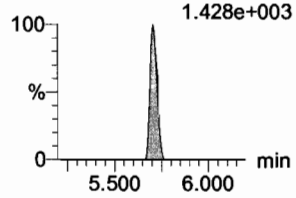
F62:MRM of 4 channels,ES-
612.9 > 318.8
3.365e+003



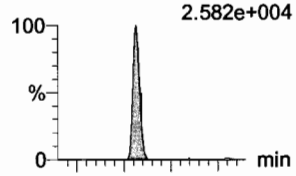
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
2.852e+003



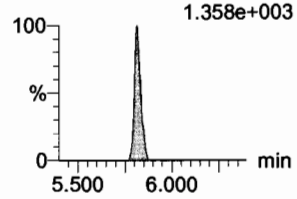
F43:MRM of 2 channels,ES-
512.1 > 219
1.428e+003



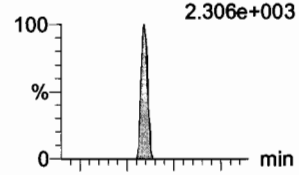
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.582e+004



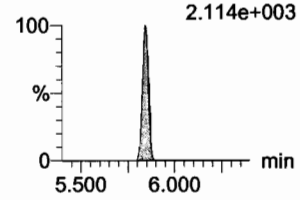
F70:MRM of 2 channels,ES-
662.9 > 319
1.358e+003



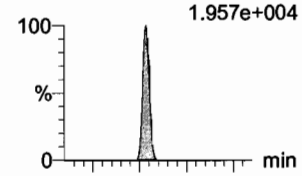
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
2.306e+003



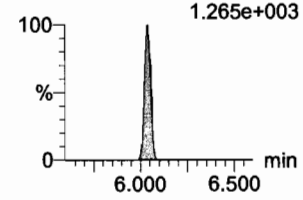
F71:MRM of 2 channels,ES-
698.8 > 98.9
2.114e+003



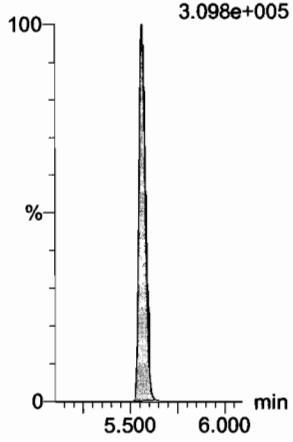
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.957e+004



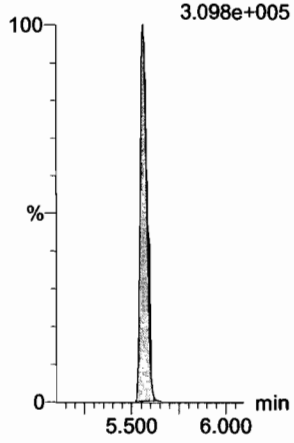
F72:MRM of 2 channels,ES-
713. > 369.0
1.265e+003



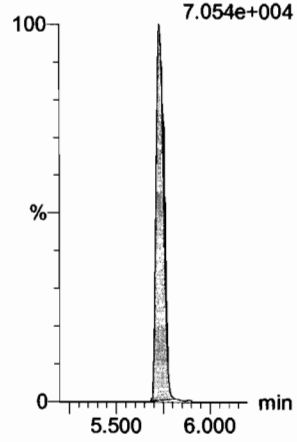
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005



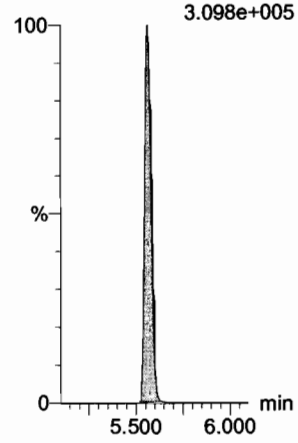
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005



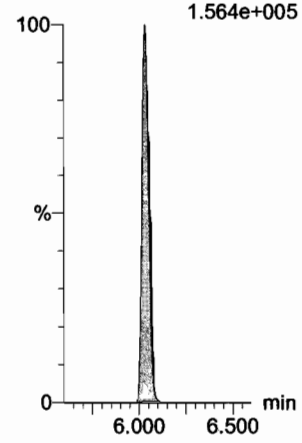
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
7.054e+004



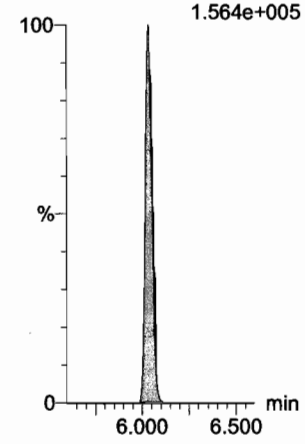
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.564e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.564e+005

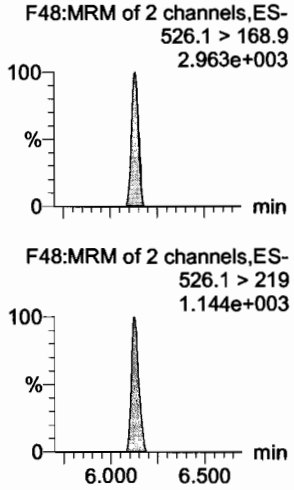


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

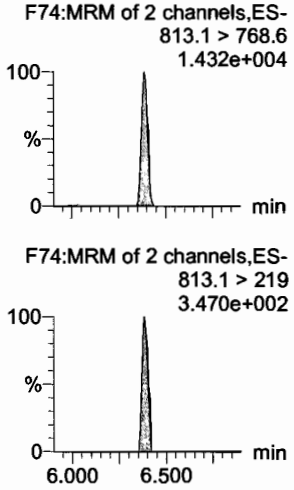
Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

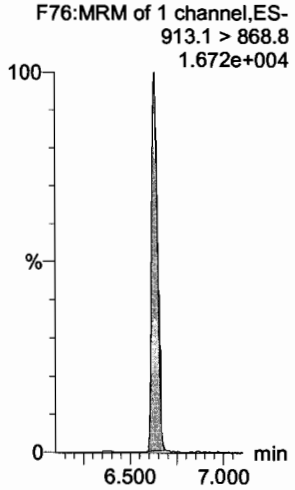
N-EtFOSA



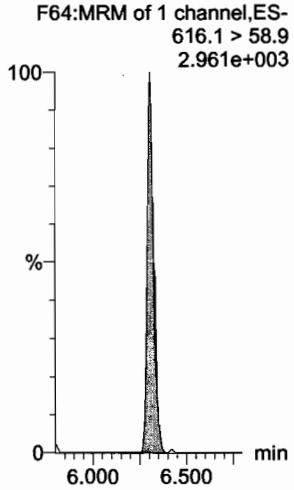
PFHxDA



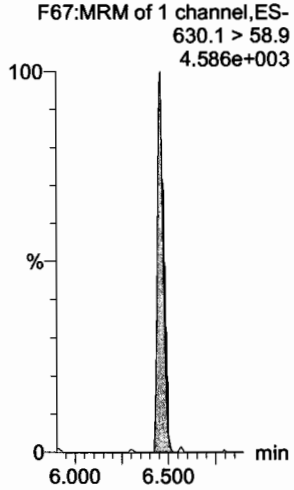
PFODA



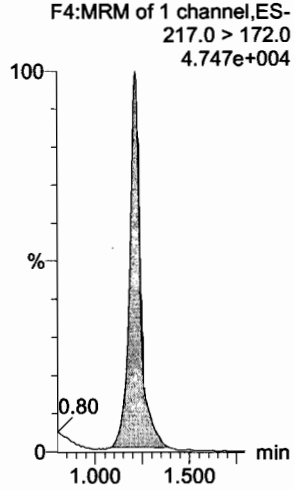
N-MeFOSE



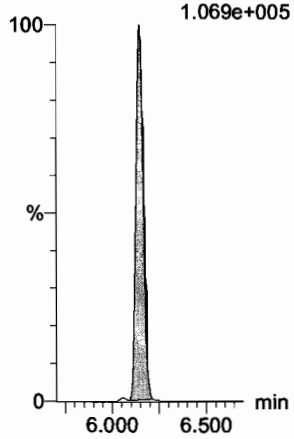
N-EtFOSE



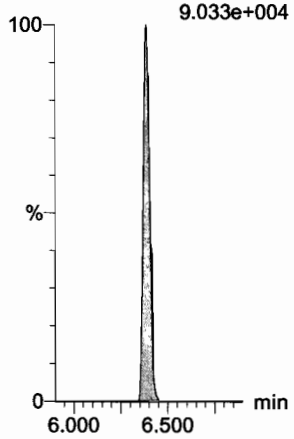
13C4-PFBA



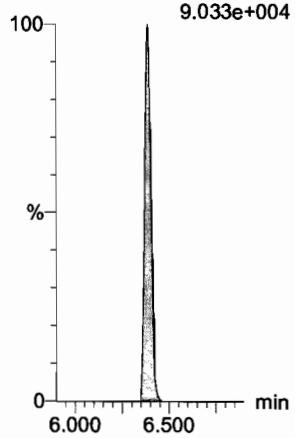
d5-N-ETFOSA



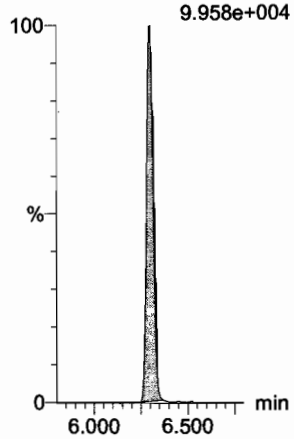
13C2-PFHxDA



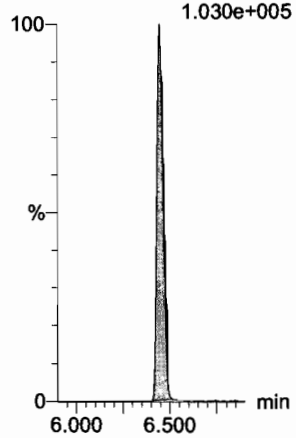
13C2-PFHxDA



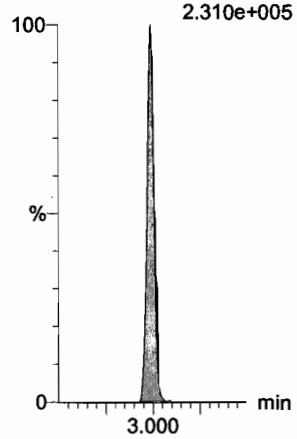
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

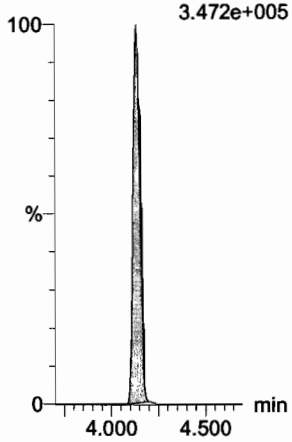


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-5.qld

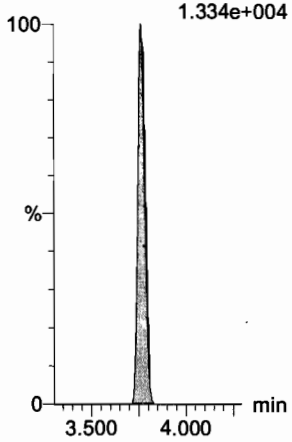
Last Altered: Thursday, July 11, 2019 11:36:58 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:49:03 Pacific Daylight Time

Name: 190710M3_5, Date: 10-Jul-2019, Time: 16:34:30, ID: ST190710M3-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

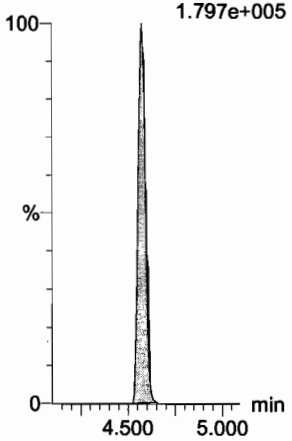
13C8-PFOA



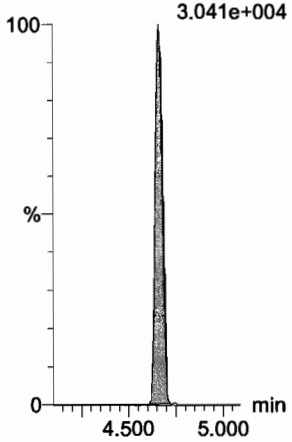
18O2-PFHxS



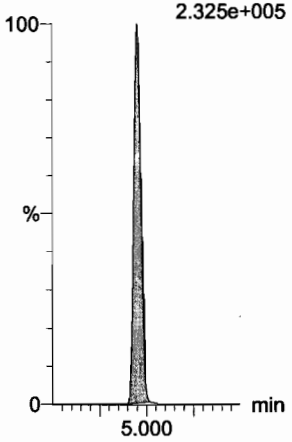
13C9-PFNA



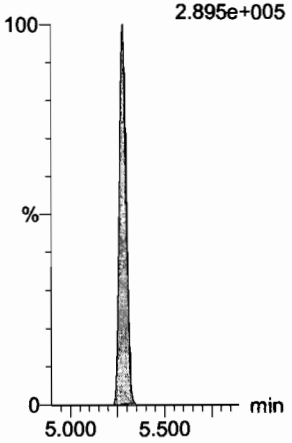
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	2191.342	1985.450	1.00	1.18	13.796	9.7	97.1	NO		
2	2	PFPrS	248.9 > 79.9	483.434	497.192	1.00	1.55	12.154	11.5	115.3	NO	2.785	NO
3	3	3:3 FTCA	240.9 > 176.9	120.503	3746.000	1.00	2.02	0.402	9.7	97.2	NO	1.712	NO
4	4	PFPeA	263.1 > 218.9	2731.292	3746.000	1.00	2.18	9.114	9.6	95.7	NO		
5	5	PFBS	299.0 > 79.7	1001.190	497.192	1.00	2.47	25.171	11.0	109.5	NO	3.212	NO
6	6	4:2 FTS	327.0 > 306.9	2579.435	1237.805	1.00	2.89	26.048	10.7	106.6	NO	1.842	NO
7	47	13C3-PFBA	216.1 > 171.8	1985.450	3123.175	1.00	1.18	7.946	12.2	97.8	NO		
8	49	13C3-PFBS	302.0 > 98.8	497.192	634.969	1.00	2.47	9.788	9.5	75.6	NO		
9	48	13C3-PFPeA	266.0 > 221.8	3746.000	10352.140	1.00	2.17	4.523	11.1	88.8	NO		
10	48	13C3-PFPeA	266.0 > 221.8	3746.000	10352.140	1.00	2.17	4.523	11.1	88.8	NO		
11	49	13C3-PFBS	302.0 > 98.8	497.192	634.969	1.00	2.47	9.788	9.5	75.6	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1237.805	634.969	1.00	2.89	24.367	10.9	87.1	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	7715.869	3295.595	1.00	2.97	11.706	10.1	100.8	NO	14.638	NO
15	8	PFPeS	349.1>80.1	1088.792	497.192	1.00	3.18	27.374	12.8	128.3	NO	1.516	NO
16	9	HFPO-DA	285.1 > 168.9	1346.256	1170.646	1.00	3.19	5.750	10.4	103.7	NO	2.277	NO
17	10	5:3 FTCA	340.9 > 236.9	885.565	4076.937	1.00	3.52	2.715	10.6	106.0	NO	1.445	NO
18	11	PFHpA	363.0 > 318.9	4122.657	4076.937	1.00	3.59	12.640	10.3	103.0	NO	5.621	NO
19	12	ADONA	376.8 > 250.9	13898.952	4076.937	1.00	3.71	42.615	9.8	98.3	NO	3.202	NO
20	52	13C2-PFHxA	315.0 > 270.0	3295.595	10352.140	1.00	2.97	3.979	5.0	100.4	NO		
21	49	13C3-PFBS	302.0 > 98.8	497.192	634.969	1.00	2.47	9.788	9.5	75.6	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1170.646	10352.140	1.00	3.19	1.414	4.6	92.2	NO		
23	53	13C4-PFHpA	367.2 > 321.8	4076.937	10352.140	1.00	3.59	4.923	12.6	100.7	NO		
24	53	13C4-PFHpA	367.2 > 321.8	4076.937	10352.140	1.00	3.59	4.923	12.6	100.7	NO		
25	53	13C4-PFHpA	367.2 > 321.8	4076.937	10352.140	1.00	3.59	4.923	12.6	100.7	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	986.290	1340.702	1.00	3.75	9.196	11.0	109.7	NO	2.045	NO
28	15	6:2 FTS	427.0 > 406.9	2330.215	975.340	1.00	4.07	29.864	10.2	102.3	NO	2.112	NO
29	16	L-PFOA	412.8 > 368.9	11973.030	8547.390	1.00	4.12	17.510	9.5	94.5	NO	3.568	NO
30	18	PFecHS	460.8 > 381.0	1830.349	8547.390	1.00	4.14	2.677	9.6	95.8	NO	0.930	NO
31	19	PFHpS	449.0 > 80.0	1063.329	1402.425	1.00	4.23	9.478	10.8	108.4	NO	2.379	NO
32	20	7:3 FTCA	440.9 > 336.9	1099.052	8159.550	1.00	4.55	1.684	12.5	125.2	NO	1.871	NO
33	54	13C3-PFHxS	401.8 > 79.9	1340.702	634.969	1.00	3.75	26.393	10.4	82.9	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	975.340	1420.256	1.00	4.06	8.584	11.7	93.3	NO		

√7# 07/11/19

7/11/19

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
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Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
35	58	13C2-PFOA	414.9 > 369.7	8547.390	14194.433	1.00	4.12	7.527	13.3	106.7	NO		
36	58	13C2-PFOA	414.9 > 369.7	8547.390	14194.433	1.00	4.12	7.527	13.3	106.7	NO		
37	59	13C8-PFOS	507.0 > 79.9	1402.425	1420.256	1.00	4.65	12.343	11.6	93.2	NO		
38	56	13C5-PFNA	468.2 > 422.9	8159.550	8545.334	1.00	4.56	11.936	12.1	97.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	7534.319	8159.550	1.00	4.56	11.542	10.5	105.0	NO	3.167	NO
41	22	PFOSA	497.9 > 77.9	1829.216	1821.299	1.00	4.62	12.554	9.8	98.4	NO	33.429	NO
42	23	L-PFOS	498.9 > 79.9	1428.217	1402.425	1.00	4.65	12.730	10.2	101.7	NO	2.038	NO
43	25	9Cl-PF30NS	530.7 > 350.8	3664.389	1402.425	1.00	4.87	32.661	10.4	103.7	NO	17.046	NO
44	26	PFDA	513 > 468.8	8694.800	6941.877	1.00	4.94	15.656	9.4	94.2	NO	4.608	NO
45	27	8:2 FTS	527.0 > 506.9	1818.050	1002.376	1.00	4.91	22.672	10.1	100.8	NO	1.371	NO
46	56	13C5-PFNA	468.2 > 422.9	8159.550	8545.334	1.00	4.56	11.936	12.1	97.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1821.299	13200.733	1.00	4.62	1.725	13.2	105.9	NO		
48	59	13C8-PFOS	507.0 > 79.9	1402.425	1420.256	1.00	4.65	12.343	11.6	93.2	NO		
49	59	13C8-PFOS	507.0 > 79.9	1402.425	1420.256	1.00	4.65	12.343	11.6	93.2	NO		
50	60	13C2-PFDA	515.1 > 469.9	6941.877	10564.525	1.00	4.94	8.214	12.4	99.2	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1002.376	1420.256	1.00	4.91	8.822	12.7	101.5	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1022.256	1402.425	1.00	5.01	9.112	10.4	104.1	NO	1.569	NO
54	29	L-MeFOSAA	570 > 419	3908.385	1530.098	1.00	5.10	31.929	10.7	106.8	NO	2.564	NO
55	31	L-EtFOSAA	584.1 > 419	2693.702	1847.953	1.00	5.26	18.221	9.2	92.1	NO	1.378	NO
56	33	PFUdA	563.0 > 518.9	7989.435	11091.568	1.00	5.27	9.004	9.7	96.6	NO	5.924	NO
57	34	PFDS	598.8 > 79.9	1446.540	1002.376	1.00	5.32	18.039	8.9	89.3	NO	1.781	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	725.955	12895.781	1.00	5.49	0.704	10.9	109.4	NO	6.742	NO
59	59	13C8-PFOS	507.0 > 79.9	1402.425	1420.256	1.00	4.65	12.343	11.6	93.2	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1530.098	13200.733	1.00	5.09	1.449	11.2	89.8	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1847.953	13200.733	1.00	5.25	1.750	11.9	95.0	NO		
62	63	13C2-PFUdA	565 > 519.8	11091.568	13200.733	1.00	5.27	10.503	12.3	98.0	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1002.376	1420.256	1.00	4.91	8.822	12.7	101.5	NO		
64	65	13C2-PFDoA	614.7 > 569.7	12895.781	10564.525	1.00	5.56	15.258	12.4	99.3	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	1944.536	1002.376	1.00	5.54	24.249	9.1	91.4	NO	1.543	NO
67	37	PFDoA	612.9 > 569.0	9411.913	12895.781	1.00	5.56	9.123	9.6	95.6	NO	7.148	NO
68	38	N-MeFOSA	512.1 > 168.9	1525.206	3353.869	1.00	5.69	68.214	53.4	106.8	NO	1.658	NO

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
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Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
69	39	PFTrDA	662.9 > 618.9	10593.382	12895.781	1.00	5.81	10.268	9.7	96.9	NO	14.434	NO
70	40	PFDoS	698.8 > 79.9	1254.618	6313.781	1.00	5.84	2.484	10.3	102.8	NO	1.884	NO
71	41	PFTeDA	713.0 > 669.0	7719.247	6313.781	1.00	6.03	15.283	10.2	102.0	NO	14.556	NO
72	65	13C2-PFDoA	614.7 > 569.7	12895.781	10564.525	1.00	5.56	15.258	12.4	99.3	NO		
73	65	13C2-PFDoA	614.7 > 569.7	12895.781	10564.525	1.00	5.56	15.258	12.4	99.3	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3353.869	13200.733	1.00	5.71	3.176	143.3	95.5	NO		
75	65	13C2-PFDoA	614.7 > 569.7	12895.781	10564.525	1.00	5.56	15.258	12.4	99.3	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6313.781	13200.733	1.00	6.03	5.979	11.7	93.5	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6313.781	13200.733	1.00	6.03	5.979	11.7	93.5	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	1584.693	5056.503	1.00	6.12	47.010	51.2	102.4	NO	2.006	NO
80	43	PFHxDA	813.1 > 768.6	5645.703	3774.864	1.00	6.39	7.478	9.9	98.8	NO	17.754	NO
81	44	PFODA	913.1 > 868.8	5909.558	3774.864	1.00	6.63	7.828	9.4	93.6	NO		
82	45	N-MeFOSE	616.1 > 58.9	1649.026	4666.709	1.00	6.31	53.004	47.2	94.5	NO		
83	46	N-EtFOSE	630.1 > 58.9	2077.877	4415.252	1.00	6.46	70.592	50.2	100.4	NO		
84	72	13C4-PFBA	217.0 > 172.0	3123.175	3123.175	1.00	1.19	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	5056.503	13200.733	1.00	6.13	4.788	153.6	102.4	NO		
86	69	13C2-PFHxDA	815 > 769.7	3774.864	13200.733	1.00	6.39	3.574	4.9	97.3	NO		
87	69	13C2-PFHxDA	815 > 769.7	3774.864	13200.733	1.00	6.39	3.574	4.9	97.3	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4666.709	13200.733	1.00	6.30	4.419	158.1	105.4	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	4415.252	13200.733	1.00	6.45	4.181	152.0	101.3	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10352.140	10352.140	1.00	2.97	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	14194.433	14194.433	1.00	4.12	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	634.969	634.969	1.00	3.75	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8545.334	8545.334	1.00	4.56	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1420.256	1420.256	1.00	4.65	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	10564.525	10564.525	1.00	4.94	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	13200.733	13200.733	1.00	5.27	12.500	12.5	100.0	NO		

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Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA

	#	Name		ID	Acq.Date	Acq.Time
1	1	190710M3_1		Tester	10-Jul-19	15:51:59
2	2	190710M3_2		IPA	10-Jul-19	16:02:43
3	3	190710M3_3		ST190710M3-1 PFC CS-2 19G0801	10-Jul-19	16:13:19
4	4	190710M3_4		ST190710M3-2 PFC CS-1 19G0802	10-Jul-19	16:23:51
5	5	190710M3_5	A	ST190710M3-3 PFC CS0 19G0803	10-Jul-19	16:34:30
6	6	190710M3_6		ST190710M3-4 PFC CS1 19G0804	10-Jul-19	16:45:08
7	7	190710M3_7		ST190710M3-5 PFC CS2 19G0805	10-Jul-19	16:55:41
8	8	190710M3_8		ST190710M3-6 PFC CS3 19G0806	10-Jul-19	17:06:19
9	9	190710M3_9		ST190710M3-7 PFC CS4 19G0807	10-Jul-19	17:16:53
10	10	190710M3_10		ST190710M3-8 PFC CS5 19G0808	10-Jul-19	17:27:30
11	11	190710M3_11		ST190710M3-9 PFC CS6 19G0809	10-Jul-19	17:38:02
12	12	190710M3_12		ST190710M3-10 PFC CS7 19G0810	10-Jul-19	17:48:41
13	13	190710M3_13		IB	10-Jul-19	17:59:14
14	14	190710M3_14		ST190710M3-1 PFC ICV 19G0811	10-Jul-19	18:09:52
15	15	190710M3_15		IPA	10-Jul-19	18:20:26
16	16	190710M3_16		B9G0061-BS1 OPR 0.125	10-Jul-19	18:31:07
17	17	190710M3_17		B9F0280-BS1 OPR 1	10-Jul-19	18:41:42
18	18	190710M3_18		B9F0280-MS1 Matrix Spike 1.08	10-Jul-19	18:52:16
19	19	190710M3_19		B9F0280-MSD1 Matrix Spike Dup 1.04	10-Jul-19	19:02:54
20	20	190710M3_20		B9F0280-BLK1 Method Blank 1	10-Jul-19	19:13:27
21	21	190710M3_21		1901683-01 Northern 1 3.56	10-Jul-19	19:24:06
22	22	190710M3_22		1901683-02 Northern 2 3.6	10-Jul-19	19:34:44
23	23	190710M3_23		1901683-03 Hagatna 1 3.93	10-Jul-19	19:45:18
24	24	190710M3_24		1901683-04 Hagatna 2 3.99	10-Jul-19	19:55:56
25	25	190710M3_25		1901683-05 Agat Santarita 1 2.51	10-Jul-19	20:06:29
26	26	190710M3_26		1901683-06 Agat Santarita 2 2.47	10-Jul-19	20:17:07
27	27	190710M3_27		1901766-05 SAOA-B04-SO-5-5.5 1.08	10-Jul-19	20:27:41
28	28	190710M3_28		1901766-06 SAOA-B04-SO-20-20.5 1.2	10-Jul-19	20:38:19
29	29	190710M3_29		1901766-07 SAOA-B04-SO-47-47.5 1.19	10-Jul-19	20:48:52
30	30	190710M3_30		1901768-01 Sludge 8.59	10-Jul-19	20:59:30
31	31	190710M3_31		IPA	10-Jul-19	21:10:09
32	32	190710M3_32		ST190710M3-11 PFC CS3 19G0806	10-Jul-19	21:20:42

A CRV not used.

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Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
33	33	190710M3_33	IPA	10-Jul-19	21:31:20
34	34	190710M3_34	B9G0092-BS1 OPR 0.25	10-Jul-19	21:41:54
35	35	190710M3_35	B9G0092-BSD1 LCSD 0.25	10-Jul-19	21:52:23
36	36	190710M3_36	B9G0092-BLK1 Method Blank 0.25	10-Jul-19	22:03:02
37	37	190710M3_37	1901784-01RE1 BWS-1 0.23881	10-Jul-19	22:13:40
38	38	190710M3_38	1901784-02RE1 FRB-1 0.24972	10-Jul-19	22:24:13
39	39	190710M3_39	B9F0281-BS1 OPR 1	10-Jul-19	22:34:44
40	40	190710M3_40	B9F0281-BLK1 Method Blank 1	10-Jul-19	22:45:22
41	41	190710M3_41	1901680-02 #5 Pulper-02 (Fiber) 57.53	10-Jul-19	22:55:56
42	42	190710M3_42	1901680-04 #1 Pulper-02 (Fiber) 56.76	10-Jul-19	23:06:34
43	43	190710M3_43	1901680-06 Sludge Press 2.88	10-Jul-19	23:17:07
44	44	190710M3_44	1901680-07 Landfill-01 1.85	10-Jul-19	23:27:45
45	45	190710M3_45	1901680-08 Landfill-02 2.17	10-Jul-19	23:38:18
46	46	190710M3_46	1901680-10 #5 Pulper-03 (Fiber) 46.58	10-Jul-19	23:48:57
47	47	190710M3_47	1901680-12 #1 Pulper-03 (Fiber) 63.69	10-Jul-19	23:59:35
48	48	190710M3_48	1901680-14 Primary Sludge-02 21.01	11-Jul-19	00:10:08
49	49	190710M3_49	IPA	11-Jul-19	00:20:46
50	50	190710M3_50	ST190710M3-12 PFC CS3 19G0806	11-Jul-19	00:31:24
51	51	190710M3_51	IPA	11-Jul-19	00:41:57
52	52	190710M3_52	B9G0063-BS1 OPR 0.25	11-Jul-19	00:52:35
53	53	190710M3_53	B9G0063-BLK1 Method Blank 0.25	11-Jul-19	01:03:14
54	54	190710M3_54	1901896-01 12013 0.23851	11-Jul-19	01:13:47
55	55	190710M3_55	1901910-01 SW1906280950KME 0.24336	11-Jul-19	01:24:25
56	56	190710M3_56	1901910-02 SW1906281025KME 0.24464	11-Jul-19	01:34:59
57	57	190710M3_57	1901910-03 SW1906281035KME 0.24318	11-Jul-19	01:45:37
58	58	190710M3_58	1901911-01 WMP1907010855JSJ 0.2509	11-Jul-19	01:56:10
59	59	190710M3_59	1901911-02 WMP1907010906JSJ 0.2559	11-Jul-19	02:06:48
60	60	190710M3_60	1901911-03 WMP1907010915JSJ 0.25216	11-Jul-19	02:17:26
61	61	190710M3_61	B9F0279-BS1 OPR 1	11-Jul-19	02:27:59
62	62	190710M3_62	B9F0279-BLK1 Method Blank 1	11-Jul-19	02:38:38
63	63	190710M3_63	1901679-03 #5A Pulper-01 (Fiber) 41.24	11-Jul-19	02:49:11
64	64	190710M3_64	1901679-05 #1 Pulper-01 (Fiber) 34.15	11-Jul-19	02:59:49
65	65	190710M3_65	1901679-07 Primary Sludge-01 24.04	11-Jul-19	03:10:22
66	66	190710M3_66	IPA	11-Jul-19	03:21:00
67	67	190710M3_67	ST190710M3-13 PFC CS3 19G0806	11-Jul-19	03:31:34
68	68	190710M3_68	IPA	11-Jul-19	03:42:12

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Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:57:14 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:57:21 Pacific Daylight Time

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
69	69	190710M3_69	1901679-08 Secondary Sludge-01 3.7	11-Jul-19	03:52:46
70	70	190710M3_70	1901681-01 Secondary Sludge-02 4.43	11-Jul-19	04:03:24
71	71	190710M3_71	1901681-06 #1 Pulper-04 (Filter) 75.63	11-Jul-19	04:13:56
72	72	190710M3_72	1901681-08 #5 Pulper-04 (Filter) 49.06	11-Jul-19	04:24:35
73	73	190710M3_73	B9G0022-BS1 OPR 0.125	11-Jul-19	04:35:08
74	74	190710M3_74	B9G0022-MS1 Matrix Spike 0.11809	11-Jul-19	04:45:46
75	75	190710M3_75	B9G0022-MSD1 Matrix Spike Dup 0.11917	11-Jul-19	04:56:19
76	76	190710M3_76	B9G0022-BLK1 Method Blank 0.125	11-Jul-19	05:06:57
77	77	190710M3_77	1901806-01 GW-PT-MW24-120-126 0.11537	11-Jul-19	05:17:31
78	78	190710M3_78	1901806-02 GW-PT-MW24-106-112 0.11614	11-Jul-19	05:28:01
79	79	190710M3_79	1901806-03 GW-PT-MW24-98-104 0.11569	11-Jul-19	05:38:39
80	80	190710M3_80	1901806-04 GW-PT-MW24-86-92 0.1179	11-Jul-19	05:49:17
81	81	190710M3_81	1901806-05 GW-PT-GZ110-179-185 0.11643	11-Jul-19	05:59:51
82	82	190710M3_82	1901806-06 GW-PT-GZ110-170-176 0.11659	11-Jul-19	06:10:29
83	83	190710M3_83	IPA	11-Jul-19	06:21:07
84	84	190710M3_84	ST190710M3-14 PFC CS3 19G0806	11-Jul-19	06:31:40
85	85	190710M3_85	IPA	11-Jul-19	06:42:18
86	86	190710M3_86	1901806-07 GW-PT-GZ110-155-166 0.11833	11-Jul-19	06:52:57
87	87	190710M3_87	1901806-08 GW-PT-GZ110-140-151 0.11879	11-Jul-19	07:03:30
88	88	190710M3_88	1901806-09 GW-PT-GZ110-121-132 0.11742	11-Jul-19	07:14:08
89	89	190710M3_89	1901806-10 GW-PT-GZ110-79-90 0.11878	11-Jul-19	07:24:41
90	90	190710M3_90	1901806-11 GW-PT-GZ110-56-62 0.11653	11-Jul-19	07:35:19
91	91	190710M3_91	1901806-12 GW-PT-GZ130-159-177 0.11929	11-Jul-19	07:45:58
92	92	190710M3_92	1901828-01 EP-2 0.11348	11-Jul-19	07:56:31
93	93	190710M3_93	1901828-02 MW-11S 0.11603	11-Jul-19	08:07:09
94	94	190710M3_94	1901828-03 MW-12 0.11347	11-Jul-19	08:17:42
95	95	190710M3_95	IPA	11-Jul-19	08:28:20
96	96	190710M3_96	ST190710M3-15 PFC CS3 19G0806	11-Jul-19	08:38:53
97	97	190710M3_97	IPA	11-Jul-19	08:49:24
98	98	190710M3_98	IB TESTER	11-Jul-19	09:00:02

Vista Analytical Laboratory

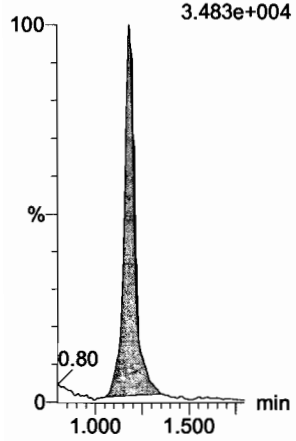
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

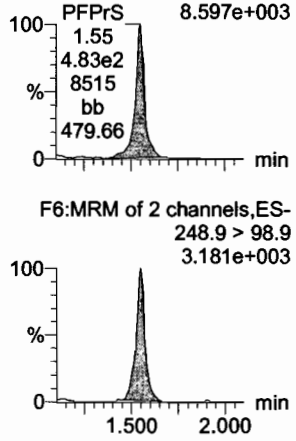
Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019M3.mdb 11 Jul 2019 11:32:03
Calibration: Z:\Projects\PFAS.pro\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

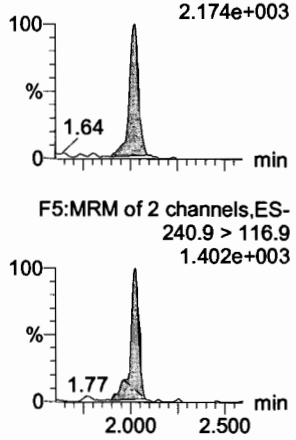
PFBA



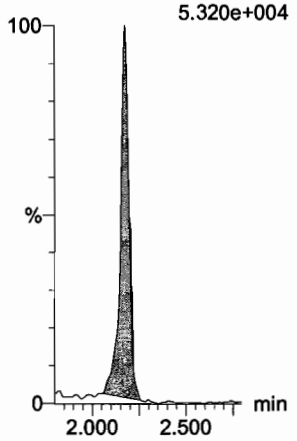
PFPrS



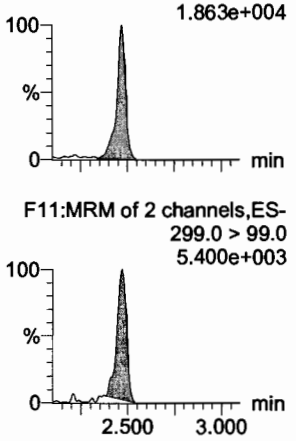
3:3 FTCA



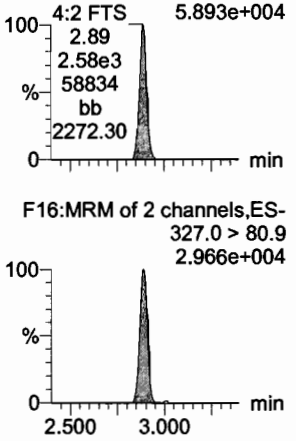
PFPeA



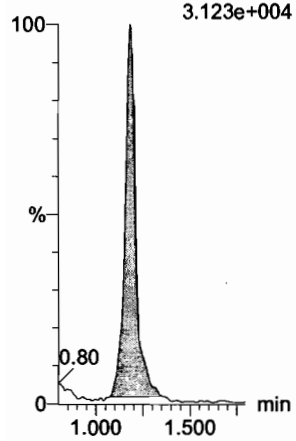
PFBS



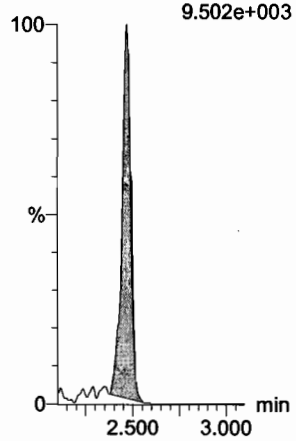
4:2 FTS



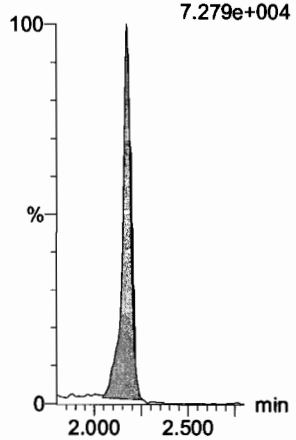
13C3-PFBA



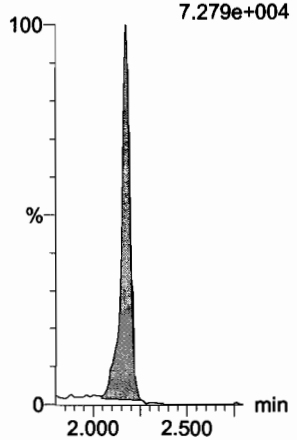
13C3-PFBS



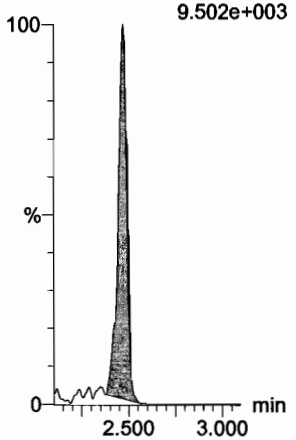
13C3-PFPeA



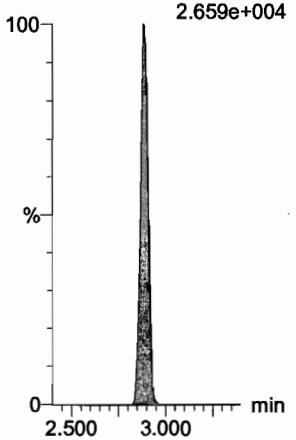
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

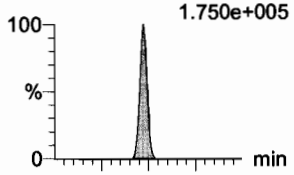


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

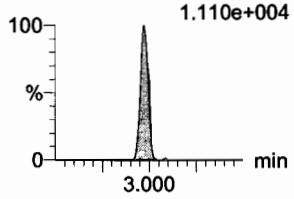
Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

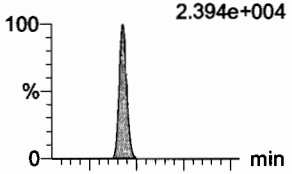
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.750e+005



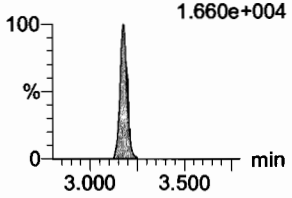
F13:MRM of 2 channels,ES-
313 > 118.9
1.110e+004



PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
2.394e+004



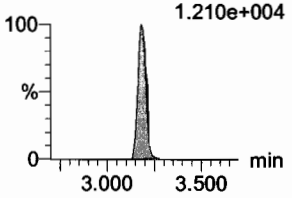
F19:MRM of 2 channels,ES-
349.1 > 99
1.660e+004



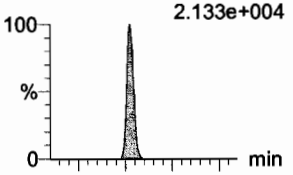
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
2.954e+004



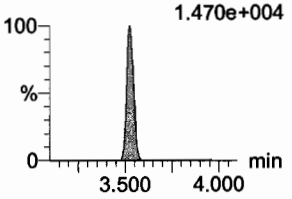
F9:MRM of 3 channels,ES-
285.1 > 184.9
1.210e+004



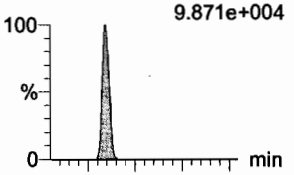
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
2.133e+004



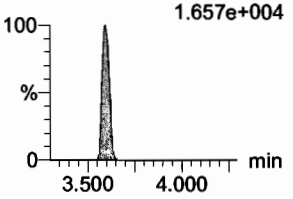
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.470e+004



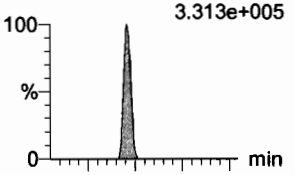
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
9.871e+004



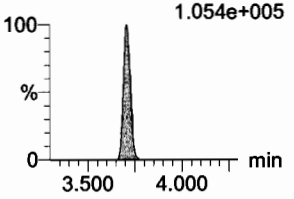
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.657e+004



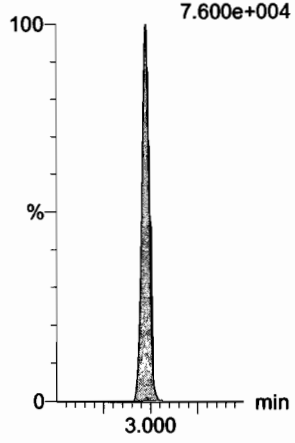
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
3.313e+005



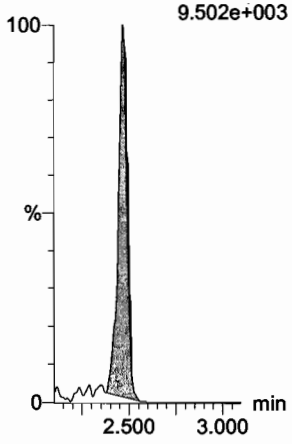
F22:MRM of 2 channels,ES-
376.8 > 85.0
1.054e+005



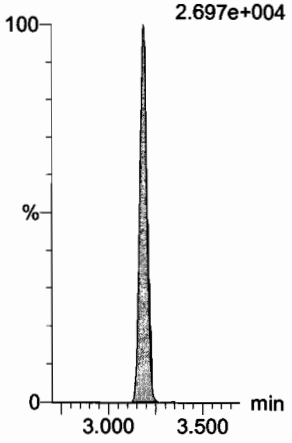
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
7.600e+004



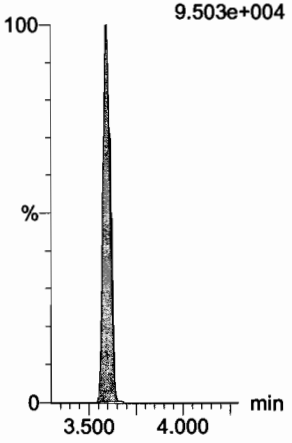
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
9.502e+003



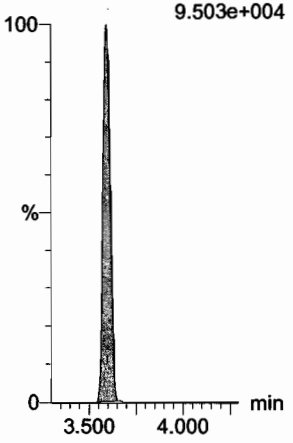
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
2.697e+004



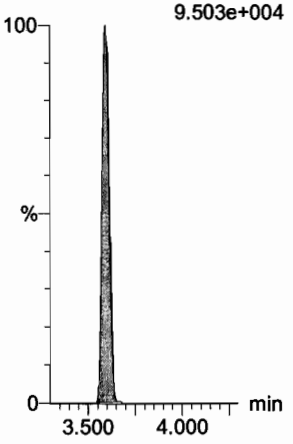
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
9.503e+004



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
9.503e+004



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
9.503e+004

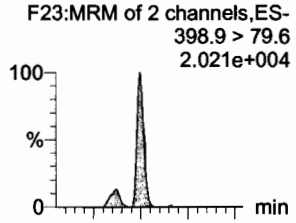


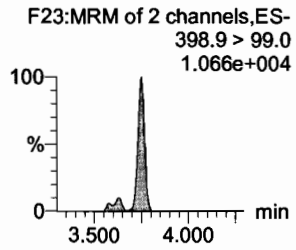
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

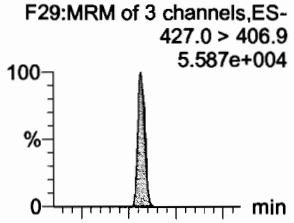
Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

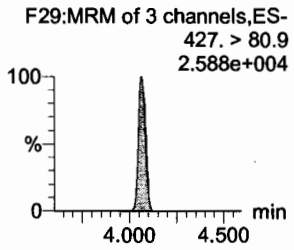
L-PFHxS



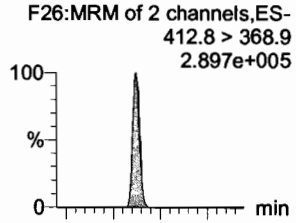


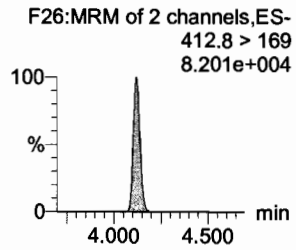
6:2 FTS



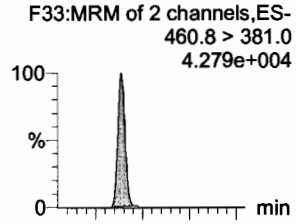


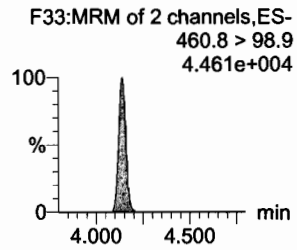
L-PFOA



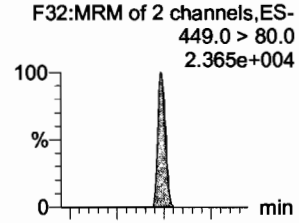


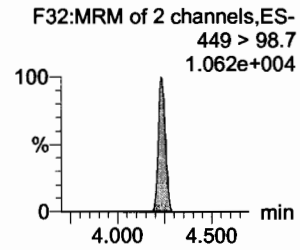
PFEChS



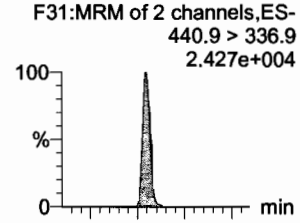


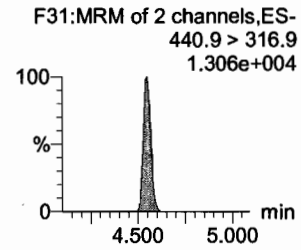
PFHpS



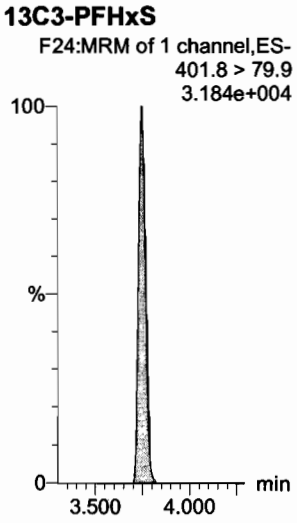


7:3 FTCA

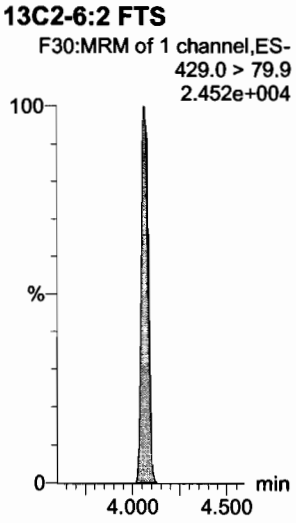




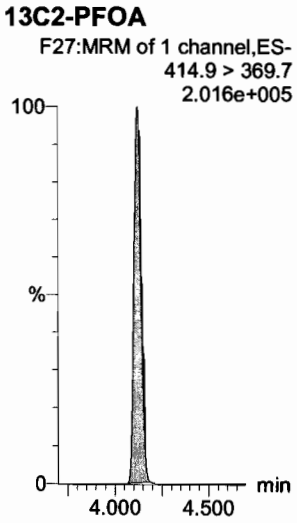
13C3-PFHxS



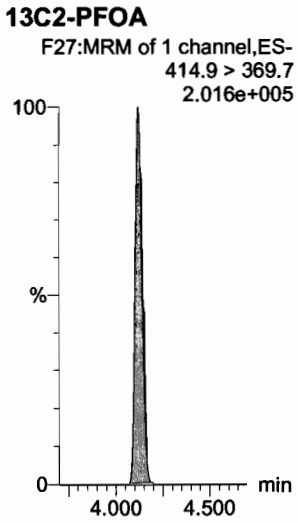
13C2-6:2 FTS



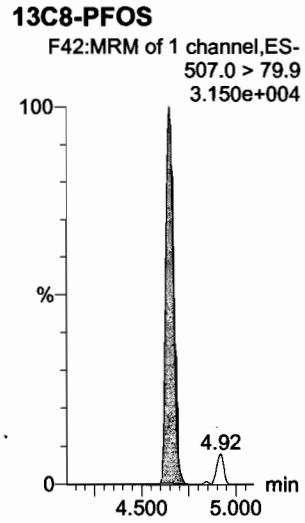
13C2-PFOA



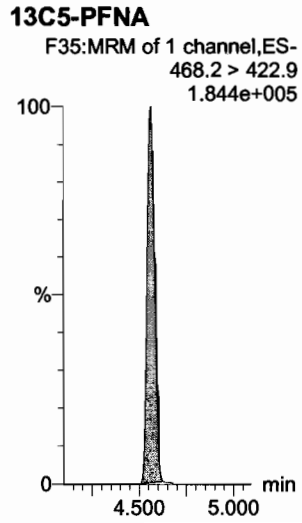
13C2-PFOA



13C8-PFOS



13C5-PFNA

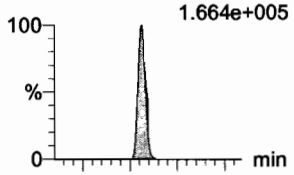


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

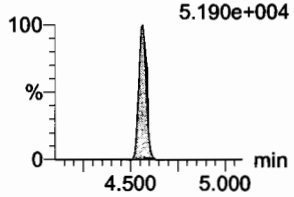
Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

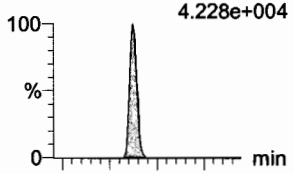
PFNA
F34:MRM of 2 channels,ES-
463.0 > 418.8
1.664e+005



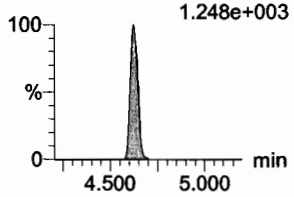
F34:MRM of 2 channels,ES-
463.0 > 219.0
5.190e+004



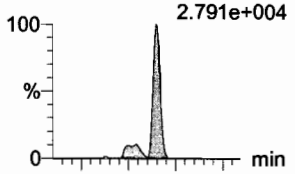
PFOSA
F37:MRM of 2 channels,ES-
497.9 > 77.9
4.228e+004



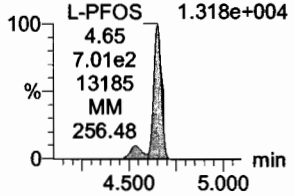
F37:MRM of 2 channels,ES-
497.9 > 168.9
1.248e+003



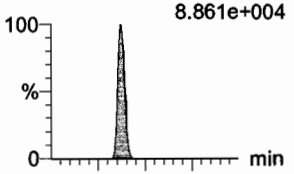
L-PFOS
F39:MRM of 2 channels,ES-
498.9 > 79.9
2.791e+004



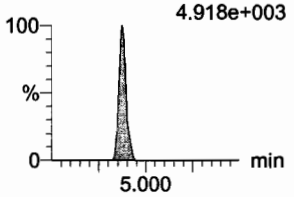
F39:MRM of 2 channels,ES-
498.9 > 99.0
1.318e+004



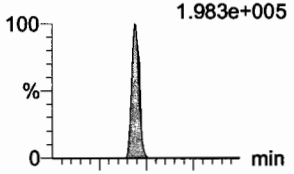
9Cl-PF30NS
F51:MRM of 2 channels,ES-
530.7 > 350.8
8.861e+004



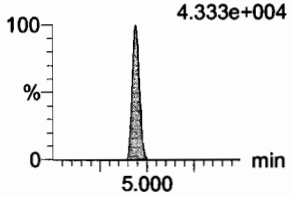
F51:MRM of 2 channels,ES-
530.7 > 82.8
4.918e+003



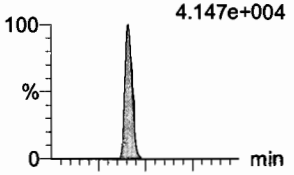
PFDA
F44:MRM of 2 channels,ES-
513 > 468.8
1.983e+005



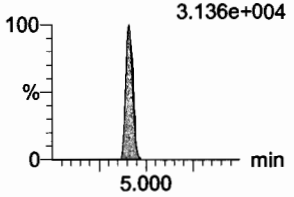
F44:MRM of 2 channels,ES-
513 > 219
4.333e+004



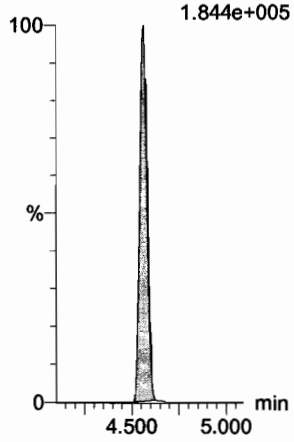
8:2 FTS
F49:MRM of 2 channels,ES-
527.0 > 506.9
4.147e+004



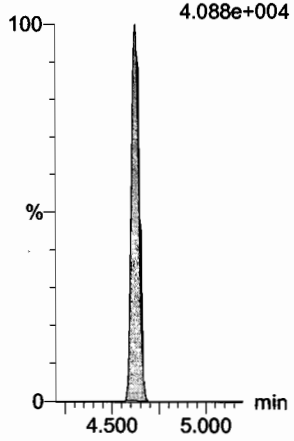
F49:MRM of 2 channels,ES-
527 > 80.9
3.136e+004



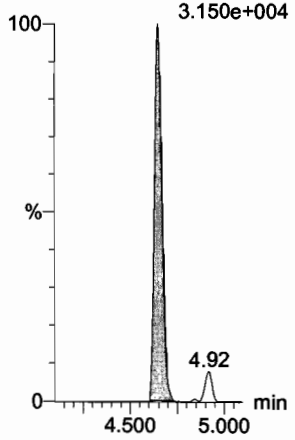
13C5-PFNA
F35:MRM of 1 channel,ES-
468.2 > 422.9
1.844e+005



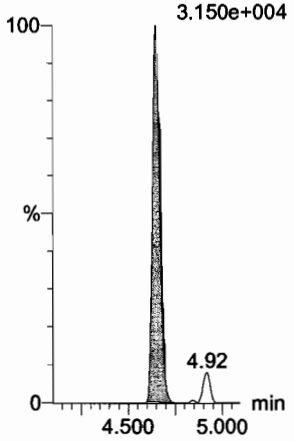
13C8-PFOSA
F41:MRM of 1 channel,ES-
506.1 > 77.7
4.088e+004



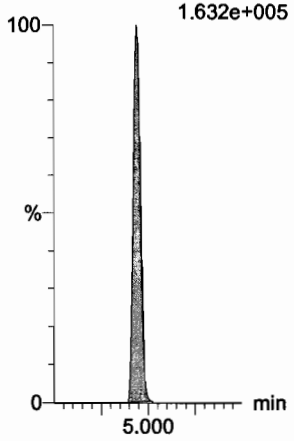
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
3.150e+004



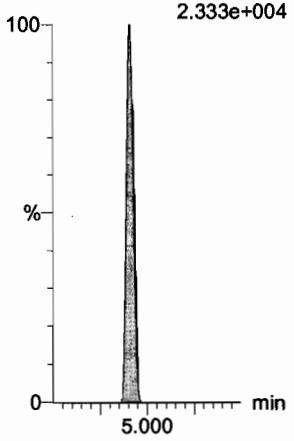
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
3.150e+004



13C2-PFDA
F45:MRM of 1 channel,ES-
515.1 > 469.9
1.632e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.333e+004

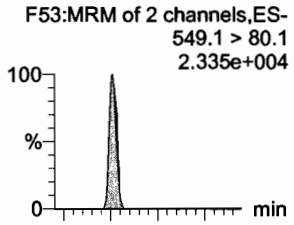


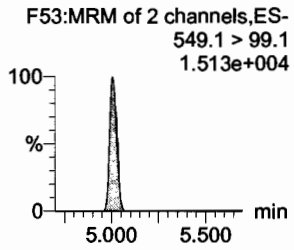
Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

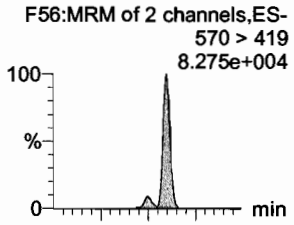
Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

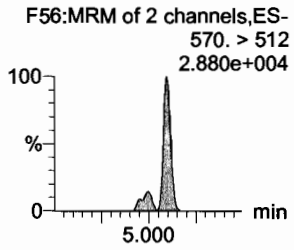
PFNS



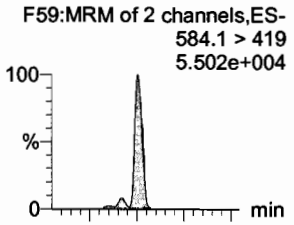


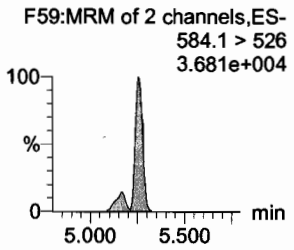
L-MeFOSAA



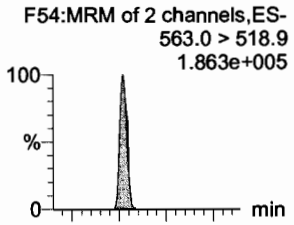


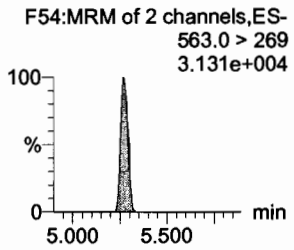
L-EtFOSAA



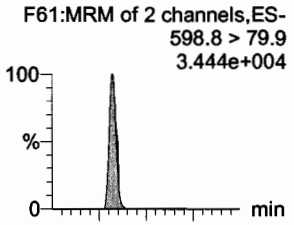


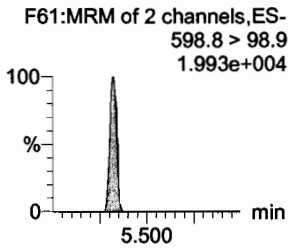
PFUdA



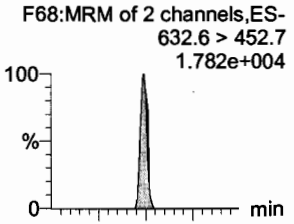


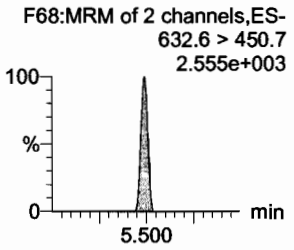
PFDS



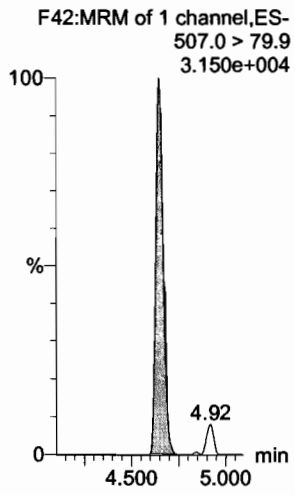


11Cl-PF30UdS

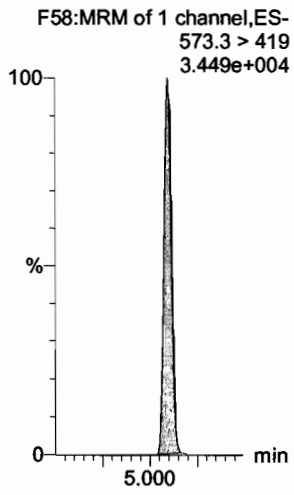




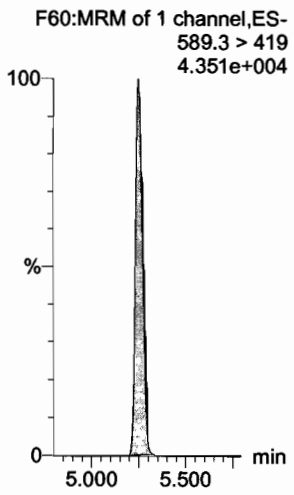
13C8-PFOS



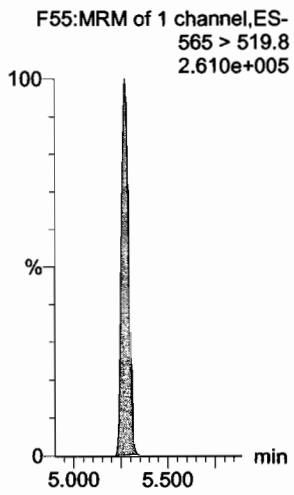
d3-N-MeFOSAA



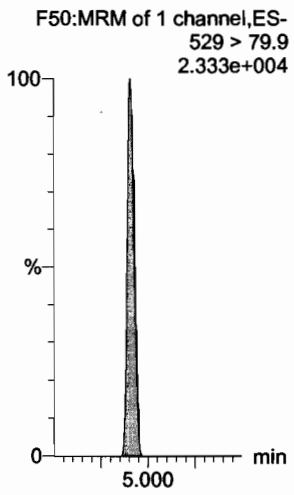
d5-N-EtFOSAA



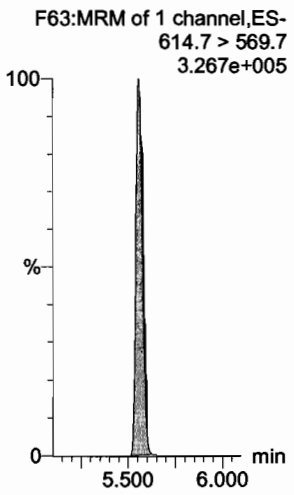
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



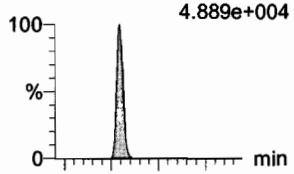
Vista Analytical Laboratory

Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

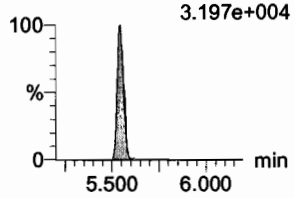
Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

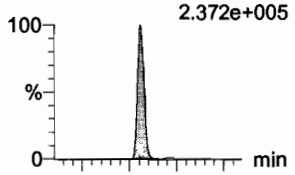
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
4.889e+004



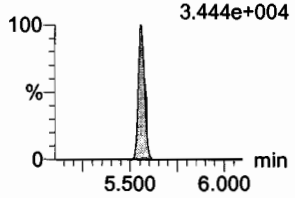
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.197e+004



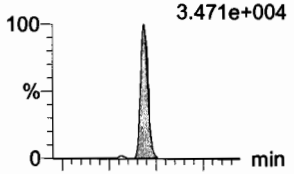
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.372e+005



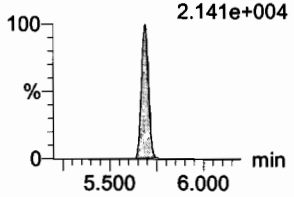
F62:MRM of 4 channels,ES-
612.9 > 318.8
3.444e+004



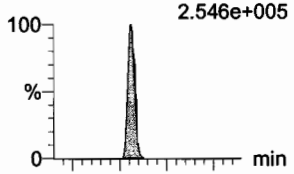
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
3.471e+004



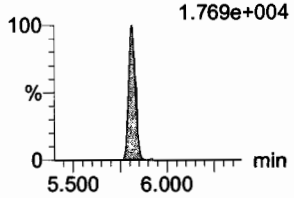
F43:MRM of 2 channels,ES-
512.1 > 219
2.141e+004



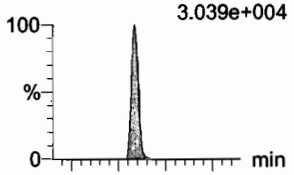
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.546e+005



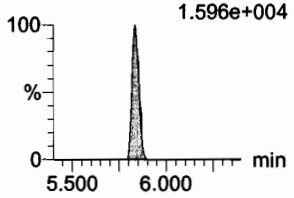
F70:MRM of 2 channels,ES-
662.9 > 319
1.769e+004



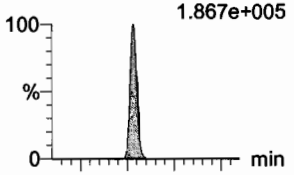
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
3.039e+004



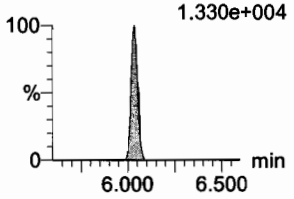
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.596e+004



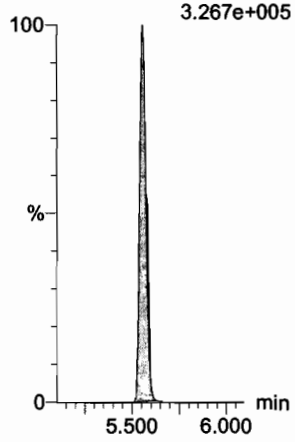
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.867e+005



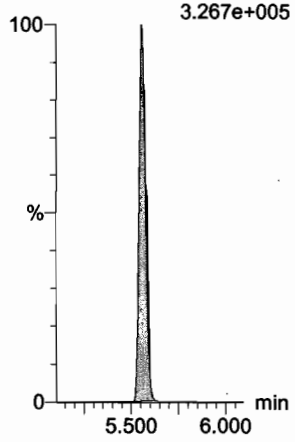
F72:MRM of 2 channels,ES-
713. > 369.0
1.330e+004



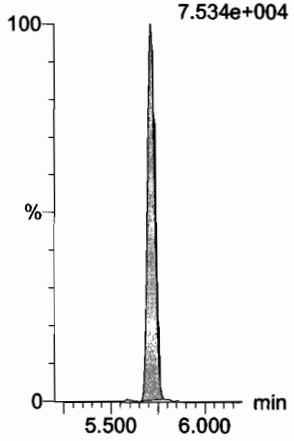
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.267e+005



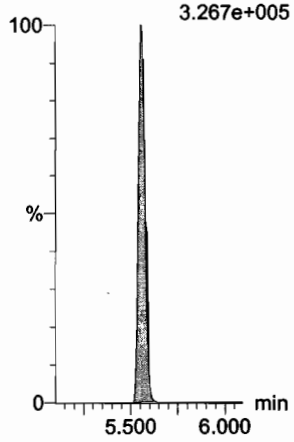
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.267e+005



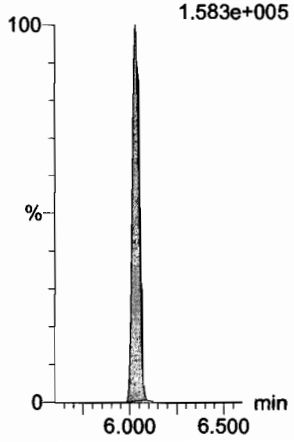
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
7.534e+004



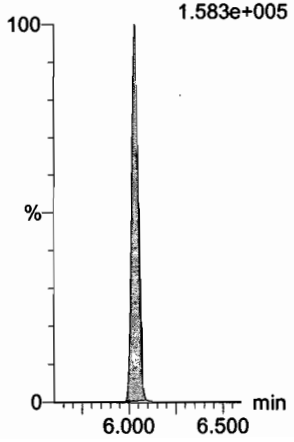
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.267e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.583e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.583e+005

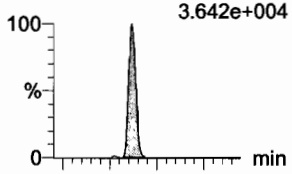


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

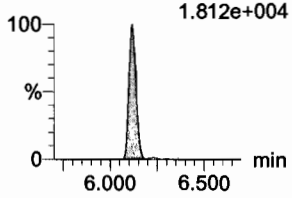
Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

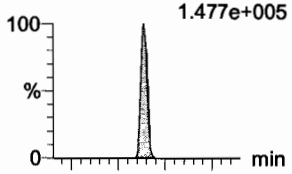
N-EtFOSA
F48:MRM of 2 channels,ES-
526.1 > 168.9
3.642e+004



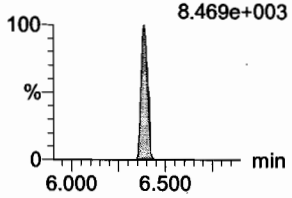
F48:MRM of 2 channels,ES-
526.1 > 219
1.812e+004



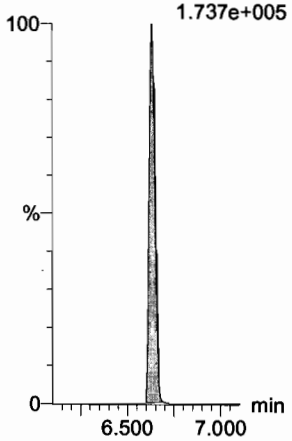
PFHxDA
F74:MRM of 2 channels,ES-
813.1 > 768.6
1.477e+005



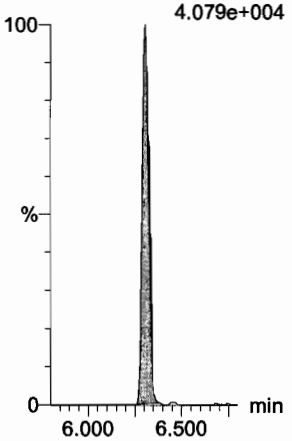
F74:MRM of 2 channels,ES-
813.1 > 219
8.469e+003



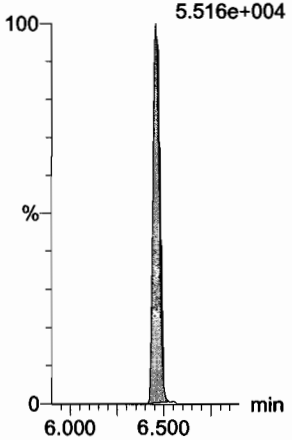
PFODA
F76:MRM of 1 channel,ES-
913.1 > 868.8
1.737e+005



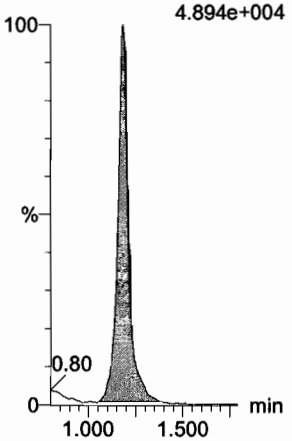
N-MeFOSE
F64:MRM of 1 channel,ES-
616.1 > 58.9
4.079e+004



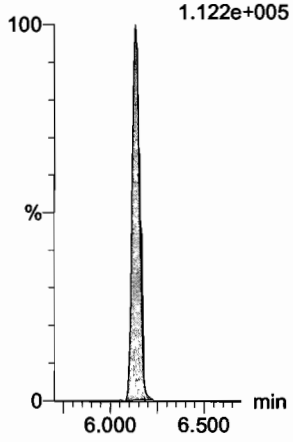
N-EtFOSE
F67:MRM of 1 channel,ES-
630.1 > 58.9
5.516e+004



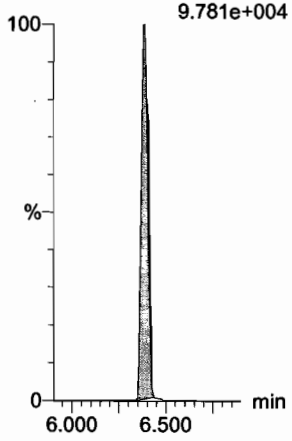
13C4-PFBA
F4:MRM of 1 channel,ES-
217.0 > 172.0
4.894e+004



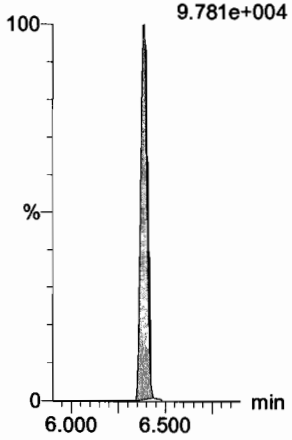
d5-N-ETFOSA
F52:MRM of 1 channel,ES-
531.1 > 168.9
1.122e+005



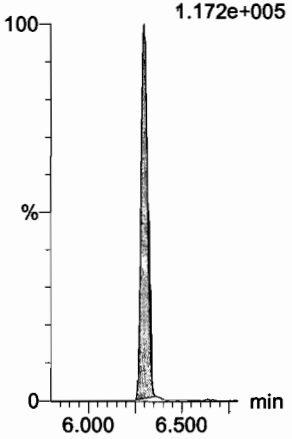
13C2-PFHxDA
F75:MRM of 1 channel,ES-
815 > 769.7
9.781e+004



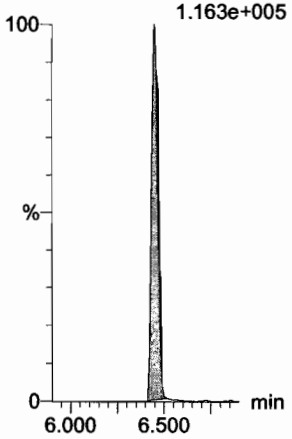
13C2-PFHxDA
F75:MRM of 1 channel,ES-
815 > 769.7
9.781e+004



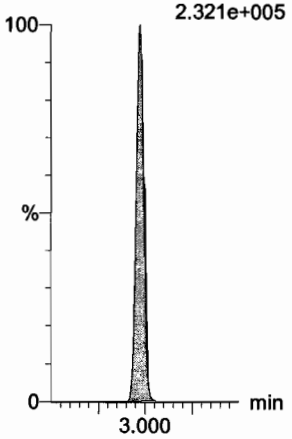
d7-N-MeFOSE
F65:MRM of 1 channel,ES-
623.1 > 58.9
1.172e+005



d9-N-EtFOSE
F69:MRM of 1 channel,ES-
639.2 > 58.8
1.163e+005



13C5-PFHxA
F15:MRM of 1 channel,ES-
318.0 > 272.9
2.321e+005

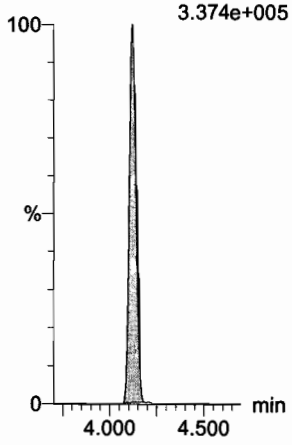


Dataset: Z:\Projects\PFAS.PRO\Results\190710M3\190710M3-32.qld

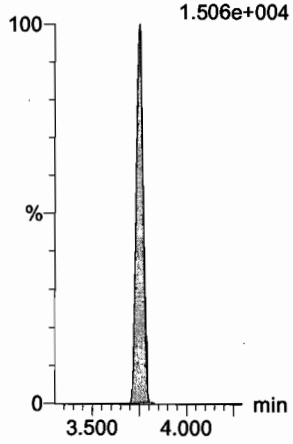
Last Altered: Thursday, July 11, 2019 11:32:06 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:34:27 Pacific Daylight Time

Name: 190710M3_32, Date: 10-Jul-2019, Time: 21:20:42, ID: ST190710M3-11 PFC CS3 19G0806, Description: PFC CS3 19F2417

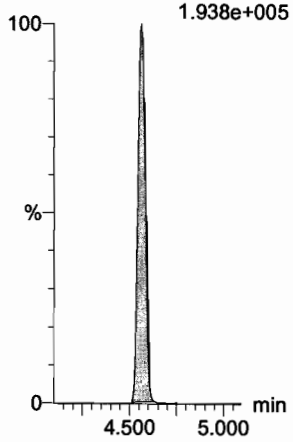
13C8-PFOA



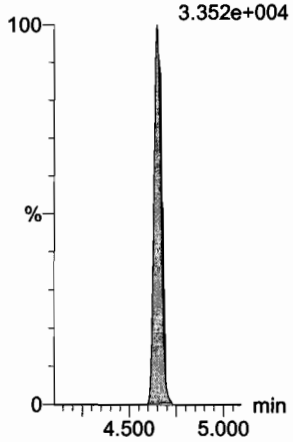
18O2-PFHxS



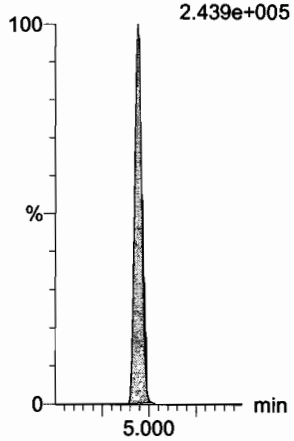
13C9-PFNA



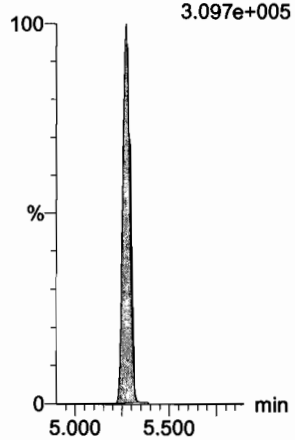
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 12, 2019 13:33:49 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:34:00 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_RS-07-11-19.mdb 11 Jul 2019 15:12:17
Calibration: 12 Jul 2019 13:33:49

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190712M1-1 PFC CS0 19G1103	3.23e3	100.0	NO
2	2	13C5-PFHxA	ST190712M1-1 PFC CS0 19G1103	1.08e4	100.0	NO
3	3	18O2-PFHxS	ST190712M1-1 PFC CS0 19G1103	5.20e2	100.0	NO
4	4	13C8-PFOA	ST190712M1-1 PFC CS0 19G1103	1.48e4	100.0	NO
5	5	13C9-PFNA	ST190712M1-1 PFC CS0 19G1103	9.26e3	100.0	NO
6	6	13C4-PFOS	ST190712M1-1 PFC CS0 19G1103	1.45e3	100.0	NO
7	7	13C6-PFDA	ST190712M1-1 PFC CS0 19G1103	1.12e4	100.0	NO
8	8	13C7-PFUdA	ST190712M1-1 PFC CS0 19G1103	1.29e4	100.0	NO

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IB	3.14e3	97.3	NO
2	2	13C5-PFHxA	IB	1.09e4	101.4	NO
3	3	18O2-PFHxS	IB	6.02e2	115.8	NO
4	4	13C8-PFOA	IB	1.50e4	101.2	NO
5	5	13C9-PFNA	IB	9.26e3	100.0	NO
6	6	13C4-PFOS	IB	1.39e3	96.1	NO
7	7	13C6-PFDA	IB	1.12e4	99.6	NO
8	8	13C7-PFUdA	IB	1.27e4	98.7	NO

Name: 190712M1_4, Date: 12-Jul-2019, Time: 10:52:05, ID: 1901910-01@5X SW1906280950KME 0.24336, Description: SW1906280950KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-01@5X SW1906280950KME ...	6.19e2	19.2	YES
2	2	13C5-PFHxA	1901910-01@5X SW1906280950KME ...	1.66e3	15.4	YES
3	3	18O2-PFHxS	1901910-01@5X SW1906280950KME ...	8.21e1	15.8	YES
4	4	13C8-PFOA	1901910-01@5X SW1906280950KME ...	2.18e3	14.7	YES
5	5	13C9-PFNA	1901910-01@5X SW1906280950KME ...	1.22e3	13.2	YES
6	6	13C4-PFOS	1901910-01@5X SW1906280950KME ...	1.83e2	12.7	YES
7	7	13C6-PFDA	1901910-01@5X SW1906280950KME ...	1.64e3	14.6	YES
8	8	13C7-PFUdA	1901910-01@5X SW1906280950KME ...	1.82e3	14.1	YES

Name: 190712M1_5, Date: 12-Jul-2019, Time: 11:02:38, ID: 1901910-02@5X SW1906281025KME 0.24464, Description: SW1906281025KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-02@5X SW1906281025KME ...	4.69e2	14.5	YES
2	2	13C5-PFHxA	1901910-02@5X SW1906281025KME ...	1.26e3	11.7	YES
3	3	18O2-PFHxS	1901910-02@5X SW1906281025KME ...	9.00e1	17.3	YES
4	4	13C8-PFOA	1901910-02@5X SW1906281025KME ...	1.92e3	13.0	YES
5	5	13C9-PFNA	1901910-02@5X SW1906281025KME ...	1.10e3	11.8	YES
6	6	13C4-PFOS	1901910-02@5X SW1906281025KME ...	2.25e2	15.6	YES
7	7	13C6-PFDA	1901910-02@5X SW1906281025KME ...	1.43e3	12.7	YES

Dataset: Untitled

Last Altered: Friday, July 12, 2019 13:33:49 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:34:00 Pacific Daylight Time

Name: 190712M1_5, Date: 12-Jul-2019, Time: 11:02:38, ID: 1901910-02@5X SW1906281025KME 0.24464, Description: SW1906281025KME

	#	Name	ID	Area	%Rec	Area Out
8	8	13C7-PFUdA	1901910-02@5X SW1906281025KME ...	1.71e3	13.2	YES

Name: 190712M1_6, Date: 12-Jul-2019, Time: 11:13:16, ID: 1901910-03 SW1906281035KME 0.24318, Description: SW1906281035KME

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901910-03 SW1906281035KME 0.243...	3.82e3	118.3	NO
2	2	13C5-PFHxA	1901910-03 SW1906281035KME 0.243...	7.40e3	68.7	NO
3	3	18O2-PFHxS	1901910-03 SW1906281035KME 0.243...	4.32e2	83.0	NO
4	4	13C8-PFOA	1901910-03 SW1906281035KME 0.243...	9.79e3	65.9	NO
5	5	13C9-PFNA	1901910-03 SW1906281035KME 0.243...	5.76e3	62.3	NO
6	6	13C4-PFOS	1901910-03 SW1906281035KME 0.243...	1.17e3	80.6	NO
7	7	13C6-PFDA	1901910-03 SW1906281035KME 0.243...	7.49e3	66.9	NO
8	8	13C7-PFUdA	1901910-03 SW1906281035KME 0.243...	8.85e3	68.6	NO

Name: 190712M1_7, Date: 12-Jul-2019, Time: 11:23:49, ID: 1901911-01@5X WMP1907010855JSJ 0.2509, Description: WMP1907010855JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901911-01@5X WMP1907010855JSJ ...	6.77e2	21.0	YES
2	2	13C5-PFHxA	1901911-01@5X WMP1907010855JSJ ...	1.28e3	11.9	YES
3	3	18O2-PFHxS	1901911-01@5X WMP1907010855JSJ ...	1.05e2	20.2	YES
4	4	13C8-PFOA	1901911-01@5X WMP1907010855JSJ ...	1.52e3	10.2	YES
5	5	13C9-PFNA	1901911-01@5X WMP1907010855JSJ ...	9.12e2	9.9	YES
6	6	13C4-PFOS	1901911-01@5X WMP1907010855JSJ ...	2.25e2	15.5	YES
7	7	13C6-PFDA	1901911-01@5X WMP1907010855JSJ ...	1.30e3	11.6	YES
8	8	13C7-PFUdA	1901911-01@5X WMP1907010855JSJ ...	1.55e3	12.0	YES

Name: 190712M1_8, Date: 12-Jul-2019, Time: 11:34:27, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Dataset: Untitled

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Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190712M1-2 PFC CS2 19G1105	3.18e3	98.6	NO
2	2	13C5-PFHxA	ST190712M1-2 PFC CS2 19G1105	1.03e4	95.6	NO
3	3	18O2-PFHxS	ST190712M1-2 PFC CS2 19G1105	5.43e2	104.4	NO
4	4	13C8-PFOA	ST190712M1-2 PFC CS2 19G1105	1.42e4	95.4	NO
5	5	13C9-PFNA	ST190712M1-2 PFC CS2 19G1105	8.25e3	89.1	NO
6	6	13C4-PFOS	ST190712M1-2 PFC CS2 19G1105	1.24e3	85.5	NO
7	7	13C6-PFDA	ST190712M1-2 PFC CS2 19G1105	1.01e4	90.2	NO
8	8	13C7-PFUdA	ST190712M1-2 PFC CS2 19G1105	1.22e4	94.4	NO

Name: 190712M1_10, Date: 12-Jul-2019, Time: 11:55:38, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190712M1_11, Date: 12-Jul-2019, Time: 12:42:12, ID: B9F0280-MS1@5X Matrix Spike 1.08, Description: Matrix Spike

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0280-MS1@5X Matrix Spike 1.08	1.42e3	44.1	YES
2	2	13C5-PFHxA	B9F0280-MS1@5X Matrix Spike 1.08	2.51e3	23.3	YES
3	3	18O2-PFHxS	B9F0280-MS1@5X Matrix Spike 1.08	1.21e2	23.2	YES
4	4	13C8-PFOA	B9F0280-MS1@5X Matrix Spike 1.08	3.53e3	23.8	YES
5	5	13C9-PFNA	B9F0280-MS1@5X Matrix Spike 1.08	2.08e3	22.4	YES
6	6	13C4-PFOS	B9F0280-MS1@5X Matrix Spike 1.08	2.73e2	18.9	YES
7	7	13C6-PFDA	B9F0280-MS1@5X Matrix Spike 1.08	2.43e3	21.7	YES
8	8	13C7-PFUdA	B9F0280-MS1@5X Matrix Spike 1.08	2.76e3	21.4	YES

Name: 190712M1_12, Date: 12-Jul-2019, Time: 12:52:55, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Dataset: Untitled

Last Altered: Friday, July 12, 2019 13:33:49 Pacific Daylight Time
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Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190712M1-2 PFC CS2 19G1105	3.22e3	99.8	NO
2	2	13C5-PFHxA	ST190712M1-2 PFC CS2 19G1105	1.07e4	98.9	NO
3	3	18O2-PFHxS	ST190712M1-2 PFC CS2 19G1105	5.92e2	113.9	NO
4	4	13C8-PFOA	ST190712M1-2 PFC CS2 19G1105	1.39e4	93.8	NO
5	5	13C9-PFNA	ST190712M1-2 PFC CS2 19G1105	8.81e3	95.1	NO
6	6	13C4-PFOS	ST190712M1-2 PFC CS2 19G1105	1.38e3	95.5	NO
7	7	13C6-PFDA	ST190712M1-2 PFC CS2 19G1105	1.11e4	99.0	NO
8	8	13C7-PFUdA	ST190712M1-2 PFC CS2 19G1105	1.28e4	99.3	NO

Name: 190712M1_14, Date: 12-Jul-2019, Time: 13:14:06, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
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Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		2082.429	1.00					NO		
2	2	PFPrS	248.9 > 79.9		556.826	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		3829.493	1.00					NO		
4	4	PFPeA	263.1 > 218.9		3829.493	1.00					NO		
5	5	PFBS	299.0 > 79.7		556.826	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		1262.880	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	2082.429	3139.752	1.00	1.18	8.291	12.8	102.0	NO		
8	49	13C3-PFBS	302.0 > 98.8	556.826	602.155	1.00	2.46	11.559	11.2	89.3	NO		
9	48	13C3-PFPeA	266.0 > 221.8	3829.493	10917.353	1.00	2.17	4.385	10.8	86.1	NO		
10	48	13C3-PFPeA	266.0 > 221.8	3829.493	10917.353	1.00	2.17	4.385	10.8	86.1	NO		
11	49	13C3-PFBS	302.0 > 98.8	556.826	602.155	1.00	2.46	11.559	11.2	89.3	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1262.880	602.155	1.00	2.88	26.216	11.7	93.7	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0		3402.869	1.00					NO		
15	8	PFPeS	349.1>80.1		556.826	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1241.046	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		4188.277	1.00					NO		
18	11	PFHpA	363.0 > 318.9		4188.277	1.00					NO		
19	12	ADONA	376.8 > 250.9		4188.277	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	3402.869	10917.353	1.00	2.97	3.896	4.9	98.3	NO		
21	49	13C3-PFBS	302.0 > 98.8	556.826	602.155	1.00	2.46	11.559	11.2	89.3	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1241.046	10917.353	1.00	3.18	1.421	4.6	92.7	NO		
23	53	13C4-PFHpA	367.2 > 321.8	4188.277	10917.353	1.00	3.59	4.795	12.3	98.1	NO		
24	53	13C4-PFHpA	367.2 > 321.8	4188.277	10917.353	1.00	3.59	4.795	12.3	98.1	NO		
25	53	13C4-PFHpA	367.2 > 321.8	4188.277	10917.353	1.00	3.59	4.795	12.3	98.1	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	6.435	1440.783	1.00	3.74	0.056	0.2		NO	22.266	YES
28	15	6:2 FTS	427.0 > 406.9		1128.066	1.00					NO		
29	16	L-PFOA	412.8 > 368.9	20.398	7985.296	1.00	4.11	0.032			NO	1.436	YES
30	18	PFecHS	460.8 > 381.0		7985.296	1.00					NO		
31	19	PFHpS	449.0 > 80.0		1384.866	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		8834.818	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	1440.783	602.155	1.00	3.74	29.909	11.7	93.9	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1128.066	1389.837	1.00	4.06	10.146	13.8	110.3	NO		
35	58	13C2-PFOA	414.9 > 369.7	7985.296	15024.184	1.00	4.11	6.644	11.8	94.2	NO		
36	58	13C2-PFOA	414.9 > 369.7	7985.296	15024.184	1.00	4.11	6.644	11.8	94.2	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
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Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1384.866	1389.837	1.00	4.64	12.455	11.8	94.0	NO		
38	56	13C5-PFNA	468.2 > 422.9	8834.818	9260.604	1.00	4.56	11.925	12.1	97.1	NO		
39	-1												
40	21	PFNA	463.0 > 418.8		8834.818	1.00					NO		
41	22	PFOSA	497.9 > 77.9		1611.925	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		1384.866	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		1384.866	1.00					NO		
44	26	PFDA	513 > 468.8		7709.601	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		1001.451	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	8834.818	9260.604	1.00	4.56	11.925	12.1	97.1	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1611.925	12742.808	1.00	4.62	1.581	12.1	97.1	NO		
48	59	13C8-PFOS	507.0 > 79.9	1384.866	1389.837	1.00	4.64	12.455	11.8	94.0	NO		
49	59	13C8-PFOS	507.0 > 79.9	1384.866	1389.837	1.00	4.64	12.455	11.8	94.0	NO		
50	60	13C2-PFDA	515.1 > 469.9	7709.601	11153.614	1.00	4.94	8.640	13.0	104.4	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1001.451	1389.837	1.00	4.90	9.007	13.0	103.6	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		1384.866	1.00					NO		
54	29	L-MeFOSAA	570 > 419		1545.079	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		1889.642	1.00					NO		
56	33	PFUdA	563.0 > 518.9		11672.776	1.00					NO		
57	34	PFDS	598.8 > 79.9		1001.451	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		13046.855	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	1384.866	1389.837	1.00	4.64	12.455	11.8	94.0	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1545.079	12742.808	1.00	5.08	1.516	11.7	94.0	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1889.642	12742.808	1.00	5.24	1.854	12.6	100.6	NO		
62	63	13C2-PFUdA	565 > 519.8	11672.776	12742.808	1.00	5.26	11.450	13.4	106.9	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1001.451	1389.837	1.00	4.90	9.007	13.0	103.6	NO		
64	65	13C2-PFDoA	614.7 > 569.7	13046.855	11153.614	1.00	5.55	14.622	11.9	95.2	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1001.451	1.00					NO		
67	37	PFDoA	612.9 > 569.0		13046.855	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9		3568.511	1.00					NO		
69	39	PFTrDA	662.9 > 618.9		13046.855	1.00					NO		
70	40	PFDoS	698.8 > 79.9		6712.177	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		6712.177	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	13046.855	11153.614	1.00	5.55	14.622	11.9	95.2	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

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Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	13046.855	11153.614	1.00	5.55	14.622	11.9	95.2	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3568.511	12742.808	1.00	5.71	3.501	158.0	105.3	NO		
75	65	13C2-PFDoA	614.7 > 569.7	13046.855	11153.614	1.00	5.55	14.622	11.9	95.2	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6712.177	12742.808	1.00	6.02	6.584	12.9	103.0	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6712.177	12742.808	1.00	6.02	6.584	12.9	103.0	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		5073.952	1.00					NO		
80	43	PFHxDA	813.1 > 768.6		3796.567	1.00					NO		
81	44	PFODA	913.1 > 868.8		3796.567	1.00					NO		
82	45	N-MeFOSE	616.1 > 58.9		4793.504	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		4552.058	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	3139.752	3139.752	1.00	1.18	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	5073.952	12742.808	1.00	6.13	4.977	159.7	106.5	NO		
86	69	13C2-PFHxDA	815 > 769.7	3796.567	12742.808	1.00	6.38	3.724	5.1	101.4	NO		
87	69	13C2-PFHxDA	815 > 769.7	3796.567	12742.808	1.00	6.38	3.724	5.1	101.4	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4793.504	12742.808	1.00	6.29	4.702	168.2	112.1	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	4552.058	12742.808	1.00	6.44	4.465	162.3	108.2	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10917.353	10917.353	1.00	2.97	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	15024.184	15024.184	1.00	4.11	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	602.155	602.155	1.00	3.74	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	9260.604	9260.604	1.00	4.56	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1389.837	1389.837	1.00	4.64	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	11153.614	11153.614	1.00	4.94	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12742.808	12742.808	1.00	5.26	12.500	12.5	100.0	NO		

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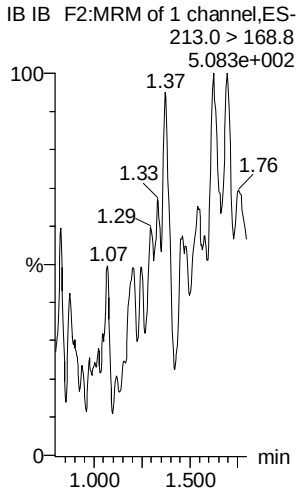
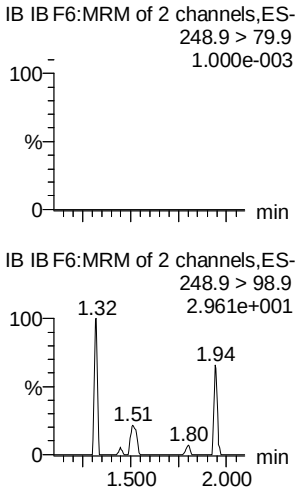
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

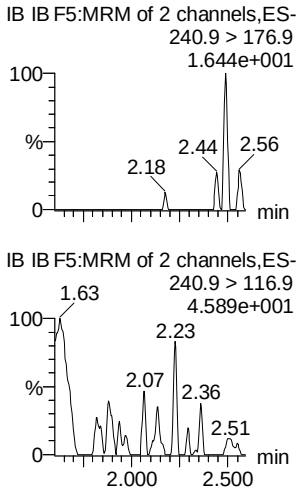
PFBA



PFPrS



3:3 FTCA



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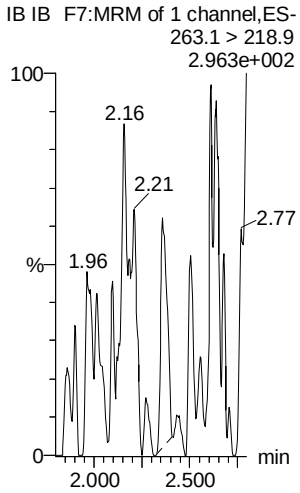

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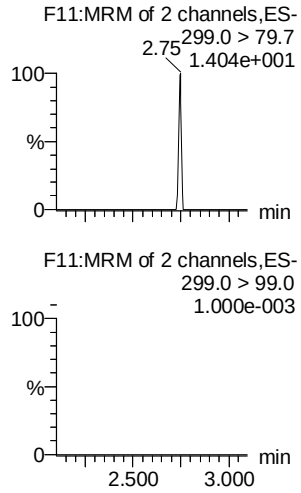
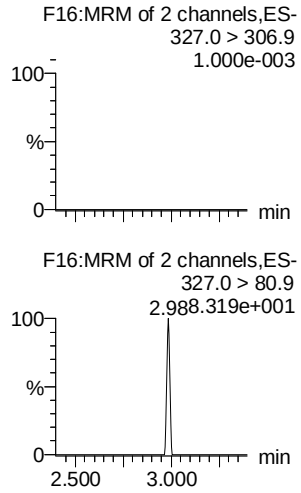
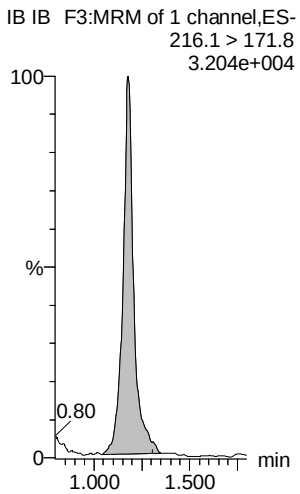


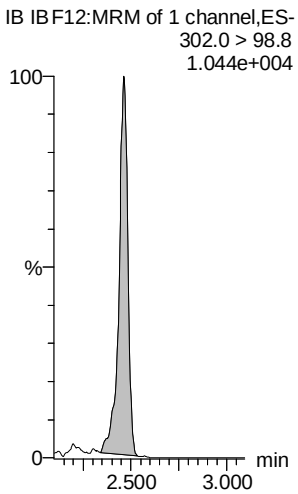
4:2 FTS



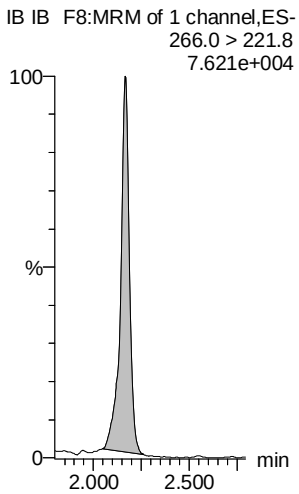
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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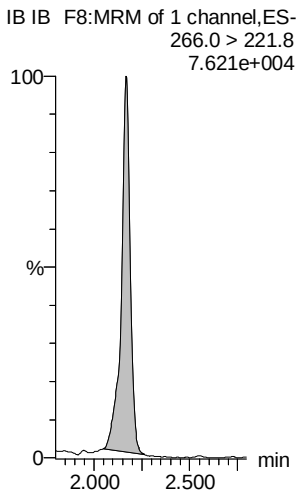

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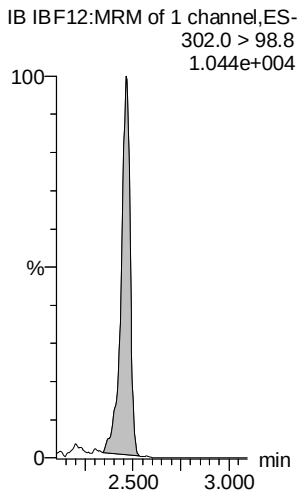
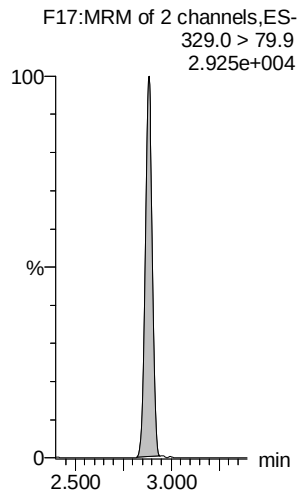


13C2-4:2 FTS



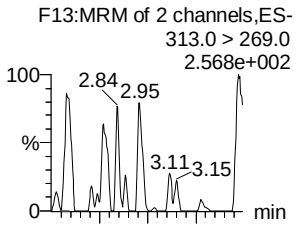
CGH 7/12/2019

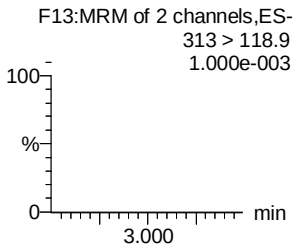
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

PFHxA





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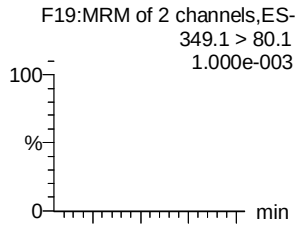
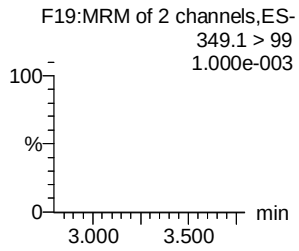
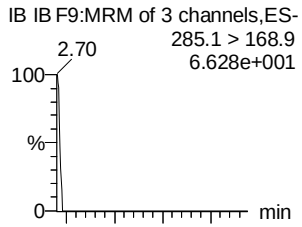
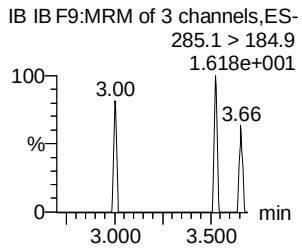


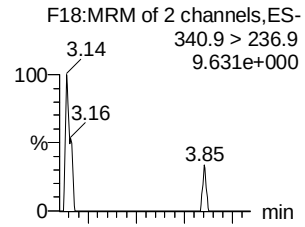


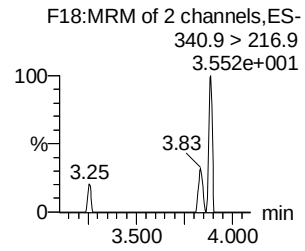
HFPO-DA





5:3 FTCA





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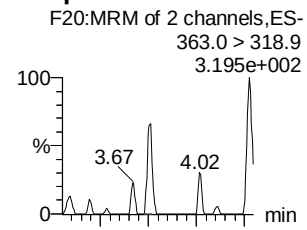

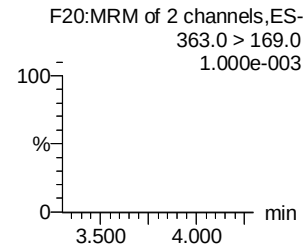

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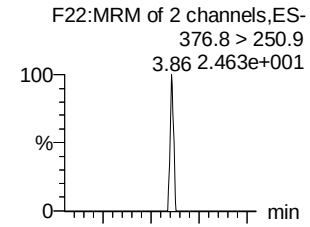

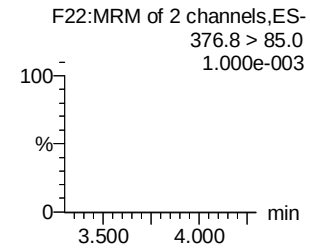

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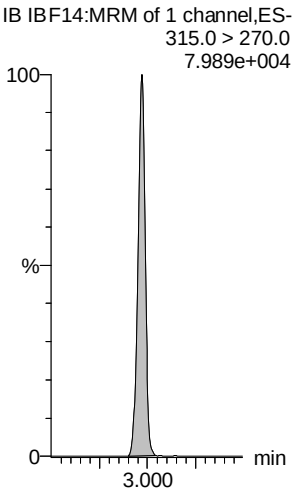
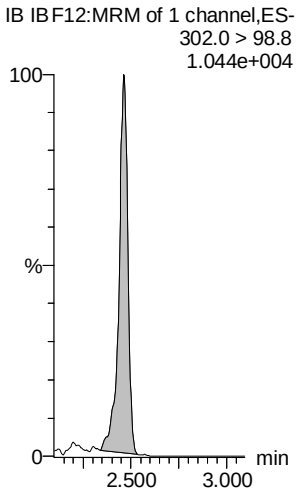
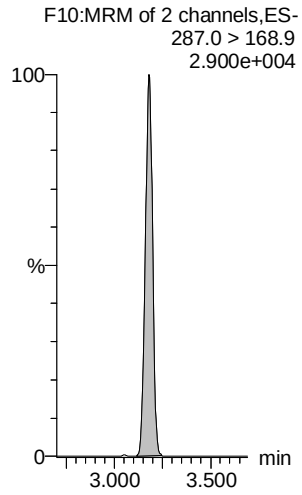


13C3-PFBS



13C3-HFPO-DA



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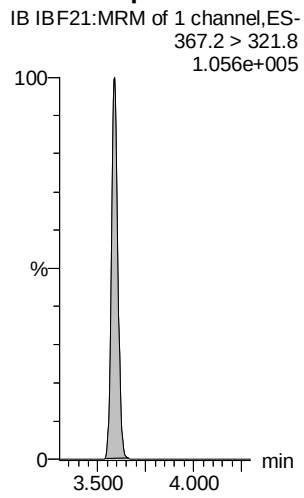

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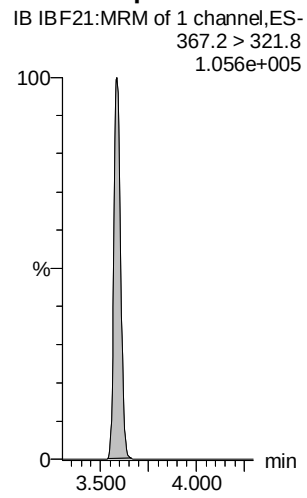

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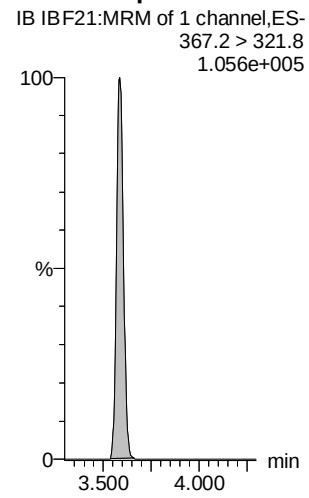

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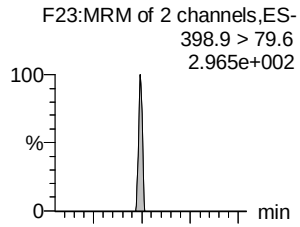
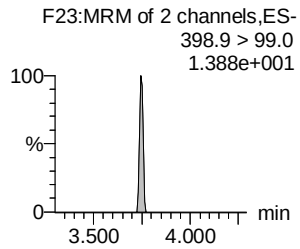
Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

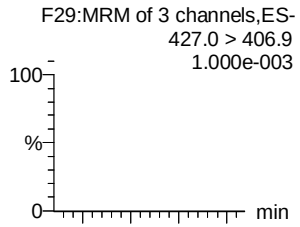
Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

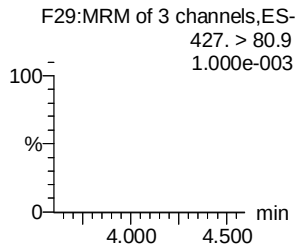
L-PFHxS





6:2 FTS





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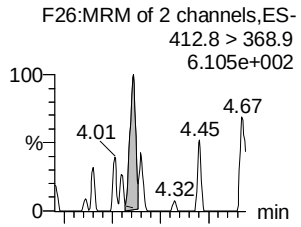

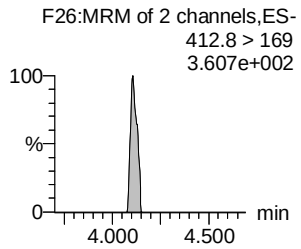

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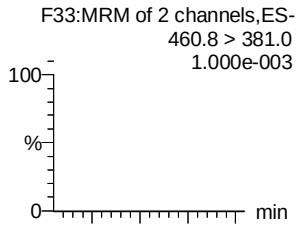

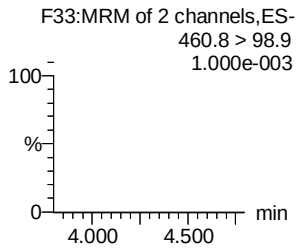

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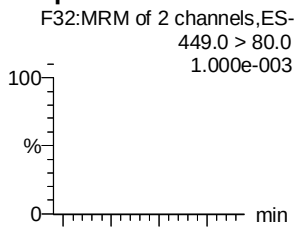
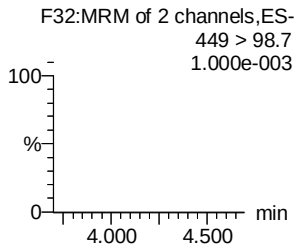
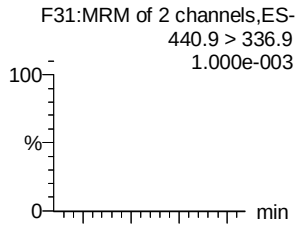
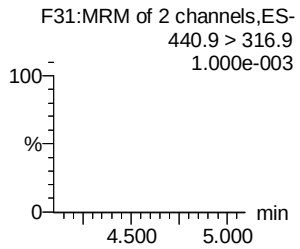


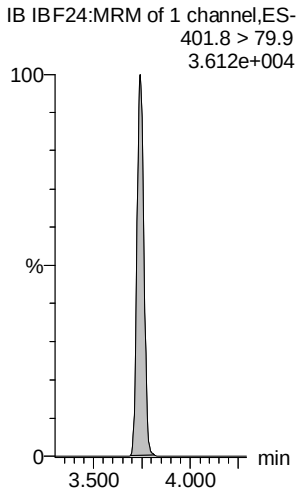


7:3 FTCA





13C3-PFHxS



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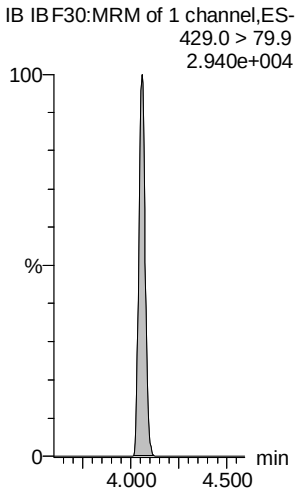

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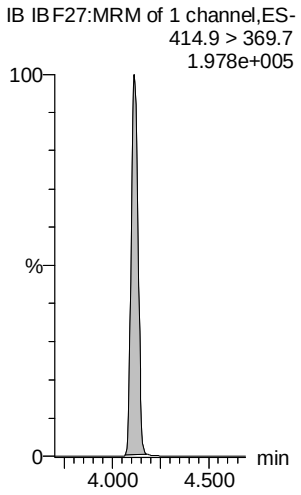

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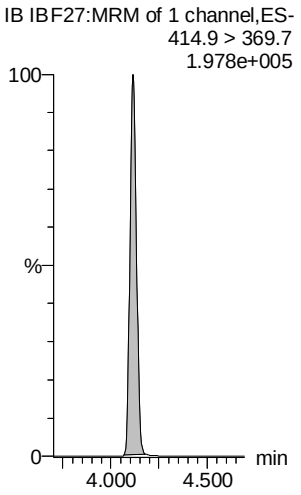
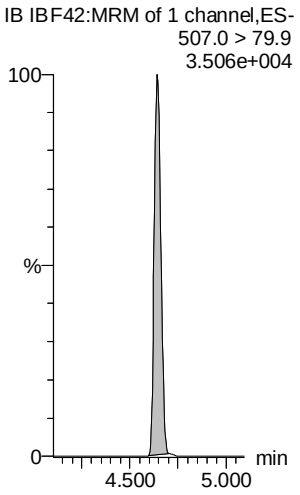


13C8-PFOS



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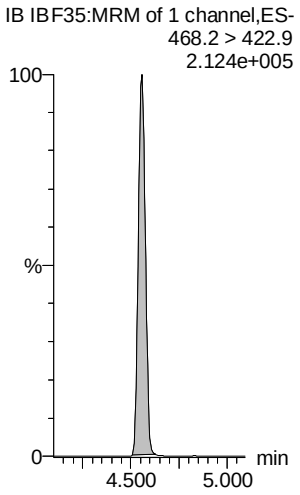
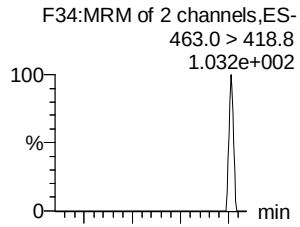


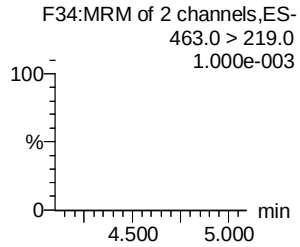
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

PFNA





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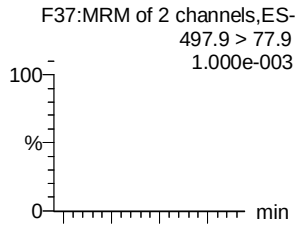
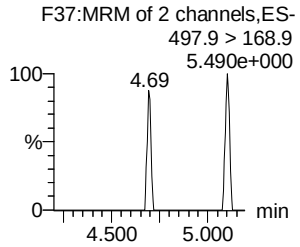
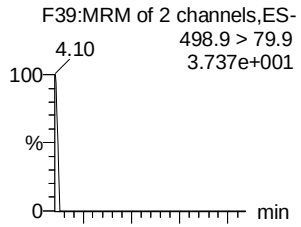
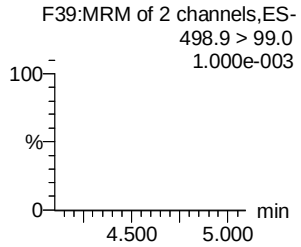


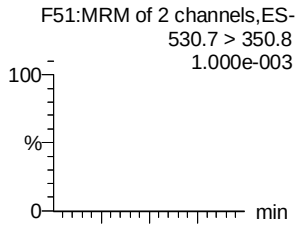


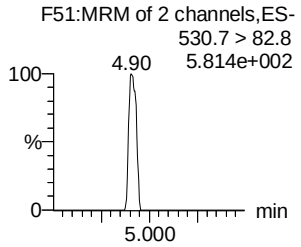
L-PFOS



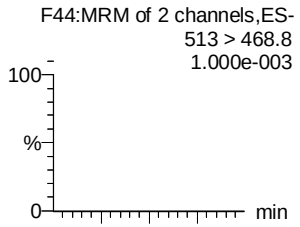


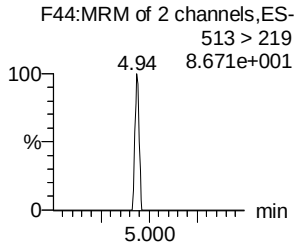
9Cl-PF30NS



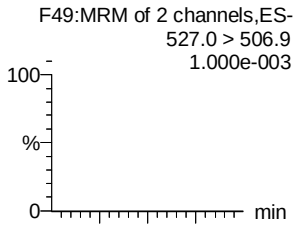


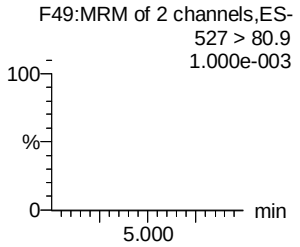
PFDA



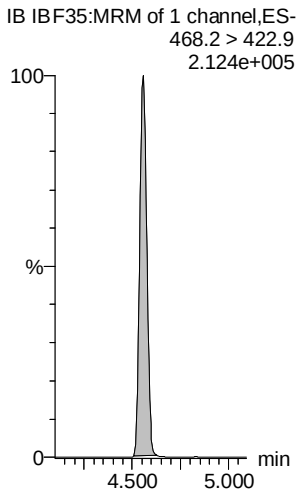


8:2 FTS

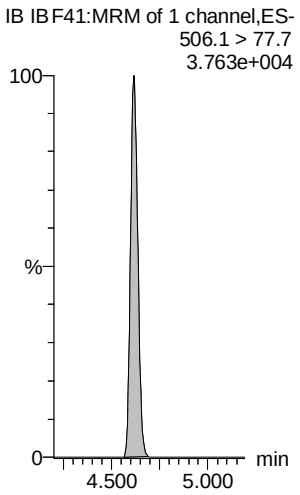




13C5-PFNA



13C8-PFOSA



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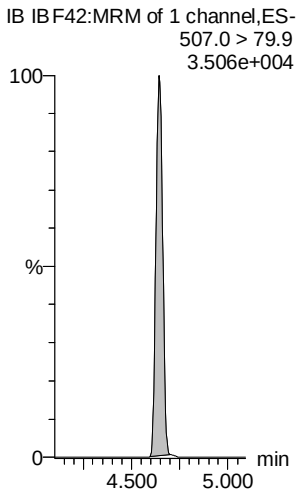

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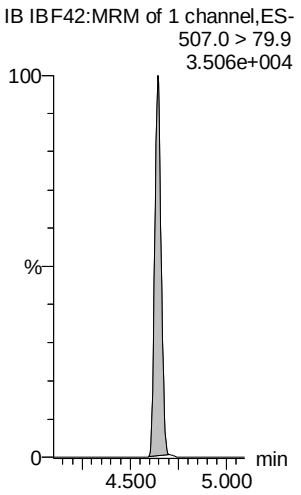
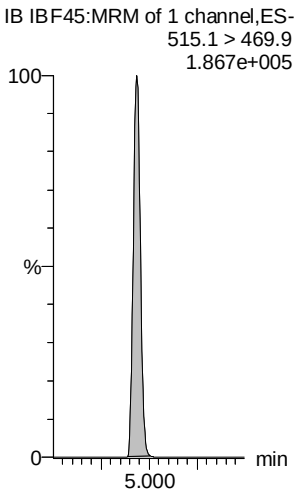
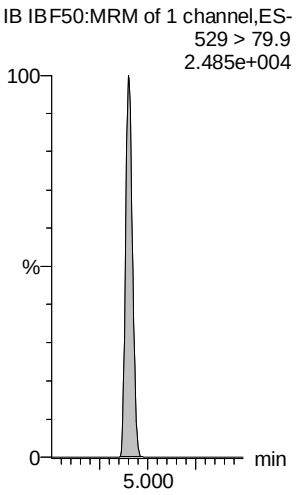


13C2-PFDA



13C2-8:2 FTS



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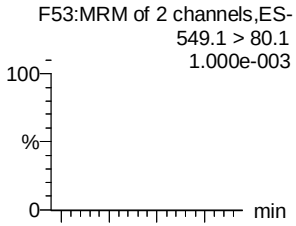
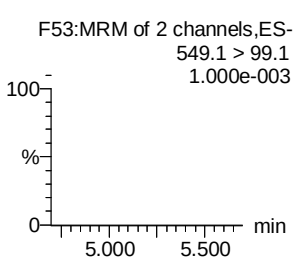
Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

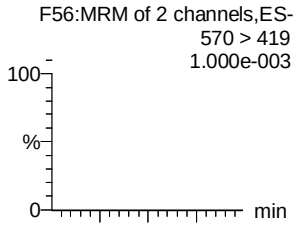
Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

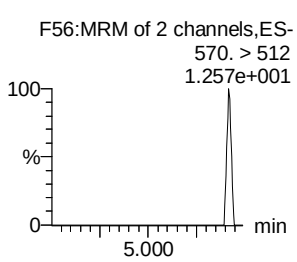
PFNS





L-MeFOSAA





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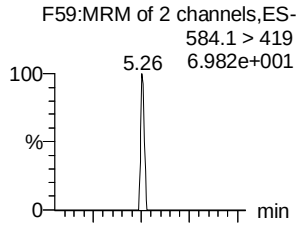
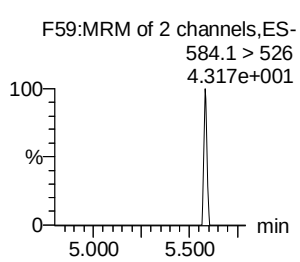
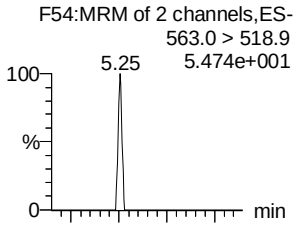
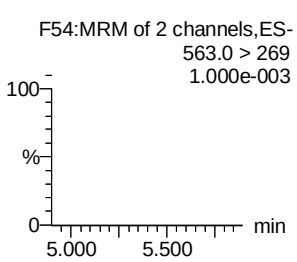




PFUdA





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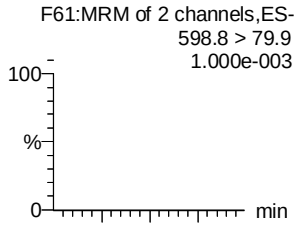

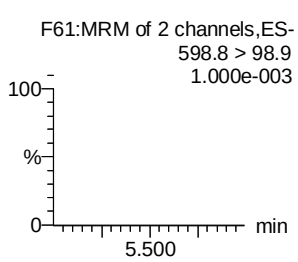

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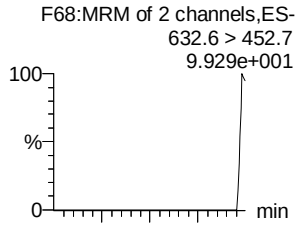
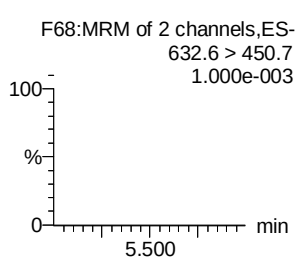
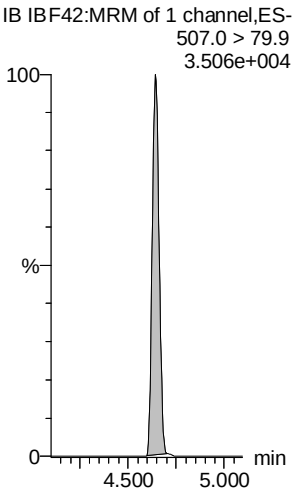
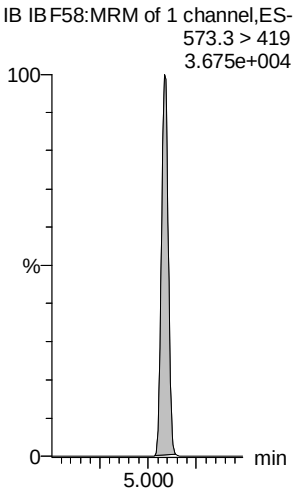




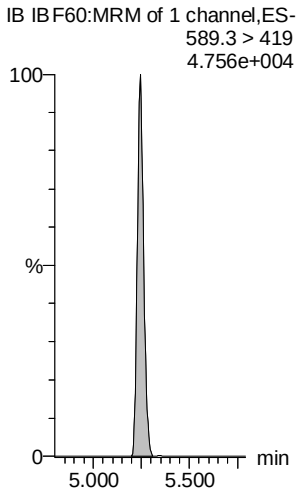
13C8-PFOS



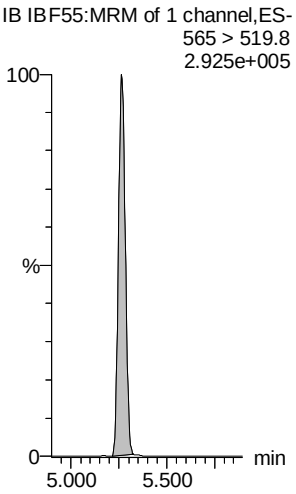
d3-N-MeFOSAA



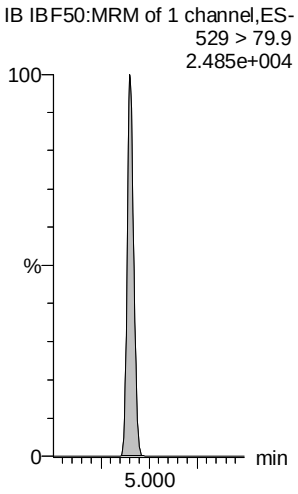
d5-N-EtFOSAA



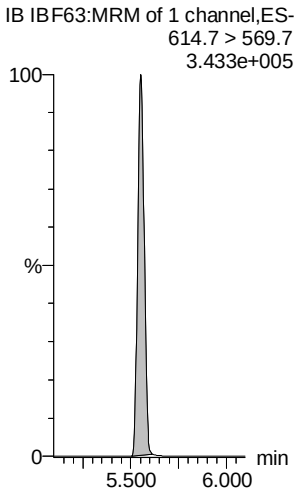
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

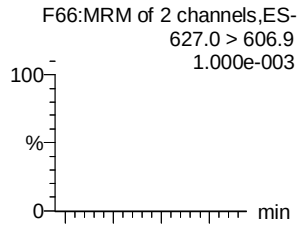


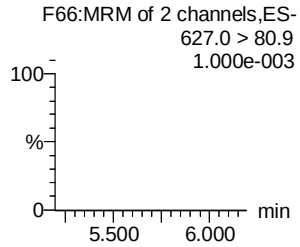
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

10:2 FTS





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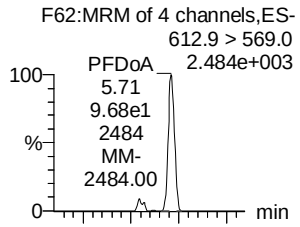
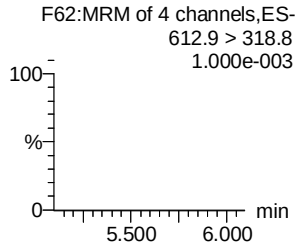
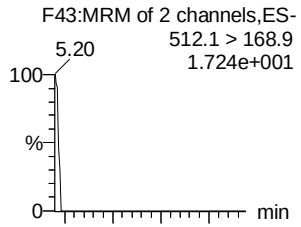
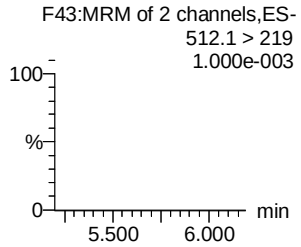




N-MeFOSA





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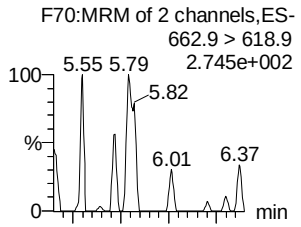
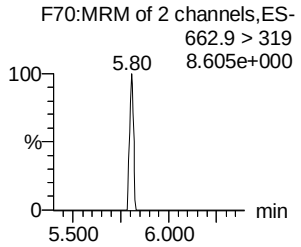
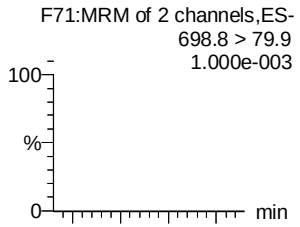
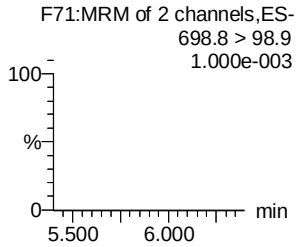


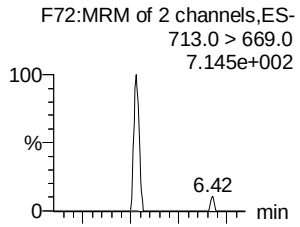


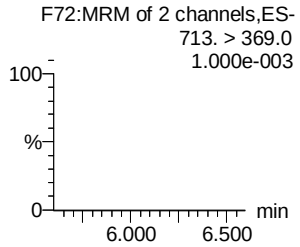
PFDoS



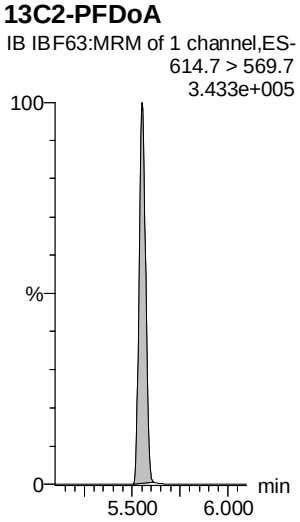


PFTeDA





13C2-PFDoA



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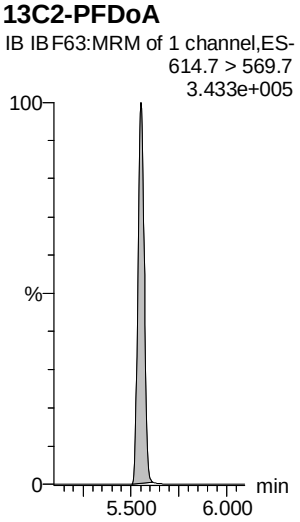
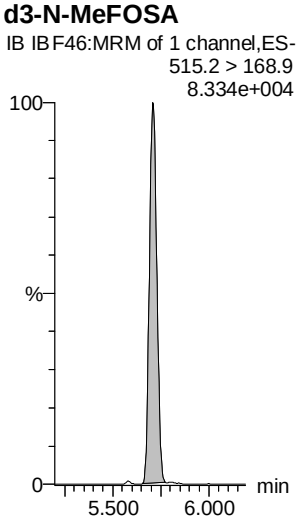


d3-N-MeFOSA



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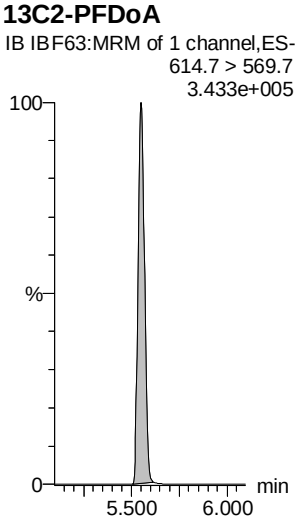

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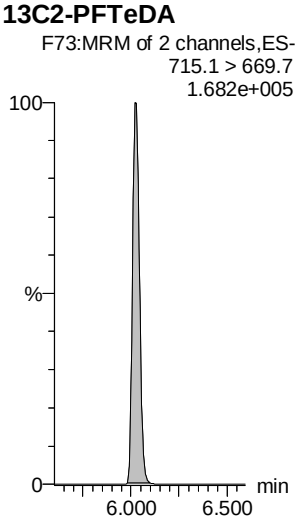

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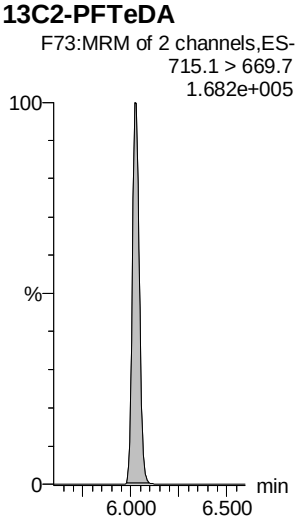

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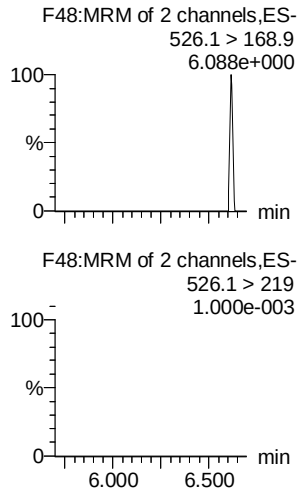
Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

N-EtFOSA



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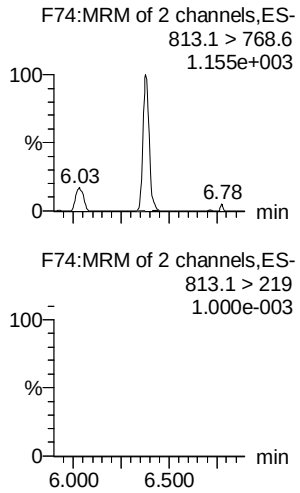

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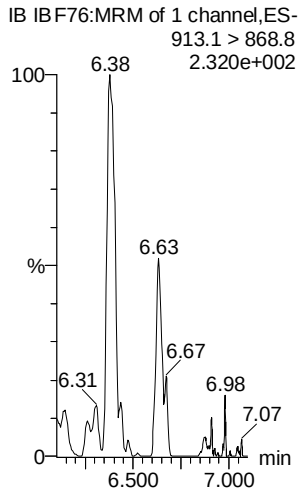
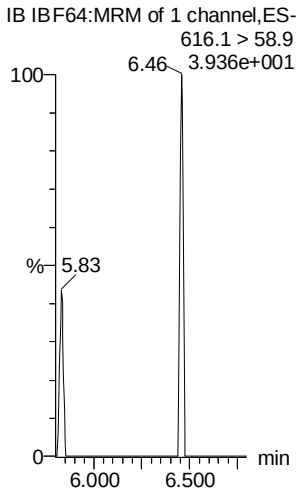
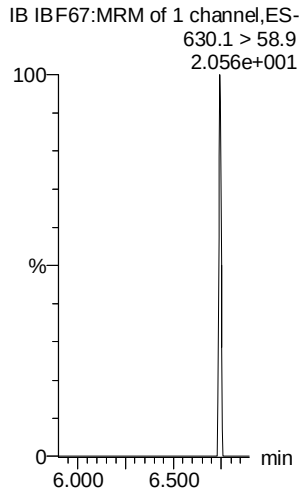


N-MeFOSE



N-EtFOSE



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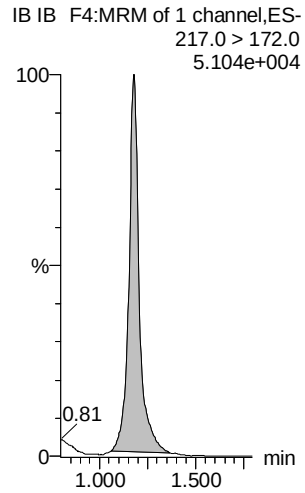
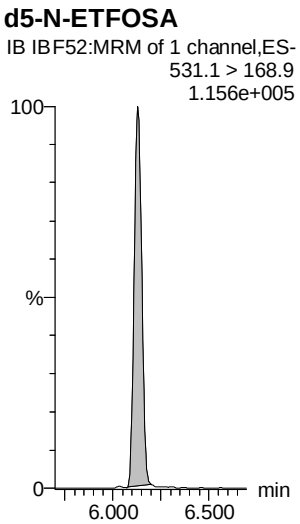
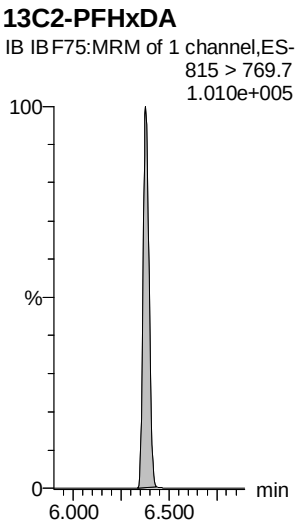


d5-N-ETFOSA



13C2-PFHxDA



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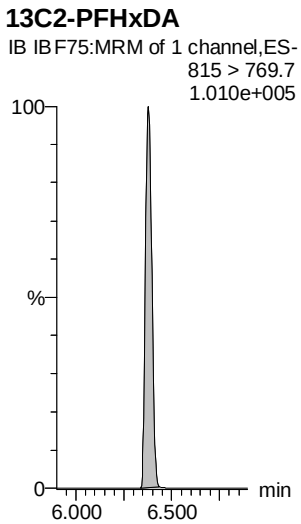
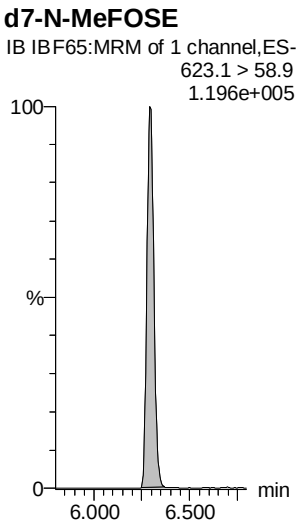
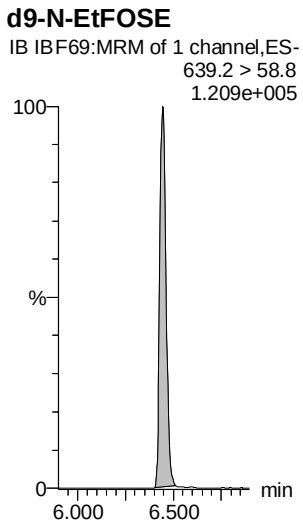


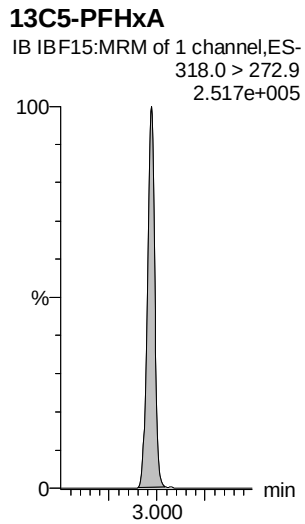
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

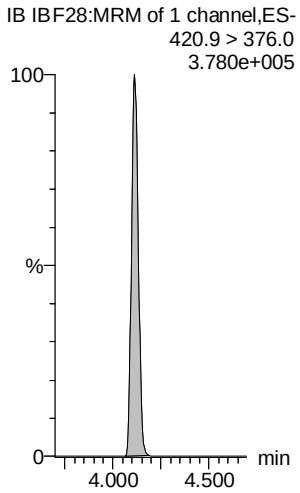


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-IB.qld

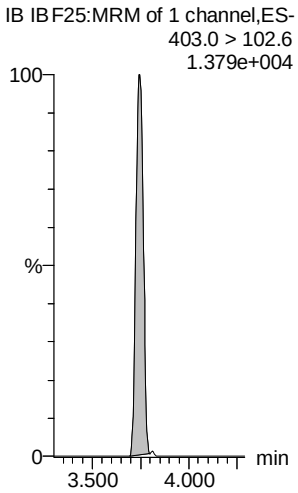
Last Altered: Friday, July 12, 2019 12:30:13 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:30:43 Pacific Daylight Time

Name: 190712M1_3, Date: 12-Jul-2019, Time: 10:41:27, ID: IB, Description: IB

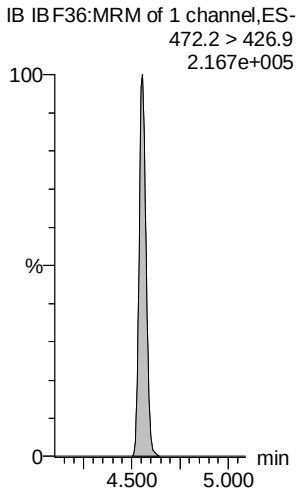
13C8-PFOA



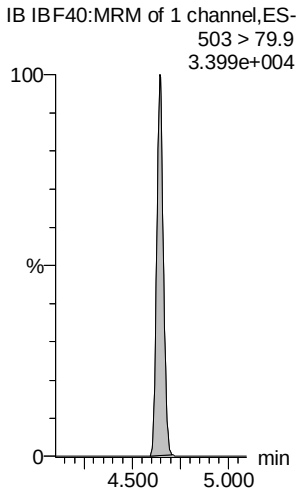
18O2-PFHxS



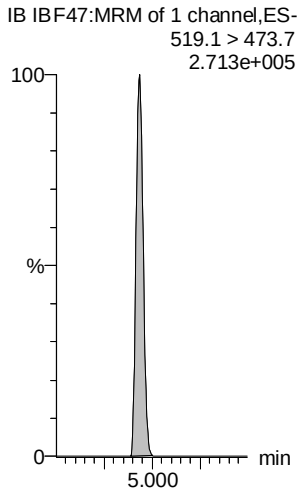
13C9-PFNA



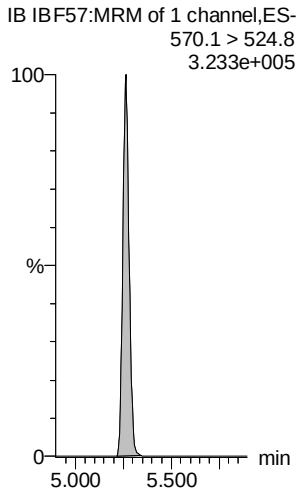
13C4-PFOS



13C6-PFDA



13C7-PFUdA



LC Calibration Standards Review Checklist Q4

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID: ST190712M1-1	L M H	☑	☑ (A)	☑	☑	☑	☑	☐
Calibration ID: ↓ -2	L M H	☑	☑	☑	☑	☑	☑	☑
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐ N/A Cab 7/12/19	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:	L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 7/03/19

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: Ar 7/12/19
Initials/Date

Comments:

(A) HFPO-DA, 7:3 FTCA < 70%

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-9.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:24:45 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.18	1.18			
2	PFPrS	1.55	1.55	2.715	2.715	NO
3	3:3 FTCA	2.03	2.01	1.872	1.872	NO
4	PFPeA	2.17	2.17			
5	PFBS	2.46	2.46	2.957	2.957	NO
6	4:2 FTS	2.88	2.88	1.628	1.628	NO
7	PFHxA	2.97	2.97	18.818	18.818	NO
8	PFPeS	3.17	3.17	1.782	1.782	NO
9	HFPO-DA	3.18	3.18	2.131	2.131	NO
10	5:3 FTCA	3.51	3.52	1.357	1.357	NO
11	PFHpA	3.58	3.58	6.797	6.797	NO
12	ADONA	3.70	3.70	3.122	3.122	NO
13	L-PFHxS	3.74	3.74	2.746	2.746	NO
14	6:2 FTS	4.06	4.06	1.778	1.778	NO
15	L-PFOA	4.11	4.11	3.601	3.601	NO
16	PFecHS	4.13	4.13	0.876	0.876	NO
17	PFHpS	4.23	4.23	1.944	1.944	NO
18	7:3 FTCA	4.55	4.54	1.747	1.747	NO
19	PFNA	4.56	4.56	2.790	2.790	NO
20	PFOSA	4.62	4.62	31.135	31.135	NO
21	L-PFOS	4.64	4.64	1.941	1.941	NO
22	9Cl-PF30NS	4.86	4.86	49.199	49.199	NO
23	PFDA	4.93	4.93	4.531	4.531	NO
24	8:2 FTS	4.90	4.90	1.491	1.491	NO
25	PFNS	5.00	5.00	1.685	1.685	NO
26	L-MeFOSAA	5.08	5.09	3.096	3.096	NO

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-9.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:25:00 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.25	5.25	1.538	1.538	NO
2	PFUdA	5.26	5.26	6.357	6.357	NO
3	PFDS	5.31	5.31	1.615	1.615	NO
4	11Cl-PF30UdS	5.48	5.48	5.939	5.939	NO
5	10:2 FTS	5.54	5.54	1.601	1.601	NO
6	PFDoA	5.55	5.55	6.951	6.951	NO
7	N-MeFOSA	5.68	5.68	1.655	1.655	NO
8	PFTrDA	5.80	5.80	18.819	18.819	NO
9	PFDoS	5.83	5.83	2.186	2.186	NO
10	PFTeDA	6.02	6.02	13.712	13.712	NO
11	N-EtFOSA	6.11	6.11	2.053	2.053	NO
12	PFHxDA	6.38	6.38	17.037	17.037	NO
13	PFODA	6.62	6.62			
14	N-MeFOSE	6.30	6.30			
15	N-EtFOSE	6.45	6.45			

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

(A) HFPO-DA < 70%.
(B) 7:3 FTCA < 70%

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

JAR 7/12/19

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	207.673	2074.304	1.00	1.18	1.251	0.9	92.4	NO		
2	2	PFPrS	248.9 > 79.9	38.751	549.420	1.00	1.54	0.882	0.8	83.0	NO	2.802	NO
3	3	3:3 FTCA	240.9 > 176.9	11.986	4000.553	1.00	2.01	0.037	1.0	102.2	NO	3.457	YES
4	4	PFPeA	263.1 > 218.9	279.420	4000.553	1.00	2.17	0.873	1.0	96.4	NO		
5	5	PFBS	299.0 > 79.7	95.957	549.420	1.00	2.46	2.183	1.1	105.4	NO	3.586	NO
6	6	4:2 FTS	327.0 > 306.9	233.142	1328.341	1.00	2.88	2.194	0.9	90.9	NO	1.584	NO
7	47	13C3-PFBA	216.1 > 171.8	2074.304	3228.265	1.00	1.18	8.032	12.4	98.8	NO		
8	49	13C3-PFBS	302.0 > 98.8	549.420	519.933	1.00	2.46	13.209	12.8	102.1	NO		
9	48	13C3-PFPeA	266.0 > 221.8	4000.553	10770.198	1.00	2.17	4.643	11.4	91.1	NO		
10	48	13C3-PFPeA	266.0 > 221.8	4000.553	10770.198	1.00	2.17	4.643	11.4	91.1	NO		
11	49	13C3-PFBS	302.0 > 98.8	549.420	519.933	1.00	2.46	13.209	12.8	102.1	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1328.341	519.933	1.00	2.88	31.935	14.3	114.1	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	688.438	3342.476	1.00	2.97	1.030	0.9	88.6	NO	16.754	NO
15	8	PFPeS	349.1>80.1	75.856	549.420	1.00	3.17	1.726	0.8	80.3	NO	1.562	NO
16	9	HFPO-DA	285.1 > 168.9	102.097	1356.024	1.00	3.16	0.376	0.7	69.5 (A)	YES	1.718	NO
17	10	5:3 FTCA	340.9 > 236.9	76.045	4166.089	1.00	3.51	0.228	1.0	98.9	NO	1.480	NO
18	11	PFHpA	363.0 > 318.9	430.838	4166.089	1.00	3.58	1.293	1.1	108.6	NO	9.990	NO
19	12	ADONA	376.8 > 250.9	1315.477	4166.089	1.00	3.70	3.947	0.9	91.5	NO	3.022	NO
20	52	13C2-PFHxA	315.0 > 270.0	3342.476	10770.198	1.00	2.96	3.879	4.9	97.9	NO		
21	49	13C3-PFBS	302.0 > 98.8	549.420	519.933	1.00	2.46	13.209	12.8	102.1	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1356.024	10770.198	1.00	3.18	1.574	5.1	102.7	NO		
23	53	13C4-PFHpA	367.2 > 321.8	4166.089	10770.198	1.00	3.58	4.835	12.4	98.9	NO		
24	53	13C4-PFHpA	367.2 > 321.8	4166.089	10770.198	1.00	3.58	4.835	12.4	98.9	NO		
25	53	13C4-PFHpA	367.2 > 321.8	4166.089	10770.198	1.00	3.58	4.835	12.4	98.9	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	70.177	1375.685	1.00	3.74	0.638	0.8	84.8	NO	1.388	NO
28	15	6:2 FTS	427.0 > 406.9	237.295	1083.781	1.00	4.05	2.737	1.0	100.3	NO	2.062	NO
29	16	L-PFOA	412.8 > 368.9	1207.611	8786.926	1.00	4.11	1.718	0.9	90.9	NO	4.369	NO
30	18	PFecHS	460.8 > 381.0	171.816	8786.926	1.00	4.13	0.244	1.0	95.2	NO	1.164	NO
31	19	PFHpS	449.0 > 80.0	98.371	1339.843	1.00	4.23	0.918	1.1	108.4	NO	2.532	NO
32	20	7:3 FTCA	440.9 > 336.9	23.303	8663.019	1.00	4.54	0.034	0.4	37.7 (B)	YES	0.564	YES
33	54	13C3-PFHxS	401.8 > 79.9	1375.685	519.933	1.00	3.74	33.074	13.0	103.9	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1083.781	1446.344	1.00	4.05	9.367	12.7	101.8	NO		
35	58	13C2-PFOA	414.9 > 369.7	8786.926	14842.357	1.00	4.11	7.400	13.1	104.9	NO		
36	58	13C2-PFOA	414.9 > 369.7	8786.926	14842.357	1.00	4.11	7.400	13.1	104.9	NO		

CGH 7/12/2019

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1339.843	1446.344	1.00	4.64	11.580	10.9	87.4	NO		
38	56	13C5-PFNA	468.2 > 422.9	8663.019	9259.697	1.00	4.55	11.695	11.9	95.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	712.930	8663.019	1.00	4.55	1.029	0.9	91.1	NO	4.857	YES
41	22	PFOSA	497.9 > 77.9	181.247	1592.772	1.00	4.61	1.422	1.1	113.7	NO	44.952	NO
42	23	L-PFOS	498.9 > 79.9	114.962	1339.843	1.00	4.64	1.073	1.0	98.3	NO	4.588	YES
43	25	9Cl-PF30NS	530.7 > 350.8	341.719	1339.843	1.00	4.86	3.188	1.1	108.2	NO	13.451	YES
44	26	PFDA	513 > 468.8	892.614	7025.380	1.00	4.93	1.588	1.0	101.8	NO	5.375	NO
45	27	8:2 FTS	527.0 > 506.9	187.249	1057.918	1.00	4.90	2.212	1.0	97.0	NO	1.002	NO
46	56	13C5-PFNA	468.2 > 422.9	8663.019	9259.697	1.00	4.55	11.695	11.9	95.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1592.772	12908.050	1.00	4.62	1.542	11.8	94.7	NO		
48	59	13C8-PFOS	507.0 > 79.9	1339.843	1446.344	1.00	4.64	11.580	10.9	87.4	NO		
49	59	13C8-PFOS	507.0 > 79.9	1339.843	1446.344	1.00	4.64	11.580	10.9	87.4	NO		
50	60	13C2-PFDA	515.1 > 469.9	7025.380	11196.444	1.00	4.93	7.843	11.8	94.8	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1057.918	1446.344	1.00	4.90	9.143	13.1	105.2	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	105.675	1339.843	1.00	5.00	0.986	1.2	120.6	NO	1.445	NO
54	29	L-MeFOSAA	570 > 419	363.671	1625.067	1.00	5.08	2.797	1.0	95.2	NO	2.217	NO
55	31	L-EtFOSAA	584.1 > 419	245.036	1983.034	1.00	5.25	1.545	0.9	89.8	NO	1.735	NO
56	33	PFUdA	563.0 > 518.9	924.492	11609.883	1.00	5.26	0.995	1.1	105.6	NO	10.681	YES
57	34	PFDS	598.8 > 79.9	123.905	1057.918	1.00	5.31	1.464	0.9	89.8	NO	1.887	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	68.504	13332.708	1.00	5.48	0.064	1.0	98.8	NO	28.723	YES
59	59	13C8-PFOS	507.0 > 79.9	1339.843	1446.344	1.00	4.64	11.580	10.9	87.4	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1625.067	12908.050	1.00	5.08	1.574	12.2	97.6	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1983.034	12908.050	1.00	5.24	1.920	13.0	104.2	NO		
62	63	13C2-PFUdA	565 > 519.8	11609.883	12908.050	1.00	5.26	11.243	13.1	104.9	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1057.918	1446.344	1.00	4.90	9.143	13.1	105.2	NO		
64	65	13C2-PFDoA	614.7 > 569.7	13332.708	11196.444	1.00	5.55	14.885	12.1	96.9	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	198.809	1057.918	1.00	5.53	2.349	0.9	90.0	NO	1.325	NO
67	37	PFDoA	612.9 > 569.0	950.597	13332.708	1.00	5.55	0.891	1.0	95.9	NO	7.872	NO
68	38	N-MeFOSA	512.1 > 168.9	128.230	3496.718	1.00	5.68	5.501	4.6	93.0	NO	1.751	NO
69	39	PFTrDA	662.9 > 618.9	1045.607	13332.708	1.00	5.80	0.980	1.0	95.9	NO	17.705	NO
70	40	PFDoS	698.8 > 79.9	86.109	6638.088	1.00	5.83	0.162	0.7	74.6	NO	1.505	NO
71	41	PFTeDA	713.0 > 669.0	824.860	6638.088	1.00	6.02	1.553	1.0	102.0	NO	13.965	NO
72	65	13C2-PFDoA	614.7 > 569.7	13332.708	11196.444	1.00	5.55	14.885	12.1	96.9	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	13332.708	11196.444	1.00	5.55	14.885	12.1	96.9	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3496.718	12908.050	1.00	5.70	3.386	152.8	101.9	NO		
75	65	13C2-PFDoA	614.7 > 569.7	13332.708	11196.444	1.00	5.55	14.885	12.1	96.9	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6638.088	12908.050	1.00	6.02	6.428	12.6	100.6	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6638.088	12908.050	1.00	6.02	6.428	12.6	100.6	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	168.515	5460.598	1.00	6.11	4.629	5.5	109.3	NO	5.095	YES
80	43	PFHxDA	813.1 > 768.6	558.245	3967.212	1.00	6.38	0.704	0.9	85.9	NO	26.671	YES
81	44	PFODA	913.1 > 868.8	628.151	3967.212	1.00	6.62	0.792	0.9	94.1	NO		
82	45	N-MeFOSE	616.1 > 58.9	173.479	4648.253	1.00	6.30	5.598	4.9	97.2	NO		
83	46	N-EtFOSE	630.1 > 58.9	169.803	4529.742	1.00	6.45	5.623	4.2	83.4	NO		
84	72	13C4-PFBA	217.0 > 172.0	3228.265	3228.265	1.00	1.18	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	5460.598	12908.050	1.00	6.13	5.288	169.7	113.1	NO		
86	69	13C2-PFHxDA	815 > 769.7	3967.212	12908.050	1.00	6.38	3.842	5.2	104.6	NO		
87	69	13C2-PFHxDA	815 > 769.7	3967.212	12908.050	1.00	6.38	3.842	5.2	104.6	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4648.253	12908.050	1.00	6.29	4.501	161.0	107.4	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	4529.742	12908.050	1.00	6.44	4.387	159.5	106.3	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10770.198	10770.198	1.00	2.96	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	14842.357	14842.357	1.00	4.11	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	519.933	519.933	1.00	3.74	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	9259.697	9259.697	1.00	4.55	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1446.344	1446.344	1.00	4.64	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	11196.444	11196.444	1.00	4.93	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12908.050	12908.050	1.00	5.26	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

Full Runlog added 8/21/19. GM 8/21/19

Last Altered: Friday, July 12, 2019 13:29:36 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:29:49 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	190712M1_1	IPA	12-Jul-19	10:20:09
2	2	190712M1_2	ST190712M1-1 PFC CS0 19G1103	12-Jul-19	10:30:54
3	3	190712M1_3	IB	12-Jul-19	10:41:27
4	4	190712M1_4	1901910-01@5X SW1906280950KME 0.24336	12-Jul-19	10:52:05
5	5	190712M1_5	1901910-02@5X SW1906281025KME 0.24464	12-Jul-19	11:02:38
6	6	190712M1_6	1901910-03 SW1906281035KME 0.24318	12-Jul-19	11:13:16
7	7	190712M1_7	1901911-01@5X WMP1907010855JSJ 0.2509	12-Jul-19	11:23:49
8	8	190712M1_8	IPA	12-Jul-19	11:34:27
9	9	190712M1_9	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	11:45:00
10	10	190712M1_10	IPA	12-Jul-19	11:55:38
11	11	190712M1_11	B9F0280-MS1@5X Matrix Spike 1.08	12-Jul-19	12:42:12
12	12	190712M1_12	IPA	12-Jul-19	12:52:55
13	13	190712M1_13	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	13:03:33
14	14	190712M1_14	IPA 3 AR 7/12/19	12-Jul-19	13:14:06

Vista Analytical Laboratory

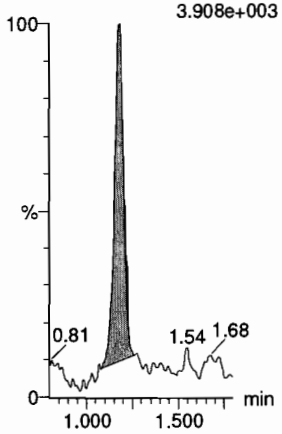
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

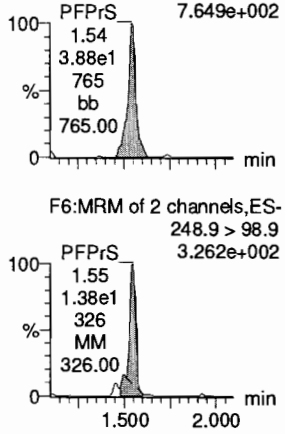
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

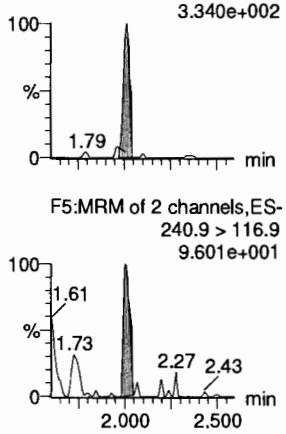
PFBA



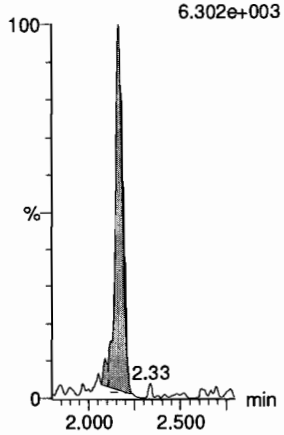
PFPrS



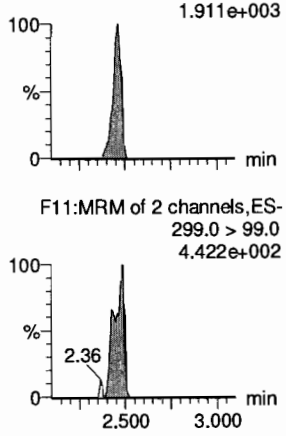
3:3 FTCA



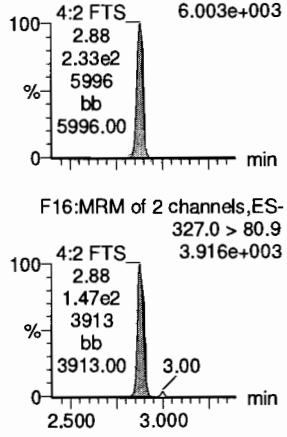
PFPeA



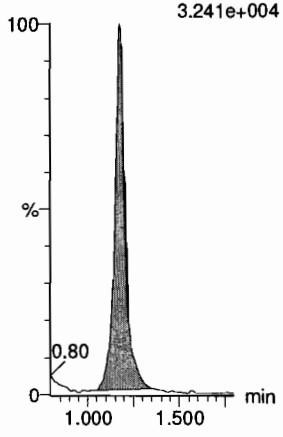
PFBS



4:2 FTS



13C3-PFBA



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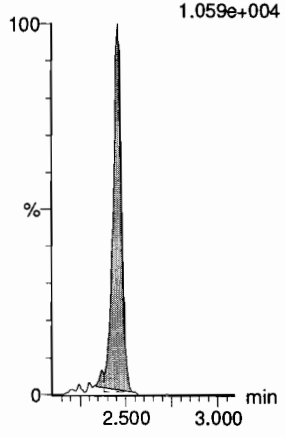
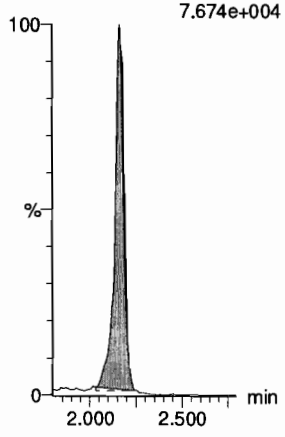


13C3-PFPeA



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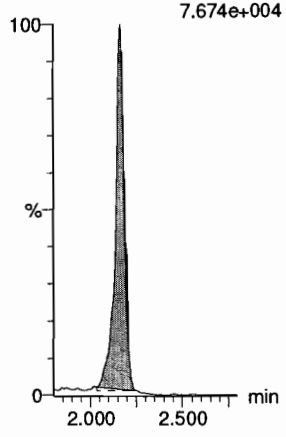
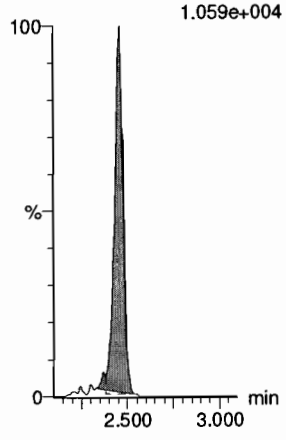
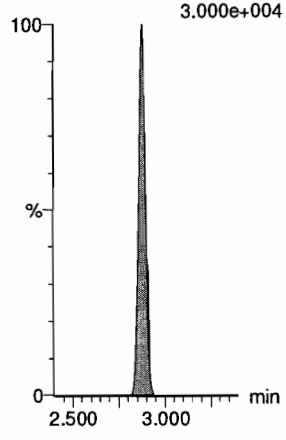


13C3-PFBS



13C2-4:2 FTS

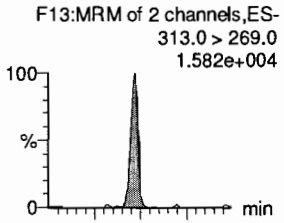


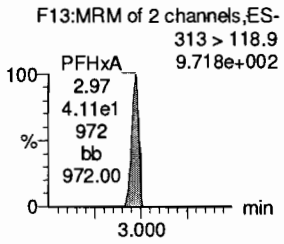
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

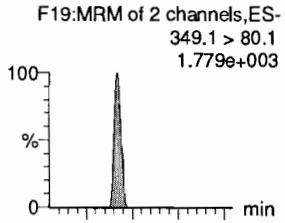
Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

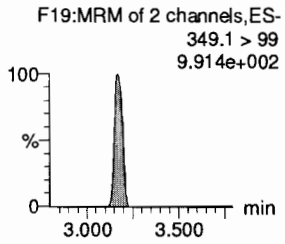
PFHxA



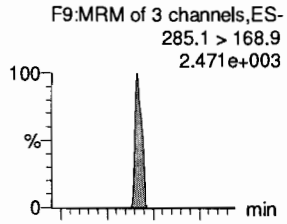


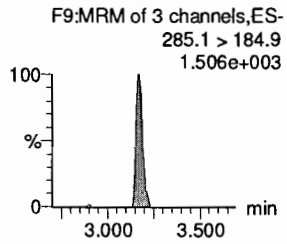
PFPeS



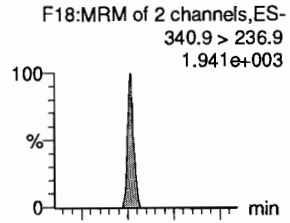


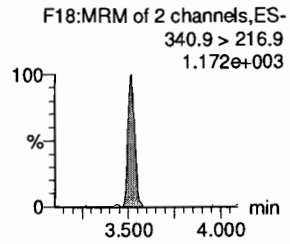
HFPO-DA



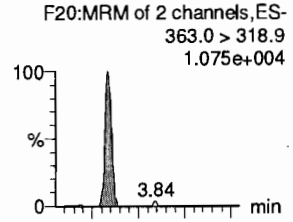


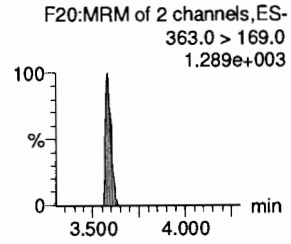
5:3 FTCA





PFHpA





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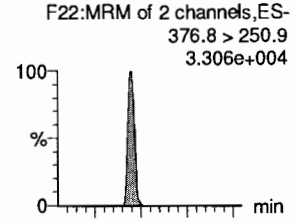
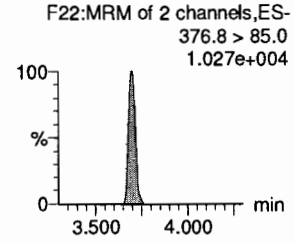
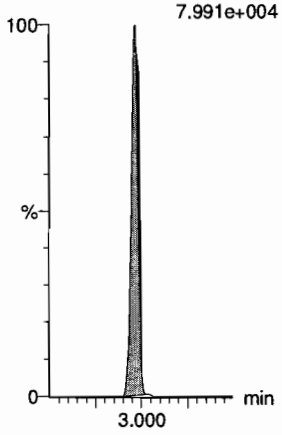
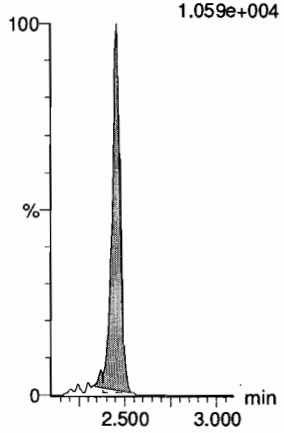




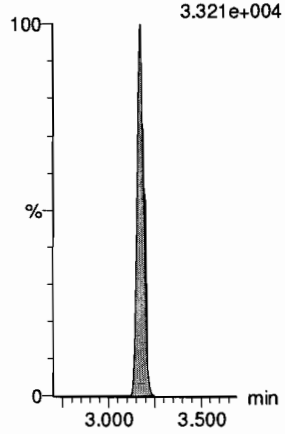
13C2-PFHxA



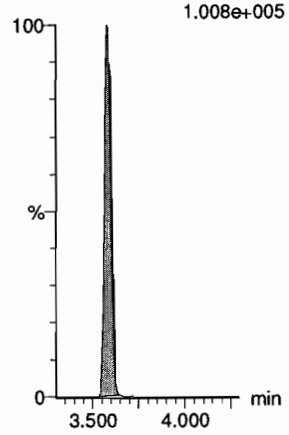
13C3-PFBS



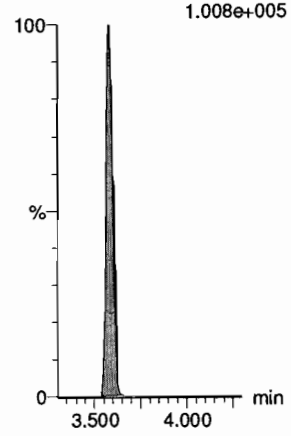
13C3-HFPO-DA



13C4-PFHpA



13C4-PFHpA



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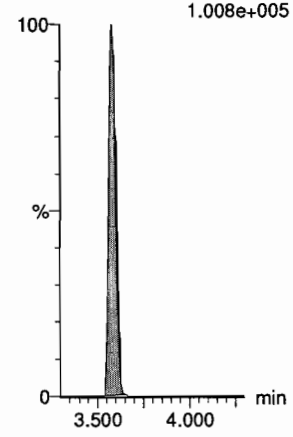
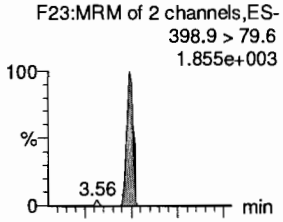


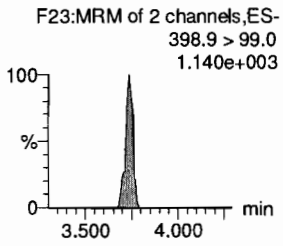
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

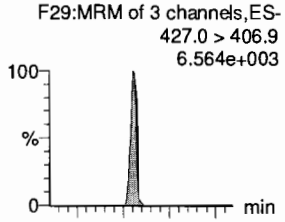
Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

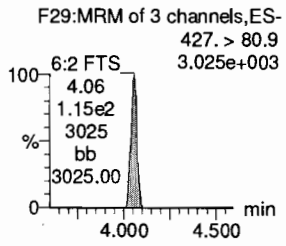
L-PFHxS



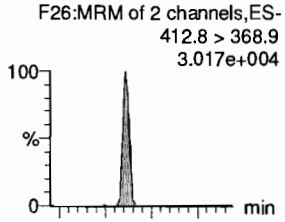


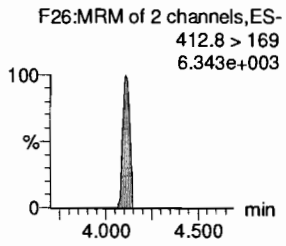
6:2 FTS





L-PFOA





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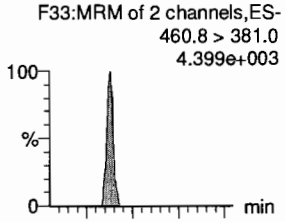
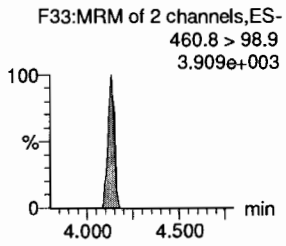
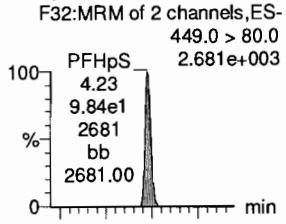
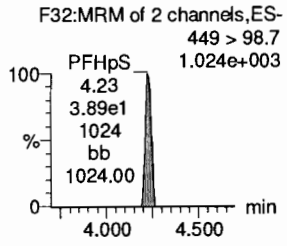


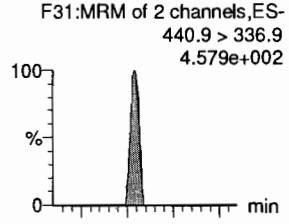


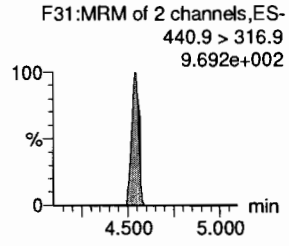
PFHpS



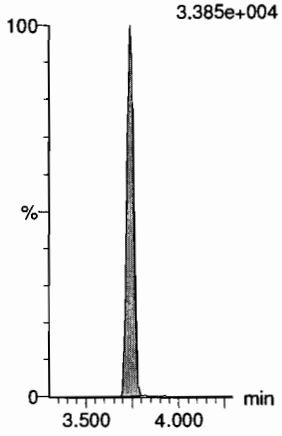


7:3 FTCA

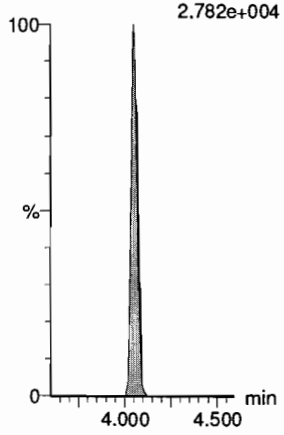




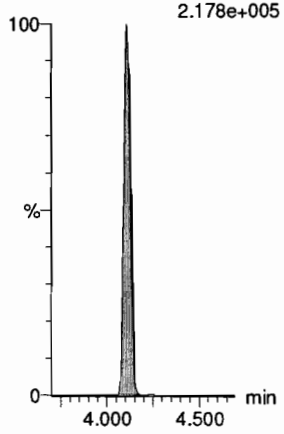
13C3-PFHxS



13C2-6:2 FTS



13C2-PFOA



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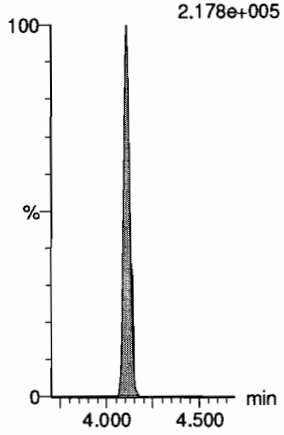
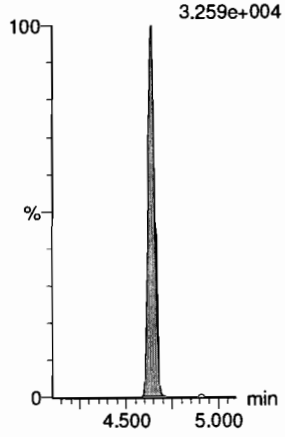
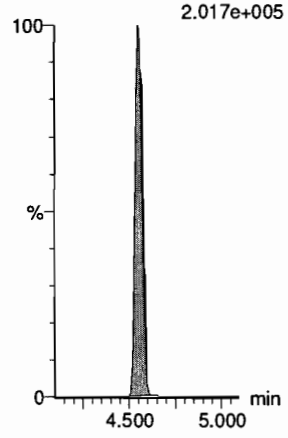


13C8-PFOS



13C5-PFNA



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Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

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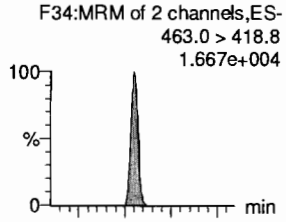

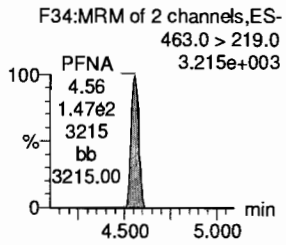

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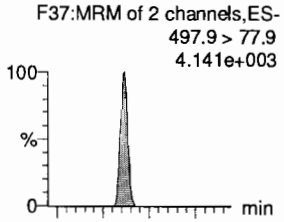

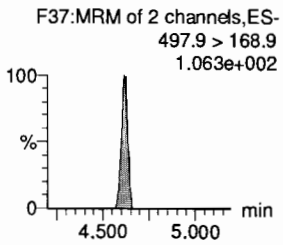

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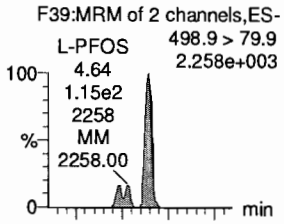
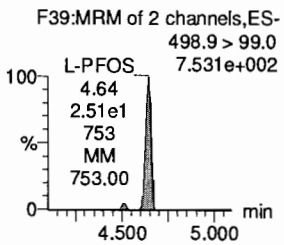
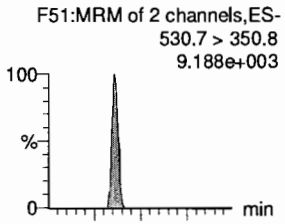
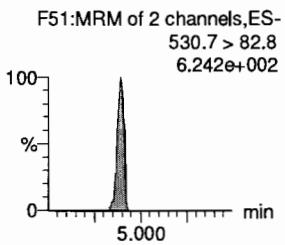




9Cl-PF30NS





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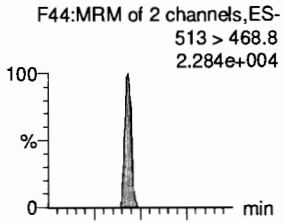
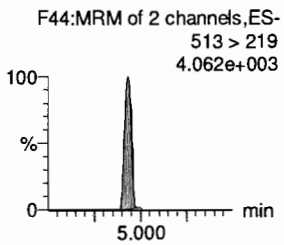
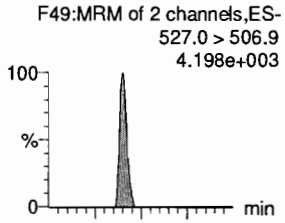
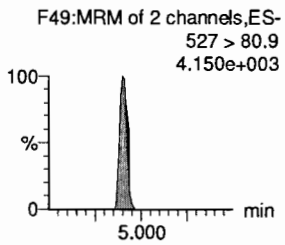


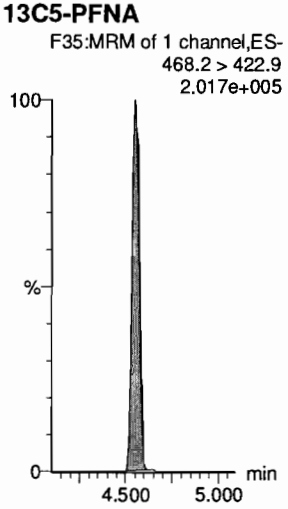


8:2 FTS

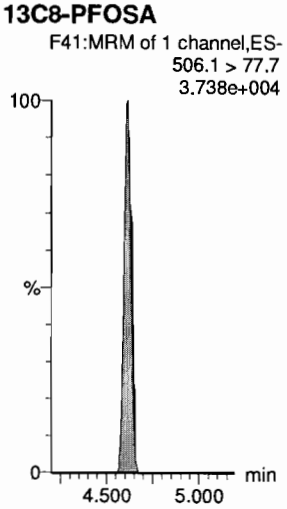




13C5-PFNA



13C8-PFOSA



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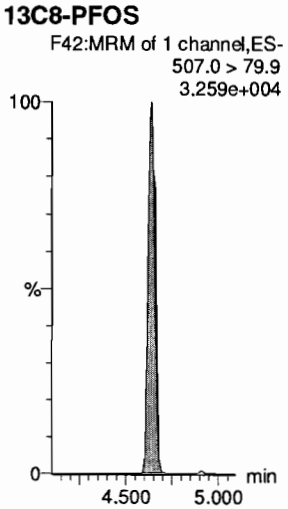
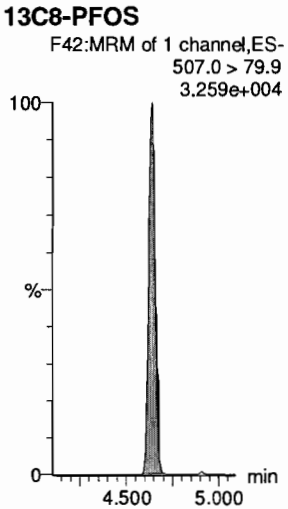
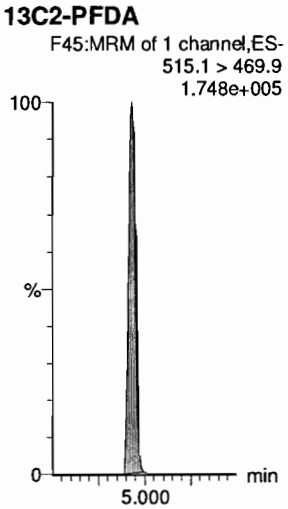


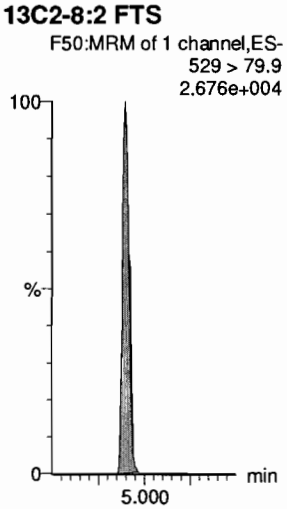
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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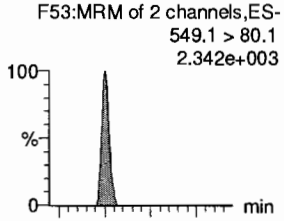
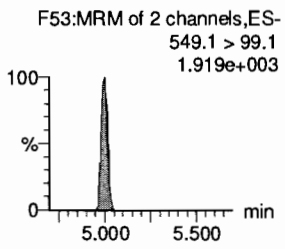
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

PFNS





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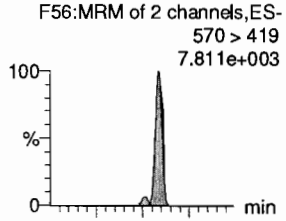

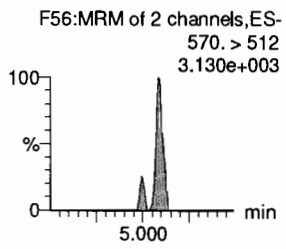

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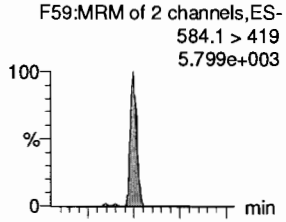

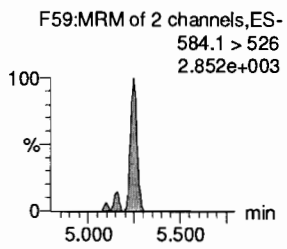

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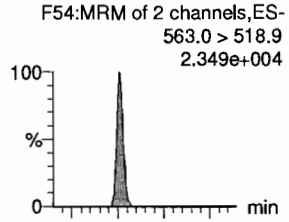
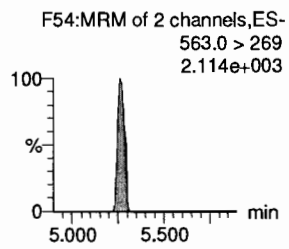
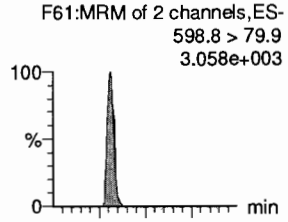
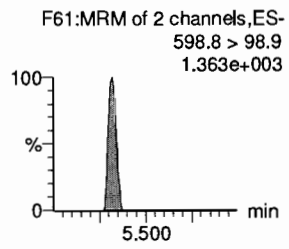


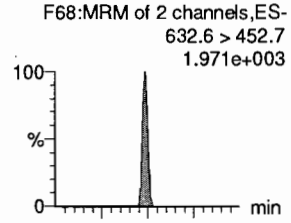


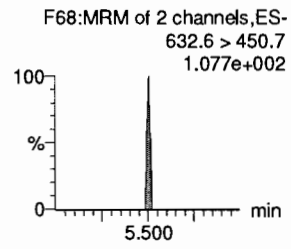
PFDS



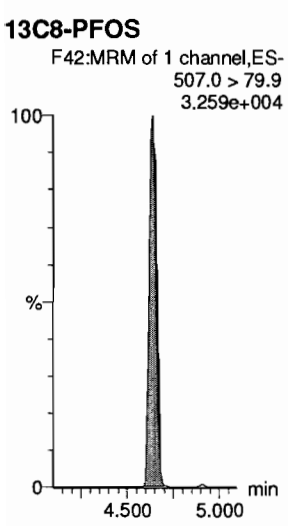


11Cl-PF30UdS

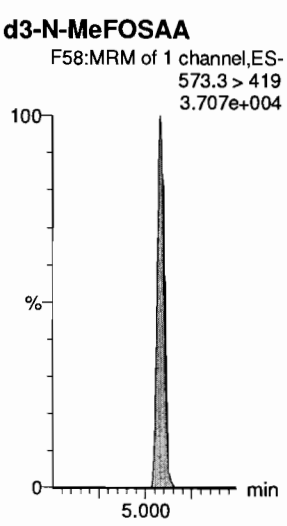




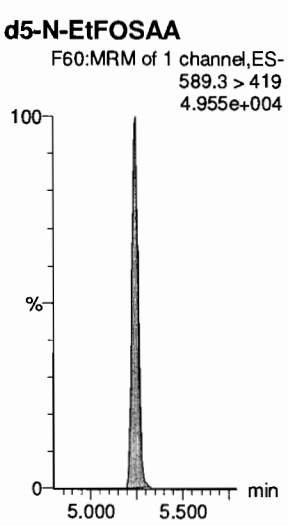
13C8-PFOS



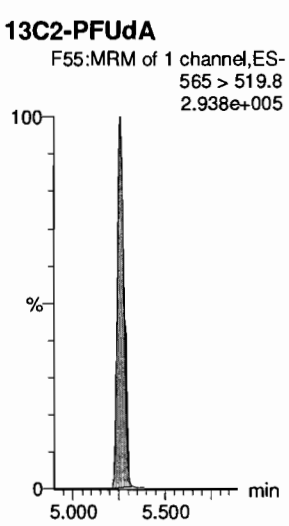
d3-N-MeFOSAA



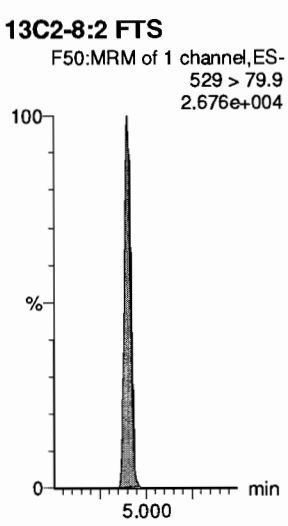
d5-N-EtFOSAA



13C2-PFUdA



13C2-8:2 FTS



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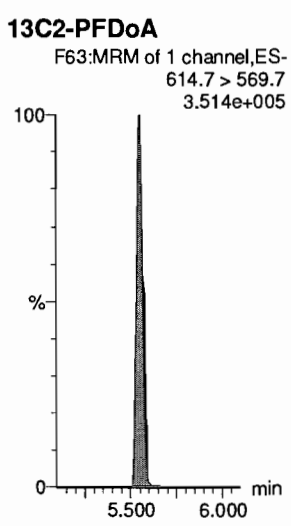

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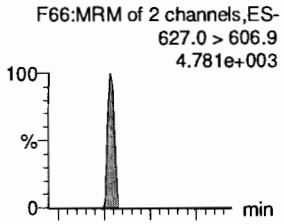
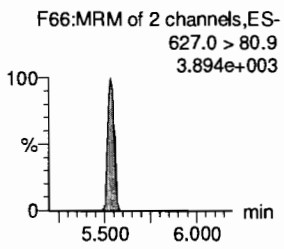
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

10:2 FTS





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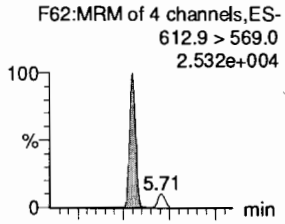
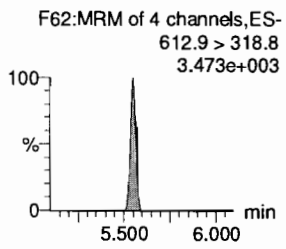
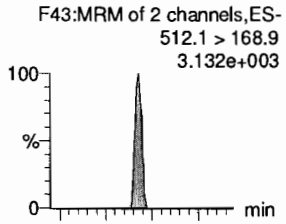
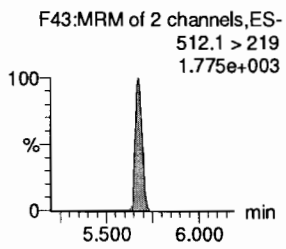


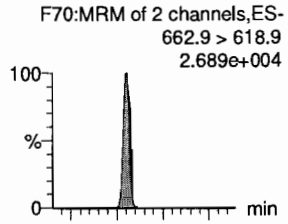


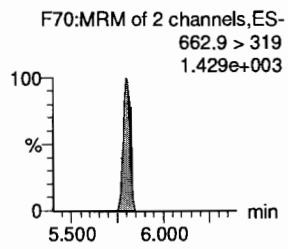
N-MeFOSA



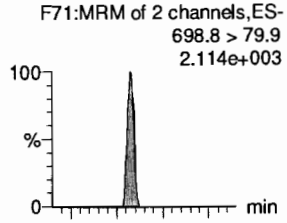


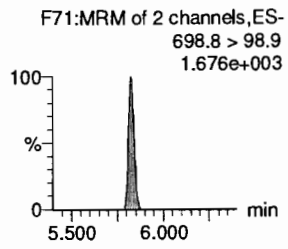
PFTrDA



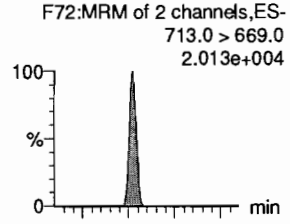


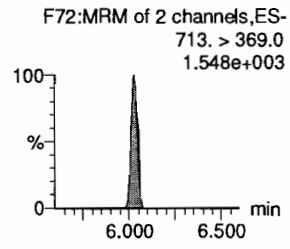
PFDoS



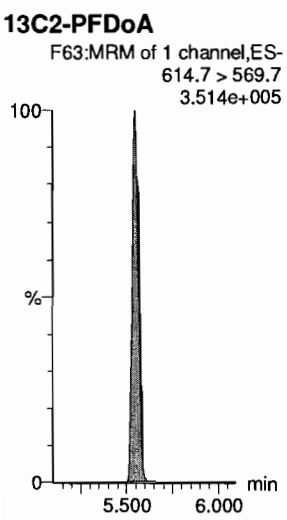


PFTeDA

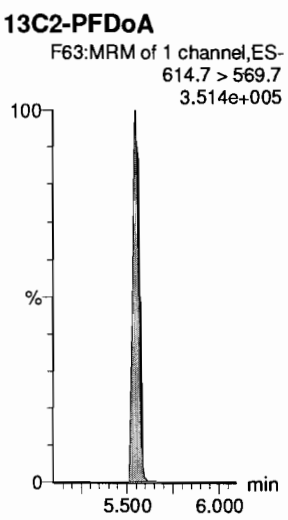




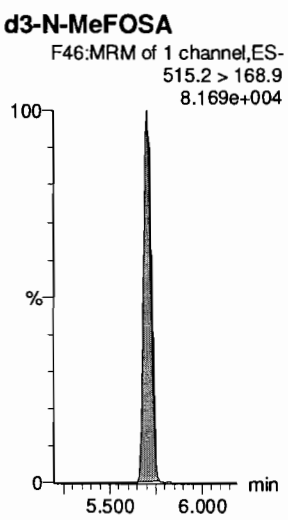
13C2-PFDoA



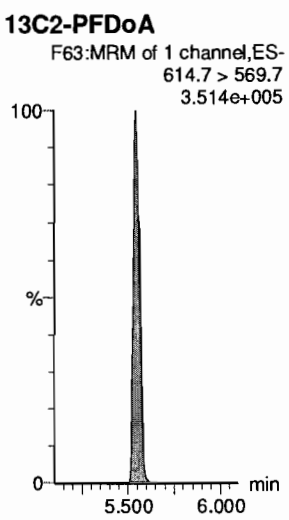
13C2-PFDoA



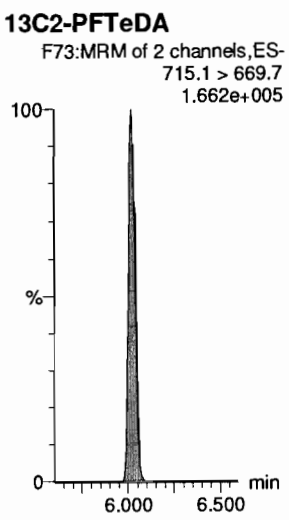
d3-N-MeFOSA



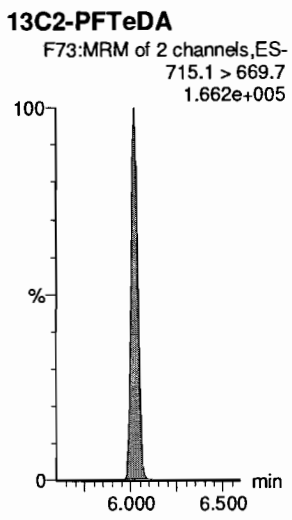
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA



Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
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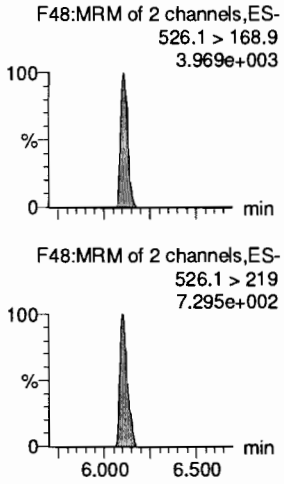
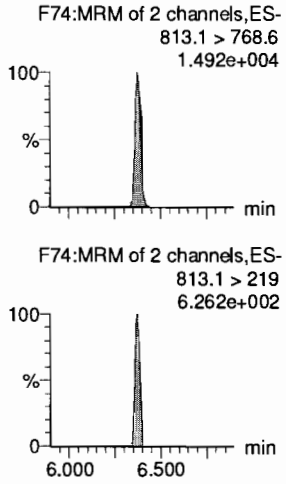
Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

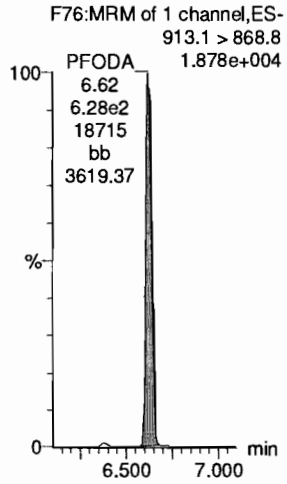
N-EtFOSA



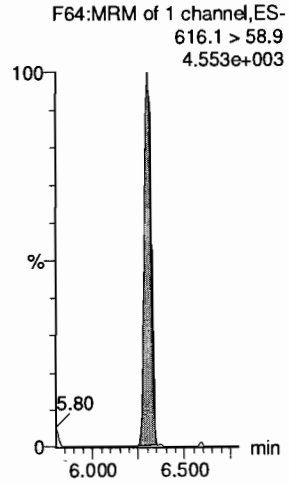
PFHxDA



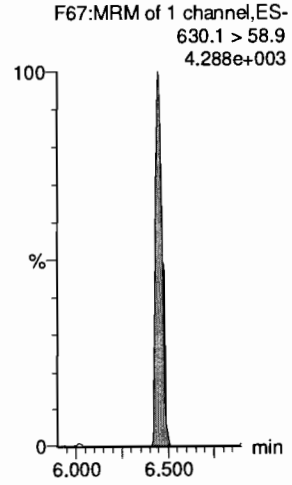
PFODA



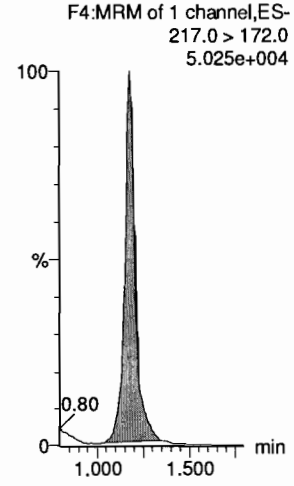
N-MeFOSE



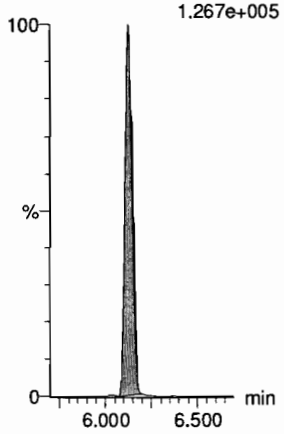
N-EtFOSE



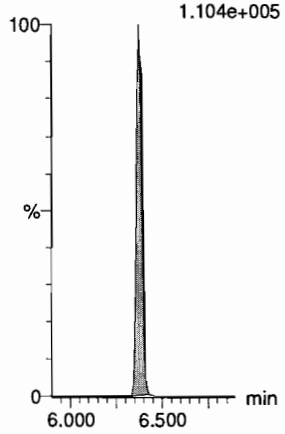
13C4-PFBA



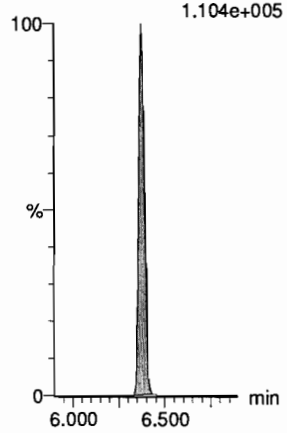
d5-N-ETFOSA



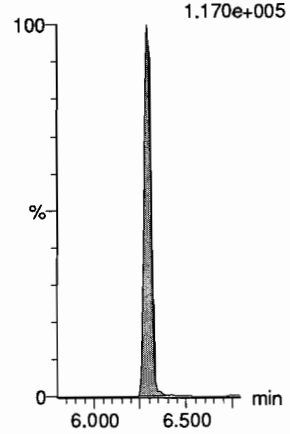
13C2-PFHxDA



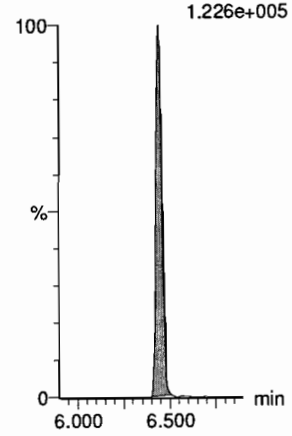
13C2-PFHxDA



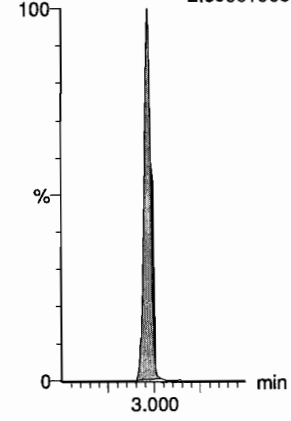
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

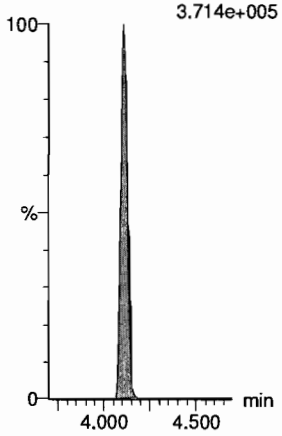


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2_1.qld

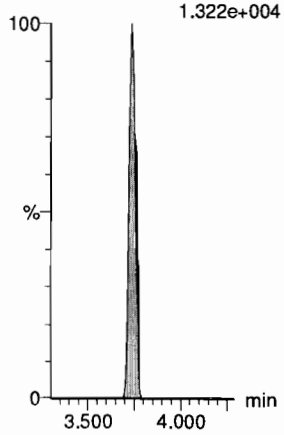
Last Altered: Friday, July 12, 2019 12:18:43 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:20:26 Pacific Daylight Time

Name: 190712M1_2, Date: 12-Jul-2019, Time: 10:30:54, ID: ST190712M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

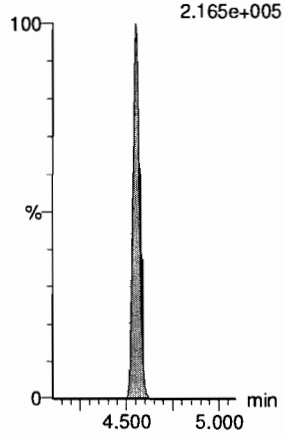
13C8-PFOA



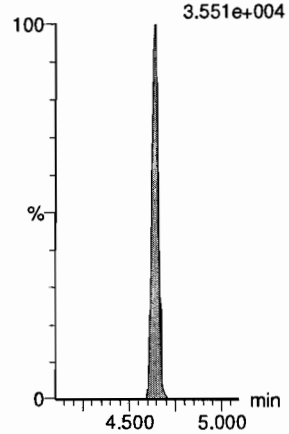
18O2-PFHxS



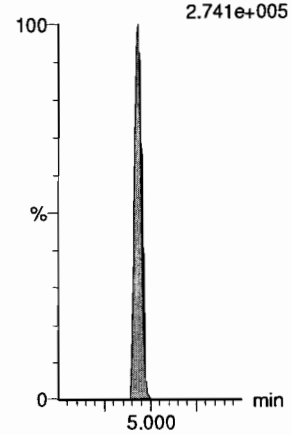
13C9-PFNA



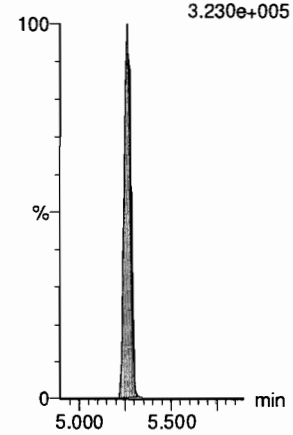
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

VAR 7/12/19

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	1151.535	2080.132	1.00	1.18	6.920	4.9	97.9	NO		
2	2	PFPrS	248.9 > 79.9	237.612	599.330	1.00	1.55	4.956	4.7	94.3	NO	2.715	NO
3	3	3:3 FTCA	240.9 > 176.9	66.015	4298.128	1.00	2.01	0.192	4.7	94.1	NO	1.872	NO
4	4	PFPeA	263.1 > 218.9	1567.248	4298.128	1.00	2.17	4.558	4.8	96.2	NO		
5	5	PFBS	299.0 > 79.7	489.793	599.330	1.00	2.46	10.215	4.5	90.3	NO	2.957	NO
6	6	4:2 FTS	327.0 > 306.9	1213.293	1297.593	1.00	2.88	11.688	4.8	95.9	NO	1.628	NO
7	47	13C3-PFBA	216.1 > 171.8	2080.132	3183.299	1.00	1.18	8.168	12.6	100.5	NO		
8	49	13C3-PFBS	302.0 > 98.8	599.330	543.042	1.00	2.46	13.796	13.3	106.6	NO		
9	48	13C3-PFPeA	266.0 > 221.8	4298.128	10295.517	1.00	2.17	5.218	12.8	102.4	NO		
10	48	13C3-PFPeA	266.0 > 221.8	4298.128	10295.517	1.00	2.17	5.218	12.8	102.4	NO		
11	49	13C3-PFBS	302.0 > 98.8	599.330	543.042	1.00	2.46	13.796	13.3	106.6	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1297.593	543.042	1.00	2.88	29.869	13.3	106.7	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	3657.644	3317.080	1.00	2.97	5.513	4.7	94.9	NO	18.818	NO
15	8	PFPeS	349.1>80.1	562.249	599.330	1.00	3.17	11.727	5.5	110.0	NO	1.782	NO
16	9	HFPO-DA	285.1 > 168.9	736.791	1161.494	1.00	3.18	3.172	5.8	115.2	NO	2.131	NO
17	10	5:3 FTCA	340.9 > 236.9	353.346	3932.738	1.00	3.52	1.123	4.5	90.4	NO	1.357	NO
18	11	PFHpA	363.0 > 318.9	1994.970	3932.738	1.00	3.58	6.341	5.2	103.7	NO	6.797	NO
19	12	ADONA	376.8 > 250.9	6335.803	3932.738	1.00	3.70	20.138	4.6	93.0	NO	3.122	NO
20	52	13C2-PFHxA	315.0 > 270.0	3317.080	10295.517	1.00	2.97	4.027	5.1	101.7	NO		
21	49	13C3-PFBS	302.0 > 98.8	599.330	543.042	1.00	2.46	13.796	13.3	106.6	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1161.494	10295.517	1.00	3.18	1.410	4.6	92.0	NO		
23	53	13C4-PFHpA	367.2 > 321.8	3932.738	10295.517	1.00	3.58	4.775	12.2	97.7	NO		
24	53	13C4-PFHpA	367.2 > 321.8	3932.738	10295.517	1.00	3.58	4.775	12.2	97.7	NO		
25	53	13C4-PFHpA	367.2 > 321.8	3932.738	10295.517	1.00	3.58	4.775	12.2	97.7	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	537.702	1348.514	1.00	3.74	4.984	6.0	120.4	NO	2.746	NO
28	15	6:2 FTS	427.0 > 406.9	1029.194	1073.398	1.00	4.06	11.985	4.1	82.7	NO	1.778	NO
29	16	L-PFOA	412.8 > 368.9	5630.665	7677.557	1.00	4.11	9.167	4.9	98.8	NO	3.601	NO
30	18	PFecHS	460.8 > 381.0	759.680	7677.557	1.00	4.13	1.237	4.5	89.6	NO	0.876	NO
31	19	PFHpS	449.0 > 80.0	443.168	1418.183	1.00	4.23	3.906	4.5	90.4	NO	1.944	NO
32	20	7:3 FTCA	440.9 > 336.9	381.650	8340.613	1.00	4.54	0.572	4.4	87.1	NO	1.747	NO
33	54	13C3-PFHxS	401.8 > 79.9	1348.514	543.042	1.00	3.74	31.041	12.2	97.5	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1073.398	1236.448	1.00	4.06	10.852	14.7	117.9	NO		
35	58	13C2-PFOA	414.9 > 369.7	7677.557	14155.490	1.00	4.11	6.780	12.0	96.1	NO		
36	58	13C2-PFOA	414.9 > 369.7	7677.557	14155.490	1.00	4.11	6.780	12.0	96.1	NO		

CAH 7/12/19

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Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
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Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1418.183	1236.448	1.00	4.64	14.337	13.5	108.2	NO		
38	56	13C5-PFNA	468.2 > 422.9	8340.613	8252.108	1.00	4.56	12.634	12.9	102.8	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	3582.283	8340.613	1.00	4.56	5.369	4.9	97.4	NO	2.790	NO
41	22	PFOSA	497.9 > 77.9	728.818	1661.477	1.00	4.62	5.483	4.3	86.2	NO	31.135	NO
42	23	L-PFOS	498.9 > 79.9	577.196	1418.183	1.00	4.64	5.087	4.1	82.9	NO	1.941	NO
43	25	9Cl-PF30NS	530.7 > 350.8	1803.233	1418.183	1.00	4.86	15.894	5.1	101.9	NO	49.199	NO
44	26	PFDA	513 > 468.8	4133.287	7025.228	1.00	4.93	7.354	4.5	89.3	NO	4.531	NO
45	27	8:2 FTS	527.0 > 506.9	898.401	886.069	1.00	4.90	12.674	5.6	112.5	NO	1.491	NO
46	56	13C5-PFNA	468.2 > 422.9	8340.613	8252.108	1.00	4.56	12.634	12.9	102.8	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1661.477	12189.365	1.00	4.62	1.704	13.1	104.6	NO		
48	59	13C8-PFOS	507.0 > 79.9	1418.183	1236.448	1.00	4.64	14.337	13.5	108.2	NO		
49	59	13C8-PFOS	507.0 > 79.9	1418.183	1236.448	1.00	4.64	14.337	13.5	108.2	NO		
50	60	13C2-PFDA	515.1 > 469.9	7025.228	10093.874	1.00	4.93	8.700	13.1	105.1	NO		
51	61	13C2-8:2 FTS	529 > 79.9	886.069	1236.448	1.00	4.90	8.958	12.9	103.1	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	444.455	1418.183	1.00	5.00	3.917	4.6	91.0	NO	1.685	NO
54	29	L-MeFOSAA	570 > 419	1992.629	1392.888	1.00	5.09	17.882	6.0	120.3	NO	3.096	NO
55	31	L-EtFOSAA	584.1 > 419	1366.426	1643.829	1.00	5.25	10.391	5.3	106.4	NO	1.538	NO
56	33	PFUdA	563.0 > 518.9	3960.477	11159.676	1.00	5.26	4.436	4.8	95.1	NO	6.357	NO
57	34	PFDS	598.8 > 79.9	630.530	886.069	1.00	5.31	8.895	4.5	90.0	NO	1.615	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	328.753	11664.535	1.00	5.48	0.352	5.5	109.8	NO	5.939	NO
59	59	13C8-PFOS	507.0 > 79.9	1418.183	1236.448	1.00	4.64	14.337	13.5	108.2	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1392.888	12189.365	1.00	5.08	1.428	11.1	88.5	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1643.829	12189.365	1.00	5.25	1.686	11.4	91.5	NO		
62	63	13C2-PFUdA	565 > 519.8	11159.676	12189.365	1.00	5.26	11.444	13.4	106.8	NO		
63	61	13C2-8:2 FTS	529 > 79.9	886.069	1236.448	1.00	4.90	8.958	12.9	103.1	NO		
64	65	13C2-PFDoA	614.7 > 569.7	11664.535	10093.874	1.00	5.55	14.445	11.8	94.0	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	982.579	886.069	1.00	5.54	13.861	5.2	104.1	NO	1.601	NO
67	37	PFDoA	612.9 > 569.0	4584.122	11664.535	1.00	5.55	4.912	5.2	103.1	NO	6.951	NO
68	38	N-MeFOSA	512.1 > 168.9	665.890	3335.078	1.00	5.68	29.949	23.6	94.2	NO	1.655	NO
69	39	PFTrDA	662.9 > 618.9	5386.172	11664.535	1.00	5.80	5.772	5.5	109.1	NO	18.819	NO
70	40	PFDoS	698.8 > 79.9	560.896	6129.911	1.00	5.83	1.144	4.8	95.5	NO	2.186	NO
71	41	PFTeDA	713.0 > 669.0	3825.106	6129.911	1.00	6.02	7.800	5.2	104.2	NO	13.712	NO
72	65	13C2-PFDoA	614.7 > 569.7	11664.535	10093.874	1.00	5.55	14.445	11.8	94.0	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	11664.535	10093.874	1.00	5.55	14.445	11.8	94.0	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3335.078	12189.365	1.00	5.71	3.420	154.3	102.9	NO		
75	65	13C2-PFDoA	614.7 > 569.7	11664.535	10093.874	1.00	5.55	14.445	11.8	94.0	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6129.911	12189.365	1.00	6.02	6.286	12.3	98.3	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6129.911	12189.365	1.00	6.02	6.286	12.3	98.3	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	767.409	5260.680	1.00	6.11	21.881	24.1	96.4	NO	2.053	NO
80	43	PFHxDA	813.1 > 768.6	2584.810	3484.982	1.00	6.38	3.708	4.8	96.9	NO	17.037	NO
81	44	PFODA	913.1 > 868.8	2957.737	3484.982	1.00	6.62	4.244	5.1	101.5	NO		
82	45	N-MeFOSE	616.1 > 58.9	741.779	4402.662	1.00	6.30	25.273	22.4	89.8	NO		
83	46	N-EtFOSE	630.1 > 58.9	1003.329	4184.799	1.00	6.45	35.963	25.7	102.7	NO		
84	72	13C4-PFBA	217.0 > 172.0	3183.299	3183.299	1.00	1.18	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	5260.680	12189.365	1.00	6.13	5.395	173.1	115.4	NO		
86	69	13C2-PFHxDA	815 > 769.7	3484.982	12189.365	1.00	6.38	3.574	4.9	97.3	NO		
87	69	13C2-PFHxDA	815 > 769.7	3484.982	12189.365	1.00	6.38	3.574	4.9	97.3	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4402.662	12189.365	1.00	6.29	4.515	161.5	107.7	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	4184.799	12189.365	1.00	6.44	4.291	156.0	104.0	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10295.517	10295.517	1.00	2.96	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	14155.490	14155.490	1.00	4.11	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	543.042	543.042	1.00	3.74	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8252.108	8252.108	1.00	4.56	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1236.448	1236.448	1.00	4.64	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	10093.874	10093.874	1.00	4.93	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12189.365	12189.365	1.00	5.26	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

Full Runlog added 8/21/19. GM 8/21/19

Last Altered: Friday, July 12, 2019 13:29:36 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	190712M1_1	IPA	12-Jul-19	10:20:09
2	2	190712M1_2	ST190712M1-1 PFC CS0 19G1103	12-Jul-19	10:30:54
3	3	190712M1_3	IB	12-Jul-19	10:41:27
4	4	190712M1_4	1901910-01@5X SW1906280950KME 0.24336	12-Jul-19	10:52:05
5	5	190712M1_5	1901910-02@5X SW1906281025KME 0.24464	12-Jul-19	11:02:38
6	6	190712M1_6	1901910-03 SW1906281035KME 0.24318	12-Jul-19	11:13:16
7	7	190712M1_7	1901911-01@5X WMP1907010855JSJ 0.2509	12-Jul-19	11:23:49
8	8	190712M1_8	IPA	12-Jul-19	11:34:27
9	9	190712M1_9	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	11:45:00
10	10	190712M1_10	IPA	12-Jul-19	11:55:38
11	11	190712M1_11	B9F0280-MS1@5X Matrix Spike 1.08	12-Jul-19	12:42:12
12	12	190712M1_12	IPA	12-Jul-19	12:52:55
13	13	190712M1_13	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	13:03:33
14	14	190712M1_14	IPA 3 AR 7/12/19	12-Jul-19	13:14:06

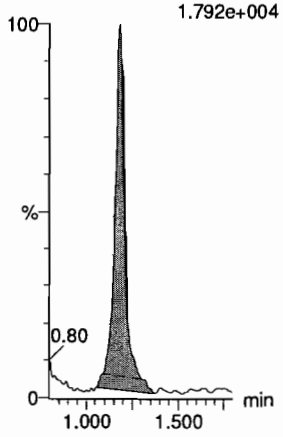
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

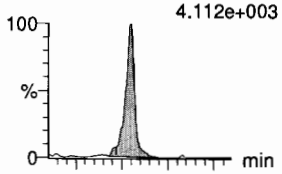
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

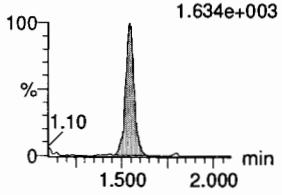
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
1.792e+004



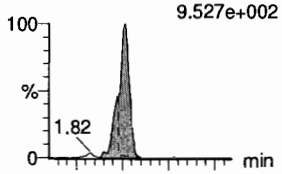
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.9
4.112e+003



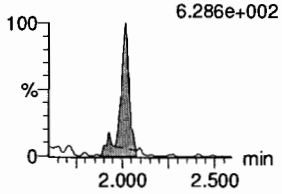
F6:MRM of 2 channels,ES-
248.9 > 98.9
1.634e+003



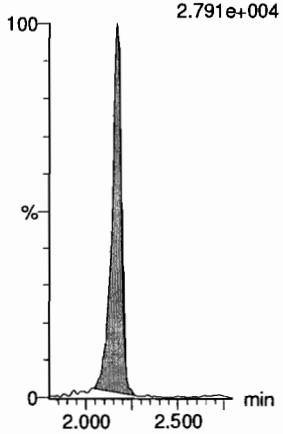
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
9.527e+002



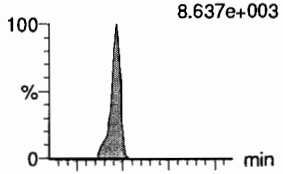
F5:MRM of 2 channels,ES-
240.9 > 116.9
6.286e+002



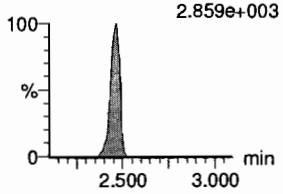
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
2.791e+004



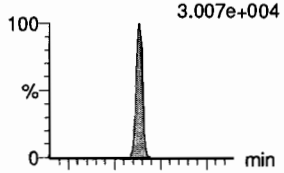
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
8.637e+003



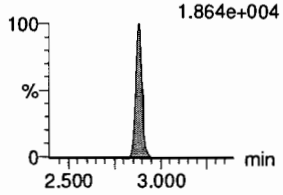
F11:MRM of 2 channels,ES-
299.0 > 99.0
2.859e+003



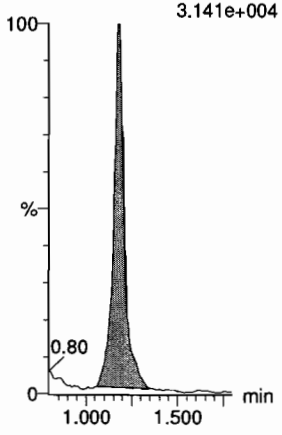
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 306.9
3.007e+004



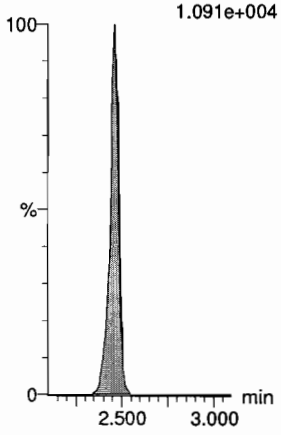
F16:MRM of 2 channels,ES-
327.0 > 80.9
1.864e+004



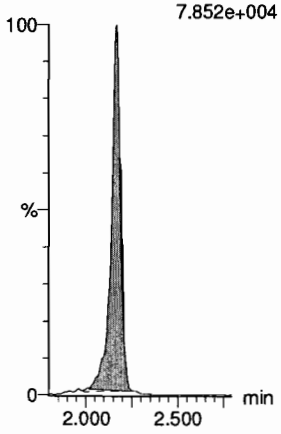
13C3-PFBA
F3:MRM of 1 channel,ES-
216.1 > 171.8
3.141e+004



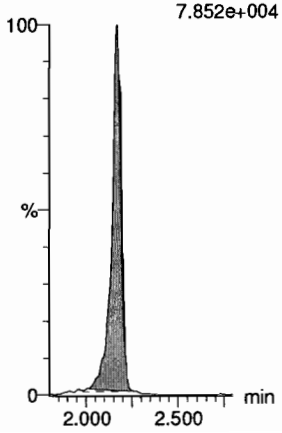
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.091e+004



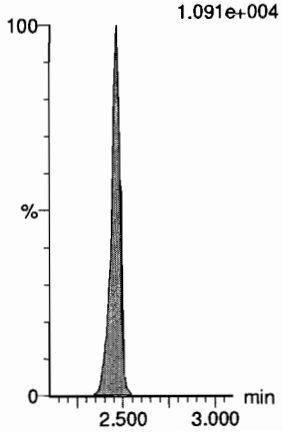
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
7.852e+004



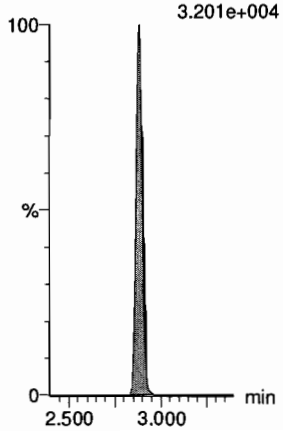
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
7.852e+004



13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.091e+004



13C2-4:2 FTS
F17:MRM of 2 channels,ES-
329.0 > 79.9
3.201e+004

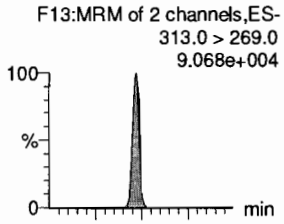


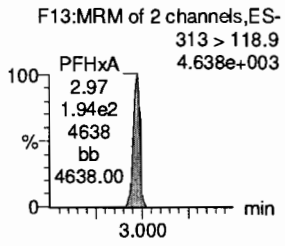
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

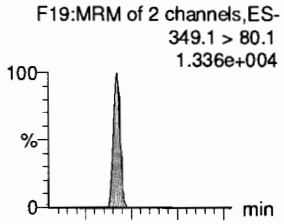
Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

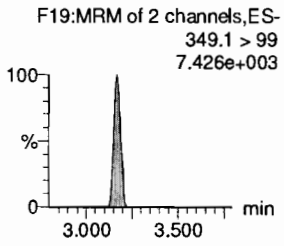
PFHxA



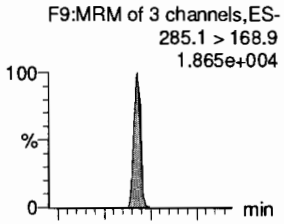


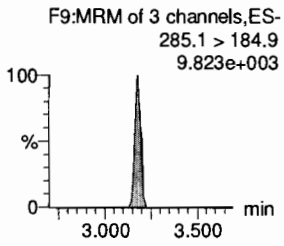
PFPeS



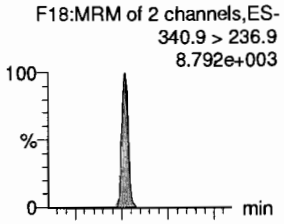


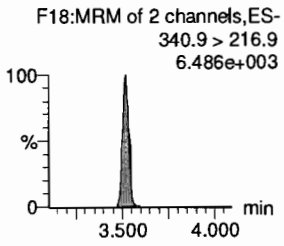
HFPO-DA



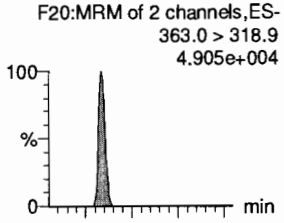


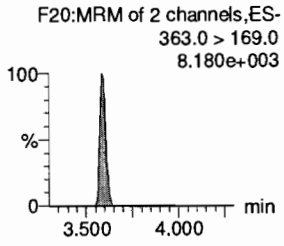
5:3 FTCA



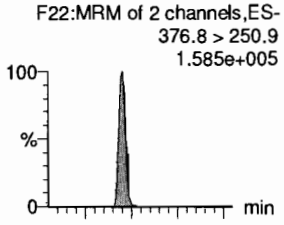


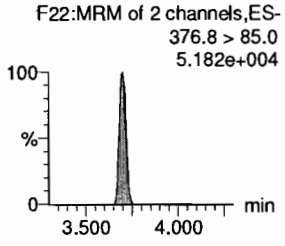
PFHpA



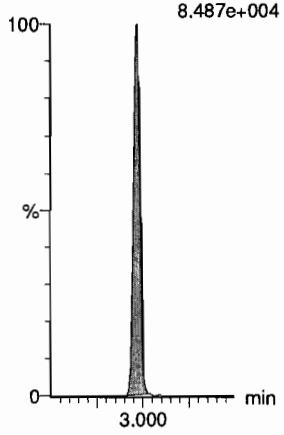


ADONA

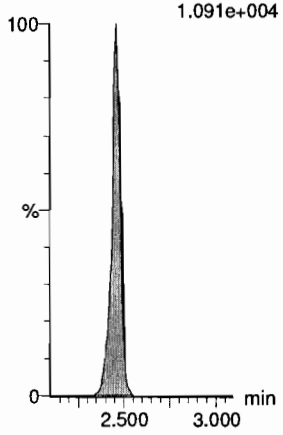




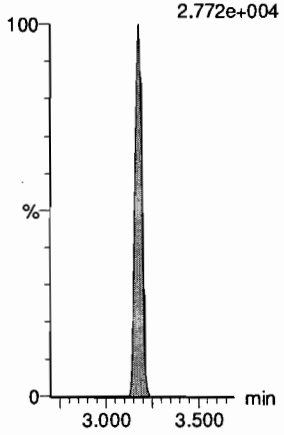
13C2-PFHxA



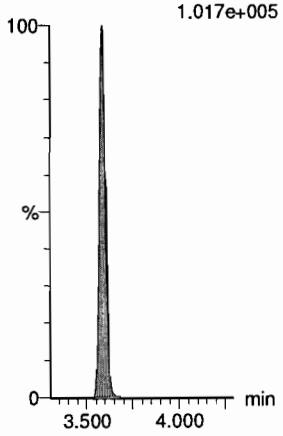
13C3-PFBS



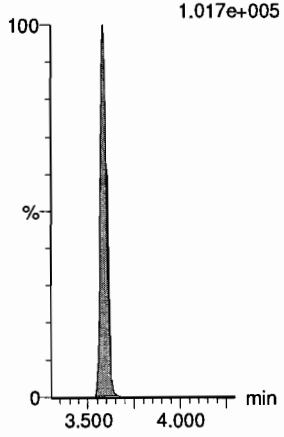
13C3-HFPO-DA



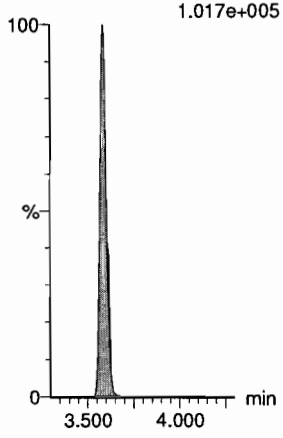
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA



Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
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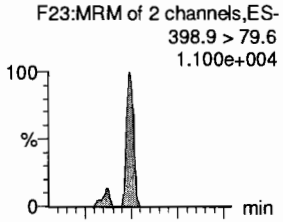
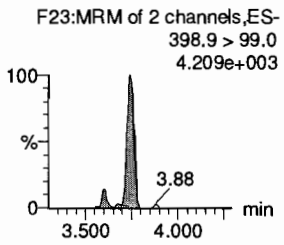
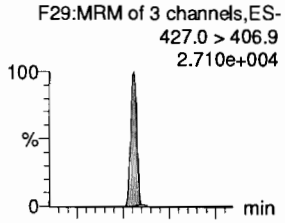
Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

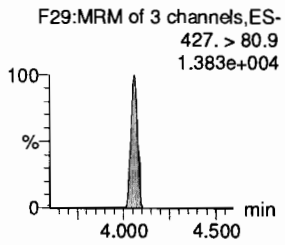
L-PFHxS



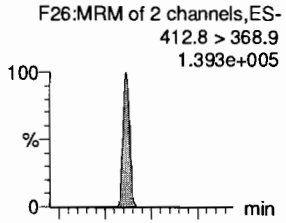


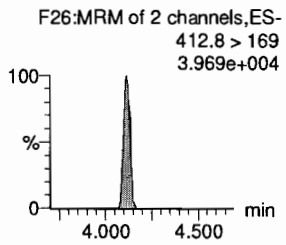
6:2 FTS



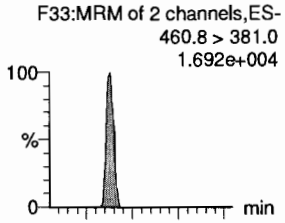


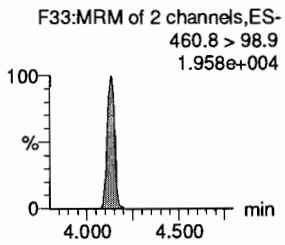
L-PFOA



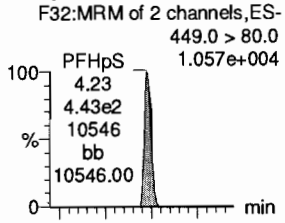


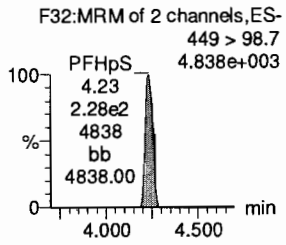
PFEChS



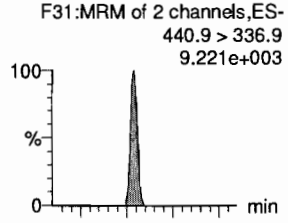


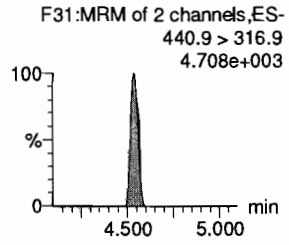
PFHpS



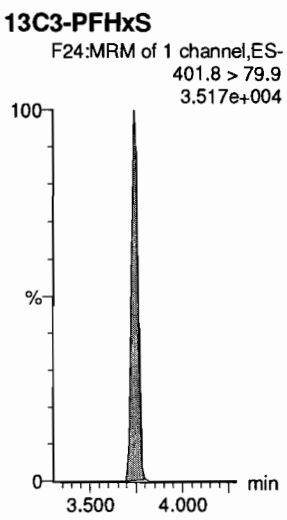


7:3 FTCA

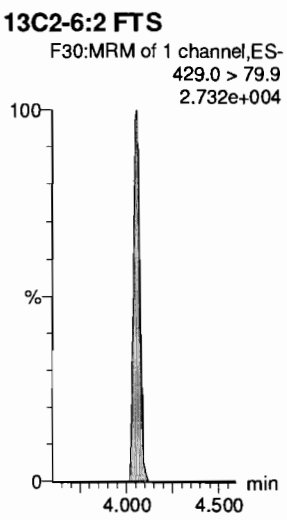




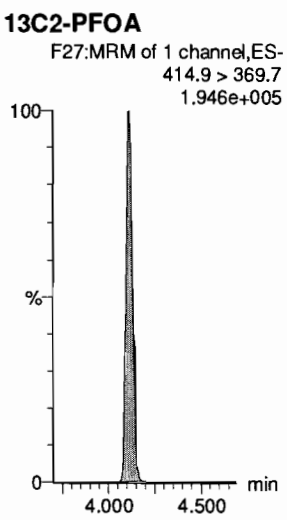
13C3-PFHxS



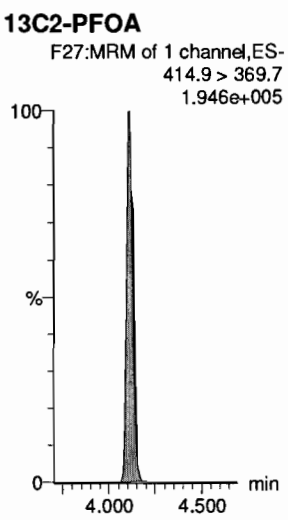
13C2-6:2 FTS



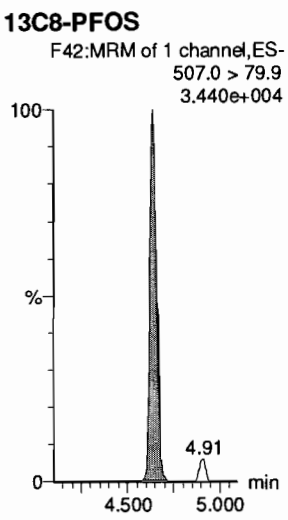
13C2-PFOA



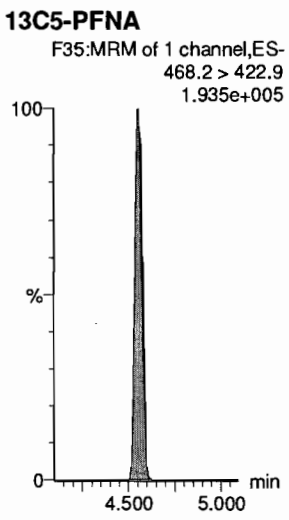
13C2-PFOA



13C8-PFOS



13C5-PFNA

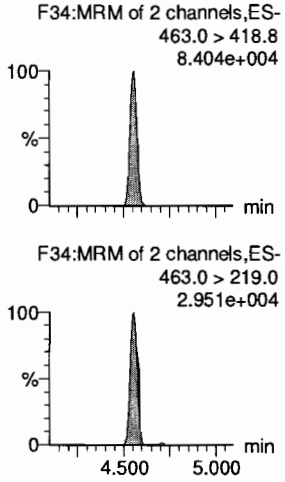


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

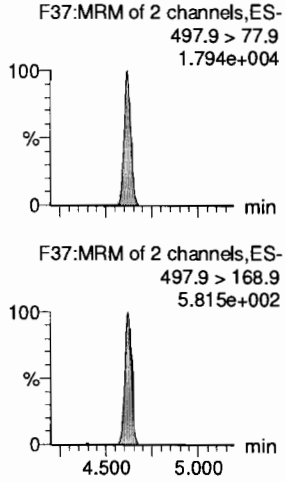
Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

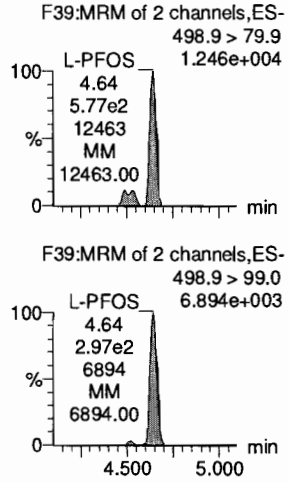
PFNA



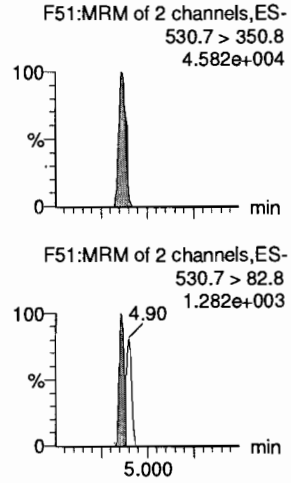
PFOSA



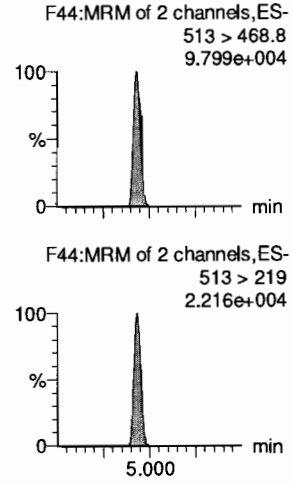
L-PFOS



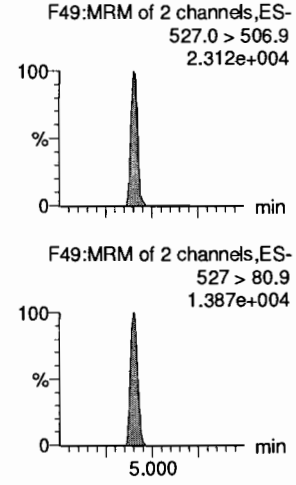
9Cl-PF30NS



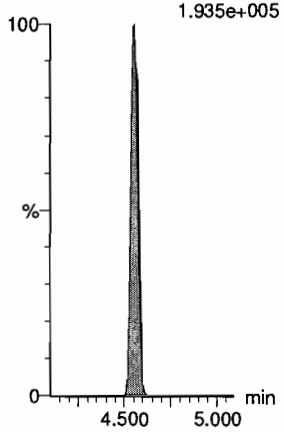
PFDA



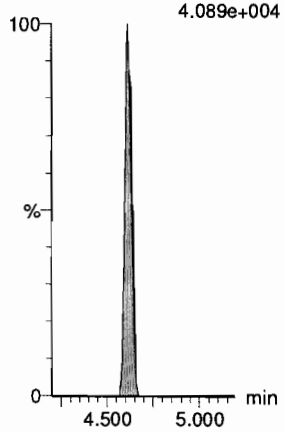
8:2 FTS



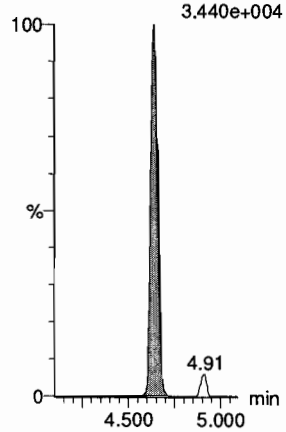
13C5-PFNA



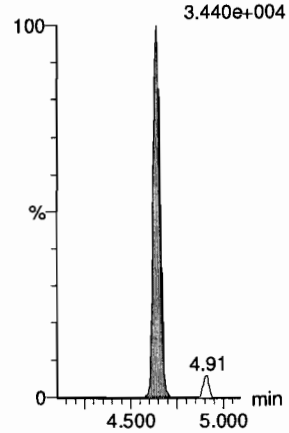
13C8-PFOSA



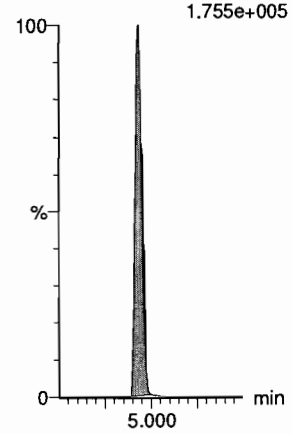
13C8-PFOS



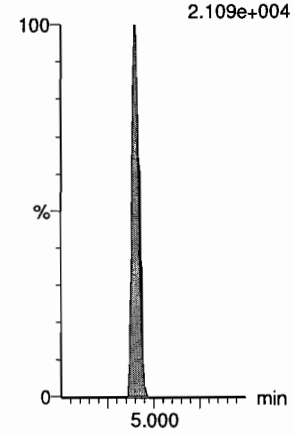
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

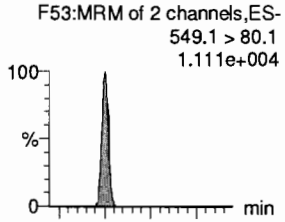


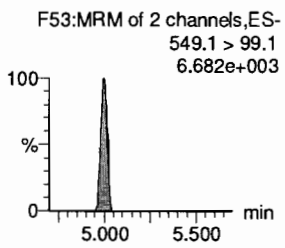
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

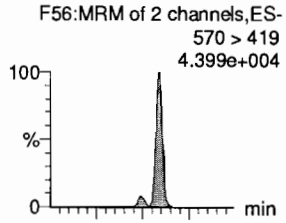
Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

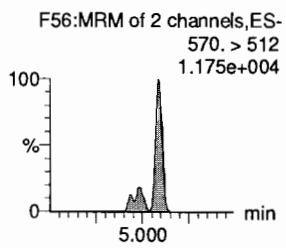
PFNS



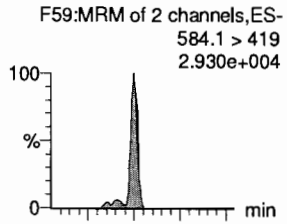


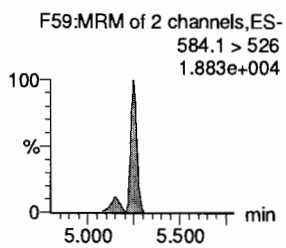
L-MeFOSAA



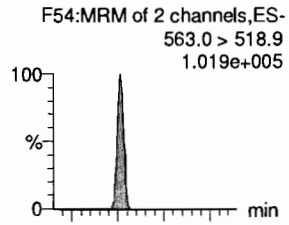


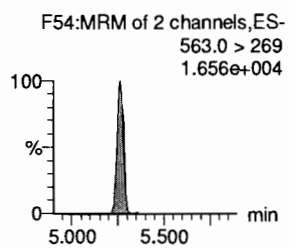
L-EtFOSAA



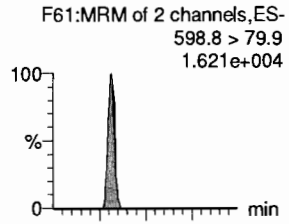


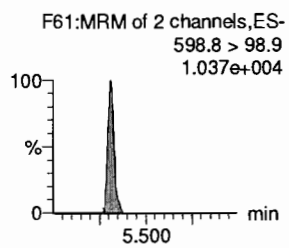
PFUdA



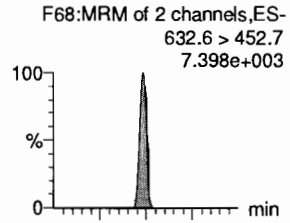


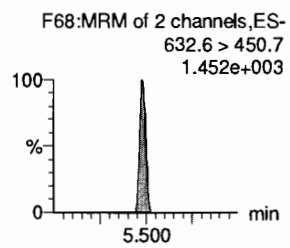
PFDS



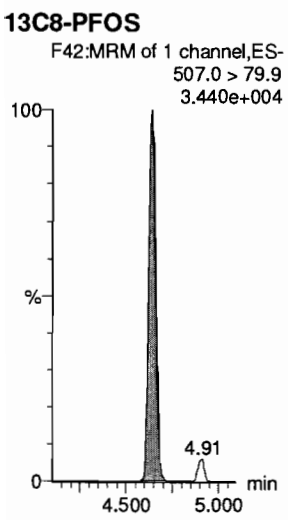


11Cl-PF30UdS

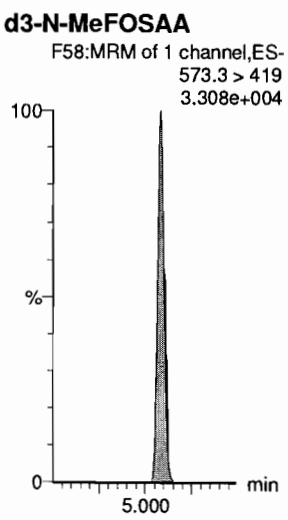




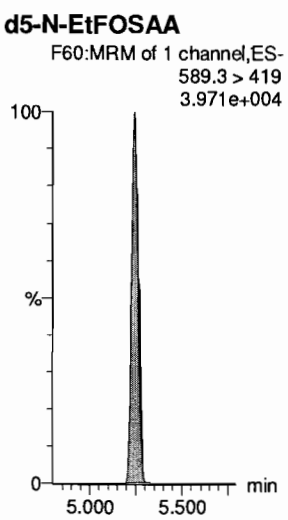
13C8-PFOS



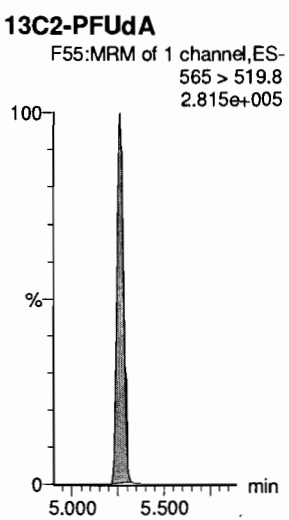
d3-N-MeFOSAA



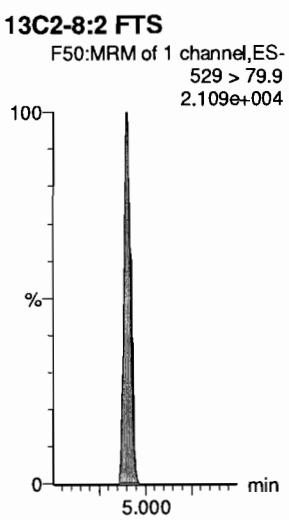
d5-N-EtFOSAA



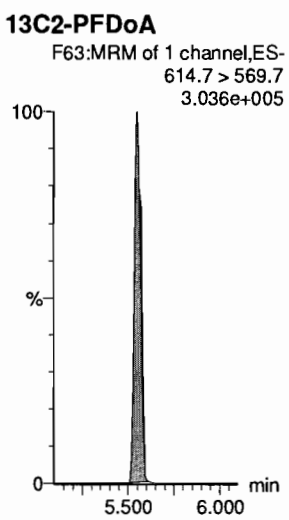
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

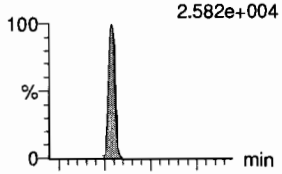


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

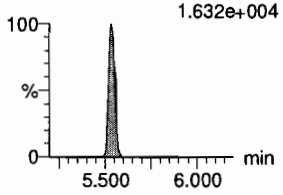
Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

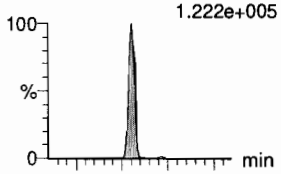
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
2.582e+004



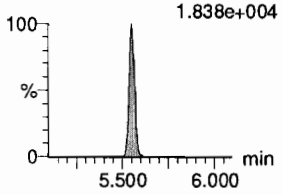
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.632e+004



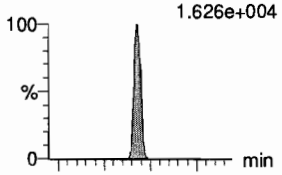
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.222e+005



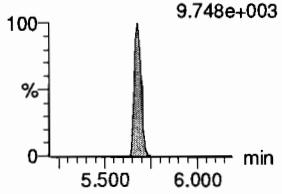
F62:MRM of 4 channels,ES-
612.9 > 318.8
1.838e+004



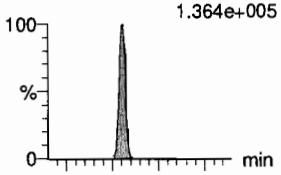
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.626e+004



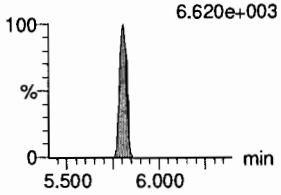
F43:MRM of 2 channels,ES-
512.1 > 219
9.748e+003



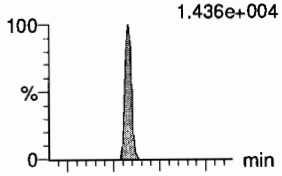
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.364e+005



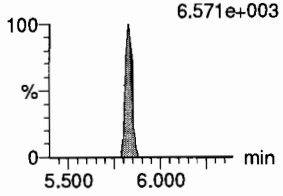
F70:MRM of 2 channels,ES-
662.9 > 319
6.620e+003



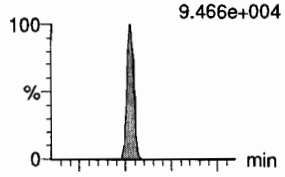
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.436e+004



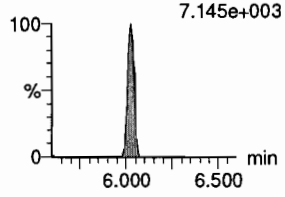
F71:MRM of 2 channels,ES-
698.8 > 98.9
6.571e+003



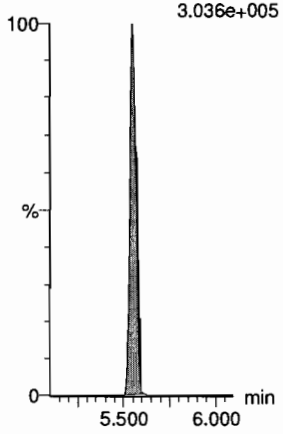
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
9.466e+004



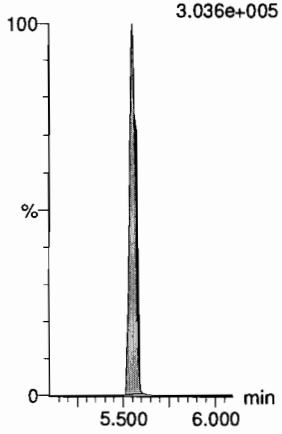
F72:MRM of 2 channels,ES-
713. > 369.0
7.145e+003



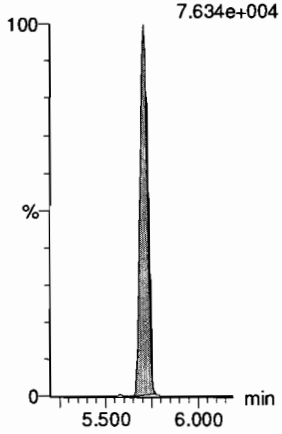
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.036e+005



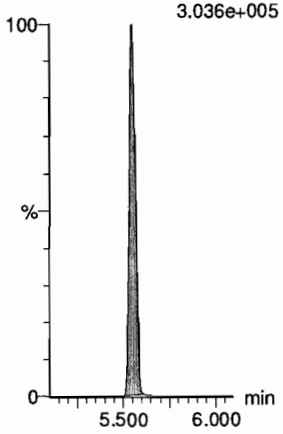
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.036e+005



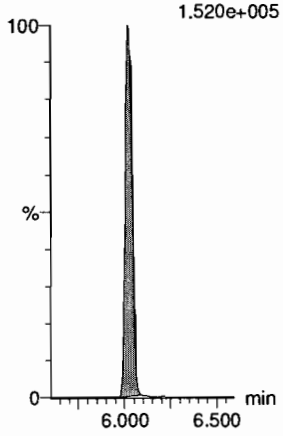
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
7.634e+004



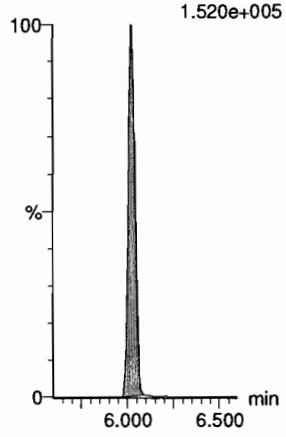
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.036e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.520e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.520e+005

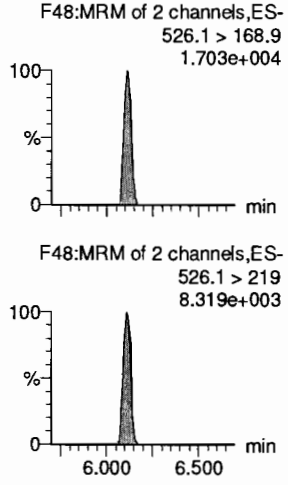


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

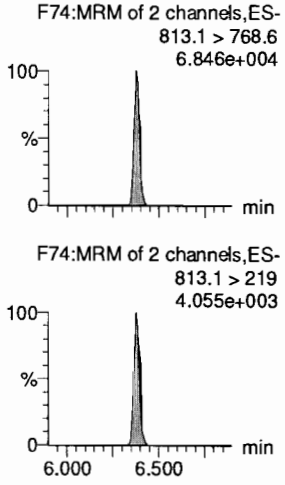
Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

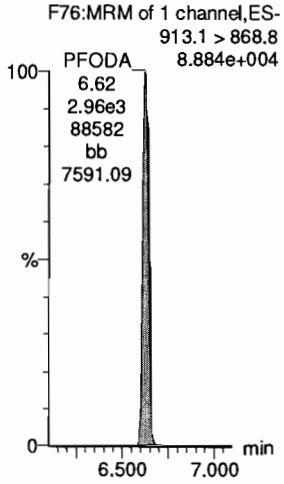
N-EtFOSA



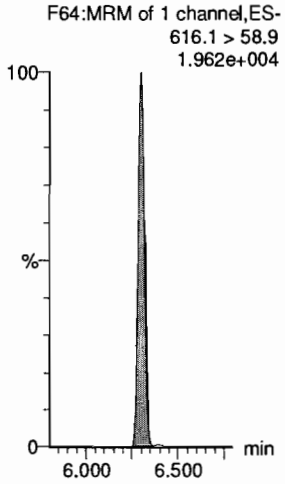
PFHxDA



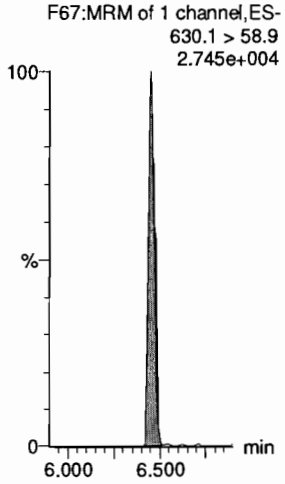
PFODA



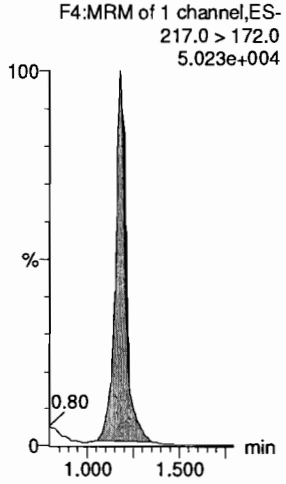
N-MeFOSE



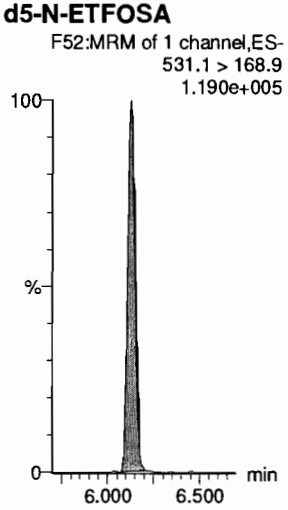
N-EtFOSE



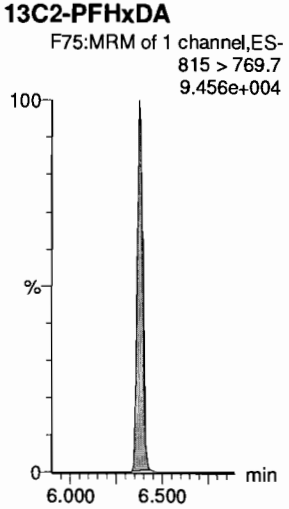
13C4-PFBA



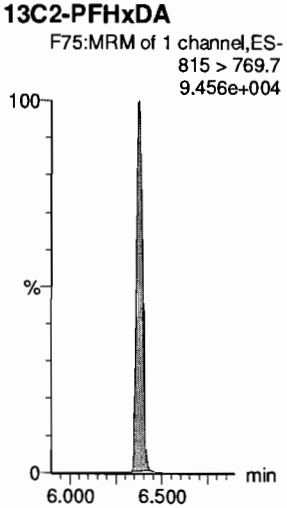
d5-N-ETFOSA



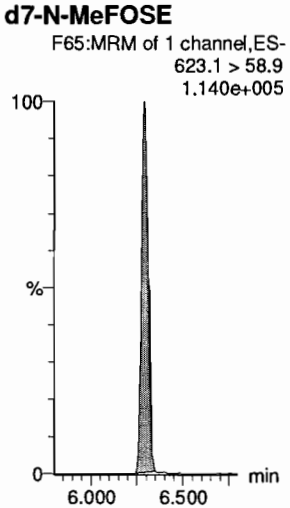
13C2-PFHxDA



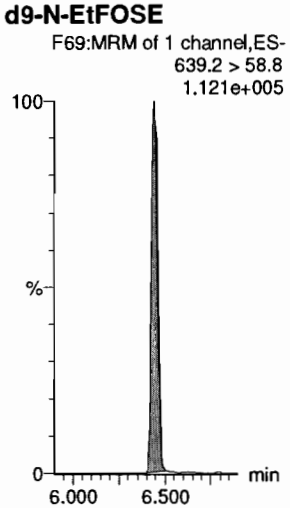
13C2-PFHxDA



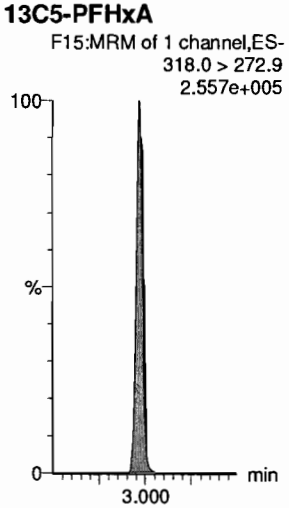
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

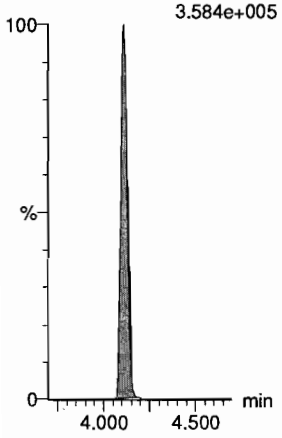


Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-2.qld

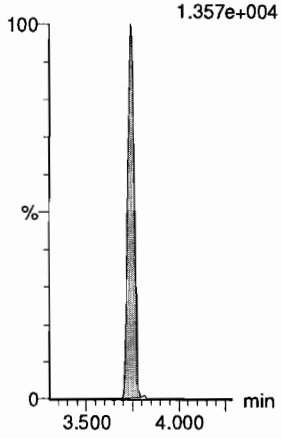
Last Altered: Friday, July 12, 2019 12:07:41 Pacific Daylight Time
Printed: Friday, July 12, 2019 12:08:06 Pacific Daylight Time

Name: 190712M1_9, Date: 12-Jul-2019, Time: 11:45:00, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS2 19G1105

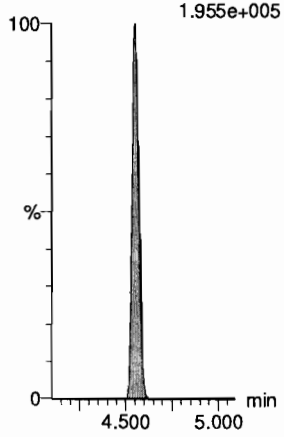
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
3.584e+005



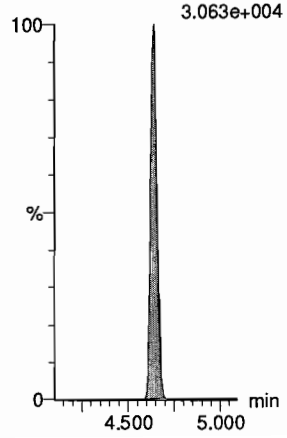
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
1.357e+004



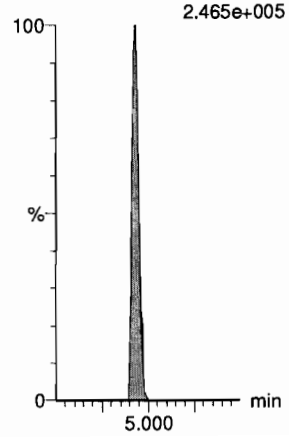
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
1.955e+005



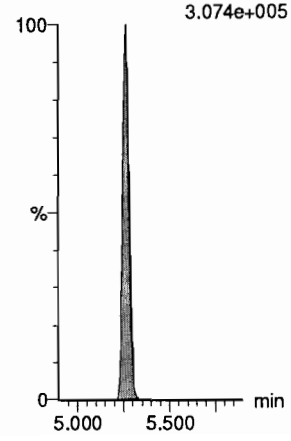
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
3.063e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
2.465e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
3.074e+005



LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	~~ST190712M2~~ ST190712-3 Calb 7/12/19	L (M) H	☑ (A)	☑	(A) ☑	☐	☐	☐	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐ N/A Calb 7/12/19	☐	☐	☐	☐	☐	☐
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: 7/3/19

Run Log Present: ☒

# of Samples per Sequence Checked: ☒

Instrument Blank Saved ☒

All Branches in Acquisition Window ☒

IIS Area Saved ☒

Reviewed By: dv 7/12/19
Initials/Date

Comments:

(A) header edited to reflect correct CCAL Name. AR 7/12/19

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

JM 7/12/19

3 AQ 7/12/19

Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	1212.338	2093.237	1.00	1.18	7.240	5.1	102.4	NO		
2	2	PFPrS	248.9 > 79.9	237.582	652.842	1.00	1.54	4.549	4.3	86.6	NO	2.351	NO
3	3	3:3 FTCA	240.9 > 176.9	66.573	4268.491	1.00	2.01	0.195	4.8	95.5	NO	2.177	NO
4	4	PFPeA	263.1 > 218.9	1606.803	4268.491	1.00	2.17	4.705	5.0	99.3	NO		
5	5	PFBS	299.0 > 79.7	487.801	652.842	1.00	2.46	9.340	4.1	82.7	NO	2.919	NO
6	6	4:2 FTS	327.0 > 306.9	1346.258	1378.302	1.00	2.88	12.209	5.0	100.2	NO	1.879	NO
7	47	13C3-PFBA	216.1 > 171.8	2093.237	3222.669	1.00	1.18	8.119	12.5	99.9	NO		
8	49	13C3-PFBS	302.0 > 98.8	652.842	592.285	1.00	2.46	13.778	13.3	106.5	NO		
9	48	13C3-PFPeA	266.0 > 221.8	4268.491	10651.375	1.00	2.17	5.009	12.3	98.3	NO		
10	48	13C3-PFPeA	266.0 > 221.8	4268.491	10651.375	1.00	2.17	5.009	12.3	98.3	NO		
11	49	13C3-PFBS	302.0 > 98.8	652.842	592.285	1.00	2.46	13.778	13.3	106.5	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1378.302	592.285	1.00	2.88	29.089	13.0	103.9	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	3863.234	3314.018	1.00	2.96	5.829	5.0	100.3	NO	16.562	NO
15	8	PFPeS	349.1>80.1	476.135	652.842	1.00	3.17	9.117	4.3	85.5	NO	1.515	NO
16	9	HFPO-DA	285.1 > 168.9	735.136	1306.682	1.00	3.17	2.813	5.1	102.3	NO	2.543	NO
17	10	5:3 FTCA	340.9 > 236.9	394.331	4180.481	1.00	3.51	1.179	4.7	94.7	NO	1.484	NO
18	11	PFHpA	363.0 > 318.9	1963.760	4180.481	1.00	3.58	5.872	4.8	96.1	NO	4.659	NO
19	12	ADONA	376.8 > 250.9	6910.855	4180.481	1.00	3.70	20.664	4.8	95.4	NO	3.352	NO
20	52	13C2-PFHxA	315.0 > 270.0	3314.018	10651.375	1.00	2.96	3.889	4.9	98.2	NO		
21	49	13C3-PFBS	302.0 > 98.8	652.842	592.285	1.00	2.46	13.778	13.3	106.5	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1306.682	10651.375	1.00	3.17	1.533	5.0	100.1	NO		
23	53	13C4-PFHpA	367.2 > 321.8	4180.481	10651.375	1.00	3.58	4.906	12.5	100.4	NO		
24	53	13C4-PFHpA	367.2 > 321.8	4180.481	10651.375	1.00	3.58	4.906	12.5	100.4	NO		
25	53	13C4-PFHpA	367.2 > 321.8	4180.481	10651.375	1.00	3.58	4.906	12.5	100.4	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	502.263	1478.304	1.00	3.74	4.247	5.1	102.9	NO	2.088	NO
28	15	6:2 FTS	427.0 > 406.9	1146.955	996.593	1.00	4.05	14.386	5.0	99.0	NO	2.075	NO
29	16	L-PFOA	412.8 > 368.9	5917.185	8111.513	1.00	4.11	9.118	4.9	98.3	NO	3.569	NO
30	18	PFecHS	460.8 > 381.0	928.582	8111.513	1.00	4.13	1.431	5.2	103.4	NO	0.937	NO
31	19	PFHpS	449.0 > 80.0	515.359	1432.631	1.00	4.23	4.497	5.2	103.9	NO	2.168	NO
32	20	7:3 FTCA	440.9 > 336.9	446.317	8225.596	1.00	4.54	0.678	5.1	102.7	NO	1.935	NO
33	54	13C3-PFHxS	401.8 > 79.9	1478.304	592.285	1.00	3.74	31.199	12.2	98.0	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	996.593	1381.313	1.00	4.05	9.019	12.3	98.0	NO		
35	58	13C2-PFOA	414.9 > 369.7	8111.513	13916.488	1.00	4.11	7.286	12.9	103.3	NO		
36	58	13C2-PFOA	414.9 > 369.7	8111.513	13916.488	1.00	4.11	7.286	12.9	103.3	NO		

C&H 7/12/19

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

3 NV 7/12/19

Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-1 PFC CS2 19G1105, Description: PFC CS3 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1432.631	1381.313	1.00	4.64	12.964	12.2	97.8	NO		
38	56	13C5-PFNA	468.2 > 422.9	8225.596	8807.404	1.00	4.55	11.674	11.9	95.0	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	3520.040	8225.596	1.00	4.55	5.349	4.9	97.0	NO	2.858	NO
41	22	PFOSA	497.9 > 77.9	776.713	1477.099	1.00	4.61	6.573	5.2	103.2	NO	27.275	NO
42	23	L-PFOS	498.9 > 79.9	669.844	1432.631	1.00	4.64	5.845	4.7	94.8	NO	1.979	NO
43	25	9Cl-PF30NS	530.7 > 350.8	1744.171	1432.631	1.00	4.86	15.218	4.9	97.7	NO	17.597	YES
44	26	PFDA	513 > 468.8	4323.057	6953.679	1.00	4.93	7.771	4.7	94.3	NO	4.764	NO
45	27	8:2 FTS	527.0 > 506.9	892.039	1027.197	1.00	4.90	10.855	4.8	96.4	NO	1.388	NO
46	56	13C5-PFNA	468.2 > 422.9	8225.596	8807.404	1.00	4.55	11.674	11.9	95.0	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1477.099	12817.602	1.00	4.61	1.440	11.1	88.5	NO		
48	59	13C8-PFOS	507.0 > 79.9	1432.631	1381.313	1.00	4.64	12.964	12.2	97.8	NO		
49	59	13C8-PFOS	507.0 > 79.9	1432.631	1381.313	1.00	4.64	12.964	12.2	97.8	NO		
50	60	13C2-PFDA	515.1 > 469.9	6953.679	11087.597	1.00	4.93	7.839	11.8	94.7	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1027.197	1381.313	1.00	4.90	9.295	13.4	106.9	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	463.927	1432.631	1.00	5.00	4.048	4.7	94.0	NO	1.449	NO
54	29	L-MeFOSAA	570 > 419	1841.561	1507.791	1.00	5.08	15.267	5.1	102.9	NO	2.610	NO
55	31	L-EtFOSAA	584.1 > 419	1416.274	1765.994	1.00	5.25	10.025	5.1	102.7	NO	1.486	NO
56	33	PFUdA	563.0 > 518.9	4097.361	11319.204	1.00	5.26	4.525	4.8	97.0	NO	5.822	NO
57	34	PFDS	598.8 > 79.9	705.287	1027.197	1.00	5.31	8.583	4.3	87.0	NO	2.013	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	341.951	12712.925	1.00	5.48	0.336	5.2	104.8	NO	17.464	YES
59	59	13C8-PFOS	507.0 > 79.9	1432.631	1381.313	1.00	4.64	12.964	12.2	97.8	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1507.791	12817.602	1.00	5.08	1.470	11.4	91.2	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1765.994	12817.602	1.00	5.24	1.722	11.7	93.5	NO		
62	63	13C2-PFUdA	565 > 519.8	11319.204	12817.602	1.00	5.26	11.039	12.9	103.0	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1027.197	1381.313	1.00	4.90	9.295	13.4	106.9	NO		
64	65	13C2-PFDoA	614.7 > 569.7	12712.925	11087.597	1.00	5.55	14.332	11.7	93.3	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	1020.696	1027.197	1.00	5.53	12.421	4.7	93.3	NO	1.408	NO
67	37	PFDoA	612.9 > 569.0	4732.680	12712.925	1.00	5.55	4.653	4.9	97.6	NO	8.399	NO
68	38	N-MeFOSA	512.1 > 168.9	769.608	3426.439	1.00	5.68	33.691	26.5	105.8	NO	1.965	NO
69	39	PFTrDA	662.9 > 618.9	5376.496	12712.925	1.00	5.80	5.286	5.0	100.0	NO	15.785	NO
70	40	PFDoS	698.8 > 79.9	654.103	6633.069	1.00	5.83	1.233	5.1	102.8	NO	2.161	NO
71	41	PFTeDA	713.0 > 669.0	3986.635	6633.069	1.00	6.02	7.513	5.0	100.4	NO	15.811	NO
72	65	13C2-PFDoA	614.7 > 569.7	12712.925	11087.597	1.00	5.55	14.332	11.7	93.3	NO		

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

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3 XM 7/12/19

Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	12712.925	11087.597	1.00	5.55	14.332	11.7	93.3	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	3426.439	12817.602	1.00	5.70	3.342	150.8	100.5	NO		
75	65	13C2-PFDoA	614.7 > 569.7	12712.925	11087.597	1.00	5.55	14.332	11.7	93.3	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6633.069	12817.602	1.00	6.02	6.469	12.6	101.2	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6633.069	12817.602	1.00	6.02	6.469	12.6	101.2	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	775.318	5239.325	1.00	6.11	22.197	24.4	97.8	NO	1.904	NO
80	43	PFHxDA	813.1 > 768.6	2734.473	3784.343	1.00	6.38	3.613	4.7	94.4	NO	20.097	NO
81	44	PFODA	913.1 > 868.8	3057.250	3784.343	1.00	6.62	4.039	4.8	96.6	NO		
82	45	N-MeFOSE	616.1 > 58.9	786.907	4525.024	1.00	6.30	26.085	23.2	92.7	NO		
83	46	N-EtFOSE	630.1 > 58.9	960.549	4278.157	1.00	6.45	33.679	24.0	96.2	NO		
84	72	13C4-PFBA	217.0 > 172.0	3222.669	3222.669	1.00	1.18	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	5239.325	12817.602	1.00	6.13	5.110	163.9	109.3	NO		
86	69	13C2-PFHxDA	815 > 769.7	3784.343	12817.602	1.00	6.38	3.691	5.0	100.4	NO		
87	69	13C2-PFHxDA	815 > 769.7	3784.343	12817.602	1.00	6.38	3.691	5.0	100.4	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4525.024	12817.602	1.00	6.29	4.413	157.9	105.2	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	4278.157	12817.602	1.00	6.44	4.172	151.7	101.1	NO		
90	73	13C5-PFHxA	318.0 > 272.9	10651.375	10651.375	1.00	2.96	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	13916.488	13916.488	1.00	4.11	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	592.285	592.285	1.00	3.74	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8807.404	8807.404	1.00	4.55	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1381.313	1381.313	1.00	4.64	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	11087.597	11087.597	1.00	4.93	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12817.602	12817.602	1.00	5.26	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 12, 2019 13:29:36 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	190712M1_1	IPA	12-Jul-19	10:20:09
2	2	190712M1_2	ST190712M1-1 PFC CS0 19G1103	12-Jul-19	10:30:54
3	3	190712M1_3	IB	12-Jul-19	10:41:27
4	4	190712M1_4	1901910-01@5X SW1906280950KME 0.24336	12-Jul-19	10:52:05
5	5	190712M1_5	1901910-02@5X SW1906281025KME 0.24464	12-Jul-19	11:02:38
6	6	190712M1_6	1901910-03 SW1906281035KME 0.24318	12-Jul-19	11:13:16
7	7	190712M1_7	1901911-01@5X WMP1907010855JSJ 0.2509	12-Jul-19	11:23:49
8	8	190712M1_8	IPA	12-Jul-19	11:34:27
9	9	190712M1_9	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	11:45:00
10	10	190712M1_10	IPA	12-Jul-19	11:55:38
11	11	190712M1_11	B9F0280-MS1@5X Matrix Spike 1.08	12-Jul-19	12:42:12
12	12	190712M1_12	IPA	12-Jul-19	12:52:55
13	13	190712M1_13	ST190712M1-2 PFC CS2 19G1105	12-Jul-19	13:03:33
14	14	190712M1_14	IPA 3 AR 7/12/19	12-Jul-19	13:14:06

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

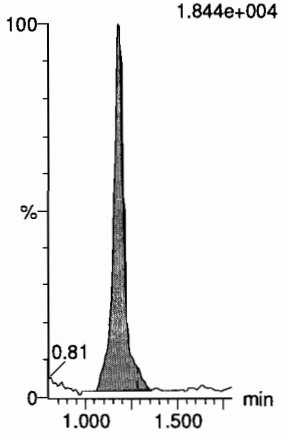
Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071219.mdb 12 Jul 2019 12:07:39
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

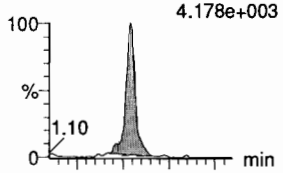
Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

3 AN 7/12/19

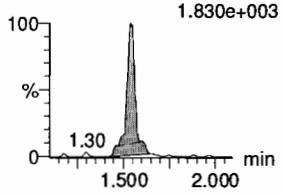
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
1.844e+004



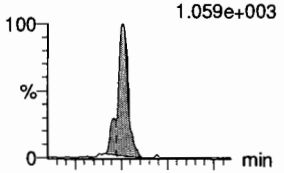
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.9
4.178e+003



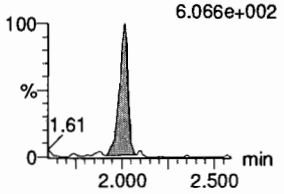
F6:MRM of 2 channels,ES-
248.9 > 98.9
1.830e+003



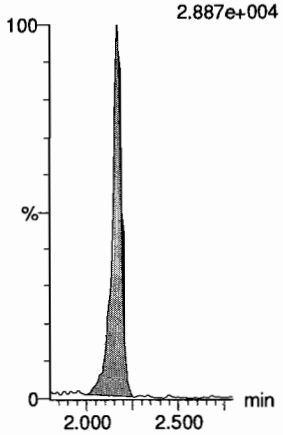
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
1.059e+003



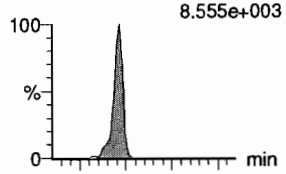
F5:MRM of 2 channels,ES-
240.9 > 116.9
6.066e+002



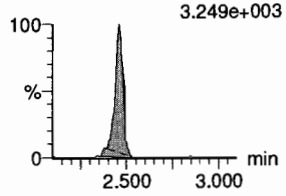
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
2.887e+004



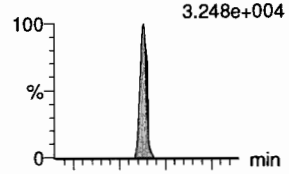
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
8.555e+003



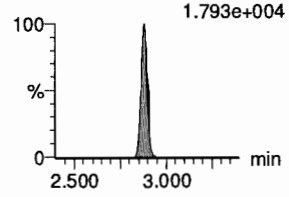
F11:MRM of 2 channels,ES-
299.0 > 99.0
3.249e+003



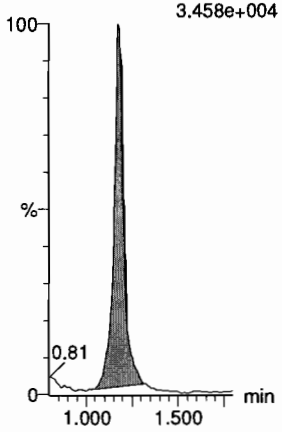
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 306.9
3.248e+004



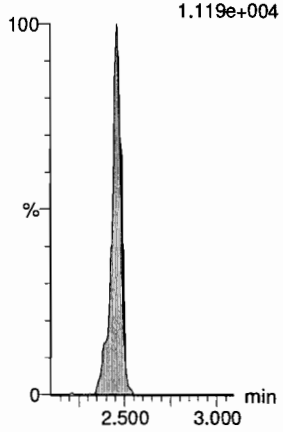
F16:MRM of 2 channels,ES-
327.0 > 80.9
1.793e+004



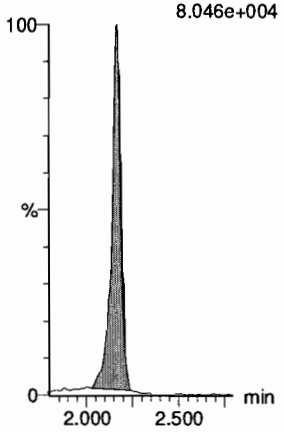
13C3-PFBA
F3:MRM of 1 channel,ES-
216.1 > 171.8
3.458e+004



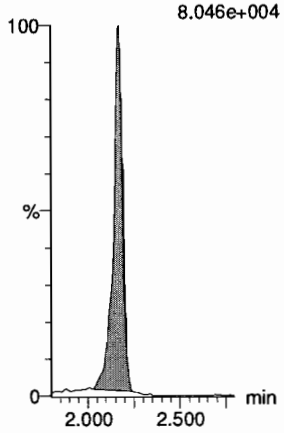
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.119e+004



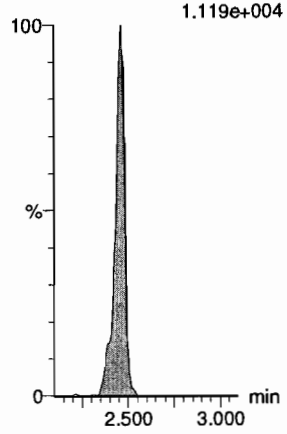
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
8.046e+004



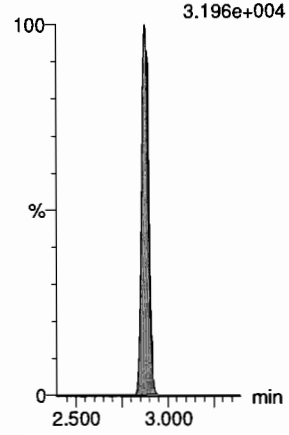
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
8.046e+004



13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.119e+004



13C2-4:2 FTS
F17:MRM of 2 channels,ES-
329.0 > 79.9
3.196e+004



Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

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Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
9.142e+004
PFHxA
2.96
3.86e3
91149
bb
3727.10

F13:MRM of 2 channels,ES-
313 > 118.9
5.624e+003
PFHxA
2.96
2.33e2
5621
bb
5621.00

PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
1.033e+004

F19:MRM of 2 channels,ES-
349.1 > 99
7.445e+003

HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
1.883e+004

F9:MRM of 3 channels,ES-
285.1 > 184.9
7.806e+003

5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
1.027e+004

F18:MRM of 2 channels,ES-
340.9 > 216.9
6.576e+003

PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
4.538e+004

F20:MRM of 2 channels,ES-
363.0 > 169.0
1.116e+004

ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
1.704e+005

F22:MRM of 2 channels,ES-
376.8 > 85.0
5.015e+004

13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
7.618e+004

13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.119e+004

13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
3.388e+004

13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.018e+005

13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.018e+005

13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.018e+005

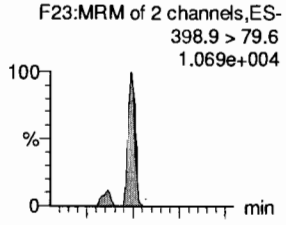
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

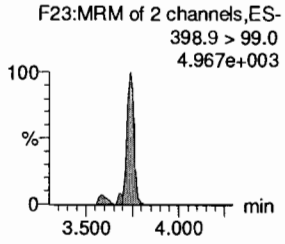
Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

3 AR 7/12/19

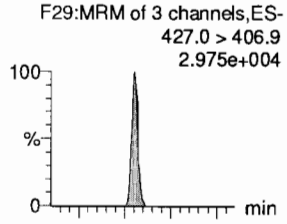
Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

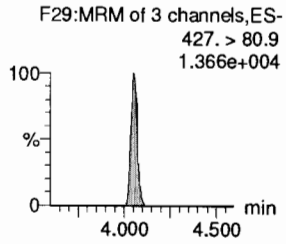
L-PFHxS



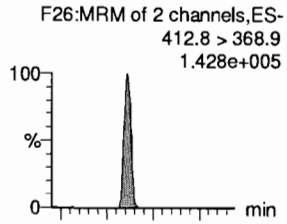


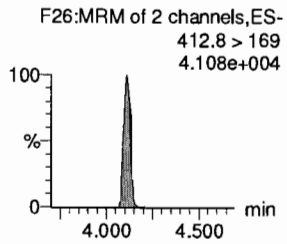
6:2 FTS



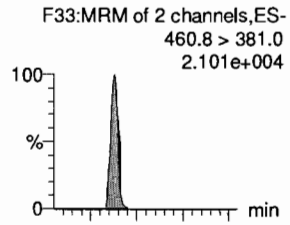


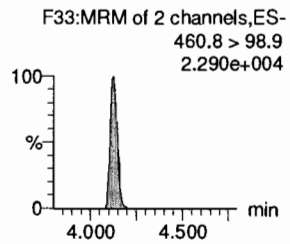
L-PFOA



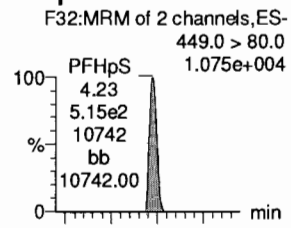


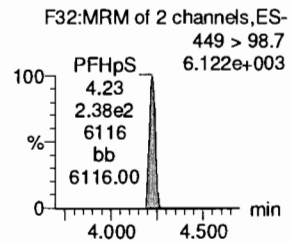
PFEChS



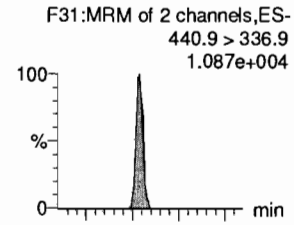


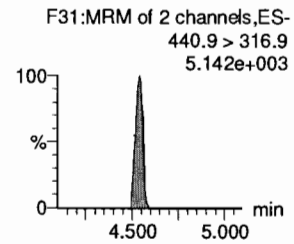
PFHpS



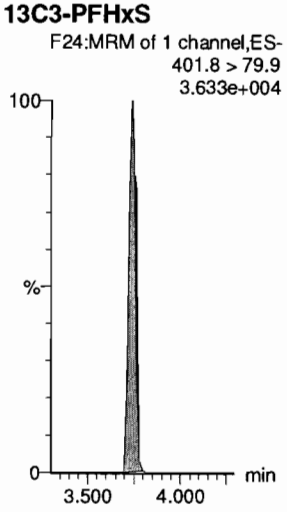


7:3 FTCA

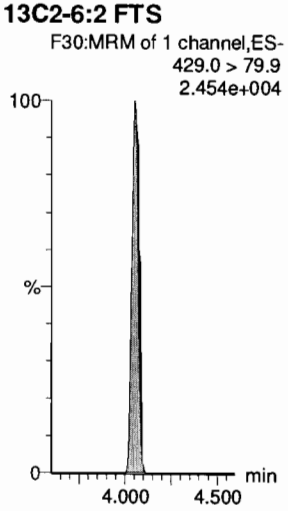




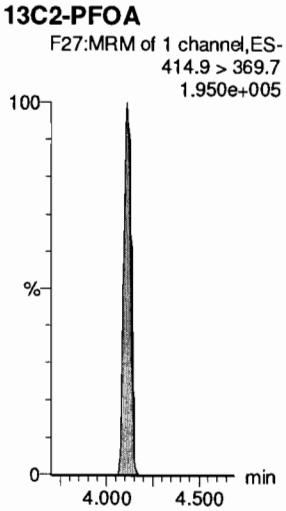
13C3-PFHxS



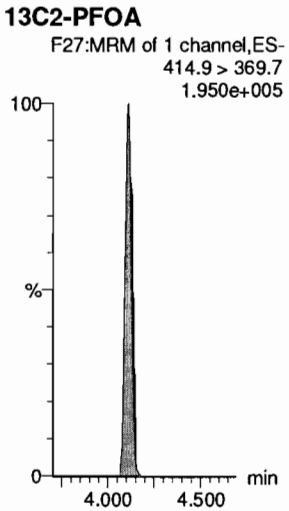
13C2-6:2 FTS



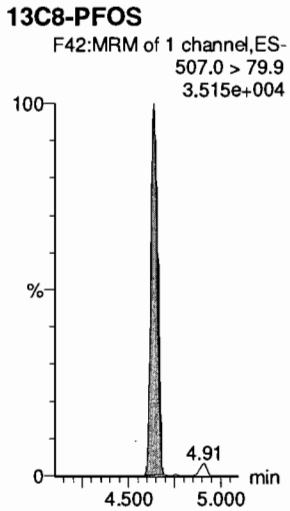
13C2-PFOA



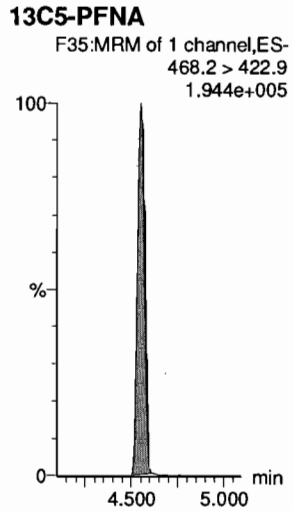
13C2-PFOA



13C8-PFOS



13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

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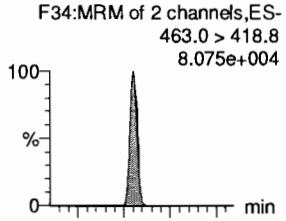
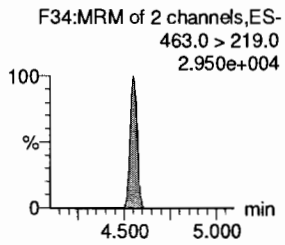
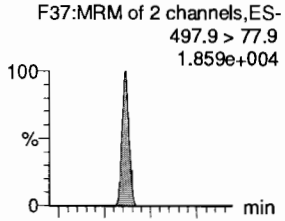
Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

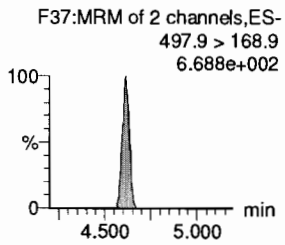
PFNA



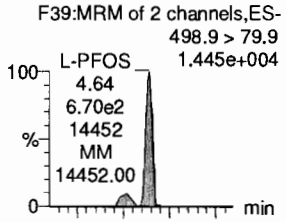


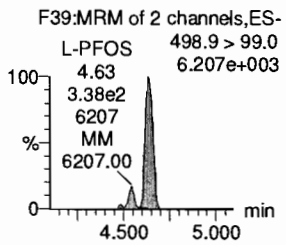
PFOSA



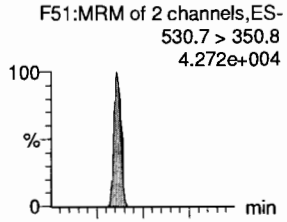


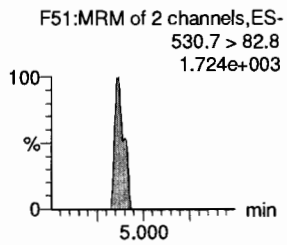
L-PFOS



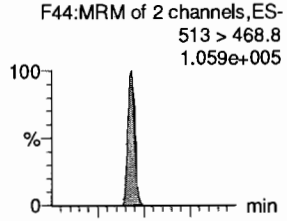


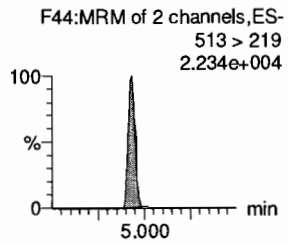
9Cl-PF30NS



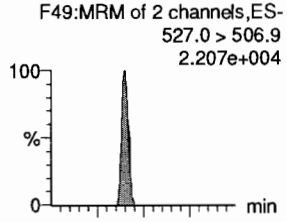


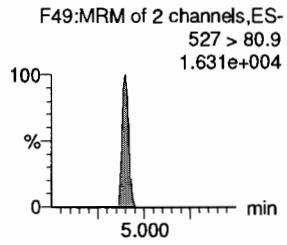
PFDA



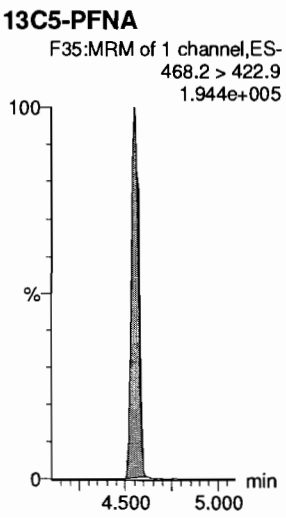


8:2 FTS

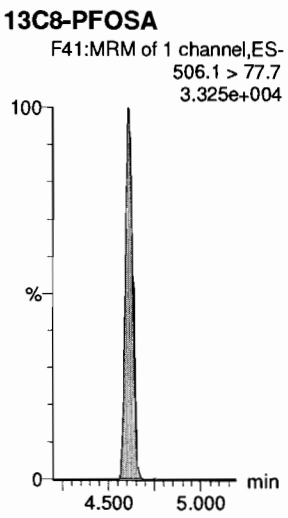




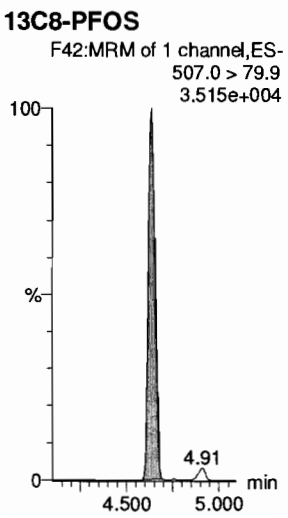
13C5-PFNA



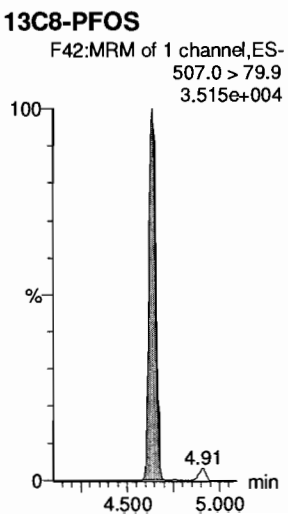
13C8-PFOSA



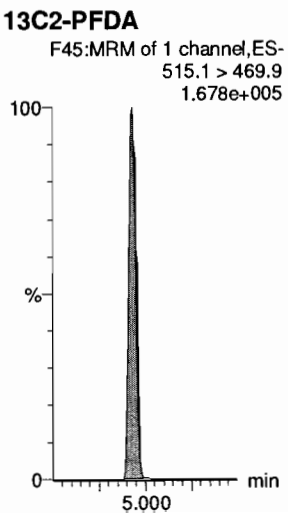
13C8-PFOS



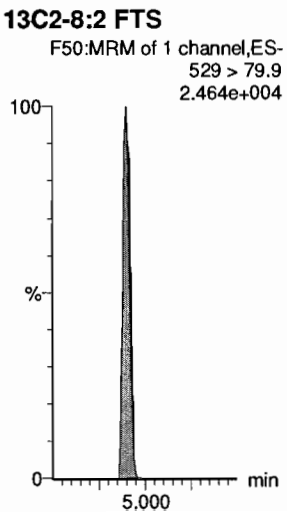
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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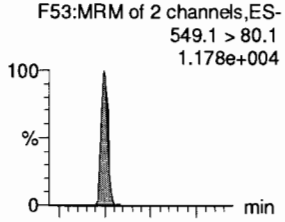
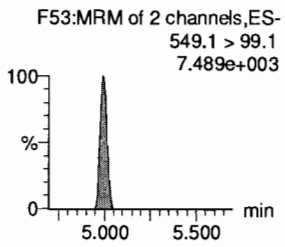
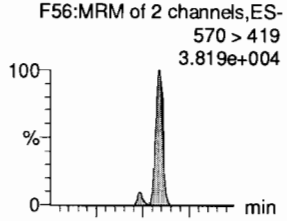
Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-7 PFC CS2 19G1105, Description: PFC CS3 19G1105

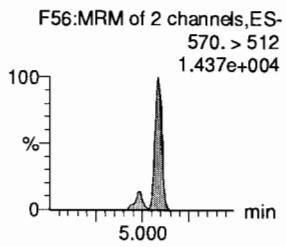
PFNS



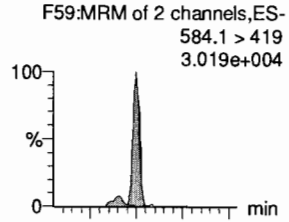


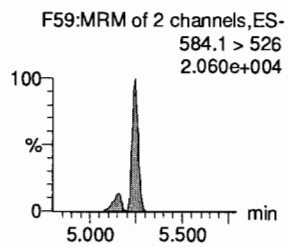
L-MeFOSAA



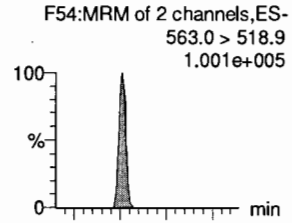


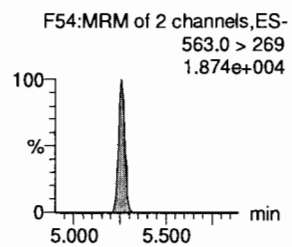
L-EtFOSAA



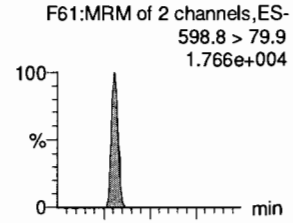


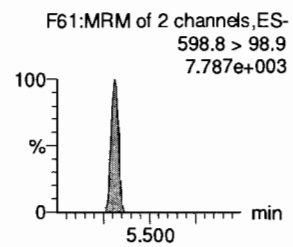
PFUdA



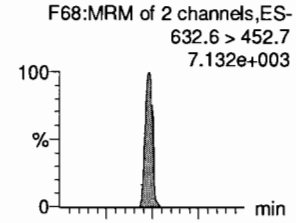


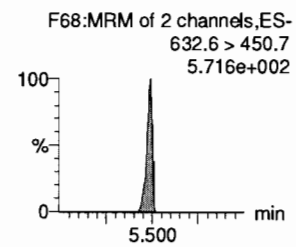
PFDS



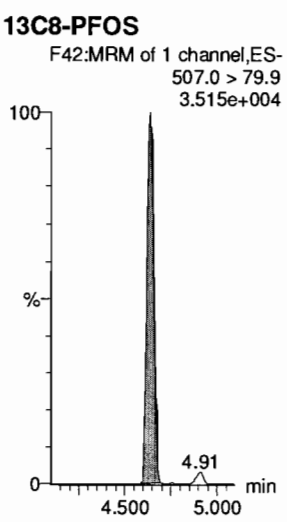


11Cl-PF30UdS

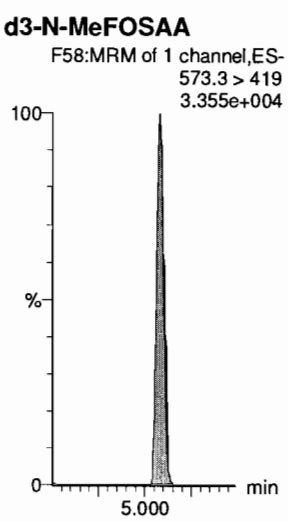




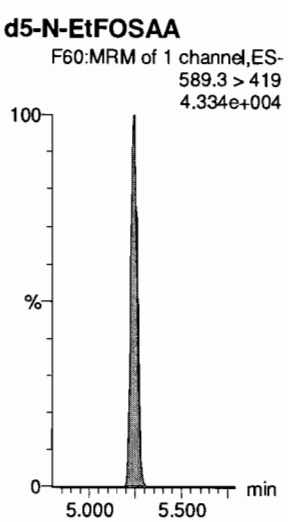
13C8-PFOS



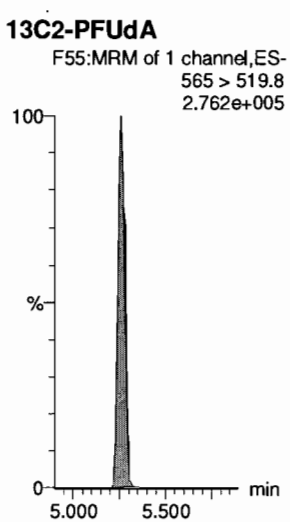
d3-N-MeFOSAA



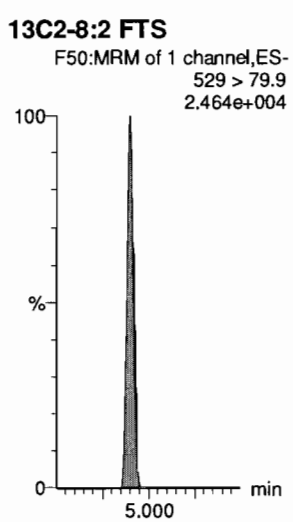
d5-N-EtFOSAA



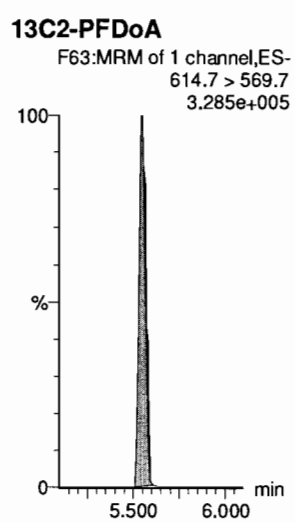
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

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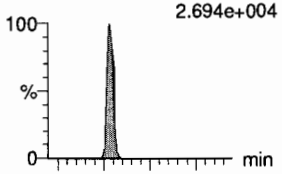
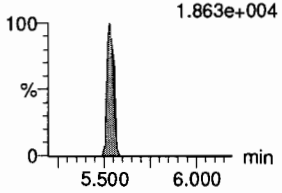
Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

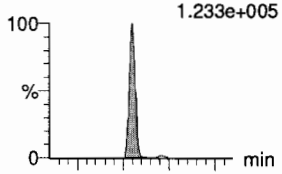
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
2.694e+004



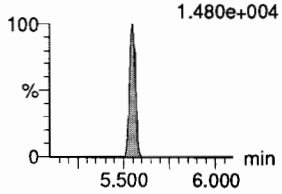
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.863e+004



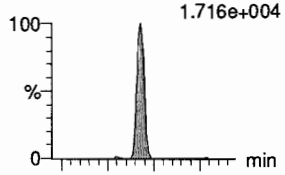
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.233e+005



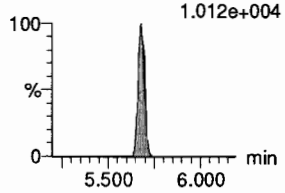
F62:MRM of 4 channels,ES-
612.9 > 318.8
1.480e+004



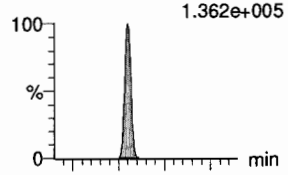
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.716e+004



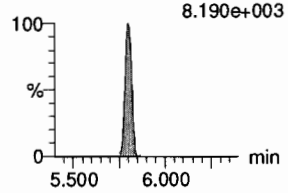
F43:MRM of 2 channels,ES-
512.1 > 219
1.012e+004



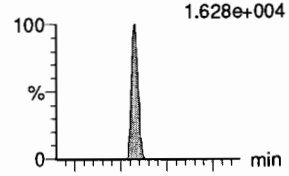
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.362e+005



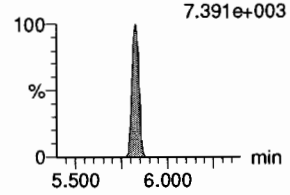
F70:MRM of 2 channels,ES-
662.9 > 319
8.190e+003



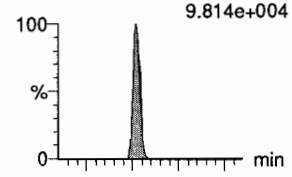
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.628e+004



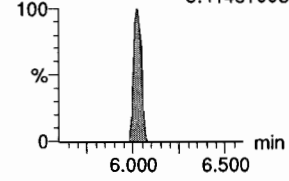
F71:MRM of 2 channels,ES-
698.8 > 98.9
7.391e+003



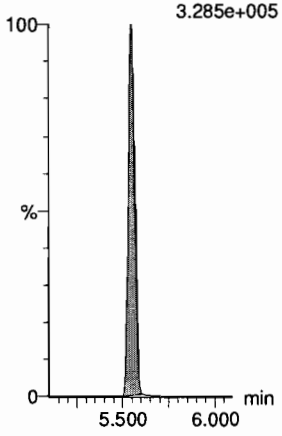
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
9.814e+004



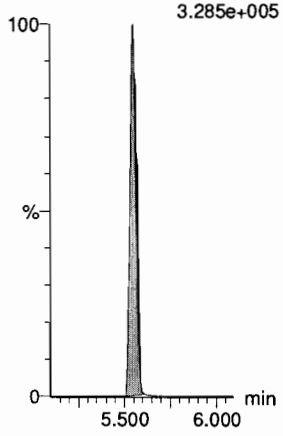
F72:MRM of 2 channels,ES-
713. > 369.0
5.414e+003



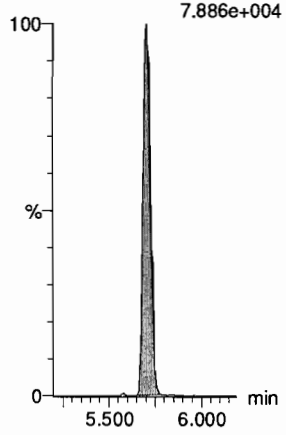
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.285e+005



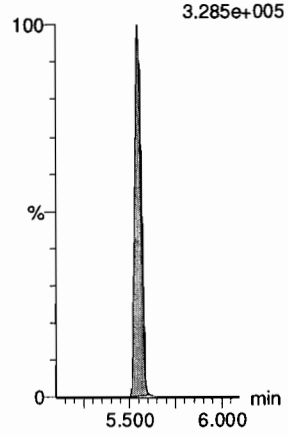
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.285e+005



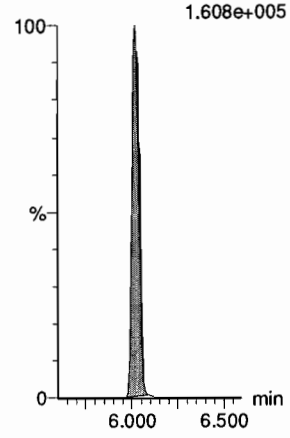
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
7.886e+004



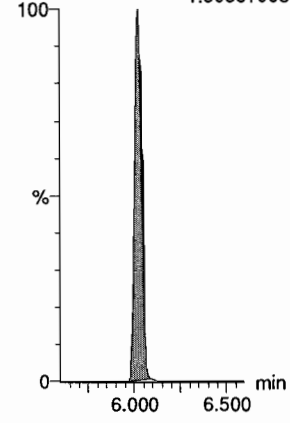
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.285e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.608e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.608e+005



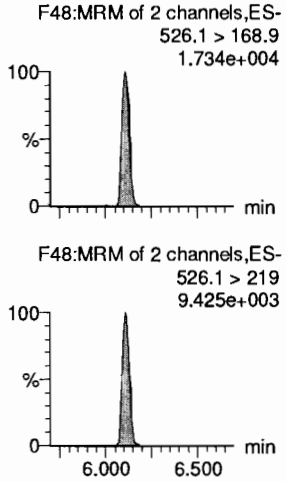
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

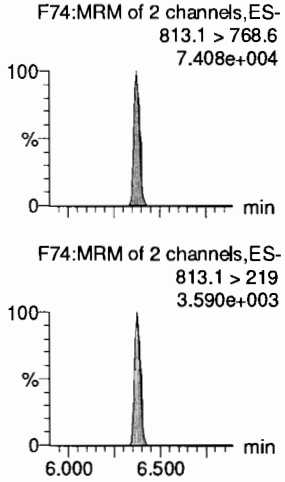
3 AN 7/12/19

Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

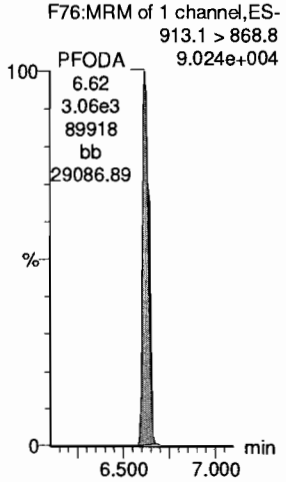
N-EtFOSA



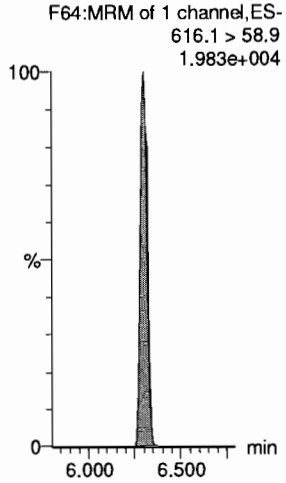
PFHxDA



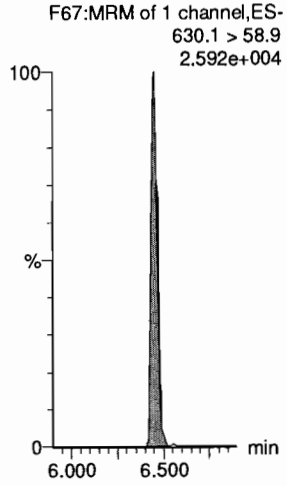
PFODA



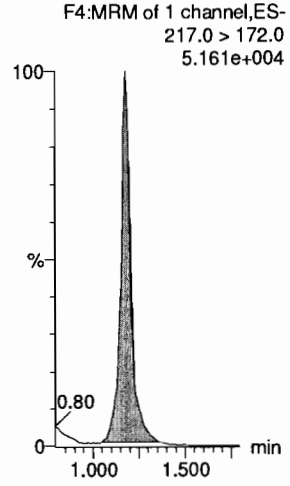
N-MeFOSE



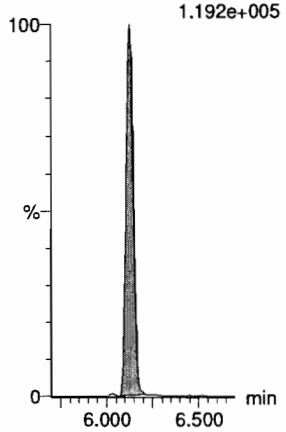
N-EtFOSE



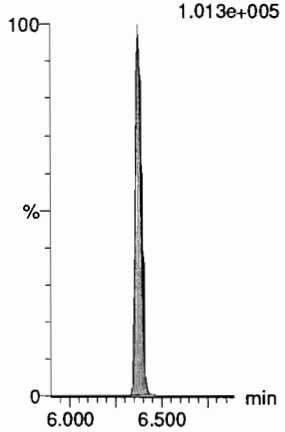
13C4-PFBA



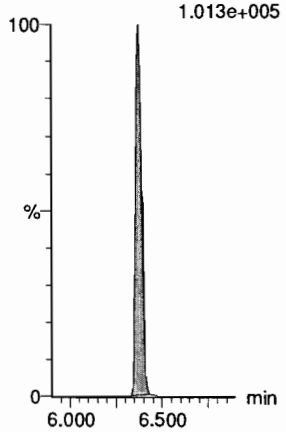
d5-N-ETFOSA



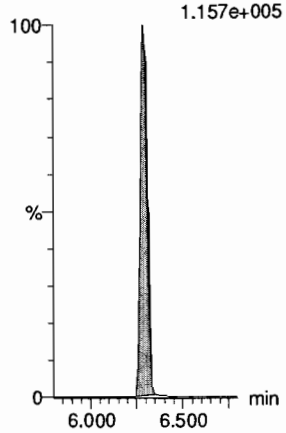
13C2-PFHxDA



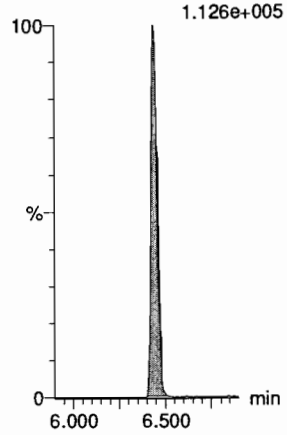
13C2-PFHxDA



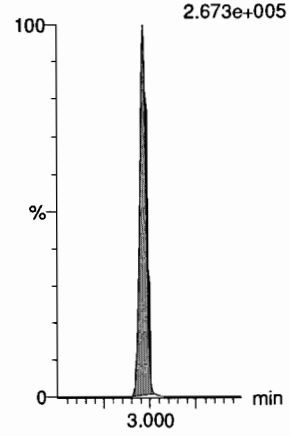
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



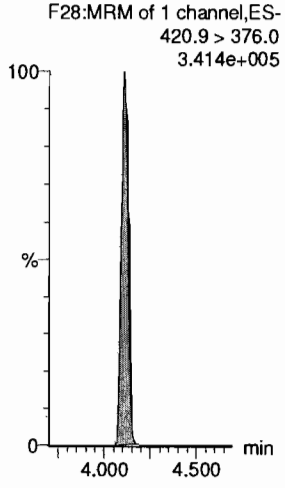
Dataset: F:\Projects\PFAS.PRO\Results\190712M1\190712M1-13.qld

Last Altered: Friday, July 12, 2019 13:26:51 Pacific Daylight Time
Printed: Friday, July 12, 2019 13:27:53 Pacific Daylight Time

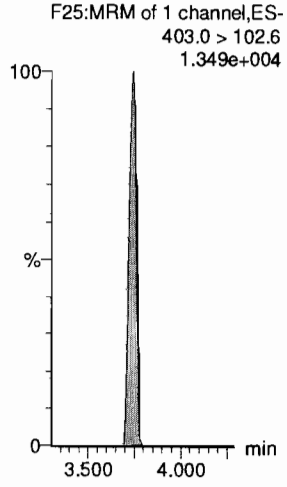
3 KM 7/12/19

Name: 190712M1_13, Date: 12-Jul-2019, Time: 13:03:33, ID: ST190712M1-2 PFC CS2 19G1105, Description: PFC CS3 19G1105

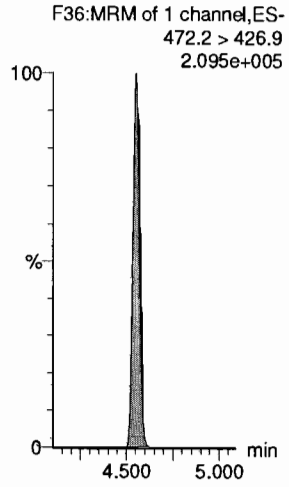
13C8-PFOA



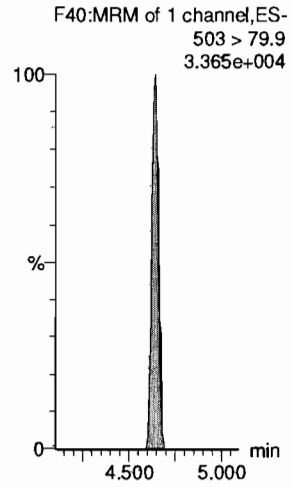
18O2-PFHxS



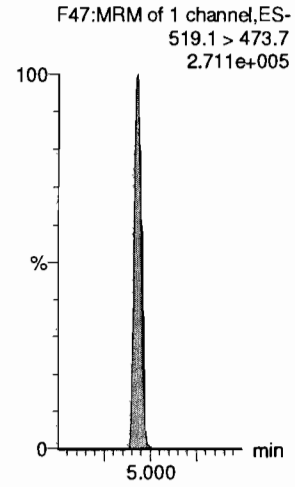
13C9-PFNA



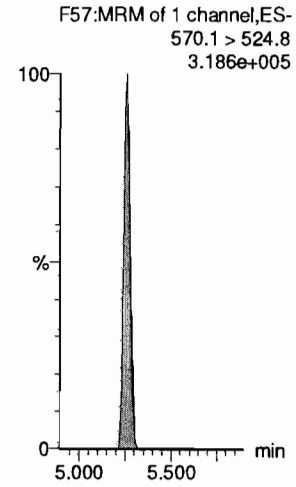
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: Untitled

Last Altered: Wednesday, July 31, 2019 10:19:02 Pacific Daylight Time
Printed: Wednesday, July 31, 2019 10:19:14 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_RS-07-13-19.mdb 23 Jul 2019 10:48:27
Calibration: 31 Jul 2019 10:19:02

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-1 PFC CS0 19G1103	8.20e3	100.0	NO
2	2	13C5-PFHxA	ST190718M1-1 PFC CS0 19G1103	2.16e4	100.0	NO
3	3	18O2-PFHxS	ST190718M1-1 PFC CS0 19G1103	1.30e3	100.0	NO
4	4	13C8-PFOA	ST190718M1-1 PFC CS0 19G1103	3.05e4	100.0	NO
5	5	13C9-PFNA	ST190718M1-1 PFC CS0 19G1103	1.62e4	100.0	NO
6	6	13C4-PFOS	ST190718M1-1 PFC CS0 19G1103	2.82e3	100.0	NO
7	7	13C6-PFDA	ST190718M1-1 PFC CS0 19G1103	2.25e4	100.0	NO
8	8	13C7-PFUdA	ST190718M1-1 PFC CS0 19G1103	2.87e4	100.0	NO

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IB	6.81e3	83.1	NO
2	2	13C5-PFHxA	IB	1.90e4	87.8	NO
3	3	18O2-PFHxS	IB	1.23e3	94.5	NO
4	4	13C8-PFOA	IB	2.60e4	85.1	NO
5	5	13C9-PFNA	IB	1.42e4	87.8	NO
6	6	13C4-PFOS	IB	2.78e3	98.5	NO
7	7	13C6-PFDA	IB	1.88e4	83.3	NO
8	8	13C7-PFUdA	IB	2.56e4	89.2	NO

Name: 190718M1_6, Date: 18-Jul-2019, Time: 08:49:23, ID: 1902056-02 AA-EFF-20190710 0.12064, Description: AA-EFF-20190710

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902056-02 AA-EFF-20190710 0.12064	9.72e3	59.3	NO
2	2	13C5-PFHxA	1902056-02 AA-EFF-20190710 0.12064	1.85e4	42.8	YES
3	3	18O2-PFHxS	1902056-02 AA-EFF-20190710 0.12064	2.12e3	81.6	NO
4	4	13C8-PFOA	1902056-02 AA-EFF-20190710 0.12064	3.15e4	51.6	NO
5	5	13C9-PFNA	1902056-02 AA-EFF-20190710 0.12064	1.87e4	57.8	NO
6	6	13C4-PFOS	1902056-02 AA-EFF-20190710 0.12064	4.62e3	81.7	NO
7	7	13C6-PFDA	1902056-02 AA-EFF-20190710 0.12064	2.86e4	63.4	NO
8	8	13C7-PFUdA	1902056-02 AA-EFF-20190710 0.12064	4.05e4	70.4	NO

Name: 190718M1_7, Date: 18-Jul-2019, Time: 08:59:59, ID: B9G0127-BSD1 LCSD 0.125, Description: LCSD

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0127-BSD1 LCSD 0.125	9.80e3	119.6	NO
2	2	13C5-PFHxA	B9G0127-BSD1 LCSD 0.125	1.66e4	76.7	NO
3	3	18O2-PFHxS	B9G0127-BSD1 LCSD 0.125	9.92e2	76.4	NO
4	4	13C8-PFOA	B9G0127-BSD1 LCSD 0.125	1.92e4	63.0	NO
5	5	13C9-PFNA	B9G0127-BSD1 LCSD 0.125	7.89e3	48.7	YES
6	6	13C4-PFOS	B9G0127-BSD1 LCSD 0.125	9.46e2	33.5	YES
7	7	13C6-PFDA	B9G0127-BSD1 LCSD 0.125	4.73e3	21.0	YES
8	8	13C7-PFUdA	B9G0127-BSD1 LCSD 0.125	1.47e3	5.1	YES

Dataset: Untitled

Last Altered: Wednesday, July 31, 2019 10:19:02 Pacific Daylight Time
Printed: Wednesday, July 31, 2019 10:19:14 Pacific Daylight Time

Name: 190718M1_8, Date: 18-Jul-2019, Time: 09:12:57, ID: B9G0127-BLK1 Method Blank 0.125, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0127-BLK1 Method Blank 0.125	8.88e3	108.4	NO
2	2	13C5-PFHxA	B9G0127-BLK1 Method Blank 0.125	1.54e4	71.1	NO
3	3	18O2-PFHxS	B9G0127-BLK1 Method Blank 0.125	9.11e2	70.1	NO
4	4	13C8-PFOA	B9G0127-BLK1 Method Blank 0.125	1.85e4	60.5	NO
5	5	13C9-PFNA	B9G0127-BLK1 Method Blank 0.125	7.26e3	44.8	YES
6	6	13C4-PFOS	B9G0127-BLK1 Method Blank 0.125	9.86e2	34.9	YES
7	7	13C6-PFDA	B9G0127-BLK1 Method Blank 0.125	4.60e3	20.4	YES
8	8	13C7-PFUdA	B9G0127-BLK1 Method Blank 0.125	2.00e3	7.0	YES

Name: 190718M1_9, Date: 18-Jul-2019, Time: 09:23:30, ID: 1902054-02 STWRT-FB-002-JL-071010 0.11813, Description: STWRT-FB-002-JL-071010

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902054-02 STWRT-FB-002-JL-071010...	8.26e3	100.7	NO
2	2	13C5-PFHxA	1902054-02 STWRT-FB-002-JL-071010...	1.47e4	68.1	NO
3	3	18O2-PFHxS	1902054-02 STWRT-FB-002-JL-071010...	8.99e2	69.2	NO
4	4	13C8-PFOA	1902054-02 STWRT-FB-002-JL-071010...	1.86e4	61.0	NO
5	5	13C9-PFNA	1902054-02 STWRT-FB-002-JL-071010...	8.25e3	50.9	NO
6	6	13C4-PFOS	1902054-02 STWRT-FB-002-JL-071010...	1.28e3	45.4	YES
7	7	13C6-PFDA	1902054-02 STWRT-FB-002-JL-071010...	6.58e3	29.2	YES
8	8	13C7-PFUdA	1902054-02 STWRT-FB-002-JL-071010...	2.61e3	9.1	YES

Name: 190718M1_10, Date: 18-Jul-2019, Time: 09:34:08, ID: 1902056-01@5X AA-INF-20190710 0.11915, Description: AA-INF-20190710

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902056-01@5X AA-INF-20190710 0.1...	2.98e3	18.2	YES
2	2	13C5-PFHxA	1902056-01@5X AA-INF-20190710 0.1...	5.47e3	12.7	YES
3	3	18O2-PFHxS	1902056-01@5X AA-INF-20190710 0.1...	3.19e2	12.3	YES
4	4	13C8-PFOA	1902056-01@5X AA-INF-20190710 0.1...	8.13e3	13.3	YES
5	5	13C9-PFNA	1902056-01@5X AA-INF-20190710 0.1...	4.76e3	14.7	YES
6	6	13C4-PFOS	1902056-01@5X AA-INF-20190710 0.1...	9.06e2	16.0	YES
7	7	13C6-PFDA	1902056-01@5X AA-INF-20190710 0.1...	6.42e3	14.2	YES
8	8	13C7-PFUdA	1902056-01@5X AA-INF-20190710 0.1...	8.01e3	13.9	YES

Name: 190718M1_11, Date: 18-Jul-2019, Time: 09:44:46, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-2 PFC CS3 19G1106	8.40e3	102.4	NO
2	2	13C5-PFHxA	ST190718M1-2 PFC CS3 19G1106	2.10e4	97.2	NO
3	3	18O2-PFHxS	ST190718M1-2 PFC CS3 19G1106	1.43e3	110.3	NO
4	4	13C8-PFOA	ST190718M1-2 PFC CS3 19G1106	2.98e4	97.8	NO
5	5	13C9-PFNA	ST190718M1-2 PFC CS3 19G1106	1.57e4	97.2	NO
6	6	13C4-PFOS	ST190718M1-2 PFC CS3 19G1106	2.81e3	99.6	NO
7	7	13C6-PFDA	ST190718M1-2 PFC CS3 19G1106	2.12e4	94.1	NO
8	8	13C7-PFUdA	ST190718M1-2 PFC CS3 19G1106	2.81e4	97.8	NO

Name: 190718M1_13, Date: 18-Jul-2019, Time: 10:05:58, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_14, Date: 18-Jul-2019, Time: 10:16:39, ID: B9G0080-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0080-BS1 OPR 0.25	8.55e3	104.3	NO
2	2	13C5-PFHxA	B9G0080-BS1 OPR 0.25	1.47e4	67.9	NO
3	3	18O2-PFHxS	B9G0080-BS1 OPR 0.25	8.73e2	67.2	NO
4	4	13C8-PFOA	B9G0080-BS1 OPR 0.25	2.07e4	67.9	NO
5	5	13C9-PFNA	B9G0080-BS1 OPR 0.25	1.12e4	69.1	NO
6	6	13C4-PFOS	B9G0080-BS1 OPR 0.25	1.81e3	64.1	NO
7	7	13C6-PFDA	B9G0080-BS1 OPR 0.25	1.51e4	66.9	NO
8	8	13C7-PFUdA	B9G0080-BS1 OPR 0.25	1.98e4	69.0	NO

Name: 190718M1_15, Date: 18-Jul-2019, Time: 10:27:14, ID: B9G0080-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0080-BLK1 Method Blank 0.25	8.29e3	101.1	NO
2	2	13C5-PFHxA	B9G0080-BLK1 Method Blank 0.25	1.53e4	70.7	NO
3	3	18O2-PFHxS	B9G0080-BLK1 Method Blank 0.25	8.63e2	66.5	NO
4	4	13C8-PFOA	B9G0080-BLK1 Method Blank 0.25	2.07e4	67.8	NO
5	5	13C9-PFNA	B9G0080-BLK1 Method Blank 0.25	1.13e4	69.7	NO
6	6	13C4-PFOS	B9G0080-BLK1 Method Blank 0.25	2.10e3	74.4	NO
7	7	13C6-PFDA	B9G0080-BLK1 Method Blank 0.25	1.54e4	68.3	NO
8	8	13C7-PFUdA	B9G0080-BLK1 Method Blank 0.25	2.02e4	70.1	NO

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Name: 190718M1_16, Date: 18-Jul-2019, Time: 10:37:53, ID: 1901888-01 SWIN1906271320KER 0.24398, Description: SWIN1906271320KER

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901888-01 SWIN1906271320KER 0.2...	8.48e3	103.5	NO
2	2	13C5-PFHxA	1901888-01 SWIN1906271320KER 0.2...	1.39e4	64.2	NO
3	3	18O2-PFHxS	1901888-01 SWIN1906271320KER 0.2...	9.48e2	72.9	NO
4	4	13C8-PFOA	1901888-01 SWIN1906271320KER 0.2...	2.06e4	67.5	NO
5	5	13C9-PFNA	1901888-01 SWIN1906271320KER 0.2...	1.09e4	67.5	NO
6	6	13C4-PFOS	1901888-01 SWIN1906271320KER 0.2...	1.79e3	63.4	NO
7	7	13C6-PFDA	1901888-01 SWIN1906271320KER 0.2...	1.45e4	64.1	NO
8	8	13C7-PFUdA	1901888-01 SWIN1906271320KER 0.2...	1.93e4	67.1	NO

Name: 190718M1_17, Date: 18-Jul-2019, Time: 10:48:26, ID: 1901889-01 SWIN1906271350KER 0.23214, Description: SWIN1906271350KER

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901889-01 SWIN1906271350KER 0.2...	8.38e3	102.2	NO
2	2	13C5-PFHxA	1901889-01 SWIN1906271350KER 0.2...	1.48e4	68.4	NO
3	3	18O2-PFHxS	1901889-01 SWIN1906271350KER 0.2...	9.34e2	71.9	NO
4	4	13C8-PFOA	1901889-01 SWIN1906271350KER 0.2...	2.14e4	70.1	NO
5	5	13C9-PFNA	1901889-01 SWIN1906271350KER 0.2...	1.11e4	68.8	NO
6	6	13C4-PFOS	1901889-01 SWIN1906271350KER 0.2...	2.05e3	72.5	NO
7	7	13C6-PFDA	1901889-01 SWIN1906271350KER 0.2...	1.54e4	68.5	NO
8	8	13C7-PFUdA	1901889-01 SWIN1906271350KER 0.2...	1.97e4	68.7	NO

Name: 190718M1_18, Date: 18-Jul-2019, Time: 10:59:05, ID: 1901890-01 SWIN1906271500KER 0.24347, Description: SWIN1906271500KER

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901890-01 SWIN1906271500KER 0.2...	8.64e3	105.4	NO
2	2	13C5-PFHxA	1901890-01 SWIN1906271500KER 0.2...	1.46e4	67.5	NO
3	3	18O2-PFHxS	1901890-01 SWIN1906271500KER 0.2...	8.64e2	66.5	NO
4	4	13C8-PFOA	1901890-01 SWIN1906271500KER 0.2...	2.05e4	67.2	NO
5	5	13C9-PFNA	1901890-01 SWIN1906271500KER 0.2...	1.10e4	67.9	NO
6	6	13C4-PFOS	1901890-01 SWIN1906271500KER 0.2...	2.01e3	71.1	NO
7	7	13C6-PFDA	1901890-01 SWIN1906271500KER 0.2...	1.52e4	67.5	NO
8	8	13C7-PFUdA	1901890-01 SWIN1906271500KER 0.2...	1.97e4	68.5	NO

Name: 190718M1_19, Date: 18-Jul-2019, Time: 11:09:43, ID: 1901919-01 SWIN1906260850GSC 0.24194, Description: SWIN1906260850GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901919-01 SWIN1906260850GSC 0.2...	8.99e3	109.7	NO
2	2	13C5-PFHxA	1901919-01 SWIN1906260850GSC 0.2...	1.56e4	72.4	NO
3	3	18O2-PFHxS	1901919-01 SWIN1906260850GSC 0.2...	9.03e2	69.5	NO
4	4	13C8-PFOA	1901919-01 SWIN1906260850GSC 0.2...	2.21e4	72.6	NO
5	5	13C9-PFNA	1901919-01 SWIN1906260850GSC 0.2...	1.19e4	73.7	NO
6	6	13C4-PFOS	1901919-01 SWIN1906260850GSC 0.2...	2.14e3	75.8	NO
7	7	13C6-PFDA	1901919-01 SWIN1906260850GSC 0.2...	1.58e4	70.2	NO
8	8	13C7-PFUdA	1901919-01 SWIN1906260850GSC 0.2...	2.03e4	70.7	NO

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Name: 190718M1_20, Date: 18-Jul-2019, Time: 11:21:11, ID: B9F0253-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-BS1 OPR 0.125	7.41e3	90.5	NO
2	2	13C5-PFHxA	B9F0253-BS1 OPR 0.125	1.34e4	62.2	NO
3	3	18O2-PFHxS	B9F0253-BS1 OPR 0.125	8.54e2	65.7	NO
4	4	13C8-PFOA	B9F0253-BS1 OPR 0.125	1.81e4	59.4	NO
5	5	13C9-PFNA	B9F0253-BS1 OPR 0.125	1.01e4	62.4	NO
6	6	13C4-PFOS	B9F0253-BS1 OPR 0.125	1.77e3	62.6	NO
7	7	13C6-PFDA	B9F0253-BS1 OPR 0.125	1.27e4	56.3	NO
8	8	13C7-PFUdA	B9F0253-BS1 OPR 0.125	1.56e4	54.2	NO

Name: 190718M1_21, Date: 18-Jul-2019, Time: 11:31:45, ID: 1901921-01 SWIN1906260935GSC 0.25302, Description: SWIN1906260935GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901921-01 SWIN1906260935GSC 0.2...	8.32e3	101.5	NO
2	2	13C5-PFHxA	1901921-01 SWIN1906260935GSC 0.2...	1.41e4	65.5	NO
3	3	18O2-PFHxS	1901921-01 SWIN1906260935GSC 0.2...	8.06e2	62.1	NO
4	4	13C8-PFOA	1901921-01 SWIN1906260935GSC 0.2...	1.97e4	64.4	NO
5	5	13C9-PFNA	1901921-01 SWIN1906260935GSC 0.2...	1.06e4	65.4	NO
6	6	13C4-PFOS	1901921-01 SWIN1906260935GSC 0.2...	1.95e3	69.2	NO
7	7	13C6-PFDA	1901921-01 SWIN1906260935GSC 0.2...	1.45e4	64.2	NO
8	8	13C7-PFUdA	1901921-01 SWIN1906260935GSC 0.2...	1.91e4	66.4	NO

Name: 190718M1_22, Date: 18-Jul-2019, Time: 11:42:23, ID: 1901923-01 SWIN1906261030GSC 0.23676, Description: SWIN1906261030GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901923-01 SWIN1906261030GSC 0.2...	8.35e3	101.9	NO
2	2	13C5-PFHxA	1901923-01 SWIN1906261030GSC 0.2...	1.43e4	66.1	NO
3	3	18O2-PFHxS	1901923-01 SWIN1906261030GSC 0.2...	9.25e2	71.2	NO
4	4	13C8-PFOA	1901923-01 SWIN1906261030GSC 0.2...	1.87e4	61.4	NO
5	5	13C9-PFNA	1901923-01 SWIN1906261030GSC 0.2...	1.04e4	64.3	NO
6	6	13C4-PFOS	1901923-01 SWIN1906261030GSC 0.2...	1.95e3	69.1	NO
7	7	13C6-PFDA	1901923-01 SWIN1906261030GSC 0.2...	1.43e4	63.5	NO
8	8	13C7-PFUdA	1901923-01 SWIN1906261030GSC 0.2...	1.90e4	66.2	NO

Name: 190718M1_23, Date: 18-Jul-2019, Time: 11:54:42, ID: B9F0253-BS1 OPR 0.125, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9F0253-BS1 OPR 0.125	7.72e3	94.2	NO
2	2	13C5-PFHxA	B9F0253-BS1 OPR 0.125	1.36e4	63.1	NO
3	3	18O2-PFHxS	B9F0253-BS1 OPR 0.125	9.33e2	71.8	NO
4	4	13C8-PFOA	B9F0253-BS1 OPR 0.125	1.91e4	62.6	NO
5	5	13C9-PFNA	B9F0253-BS1 OPR 0.125	9.86e3	60.8	NO
6	6	13C4-PFOS	B9F0253-BS1 OPR 0.125	1.96e3	69.3	NO
7	7	13C6-PFDA	B9F0253-BS1 OPR 0.125	1.34e4	59.2	NO
8	8	13C7-PFUdA	B9F0253-BS1 OPR 0.125	1.59e4	55.2	NO

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Name: 190718M1_24, Date: 18-Jul-2019, Time: 12:05:19, ID: 1901924-01 SWIN1906261240GSC 0.23934, Description: SWIN1906261240GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901924-01 SWIN1906261240GSC 0.2...	9.05e3	110.5	NO
2	2	13C5-PFHxA	1901924-01 SWIN1906261240GSC 0.2...	1.64e4	76.0	NO
3	3	18O2-PFHxS	1901924-01 SWIN1906261240GSC 0.2...	1.04e3	80.0	NO
4	4	13C8-PFOA	1901924-01 SWIN1906261240GSC 0.2...	2.31e4	75.8	NO
5	5	13C9-PFNA	1901924-01 SWIN1906261240GSC 0.2...	1.20e4	74.2	NO
6	6	13C4-PFOS	1901924-01 SWIN1906261240GSC 0.2...	2.22e3	78.7	NO
7	7	13C6-PFDA	1901924-01 SWIN1906261240GSC 0.2...	1.74e4	77.1	NO
8	8	13C7-PFUdA	1901924-01 SWIN1906261240GSC 0.2...	2.21e4	77.1	NO

Name: 190718M1_25, Date: 18-Jul-2019, Time: 12:17:23, ID: 1901925-01 SWIN1906280740GSC 0.24848, Description: SWIN1906280740GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901925-01 SWIN1906280740GSC 0.2...	9.23e3	112.6	NO
2	2	13C5-PFHxA	1901925-01 SWIN1906280740GSC 0.2...	1.67e4	77.4	NO
3	3	18O2-PFHxS	1901925-01 SWIN1906280740GSC 0.2...	1.06e3	81.6	NO
4	4	13C8-PFOA	1901925-01 SWIN1906280740GSC 0.2...	2.34e4	76.6	NO
5	5	13C9-PFNA	1901925-01 SWIN1906280740GSC 0.2...	1.28e4	78.9	NO
6	6	13C4-PFOS	1901925-01 SWIN1906280740GSC 0.2...	2.23e3	79.0	NO
7	7	13C6-PFDA	1901925-01 SWIN1906280740GSC 0.2...	1.70e4	75.3	NO
8	8	13C7-PFUdA	1901925-01 SWIN1906280740GSC 0.2...	2.18e4	75.9	NO

Name: 190718M1_26, Date: 18-Jul-2019, Time: 12:28:00, ID: 1901925-02 SWIN1906280740GSC-FD 0.23719, Description: SWIN1906280740GSC-FD

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901925-02 SWIN1906280740GSC-FD...	8.95e3	109.2	NO
2	2	13C5-PFHxA	1901925-02 SWIN1906280740GSC-FD...	1.52e4	70.2	NO
3	3	18O2-PFHxS	1901925-02 SWIN1906280740GSC-FD...	9.77e2	75.2	NO
4	4	13C8-PFOA	1901925-02 SWIN1906280740GSC-FD...	2.18e4	71.5	NO
5	5	13C9-PFNA	1901925-02 SWIN1906280740GSC-FD...	1.14e4	70.5	NO
6	6	13C4-PFOS	1901925-02 SWIN1906280740GSC-FD...	2.05e3	72.7	NO
7	7	13C6-PFDA	1901925-02 SWIN1906280740GSC-FD...	1.49e4	66.2	NO
8	8	13C7-PFUdA	1901925-02 SWIN1906280740GSC-FD...	2.01e4	70.1	NO

Name: 190718M1_27, Date: 18-Jul-2019, Time: 12:38:32, ID: 1901926-01 SWIN1906280840GSC 0.23337, Description: SWIN1906280840GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901926-01 SWIN1906280840GSC 0.2...	8.65e3	105.5	NO
2	2	13C5-PFHxA	1901926-01 SWIN1906280840GSC 0.2...	1.47e4	67.9	NO
3	3	18O2-PFHxS	1901926-01 SWIN1906280840GSC 0.2...	1.01e3	77.8	NO
4	4	13C8-PFOA	1901926-01 SWIN1906280840GSC 0.2...	2.04e4	66.8	NO
5	5	13C9-PFNA	1901926-01 SWIN1906280840GSC 0.2...	1.09e4	67.4	NO
6	6	13C4-PFOS	1901926-01 SWIN1906280840GSC 0.2...	1.97e3	69.6	NO
7	7	13C6-PFDA	1901926-01 SWIN1906280840GSC 0.2...	1.48e4	65.6	NO
8	8	13C7-PFUdA	1901926-01 SWIN1906280840GSC 0.2...	1.98e4	68.8	NO

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Name: 190718M1_28, Date: 18-Jul-2019, Time: 12:49:11, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-3 PFC CS3 19G1106	8.10e3	98.8	NO
2	2	13C5-PFHxA	ST190718M1-3 PFC CS3 19G1106	2.03e4	93.9	NO
3	3	18O2-PFHxS	ST190718M1-3 PFC CS3 19G1106	1.14e3	87.7	NO
4	4	13C8-PFOA	ST190718M1-3 PFC CS3 19G1106	2.92e4	95.5	NO
5	5	13C9-PFNA	ST190718M1-3 PFC CS3 19G1106	1.54e4	95.0	NO
6	6	13C4-PFOS	ST190718M1-3 PFC CS3 19G1106	2.66e3	94.1	NO
7	7	13C6-PFDA	ST190718M1-3 PFC CS3 19G1106	2.03e4	90.0	NO
8	8	13C7-PFUdA	ST190718M1-3 PFC CS3 19G1106	2.73e4	95.1	NO

Name: 190718M1_30, Date: 18-Jul-2019, Time: 13:10:22, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_31, Date: 18-Jul-2019, Time: 13:20:58, ID: 1901927-01 SWIN1906280925GSC 0.2436, Description: SWIN1906280925GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901927-01 SWIN1906280925GSC 0.2...	8.73e3	106.6	NO
2	2	13C5-PFHxA	1901927-01 SWIN1906280925GSC 0.2...	1.47e4	68.0	NO
3	3	18O2-PFHxS	1901927-01 SWIN1906280925GSC 0.2...	8.62e2	66.4	NO
4	4	13C8-PFOA	1901927-01 SWIN1906280925GSC 0.2...	2.14e4	70.0	NO
5	5	13C9-PFNA	1901927-01 SWIN1906280925GSC 0.2...	1.13e4	69.7	NO
6	6	13C4-PFOS	1901927-01 SWIN1906280925GSC 0.2...	2.15e3	76.2	NO
7	7	13C6-PFDA	1901927-01 SWIN1906280925GSC 0.2...	1.51e4	67.1	NO
8	8	13C7-PFUdA	1901927-01 SWIN1906280925GSC 0.2...	2.09e4	72.7	NO

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Name: 190718M1_32, Date: 18-Jul-2019, Time: 13:31:33, ID: 1901928-01 SWIN1906281040GSC 0.24365, Description: SWIN1906281040GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901928-01 SWIN1906281040GSC 0.2...	8.33e3	101.6	NO
2	2	13C5-PFHxA	1901928-01 SWIN1906281040GSC 0.2...	1.42e4	65.5	NO
3	3	18O2-PFHxS	1901928-01 SWIN1906281040GSC 0.2...	8.95e2	68.9	NO
4	4	13C8-PFOA	1901928-01 SWIN1906281040GSC 0.2...	1.96e4	64.1	NO
5	5	13C9-PFNA	1901928-01 SWIN1906281040GSC 0.2...	1.05e4	64.5	NO
6	6	13C4-PFOS	1901928-01 SWIN1906281040GSC 0.2...	1.92e3	68.1	NO
7	7	13C6-PFDA	1901928-01 SWIN1906281040GSC 0.2...	1.49e4	66.2	NO
8	8	13C7-PFUdA	1901928-01 SWIN1906281040GSC 0.2...	1.90e4	66.0	NO

Name: 190718M1_33, Date: 18-Jul-2019, Time: 13:42:07, ID: 1901929-01 SWIN1906281125GSC 0.24754, Description: SWIN1906281125GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901929-01 SWIN1906281125GSC 0.2...	8.47e3	103.3	NO
2	2	13C5-PFHxA	1901929-01 SWIN1906281125GSC 0.2...	1.43e4	66.0	NO
3	3	18O2-PFHxS	1901929-01 SWIN1906281125GSC 0.2...	8.79e2	67.6	NO
4	4	13C8-PFOA	1901929-01 SWIN1906281125GSC 0.2...	1.91e4	62.4	NO
5	5	13C9-PFNA	1901929-01 SWIN1906281125GSC 0.2...	1.07e4	65.7	NO
6	6	13C4-PFOS	1901929-01 SWIN1906281125GSC 0.2...	1.96e3	69.6	NO
7	7	13C6-PFDA	1901929-01 SWIN1906281125GSC 0.2...	1.50e4	66.7	NO
8	8	13C7-PFUdA	1901929-01 SWIN1906281125GSC 0.2...	1.85e4	64.5	NO

Name: 190718M1_34, Date: 18-Jul-2019, Time: 13:52:45, ID: 1901930-01 SWIN1906281215GSC 0.24862, Description: SWIN1906281215GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901930-01 SWIN1906281215GSC 0.2...	8.07e3	98.5	NO
2	2	13C5-PFHxA	1901930-01 SWIN1906281215GSC 0.2...	1.44e4	66.6	NO
3	3	18O2-PFHxS	1901930-01 SWIN1906281215GSC 0.2...	9.44e2	72.7	NO
4	4	13C8-PFOA	1901930-01 SWIN1906281215GSC 0.2...	2.12e4	69.4	NO
5	5	13C9-PFNA	1901930-01 SWIN1906281215GSC 0.2...	1.12e4	69.0	NO
6	6	13C4-PFOS	1901930-01 SWIN1906281215GSC 0.2...	1.92e3	68.1	NO
7	7	13C6-PFDA	1901930-01 SWIN1906281215GSC 0.2...	1.48e4	65.8	NO
8	8	13C7-PFUdA	1901930-01 SWIN1906281215GSC 0.2...	2.00e4	69.8	NO

Name: 190718M1_35, Date: 18-Jul-2019, Time: 14:03:18, ID: 1901931-01 SWIN1906261345GSC 0.24093, Description: SWIN1906261345GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901931-01 SWIN1906261345GSC 0.2...	8.21e3	100.2	NO
2	2	13C5-PFHxA	1901931-01 SWIN1906261345GSC 0.2...	1.49e4	69.0	NO
3	3	18O2-PFHxS	1901931-01 SWIN1906261345GSC 0.2...	8.76e2	67.4	NO
4	4	13C8-PFOA	1901931-01 SWIN1906261345GSC 0.2...	2.13e4	69.7	NO
5	5	13C9-PFNA	1901931-01 SWIN1906261345GSC 0.2...	1.13e4	69.8	NO
6	6	13C4-PFOS	1901931-01 SWIN1906261345GSC 0.2...	2.04e3	72.1	NO
7	7	13C6-PFDA	1901931-01 SWIN1906261345GSC 0.2...	1.50e4	66.6	NO
8	8	13C7-PFUdA	1901931-01 SWIN1906261345GSC 0.2...	2.02e4	70.1	NO

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Name: 190718M1_36, Date: 18-Jul-2019, Time: 14:13:56, ID: 1902049-03 EB07-070819 0.25547, Description: EB07-070819

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902049-03 EB07-070819 0.25547	9.62e3	117.4	NO
2	2	13C5-PFHxA	1902049-03 EB07-070819 0.25547	1.58e4	72.9	NO
3	3	18O2-PFHxS	1902049-03 EB07-070819 0.25547	8.79e2	67.6	NO
4	4	13C8-PFOA	1902049-03 EB07-070819 0.25547	1.88e4	61.5	NO
5	5	13C9-PFNA	1902049-03 EB07-070819 0.25547	8.59e3	53.0	NO
6	6	13C4-PFOS	1902049-03 EB07-070819 0.25547	1.32e3	46.7	YES
7	7	13C6-PFDA	1902049-03 EB07-070819 0.25547	6.82e3	30.3	YES
8	8	13C7-PFUdA	1902049-03 EB07-070819 0.25547	3.84e3	13.3	YES

Name: 190718M1_37, Date: 18-Jul-2019, Time: 14:24:30, ID: 1902049-12 EB08-070919 0.25637, Description: EB08-070919

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902049-12 EB08-070919 0.25637	8.94e3	109.1	NO
2	2	13C5-PFHxA	1902049-12 EB08-070919 0.25637	1.48e4	68.5	NO
3	3	18O2-PFHxS	1902049-12 EB08-070919 0.25637	9.62e2	74.1	NO
4	4	13C8-PFOA	1902049-12 EB08-070919 0.25637	1.84e4	60.3	NO
5	5	13C9-PFNA	1902049-12 EB08-070919 0.25637	7.96e3	49.1	YES
6	6	13C4-PFOS	1902049-12 EB08-070919 0.25637	1.59e3	56.1	NO
7	7	13C6-PFDA	1902049-12 EB08-070919 0.25637	7.68e3	34.1	YES
8	8	13C7-PFUdA	1902049-12 EB08-070919 0.25637	4.64e3	16.2	YES

Name: 190718M1_38, Date: 18-Jul-2019, Time: 14:35:38, ID: B9G0153-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0153-BLK1 Method Blank 0.25	9.48e3	115.6	NO
2	2	13C5-PFHxA	B9G0153-BLK1 Method Blank 0.25	1.56e4	72.0	NO
3	3	18O2-PFHxS	B9G0153-BLK1 Method Blank 0.25	9.51e2	73.2	NO
4	4	13C8-PFOA	B9G0153-BLK1 Method Blank 0.25	1.71e4	55.9	NO
5	5	13C9-PFNA	B9G0153-BLK1 Method Blank 0.25	6.98e3	43.1	YES
6	6	13C4-PFOS	B9G0153-BLK1 Method Blank 0.25	1.21e3	43.0	YES
7	7	13C6-PFDA	B9G0153-BLK1 Method Blank 0.25	5.61e3	24.9	YES
8	8	13C7-PFUdA	B9G0153-BLK1 Method Blank 0.25	2.21e3	7.7	YES

Name: 190718M1_39, Date: 18-Jul-2019, Time: 14:46:12, ID: 1902048-10 EB06-070319 0.2586, Description: EB06-070319

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902048-10 EB06-070319 0.2586	8.36e3	102.1	NO
2	2	13C5-PFHxA	1902048-10 EB06-070319 0.2586	1.41e4	65.0	NO
3	3	18O2-PFHxS	1902048-10 EB06-070319 0.2586	8.33e2	64.1	NO
4	4	13C8-PFOA	1902048-10 EB06-070319 0.2586	1.82e4	59.8	NO
5	5	13C9-PFNA	1902048-10 EB06-070319 0.2586	8.67e3	53.5	NO
6	6	13C4-PFOS	1902048-10 EB06-070319 0.2586	1.50e3	53.2	NO
7	7	13C6-PFDA	1902048-10 EB06-070319 0.2586	8.64e3	38.3	YES
8	8	13C7-PFUdA	1902048-10 EB06-070319 0.2586	5.52e3	19.2	YES

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Name: 190718M1_40, Date: 18-Jul-2019, Time: 14:56:50, ID: B9G0153-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0153-BS1 OPR 0.25	8.90e3	108.6	NO
2	2	13C5-PFHxA	B9G0153-BS1 OPR 0.25	1.55e4	71.8	NO
3	3	18O2-PFHxS	B9G0153-BS1 OPR 0.25	8.75e2	67.4	NO
4	4	13C8-PFOA	B9G0153-BS1 OPR 0.25	1.88e4	61.6	NO
5	5	13C9-PFNA	B9G0153-BS1 OPR 0.25	8.11e3	50.1	NO
6	6	13C4-PFOS	B9G0153-BS1 OPR 0.25	1.34e3	47.3	YES
7	7	13C6-PFDA	B9G0153-BS1 OPR 0.25	6.15e3	27.3	YES
8	8	13C7-PFUdA	B9G0153-BS1 OPR 0.25	2.47e3	8.6	YES

Name: 190718M1_41, Date: 18-Jul-2019, Time: 15:07:23, ID: B9G0153-BSD1 LCSD 0.25, Description: BSD1

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0153-BSD1 LCSD 0.25	8.95e3	109.2	NO
2	2	13C5-PFHxA	B9G0153-BSD1 LCSD 0.25	1.63e4	75.3	NO
3	3	18O2-PFHxS	B9G0153-BSD1 LCSD 0.25	9.03e2	69.6	NO
4	4	13C8-PFOA	B9G0153-BSD1 LCSD 0.25	2.12e4	69.4	NO
5	5	13C9-PFNA	B9G0153-BSD1 LCSD 0.25	9.51e3	58.7	NO
6	6	13C4-PFOS	B9G0153-BSD1 LCSD 0.25	1.33e3	47.1	YES
7	7	13C6-PFDA	B9G0153-BSD1 LCSD 0.25	7.48e3	33.2	YES
8	8	13C7-PFUdA	B9G0153-BSD1 LCSD 0.25	3.11e3	10.8	YES

Name: 190718M1_42, Date: 18-Jul-2019, Time: 15:20:30, ID: 1901901-01 MACON_GW_062819 0.11674, Description: MACON_GW_062819

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901901-01 MACON_GW_062819 0.11...	6.38e3	77.8	NO
2	2	13C5-PFHxA	1901901-01 MACON_GW_062819 0.11...	8.47e3	39.2	YES
3	3	18O2-PFHxS	1901901-01 MACON_GW_062819 0.11...	1.02e3	78.7	NO
4	4	13C8-PFOA	1901901-01 MACON_GW_062819 0.11...	1.39e4	45.6	YES
5	5	13C9-PFNA	1901901-01 MACON_GW_062819 0.11...	7.47e3	46.1	YES
6	6	13C4-PFOS	1901901-01 MACON_GW_062819 0.11...	2.22e3	78.5	NO
7	7	13C6-PFDA	1901901-01 MACON_GW_062819 0.11...	1.17e4	51.8	NO
8	8	13C7-PFUdA	1901901-01 MACON_GW_062819 0.11...	1.57e4	54.5	NO

Name: 190718M1_43, Date: 18-Jul-2019, Time: 15:31:05, ID: B9G0147-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0147-BS1 OPR 0.25	9.25e3	112.8	NO
2	2	13C5-PFHxA	B9G0147-BS1 OPR 0.25	1.64e4	75.7	NO
3	3	18O2-PFHxS	B9G0147-BS1 OPR 0.25	1.04e3	80.3	NO
4	4	13C8-PFOA	B9G0147-BS1 OPR 0.25	2.37e4	77.5	NO
5	5	13C9-PFNA	B9G0147-BS1 OPR 0.25	1.25e4	77.1	NO
6	6	13C4-PFOS	B9G0147-BS1 OPR 0.25	2.26e3	80.2	NO
7	7	13C6-PFDA	B9G0147-BS1 OPR 0.25	1.69e4	75.1	NO
8	8	13C7-PFUdA	B9G0147-BS1 OPR 0.25	2.25e4	78.2	NO

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Name: 190718M1_44, Date: 18-Jul-2019, Time: 15:41:44, ID: B9G0147-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0147-BLK1 Method Blank 0.25	8.81e3	107.5	NO
2	2	13C5-PFHxA	B9G0147-BLK1 Method Blank 0.25	1.54e4	71.4	NO
3	3	18O2-PFHxS	B9G0147-BLK1 Method Blank 0.25	9.37e2	72.2	NO
4	4	13C8-PFOA	B9G0147-BLK1 Method Blank 0.25	2.18e4	71.3	NO
5	5	13C9-PFNA	B9G0147-BLK1 Method Blank 0.25	1.18e4	72.9	NO
6	6	13C4-PFOS	B9G0147-BLK1 Method Blank 0.25	2.25e3	79.6	NO
7	7	13C6-PFDA	B9G0147-BLK1 Method Blank 0.25	1.59e4	70.6	NO
8	8	13C7-PFUdA	B9G0147-BLK1 Method Blank 0.25	2.11e4	73.5	NO

Name: 190718M1_45, Date: 18-Jul-2019, Time: 15:52:17, ID: 1902052-01 1907364-01A 0.24349, Description: 1907364-01A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902052-01 1907364-01A 0.24349	9.04e3	110.3	NO
2	2	13C5-PFHxA	1902052-01 1907364-01A 0.24349	1.48e4	68.3	NO
3	3	18O2-PFHxS	1902052-01 1907364-01A 0.24349	9.21e2	70.9	NO
4	4	13C8-PFOA	1902052-01 1907364-01A 0.24349	2.21e4	72.4	NO
5	5	13C9-PFNA	1902052-01 1907364-01A 0.24349	1.17e4	71.9	NO
6	6	13C4-PFOS	1902052-01 1907364-01A 0.24349	2.15e3	76.0	NO
7	7	13C6-PFDA	1902052-01 1907364-01A 0.24349	1.64e4	72.6	NO
8	8	13C7-PFUdA	1902052-01 1907364-01A 0.24349	2.10e4	73.1	NO

Name: 190718M1_46, Date: 18-Jul-2019, Time: 16:02:47, ID: 1902052-02 1907364-02A 0.24144, Description: 1907364-02A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902052-02 1907364-02A 0.24144	9.13e3	111.5	NO
2	2	13C5-PFHxA	1902052-02 1907364-02A 0.24144	1.52e4	70.5	NO
3	3	18O2-PFHxS	1902052-02 1907364-02A 0.24144	1.05e3	80.9	NO
4	4	13C8-PFOA	1902052-02 1907364-02A 0.24144	2.14e4	70.1	NO
5	5	13C9-PFNA	1902052-02 1907364-02A 0.24144	1.20e4	74.3	NO
6	6	13C4-PFOS	1902052-02 1907364-02A 0.24144	2.25e3	79.7	NO
7	7	13C6-PFDA	1902052-02 1907364-02A 0.24144	1.65e4	73.4	NO
8	8	13C7-PFUdA	1902052-02 1907364-02A 0.24144	2.20e4	76.5	NO

Name: 190718M1_47, Date: 18-Jul-2019, Time: 16:13:25, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Name: 190718M1_48, Date: 18-Jul-2019, Time: 16:24:04, ID: ST190718M1-4 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-4 PFC CS3 19G1106	8.66e3	105.6	NO
2	2	13C5-PFHxA	ST190718M1-4 PFC CS3 19G1106	2.10e4	97.1	NO
3	3	18O2-PFHxS	ST190718M1-4 PFC CS3 19G1106	1.22e3	93.8	NO
4	4	13C8-PFOA	ST190718M1-4 PFC CS3 19G1106	2.89e4	94.7	NO
5	5	13C9-PFNA	ST190718M1-4 PFC CS3 19G1106	1.57e4	97.0	NO
6	6	13C4-PFOS	ST190718M1-4 PFC CS3 19G1106	2.76e3	97.8	NO
7	7	13C6-PFDA	ST190718M1-4 PFC CS3 19G1106	2.02e4	89.6	NO
8	8	13C7-PFUdA	ST190718M1-4 PFC CS3 19G1106	2.75e4	95.8	NO

Name: 190718M1_49, Date: 18-Jul-2019, Time: 16:34:42, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_50, Date: 18-Jul-2019, Time: 16:45:15, ID: 1902053-01 1907368-01A 0.24543, Description: 1907368-01A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902053-01 1907368-01A 0.24543	8.44e3	103.0	NO
2	2	13C5-PFHxA	1902053-01 1907368-01A 0.24543	1.51e4	69.9	NO
3	3	18O2-PFHxS	1902053-01 1907368-01A 0.24543	1.03e3	79.5	NO
4	4	13C8-PFOA	1902053-01 1907368-01A 0.24543	2.29e4	74.9	NO
5	5	13C9-PFNA	1902053-01 1907368-01A 0.24543	1.21e4	74.8	NO
6	6	13C4-PFOS	1902053-01 1907368-01A 0.24543	2.18e3	77.1	NO
7	7	13C6-PFDA	1902053-01 1907368-01A 0.24543	1.64e4	72.8	NO
8	8	13C7-PFUdA	1902053-01 1907368-01A 0.24543	2.13e4	74.3	NO

Name: 190718M1_51, Date: 18-Jul-2019, Time: 16:55:54, ID: 1902053-02 1907368-02A 0.23176, Description: 1907368-02A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902053-02 1907368-02A 0.23176	8.30e3	101.3	NO
2	2	13C5-PFHxA	1902053-02 1907368-02A 0.23176	1.40e4	64.8	NO
3	3	18O2-PFHxS	1902053-02 1907368-02A 0.23176	9.41e2	72.4	NO
4	4	13C8-PFOA	1902053-02 1907368-02A 0.23176	2.08e4	68.2	NO
5	5	13C9-PFNA	1902053-02 1907368-02A 0.23176	1.12e4	69.2	NO
6	6	13C4-PFOS	1902053-02 1907368-02A 0.23176	2.29e3	81.1	NO
7	7	13C6-PFDA	1902053-02 1907368-02A 0.23176	1.54e4	68.5	NO
8	8	13C7-PFUdA	1902053-02 1907368-02A 0.23176	1.96e4	68.2	NO

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Name: 190718M1_52, Date: 18-Jul-2019, Time: 17:06:27, ID: 1902055-01 1907363-01A 0.25186, Description: 1907363-01A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902055-01 1907363-01A 0.25186	8.16e3	99.5	NO
2	2	13C5-PFHxA	1902055-01 1907363-01A 0.25186	1.46e4	67.5	NO
3	3	18O2-PFHxS	1902055-01 1907363-01A 0.25186	1.02e3	78.8	NO
4	4	13C8-PFOA	1902055-01 1907363-01A 0.25186	2.16e4	70.9	NO
5	5	13C9-PFNA	1902055-01 1907363-01A 0.25186	1.21e4	74.4	NO
6	6	13C4-PFOS	1902055-01 1907363-01A 0.25186	2.14e3	75.8	NO
7	7	13C6-PFDA	1902055-01 1907363-01A 0.25186	1.65e4	73.1	NO
8	8	13C7-PFUdA	1902055-01 1907363-01A 0.25186	2.08e4	72.4	NO

Name: 190718M1_53, Date: 18-Jul-2019, Time: 17:17:05, ID: 1902055-02 1907363-02A 0.2408, Description: 1907363-02A

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902055-02 1907363-02A 0.2408	8.28e3	101.0	NO
2	2	13C5-PFHxA	1902055-02 1907363-02A 0.2408	1.42e4	65.6	NO
3	3	18O2-PFHxS	1902055-02 1907363-02A 0.2408	9.88e2	76.1	NO
4	4	13C8-PFOA	1902055-02 1907363-02A 0.2408	2.12e4	69.6	NO
5	5	13C9-PFNA	1902055-02 1907363-02A 0.2408	1.18e4	72.6	NO
6	6	13C4-PFOS	1902055-02 1907363-02A 0.2408	2.23e3	78.9	NO
7	7	13C6-PFDA	1902055-02 1907363-02A 0.2408	1.52e4	67.5	NO
8	8	13C7-PFUdA	1902055-02 1907363-02A 0.2408	2.09e4	72.6	NO

Name: 190718M1_54, Date: 18-Jul-2019, Time: 17:27:39, ID: 1902076-01 AS-SW-01-0719 0.24981, Description: AS-SW-01-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-01 AS-SW-01-0719 0.24981	8.51e3	103.9	NO
2	2	13C5-PFHxA	1902076-01 AS-SW-01-0719 0.24981	1.44e4	66.7	NO
3	3	18O2-PFHxS	1902076-01 AS-SW-01-0719 0.24981	9.50e2	73.1	NO
4	4	13C8-PFOA	1902076-01 AS-SW-01-0719 0.24981	2.04e4	66.7	NO
5	5	13C9-PFNA	1902076-01 AS-SW-01-0719 0.24981	1.09e4	67.1	NO
6	6	13C4-PFOS	1902076-01 AS-SW-01-0719 0.24981	2.17e3	77.0	NO
7	7	13C6-PFDA	1902076-01 AS-SW-01-0719 0.24981	1.51e4	66.9	NO
8	8	13C7-PFUdA	1902076-01 AS-SW-01-0719 0.24981	1.97e4	68.5	NO

Name: 190718M1_55, Date: 18-Jul-2019, Time: 17:38:17, ID: 1902076-02 AS-PW-01-0719 0.24432, Description: AS-PW-01-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-02 AS-PW-01-0719 0.24432	8.49e3	103.7	NO
2	2	13C5-PFHxA	1902076-02 AS-PW-01-0719 0.24432	1.52e4	70.5	NO
3	3	18O2-PFHxS	1902076-02 AS-PW-01-0719 0.24432	9.96e2	76.7	NO
4	4	13C8-PFOA	1902076-02 AS-PW-01-0719 0.24432	2.19e4	71.6	NO
5	5	13C9-PFNA	1902076-02 AS-PW-01-0719 0.24432	1.10e4	67.6	NO
6	6	13C4-PFOS	1902076-02 AS-PW-01-0719 0.24432	2.20e3	77.8	NO
7	7	13C6-PFDA	1902076-02 AS-PW-01-0719 0.24432	1.55e4	68.6	NO
8	8	13C7-PFUdA	1902076-02 AS-PW-01-0719 0.24432	2.03e4	70.5	NO

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Name: 190718M1_56, Date: 18-Jul-2019, Time: 17:48:50, ID: 1902076-03 AS-SW-02-0719 0.24344, Description: AS-SW-02-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-03 AS-SW-02-0719 0.24344	9.20e3	112.3	NO
2	2	13C5-PFHxA	1902076-03 AS-SW-02-0719 0.24344	1.68e4	77.8	NO
3	3	18O2-PFHxS	1902076-03 AS-SW-02-0719 0.24344	1.19e3	91.5	NO
4	4	13C8-PFOA	1902076-03 AS-SW-02-0719 0.24344	2.35e4	76.9	NO
5	5	13C9-PFNA	1902076-03 AS-SW-02-0719 0.24344	1.29e4	79.7	NO
6	6	13C4-PFOS	1902076-03 AS-SW-02-0719 0.24344	2.53e3	89.7	NO
7	7	13C6-PFDA	1902076-03 AS-SW-02-0719 0.24344	1.73e4	76.5	NO
8	8	13C7-PFUdA	1902076-03 AS-SW-02-0719 0.24344	2.21e4	76.9	NO

Name: 190718M1_57, Date: 18-Jul-2019, Time: 17:59:28, ID: 1902076-04 AS-PW-02-0719 0.24256, Description: AS-PW-02-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-04 AS-PW-02-0719 0.24256	9.11e3	111.2	NO
2	2	13C5-PFHxA	1902076-04 AS-PW-02-0719 0.24256	1.64e4	75.9	NO
3	3	18O2-PFHxS	1902076-04 AS-PW-02-0719 0.24256	1.09e3	83.6	NO
4	4	13C8-PFOA	1902076-04 AS-PW-02-0719 0.24256	2.32e4	76.0	NO
5	5	13C9-PFNA	1902076-04 AS-PW-02-0719 0.24256	1.22e4	75.1	NO
6	6	13C4-PFOS	1902076-04 AS-PW-02-0719 0.24256	2.31e3	81.9	NO
7	7	13C6-PFDA	1902076-04 AS-PW-02-0719 0.24256	1.61e4	71.5	NO
8	8	13C7-PFUdA	1902076-04 AS-PW-02-0719 0.24256	2.22e4	77.3	NO

Name: 190718M1_58, Date: 18-Jul-2019, Time: 18:10:06, ID: 1902076-05 AS-SW-03-0719 0.24213, Description: AS-SW-03-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-05 AS-SW-03-0719 0.24213	9.80e3	119.5	NO
2	2	13C5-PFHxA	1902076-05 AS-SW-03-0719 0.24213	1.68e4	78.0	NO
3	3	18O2-PFHxS	1902076-05 AS-SW-03-0719 0.24213	1.10e3	84.7	NO
4	4	13C8-PFOA	1902076-05 AS-SW-03-0719 0.24213	2.52e4	82.5	NO
5	5	13C9-PFNA	1902076-05 AS-SW-03-0719 0.24213	1.33e4	81.9	NO
6	6	13C4-PFOS	1902076-05 AS-SW-03-0719 0.24213	2.65e3	94.0	NO
7	7	13C6-PFDA	1902076-05 AS-SW-03-0719 0.24213	1.83e4	81.0	NO
8	8	13C7-PFUdA	1902076-05 AS-SW-03-0719 0.24213	2.37e4	82.6	NO

Name: 190718M1_59, Date: 18-Jul-2019, Time: 18:20:40, ID: 1902076-06 AS-PW-03-0719 0.25236, Description: AS-PW-03-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-06 AS-PW-03-0719 0.25236	8.97e3	109.4	NO
2	2	13C5-PFHxA	1902076-06 AS-PW-03-0719 0.25236	1.58e4	73.3	NO
3	3	18O2-PFHxS	1902076-06 AS-PW-03-0719 0.25236	1.00e3	77.3	NO
4	4	13C8-PFOA	1902076-06 AS-PW-03-0719 0.25236	2.29e4	74.9	NO
5	5	13C9-PFNA	1902076-06 AS-PW-03-0719 0.25236	1.17e4	71.9	NO
6	6	13C4-PFOS	1902076-06 AS-PW-03-0719 0.25236	2.38e3	84.4	NO
7	7	13C6-PFDA	1902076-06 AS-PW-03-0719 0.25236	1.62e4	71.9	NO
8	8	13C7-PFUdA	1902076-06 AS-PW-03-0719 0.25236	2.12e4	73.7	NO

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Name: 190718M1_60, Date: 18-Jul-2019, Time: 18:31:18, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_61, Date: 18-Jul-2019, Time: 18:41:57, ID: ST190718M1-5 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-5 PFC CS3 19G1106	8.24e3	100.6	NO
2	2	13C5-PFHxA	ST190718M1-5 PFC CS3 19G1106	2.08e4	96.4	NO
3	3	18O2-PFHxS	ST190718M1-5 PFC CS3 19G1106	1.29e3	99.0	NO
4	4	13C8-PFOA	ST190718M1-5 PFC CS3 19G1106	2.90e4	95.2	NO
5	5	13C9-PFNA	ST190718M1-5 PFC CS3 19G1106	1.53e4	94.2	NO
6	6	13C4-PFOS	ST190718M1-5 PFC CS3 19G1106	2.72e3	96.5	NO
7	7	13C6-PFDA	ST190718M1-5 PFC CS3 19G1106	2.05e4	91.0	NO
8	8	13C7-PFUdA	ST190718M1-5 PFC CS3 19G1106	2.74e4	95.4	NO

Name: 190718M1_62, Date: 18-Jul-2019, Time: 18:52:30, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_63, Date: 18-Jul-2019, Time: 19:03:09, ID: 1902076-07 AS-SW-04-0719 0.2378, Description: AS-SW-04-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-07 AS-SW-04-0719 0.2378	9.36e3	114.2	NO
2	2	13C5-PFHxA	1902076-07 AS-SW-04-0719 0.2378	1.71e4	78.9	NO
3	3	18O2-PFHxS	1902076-07 AS-SW-04-0719 0.2378	1.09e3	84.1	NO
4	4	13C8-PFOA	1902076-07 AS-SW-04-0719 0.2378	2.40e4	78.7	NO
5	5	13C9-PFNA	1902076-07 AS-SW-04-0719 0.2378	1.27e4	78.3	NO
6	6	13C4-PFOS	1902076-07 AS-SW-04-0719 0.2378	2.48e3	87.9	NO
7	7	13C6-PFDA	1902076-07 AS-SW-04-0719 0.2378	1.73e4	77.0	NO
8	8	13C7-PFUdA	1902076-07 AS-SW-04-0719 0.2378	2.32e4	80.8	NO

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Name: 190718M1_64, Date: 18-Jul-2019, Time: 19:13:47, ID: 1902076-08 AS-PW-04-0719 0.25413, Description: AS-PW-04-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-08 AS-PW-04-0719 0.25413	8.98e3	109.5	NO
2	2	13C5-PFHxA	1902076-08 AS-PW-04-0719 0.25413	1.53e4	70.7	NO
3	3	18O2-PFHxS	1902076-08 AS-PW-04-0719 0.25413	1.04e3	79.9	NO
4	4	13C8-PFOA	1902076-08 AS-PW-04-0719 0.25413	2.28e4	74.6	NO
5	5	13C9-PFNA	1902076-08 AS-PW-04-0719 0.25413	1.17e4	72.4	NO
6	6	13C4-PFOS	1902076-08 AS-PW-04-0719 0.25413	2.18e3	77.1	NO
7	7	13C6-PFDA	1902076-08 AS-PW-04-0719 0.25413	1.61e4	71.4	NO
8	8	13C7-PFUdA	1902076-08 AS-PW-04-0719 0.25413	2.13e4	74.3	NO

Name: 190718M1_65, Date: 18-Jul-2019, Time: 19:24:20, ID: 1902076-09 AS-SW-05-0719 0.2484, Description: AS-SW-05-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-09 AS-SW-05-0719 0.2484	7.86e3	95.9	NO
2	2	13C5-PFHxA	1902076-09 AS-SW-05-0719 0.2484	1.45e4	67.2	NO
3	3	18O2-PFHxS	1902076-09 AS-SW-05-0719 0.2484	9.35e2	71.9	NO
4	4	13C8-PFOA	1902076-09 AS-SW-05-0719 0.2484	2.08e4	68.0	NO
5	5	13C9-PFNA	1902076-09 AS-SW-05-0719 0.2484	1.08e4	66.4	NO
6	6	13C4-PFOS	1902076-09 AS-SW-05-0719 0.2484	2.09e3	73.9	NO
7	7	13C6-PFDA	1902076-09 AS-SW-05-0719 0.2484	1.47e4	65.0	NO
8	8	13C7-PFUdA	1902076-09 AS-SW-05-0719 0.2484	2.02e4	70.4	NO

Name: 190718M1_66, Date: 18-Jul-2019, Time: 19:34:58, ID: 1902076-10 AS-PW-05-0719 0.26123, Description: AS-PW-05-0719

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902076-10 AS-PW-05-0719 0.26123	9.79e3	119.4	NO
2	2	13C5-PFHxA	1902076-10 AS-PW-05-0719 0.26123	1.72e4	79.5	NO
3	3	18O2-PFHxS	1902076-10 AS-PW-05-0719 0.26123	1.23e3	95.0	NO
4	4	13C8-PFOA	1902076-10 AS-PW-05-0719 0.26123	2.48e4	81.3	NO
5	5	13C9-PFNA	1902076-10 AS-PW-05-0719 0.26123	1.31e4	80.7	NO
6	6	13C4-PFOS	1902076-10 AS-PW-05-0719 0.26123	2.58e3	91.4	NO
7	7	13C6-PFDA	1902076-10 AS-PW-05-0719 0.26123	1.83e4	81.0	NO
8	8	13C7-PFUdA	1902076-10 AS-PW-05-0719 0.26123	2.41e4	83.7	NO

Name: 190718M1_67, Date: 18-Jul-2019, Time: 19:45:31, ID: B9G0103-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0103-BS1 OPR 0.25	1.16e4	141.4	NO
2	2	13C5-PFHxA	B9G0103-BS1 OPR 0.25	2.01e4	92.8	NO
3	3	18O2-PFHxS	B9G0103-BS1 OPR 0.25	1.42e3	109.6	NO
4	4	13C8-PFOA	B9G0103-BS1 OPR 0.25	2.67e4	87.4	NO
5	5	13C9-PFNA	B9G0103-BS1 OPR 0.25	1.50e4	92.8	NO
6	6	13C4-PFOS	B9G0103-BS1 OPR 0.25	2.77e3	98.0	NO
7	7	13C6-PFDA	B9G0103-BS1 OPR 0.25	2.01e4	89.3	NO
8	8	13C7-PFUdA	B9G0103-BS1 OPR 0.25	2.58e4	89.9	NO

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Name: 190718M1_68, Date: 18-Jul-2019, Time: 19:56:10, ID: B9G0103-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0103-BLK1 Method Blank 0.25	1.22e4	148.4	NO
2	2	13C5-PFHxA	B9G0103-BLK1 Method Blank 0.25	2.03e4	94.0	NO
3	3	18O2-PFHxS	B9G0103-BLK1 Method Blank 0.25	1.36e3	104.6	NO
4	4	13C8-PFOA	B9G0103-BLK1 Method Blank 0.25	2.99e4	97.9	NO
5	5	13C9-PFNA	B9G0103-BLK1 Method Blank 0.25	1.54e4	94.9	NO
6	6	13C4-PFOS	B9G0103-BLK1 Method Blank 0.25	2.72e3	96.3	NO
7	7	13C6-PFDA	B9G0103-BLK1 Method Blank 0.25	2.11e4	93.7	NO
8	8	13C7-PFUdA	B9G0103-BLK1 Method Blank 0.25	2.88e4	100.2	NO

Name: 190718M1_69, Date: 18-Jul-2019, Time: 20:06:48, ID: 1901962-01 SWIN1906270800GSC 0.23842, Description: SWIN1906270800GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901962-01 SWIN1906270800GSC 0.2...	1.18e4	144.0	NO
2	2	13C5-PFHxA	1901962-01 SWIN1906270800GSC 0.2...	1.99e4	91.9	NO
3	3	18O2-PFHxS	1901962-01 SWIN1906270800GSC 0.2...	1.29e3	99.0	NO
4	4	13C8-PFOA	1901962-01 SWIN1906270800GSC 0.2...	2.76e4	90.5	NO
5	5	13C9-PFNA	1901962-01 SWIN1906270800GSC 0.2...	1.43e4	88.1	NO
6	6	13C4-PFOS	1901962-01 SWIN1906270800GSC 0.2...	2.83e3	100.1	NO
7	7	13C6-PFDA	1901962-01 SWIN1906270800GSC 0.2...	2.00e4	88.6	NO
8	8	13C7-PFUdA	1901962-01 SWIN1906270800GSC 0.2...	2.58e4	89.8	NO

Name: 190718M1_70, Date: 18-Jul-2019, Time: 20:17:21, ID: 1901962-02 SWIN1906270800GSC-FD 0.25079, Description: SWIN1906270800GSC-FD

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901962-02 SWIN1906270800GSC-FD...	1.16e4	141.2	NO
2	2	13C5-PFHxA	1901962-02 SWIN1906270800GSC-FD...	1.90e4	88.0	NO
3	3	18O2-PFHxS	1901962-02 SWIN1906270800GSC-FD...	1.27e3	97.6	NO
4	4	13C8-PFOA	1901962-02 SWIN1906270800GSC-FD...	2.80e4	91.8	NO
5	5	13C9-PFNA	1901962-02 SWIN1906270800GSC-FD...	1.42e4	87.7	NO
6	6	13C4-PFOS	1901962-02 SWIN1906270800GSC-FD...	2.56e3	90.6	NO
7	7	13C6-PFDA	1901962-02 SWIN1906270800GSC-FD...	1.94e4	86.3	NO
8	8	13C7-PFUdA	1901962-02 SWIN1906270800GSC-FD...	2.43e4	84.5	NO

Name: 190718M1_71, Date: 18-Jul-2019, Time: 20:28:00, ID: 1901963-01 SWIN1906270915GSC 0.23089, Description: SWIN1906270915GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901963-01 SWIN1906270915GSC 0.2...	1.11e4	135.9	NO
2	2	13C5-PFHxA	1901963-01 SWIN1906270915GSC 0.2...	1.99e4	92.2	NO
3	3	18O2-PFHxS	1901963-01 SWIN1906270915GSC 0.2...	1.22e3	93.5	NO
4	4	13C8-PFOA	1901963-01 SWIN1906270915GSC 0.2...	2.79e4	91.3	NO
5	5	13C9-PFNA	1901963-01 SWIN1906270915GSC 0.2...	1.48e4	91.3	NO
6	6	13C4-PFOS	1901963-01 SWIN1906270915GSC 0.2...	2.75e3	97.5	NO
7	7	13C6-PFDA	1901963-01 SWIN1906270915GSC 0.2...	2.05e4	91.1	NO
8	8	13C7-PFUdA	1901963-01 SWIN1906270915GSC 0.2...	2.62e4	91.2	NO

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Name: 190718M1_72, Date: 18-Jul-2019, Time: 20:38:33, ID: 1901964-01 SWIN1906271000GSC 0.24416, Description: SWIN1906271000GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901964-01 SWIN1906271000GSC 0.2...	1.06e4	129.9	NO
2	2	13C5-PFHxA	1901964-01 SWIN1906271000GSC 0.2...	1.92e4	88.9	NO
3	3	18O2-PFHxS	1901964-01 SWIN1906271000GSC 0.2...	1.19e3	91.3	NO
4	4	13C8-PFOA	1901964-01 SWIN1906271000GSC 0.2...	2.61e4	85.4	NO
5	5	13C9-PFNA	1901964-01 SWIN1906271000GSC 0.2...	1.43e4	88.4	NO
6	6	13C4-PFOS	1901964-01 SWIN1906271000GSC 0.2...	2.69e3	95.4	NO
7	7	13C6-PFDA	1901964-01 SWIN1906271000GSC 0.2...	1.98e4	87.8	NO
8	8	13C7-PFUdA	1901964-01 SWIN1906271000GSC 0.2...	2.48e4	86.2	NO

Name: 190718M1_73, Date: 18-Jul-2019, Time: 20:49:12, ID: 1901965-01 SWIN1906271025GSC 0.24871, Description: SWIN1906271025GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901965-01 SWIN1906271025GSC 0.2...	1.20e4	146.0	NO
2	2	13C5-PFHxA	1901965-01 SWIN1906271025GSC 0.2...	1.96e4	90.9	NO
3	3	18O2-PFHxS	1901965-01 SWIN1906271025GSC 0.2...	1.23e3	94.4	NO
4	4	13C8-PFOA	1901965-01 SWIN1906271025GSC 0.2...	2.80e4	91.9	NO
5	5	13C9-PFNA	1901965-01 SWIN1906271025GSC 0.2...	1.51e4	92.9	NO
6	6	13C4-PFOS	1901965-01 SWIN1906271025GSC 0.2...	3.03e3	107.3	NO
7	7	13C6-PFDA	1901965-01 SWIN1906271025GSC 0.2...	2.01e4	89.1	NO
8	8	13C7-PFUdA	1901965-01 SWIN1906271025GSC 0.2...	2.59e4	90.2	NO

Name: 190718M1_74, Date: 18-Jul-2019, Time: 20:59:50, ID: 1901966-01 SWIN1906271100GSC 0.2431, Description: SWIN1906271100GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901966-01 SWIN1906271100GSC 0.2...	1.18e4	144.1	NO
2	2	13C5-PFHxA	1901966-01 SWIN1906271100GSC 0.2...	1.99e4	91.9	NO
3	3	18O2-PFHxS	1901966-01 SWIN1906271100GSC 0.2...	1.26e3	97.3	NO
4	4	13C8-PFOA	1901966-01 SWIN1906271100GSC 0.2...	2.70e4	88.4	NO
5	5	13C9-PFNA	1901966-01 SWIN1906271100GSC 0.2...	1.49e4	92.0	NO
6	6	13C4-PFOS	1901966-01 SWIN1906271100GSC 0.2...	2.69e3	95.1	NO
7	7	13C6-PFDA	1901966-01 SWIN1906271100GSC 0.2...	1.98e4	87.8	NO
8	8	13C7-PFUdA	1901966-01 SWIN1906271100GSC 0.2...	2.53e4	88.2	NO

Name: 190718M1_75, Date: 18-Jul-2019, Time: 21:10:22, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

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Name: 190718M1_76, Date: 18-Jul-2019, Time: 21:21:01, ID: ST190718M1-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-6 PFC CS3 19G1106	8.34e3	101.8	NO
2	2	13C5-PFHxA	ST190718M1-6 PFC CS3 19G1106	2.06e4	95.2	NO
3	3	18O2-PFHxS	ST190718M1-6 PFC CS3 19G1106	1.22e3	93.9	NO
4	4	13C8-PFOA	ST190718M1-6 PFC CS3 19G1106	2.98e4	97.5	NO
5	5	13C9-PFNA	ST190718M1-6 PFC CS3 19G1106	1.57e4	96.9	NO
6	6	13C4-PFOS	ST190718M1-6 PFC CS3 19G1106	2.81e3	99.4	NO
7	7	13C6-PFDA	ST190718M1-6 PFC CS3 19G1106	2.13e4	94.6	NO
8	8	13C7-PFUdA	ST190718M1-6 PFC CS3 19G1106	2.68e4	93.4	NO

Name: 190718M1_77, Date: 18-Jul-2019, Time: 21:31:40, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_78, Date: 18-Jul-2019, Time: 21:42:13, ID: 1901967-01 SWIN1906271135GSC 0.23334, Description: SWIN1906271135GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901967-01 SWIN1906271135GSC 0.2...	1.21e4	147.2	NO
2	2	13C5-PFHxA	1901967-01 SWIN1906271135GSC 0.2...	1.97e4	91.3	NO
3	3	18O2-PFHxS	1901967-01 SWIN1906271135GSC 0.2...	1.32e3	101.4	NO
4	4	13C8-PFOA	1901967-01 SWIN1906271135GSC 0.2...	2.79e4	91.3	NO
5	5	13C9-PFNA	1901967-01 SWIN1906271135GSC 0.2...	1.43e4	88.4	NO
6	6	13C4-PFOS	1901967-01 SWIN1906271135GSC 0.2...	2.71e3	95.8	NO
7	7	13C6-PFDA	1901967-01 SWIN1906271135GSC 0.2...	2.01e4	89.3	NO
8	8	13C7-PFUdA	1901967-01 SWIN1906271135GSC 0.2...	2.64e4	92.0	NO

Name: 190718M1_79, Date: 18-Jul-2019, Time: 21:52:51, ID: 1901968-01 SWIN1906271245GSC 0.24441, Description: SWIN1906271245GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901968-01 SWIN1906271245GSC 0.2...	1.01e4	123.8	NO
2	2	13C5-PFHxA	1901968-01 SWIN1906271245GSC 0.2...	1.72e4	79.7	NO
3	3	18O2-PFHxS	1901968-01 SWIN1906271245GSC 0.2...	1.12e3	86.4	NO
4	4	13C8-PFOA	1901968-01 SWIN1906271245GSC 0.2...	2.48e4	81.2	NO
5	5	13C9-PFNA	1901968-01 SWIN1906271245GSC 0.2...	1.35e4	83.3	NO
6	6	13C4-PFOS	1901968-01 SWIN1906271245GSC 0.2...	2.55e3	90.4	NO
7	7	13C6-PFDA	1901968-01 SWIN1906271245GSC 0.2...	1.69e4	75.1	NO
8	8	13C7-PFUdA	1901968-01 SWIN1906271245GSC 0.2...	2.25e4	78.3	NO

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Name: 190718M1_80, Date: 18-Jul-2019, Time: 22:03:24, ID: 1901969-01 SWIN1906271315GSC 0.2441, Description: SWIN1906271315GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901969-01 SWIN1906271315GSC 0.2...	1.04e4	127.0	NO
2	2	13C5-PFHxA	1901969-01 SWIN1906271315GSC 0.2...	1.89e4	87.3	NO
3	3	18O2-PFHxS	1901969-01 SWIN1906271315GSC 0.2...	1.12e3	86.3	NO
4	4	13C8-PFOA	1901969-01 SWIN1906271315GSC 0.2...	2.64e4	86.6	NO
5	5	13C9-PFNA	1901969-01 SWIN1906271315GSC 0.2...	1.42e4	87.4	NO
6	6	13C4-PFOS	1901969-01 SWIN1906271315GSC 0.2...	2.42e3	85.8	NO
7	7	13C6-PFDA	1901969-01 SWIN1906271315GSC 0.2...	1.86e4	82.4	NO
8	8	13C7-PFUdA	1901969-01 SWIN1906271315GSC 0.2...	2.46e4	85.7	NO

Name: 190718M1_81, Date: 18-Jul-2019, Time: 22:14:02, ID: 1901970-01 SWIN1906271345GSC 0.2504, Description: SWIN1906271345GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901970-01 SWIN1906271345GSC 0.2...	9.26e3	113.0	NO
2	2	13C5-PFHxA	1901970-01 SWIN1906271345GSC 0.2...	1.65e4	76.4	NO
3	3	18O2-PFHxS	1901970-01 SWIN1906271345GSC 0.2...	1.00e3	77.1	NO
4	4	13C8-PFOA	1901970-01 SWIN1906271345GSC 0.2...	2.30e4	75.3	NO
5	5	13C9-PFNA	1901970-01 SWIN1906271345GSC 0.2...	1.25e4	77.1	NO
6	6	13C4-PFOS	1901970-01 SWIN1906271345GSC 0.2...	2.31e3	81.9	NO
7	7	13C6-PFDA	1901970-01 SWIN1906271345GSC 0.2...	1.65e4	73.2	NO
8	8	13C7-PFUdA	1901970-01 SWIN1906271345GSC 0.2...	2.25e4	78.1	NO

Name: 190718M1_82, Date: 18-Jul-2019, Time: 22:24:35, ID: 1901971-01 SWIN1906271445GSC 0.24326, Description: SWIN1906271445GSC

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901971-01 SWIN1906271445GSC 0.2...	1.00e4	122.4	NO
2	2	13C5-PFHxA	1901971-01 SWIN1906271445GSC 0.2...	1.79e4	82.9	NO
3	3	18O2-PFHxS	1901971-01 SWIN1906271445GSC 0.2...	1.21e3	93.3	NO
4	4	13C8-PFOA	1901971-01 SWIN1906271445GSC 0.2...	2.46e4	80.5	NO
5	5	13C9-PFNA	1901971-01 SWIN1906271445GSC 0.2...	1.37e4	84.5	NO
6	6	13C4-PFOS	1901971-01 SWIN1906271445GSC 0.2...	2.60e3	91.9	NO
7	7	13C6-PFDA	1901971-01 SWIN1906271445GSC 0.2...	1.84e4	81.5	NO
8	8	13C7-PFUdA	1901971-01 SWIN1906271445GSC 0.2...	2.51e4	87.2	NO

Name: 190718M1_83, Date: 18-Jul-2019, Time: 22:35:13, ID: 1901987-01 BWS 0.24274, Description: BWS

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901987-01 BWS 0.24274	6.29e3	76.8	NO
2	2	13C5-PFHxA	1901987-01 BWS 0.24274	1.13e4	52.2	NO
3	3	18O2-PFHxS	1901987-01 BWS 0.24274	9.90e2	76.2	NO
4	4	13C8-PFOA	1901987-01 BWS 0.24274	1.81e4	59.2	NO
5	5	13C9-PFNA	1901987-01 BWS 0.24274	1.01e4	62.2	NO
6	6	13C4-PFOS	1901987-01 BWS 0.24274	2.30e3	81.5	NO
7	7	13C6-PFDA	1901987-01 BWS 0.24274	1.39e4	61.8	NO
8	8	13C7-PFUdA	1901987-01 BWS 0.24274	2.00e4	69.7	NO

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Name: 190718M1_84, Date: 18-Jul-2019, Time: 22:45:52, ID: 1901995-02 WEF1907080940JSJ 0.2503, Description: WEF1907080940JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901995-02 WEF1907080940JSJ 0.2503	7.48e3	91.3	NO
2	2	13C5-PFHxA	1901995-02 WEF1907080940JSJ 0.2503	1.42e4	65.6	NO
3	3	18O2-PFHxS	1901995-02 WEF1907080940JSJ 0.2503	1.22e3	93.8	NO
4	4	13C8-PFOA	1901995-02 WEF1907080940JSJ 0.2503	2.11e4	69.2	NO
5	5	13C9-PFNA	1901995-02 WEF1907080940JSJ 0.2503	1.12e4	69.1	NO
6	6	13C4-PFOS	1901995-02 WEF1907080940JSJ 0.2503	2.73e3	96.6	NO
7	7	13C6-PFDA	1901995-02 WEF1907080940JSJ 0.2503	1.61e4	71.6	NO
8	8	13C7-PFUdA	1901995-02 WEF1907080940JSJ 0.2503	2.24e4	77.8	NO

Name: 190718M1_85, Date: 18-Jul-2019, Time: 22:56:26, ID: 1901995-03 WEF1907080948JSJ 0.25251, Description: WEF1907080948JSJ

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901995-03 WEF1907080948JSJ 0.25...	8.30e3	101.3	NO
2	2	13C5-PFHxA	1901995-03 WEF1907080948JSJ 0.25...	1.45e4	67.2	NO
3	3	18O2-PFHxS	1901995-03 WEF1907080948JSJ 0.25...	1.13e3	86.9	NO
4	4	13C8-PFOA	1901995-03 WEF1907080948JSJ 0.25...	2.19e4	71.9	NO
5	5	13C9-PFNA	1901995-03 WEF1907080948JSJ 0.25...	1.22e4	75.1	NO
6	6	13C4-PFOS	1901995-03 WEF1907080948JSJ 0.25...	2.68e3	94.9	NO
7	7	13C6-PFDA	1901995-03 WEF1907080948JSJ 0.25...	1.70e4	75.4	NO
8	8	13C7-PFUdA	1901995-03 WEF1907080948JSJ 0.25...	2.32e4	80.8	NO

Name: 190718M1_86, Date: 18-Jul-2019, Time: 23:07:04, ID: B9G0183-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0183-BS1 OPR 0.25	1.01e4	122.8	NO
2	2	13C5-PFHxA	B9G0183-BS1 OPR 0.25	1.80e4	83.2	NO
3	3	18O2-PFHxS	B9G0183-BS1 OPR 0.25	1.32e3	101.5	NO
4	4	13C8-PFOA	B9G0183-BS1 OPR 0.25	2.62e4	85.7	NO
5	5	13C9-PFNA	B9G0183-BS1 OPR 0.25	1.47e4	90.9	NO
6	6	13C4-PFOS	B9G0183-BS1 OPR 0.25	2.98e3	105.6	NO
7	7	13C6-PFDA	B9G0183-BS1 OPR 0.25	1.98e4	87.7	NO
8	8	13C7-PFUdA	B9G0183-BS1 OPR 0.25	2.70e4	94.0	NO

Name: 190718M1_87, Date: 18-Jul-2019, Time: 23:17:36, ID: B9G0183-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0183-BLK1 Method Blank 0.25	9.02e3	110.1	NO
2	2	13C5-PFHxA	B9G0183-BLK1 Method Blank 0.25	1.71e4	79.1	NO
3	3	18O2-PFHxS	B9G0183-BLK1 Method Blank 0.25	1.32e3	101.8	NO
4	4	13C8-PFOA	B9G0183-BLK1 Method Blank 0.25	2.47e4	81.1	NO
5	5	13C9-PFNA	B9G0183-BLK1 Method Blank 0.25	1.41e4	86.8	NO
6	6	13C4-PFOS	B9G0183-BLK1 Method Blank 0.25	2.76e3	97.6	NO
7	7	13C6-PFDA	B9G0183-BLK1 Method Blank 0.25	1.83e4	81.2	NO
8	8	13C7-PFUdA	B9G0183-BLK1 Method Blank 0.25	2.46e4	85.7	NO

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Name: 190718M1_88, Date: 18-Jul-2019, Time: 23:28:15, ID: 1901661-01RE1 WMP1906180936BRH 0.25118, Description: WMP1906180936BRH

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901661-01RE1 WMP1906180936BRH...	7.99e3	97.5	NO
2	2	13C5-PFHxA	1901661-01RE1 WMP1906180936BRH...	1.46e4	67.5	NO
3	3	18O2-PFHxS	1901661-01RE1 WMP1906180936BRH...	1.22e3	94.2	NO
4	4	13C8-PFOA	1901661-01RE1 WMP1906180936BRH...	1.77e4	58.0	NO
5	5	13C9-PFNA	1901661-01RE1 WMP1906180936BRH...	1.06e4	65.3	NO
6	6	13C4-PFOS	1901661-01RE1 WMP1906180936BRH...	2.10e3	74.5	NO
7	7	13C6-PFDA	1901661-01RE1 WMP1906180936BRH...	1.49e4	66.2	NO
8	8	13C7-PFUdA	1901661-01RE1 WMP1906180936BRH...	2.01e4	69.9	NO

Name: 190718M1_89, Date: 18-Jul-2019, Time: 23:38:53, ID: 1901661-02RE1 WEF1906180942BRH 0.24993, Description: WEF1906180942BRH

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901661-02RE1 WEF1906180942BRH...	6.24e3	76.2	NO
2	2	13C5-PFHxA	1901661-02RE1 WEF1906180942BRH...	1.11e4	51.5	NO
3	3	18O2-PFHxS	1901661-02RE1 WEF1906180942BRH...	9.81e2	75.5	NO
4	4	13C8-PFOA	1901661-02RE1 WEF1906180942BRH...	1.67e4	54.9	NO
5	5	13C9-PFNA	1901661-02RE1 WEF1906180942BRH...	8.77e3	54.1	NO
6	6	13C4-PFOS	1901661-02RE1 WEF1906180942BRH...	2.18e3	77.2	NO
7	7	13C6-PFDA	1901661-02RE1 WEF1906180942BRH...	1.31e4	58.0	NO
8	8	13C7-PFUdA	1901661-02RE1 WEF1906180942BRH...	1.78e4	61.8	NO

Name: 190718M1_90, Date: 18-Jul-2019, Time: 23:49:26, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_91, Date: 19-Jul-2019, Time: 00:00:04, ID: ST190718M1-7 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-7 PFC CS3 19G1106	8.52e3	104.0	NO
2	2	13C5-PFHxA	ST190718M1-7 PFC CS3 19G1106	2.16e4	100.1	NO
3	3	18O2-PFHxS	ST190718M1-7 PFC CS3 19G1106	1.38e3	106.5	NO
4	4	13C8-PFOA	ST190718M1-7 PFC CS3 19G1106	2.92e4	95.5	NO
5	5	13C9-PFNA	ST190718M1-7 PFC CS3 19G1106	1.64e4	101.4	NO
6	6	13C4-PFOS	ST190718M1-7 PFC CS3 19G1106	2.91e3	103.2	NO
7	7	13C6-PFDA	ST190718M1-7 PFC CS3 19G1106	2.19e4	97.0	NO
8	8	13C7-PFUdA	ST190718M1-7 PFC CS3 19G1106	2.78e4	96.6	NO

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Name: 190718M1_92, Date: 19-Jul-2019, Time: 00:10:38, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_93, Date: 19-Jul-2019, Time: 00:21:16, ID: 1901661-03RE1 WEF1906180957BRH 0.25772, Description: WEF1906180957BRH

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1901661-03RE1 WEF1906180957BRH...	7.94e3	96.9	NO
2	2	13C5-PFHxA	1901661-03RE1 WEF1906180957BRH...	1.40e4	64.7	NO
3	3	18O2-PFHxS	1901661-03RE1 WEF1906180957BRH...	1.23e3	94.9	NO
4	4	13C8-PFOA	1901661-03RE1 WEF1906180957BRH...	1.95e4	63.9	NO
5	5	13C9-PFNA	1901661-03RE1 WEF1906180957BRH...	1.01e4	62.3	NO
6	6	13C4-PFOS	1901661-03RE1 WEF1906180957BRH...	2.82e3	100.0	NO
7	7	13C6-PFDA	1901661-03RE1 WEF1906180957BRH...	1.39e4	61.8	NO
8	8	13C7-PFUdA	1901661-03RE1 WEF1906180957BRH...	1.91e4	66.3	NO

Name: 190718M1_94, Date: 19-Jul-2019, Time: 00:31:49, ID: 1902105-01 6C Discharge 0.24191, Description: 6C Discharge

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902105-01 6C Discharge 0.24191	8.52e3	103.9	NO
2	2	13C5-PFHxA	1902105-01 6C Discharge 0.24191	1.67e4	77.2	NO
3	3	18O2-PFHxS	1902105-01 6C Discharge 0.24191	1.27e3	97.9	NO
4	4	13C8-PFOA	1902105-01 6C Discharge 0.24191	2.82e4	92.4	NO
5	5	13C9-PFNA	1902105-01 6C Discharge 0.24191	1.50e4	92.9	NO
6	6	13C4-PFOS	1902105-01 6C Discharge 0.24191	2.74e3	97.2	NO
7	7	13C6-PFDA	1902105-01 6C Discharge 0.24191	2.05e4	90.8	NO
8	8	13C7-PFUdA	1902105-01 6C Discharge 0.24191	2.69e4	93.7	NO

Name: 190718M1_95, Date: 19-Jul-2019, Time: 00:42:27, ID: 1902105-02 5A Raw Leachate 0.24309, Description: 5A Raw Leachate

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902105-02 5A Raw Leachate 0.24309	4.70e3	57.4	NO
2	2	13C5-PFHxA	1902105-02 5A Raw Leachate 0.24309	8.39e3	38.8	YES
3	3	18O2-PFHxS	1902105-02 5A Raw Leachate 0.24309	1.19e3	91.7	NO
4	4	13C8-PFOA	1902105-02 5A Raw Leachate 0.24309	2.05e4	67.3	NO
5	5	13C9-PFNA	1902105-02 5A Raw Leachate 0.24309	1.40e4	86.1	NO
6	6	13C4-PFOS	1902105-02 5A Raw Leachate 0.24309	2.92e3	103.3	NO
7	7	13C6-PFDA	1902105-02 5A Raw Leachate 0.24309	1.87e4	83.1	NO
8	8	13C7-PFUdA	1902105-02 5A Raw Leachate 0.24309	2.67e4	93.0	NO

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Name: 190718M1_96, Date: 19-Jul-2019, Time: 00:53:00, ID: 1902105-03 Field Blank 0.23889, Description: Field Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902105-03 Field Blank 0.23889	1.05e4	128.5	NO
2	2	13C5-PFHxA	1902105-03 Field Blank 0.23889	1.80e4	83.2	NO
3	3	18O2-PFHxS	1902105-03 Field Blank 0.23889	1.14e3	87.8	NO
4	4	13C8-PFOA	1902105-03 Field Blank 0.23889	2.53e4	82.8	NO
5	5	13C9-PFNA	1902105-03 Field Blank 0.23889	1.33e4	82.2	NO
6	6	13C4-PFOS	1902105-03 Field Blank 0.23889	2.52e3	89.3	NO
7	7	13C6-PFDA	1902105-03 Field Blank 0.23889	1.83e4	81.1	NO
8	8	13C7-PFUdA	1902105-03 Field Blank 0.23889	2.50e4	86.9	NO

Name: 190718M1_97, Date: 19-Jul-2019, Time: 01:03:38, ID: 1902106-01 WT1907110855SK 0.23917, Description: WT1907110855SK

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902106-01 WT1907110855SK 0.23917	9.63e3	117.5	NO
2	2	13C5-PFHxA	1902106-01 WT1907110855SK 0.23917	1.73e4	80.1	NO
3	3	18O2-PFHxS	1902106-01 WT1907110855SK 0.23917	1.24e3	95.7	NO
4	4	13C8-PFOA	1902106-01 WT1907110855SK 0.23917	2.42e4	79.3	NO
5	5	13C9-PFNA	1902106-01 WT1907110855SK 0.23917	1.34e4	82.4	NO
6	6	13C4-PFOS	1902106-01 WT1907110855SK 0.23917	2.61e3	92.5	NO
7	7	13C6-PFDA	1902106-01 WT1907110855SK 0.23917	1.89e4	83.8	NO
8	8	13C7-PFUdA	1902106-01 WT1907110855SK 0.23917	2.29e4	79.7	NO

Name: 190718M1_98, Date: 19-Jul-2019, Time: 01:14:12, ID: 1902106-02 WR1907110930SK 0.24874, Description: WR1907110930SK

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902106-02 WR1907110930SK 0.24874	9.93e3	121.1	NO
2	2	13C5-PFHxA	1902106-02 WR1907110930SK 0.24874	1.65e4	76.5	NO
3	3	18O2-PFHxS	1902106-02 WR1907110930SK 0.24874	1.18e3	90.8	NO
4	4	13C8-PFOA	1902106-02 WR1907110930SK 0.24874	2.46e4	80.5	NO
5	5	13C9-PFNA	1902106-02 WR1907110930SK 0.24874	1.33e4	81.8	NO
6	6	13C4-PFOS	1902106-02 WR1907110930SK 0.24874	2.56e3	90.8	NO
7	7	13C6-PFDA	1902106-02 WR1907110930SK 0.24874	1.75e4	77.7	NO
8	8	13C7-PFUdA	1902106-02 WR1907110930SK 0.24874	2.34e4	81.3	NO

Name: 190718M1_99, Date: 19-Jul-2019, Time: 01:24:50, ID: B9G0184-BS1 OPR 0.25, Description: OPR

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0184-BS1 OPR 0.25	6.34e3	77.3	NO
2	2	13C5-PFHxA	B9G0184-BS1 OPR 0.25	1.15e4	53.1	NO
3	3	18O2-PFHxS	B9G0184-BS1 OPR 0.25	8.13e2	62.6	NO
4	4	13C8-PFOA	B9G0184-BS1 OPR 0.25	1.68e4	54.9	NO
5	5	13C9-PFNA	B9G0184-BS1 OPR 0.25	9.28e3	57.3	NO
6	6	13C4-PFOS	B9G0184-BS1 OPR 0.25	1.89e3	67.1	NO
7	7	13C6-PFDA	B9G0184-BS1 OPR 0.25	1.34e4	59.2	NO
8	8	13C7-PFUdA	B9G0184-BS1 OPR 0.25	1.74e4	60.7	NO

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Name: 190718M1_100, Date: 19-Jul-2019, Time: 01:35:23, ID: B9G0184-BLK1 Method Blank 0.25, Description: Method Blank

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	B9G0184-BLK1 Method Blank 0.25	6.58e3	80.3	NO
2	2	13C5-PFHxA	B9G0184-BLK1 Method Blank 0.25	1.18e4	54.4	NO
3	3	18O2-PFHxS	B9G0184-BLK1 Method Blank 0.25	8.19e2	63.1	NO
4	4	13C8-PFOA	B9G0184-BLK1 Method Blank 0.25	1.78e4	58.2	NO
5	5	13C9-PFNA	B9G0184-BLK1 Method Blank 0.25	9.97e3	61.5	NO
6	6	13C4-PFOS	B9G0184-BLK1 Method Blank 0.25	2.04e3	72.2	NO
7	7	13C6-PFDA	B9G0184-BLK1 Method Blank 0.25	1.34e4	59.3	NO
8	8	13C7-PFUdA	B9G0184-BLK1 Method Blank 0.25	1.81e4	62.9	NO

Name: 190718M1_101, Date: 19-Jul-2019, Time: 01:45:54, ID: 1902129-01 WIN1907151315GGA 0.24332, Description: WIN1907151315GGA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902129-01 WIN1907151315GGA 0.24...	7.59e3	92.6	NO
2	2	13C5-PFHxA	1902129-01 WIN1907151315GGA 0.24...	1.24e4	57.4	NO
3	3	18O2-PFHxS	1902129-01 WIN1907151315GGA 0.24...	8.74e2	67.3	NO
4	4	13C8-PFOA	1902129-01 WIN1907151315GGA 0.24...	1.81e4	59.3	NO
5	5	13C9-PFNA	1902129-01 WIN1907151315GGA 0.24...	9.89e3	61.0	NO
6	6	13C4-PFOS	1902129-01 WIN1907151315GGA 0.24...	1.76e3	62.2	NO
7	7	13C6-PFDA	1902129-01 WIN1907151315GGA 0.24...	1.29e4	57.0	NO
8	8	13C7-PFUdA	1902129-01 WIN1907151315GGA 0.24...	1.76e4	61.1	NO

Name: 190718M1_102, Date: 19-Jul-2019, Time: 01:56:32, ID: 1902129-02 WMP1907151305GGA 0.25773, Description: WMP1907151305GGA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902129-02 WMP1907151305GGA 0.2...	6.03e3	73.6	NO
2	2	13C5-PFHxA	1902129-02 WMP1907151305GGA 0.2...	1.10e4	51.1	NO
3	3	18O2-PFHxS	1902129-02 WMP1907151305GGA 0.2...	9.29e2	71.5	NO
4	4	13C8-PFOA	1902129-02 WMP1907151305GGA 0.2...	1.67e4	54.6	NO
5	5	13C9-PFNA	1902129-02 WMP1907151305GGA 0.2...	8.79e3	54.2	NO
6	6	13C4-PFOS	1902129-02 WMP1907151305GGA 0.2...	1.94e3	68.8	NO
7	7	13C6-PFDA	1902129-02 WMP1907151305GGA 0.2...	1.31e4	57.9	NO
8	8	13C7-PFUdA	1902129-02 WMP1907151305GGA 0.2...	1.71e4	59.5	NO

Name: 190718M1_103, Date: 19-Jul-2019, Time: 02:07:06, ID: 1902129-03 WEF1907081510GGA 0.25452, Description: WEF1907081510GGA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	1902129-03 WEF1907081510GGA 0.25...	6.75e3	82.4	NO
2	2	13C5-PFHxA	1902129-03 WEF1907081510GGA 0.25...	1.24e4	57.4	NO
3	3	18O2-PFHxS	1902129-03 WEF1907081510GGA 0.25...	9.20e2	70.9	NO
4	4	13C8-PFOA	1902129-03 WEF1907081510GGA 0.25...	1.76e4	57.6	NO
5	5	13C9-PFNA	1902129-03 WEF1907081510GGA 0.25...	9.55e3	58.9	NO
6	6	13C4-PFOS	1902129-03 WEF1907081510GGA 0.25...	1.97e3	69.7	NO
7	7	13C6-PFDA	1902129-03 WEF1907081510GGA 0.25...	1.31e4	58.3	NO
8	8	13C7-PFUdA	1902129-03 WEF1907081510GGA 0.25...	1.81e4	62.9	NO

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Name: 190718M1_104, Date: 19-Jul-2019, Time: 02:17:44, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_105, Date: 19-Jul-2019, Time: 02:28:22, ID: ST190718M1-8 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	ST190718M1-8 PFC CS3 19G1106	8.43e3	102.8	NO
2	2	13C5-PFHxA	ST190718M1-8 PFC CS3 19G1106	2.18e4	100.9	NO
3	3	18O2-PFHxS	ST190718M1-8 PFC CS3 19G1106	1.39e3	106.8	NO
4	4	13C8-PFOA	ST190718M1-8 PFC CS3 19G1106	2.97e4	97.3	NO
5	5	13C9-PFNA	ST190718M1-8 PFC CS3 19G1106	1.58e4	97.7	NO
6	6	13C4-PFOS	ST190718M1-8 PFC CS3 19G1106	2.88e3	102.0	NO
7	7	13C6-PFDA	ST190718M1-8 PFC CS3 19G1106	2.15e4	95.5	NO
8	8	13C7-PFUdA	ST190718M1-8 PFC CS3 19G1106	2.78e4	96.7	NO

Name: 190718M1_106, Date: 19-Jul-2019, Time: 02:38:55, ID: IPA, Description: IPA

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IPA			NO
2	2	13C5-PFHxA	IPA			NO
3	3	18O2-PFHxS	IPA			NO
4	4	13C8-PFOA	IPA			NO
5	5	13C9-PFNA	IPA			NO
6	6	13C4-PFOS	IPA			NO
7	7	13C6-PFDA	IPA			NO
8	8	13C7-PFUdA	IPA			NO

Name: 190718M1_107, Date: 19-Jul-2019, Time: 02:49:33, ID: IB tester, Description: MeOH

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	IB tester	5.47e3	66.8	NO
2	2	13C5-PFHxA	IB tester	1.42e4	65.9	NO
3	3	18O2-PFHxS	IB tester	1.15e3	88.5	NO
4	4	13C8-PFOA	IB tester	2.54e4	83.3	NO
5	5	13C9-PFNA	IB tester	1.33e4	82.0	NO
6	6	13C4-PFOS	IB tester	2.43e3	85.9	NO
7	7	13C6-PFDA	IB tester	1.87e4	82.8	NO
8	8	13C7-PFUdA	IB tester	2.43e4	84.4	NO

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Name: 190718M1_108, Date: 19-Jul-2019, Time: 03:00:09, ID: QC NS SUP, Description: QC NS SUP

	#	Name	ID	Area	%Rec	Area Out
1	1	13C4-PFBA	QC NS SUP	6.53e3	79.6	NO
2	2	13C5-PFHxA	QC NS SUP	1.82e4	84.1	NO
3	3	18O2-PFHxS	QC NS SUP	1.10e3	84.6	NO
4	4	13C8-PFOA	QC NS SUP	2.51e4	82.1	NO
5	5	13C9-PFNA	QC NS SUP	1.35e4	83.5	NO
6	6	13C4-PFOS	QC NS SUP	2.62e3	92.8	NO
7	7	13C6-PFDA	QC NS SUP	1.79e4	79.6	NO
8	8	13C7-PFUdA	QC NS SUP	2.38e4	82.7	NO

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Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		4963.912	1.00					NO		
2	2	PFPrS	248.9 > 79.9		1224.781	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		8460.232	1.00					NO		
4	4	PFPeA	263.1 > 218.9		8460.232	1.00					NO		
5	5	PFBS	299.0 > 79.7		1224.781	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		2469.813	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	4963.912	7238.881	1.00	1.18	8.572	12.8	102.1	NO		
8	49	13C3-PFBS	302.0 > 98.8	1224.781	1227.222	1.00	2.47	12.475	12.1	96.5	NO		
9	48	13C3-PFPeA	266.0 > 221.8	8460.232	18968.291	1.00	2.18	5.575	12.3	98.4	NO		
10	48	13C3-PFPeA	266.0 > 221.8	8460.232	18968.291	1.00	2.18	5.575	12.3	98.4	NO		
11	49	13C3-PFBS	302.0 > 98.8	1224.781	1227.222	1.00	2.47	12.475	12.1	96.5	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2469.813	1227.222	1.00	2.90	25.157	13.5	108.3	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0		6092.004	1.00					NO		
15	8	PFPeS	349.1>80.1		1224.781	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1518.827	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		6434.263	1.00					NO		
18	11	PFHpA	363.0 > 318.9		6434.263	1.00					NO		
19	12	ADONA	376.8 > 250.9		6434.263	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	6092.004	18968.291	1.00	2.99	4.015	5.1	101.5	NO		
21	49	13C3-PFBS	302.0 > 98.8	1224.781	1227.222	1.00	2.47	12.475	12.1	96.5	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1518.827	18968.291	1.00	3.20	1.001	4.4	88.3	NO		
23	53	13C4-PFHpA	367.2 > 321.8	6434.263	18968.291	1.00	3.61	4.240	11.6	92.9	NO		
24	53	13C4-PFHpA	367.2 > 321.8	6434.263	18968.291	1.00	3.61	4.240	11.6	92.9	NO		
25	53	13C4-PFHpA	367.2 > 321.8	6434.263	18968.291	1.00	3.61	4.240	11.6	92.9	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	1.407	2635.344	1.00	3.75	0.007	0.1		NO	2.770	NO
28	15	6:2 FTS	427.0 > 406.9		2057.611	1.00					NO		
29	16	L-PFOA	412.8 > 368.9		14423.480	1.00					NO		
30	18	PFecHS	460.8 > 381.0		14423.480	1.00					NO		
31	19	PFHpS	449.0 > 80.0		2523.813	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		14404.660	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	2635.344	1227.222	1.00	3.77	26.843	12.1	97.2	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	2057.611	2780.579	1.00	4.08	9.250	13.6	108.4	NO		
35	58	13C2-PFOA	414.9 > 369.7	14423.480	25958.898	1.00	4.14	6.945	13.6	109.1	NO		
36	58	13C2-PFOA	414.9 > 369.7	14423.480	25958.898	1.00	4.14	6.945	13.6	109.1	NO		

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Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2523.813	2780.579	1.00	4.67	11.346	11.2	89.4	NO		
38	56	13C5-PFNA	468.2 > 422.9	14404.660	14227.189	1.00	4.59	12.656	12.7	101.5	NO		
39	-1												
40	21	PFNA	463.0 > 418.8		14404.660	1.00					NO		
41	22	PFOSA	497.9 > 77.9		3710.520	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		2523.813	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		2523.813	1.00					NO		
44	26	PFDA	513 > 468.8		12855.509	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		2154.001	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	14404.660	14227.189	1.00	4.59	12.656	12.7	101.5	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3710.520	25626.057	1.00	4.65	1.810	13.1	104.4	NO		
48	59	13C8-PFOS	507.0 > 79.9	2523.813	2780.579	1.00	4.67	11.346	11.2	89.4	NO		
49	59	13C8-PFOS	507.0 > 79.9	2523.813	2780.579	1.00	4.67	11.346	11.2	89.4	NO		
50	60	13C2-PFDA	515.1 > 469.9	12855.509	18773.705	1.00	4.97	8.560	12.8	102.4	NO		
51	61	13C2-8:2 FTS	529 > 79.9	2154.001	2780.579	1.00	4.94	9.683	14.1	113.0	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		2523.813	1.00					NO		
54	29	L-MeFOSAA	570 > 419		3321.820	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		4843.235	1.00					NO		
56	33	PFUdA	563.0 > 518.9	32.237	19913.938	1.00	5.30	0.020			NO	8.920	YES
57	34	PFDS	598.8 > 79.9		2154.001	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		22872.504	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	2523.813	2780.579	1.00	4.67	11.346	11.2	89.4	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3321.820	25626.057	1.00	5.12	1.620	13.1	104.4	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	4843.235	25626.057	1.00	5.28	2.362	13.5	108.4	NO		
62	63	13C2-PFUdA	565 > 519.8	19913.938	25626.057	1.00	5.30	9.714	12.0	95.8	NO		
63	61	13C2-8:2 FTS	529 > 79.9	2154.001	2780.579	1.00	4.94	9.683	14.1	113.0	NO		
64	65	13C2-PFDoA	614.7 > 569.7	22872.504	18773.705	1.00	5.59	15.229	11.6	92.9	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		2154.001	1.00					NO		
67	37	PFDoA	612.9 > 569.0		22872.504	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9		8277.637	1.00					NO		
69	39	PFTrDA	662.9 > 618.9		22872.504	1.00					NO		
70	40	PFDoS	698.8 > 79.9		10800.584	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		10800.584	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	22872.504	18773.705	1.00	5.59	15.229	11.6	92.9	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
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Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	22872.504	18773.705	1.00	5.59	15.229	11.6	92.9	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	8277.637	25626.057	1.00	5.77	4.038	146.0	97.4	NO		
75	65	13C2-PFDoA	614.7 > 569.7	22872.504	18773.705	1.00	5.59	15.229	11.6	92.9	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	10800.584	25626.057	1.00	6.06	5.268	12.1	96.4	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	10800.584	25626.057	1.00	6.06	5.268	12.1	96.4	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		10730.140	1.00					NO		
80	43	PFHxDA	813.1 > 768.6	51.358	6797.498	1.00	6.42	0.038	0.0		NO	58.361	YES
81	44	PFODA	913.1 > 868.8	8.038	6797.498	1.00	6.67	0.006			NO		
82	45	N-MeFOSE	616.1 > 58.9		8776.999	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		9169.738	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	7238.881	7238.881	1.00	1.19	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	10730.140	25626.057	1.00	6.19	5.234	161.2	107.4	NO		
86	69	13C2-PFHxDA	815 > 769.7	6797.498	25626.057	1.00	6.42	3.316	4.6	91.1	NO		
87	69	13C2-PFHxDA	815 > 769.7	6797.498	25626.057	1.00	6.42	3.316	4.6	91.1	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	8776.999	25626.057	1.00	6.36	4.281	144.0	96.0	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	9169.738	25626.057	1.00	6.51	4.473	146.9	97.9	NO		
90	73	13C5-PFHxA	318.0 > 272.9	18968.291	18968.291	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	25958.898	25958.898	1.00	4.14	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1227.222	1227.222	1.00	3.77	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	14227.189	14227.189	1.00	4.59	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2780.579	2780.579	1.00	4.67	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	18773.705	18773.705	1.00	4.97	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	25626.057	25626.057	1.00	5.30	12.500	12.5	100.0	NO		

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Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
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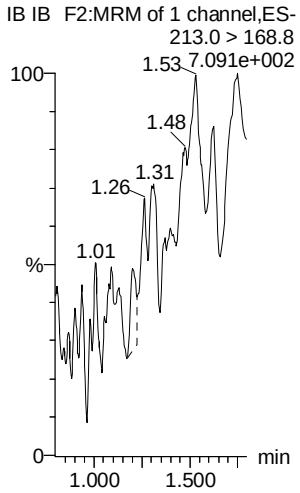
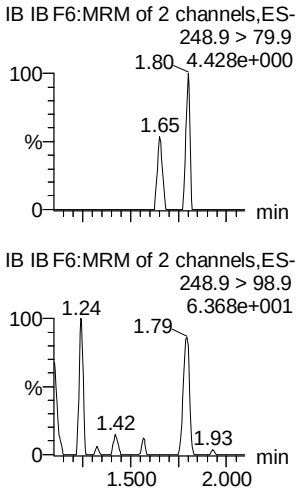
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

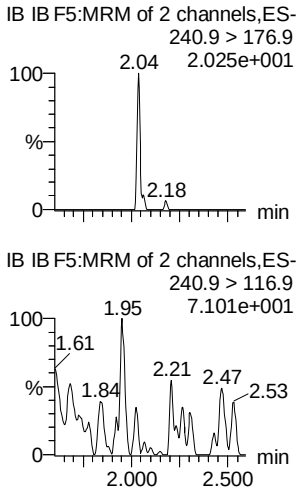
PFBA



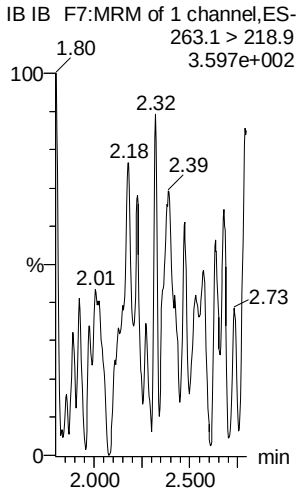
PFPrS



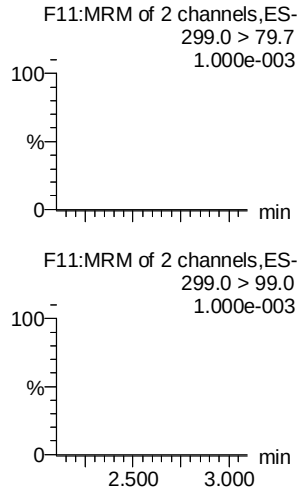
3:3 FTCA



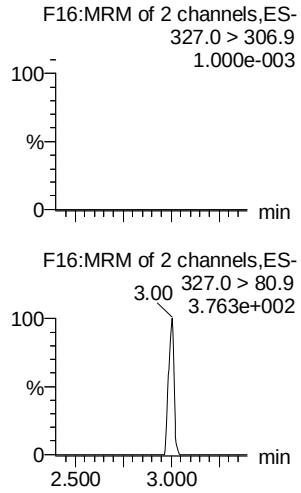
PFPeA



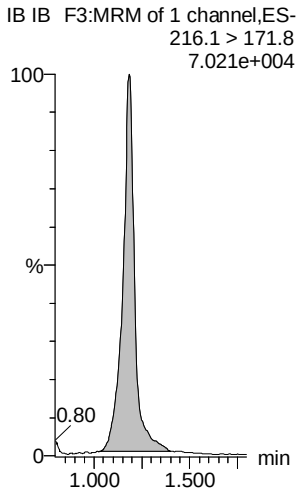
PFBS



4:2 FTS



13C3-PFBA



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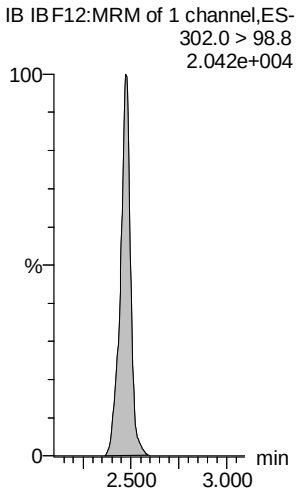
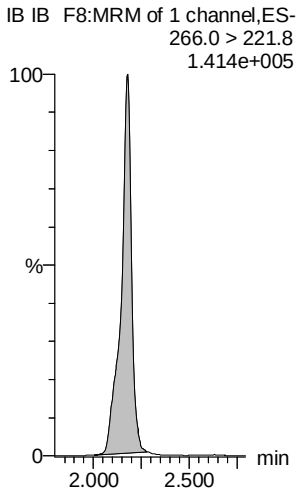


13C3-PFPeA



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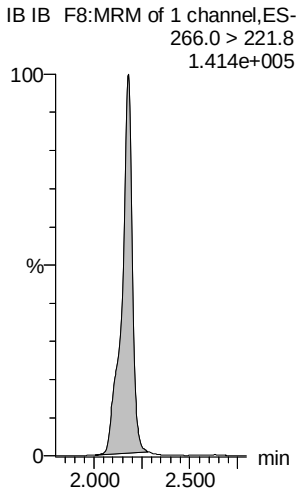

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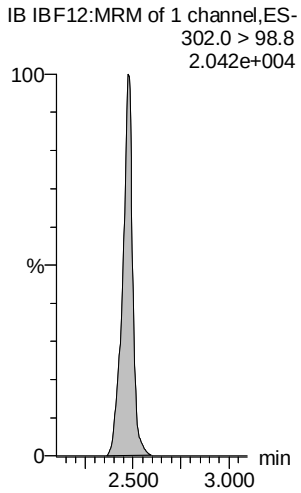
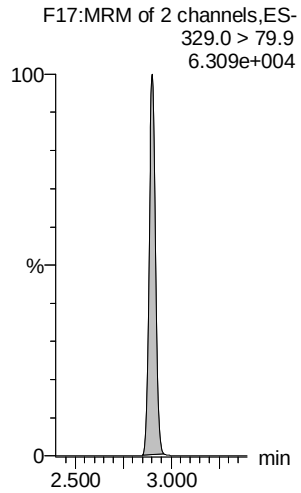


13C2-4:2 FTS



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Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
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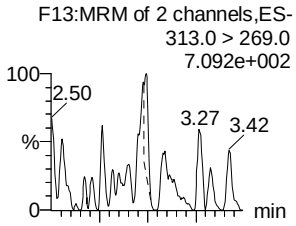
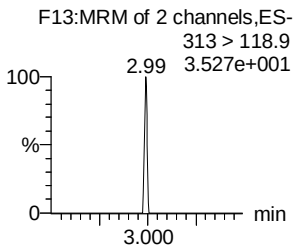
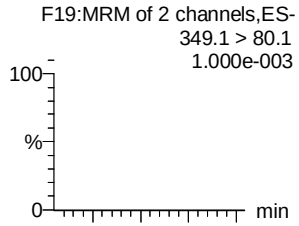
Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

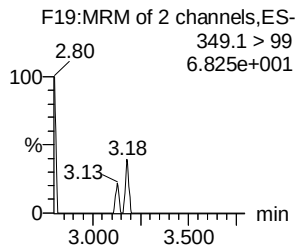
PFHxA



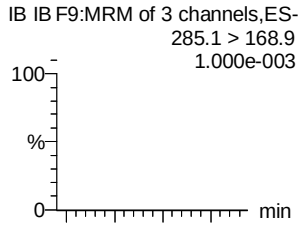


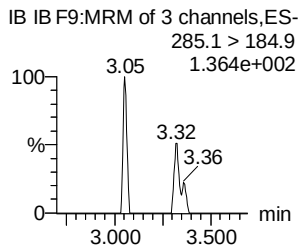
PFPeS



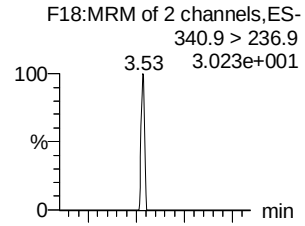


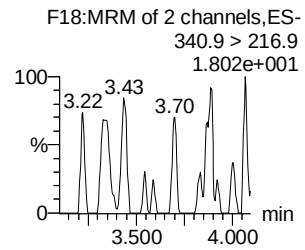
HFPO-DA



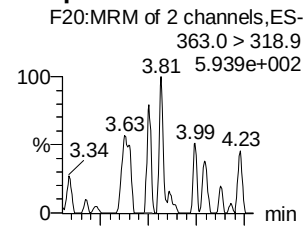


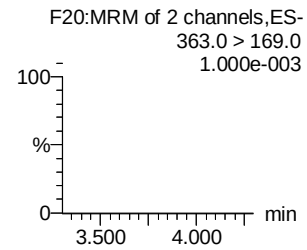
5:3 FTCA



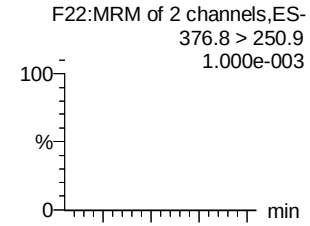


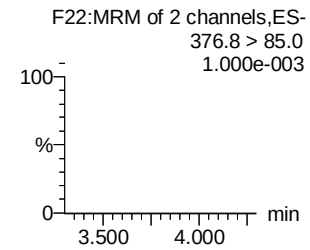
PFHpA



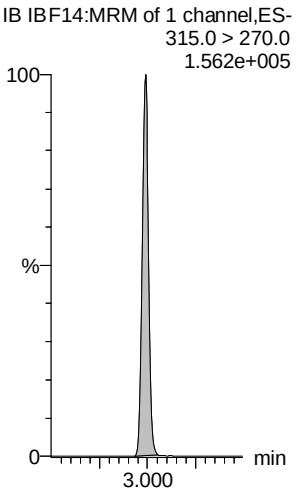


ADONA

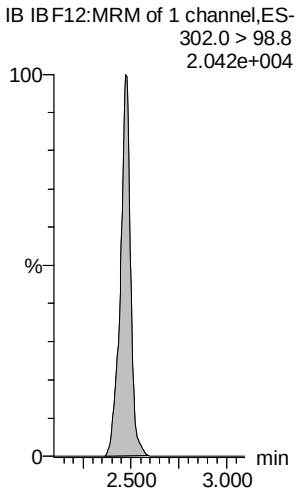




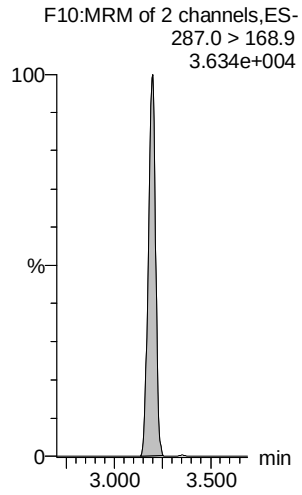
13C2-PFHxA



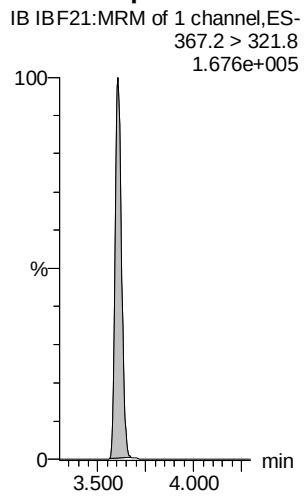
13C3-PFBS



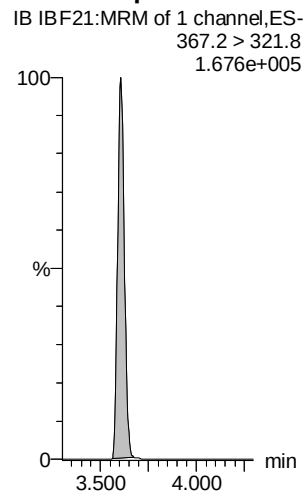
13C3-HFPO-DA



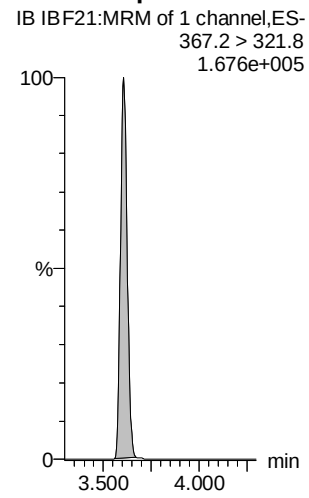
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

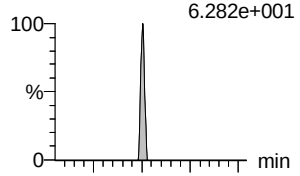


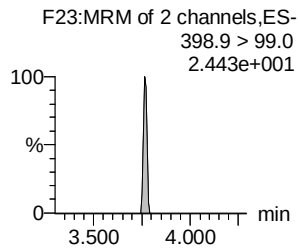
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

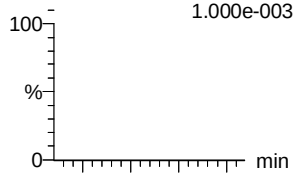
Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

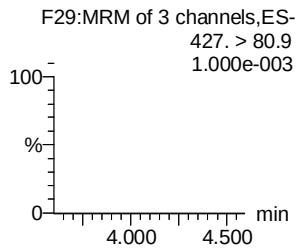
L-PFHxS



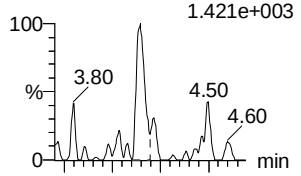


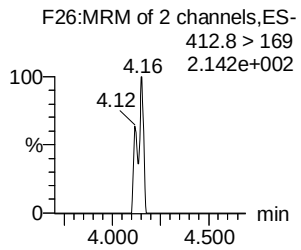
6:2 FTS



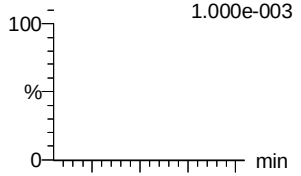


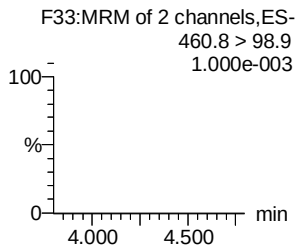
L-PFOA





PFEChS





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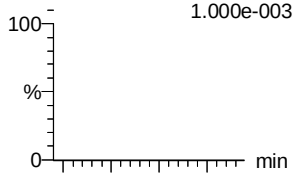
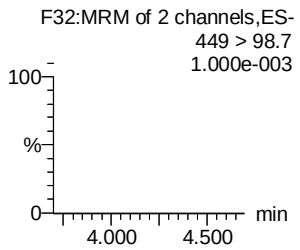
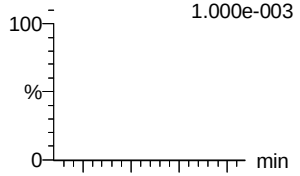
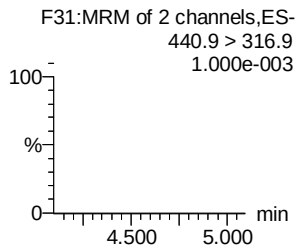


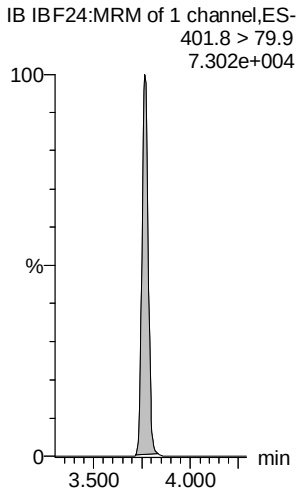


7:3 FTCA

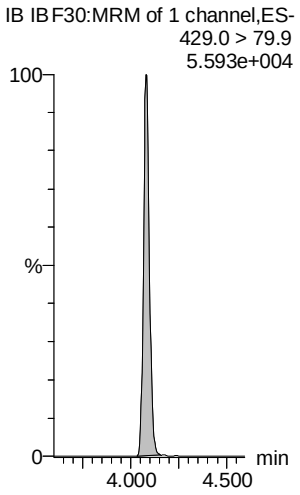




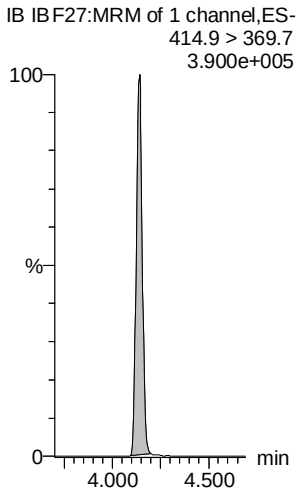
13C3-PFHxS



13C2-6:2 FTS



13C2-PFOA



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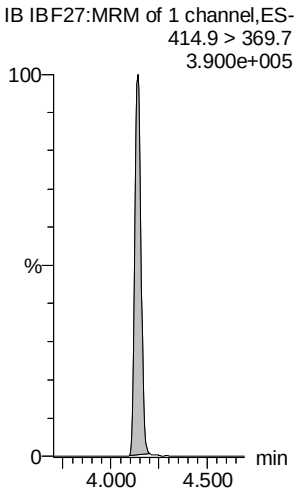

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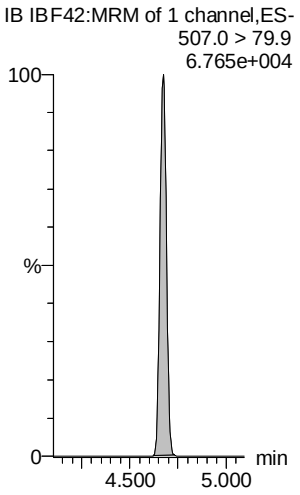
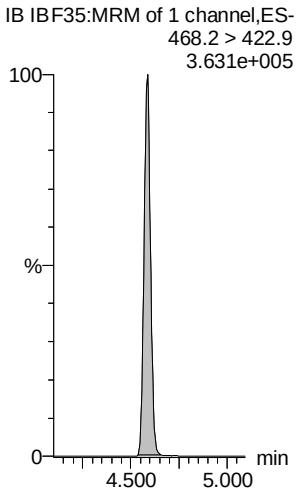


13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

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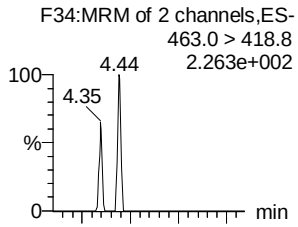

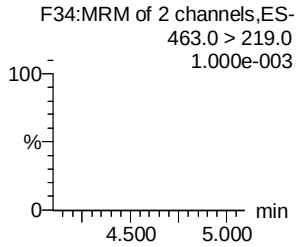

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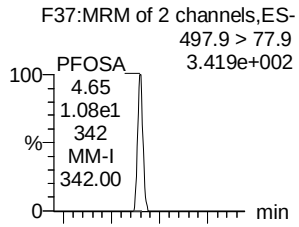
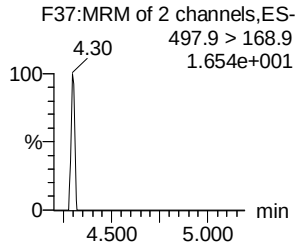
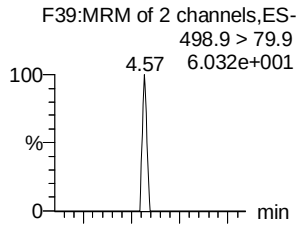
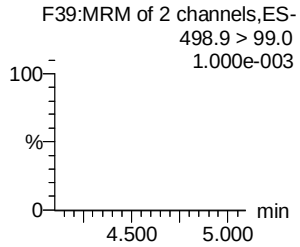


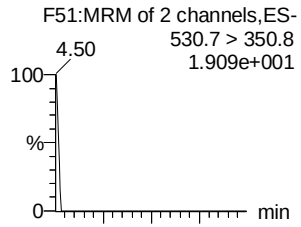


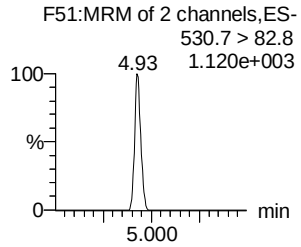
L-PFOS





9Cl-PF30NS





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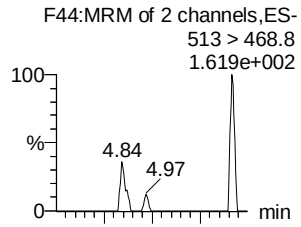
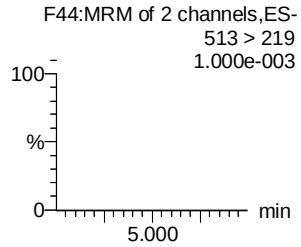
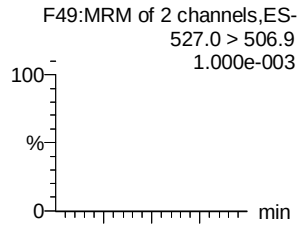
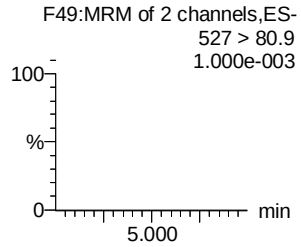




8:2 FTS





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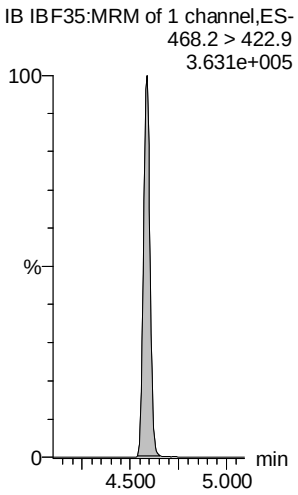

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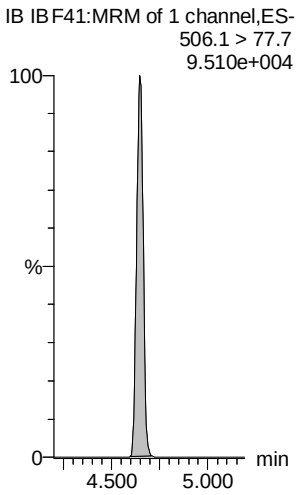

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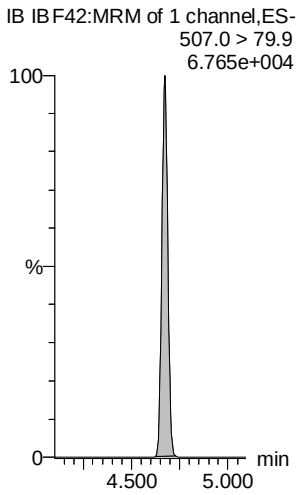

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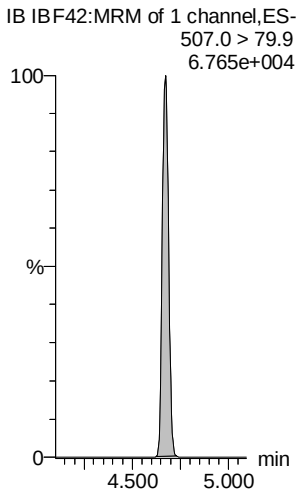

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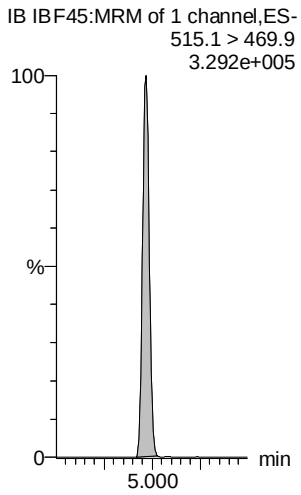
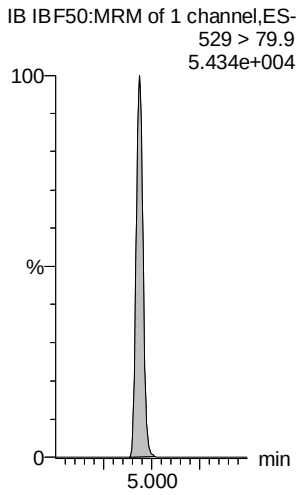


13C2-8:2 FTS



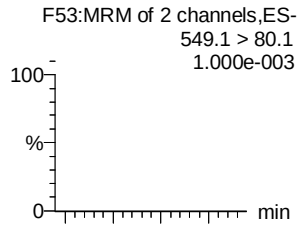
CGH 7/18/2019

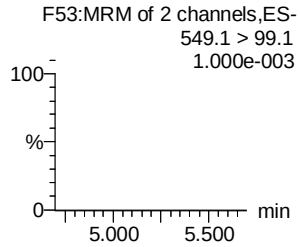
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

PFNS





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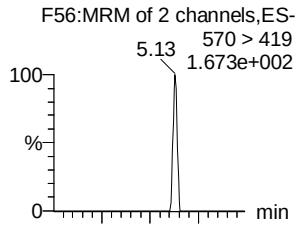

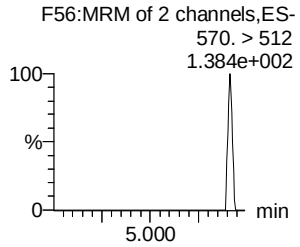

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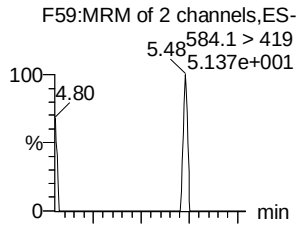

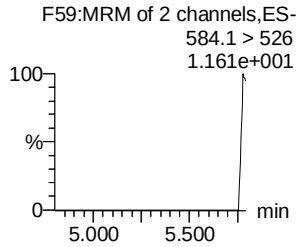

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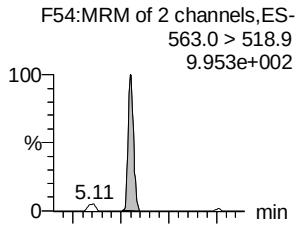
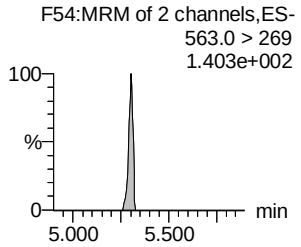
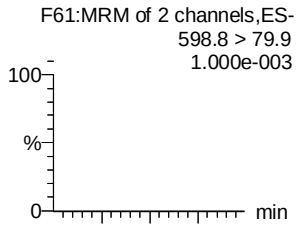
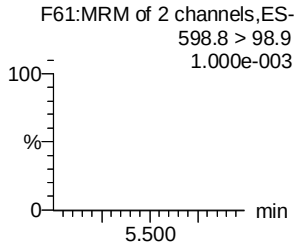




PFDS





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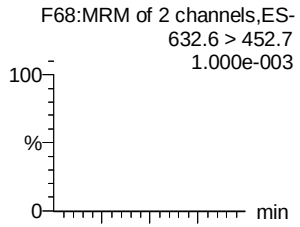
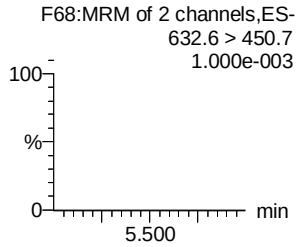
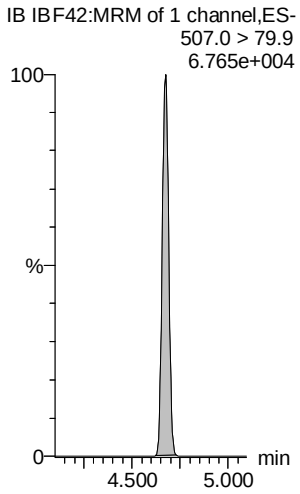
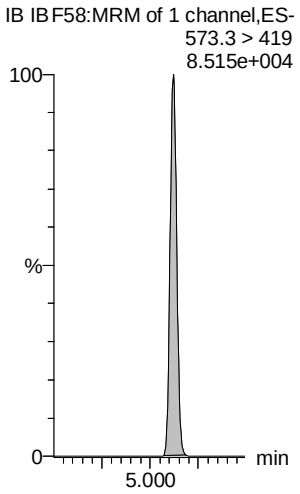




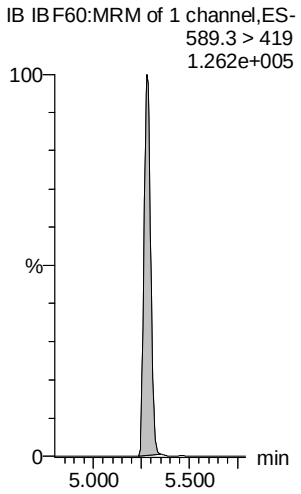
13C8-PFOS



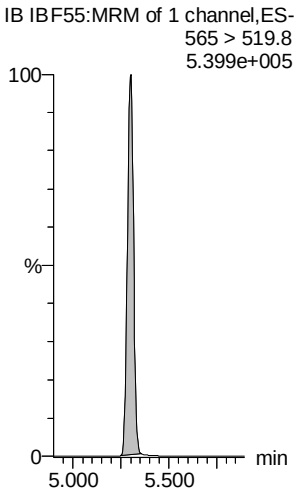
d3-N-MeFOSAA



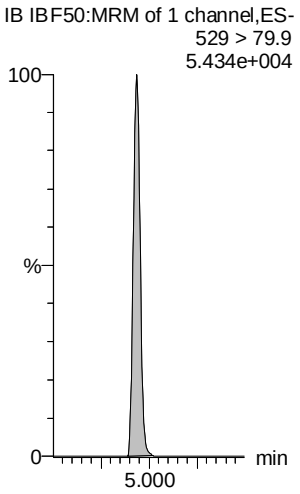
d5-N-EtFOSAA



13C2-PFUdA



13C2-8:2 FTS



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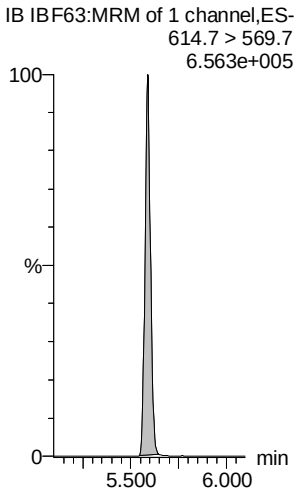

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

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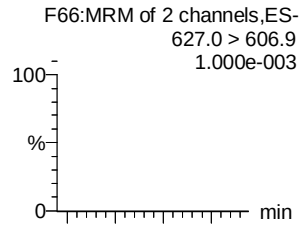
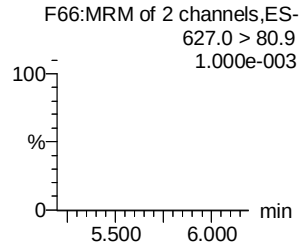
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

10:2 FTS





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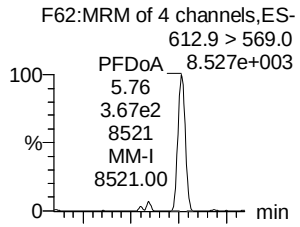
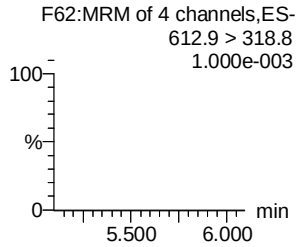
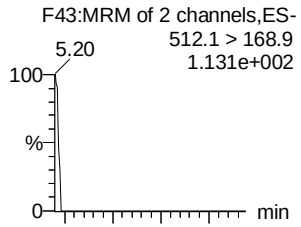
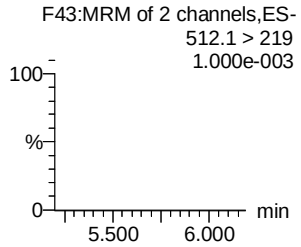


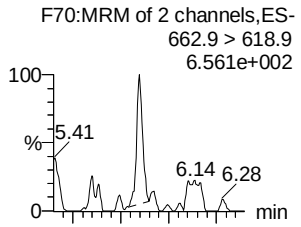


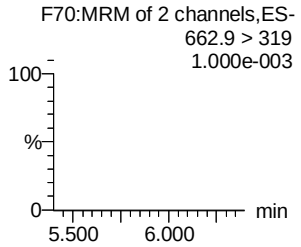
N-MeFOSA



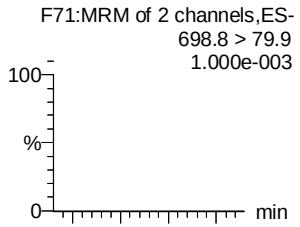


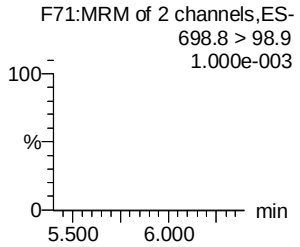
PFTrDA



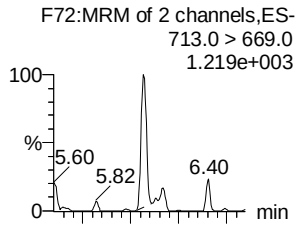


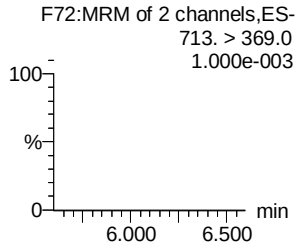
PFDoS



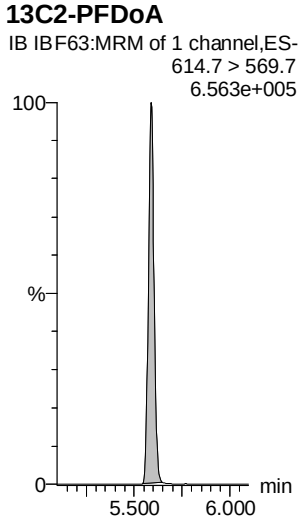


PFTeDA

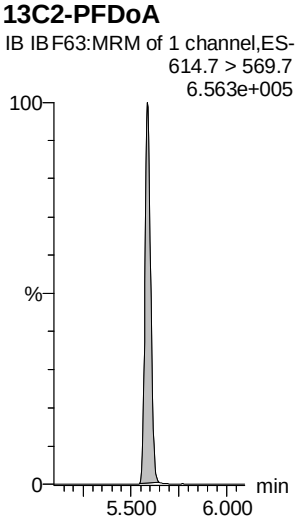




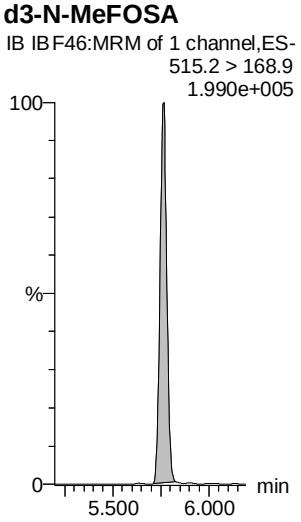
13C2-PFDoA



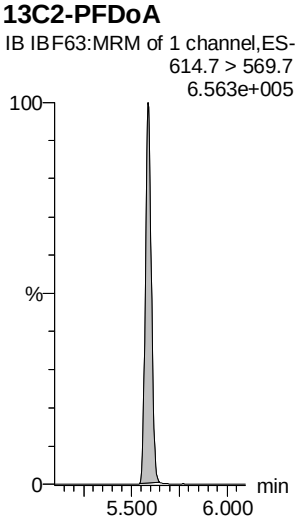
13C2-PFDoA



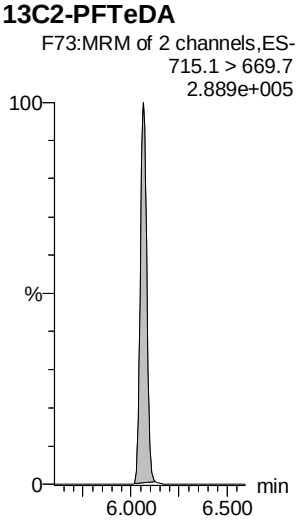
d3-N-MeFOSA



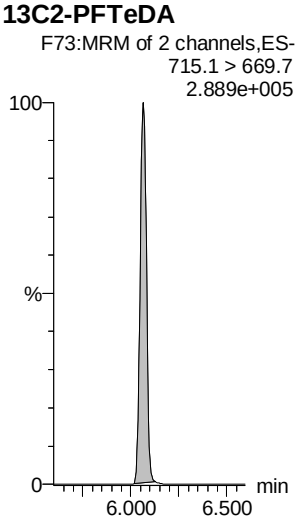
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA



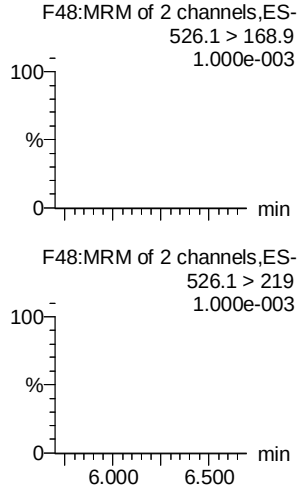
CGH 7/18/2019

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

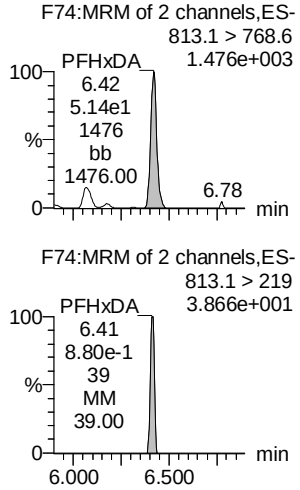
Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

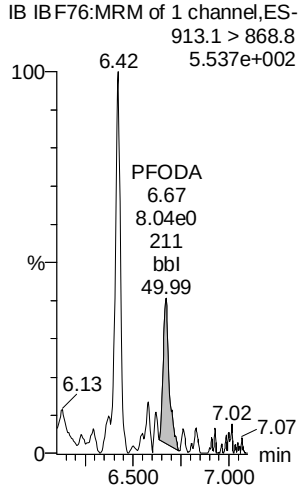
N-EtFOSA



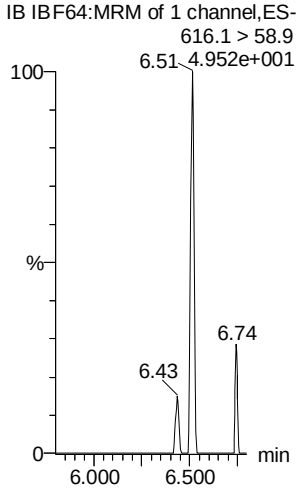
PFHxDA



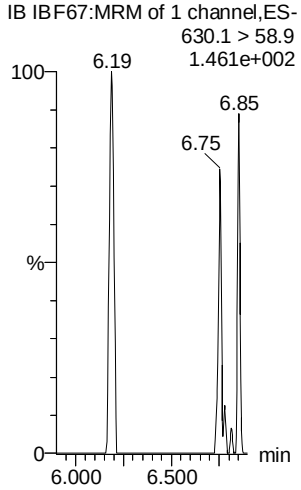
PFODA



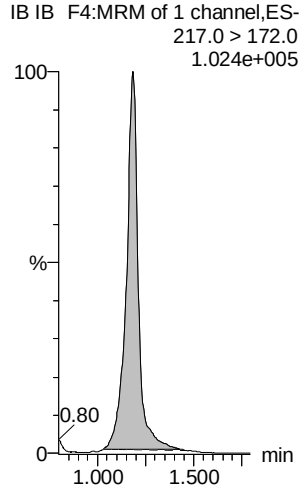
N-MeFOSE



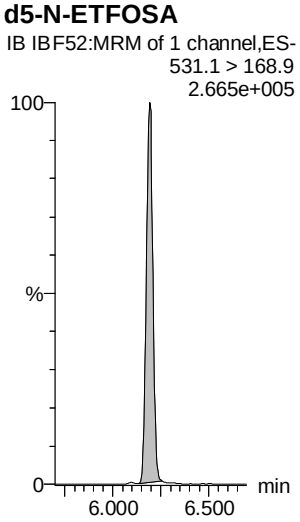
N-EtFOSE



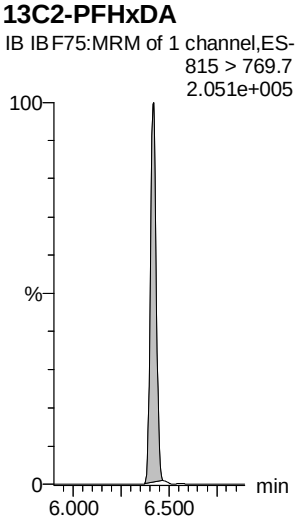
13C4-PFBA



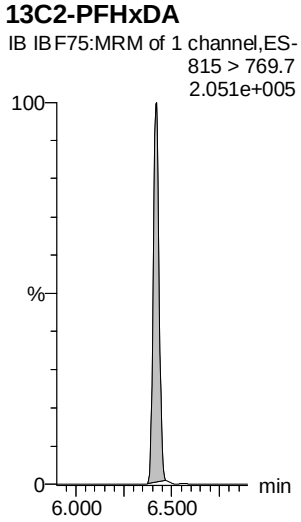
d5-N-ETFOSA



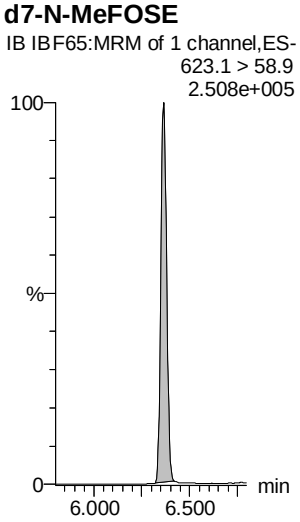
13C2-PFHxDA



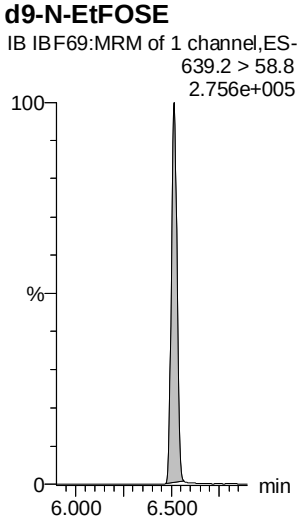
13C2-PFHxDA



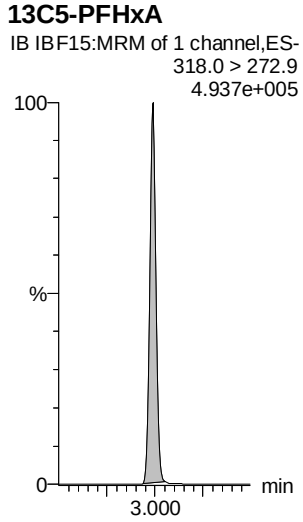
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

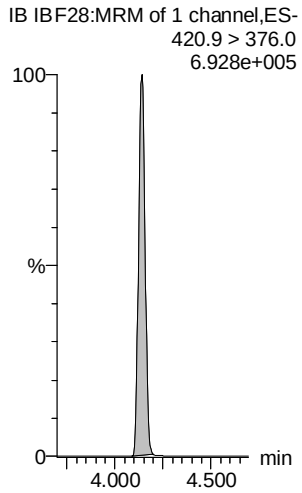


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-IB.qld

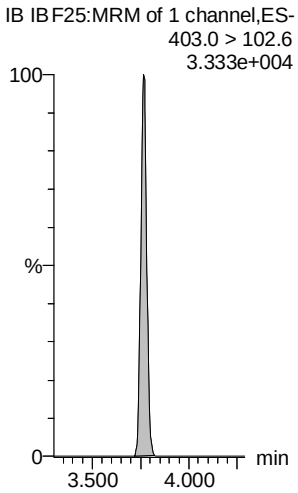
Last Altered: Thursday, July 18, 2019 10:25:29 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:25:44 Pacific Daylight Time

Name: 190718M1_5, Date: 18-Jul-2019, Time: 08:38:42, ID: IB, Description: IB

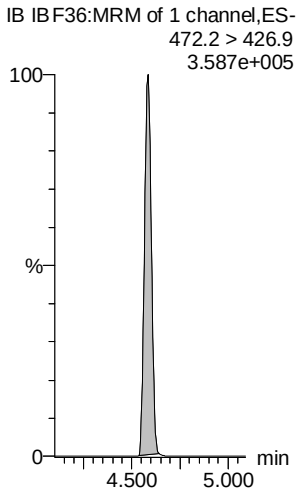
13C8-PFOA



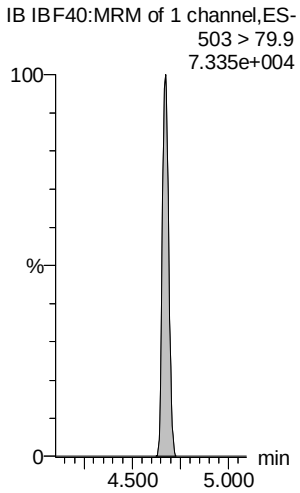
18O2-PFHxS



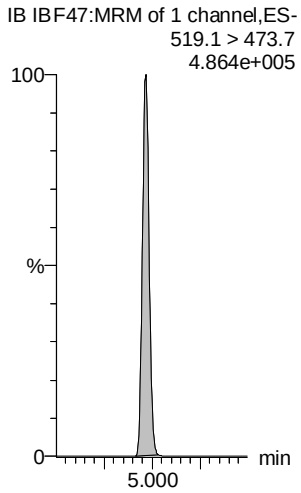
13C9-PFNA



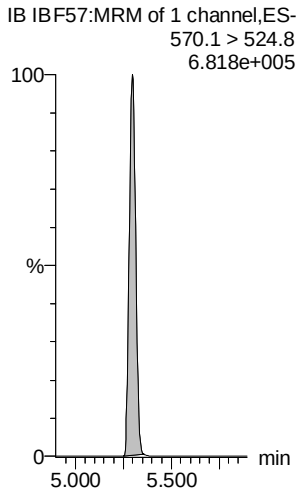
13C4-PFOS



13C6-PFDA



13C7-PFUdA



LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	ST190718M1 -1	L M H	☑	☑	☑	☑	☑	☑	☐
Calibration ID:	-2	L M H	☑	☑	☑	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐ N/A Calt 7/18/19	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 07/15/19

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: 7/10/19
Initials/Date

Comments:

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:15:14 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.19	1.19			
2	PFPrS	1.56	1.56	2.406	2.406	NO
3	3:3 FTCA	2.04	2.03	1.692	1.692	NO
4	PFPeA	2.18	2.19			
5	PFBS	2.48	2.48	3.162	3.162	NO
6	4:2 FTS	2.91	2.91	1.954	1.954	NO
7	PFHxA	2.99	2.99	15.536	15.536	NO
8	PFPeS	3.20	3.20	1.393	1.393	NO
9	HFPO-DA	3.20	3.20	2.323	2.323	NO
10	5:3 FTCA	3.54	3.54	1.521	1.521	NO
11	PFHpA	3.61	3.61	4.411	4.411	NO
12	ADONA	3.72	3.72	3.369	3.369	NO
13	L-PFHxS	3.77	3.77	1.998	1.998	NO
14	6:2 FTS	4.09	4.09	2.080	2.080	NO
15	L-PFOA	4.14	4.14	3.967	3.967	NO
16	PFecHS	4.16	4.16	1.025	1.025	NO
17	PFHpS	4.26	4.26	1.808	1.808	NO
18	7:3 FTCA	4.58	4.57	2.020	2.020	NO
19	PFNA	4.59	4.59	2.858	2.858	NO
20	PFOSA	4.65	4.65	32.079	32.079	NO
21	L-PFOS	4.68	4.68	2.010	2.010	NO
22	9Cl-PF30NS	4.90	4.90	18.302	18.302	NO
23	PFDA	4.97	4.97	4.330	4.330	NO
24	8:2 FTS	4.94	4.94	1.388	1.388	NO
25	PFNS	5.04	5.04	1.523	1.523	NO
26	L-MeFOSAA	5.13	5.13	2.252	2.252	NO

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:15:24 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.28	5.29	1.252	1.252	NO
2	PFUdA	5.30	5.30	5.501	5.501	NO
3	PFDS	5.35	5.35	1.895	1.895	NO
4	11Cl-PF30UdS	5.52	5.52	4.046	4.046	NO
5	10:2 FTS	5.58	5.58	1.515	1.515	NO
6	PFDoA	5.59	5.59	7.881	7.881	NO
7	N-MeFOSA	5.74	5.74	2.096	2.096	NO
8	PFTrDA	5.84	5.84	12.913	12.913	NO
9	PFDoS	5.87	5.87	1.774	1.774	NO
10	PFTeDA	6.06	6.06	16.225	16.225	NO
11	N-EtFOSA	6.18	6.18	2.111	2.111	NO
12	PFHxDA	6.42	6.42	10.724	10.724	NO
13	PFODA	6.67	6.67			
14	N-MeFOSE	6.37	6.37			
15	N-EtFOSE	6.53	6.53			

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

JJM 7/18/19

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	512.882	5278.840	1.00	1.19	1.214	1.0	95.3	NO		
2	2	PFPrS	248.9 > 79.9	114.043	1376.629	1.00	1.55	1.036	0.9	85.8	NO	2.712	NO
3	3	3:3 FTCA	240.9 > 176.9	22.154	9741.981	1.00	2.03	0.028	0.8	77.5	NO	1.782	NO
4	4	PFPeA	263.1 > 218.9	644.562	9741.981	1.00	2.18	0.827	0.9	94.1	NO		
5	5	PFBS	299.0 > 79.7	233.604	1376.629	1.00	2.48	2.121	1.0	96.8	NO	3.546	NO
6	6	4:2 FTS	327.0 > 306.9	546.861	2770.236	1.00	2.90	2.468	1.0	96.1	NO	1.753	NO
7	47	13C3-PFBA	216.1 > 171.8	5278.840	8195.370	1.00	1.18	8.052	12.0	95.9	NO		
8	49	13C3-PFBS	302.0 > 98.8	1376.629	1299.046	1.00	2.48	13.247	12.8	102.4	NO		
9	48	13C3-PFPeA	266.0 > 221.8	9741.981	21608.658	1.00	2.18	5.635	12.4	99.5	NO		
10	48	13C3-PFPeA	266.0 > 221.8	9741.981	21608.658	1.00	2.18	5.635	12.4	99.5	NO		
11	49	13C3-PFBS	302.0 > 98.8	1376.629	1299.046	1.00	2.48	13.247	12.8	102.4	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2770.236	1299.046	1.00	2.90	26.656	14.3	114.7	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	1646.893	6486.481	1.00	2.98	1.269	1.1	107.5	NO	12.059	NO
15	8	PFPeS	349.1>80.1	176.360	1376.629	1.00	3.19	1.601	1.0	98.8	NO	1.045	NO
16	9	HFPO-DA	285.1 > 168.9	173.775	1837.119	1.00	3.20	0.473	0.9	91.5	NO	2.273	NO
17	10	5:3 FTCA	340.9 > 236.9	160.660	7848.430	1.00	3.54	0.256	1.0	96.4	NO	1.549	NO
18	11	PFHpA	363.0 > 318.9	753.078	7848.430	1.00	3.61	1.199	1.0	100.9	NO	5.836	NO
19	12	ADONA	376.8 > 250.9	2503.184	7848.430	1.00	3.72	3.987	0.9	91.4	NO	3.372	NO
20	52	13C2-PFHxA	315.0 > 270.0	6486.481	21608.658	1.00	2.98	3.752	4.7	94.9	NO		
21	49	13C3-PFBS	302.0 > 98.8	1376.629	1299.046	1.00	2.48	13.247	12.8	102.4	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1837.119	21608.658	1.00	3.19	1.063	4.7	93.8	NO		
23	53	13C4-PFHpA	367.2 > 321.8	7848.430	21608.658	1.00	3.61	4.540	12.4	99.5	NO		
24	53	13C4-PFHpA	367.2 > 321.8	7848.430	21608.658	1.00	3.61	4.540	12.4	99.5	NO		
25	53	13C4-PFHpA	367.2 > 321.8	7848.430	21608.658	1.00	3.61	4.540	12.4	99.5	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	203.190	2916.796	1.00	3.77	0.871	0.9	93.8	NO	3.105	YES
28	15	6:2 FTS	427.0 > 406.9	427.941	2160.389	1.00	4.08	2.476	0.9	90.4	NO	1.656	NO
29	16	L-PFOA	412.8 > 368.9	2468.673	16170.059	1.00	4.14	1.908	0.9	93.6	NO	4.042	NO
30	18	PFecHS	460.8 > 381.0	330.611	16170.059	1.00	4.16	0.256	0.8	83.0	NO	0.906	NO
31	19	PFHpS	449.0 > 80.0	172.298	2856.567	1.00	4.26	0.754	0.9	94.7	NO	1.526	NO
32	20	7:3 FTCA	440.9 > 336.9	173.766	16482.518	1.00	4.56	0.132	1.0	104.3	NO	2.301	NO
33	54	13C3-PFHxS	401.8 > 79.9	2916.796	1299.046	1.00	3.76	28.067	12.7	101.6	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	2160.389	2823.660	1.00	4.08	9.564	14.0	112.1	NO		
35	58	13C2-PFOA	414.9 > 369.7	16170.059	30518.973	1.00	4.14	6.623	13.0	104.1	NO		
36	58	13C2-PFOA	414.9 > 369.7	16170.059	30518.973	1.00	4.14	6.623	13.0	104.1	NO		

CAH 7/18/19

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2856.567	2823.660	1.00	4.67	12.646	12.5	99.7	NO		
38	56	13C5-PFNA	468.2 > 422.9	16482.518	16207.635	1.00	4.58	12.712	12.7	101.9	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	1209.507	16482.518	1.00	4.58	0.917	0.9	89.5	NO	2.302	NO
41	22	PFOSA	497.9 > 77.9	390.781	4001.649	1.00	4.65	1.221	1.0	101.7	NO	53.960	YES
42	23	L-PFOS	498.9 > 79.9	231.708	2856.567	1.00	4.67	1.014	0.9	90.4	NO	1.967	NO
43	25	9Cl-PF30NS	530.7 > 350.8	719.085	2856.567	1.00	4.90	3.147	1.0	98.1	NO	10.712	NO
44	26	PFDA	513 > 468.8	1746.246	14524.881	1.00	4.97	1.503	1.0	98.4	NO	4.020	NO
45	27	8:2 FTS	527.0 > 506.9	467.716	2281.527	1.00	4.94	2.563	1.1	109.2	NO	1.897	NO
46	56	13C5-PFNA	468.2 > 422.9	16482.518	16207.635	1.00	4.58	12.712	12.7	101.9	NO		
47	57	13C8-PFOSA	506.1 > 77.7	4001.649	28740.389	1.00	4.65	1.740	12.6	100.4	NO		
48	59	13C8-PFOS	507.0 > 79.9	2856.567	2823.660	1.00	4.67	12.646	12.5	99.7	NO		
49	59	13C8-PFOS	507.0 > 79.9	2856.567	2823.660	1.00	4.67	12.646	12.5	99.7	NO		
50	60	13C2-PFDA	515.1 > 469.9	14524.881	22542.191	1.00	4.97	8.054	12.0	96.3	NO		
51	61	13C2-8:2 FTS	529 > 79.9	2281.527	2823.660	1.00	4.94	10.100	14.7	117.8	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	145.023	2856.567	1.00	5.03	0.635	0.9	85.9	NO	1.682	NO
54	29	L-MeFOSAA	570 > 419	774.221	3596.546	1.00	5.12	2.691	1.0	98.1	NO	2.754	NO
55	31	L-EtFOSAA	584.1 > 419	579.627	5134.988	1.00	5.29	1.411	1.0	96.8	NO	1.360	NO
56	33	PFUdA	563.0 > 518.9	1774.143	23094.541	1.00	5.30	0.960	1.0	103.7	NO	6.713	NO
57	34	PFDS	598.8 > 79.9	278.699	2281.527	1.00	5.35	1.527	0.8	83.1	NO	1.838	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	78.216	26591.381	1.00	5.52	0.037	0.8	78.7	NO	7.474	YES
59	59	13C8-PFOS	507.0 > 79.9	2856.567	2823.660	1.00	4.67	12.646	12.5	99.7	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3596.546	28740.389	1.00	5.12	1.564	12.6	100.8	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	5134.988	28740.389	1.00	5.28	2.233	12.8	102.5	NO		
62	63	13C2-PFUdA	565 > 519.8	23094.541	28740.389	1.00	5.30	10.044	12.4	99.0	NO		
63	61	13C2-8:2 FTS	529 > 79.9	2281.527	2823.660	1.00	4.94	10.100	14.7	117.8	NO		
64	65	13C2-PFDoA	614.7 > 569.7	26591.381	22542.191	1.00	5.59	14.745	11.2	89.9	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	462.114	2281.527	1.00	5.57	2.532	1.0	99.3	NO	1.440	NO
67	37	PFDoA	612.9 > 569.0	2067.233	26591.381	1.00	5.59	0.972	1.0	99.4	NO	7.887	NO
68	38	N-MeFOSA	512.1 > 168.9	248.569	8684.296	1.00	5.73	4.293	4.2	83.2	NO	1.362	NO
69	39	PFTrDA	662.9 > 618.9	2153.217	26591.381	1.00	5.84	1.012	0.9	91.3	NO	19.031	NO
70	40	PFDoS	698.8 > 79.9	232.124	12107.804	1.00	5.87	0.240	0.9	90.6	NO	1.813	NO
71	41	PFTeDA	713.0 > 669.0	1769.635	12107.804	1.00	6.06	1.827	1.0	99.0	NO	16.815	NO
72	65	13C2-PFDoA	614.7 > 569.7	26591.381	22542.191	1.00	5.59	14.745	11.2	89.9	NO		

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	26591.381	22542.191	1.00	5.59	14.745	11.2	89.9	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	8684.296	28740.389	1.00	5.76	3.777	136.6	91.1	NO		
75	65	13C2-PFDoA	614.7 > 569.7	26591.381	22542.191	1.00	5.59	14.745	11.2	89.9	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	12107.804	28740.389	1.00	6.06	5.266	12.1	96.4	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	12107.804	28740.389	1.00	6.06	5.266	12.1	96.4	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	388.758	11287.549	1.00	6.17	5.166	5.9	117.6	NO	3.188	YES
80	43	PFHxDA	813.1 > 768.6	1058.438	8018.415	1.00	6.42	0.660	1.0	101.2	NO	12.980	NO
81	44	PFODA	913.1 > 868.8	1253.092	8018.415	1.00	6.66	0.781	1.0	96.7	NO		
82	45	N-MeFOSE	616.1 > 58.9	361.747	9642.020	1.00	6.37	5.628	5.3	106.8	NO		
83	46	N-EtFOSE	630.1 > 58.9	406.987	9842.747	1.00	6.52	6.202	4.9	98.1	NO		
84	72	13C4-PFBA	217.0 > 172.0	8195.370	8195.370	1.00	1.19	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	11287.549	28740.389	1.00	6.19	4.909	151.2	100.8	NO		
86	69	13C2-PFHxDA	815 > 769.7	8018.415	28740.389	1.00	6.42	3.487	4.8	95.8	NO		
87	69	13C2-PFHxDA	815 > 769.7	8018.415	28740.389	1.00	6.42	3.487	4.8	95.8	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	9642.020	28740.389	1.00	6.36	4.194	141.0	94.0	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	9842.747	28740.389	1.00	6.51	4.281	140.6	93.7	NO		
90	73	13C5-PFHxA	318.0 > 272.9	21608.658	21608.658	1.00	2.98	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	30518.973	30518.973	1.00	4.14	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1299.046	1299.046	1.00	3.76	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	16207.635	16207.635	1.00	4.59	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2823.660	2823.660	1.00	4.67	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	22542.191	22542.191	1.00	4.97	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	28740.389	28740.389	1.00	5.30	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

Last Altered: Tuesday, August 06, 2019 11:48:53 Pacific Daylight Time
Printed: Tuesday, August 06, 2019 11:49:59 Pacific Daylight Time

Full Runlog added 8/21/19. GM 8/21/19

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 19 Jul 2019 12:00:26
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: PFBA

A Aquisition error. GM 8/21/19

	#	Name	ID		Acq.Date	Acq.Time
1	1	190718M1_1	IPA		18-Jul-19	07:56:08
2	2	190718M1_2	IPA		18-Jul-19	08:06:58
3	3	190718M1_3	IPA		18-Jul-19	08:17:31
4	4	190718M1_4	ST190718M1-1 PFC CS0 19G1103		18-Jul-19	08:28:09
5	5	190718M1_5	IB		18-Jul-19	08:38:42
6	6	190718M1_6	1902056-02 AA-EFF-20190710 0.12064		18-Jul-19	08:49:23
7	7	190718M1_7	B9G0127-BSD1 LCSD 0.125		18-Jul-19	08:59:59
8	8	190718M1_8	B9G0127-BLK1 Method Blank 0.125		18-Jul-19	09:12:57
9	9	190718M1_9	1902054-02 STWRT-FB-002-JL-071010 0.11813		18-Jul-19	09:23:30
10	10	190718M1_10	1902056-01@5X AA-INF-20190710 0.11915		18-Jul-19	09:34:08
11	11	190718M1_11	IPA		18-Jul-19	09:44:46
12	12	190718M1_12	ST190718M1-2 PFC CS3 19G1106		18-Jul-19	09:55:19
13	13	190718M1_13	IPA		18-Jul-19	10:05:58
14	14	190718M1_14	B9G0080-BS1 OPR 0.25		18-Jul-19	10:16:39
15	15	190718M1_15	B9G0080-BLK1 Method Blank 0.25		18-Jul-19	10:27:14
16	16	190718M1_16	1901888-01 SWIN1906271320KER 0.24398		18-Jul-19	10:37:53
17	17	190718M1_17	1901889-01 SWIN1906271350KER 0.23214		18-Jul-19	10:48:26
18	18	190718M1_18	1901890-01 SWIN1906271500KER 0.24347		18-Jul-19	10:59:05
19	19	190718M1_19	1901919-01 SWIN1906260850GSC 0.24194		18-Jul-19	11:09:43
20	20	190718M1_20	B9F0253-BS1 OPR 0.125	A	18-Jul-19	11:21:11
21	21	190718M1_21	1901921-01 SWIN1906260935GSC 0.25302		18-Jul-19	11:31:45
22	22	190718M1_22	1901923-01 SWIN1906261030GSC 0.23676		18-Jul-19	11:42:23
23	23	190718M1_23	B9F0253-BS1 OPR 0.125		18-Jul-19	11:54:42
24	24	190718M1_24	1901924-01 SWIN1906261240GSC 0.23934		18-Jul-19	12:05:19
25	25	190718M1_25	1901925-01 SWIN1906280740GSC 0.24848		18-Jul-19	12:17:23
26	26	190718M1_26	1901925-02 SWIN1906280740GSC-FD 0.23719		18-Jul-19	12:28:00
27	27	190718M1_27	1901926-01 SWIN1906280840GSC 0.23337		18-Jul-19	12:38:32
28	28	190718M1_28	IPA		18-Jul-19	12:49:11
29	29	190718M1_29	ST190718M1-3 PFC CS3 19G1106		18-Jul-19	12:59:43
30	30	190718M1_30	IPA		18-Jul-19	13:10:22
31	31	190718M1_31	1901927-01 SWIN1906280925GSC 0.2436		18-Jul-19	13:20:58
32	32	190718M1_32	1901928-01 SWIN1906281040GSC 0.24365		18-Jul-19	13:31:33

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
33	33	190718M1_33	1901929-01 SWIN1906281125GSC 0.24754	18-Jul-19	13:42:07
34	34	190718M1_34	1901930-01 SWIN1906281215GSC 0.24862	18-Jul-19	13:52:45
35	35	190718M1_35	1901931-01 SWIN1906261345GSC 0.24093	18-Jul-19	14:03:18
36	36	190718M1_36	1902049-03 EB07-070819 0.25547	18-Jul-19	14:13:56
37	37	190718M1_37	1902049-12 EB08-070919 0.25637	18-Jul-19	14:24:30
38	38	190718M1_38	B9G0153-BLK1 Method Blank 0.25	18-Jul-19	14:35:38
39	39	190718M1_39	1902048-10 EB06-070319 0.2586	18-Jul-19	14:46:12
40	40	190718M1_40	B9G0153-BS1 OPR 0.25	18-Jul-19	14:56:50
41	41	190718M1_41	B9G0153-BSD1 LCSD 0.25	18-Jul-19	15:07:23
42	42	190718M1_42	1901901-01 MACON_GW_062819 0.11674	18-Jul-19	15:20:30
43	43	190718M1_43	B9G0147-BS1 OPR 0.25	18-Jul-19	15:31:05
44	44	190718M1_44	B9G0147-BLK1 Method Blank 0.25	18-Jul-19	15:41:44
45	45	190718M1_45	1902052-01 1907364-01A 0.24349	18-Jul-19	15:52:17
46	46	190718M1_46	1902052-02 1907364-02A 0.24144	18-Jul-19	16:02:47
47	47	190718M1_47	IPA	18-Jul-19	16:13:25
48	48	190718M1_48	ST190718M1-4 PFC CS3 19G1106	18-Jul-19	16:24:04
49	49	190718M1_49	IPA	18-Jul-19	16:34:42
50	50	190718M1_50	1902053-01 1907368-01A 0.24543	18-Jul-19	16:45:15
51	51	190718M1_51	1902053-02 1907368-02A 0.23176	18-Jul-19	16:55:54
52	52	190718M1_52	1902055-01 1907363-01A 0.25186	18-Jul-19	17:06:27
53	53	190718M1_53	1902055-02 1907363-02A 0.2408	18-Jul-19	17:17:05
54	54	190718M1_54	1902076-01 AS-SW-01-0719 0.24981	18-Jul-19	17:27:39
55	55	190718M1_55	1902076-02 AS-PW-01-0719 0.24432	18-Jul-19	17:38:17
56	56	190718M1_56	1902076-03 AS-SW-02-0719 0.24344	18-Jul-19	17:48:50
57	57	190718M1_57	1902076-04 AS-PW-02-0719 0.24256	18-Jul-19	17:59:28
58	58	190718M1_58	1902076-05 AS-SW-03-0719 0.24213	18-Jul-19	18:10:06
59	59	190718M1_59	1902076-06 AS-PW-03-0719 0.25236	18-Jul-19	18:20:40
60	60	190718M1_60	IPA	18-Jul-19	18:31:18
61	61	190718M1_61	ST190718M1-5 PFC CS3 19G1106	18-Jul-19	18:41:57
62	62	190718M1_62	IPA	18-Jul-19	18:52:30
63	63	190718M1_63	1902076-07 AS-SW-04-0719 0.2378	18-Jul-19	19:03:09
64	64	190718M1_64	1902076-08 AS-PW-04-0719 0.25413	18-Jul-19	19:13:47
65	65	190718M1_65	1902076-09 AS-SW-05-0719 0.2484	18-Jul-19	19:24:20
66	66	190718M1_66	1902076-10 AS-PW-05-0719 0.26123	18-Jul-19	19:34:58
67	67	190718M1_67	B9G0103-BS1 OPR 0.25	18-Jul-19	19:45:31
68	68	190718M1_68	B9G0103-BLK1 Method Blank 0.25	18-Jul-19	19:56:10

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
69	69	190718M1_69	1901962-01 SWIN1906270800GSC 0.23842	18-Jul-19	20:06:48
70	70	190718M1_70	1901962-02 SWIN1906270800GSC-FD 0.25079	18-Jul-19	20:17:21
71	71	190718M1_71	1901963-01 SWIN1906270915GSC 0.23089	18-Jul-19	20:28:00
72	72	190718M1_72	1901964-01 SWIN1906271000GSC 0.24416	18-Jul-19	20:38:33
73	73	190718M1_73	1901965-01 SWIN1906271025GSC 0.24871	18-Jul-19	20:49:12
74	74	190718M1_74	1901966-01 SWIN1906271100GSC 0.2431	18-Jul-19	20:59:50
75	75	190718M1_75	IPA	18-Jul-19	21:10:22
76	76	190718M1_76	ST190718M1-6 PFC CS3 19G1106	18-Jul-19	21:21:01
77	77	190718M1_77	IPA	18-Jul-19	21:31:40
78	78	190718M1_78	1901967-01 SWIN1906271135GSC 0.23334	18-Jul-19	21:42:13
79	79	190718M1_79	1901968-01 SWIN1906271245GSC 0.24441	18-Jul-19	21:52:51
80	80	190718M1_80	1901969-01 SWIN1906271315GSC 0.2441	18-Jul-19	22:03:24
81	81	190718M1_81	1901970-01 SWIN1906271345GSC 0.2504	18-Jul-19	22:14:02
82	82	190718M1_82	1901971-01 SWIN1906271445GSC 0.24326	18-Jul-19	22:24:35
83	83	190718M1_83	1901987-01 BWS 0.24274	18-Jul-19	22:35:13
84	84	190718M1_84	1901995-02 WEF1907080940JSJ 0.2503	18-Jul-19	22:45:52
85	85	190718M1_85	1901995-03 WEF1907080948JSJ 0.25251	18-Jul-19	22:56:26
86	86	190718M1_86	B9G0183-BS1 OPR 0.25	18-Jul-19	23:07:04
87	87	190718M1_87	B9G0183-BLK1 Method Blank 0.25	18-Jul-19	23:17:36
88	88	190718M1_88	1901661-01RE1 WMP1906180936BRH 0.25118	18-Jul-19	23:28:15
89	89	190718M1_89	1901661-02RE1 WEF1906180942BRH 0.24993	18-Jul-19	23:38:53
90	90	190718M1_90	IPA	18-Jul-19	23:49:26
91	91	190718M1_91	ST190718M1-7 PFC CS3 19G1106	19-Jul-19	00:00:04
92	92	190718M1_92	IPA	19-Jul-19	00:10:38
93	93	190718M1_93	1901661-03RE1 WEF1906180957BRH 0.25772	19-Jul-19	00:21:16
94	94	190718M1_94	1902105-01 6C Discharge 0.24191	19-Jul-19	00:31:49
95	95	190718M1_95	1902105-02 5A Raw Leachate 0.24309	19-Jul-19	00:42:27
96	96	190718M1_96	1902105-03 Field Blank 0.23889	19-Jul-19	00:53:00
97	97	190718M1_97	1902106-01 WT1907110855SK 0.23917	19-Jul-19	01:03:38
98	98	190718M1_98	1902106-02 WR1907110930SK 0.24874	19-Jul-19	01:14:12
99	99	190718M1_99	B9G0184-BS1 OPR 0.25	19-Jul-19	01:24:50
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101	101	190718M1_101	1902129-01 WIN1907151315GGA 0.24332	19-Jul-19	01:45:54
102	102	190718M1_102	1902129-02 WMP1907151305GGA 0.25773	19-Jul-19	01:56:32
103	103	190718M1_103	1902129-03 WEF1907081510GGA 0.25452	19-Jul-19	02:07:06
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Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

Last Altered: Tuesday, August 06, 2019 11:48:53 Pacific Daylight Time
Printed: Tuesday, August 06, 2019 11:49:59 Pacific Daylight Time

Compound name: PFBA

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105	105	190718M1_105	ST190718M1-8 PFC CS3 19G1106	19-Jul-19	02:28:22
106	106	190718M1_106	IPA	19-Jul-19	02:38:55
107	107	190718M1_107	IB tester	19-Jul-19	02:49:33
108	108	190718M1_108	QC NS SUP	19-Jul-19	03:00:09

Vista Analytical Laboratory

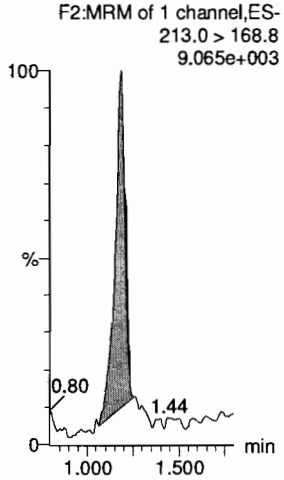
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

PFBA



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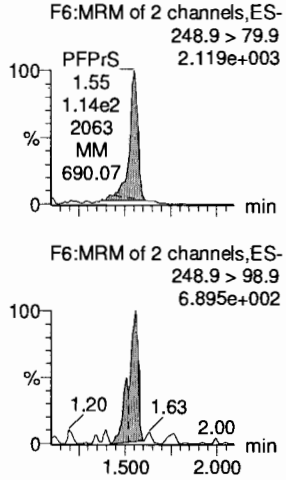
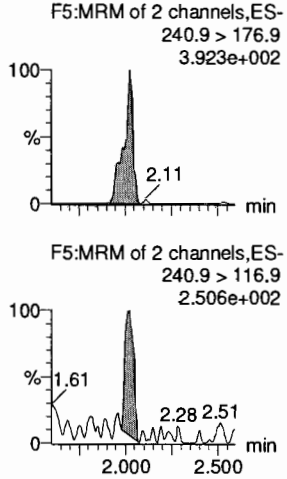


3:3 FTCA



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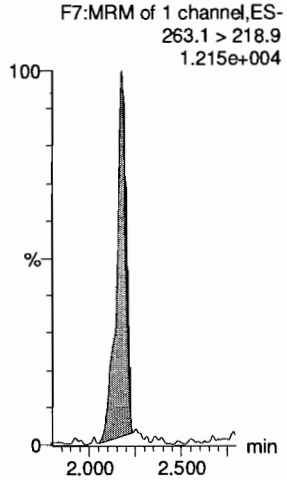

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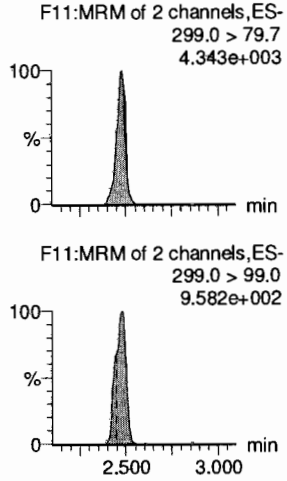
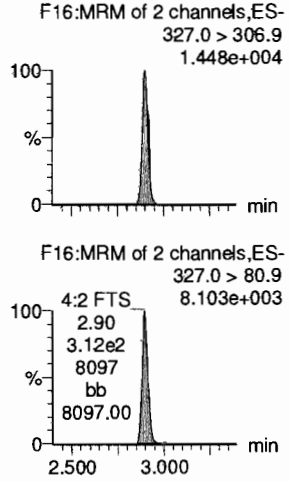
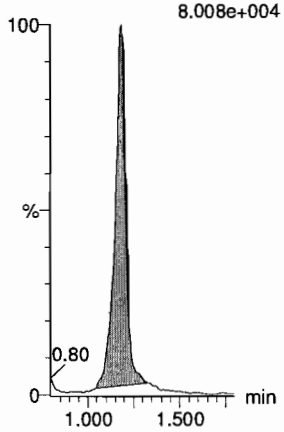


4:2 FTS



13C3-PFBA



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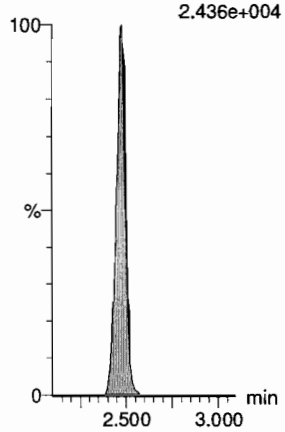

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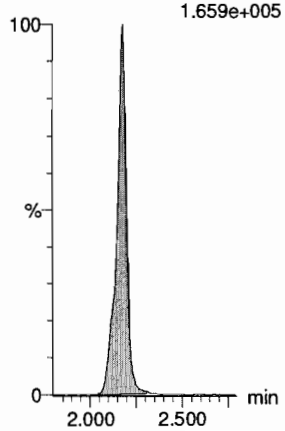

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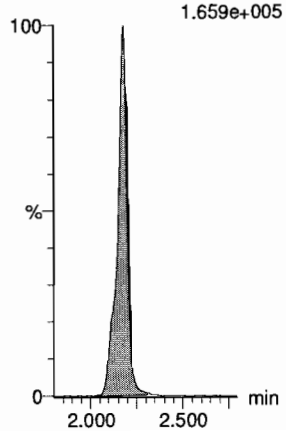

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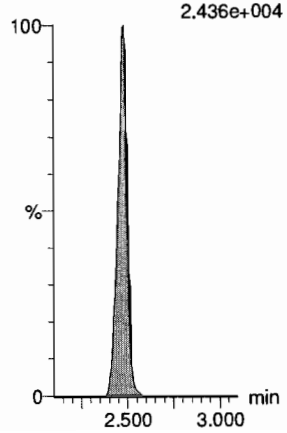
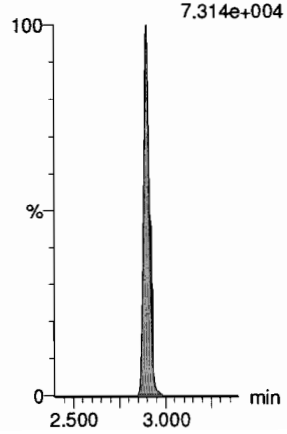


13C2-4:2 FTS

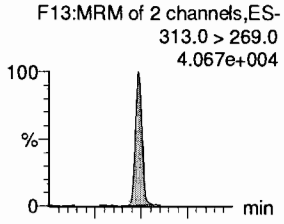


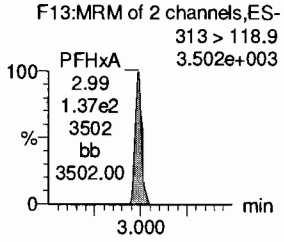
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

PFHxA





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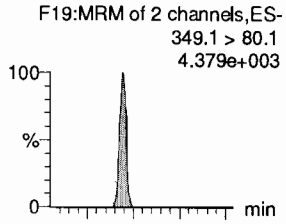
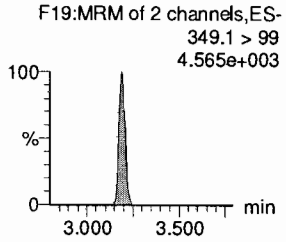
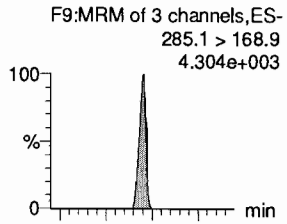
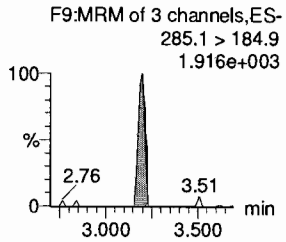


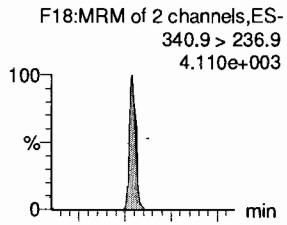


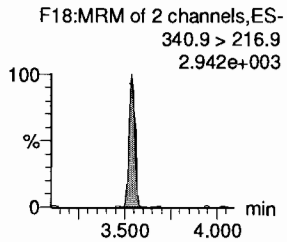
HFPO-DA





5:3 FTCA





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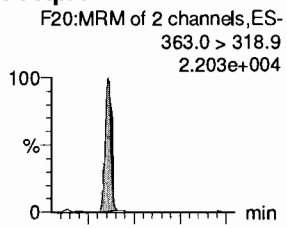

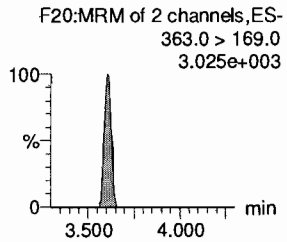

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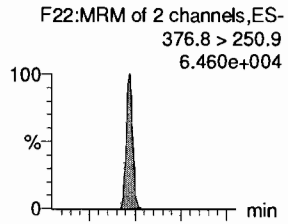

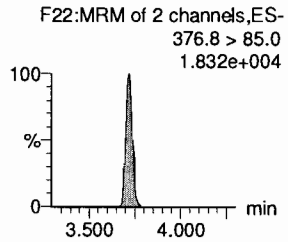

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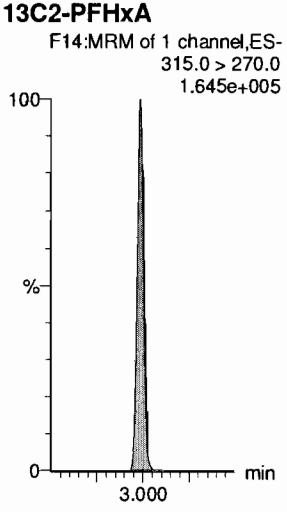

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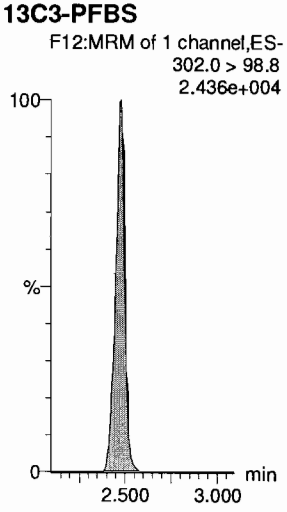

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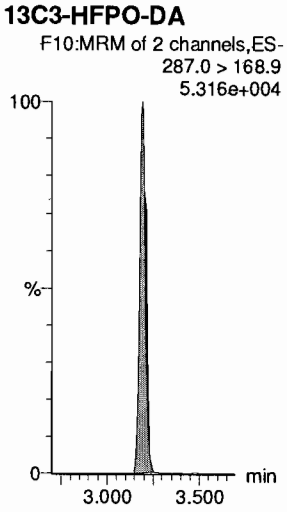

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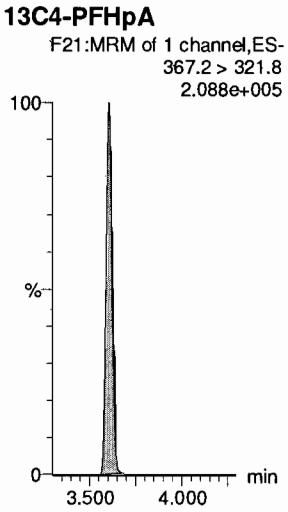

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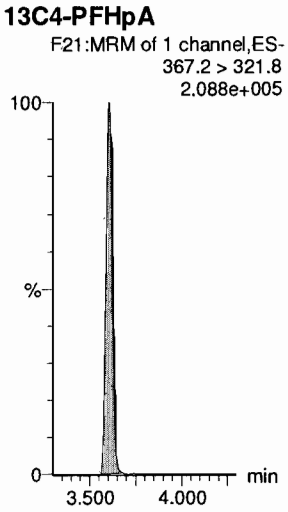

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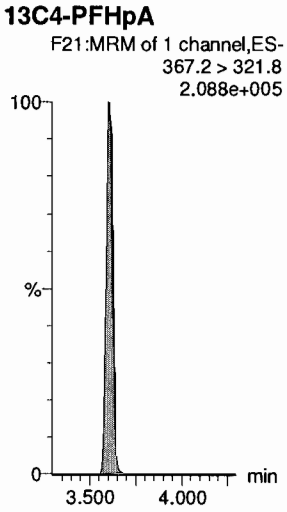
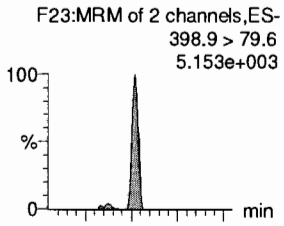


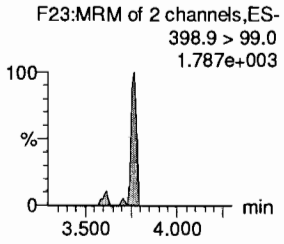
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

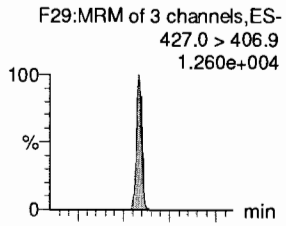
Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

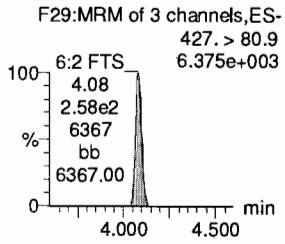
L-PFHxS



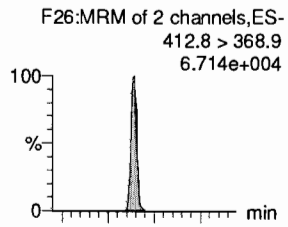


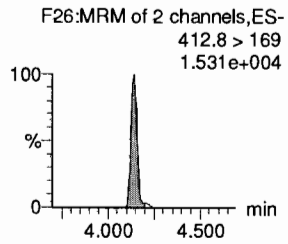
6:2 FTS





L-PFOA





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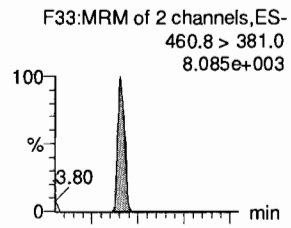

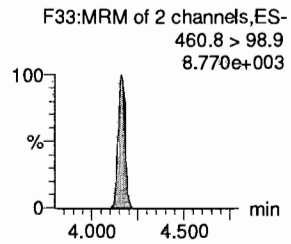

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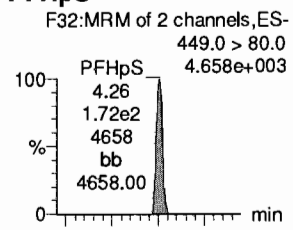
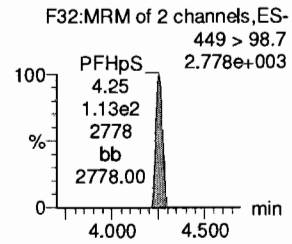
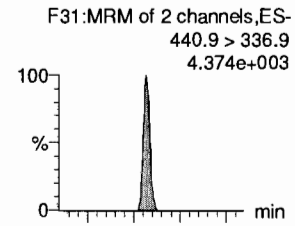
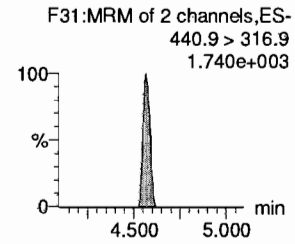


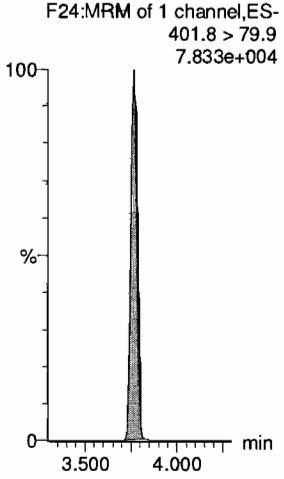


7:3 FTCA





13C3-PFHxS



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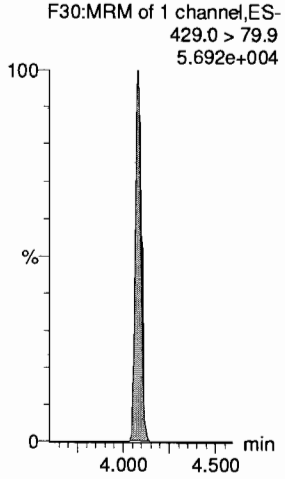

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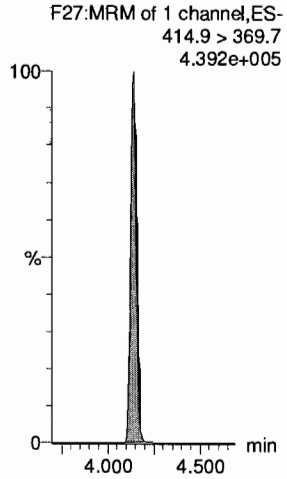

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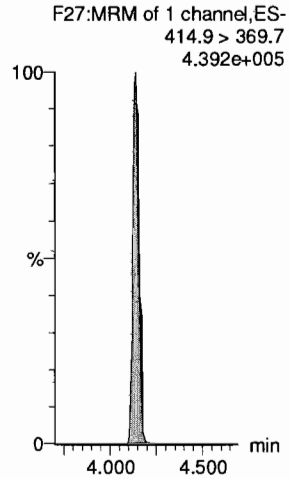
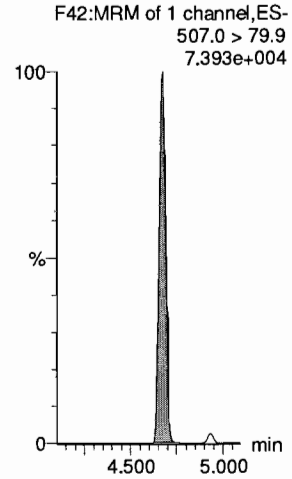
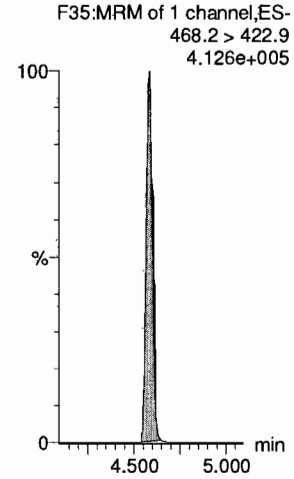


13C8-PFOS



13C5-PFNA

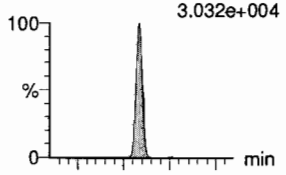


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

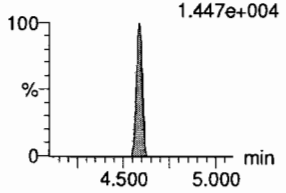
Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

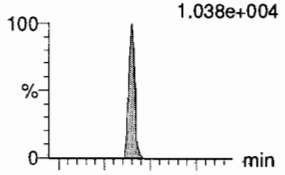
PFNA
F34:MRM of 2 channels,ES-
463.0 > 418.8
3.032e+004



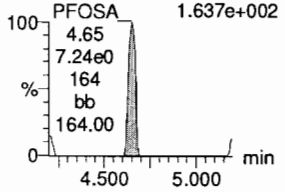
F34:MRM of 2 channels,ES-
463.0 > 219.0
1.447e+004



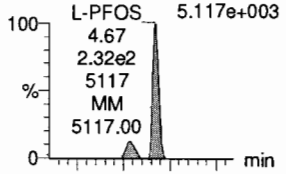
PFOSA
F37:MRM of 2 channels,ES-
497.9 > 77.9
1.038e+004



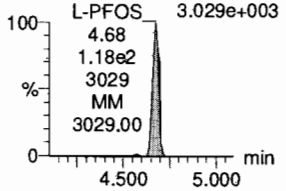
F37:MRM of 2 channels,ES-
497.9 > 168.9
1.637e+002



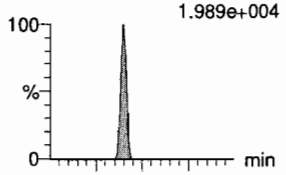
L-PFOS
F39:MRM of 2 channels,ES-
498.9 > 79.9
5.117e+003



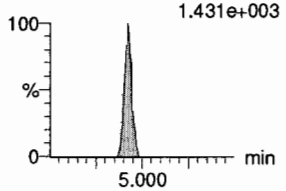
F39:MRM of 2 channels,ES-
498.9 > 99.0
3.029e+003



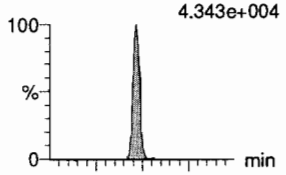
9Cl-PF30NS
F51:MRM of 2 channels,ES-
530.7 > 350.8
1.989e+004



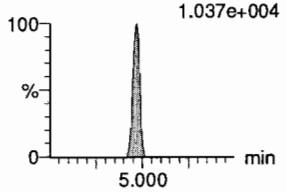
F51:MRM of 2 channels,ES-
530.7 > 82.8
1.431e+003



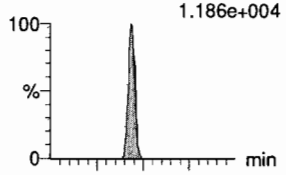
PFDA
F44:MRM of 2 channels,ES-
513 > 468.8
4.343e+004



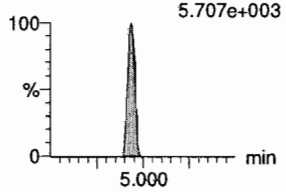
F44:MRM of 2 channels,ES-
513 > 219
1.037e+004



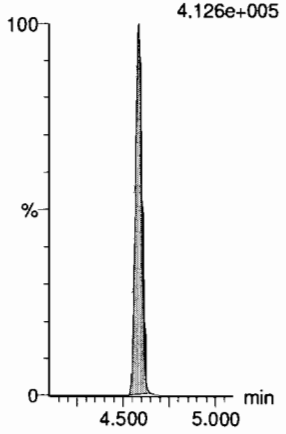
8:2 FTS
F49:MRM of 2 channels,ES-
527.0 > 506.9
1.186e+004



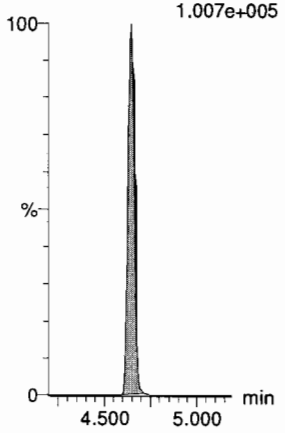
F49:MRM of 2 channels,ES-
527 > 80.9
5.707e+003



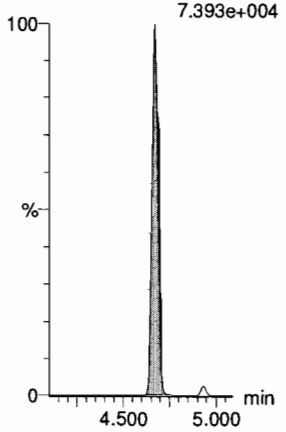
13C5-PFNA
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.126e+005



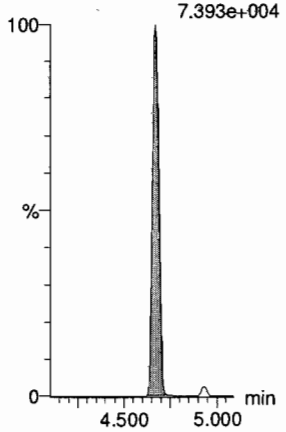
13C8-PFOSA
F41:MRM of 1 channel,ES-
506.1 > 77.7
1.007e+005



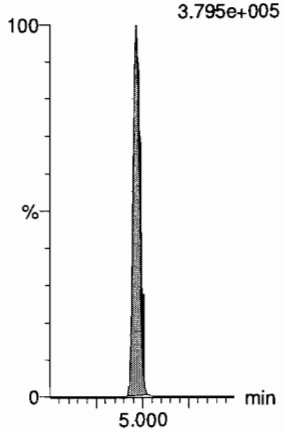
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.393e+004



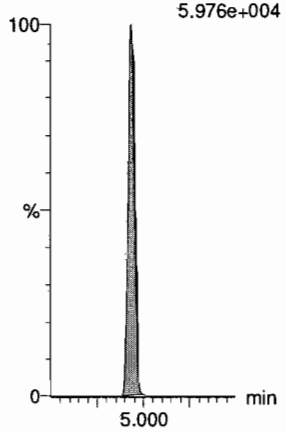
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.393e+004



13C2-PFDA
F45:MRM of 1 channel,ES-
515.1 > 469.9
3.795e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
5.976e+004

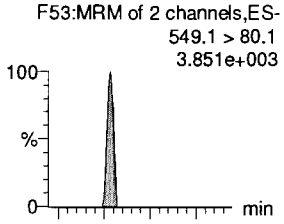


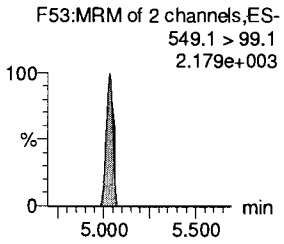
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

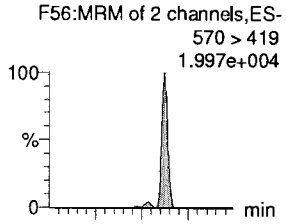
Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

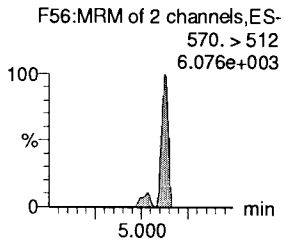
PFNS



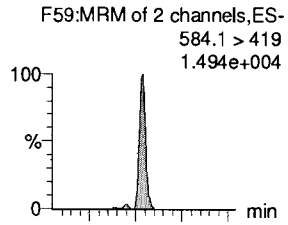


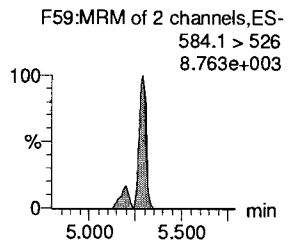
L-MeFOSAA



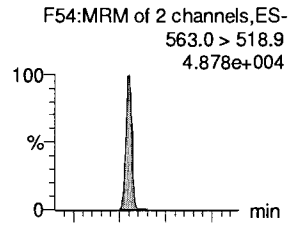


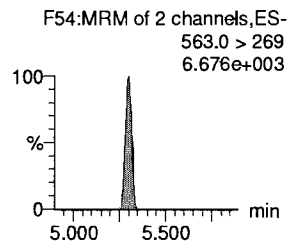
L-EtFOSAA



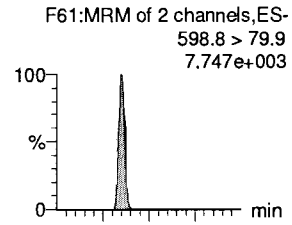


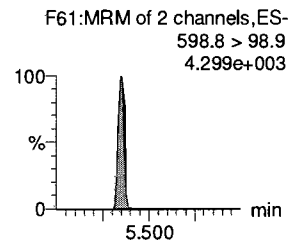
PFUdA



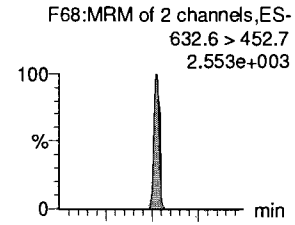


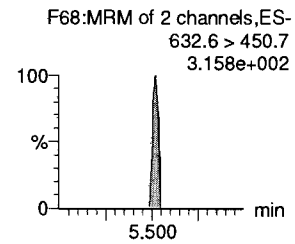
PFDS



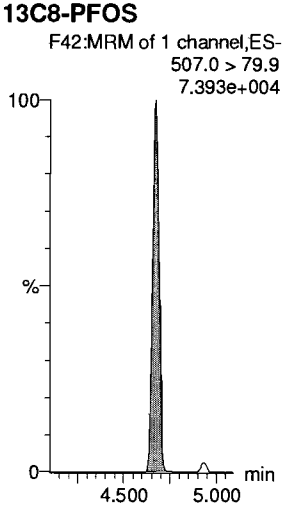


11Cl-PF30UdS

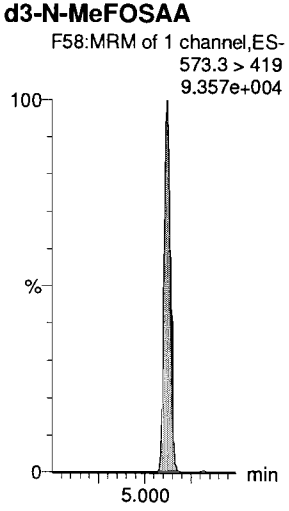




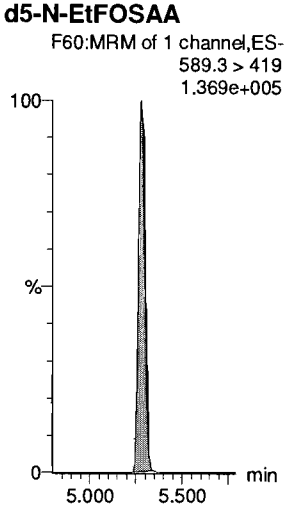
13C8-PFOS



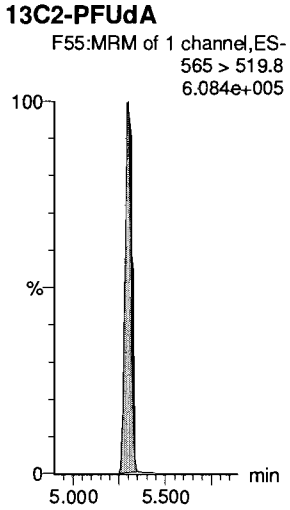
d3-N-MeFOSAA



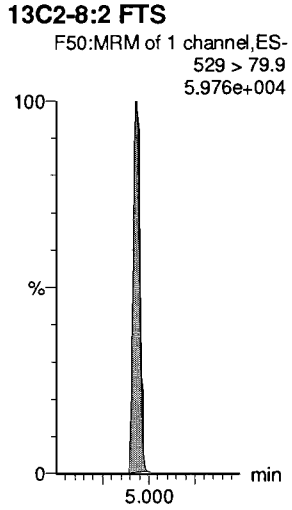
d5-N-EtFOSAA



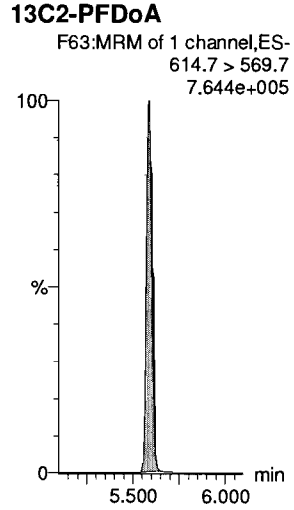
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

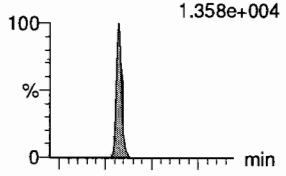


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

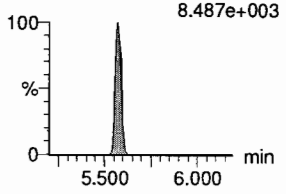
Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

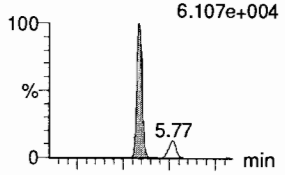
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
1.358e+004



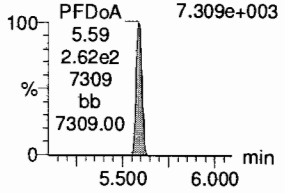
F66:MRM of 2 channels,ES-
627.0 > 80.9
8.487e+003



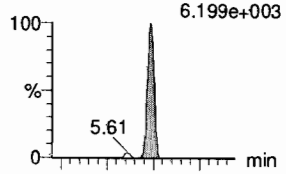
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
6.107e+004



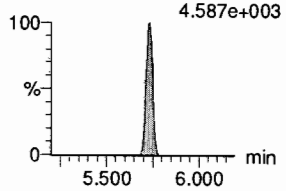
F62:MRM of 4 channels,ES-
612.9 > 318.8
7.309e+003



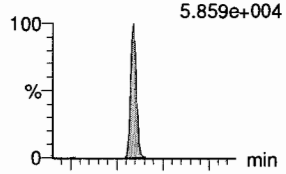
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
6.199e+003



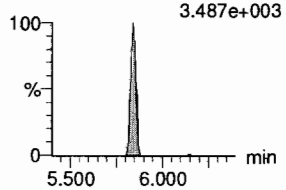
F43:MRM of 2 channels,ES-
512.1 > 219
4.587e+003



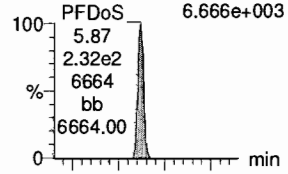
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
5.859e+004



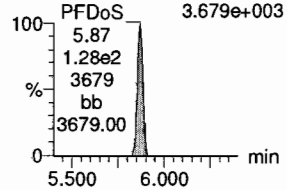
F70:MRM of 2 channels,ES-
662.9 > 319
3.487e+003



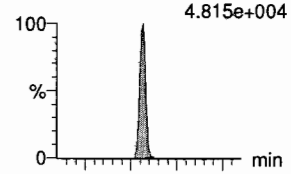
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
6.666e+003



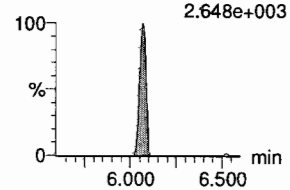
F71:MRM of 2 channels,ES-
698.8 > 98.9
3.679e+003



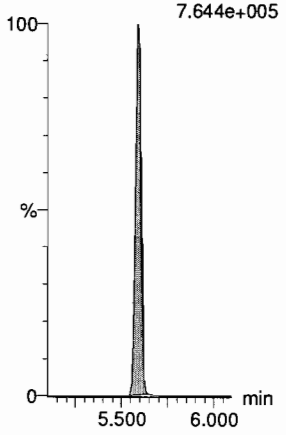
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
4.815e+004



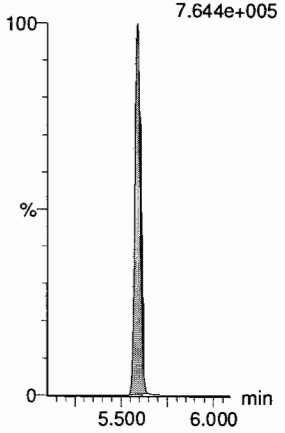
F72:MRM of 2 channels,ES-
713. > 369.0
2.648e+003



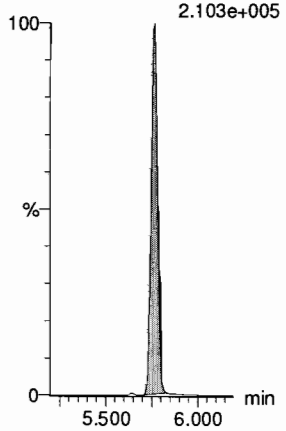
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.644e+005



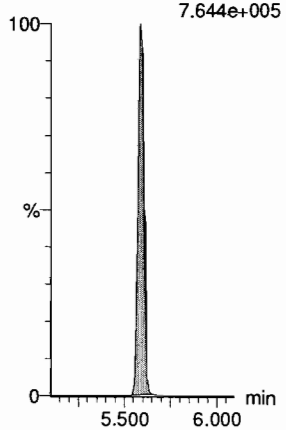
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.644e+005



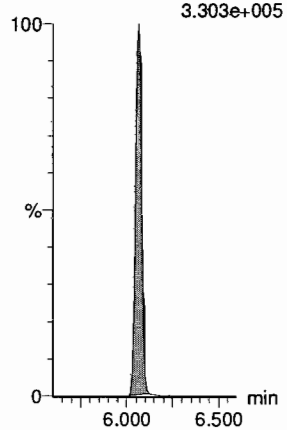
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.103e+005



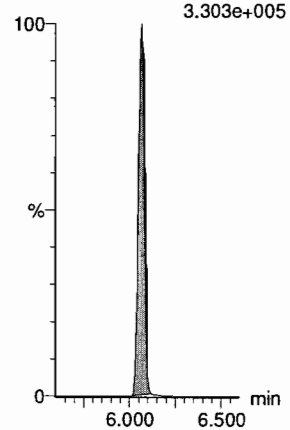
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.644e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.303e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.303e+005

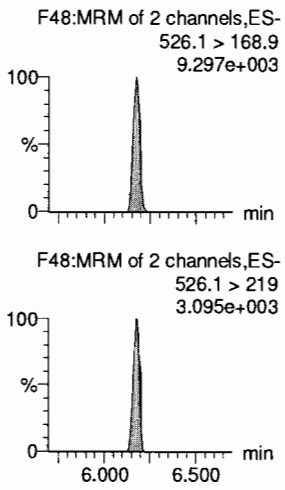


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

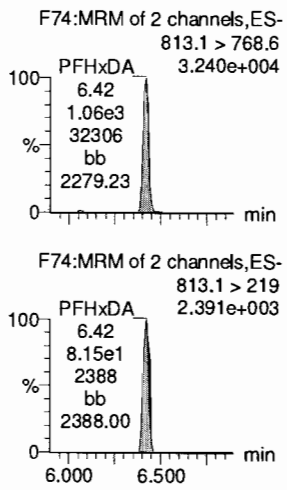
Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:19:18 Pacific Daylight Time

Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

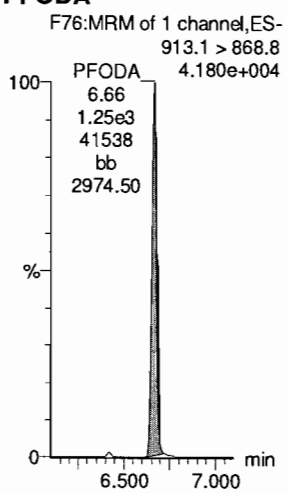
N-EtFOSA



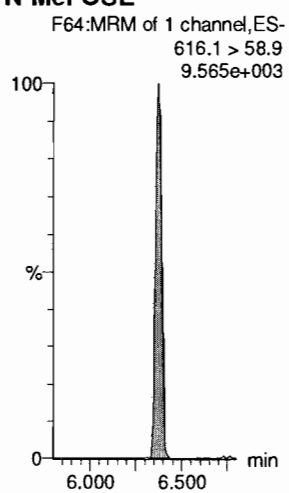
PFHxDA



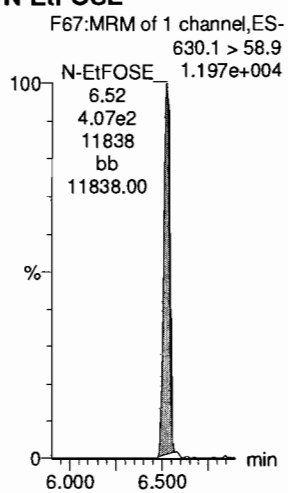
PFODA



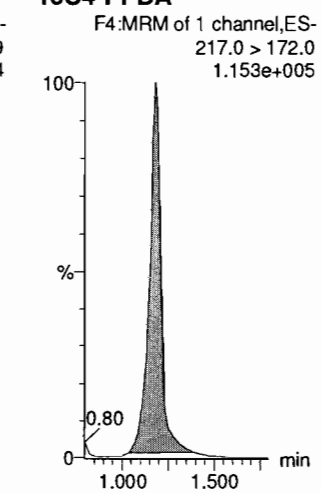
N-MeFOSE



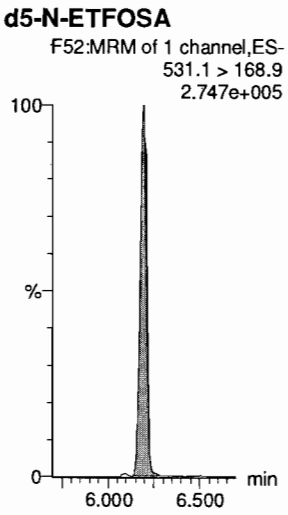
N-EtFOSE



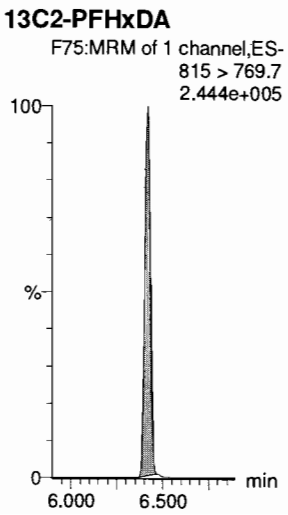
13C4-PFBA



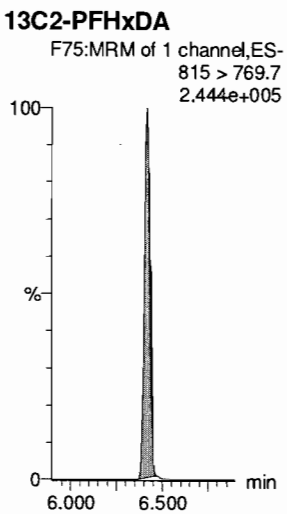
d5-N-ETFOSA



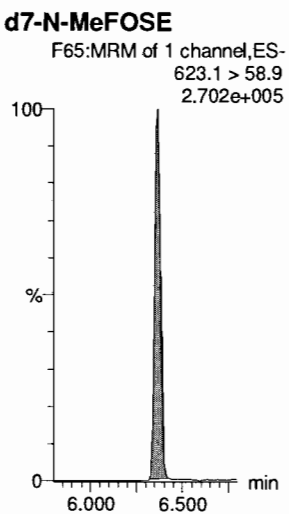
13C2-PFHxDA



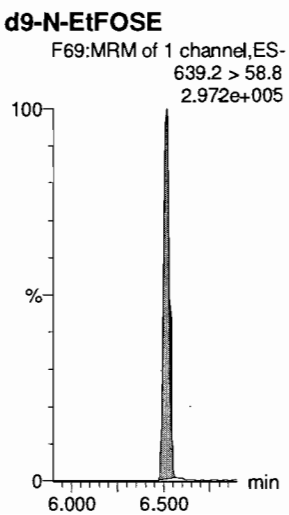
13C2-PFHxDA



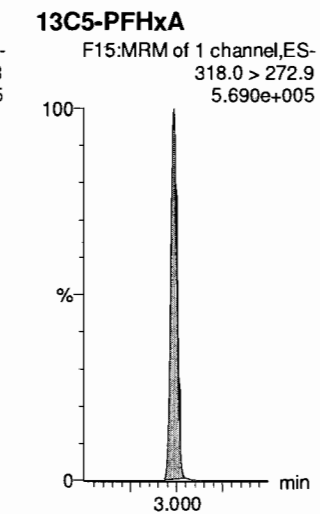
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-4.qld

Last Altered: Thursday, July 18, 2019 10:18:22 Pacific Daylight Time
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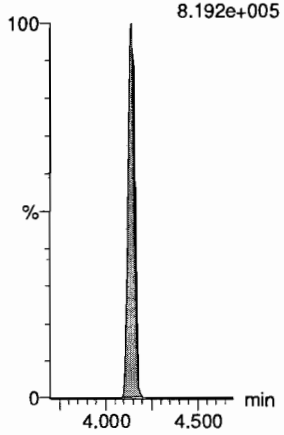
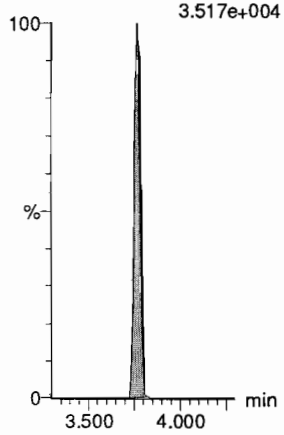
Name: 190718M1_4, Date: 18-Jul-2019, Time: 08:28:09, ID: ST190718M1-1 PFC CS0 19G1103, Description: PFC CS0 19G1103

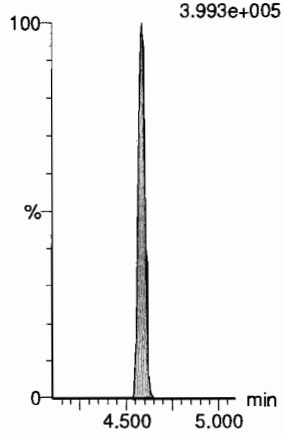
13C8-PFOA



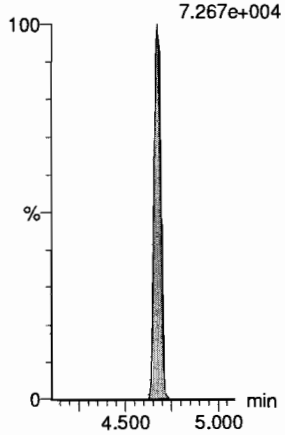
18O2-PFHxS



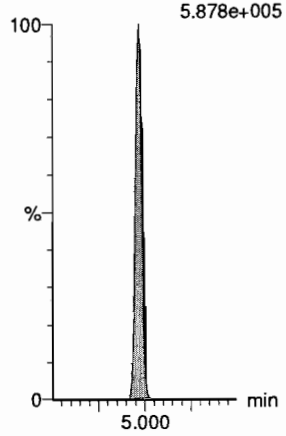
13C9-PFNA



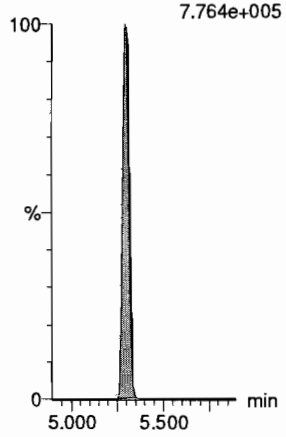
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
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Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	5975.732	5756.582	1.00	1.19	12.976	9.2	91.9	NO		
2	2	PFPrS	248.9 > 79.9	1407.736	1353.539	1.00	1.56	13.001	9.7	97.5	NO	2.406	NO
3	3	3:3 FTCA	240.9 > 176.9	278.601	9448.334	1.00	2.03	0.369	9.4	93.5	NO	1.692	NO
4	4	PFPeA	263.1 > 218.9	6984.955	9448.334	1.00	2.19	9.241	10.0	100.1	NO		
5	5	PFBS	299.0 > 79.7	2542.247	1353.539	1.00	2.48	23.478	10.2	102.3	NO	3.162	NO
6	6	4:2 FTS	327.0 > 306.9	5955.919	2688.206	1.00	2.91	27.695	10.1	100.9	NO	1.954	NO
7	47	13C3-PFBA	216.1 > 171.8	5756.582	8388.434	1.00	1.19	8.578	12.8	102.2	NO		
8	49	13C3-PFBS	302.0 > 98.8	1353.539	1432.422	1.00	2.48	11.812	11.4	91.3	NO		
9	48	13C3-PFPeA	266.0 > 221.8	9448.334	20996.902	1.00	2.18	5.625	12.4	99.3	NO		
10	48	13C3-PFPeA	266.0 > 221.8	9448.334	20996.902	1.00	2.18	5.625	12.4	99.3	NO		
11	49	13C3-PFBS	302.0 > 98.8	1353.539	1432.422	1.00	2.48	11.812	11.4	91.3	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2688.206	1432.422	1.00	2.91	23.459	12.6	101.0	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	16134.903	6709.168	1.00	2.99	12.025	10.4	104.0	NO	15.536	NO
15	8	PFPeS	349.1>80.1	1996.659	1353.539	1.00	3.20	18.439	12.3	122.8	NO	1.393	NO
16	9	HFPO-DA	285.1 > 168.9	2403.936	2096.236	1.00	3.20	5.734	9.8	97.8	NO	2.323	NO
17	10	5:3 FTCA	340.9 > 236.9	1695.910	7230.992	1.00	3.54	2.932	10.6	105.5	NO	1.521	NO
18	11	PFHpA	363.0 > 318.9	7151.985	7230.992	1.00	3.61	12.363	9.9	98.6	NO	4.411	NO
19	12	ADONA	376.8 > 250.9	26689.418	7230.992	1.00	3.72	46.137	9.8	98.1	NO	3.369	NO
20	52	13C2-PFHxA	315.0 > 270.0	6709.168	20996.902	1.00	2.99	3.994	5.0	101.0	NO		
21	49	13C3-PFBS	302.0 > 98.8	1353.539	1432.422	1.00	2.48	11.812	11.4	91.3	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	2096.236	20996.902	1.00	3.20	1.248	5.5	110.1	NO		
23	53	13C4-PFHpA	367.2 > 321.8	7230.992	20996.902	1.00	3.61	4.305	11.8	94.4	NO		
24	53	13C4-PFHpA	367.2 > 321.8	7230.992	20996.902	1.00	3.61	4.305	11.8	94.4	NO		
25	53	13C4-PFHpA	367.2 > 321.8	7230.992	20996.902	1.00	3.61	4.305	11.8	94.4	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	2083.875	2935.777	1.00	3.77	8.873	8.9	89.5	NO	1.998	NO
28	15	6:2 FTS	427.0 > 406.9	4761.157	2158.139	1.00	4.09	27.577	9.5	95.2	NO	2.080	NO
29	16	L-PFOA	412.8 > 368.9	23606.912	15352.445	1.00	4.14	19.221	9.6	96.2	NO	3.967	NO
30	18	PFecHS	460.8 > 381.0	3954.917	15352.445	1.00	4.16	3.220	10.0	100.3	NO	1.025	NO
31	19	PFHpS	449.0 > 80.0	1971.297	2900.297	1.00	4.26	8.496	10.0	100.2	NO	1.808	NO
32	20	7:3 FTCA	440.9 > 336.9	1856.622	16665.475	1.00	4.57	1.393	9.2	91.6	NO	2.020	NO
33	54	13C3-PFHxS	401.8 > 79.9	2935.777	1432.422	1.00	3.77	25.619	11.6	92.7	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	2158.139	2813.405	1.00	4.09	9.589	14.1	112.4	NO		
35	58	13C2-PFOA	414.9 > 369.7	15352.445	29836.182	1.00	4.14	6.432	12.6	101.1	NO		
36	58	13C2-PFOA	414.9 > 369.7	15352.445	29836.182	1.00	4.14	6.432	12.6	101.1	NO		

CaH 7/18/19

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

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Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2900.297	2813.405	1.00	4.68	12.886	12.7	101.6	NO		
38	56	13C5-PFNA	468.2 > 422.9	16665.475	15746.935	1.00	4.59	13.229	13.3	106.1	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	13920.686	16665.475	1.00	4.59	10.441	10.1	100.7	NO	2.858	NO
41	22	PFOSA	497.9 > 77.9	3739.483	3718.010	1.00	4.65	12.572	10.9	108.6	NO	32.079	NO
42	23	L-PFOS	498.9 > 79.9	2704.038	2900.297	1.00	4.68	11.654	9.2	91.7	NO	2.010	NO
43	25	9Cl-PF30NS	530.7 > 350.8	7891.957	2900.297	1.00	4.90	34.014	9.8	98.1	NO	18.302	NO
44	26	PFDA	513 > 468.8	16831.295	14403.103	1.00	4.97	14.607	9.8	97.7	NO	4.330	NO
45	27	8:2 FTS	527.0 > 506.9	4131.793	2066.378	1.00	4.94	24.994	10.2	101.8	NO	1.388	NO
46	56	13C5-PFNA	468.2 > 422.9	16665.475	15746.935	1.00	4.59	13.229	13.3	106.1	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3718.010	28110.816	1.00	4.65	1.653	11.9	95.4	NO		
48	59	13C8-PFOS	507.0 > 79.9	2900.297	2813.405	1.00	4.68	12.886	12.7	101.6	NO		
49	59	13C8-PFOS	507.0 > 79.9	2900.297	2813.405	1.00	4.68	12.886	12.7	101.6	NO		
50	60	13C2-PFDA	515.1 > 469.9	14403.103	21214.148	1.00	4.97	8.487	12.7	101.5	NO		
51	61	13C2-8:2 FTS	529 > 79.9	2066.378	2813.405	1.00	4.94	9.181	13.4	107.1	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1938.563	2900.297	1.00	5.04	8.355	10.4	103.9	NO	1.523	NO
54	29	L-MeFOSAA	570 > 419	8263.546	3607.822	1.00	5.13	28.631	9.7	96.9	NO	2.252	NO
55	31	L-EtFOSAA	584.1 > 419	5981.303	4705.796	1.00	5.29	15.888	10.1	101.2	NO	1.252	NO
56	33	PFUdA	563.0 > 518.9	16868.086	22276.467	1.00	5.30	9.465	10.6	105.9	NO	5.501	NO
57	34	PFDS	598.8 > 79.9	3150.927	2066.378	1.00	5.35	19.061	10.2	102.2	NO	1.895	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	1178.078	25800.051	1.00	5.52	0.571	9.7	96.8	NO	4.046	NO
59	59	13C8-PFOS	507.0 > 79.9	2900.297	2813.405	1.00	4.68	12.886	12.7	101.6	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3607.822	28110.816	1.00	5.13	1.604	12.9	103.4	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	4705.796	28110.816	1.00	5.28	2.093	12.0	96.0	NO		
62	63	13C2-PFUdA	565 > 519.8	22276.467	28110.816	1.00	5.30	9.906	12.2	97.6	NO		
63	61	13C2-8:2 FTS	529 > 79.9	2066.378	2813.405	1.00	4.94	9.181	13.4	107.1	NO		
64	65	13C2-PFDoA	614.7 > 569.7	25800.051	21214.148	1.00	5.59	15.202	11.6	92.7	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	4370.762	2066.378	1.00	5.58	26.440	10.8	107.6	NO	1.515	NO
67	37	PFDoA	612.9 > 569.0	20054.123	25800.051	1.00	5.59	9.716	10.1	100.8	NO	7.881	NO
68	38	N-MeFOSA	512.1 > 168.9	3334.739	8716.784	1.00	5.74	57.385	52.7	105.4	NO	2.096	NO
69	39	PFTrDA	662.9 > 618.9	22286.732	25800.051	1.00	5.84	10.798	10.6	105.9	NO	12.913	NO
70	40	PFDoS	698.8 > 79.9	2462.845	12004.970	1.00	5.87	2.564	9.3	93.5	NO	1.774	NO
71	41	PFTeDA	713.0 > 669.0	17902.393	12004.970	1.00	6.06	18.641	10.5	105.2	NO	16.225	NO
72	65	13C2-PFDoA	614.7 > 569.7	25800.051	21214.148	1.00	5.59	15.202	11.6	92.7	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
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Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	25800.051	21214.148	1.00	5.59	15.202	11.6	92.7	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	8716.784	28110.816	1.00	5.77	3.876	140.2	93.5	NO		
75	65	13C2-PFDoA	614.7 > 569.7	25800.051	21214.148	1.00	5.59	15.202	11.6	92.7	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	12004.970	28110.816	1.00	6.06	5.338	12.2	97.7	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	12004.970	28110.816	1.00	6.06	5.338	12.2	97.7	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	3590.057	11672.236	1.00	6.18	46.136	49.2	98.4	NO	2.111	NO
80	43	PFHxDA	813.1 > 768.6	9618.203	7613.637	1.00	6.42	6.316	9.9	99.0	NO	10.724	NO
81	44	PFODA	913.1 > 868.8	12999.172	7613.637	1.00	6.67	8.537	11.4	114.1	NO		
82	45	N-MeFOSE	616.1 > 58.9	3585.404	9645.976	1.00	6.37	55.755	51.4	102.9	NO		
83	46	N-EtFOSE	630.1 > 58.9	4392.936	9799.158	1.00	6.53	67.245	50.3	100.6	NO		
84	72	13C4-PFBA	217.0 > 172.0	8388.434	8388.434	1.00	1.19	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	11672.236	28110.816	1.00	6.20	5.190	159.8	106.6	NO		
86	69	13C2-PFHxDA	815 > 769.7	7613.637	28110.816	1.00	6.42	3.386	4.6	93.0	NO		
87	69	13C2-PFHxDA	815 > 769.7	7613.637	28110.816	1.00	6.42	3.386	4.6	93.0	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	9645.976	28110.816	1.00	6.36	4.289	144.2	96.2	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	9799.158	28110.816	1.00	6.51	4.357	143.1	95.4	NO		
90	73	13C5-PFHxA	318.0 > 272.9	20996.902	20996.902	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	29836.182	29836.182	1.00	4.14	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1432.422	1432.422	1.00	3.77	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	15746.935	15746.935	1.00	4.59	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2813.405	2813.405	1.00	4.68	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	21214.148	21214.148	1.00	4.97	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	28110.816	28110.816	1.00	5.30	12.500	12.5	100.0	NO		

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Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

Full Runlog added 8/21/19. GM 8/21/19

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Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 19 Jul 2019 12:00:26
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: PFBA

A Aquisition error. GM 8/21/19

	#	Name	ID		Acq.Date	Acq.Time
1	1	190718M1_1	IPA		18-Jul-19	07:56:08
2	2	190718M1_2	IPA		18-Jul-19	08:06:58
3	3	190718M1_3	IPA		18-Jul-19	08:17:31
4	4	190718M1_4	ST190718M1-1 PFC CS0 19G1103		18-Jul-19	08:28:09
5	5	190718M1_5	IB		18-Jul-19	08:38:42
6	6	190718M1_6	1902056-02 AA-EFF-20190710 0.12064		18-Jul-19	08:49:23
7	7	190718M1_7	B9G0127-BSD1 LCSD 0.125		18-Jul-19	08:59:59
8	8	190718M1_8	B9G0127-BLK1 Method Blank 0.125		18-Jul-19	09:12:57
9	9	190718M1_9	1902054-02 STWRT-FB-002-JL-071010 0.11813		18-Jul-19	09:23:30
10	10	190718M1_10	1902056-01@5X AA-INF-20190710 0.11915		18-Jul-19	09:34:08
11	11	190718M1_11	IPA		18-Jul-19	09:44:46
12	12	190718M1_12	ST190718M1-2 PFC CS3 19G1106		18-Jul-19	09:55:19
13	13	190718M1_13	IPA		18-Jul-19	10:05:58
14	14	190718M1_14	B9G0080-BS1 OPR 0.25		18-Jul-19	10:16:39
15	15	190718M1_15	B9G0080-BLK1 Method Blank 0.25		18-Jul-19	10:27:14
16	16	190718M1_16	1901888-01 SWIN1906271320KER 0.24398		18-Jul-19	10:37:53
17	17	190718M1_17	1901889-01 SWIN1906271350KER 0.23214		18-Jul-19	10:48:26
18	18	190718M1_18	1901890-01 SWIN1906271500KER 0.24347		18-Jul-19	10:59:05
19	19	190718M1_19	1901919-01 SWIN1906260850GSC 0.24194		18-Jul-19	11:09:43
20	20	190718M1_20	B9F0253-BS1 OPR 0.125	A	18-Jul-19	11:21:11
21	21	190718M1_21	1901921-01 SWIN1906260935GSC 0.25302		18-Jul-19	11:31:45
22	22	190718M1_22	1901923-01 SWIN1906261030GSC 0.23676		18-Jul-19	11:42:23
23	23	190718M1_23	B9F0253-BS1 OPR 0.125		18-Jul-19	11:54:42
24	24	190718M1_24	1901924-01 SWIN1906261240GSC 0.23934		18-Jul-19	12:05:19
25	25	190718M1_25	1901925-01 SWIN1906280740GSC 0.24848		18-Jul-19	12:17:23
26	26	190718M1_26	1901925-02 SWIN1906280740GSC-FD 0.23719		18-Jul-19	12:28:00
27	27	190718M1_27	1901926-01 SWIN1906280840GSC 0.23337		18-Jul-19	12:38:32
28	28	190718M1_28	IPA		18-Jul-19	12:49:11
29	29	190718M1_29	ST190718M1-3 PFC CS3 19G1106		18-Jul-19	12:59:43
30	30	190718M1_30	IPA		18-Jul-19	13:10:22
31	31	190718M1_31	1901927-01 SWIN1906280925GSC 0.2436		18-Jul-19	13:20:58
32	32	190718M1_32	1901928-01 SWIN1906281040GSC 0.24365		18-Jul-19	13:31:33

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
33	33	190718M1_33	1901929-01 SWIN1906281125GSC 0.24754	18-Jul-19	13:42:07
34	34	190718M1_34	1901930-01 SWIN1906281215GSC 0.24862	18-Jul-19	13:52:45
35	35	190718M1_35	1901931-01 SWIN1906261345GSC 0.24093	18-Jul-19	14:03:18
36	36	190718M1_36	1902049-03 EB07-070819 0.25547	18-Jul-19	14:13:56
37	37	190718M1_37	1902049-12 EB08-070919 0.25637	18-Jul-19	14:24:30
38	38	190718M1_38	B9G0153-BLK1 Method Blank 0.25	18-Jul-19	14:35:38
39	39	190718M1_39	1902048-10 EB06-070319 0.2586	18-Jul-19	14:46:12
40	40	190718M1_40	B9G0153-BS1 OPR 0.25	18-Jul-19	14:56:50
41	41	190718M1_41	B9G0153-BSD1 LCSD 0.25	18-Jul-19	15:07:23
42	42	190718M1_42	1901901-01 MACON_GW_062819 0.11674	18-Jul-19	15:20:30
43	43	190718M1_43	B9G0147-BS1 OPR 0.25	18-Jul-19	15:31:05
44	44	190718M1_44	B9G0147-BLK1 Method Blank 0.25	18-Jul-19	15:41:44
45	45	190718M1_45	1902052-01 1907364-01A 0.24349	18-Jul-19	15:52:17
46	46	190718M1_46	1902052-02 1907364-02A 0.24144	18-Jul-19	16:02:47
47	47	190718M1_47	IPA	18-Jul-19	16:13:25
48	48	190718M1_48	ST190718M1-4 PFC CS3 19G1106	18-Jul-19	16:24:04
49	49	190718M1_49	IPA	18-Jul-19	16:34:42
50	50	190718M1_50	1902053-01 1907368-01A 0.24543	18-Jul-19	16:45:15
51	51	190718M1_51	1902053-02 1907368-02A 0.23176	18-Jul-19	16:55:54
52	52	190718M1_52	1902055-01 1907363-01A 0.25186	18-Jul-19	17:06:27
53	53	190718M1_53	1902055-02 1907363-02A 0.2408	18-Jul-19	17:17:05
54	54	190718M1_54	1902076-01 AS-SW-01-0719 0.24981	18-Jul-19	17:27:39
55	55	190718M1_55	1902076-02 AS-PW-01-0719 0.24432	18-Jul-19	17:38:17
56	56	190718M1_56	1902076-03 AS-SW-02-0719 0.24344	18-Jul-19	17:48:50
57	57	190718M1_57	1902076-04 AS-PW-02-0719 0.24256	18-Jul-19	17:59:28
58	58	190718M1_58	1902076-05 AS-SW-03-0719 0.24213	18-Jul-19	18:10:06
59	59	190718M1_59	1902076-06 AS-PW-03-0719 0.25236	18-Jul-19	18:20:40
60	60	190718M1_60	IPA	18-Jul-19	18:31:18
61	61	190718M1_61	ST190718M1-5 PFC CS3 19G1106	18-Jul-19	18:41:57
62	62	190718M1_62	IPA	18-Jul-19	18:52:30
63	63	190718M1_63	1902076-07 AS-SW-04-0719 0.2378	18-Jul-19	19:03:09
64	64	190718M1_64	1902076-08 AS-PW-04-0719 0.25413	18-Jul-19	19:13:47
65	65	190718M1_65	1902076-09 AS-SW-05-0719 0.2484	18-Jul-19	19:24:20
66	66	190718M1_66	1902076-10 AS-PW-05-0719 0.26123	18-Jul-19	19:34:58
67	67	190718M1_67	B9G0103-BS1 OPR 0.25	18-Jul-19	19:45:31
68	68	190718M1_68	B9G0103-BLK1 Method Blank 0.25	18-Jul-19	19:56:10

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
69	69	190718M1_69	1901962-01 SWIN1906270800GSC 0.23842	18-Jul-19	20:06:48
70	70	190718M1_70	1901962-02 SWIN1906270800GSC-FD 0.25079	18-Jul-19	20:17:21
71	71	190718M1_71	1901963-01 SWIN1906270915GSC 0.23089	18-Jul-19	20:28:00
72	72	190718M1_72	1901964-01 SWIN1906271000GSC 0.24416	18-Jul-19	20:38:33
73	73	190718M1_73	1901965-01 SWIN1906271025GSC 0.24871	18-Jul-19	20:49:12
74	74	190718M1_74	1901966-01 SWIN1906271100GSC 0.2431	18-Jul-19	20:59:50
75	75	190718M1_75	IPA	18-Jul-19	21:10:22
76	76	190718M1_76	ST190718M1-6 PFC CS3 19G1106	18-Jul-19	21:21:01
77	77	190718M1_77	IPA	18-Jul-19	21:31:40
78	78	190718M1_78	1901967-01 SWIN1906271135GSC 0.23334	18-Jul-19	21:42:13
79	79	190718M1_79	1901968-01 SWIN1906271245GSC 0.24441	18-Jul-19	21:52:51
80	80	190718M1_80	1901969-01 SWIN1906271315GSC 0.2441	18-Jul-19	22:03:24
81	81	190718M1_81	1901970-01 SWIN1906271345GSC 0.2504	18-Jul-19	22:14:02
82	82	190718M1_82	1901971-01 SWIN1906271445GSC 0.24326	18-Jul-19	22:24:35
83	83	190718M1_83	1901987-01 BWS 0.24274	18-Jul-19	22:35:13
84	84	190718M1_84	1901995-02 WEF1907080940JSJ 0.2503	18-Jul-19	22:45:52
85	85	190718M1_85	1901995-03 WEF1907080948JSJ 0.25251	18-Jul-19	22:56:26
86	86	190718M1_86	B9G0183-BS1 OPR 0.25	18-Jul-19	23:07:04
87	87	190718M1_87	B9G0183-BLK1 Method Blank 0.25	18-Jul-19	23:17:36
88	88	190718M1_88	1901661-01RE1 WMP1906180936BRH 0.25118	18-Jul-19	23:28:15
89	89	190718M1_89	1901661-02RE1 WEF1906180942BRH 0.24993	18-Jul-19	23:38:53
90	90	190718M1_90	IPA	18-Jul-19	23:49:26
91	91	190718M1_91	ST190718M1-7 PFC CS3 19G1106	19-Jul-19	00:00:04
92	92	190718M1_92	IPA	19-Jul-19	00:10:38
93	93	190718M1_93	1901661-03RE1 WEF1906180957BRH 0.25772	19-Jul-19	00:21:16
94	94	190718M1_94	1902105-01 6C Discharge 0.24191	19-Jul-19	00:31:49
95	95	190718M1_95	1902105-02 5A Raw Leachate 0.24309	19-Jul-19	00:42:27
96	96	190718M1_96	1902105-03 Field Blank 0.23889	19-Jul-19	00:53:00
97	97	190718M1_97	1902106-01 WT1907110855SK 0.23917	19-Jul-19	01:03:38
98	98	190718M1_98	1902106-02 WR1907110930SK 0.24874	19-Jul-19	01:14:12
99	99	190718M1_99	B9G0184-BS1 OPR 0.25	19-Jul-19	01:24:50
100	100	190718M1_100	B9G0184-BLK1 Method Blank 0.25	19-Jul-19	01:35:23
101	101	190718M1_101	1902129-01 WIN1907151315GGA 0.24332	19-Jul-19	01:45:54
102	102	190718M1_102	1902129-02 WMP1907151305GGA 0.25773	19-Jul-19	01:56:32
103	103	190718M1_103	1902129-03 WEF1907081510GGA 0.25452	19-Jul-19	02:07:06
104	104	190718M1_104	IPA	19-Jul-19	02:17:44

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

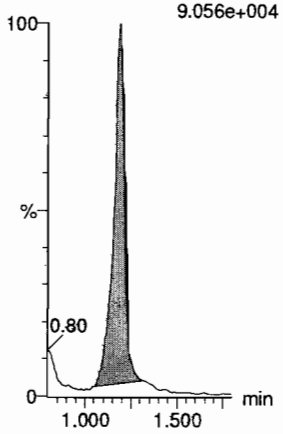
	#	Name	ID	Acq.Date	Acq.Time
105	105	190718M1_105	ST190718M1-8 PFC CS3 19G1106	19-Jul-19	02:28:22
106	106	190718M1_106	IPA	19-Jul-19	02:38:55
107	107	190718M1_107	IB tester	19-Jul-19	02:49:33
108	108	190718M1_108	QC NS SUP	19-Jul-19	03:00:09

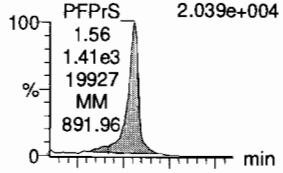
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

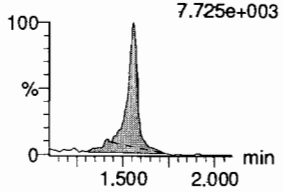
Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

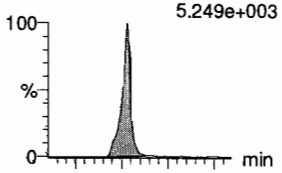
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

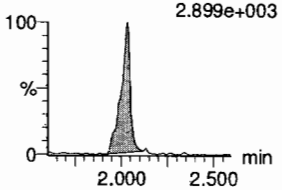
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

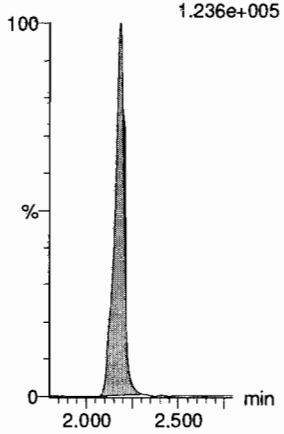
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
9.056e+004


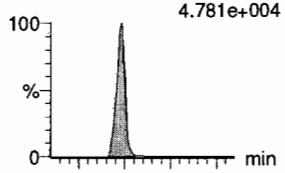
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.9
2.039e+004


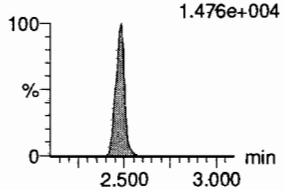
F6:MRM of 2 channels,ES-
248.9 > 98.9
7.725e+003


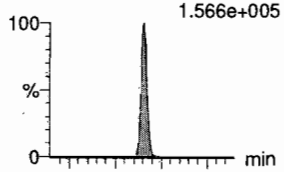
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
5.249e+003


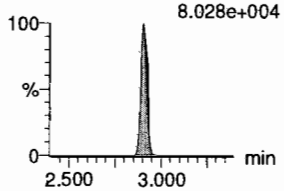
F5:MRM of 2 channels,ES-
240.9 > 116.9
2.899e+003


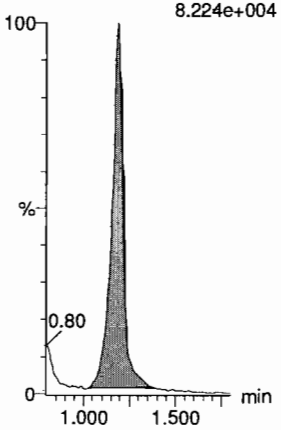
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
1.236e+005


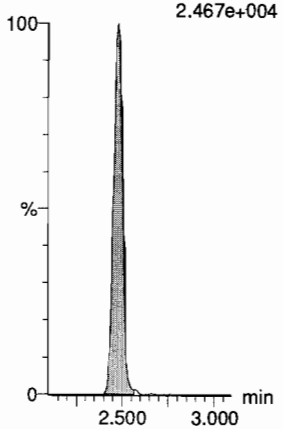
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
4.781e+004


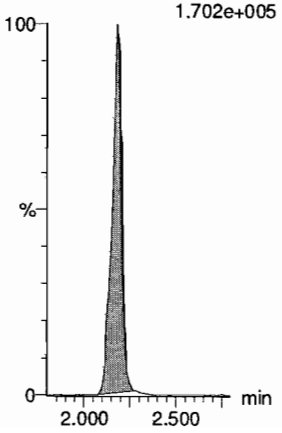
F11:MRM of 2 channels,ES-
299.0 > 99.0
1.476e+004


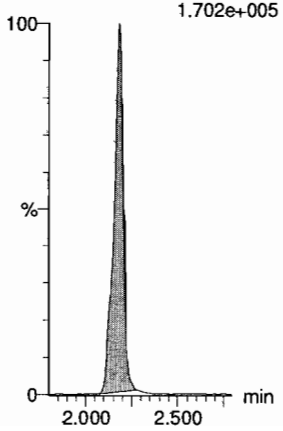
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 306.9
1.566e+005


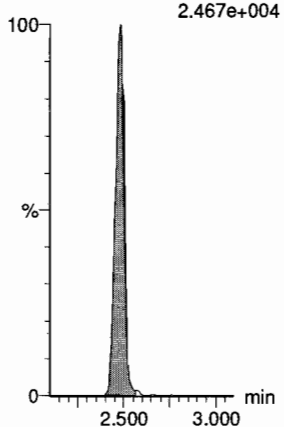
F16:MRM of 2 channels,ES-
327.0 > 80.9
8.028e+004


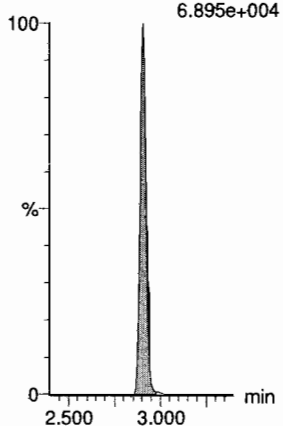
13C3-PFBA
F3:MRM of 1 channel,ES-
216.1 > 171.8
8.224e+004


13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.467e+004


13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.702e+005


13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.702e+005


13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.467e+004


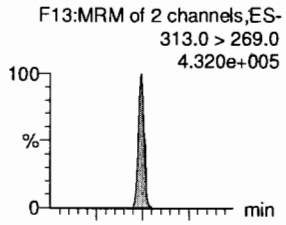
13C2-4:2 FTS
F17:MRM of 2 channels,ES-
329.0 > 79.9
6.895e+004


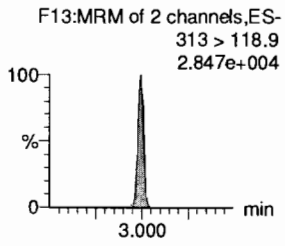
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

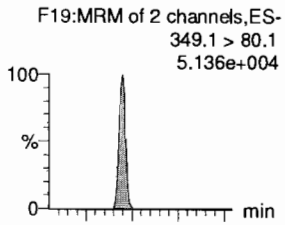
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

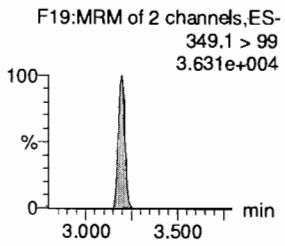
PFHxA



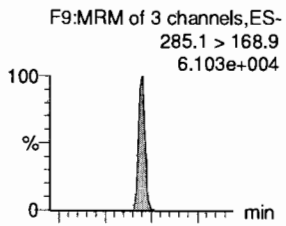


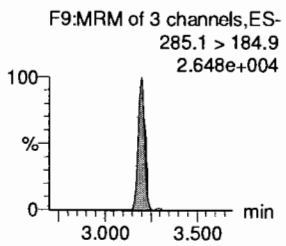
PFPeS



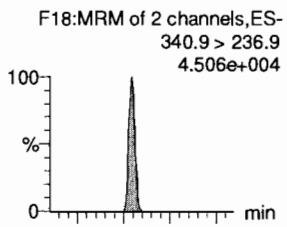


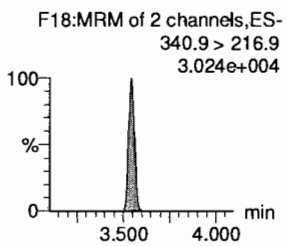
HFPO-DA



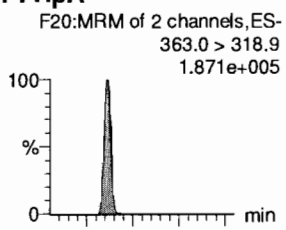


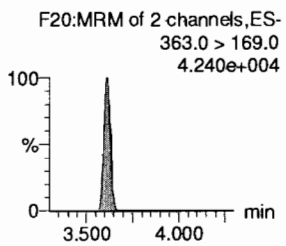
5:3 FTCA



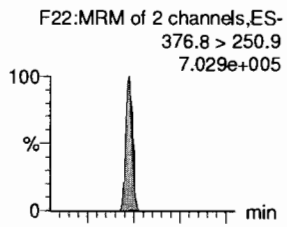


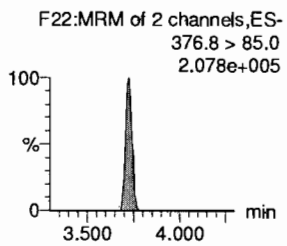
PFHpA



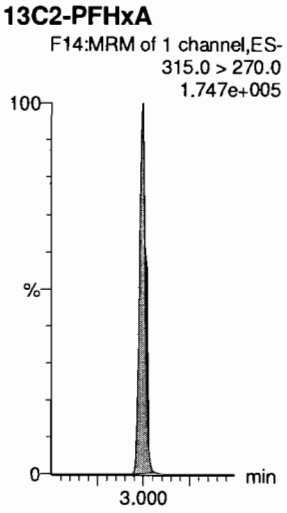


ADONA

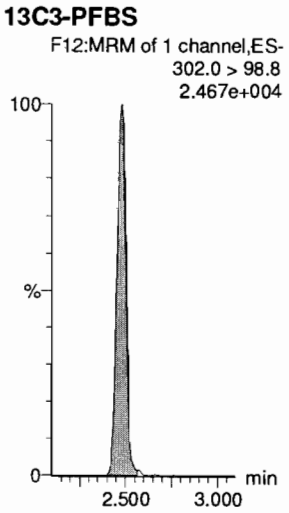




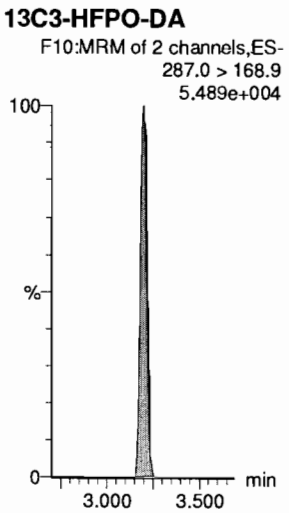
13C2-PFHxA



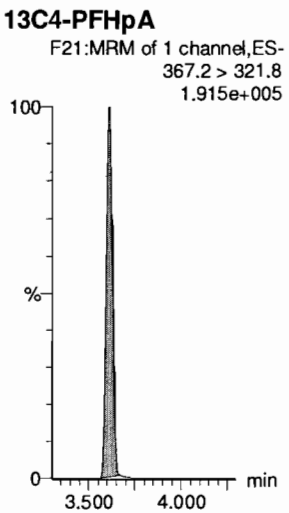
13C3-PFBS



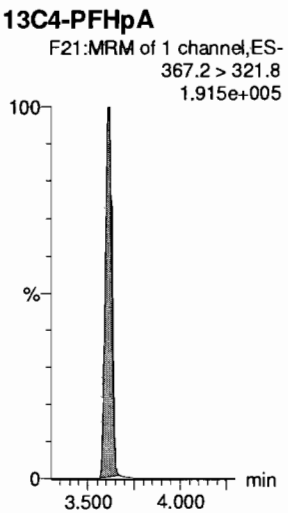
13C3-HFPO-DA



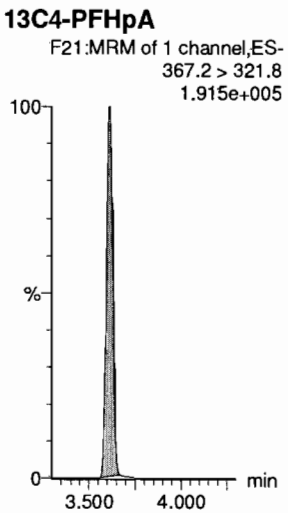
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA



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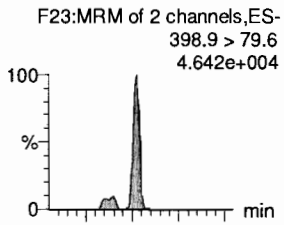
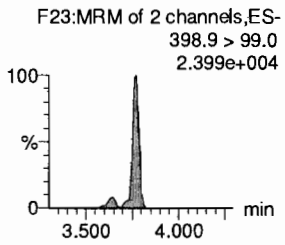
Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

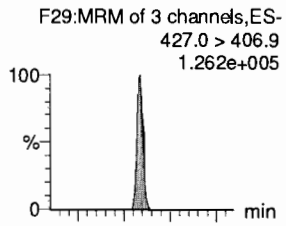
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

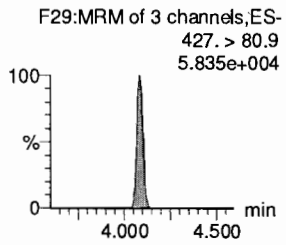
L-PFHxS



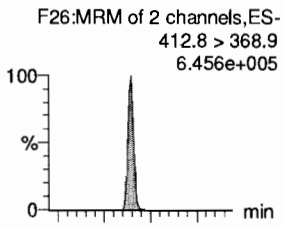


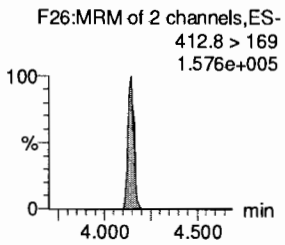
6:2 FTS



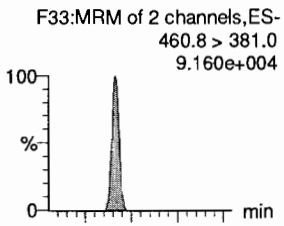


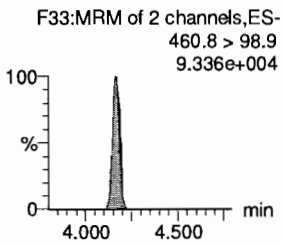
L-PFOA



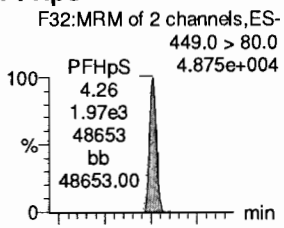


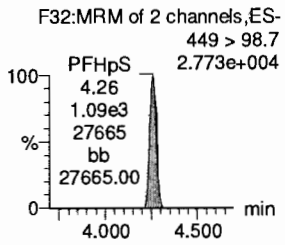
PFEChS



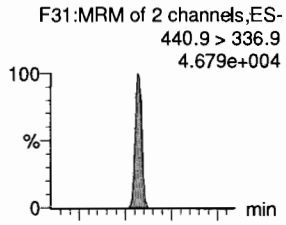


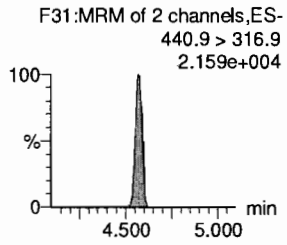
PFHpS



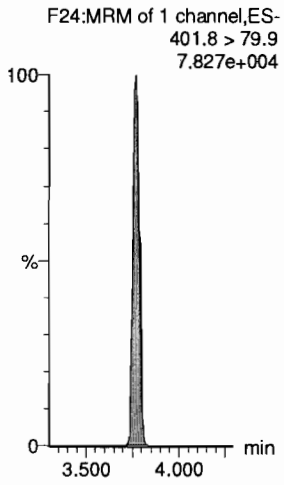


7:3 FTCA

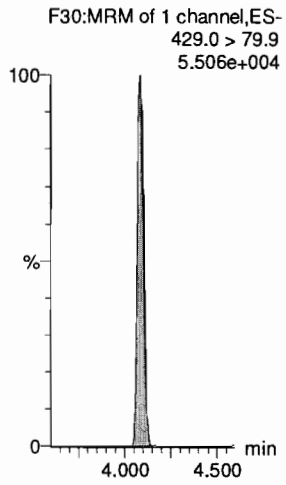




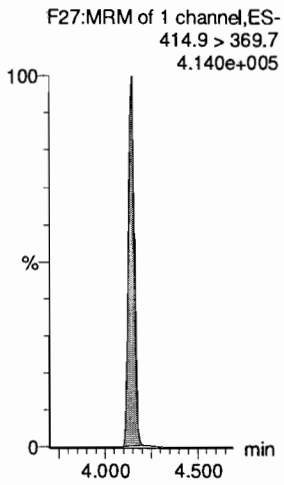
13C3-PFHxS



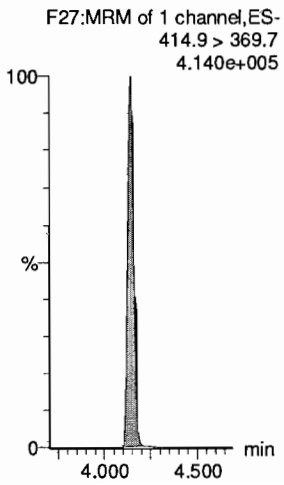
13C2-6:2 FTS



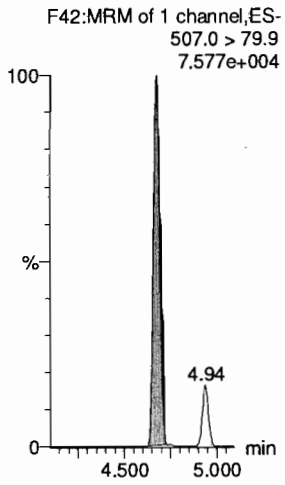
13C2-PFOA



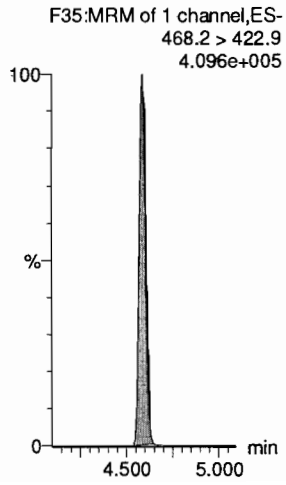
13C2-PFOA



13C8-PFOS



13C5-PFNA

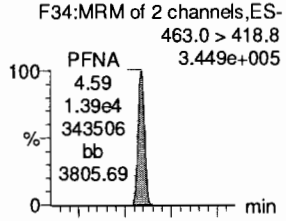


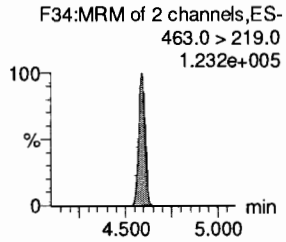
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

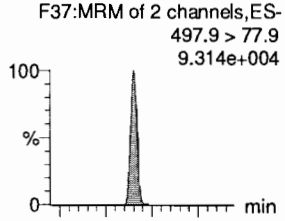
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

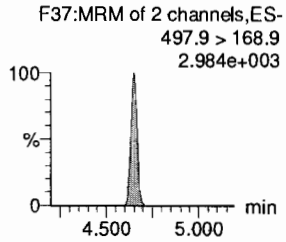
PFNA



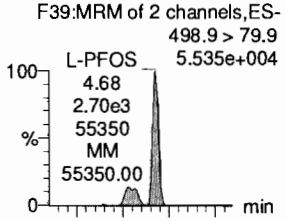


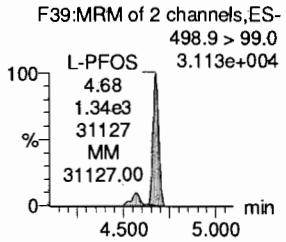
PFOSA



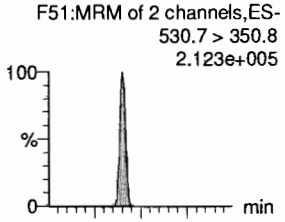


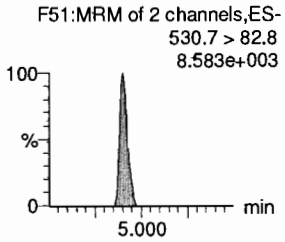
L-PFOS



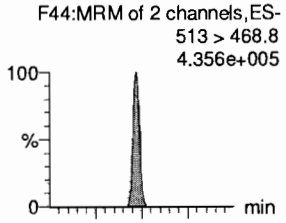


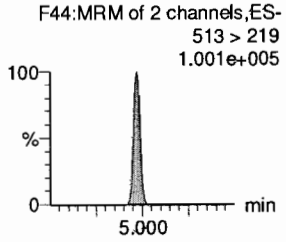
9Cl-PF30NS



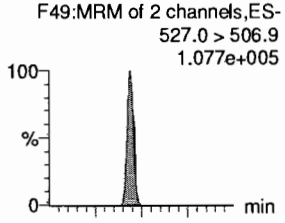


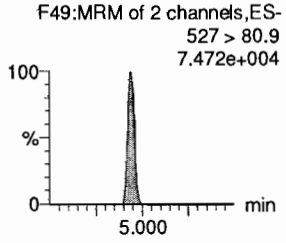
PFDA



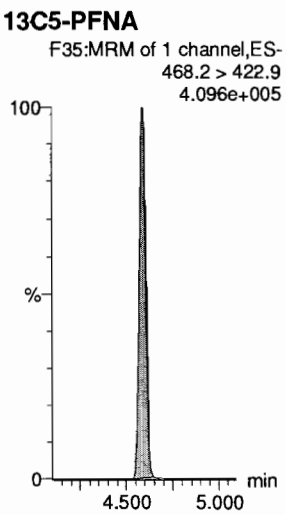


8:2 FTS

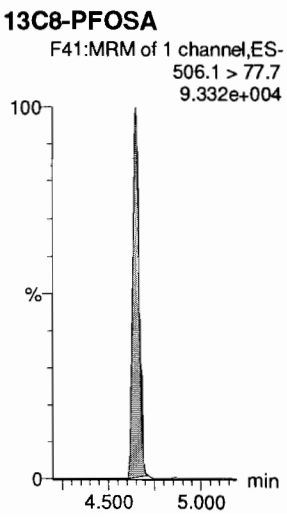




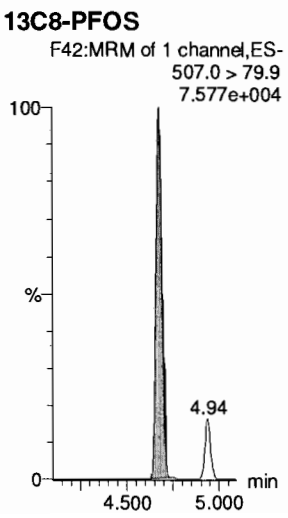
13C5-PFNA



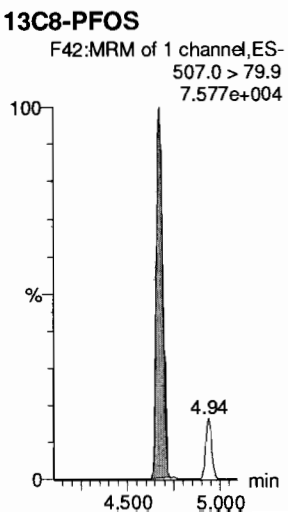
13C8-PFOSA



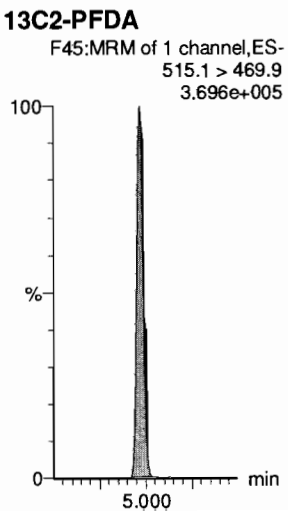
13C8-PFOS



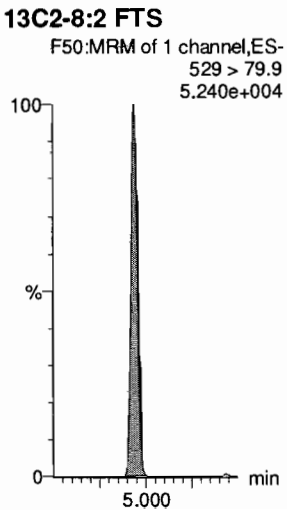
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

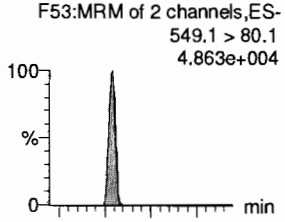


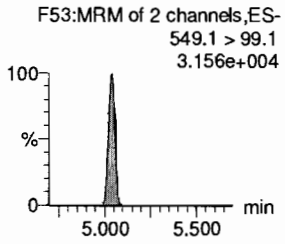
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

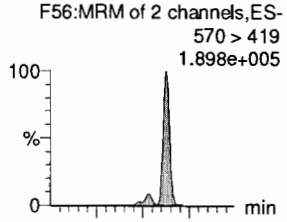
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

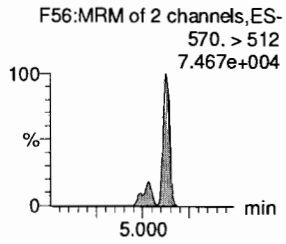
PFNS



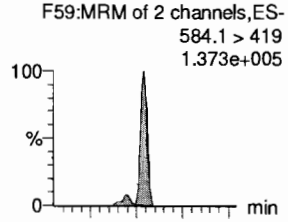


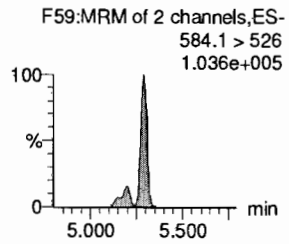
L-MeFOSAA





L-EtFOSAA





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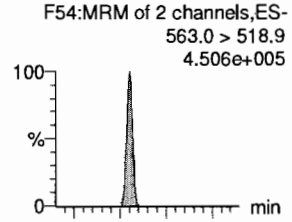
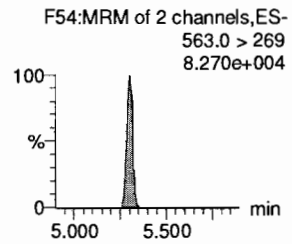
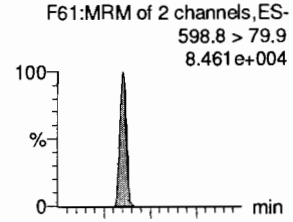
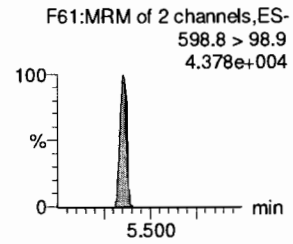




PFDS





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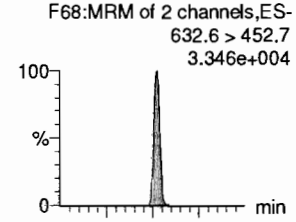
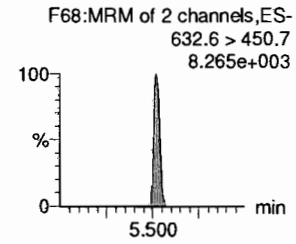
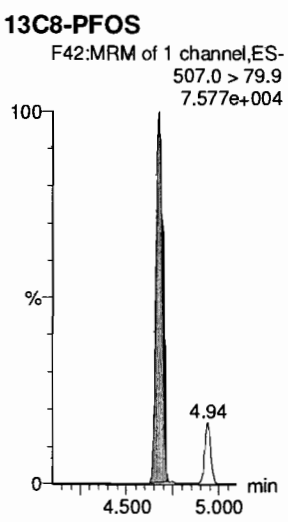
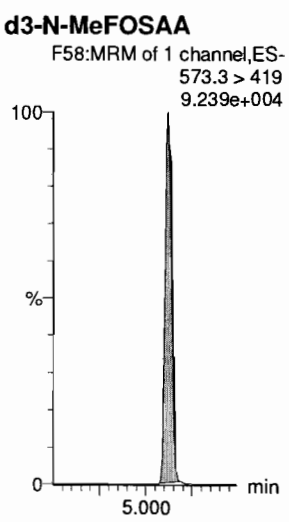




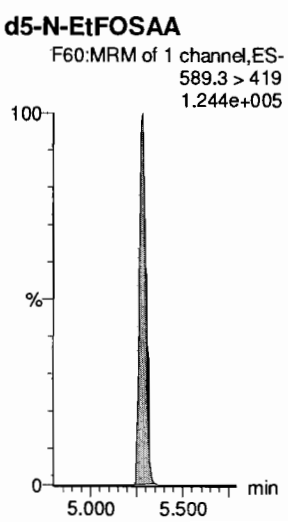
13C8-PFOS



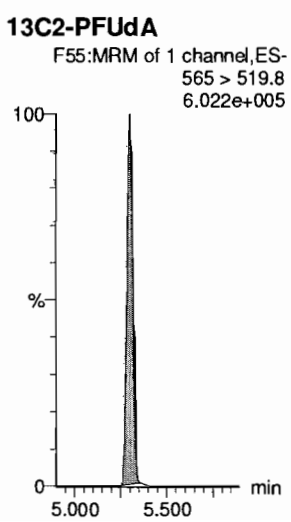
d3-N-MeFOSAA



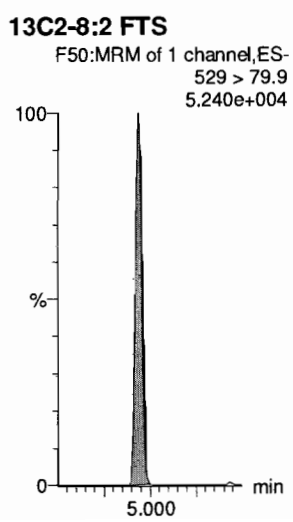
d5-N-EtFOSAA



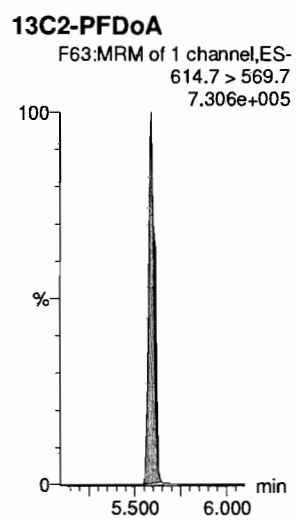
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

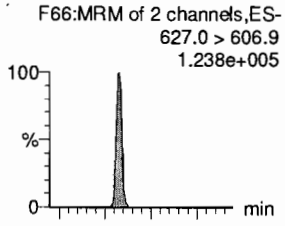


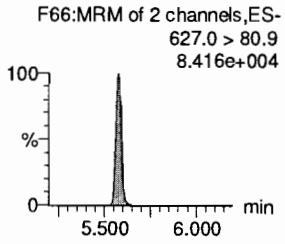
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

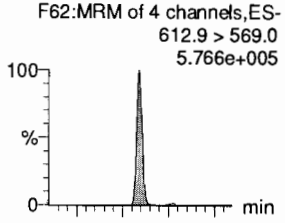
Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

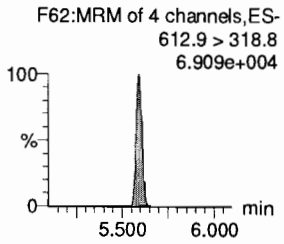
10:2 FTS



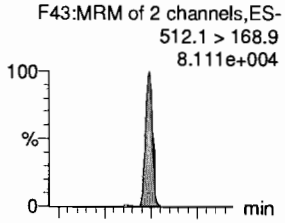


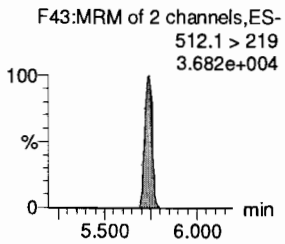
PFDoA



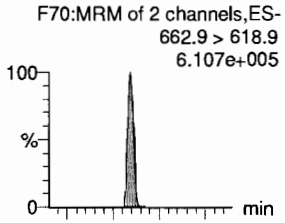


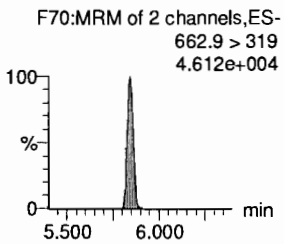
N-MeFOSA



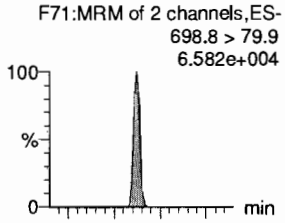


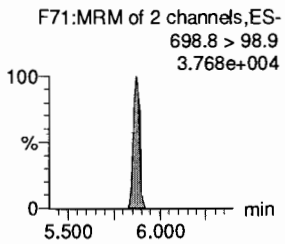
PFTrDA



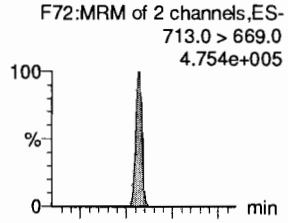


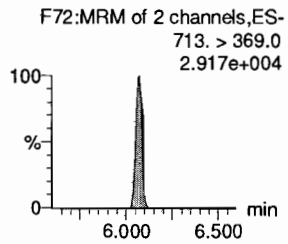
PFDoS



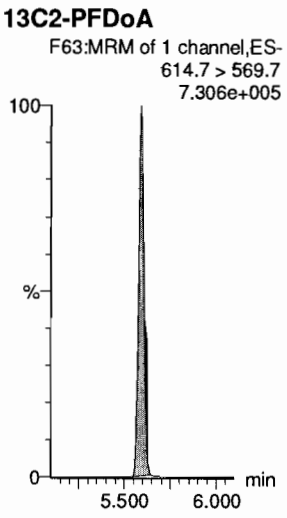


PFTeDA

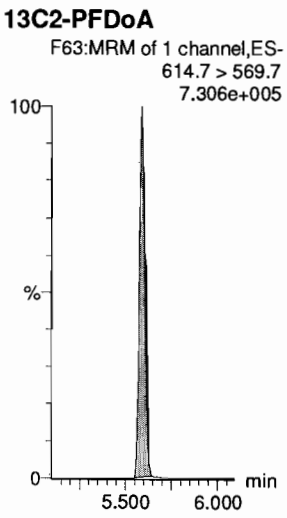




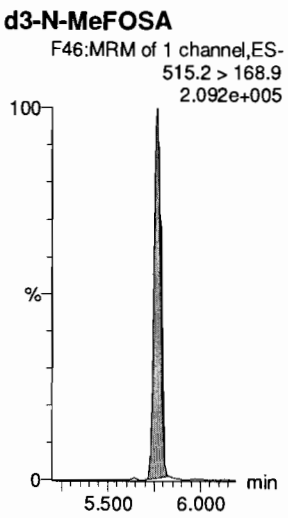
13C2-PFDoA



13C2-PFDoA



d3-N-MeFOSA



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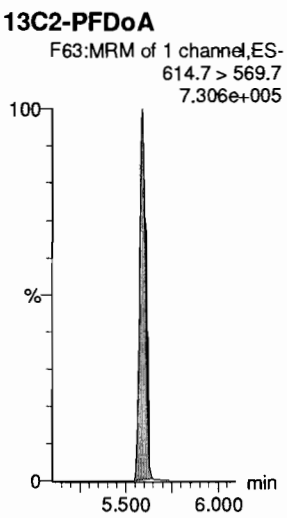

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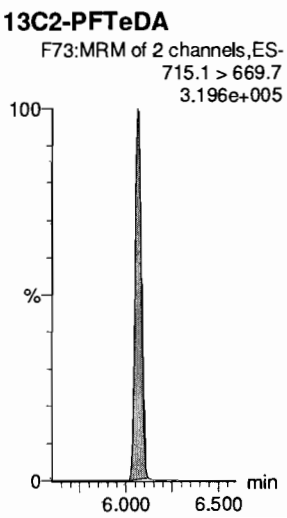

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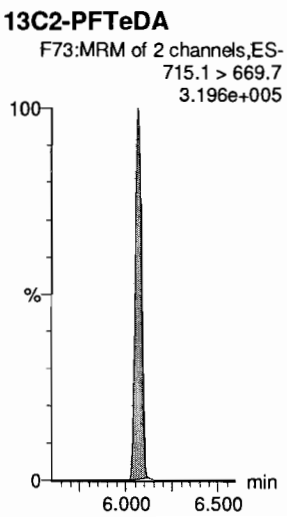
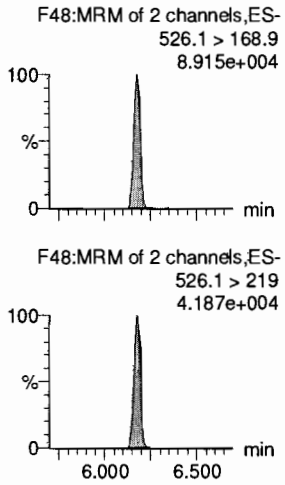


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

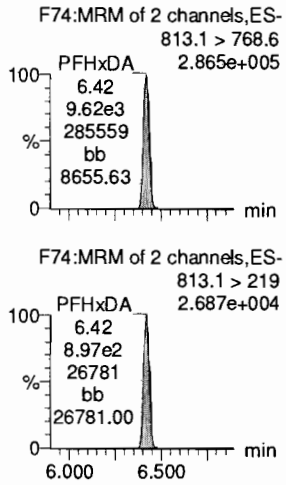
Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

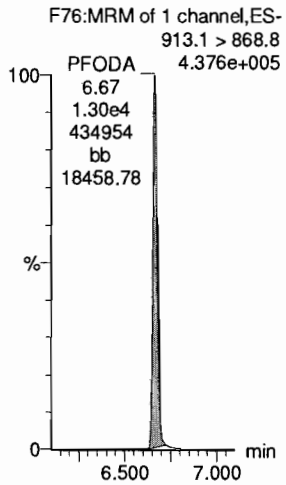
N-EtFOSA



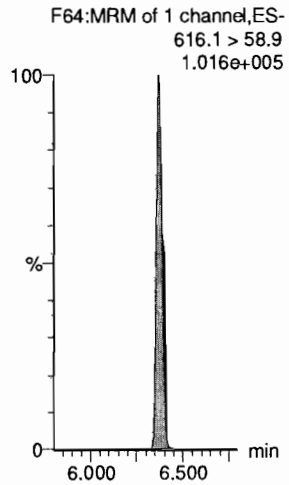
PFHxDA



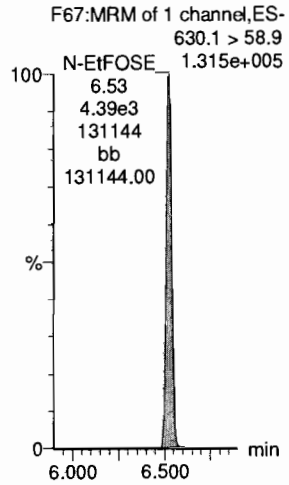
PFODA



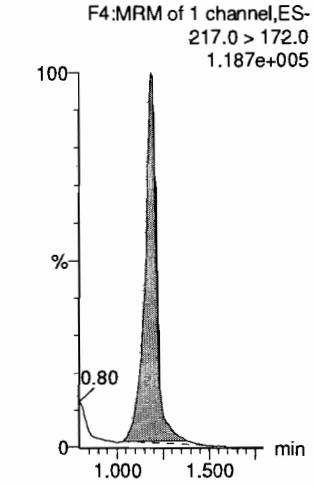
N-MeFOSE



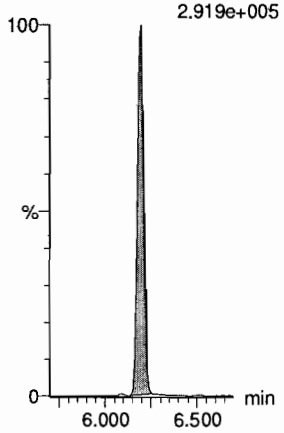
N-EtFOSE



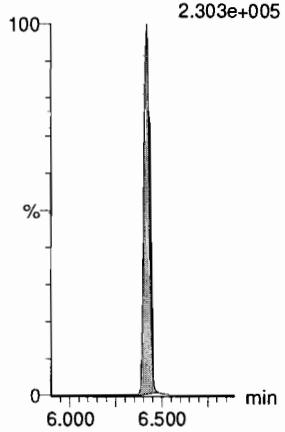
13C4-PFBA



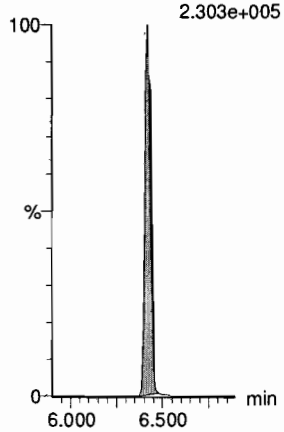
d5-N-ETFOSA



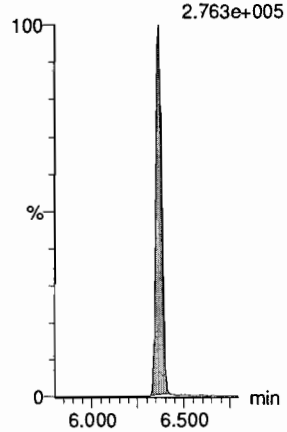
13C2-PFHxDA



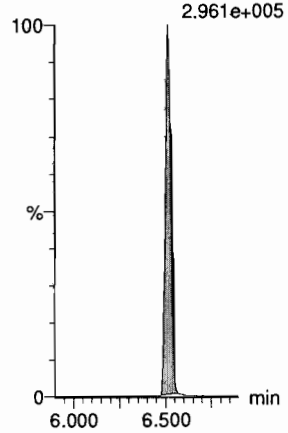
13C2-PFHxDA



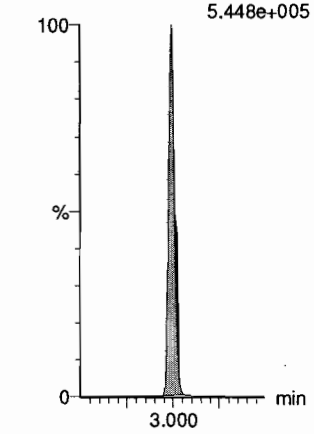
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

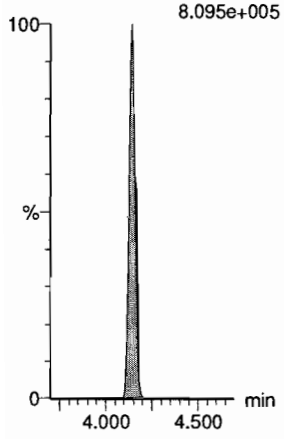


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-12.qld

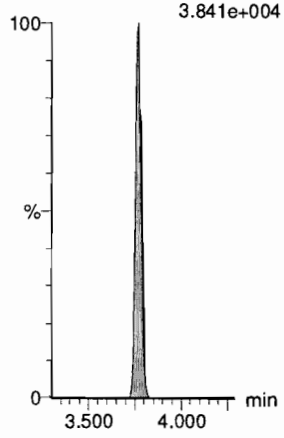
Last Altered: Thursday, July 18, 2019 10:13:56 Pacific Daylight Time
Printed: Thursday, July 18, 2019 10:14:17 Pacific Daylight Time

Name: 190718M1_12, Date: 18-Jul-2019, Time: 09:55:19, ID: ST190718M1-2 PFC CS3 19G1106, Description: PFC CS3 19G1106

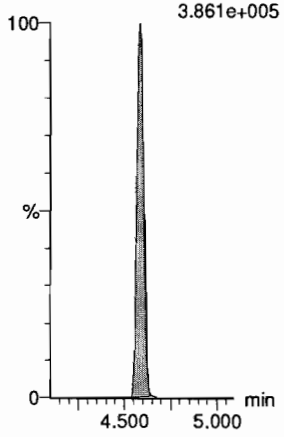
13C8-PFOA



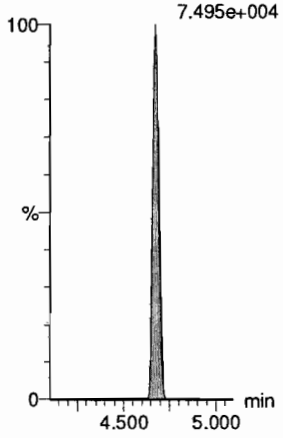
18O2-PFHxS



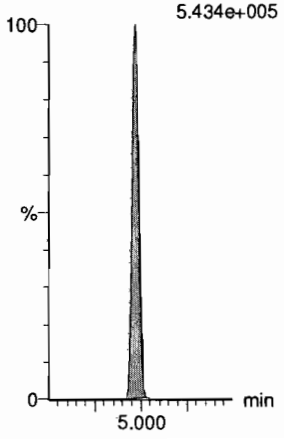
13C9-PFNA



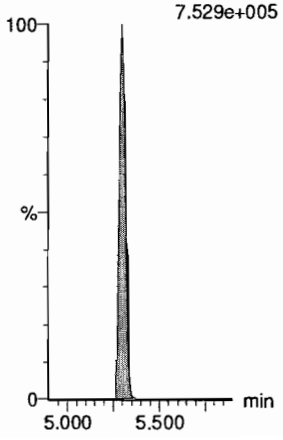
13C4-PFOS



13C6-PFDA



13C7-PFUdA



LC Calibration Standards Review Checklist Q4

			ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
Calibration ID:	ST190718M1-3	L (M) H	☑	☑	☐	☑	☑	☑	☑
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐ N/A Cald 7/18/19	☐	☐	☐	☐	☐	☐
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: 07/15/19

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Instrument Blank Saved ☑

All Branches in Acquisition Window ☑

IIS Area Saved ☑

Reviewed By: JM 7/19/19
Initials/Date

Comments:

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

JAM 7/19/19

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	6180.249	5429.204	1.00	1.20	14.229	10.1	100.6	NO		
2	2	PFPrS	248.9 > 79.9	1422.115	1364.624	1.00	1.56	13.027	9.8	97.7	NO	2.725	NO
3	3	3:3 FTCA	240.9 > 176.9	298.240	9052.201	1.00	2.03	0.412	10.4	104.3	NO	1.866	NO
4	4	PFPeA	263.1 > 218.9	6619.666	9052.201	1.00	2.19	9.141	9.9	99.1	NO		
5	5	PFBS	299.0 > 79.7	2495.433	1364.624	1.00	2.49	22.858	10.0	99.6	NO	3.122	NO
6	6	4:2 FTS	327.0 > 306.9	5793.545	2752.662	1.00	2.91	26.309	9.6	95.9	NO	1.946	NO
7	47	13C3-PFBA	216.1 > 171.8	5429.204	8099.800	1.00	1.20	8.379	12.5	99.8	NO		
8	49	13C3-PFBS	302.0 > 98.8	1364.624	1139.359	1.00	2.49	14.971	14.5	115.8	NO		
9	48	13C3-PFPeA	266.0 > 221.8	9052.201	20293.139	1.00	2.19	5.576	12.3	98.4	NO		
10	48	13C3-PFPeA	266.0 > 221.8	9052.201	20293.139	1.00	2.19	5.576	12.3	98.4	NO		
11	49	13C3-PFBS	302.0 > 98.8	1364.624	1139.359	1.00	2.49	14.971	14.5	115.8	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2752.662	1139.359	1.00	2.91	30.200	16.2	130.0	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	15343.641	6464.508	1.00	2.99	11.868	10.3	102.6	NO	15.143	NO
15	8	PFPeS	349.1>80.1	1930.864	1364.624	1.00	3.20	17.687	11.8	117.8	NO	1.532	NO
16	9	HFPO-DA	285.1 > 168.9	1867.442	1796.355	1.00	3.20	5.198	8.9	88.7	NO	2.258	NO
17	10	5:3 FTCA	340.9 > 236.9	1583.837	7122.253	1.00	3.55	2.780	10.0	100.1	NO	1.449	NO
18	11	PFHpA	363.0 > 318.9	7205.570	7122.253	1.00	3.62	12.646	10.1	100.9	NO	4.514	NO
19	12	ADONA	376.8 > 250.9	26051.016	7122.253	1.00	3.73	45.721	9.7	97.2	NO	3.185	NO
20	52	13C2-PFHxA	315.0 > 270.0	6464.508	20293.139	1.00	2.99	3.982	5.0	100.7	NO		
21	49	13C3-PFBS	302.0 > 98.8	1364.624	1139.359	1.00	2.49	14.971	14.5	115.8	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1796.355	20293.139	1.00	3.21	1.107	4.9	97.6	NO		
23	53	13C4-PFHpA	367.2 > 321.8	7122.253	20293.139	1.00	3.61	4.387	12.0	96.2	NO		
24	53	13C4-PFHpA	367.2 > 321.8	7122.253	20293.139	1.00	3.61	4.387	12.0	96.2	NO		
25	53	13C4-PFHpA	367.2 > 321.8	7122.253	20293.139	1.00	3.61	4.387	12.0	96.2	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	2177.968	2773.259	1.00	3.77	9.817	9.9	98.9	NO	2.226	NO
28	15	6:2 FTS	427.0 > 406.9	4798.980	2057.618	1.00	4.09	29.154	10.1	100.6	NO	2.119	NO
29	16	L-PFOA	412.8 > 368.9	23155.207	14201.538	1.00	4.15	20.381	10.2	102.0	NO	3.763	NO
30	18	PFecHS	460.8 > 381.0	3649.962	14201.538	1.00	4.17	3.213	10.0	100.0	NO	0.929	NO
31	19	PFHpS	449.0 > 80.0	2149.612	2828.982	1.00	4.26	9.498	11.2	112.0	NO	1.833	NO
32	20	7:3 FTCA	440.9 > 336.9	1745.358	15211.328	1.00	4.57	1.434	9.4	94.2	NO	2.027	NO
33	54	13C3-PFHxS	401.8 > 79.9	2773.259	1139.359	1.00	3.77	30.426	13.8	110.1	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	2057.618	2656.050	1.00	4.09	9.684	14.2	113.5	NO		
35	58	13C2-PFOA	414.9 > 369.7	14201.538	29158.391	1.00	4.15	6.088	12.0	95.7	NO		
36	58	13C2-PFOA	414.9 > 369.7	14201.538	29158.391	1.00	4.15	6.088	12.0	95.7	NO		

CAH 7/18/19

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2828.982	2656.050	1.00	4.68	13.314	13.1	104.9	NO		
38	56	13C5-PFNA	468.2 > 422.9	15211.328	15392.850	1.00	4.59	12.353	12.4	99.0	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	13456.766	15211.328	1.00	4.59	11.058	10.7	106.6	NO	2.784	NO
41	22	PFOSA	497.9 > 77.9	3595.214	3749.857	1.00	4.65	11.985	10.4	103.5	NO	39.995	NO
42	23	L-PFOS	498.9 > 79.9	2911.039	2828.982	1.00	4.68	12.863	10.1	101.1	NO	2.315	NO
43	25	9Cl-PF30NS	530.7 > 350.8	7840.655	2828.982	1.00	4.90	34.644	10.0	99.9	NO	19.322	NO
44	26	PFDA	513 > 468.8	16674.844	13647.637	1.00	4.97	15.273	10.2	102.2	NO	4.466	NO
45	27	8:2 FTS	527.0 > 506.9	4186.261	1979.535	1.00	4.94	26.435	10.8	107.6	NO	1.477	NO
46	56	13C5-PFNA	468.2 > 422.9	15211.328	15392.850	1.00	4.59	12.353	12.4	99.0	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3749.857	27344.420	1.00	4.66	1.714	12.4	98.9	NO		
48	59	13C8-PFOS	507.0 > 79.9	2828.982	2656.050	1.00	4.68	13.314	13.1	104.9	NO		
49	59	13C8-PFOS	507.0 > 79.9	2828.982	2656.050	1.00	4.68	13.314	13.1	104.9	NO		
50	60	13C2-PFDA	515.1 > 469.9	13647.637	20288.205	1.00	4.97	8.409	12.6	100.5	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1979.535	2656.050	1.00	4.94	9.316	13.6	108.7	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1995.061	2828.982	1.00	5.04	8.815	11.0	109.6	NO	1.712	NO
54	29	L-MeFOSAA	570 > 419	8157.682	3206.605	1.00	5.13	31.800	10.8	107.6	NO	2.407	NO
55	31	L-EtFOSAA	584.1 > 419	6336.773	4972.289	1.00	5.29	15.930	10.1	101.5	NO	1.395	NO
56	33	PFUdA	563.0 > 518.9	16313.709	21663.094	1.00	5.30	9.413	10.5	105.3	NO	5.737	NO
57	34	PFDS	598.8 > 79.9	2901.467	1979.535	1.00	5.36	18.322	9.8	98.3	NO	1.636	NO
58	35	11Cl-PF30UdS	632.6 > 452.7	1121.222	24205.770	1.00	5.52	0.579	9.8	98.2	NO	4.416	NO
59	59	13C8-PFOS	507.0 > 79.9	2828.982	2656.050	1.00	4.68	13.314	13.1	104.9	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3206.605	27344.420	1.00	5.13	1.466	11.8	94.5	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	4972.289	27344.420	1.00	5.29	2.273	13.0	104.3	NO		
62	63	13C2-PFUdA	565 > 519.8	21663.094	27344.420	1.00	5.31	9.903	12.2	97.6	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1979.535	2656.050	1.00	4.94	9.316	13.6	108.7	NO		
64	65	13C2-PFDoA	614.7 > 569.7	24205.770	20288.205	1.00	5.59	14.914	11.4	91.0	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9	4151.184	1979.535	1.00	5.58	26.213	10.7	106.7	NO	1.519	NO
67	37	PFDoA	612.9 > 569.0	19776.455	24205.770	1.00	5.59	10.213	10.6	106.0	NO	7.586	NO
68	38	N-MeFOSA	512.1 > 168.9	3185.794	8371.303	1.00	5.74	57.084	52.4	104.8	NO	1.889	NO
69	39	PFTrDA	662.9 > 618.9	21624.572	24205.770	1.00	5.85	11.167	11.0	109.6	NO	13.053	NO
70	40	PFDoS	698.8 > 79.9	2330.016	11124.231	1.00	5.87	2.618	9.5	95.4	NO	1.816	NO
71	41	PFTeDA	713.0 > 669.0	17013.557	11124.231	1.00	6.07	19.118	10.8	107.9	NO	15.771	NO
72	65	13C2-PFDoA	614.7 > 569.7	24205.770	20288.205	1.00	5.59	14.914	11.4	91.0	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	24205.770	20288.205	1.00	5.59	14.914	11.4	91.0	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	8371.303	27344.420	1.00	5.77	3.827	138.4	92.3	NO		
75	65	13C2-PFDoA	614.7 > 569.7	24205.770	20288.205	1.00	5.59	14.914	11.4	91.0	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	11124.231	27344.420	1.00	6.07	5.085	11.6	93.1	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	11124.231	27344.420	1.00	6.07	5.085	11.6	93.1	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9	3612.384	11061.683	1.00	6.18	48.985	52.2	104.4	NO	2.161	NO
80	43	PFHxDA	813.1 > 768.6	9185.066	7699.329	1.00	6.42	5.965	9.3	93.5	NO	9.934	NO
81	44	PFODA	913.1 > 868.8	12588.270	7699.329	1.00	6.67	8.175	10.9	109.3	NO		
82	45	N-MeFOSE	616.1 > 58.9	3362.462	9249.161	1.00	6.37	54.531	50.3	100.6	NO		
83	46	N-EtFOSE	630.1 > 58.9	4202.723	10096.516	1.00	6.52	62.438	46.7	93.5	NO		
84	72	13C4-PFBA	217.0 > 172.0	8099.800	8099.800	1.00	1.19	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	11061.683	27344.420	1.00	6.20	5.057	155.7	103.8	NO		
86	69	13C2-PFHxDA	815 > 769.7	7699.329	27344.420	1.00	6.42	3.520	4.8	96.7	NO		
87	69	13C2-PFHxDA	815 > 769.7	7699.329	27344.420	1.00	6.42	3.520	4.8	96.7	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	9249.161	27344.420	1.00	6.36	4.228	142.2	94.8	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	10096.516	27344.420	1.00	6.51	4.615	151.6	101.1	NO		
90	73	13C5-PFHxA	318.0 > 272.9	20293.139	20293.139	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	29158.391	29158.391	1.00	4.15	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1139.359	1139.359	1.00	3.77	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	15392.850	15392.850	1.00	4.59	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2656.050	2656.050	1.00	4.68	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	20288.205	20288.205	1.00	4.97	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	27344.420	27344.420	1.00	5.31	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

Full Runlog added 8/21/19. GM 8/21/19

Last Altered: Tuesday, August 06, 2019 11:48:53 Pacific Daylight Time
Printed: Tuesday, August 06, 2019 11:49:59 Pacific Daylight Time

Method: Z:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 19 Jul 2019 12:00:26
Calibration: Z:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: PFBA

A Aquisition error. GM 8/21/19

	#	Name	ID		Acq.Date	Acq.Time
1	1	190718M1_1	IPA		18-Jul-19	07:56:08
2	2	190718M1_2	IPA		18-Jul-19	08:06:58
3	3	190718M1_3	IPA		18-Jul-19	08:17:31
4	4	190718M1_4	ST190718M1-1 PFC CS0 19G1103		18-Jul-19	08:28:09
5	5	190718M1_5	IB		18-Jul-19	08:38:42
6	6	190718M1_6	1902056-02 AA-EFF-20190710 0.12064		18-Jul-19	08:49:23
7	7	190718M1_7	B9G0127-BSD1 LCSD 0.125		18-Jul-19	08:59:59
8	8	190718M1_8	B9G0127-BLK1 Method Blank 0.125		18-Jul-19	09:12:57
9	9	190718M1_9	1902054-02 STWRT-FB-002-JL-071010 0.11813		18-Jul-19	09:23:30
10	10	190718M1_10	1902056-01@5X AA-INF-20190710 0.11915		18-Jul-19	09:34:08
11	11	190718M1_11	IPA		18-Jul-19	09:44:46
12	12	190718M1_12	ST190718M1-2 PFC CS3 19G1106		18-Jul-19	09:55:19
13	13	190718M1_13	IPA		18-Jul-19	10:05:58
14	14	190718M1_14	B9G0080-BS1 OPR 0.25		18-Jul-19	10:16:39
15	15	190718M1_15	B9G0080-BLK1 Method Blank 0.25		18-Jul-19	10:27:14
16	16	190718M1_16	1901888-01 SWIN1906271320KER 0.24398		18-Jul-19	10:37:53
17	17	190718M1_17	1901889-01 SWIN1906271350KER 0.23214		18-Jul-19	10:48:26
18	18	190718M1_18	1901890-01 SWIN1906271500KER 0.24347		18-Jul-19	10:59:05
19	19	190718M1_19	1901919-01 SWIN1906260850GSC 0.24194		18-Jul-19	11:09:43
20	20	190718M1_20	B9F0253-BS1 OPR 0.125	A	18-Jul-19	11:21:11
21	21	190718M1_21	1901921-01 SWIN1906260935GSC 0.25302		18-Jul-19	11:31:45
22	22	190718M1_22	1901923-01 SWIN1906261030GSC 0.23676		18-Jul-19	11:42:23
23	23	190718M1_23	B9F0253-BS1 OPR 0.125		18-Jul-19	11:54:42
24	24	190718M1_24	1901924-01 SWIN1906261240GSC 0.23934		18-Jul-19	12:05:19
25	25	190718M1_25	1901925-01 SWIN1906280740GSC 0.24848		18-Jul-19	12:17:23
26	26	190718M1_26	1901925-02 SWIN1906280740GSC-FD 0.23719		18-Jul-19	12:28:00
27	27	190718M1_27	1901926-01 SWIN1906280840GSC 0.23337		18-Jul-19	12:38:32
28	28	190718M1_28	IPA		18-Jul-19	12:49:11
29	29	190718M1_29	ST190718M1-3 PFC CS3 19G1106		18-Jul-19	12:59:43
30	30	190718M1_30	IPA		18-Jul-19	13:10:22
31	31	190718M1_31	1901927-01 SWIN1906280925GSC 0.2436		18-Jul-19	13:20:58
32	32	190718M1_32	1901928-01 SWIN1906281040GSC 0.24365		18-Jul-19	13:31:33

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

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34	34	190718M1_34	1901930-01 SWIN1906281215GSC 0.24862	18-Jul-19	13:52:45
35	35	190718M1_35	1901931-01 SWIN1906261345GSC 0.24093	18-Jul-19	14:03:18
36	36	190718M1_36	1902049-03 EB07-070819 0.25547	18-Jul-19	14:13:56
37	37	190718M1_37	1902049-12 EB08-070919 0.25637	18-Jul-19	14:24:30
38	38	190718M1_38	B9G0153-BLK1 Method Blank 0.25	18-Jul-19	14:35:38
39	39	190718M1_39	1902048-10 EB06-070319 0.2586	18-Jul-19	14:46:12
40	40	190718M1_40	B9G0153-BS1 OPR 0.25	18-Jul-19	14:56:50
41	41	190718M1_41	B9G0153-BSD1 LCSD 0.25	18-Jul-19	15:07:23
42	42	190718M1_42	1901901-01 MACON_GW_062819 0.11674	18-Jul-19	15:20:30
43	43	190718M1_43	B9G0147-BS1 OPR 0.25	18-Jul-19	15:31:05
44	44	190718M1_44	B9G0147-BLK1 Method Blank 0.25	18-Jul-19	15:41:44
45	45	190718M1_45	1902052-01 1907364-01A 0.24349	18-Jul-19	15:52:17
46	46	190718M1_46	1902052-02 1907364-02A 0.24144	18-Jul-19	16:02:47
47	47	190718M1_47	IPA	18-Jul-19	16:13:25
48	48	190718M1_48	ST190718M1-4 PFC CS3 19G1106	18-Jul-19	16:24:04
49	49	190718M1_49	IPA	18-Jul-19	16:34:42
50	50	190718M1_50	1902053-01 1907368-01A 0.24543	18-Jul-19	16:45:15
51	51	190718M1_51	1902053-02 1907368-02A 0.23176	18-Jul-19	16:55:54
52	52	190718M1_52	1902055-01 1907363-01A 0.25186	18-Jul-19	17:06:27
53	53	190718M1_53	1902055-02 1907363-02A 0.2408	18-Jul-19	17:17:05
54	54	190718M1_54	1902076-01 AS-SW-01-0719 0.24981	18-Jul-19	17:27:39
55	55	190718M1_55	1902076-02 AS-PW-01-0719 0.24432	18-Jul-19	17:38:17
56	56	190718M1_56	1902076-03 AS-SW-02-0719 0.24344	18-Jul-19	17:48:50
57	57	190718M1_57	1902076-04 AS-PW-02-0719 0.24256	18-Jul-19	17:59:28
58	58	190718M1_58	1902076-05 AS-SW-03-0719 0.24213	18-Jul-19	18:10:06
59	59	190718M1_59	1902076-06 AS-PW-03-0719 0.25236	18-Jul-19	18:20:40
60	60	190718M1_60	IPA	18-Jul-19	18:31:18
61	61	190718M1_61	ST190718M1-5 PFC CS3 19G1106	18-Jul-19	18:41:57
62	62	190718M1_62	IPA	18-Jul-19	18:52:30
63	63	190718M1_63	1902076-07 AS-SW-04-0719 0.2378	18-Jul-19	19:03:09
64	64	190718M1_64	1902076-08 AS-PW-04-0719 0.25413	18-Jul-19	19:13:47
65	65	190718M1_65	1902076-09 AS-SW-05-0719 0.2484	18-Jul-19	19:24:20
66	66	190718M1_66	1902076-10 AS-PW-05-0719 0.26123	18-Jul-19	19:34:58
67	67	190718M1_67	B9G0103-BS1 OPR 0.25	18-Jul-19	19:45:31
68	68	190718M1_68	B9G0103-BLK1 Method Blank 0.25	18-Jul-19	19:56:10

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

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70	70	190718M1_70	1901962-02 SWIN1906270800GSC-FD 0.25079	18-Jul-19	20:17:21
71	71	190718M1_71	1901963-01 SWIN1906270915GSC 0.23089	18-Jul-19	20:28:00
72	72	190718M1_72	1901964-01 SWIN1906271000GSC 0.24416	18-Jul-19	20:38:33
73	73	190718M1_73	1901965-01 SWIN1906271025GSC 0.24871	18-Jul-19	20:49:12
74	74	190718M1_74	1901966-01 SWIN1906271100GSC 0.2431	18-Jul-19	20:59:50
75	75	190718M1_75	IPA	18-Jul-19	21:10:22
76	76	190718M1_76	ST190718M1-6 PFC CS3 19G1106	18-Jul-19	21:21:01
77	77	190718M1_77	IPA	18-Jul-19	21:31:40
78	78	190718M1_78	1901967-01 SWIN1906271135GSC 0.23334	18-Jul-19	21:42:13
79	79	190718M1_79	1901968-01 SWIN1906271245GSC 0.24441	18-Jul-19	21:52:51
80	80	190718M1_80	1901969-01 SWIN1906271315GSC 0.2441	18-Jul-19	22:03:24
81	81	190718M1_81	1901970-01 SWIN1906271345GSC 0.2504	18-Jul-19	22:14:02
82	82	190718M1_82	1901971-01 SWIN1906271445GSC 0.24326	18-Jul-19	22:24:35
83	83	190718M1_83	1901987-01 BWS 0.24274	18-Jul-19	22:35:13
84	84	190718M1_84	1901995-02 WEF1907080940JSJ 0.2503	18-Jul-19	22:45:52
85	85	190718M1_85	1901995-03 WEF1907080948JSJ 0.25251	18-Jul-19	22:56:26
86	86	190718M1_86	B9G0183-BS1 OPR 0.25	18-Jul-19	23:07:04
87	87	190718M1_87	B9G0183-BLK1 Method Blank 0.25	18-Jul-19	23:17:36
88	88	190718M1_88	1901661-01RE1 WMP1906180936BRH 0.25118	18-Jul-19	23:28:15
89	89	190718M1_89	1901661-02RE1 WEF1906180942BRH 0.24993	18-Jul-19	23:38:53
90	90	190718M1_90	IPA	18-Jul-19	23:49:26
91	91	190718M1_91	ST190718M1-7 PFC CS3 19G1106	19-Jul-19	00:00:04
92	92	190718M1_92	IPA	19-Jul-19	00:10:38
93	93	190718M1_93	1901661-03RE1 WEF1906180957BRH 0.25772	19-Jul-19	00:21:16
94	94	190718M1_94	1902105-01 6C Discharge 0.24191	19-Jul-19	00:31:49
95	95	190718M1_95	1902105-02 5A Raw Leachate 0.24309	19-Jul-19	00:42:27
96	96	190718M1_96	1902105-03 Field Blank 0.23889	19-Jul-19	00:53:00
97	97	190718M1_97	1902106-01 WT1907110855SK 0.23917	19-Jul-19	01:03:38
98	98	190718M1_98	1902106-02 WR1907110930SK 0.24874	19-Jul-19	01:14:12
99	99	190718M1_99	B9G0184-BS1 OPR 0.25	19-Jul-19	01:24:50
100	100	190718M1_100	B9G0184-BLK1 Method Blank 0.25	19-Jul-19	01:35:23
101	101	190718M1_101	1902129-01 WIN1907151315GGA 0.24332	19-Jul-19	01:45:54
102	102	190718M1_102	1902129-02 WMP1907151305GGA 0.25773	19-Jul-19	01:56:32
103	103	190718M1_103	1902129-03 WEF1907081510GGA 0.25452	19-Jul-19	02:07:06
104	104	190718M1_104	IPA	19-Jul-19	02:17:44

Dataset: Z:\Projects\PFAS.PRO\Results\190718M1\log.qld

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Compound name: PFBA

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106	106	190718M1_106	IPA	19-Jul-19	02:38:55
107	107	190718M1_107	IB tester	19-Jul-19	02:49:33
108	108	190718M1_108	QC NS SUP	19-Jul-19	03:00:09

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Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071819.mdb 18 Jul 2019 10:13:55
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Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

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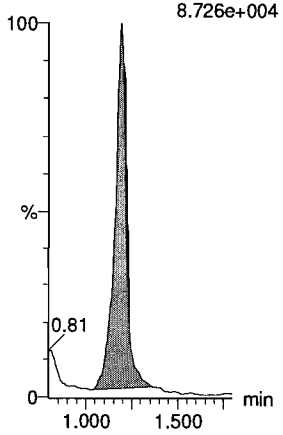
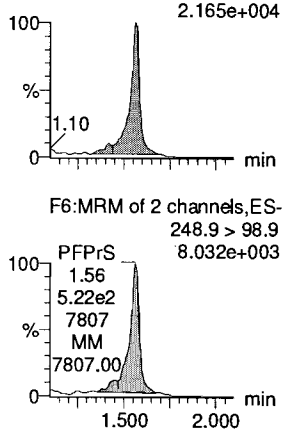
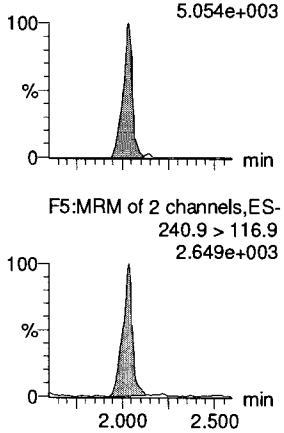


PFPrS



3:3 FTCA



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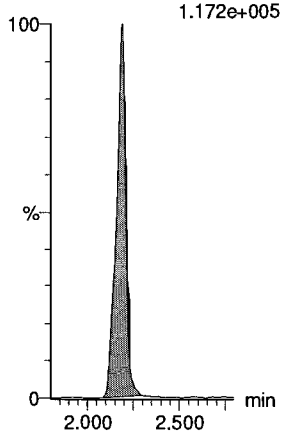

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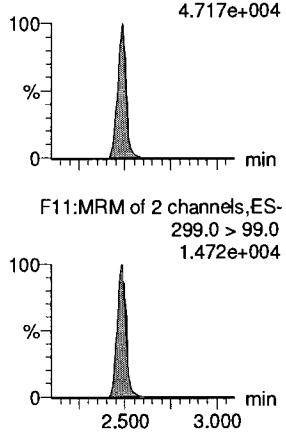
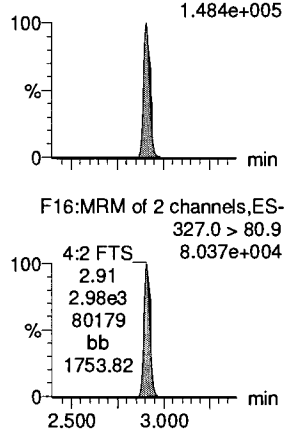


4:2 FTS



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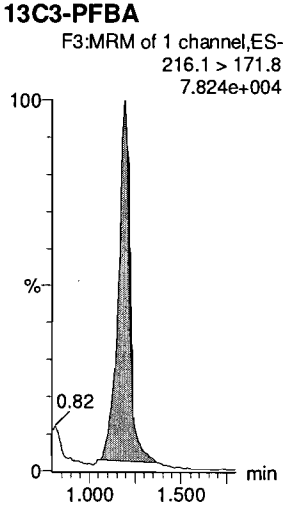

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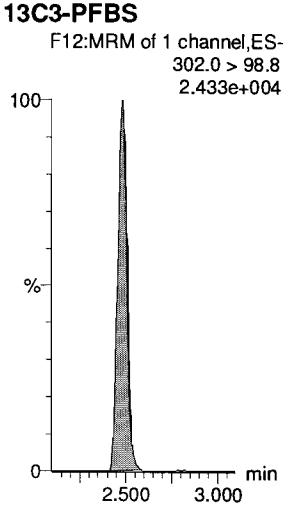

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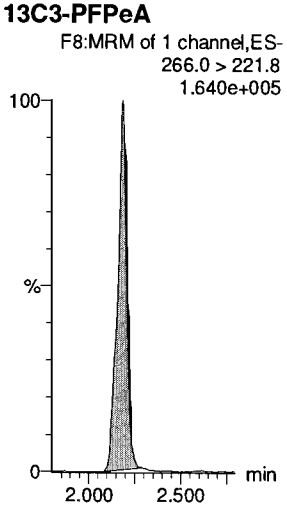

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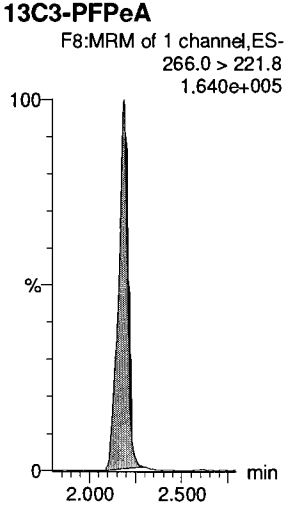

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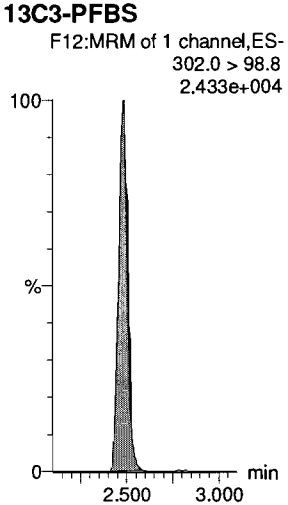

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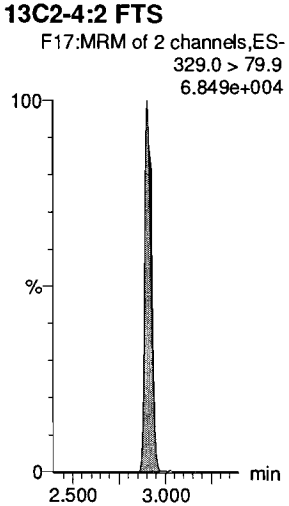

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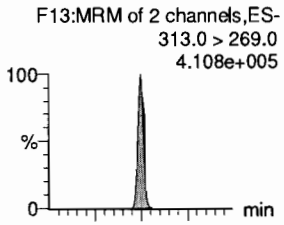
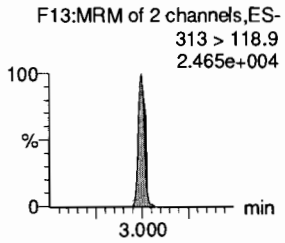
Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

PFHxA





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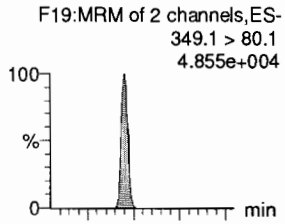
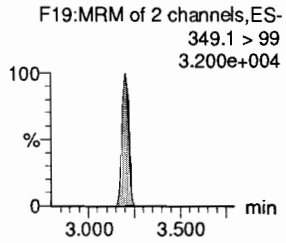
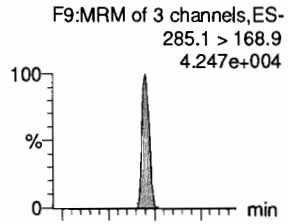
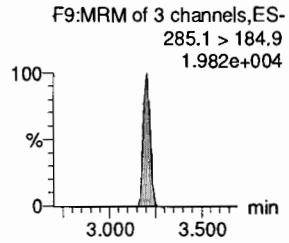


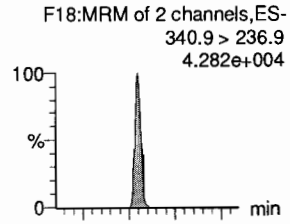


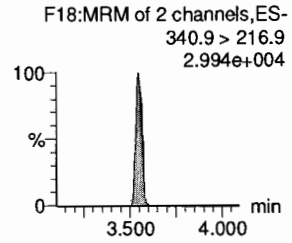
HFPO-DA





5:3 FTCA





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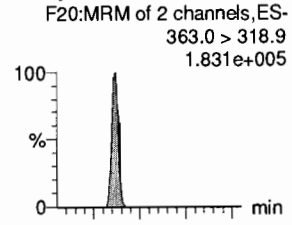
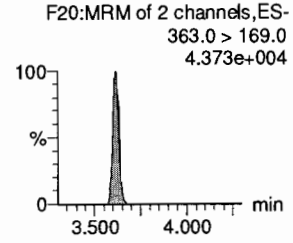
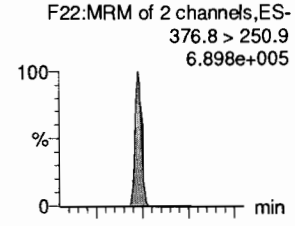
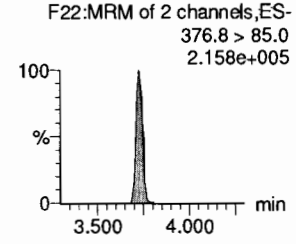


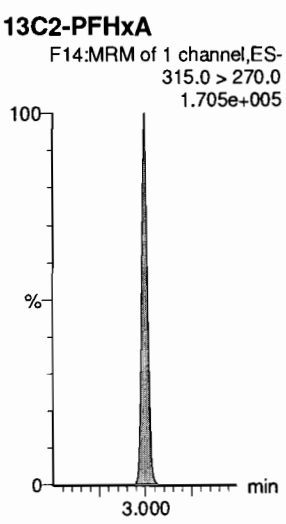


ADONA

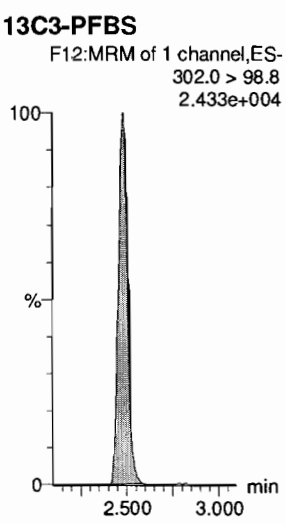




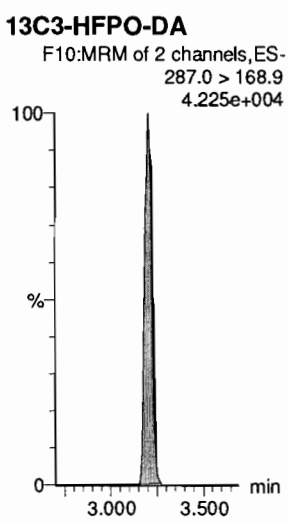
13C2-PFHxA



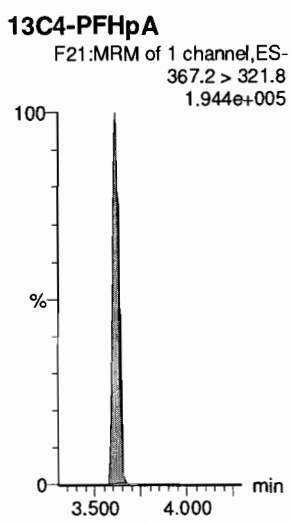
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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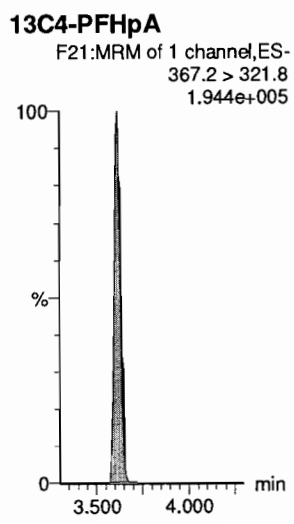
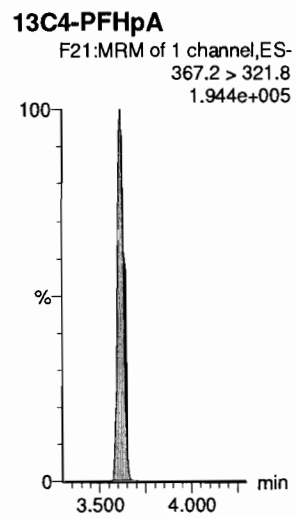


13C4-PFHpA

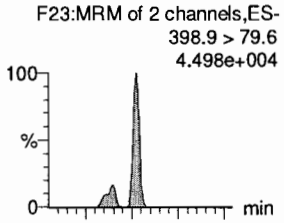


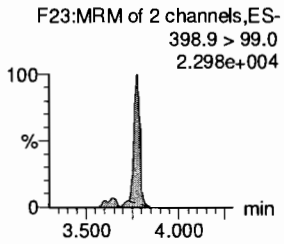
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

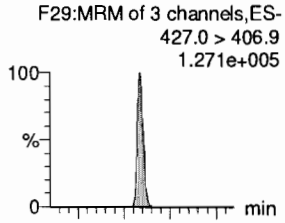
Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

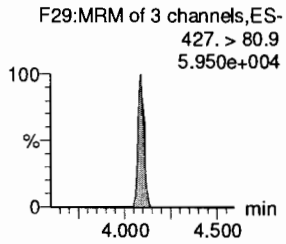
L-PFHxS



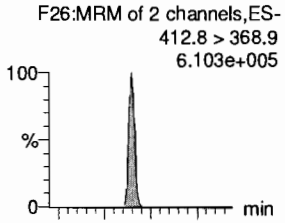


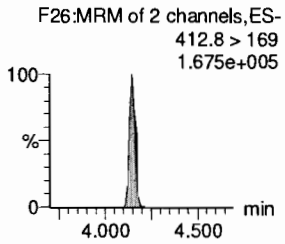
6:2 FTS



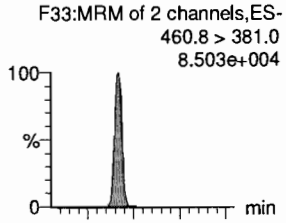


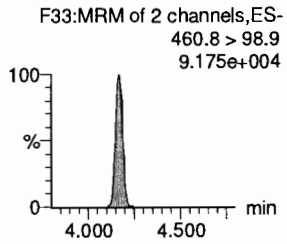
L-PFOA



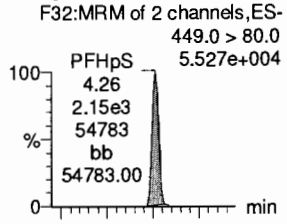


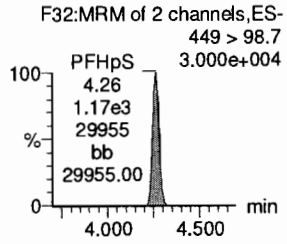
PFEChS



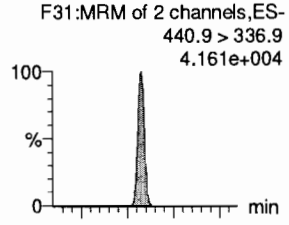


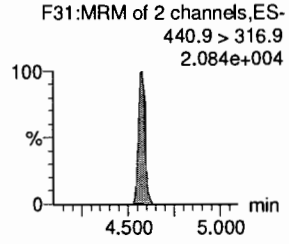
PFHpS



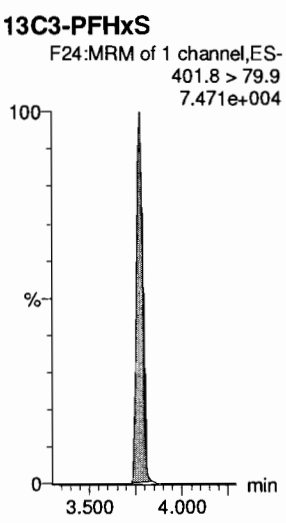


7:3 FTCA

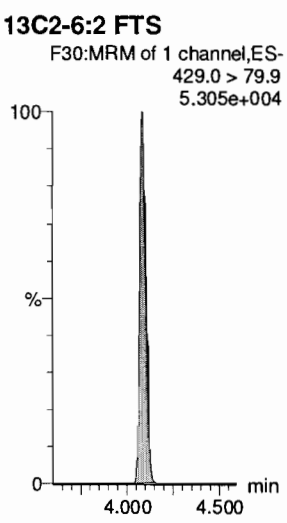




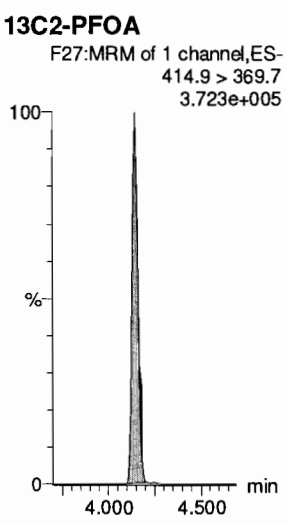
13C3-PFHxS



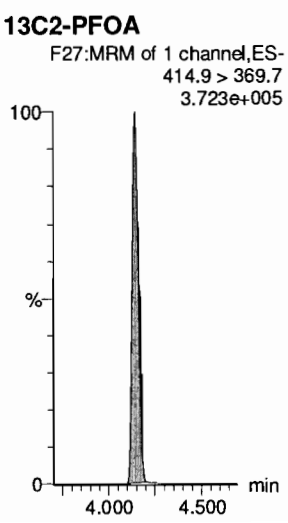
13C2-6:2 FTS



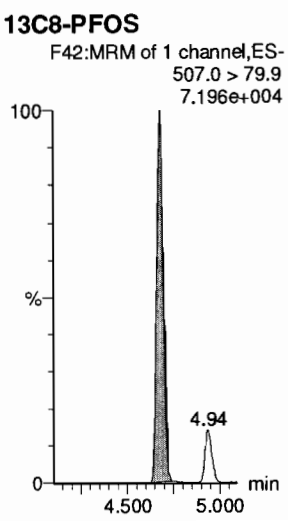
13C2-PFOA



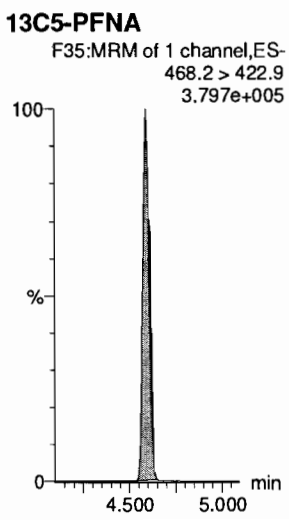
13C2-PFOA



13C8-PFOS



13C5-PFNA

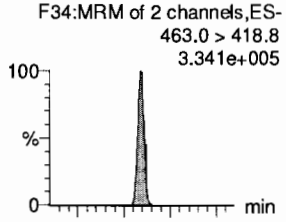


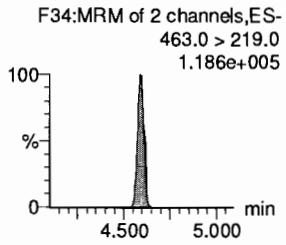
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

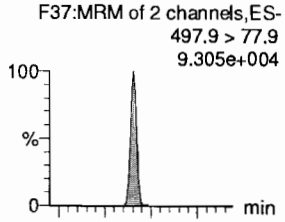
Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

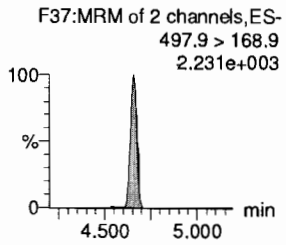
PFNA



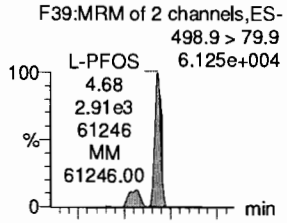


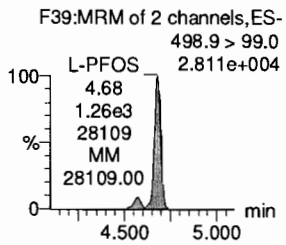
PFOSA



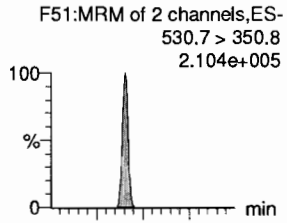


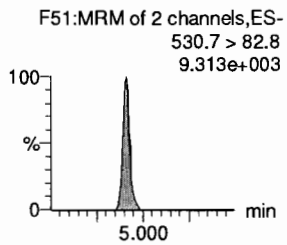
L-PFOS



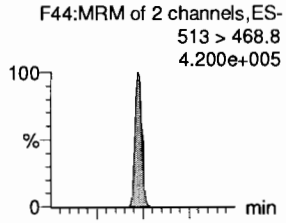


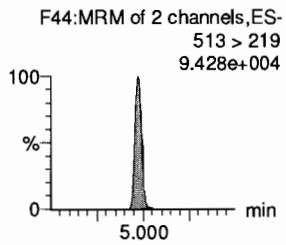
9Cl-PF30NS



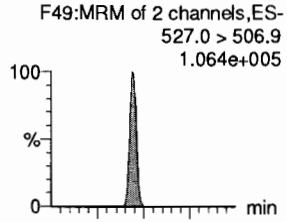


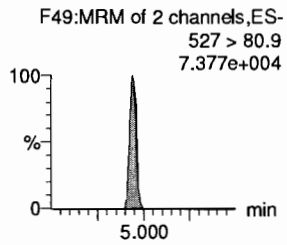
PFDA



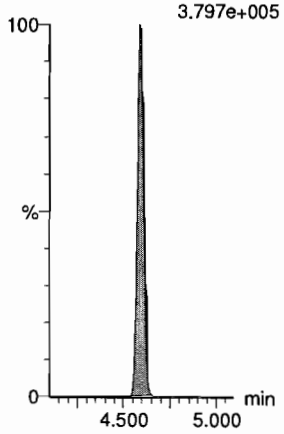


8:2 FTS

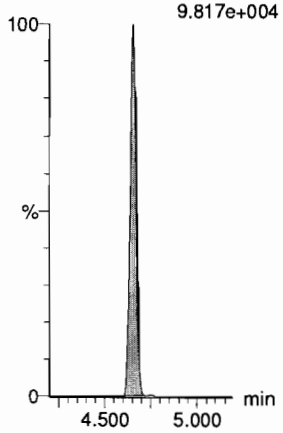




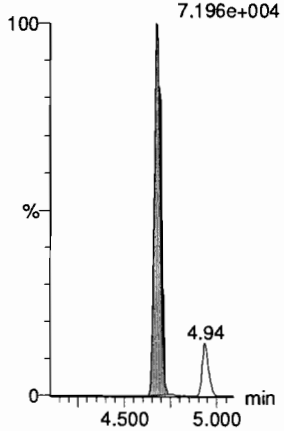
13C5-PFNA



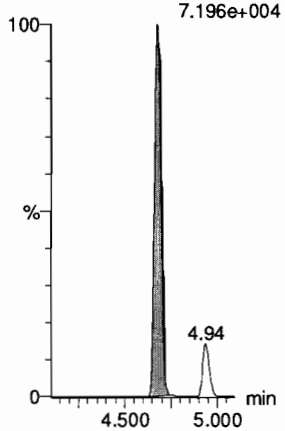
13C8-PFOSA



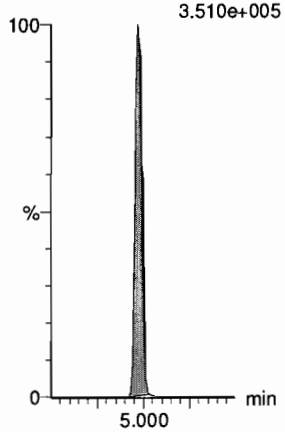
13C8-PFOS



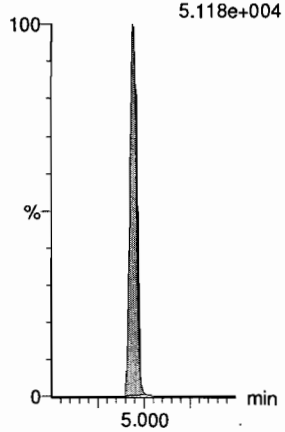
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

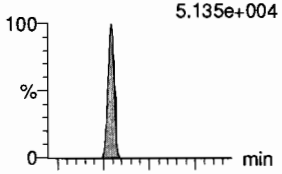


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

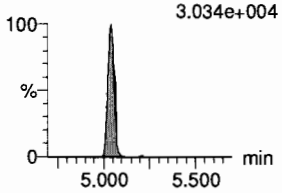
Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

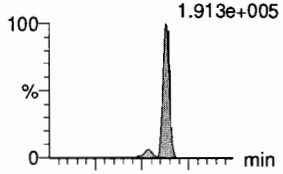
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
5.135e+004



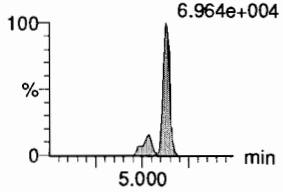
F53:MRM of 2 channels,ES-
549.1 > 99.1
3.034e+004



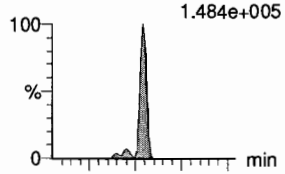
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.913e+005



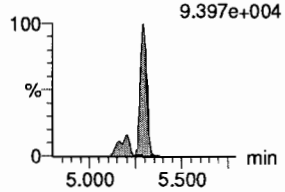
F56:MRM of 2 channels,ES-
570. > 512
6.964e+004



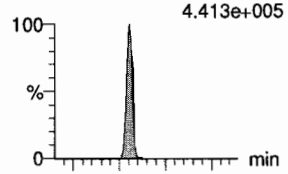
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.484e+005



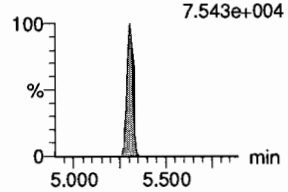
F59:MRM of 2 channels,ES-
584.1 > 526
9.397e+004



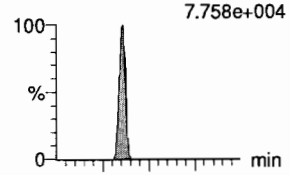
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.413e+005



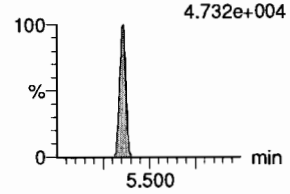
F54:MRM of 2 channels,ES-
563.0 > 269
7.543e+004



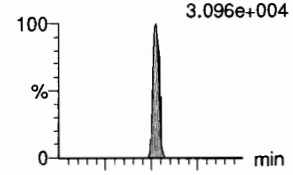
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
7.758e+004



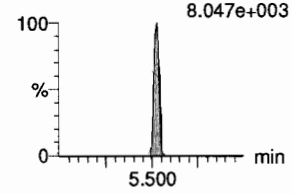
F61:MRM of 2 channels,ES-
598.8 > 98.9
4.732e+004



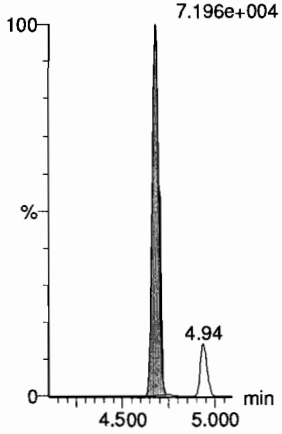
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
3.096e+004



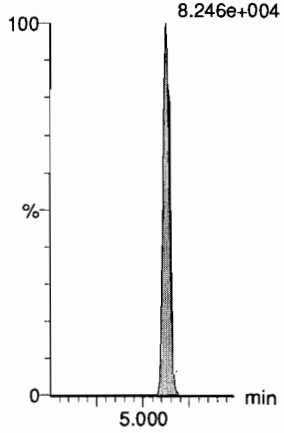
F68:MRM of 2 channels,ES-
632.6 > 450.7
8.047e+003



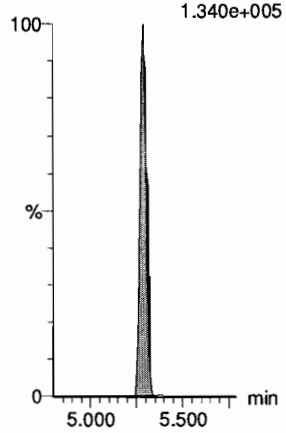
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.196e+004



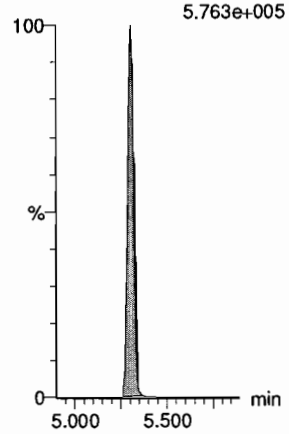
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.246e+004



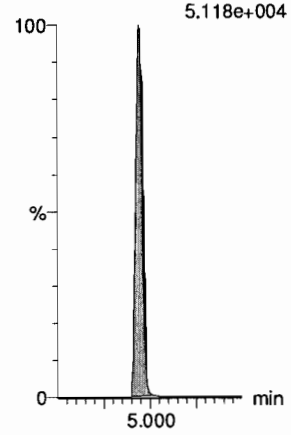
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.340e+005



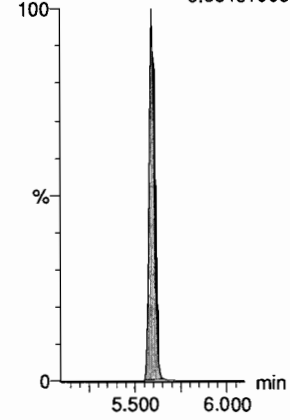
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.763e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
5.118e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.864e+005

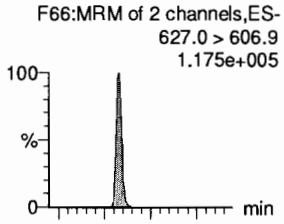


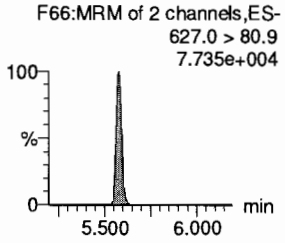
Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

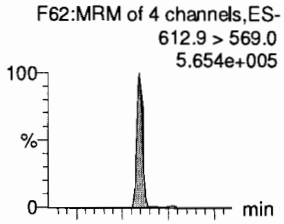
Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

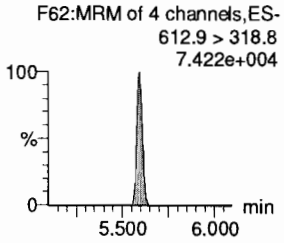
10:2 FTS



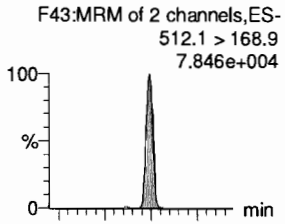


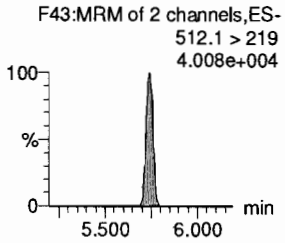
PFDoA



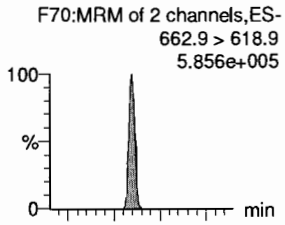


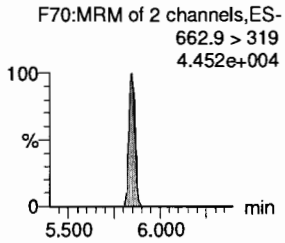
N-MeFOSA



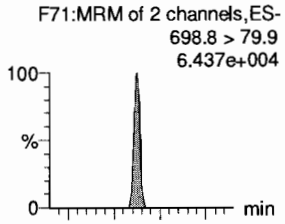


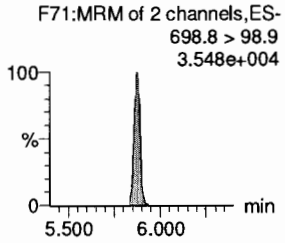
PFTrDA



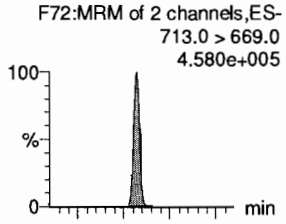


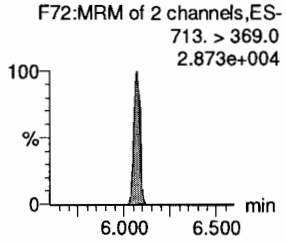
PFDoS



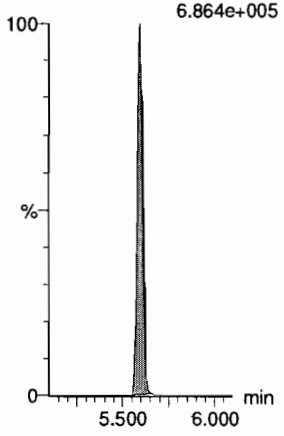


PFTeDA

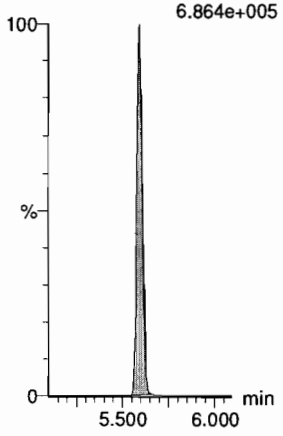




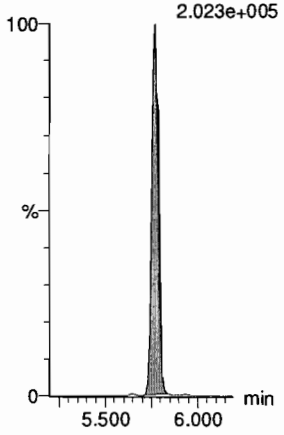
13C2-PFDoA



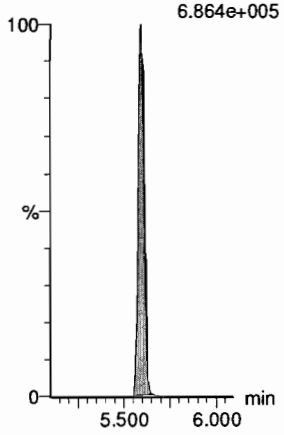
13C2-PFDoA



d3-N-MeFOSA



13C2-PFDoA



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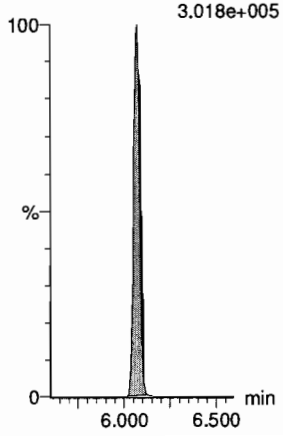
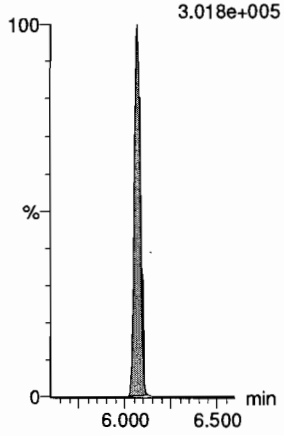


13C2-PFTeDA

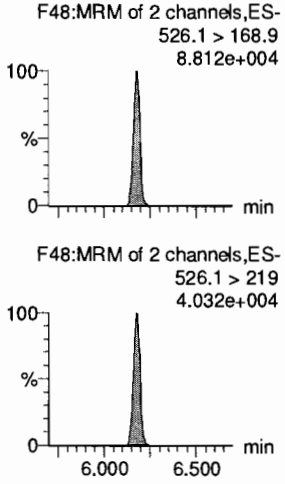


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

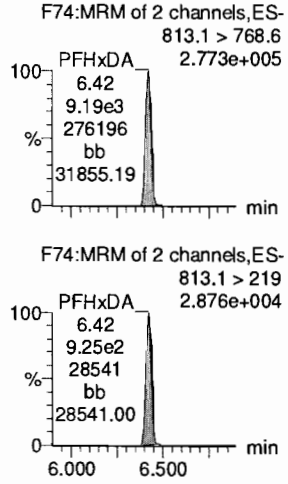
Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

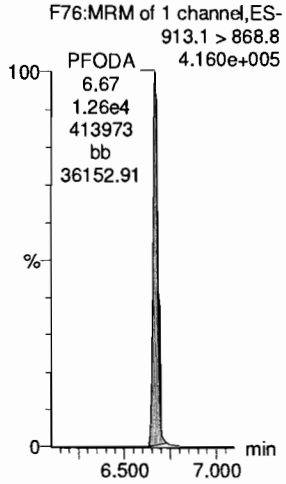
N-EtFOSA



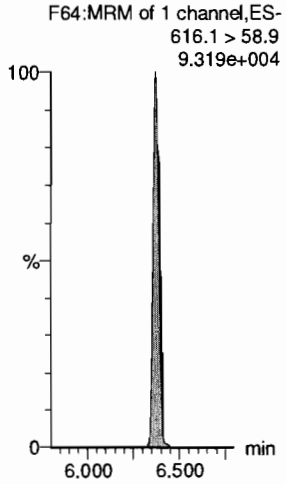
PFHxDA



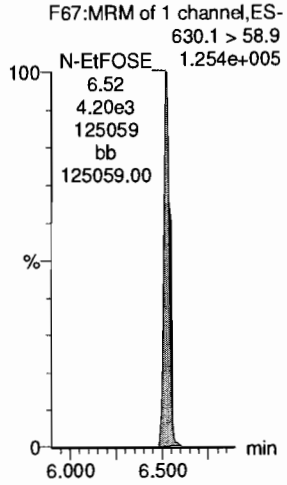
PFODA



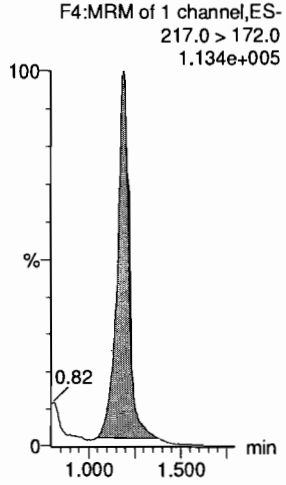
N-MeFOSE



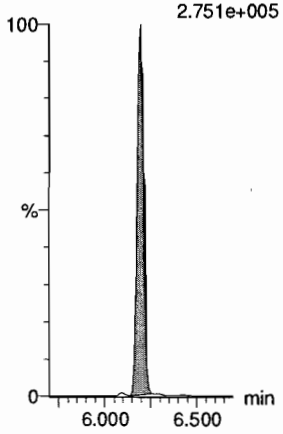
N-EtFOSE



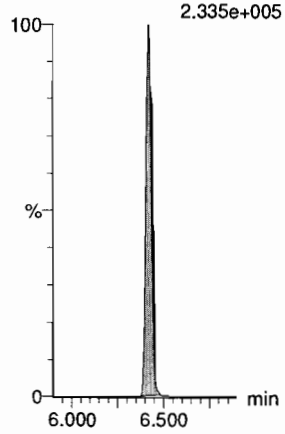
13C4-PFBA



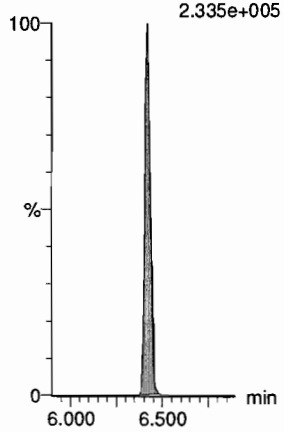
d5-N-ETFOSA



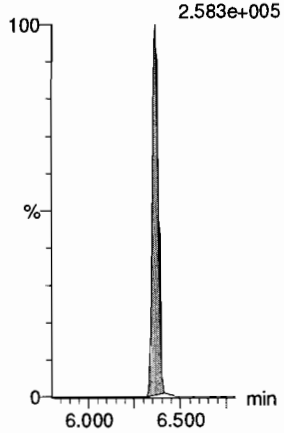
13C2-PFHxDA



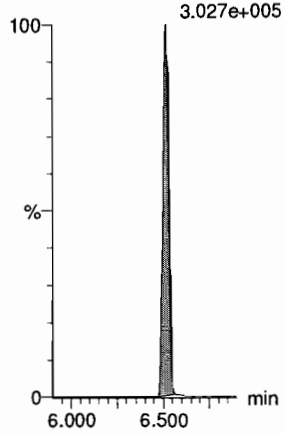
13C2-PFHxDA



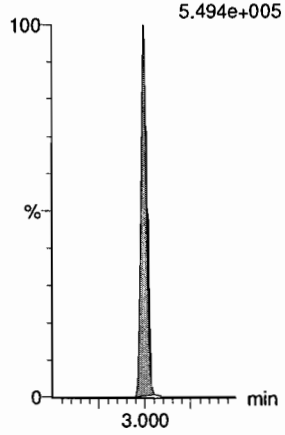
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

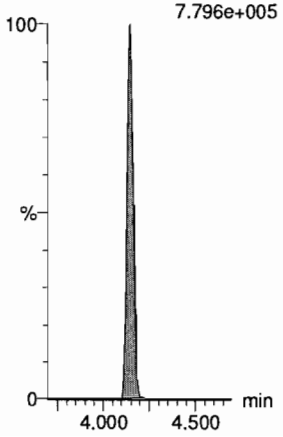


Dataset: F:\Projects\PFAS.PRO\Results\190718M1\190718M1-29.qld

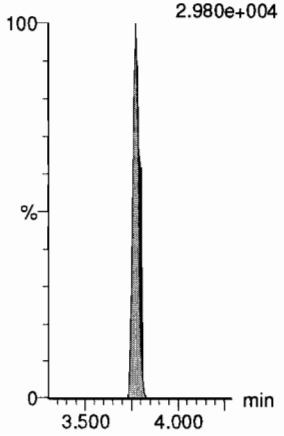
Last Altered: Thursday, July 18, 2019 15:26:34 Pacific Daylight Time
Printed: Thursday, July 18, 2019 15:27:15 Pacific Daylight Time

Name: 190718M1_29, Date: 18-Jul-2019, Time: 12:59:43, ID: ST190718M1-3 PFC CS3 19G1106, Description: PFC CS3 19G1106

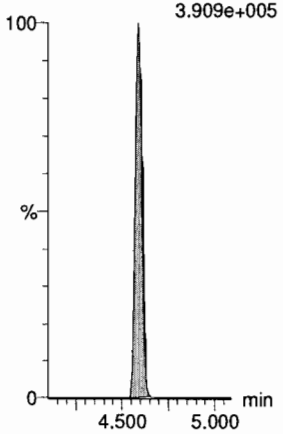
13C8-PFOA



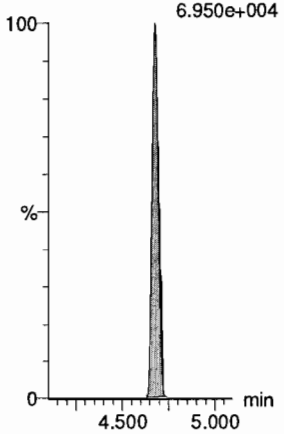
18O2-PFHxS



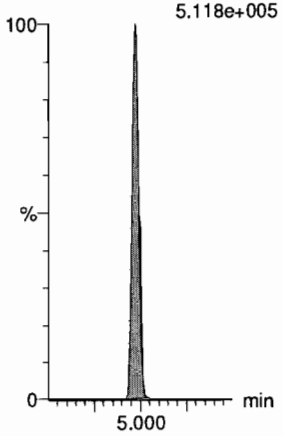
13C9-PFNA



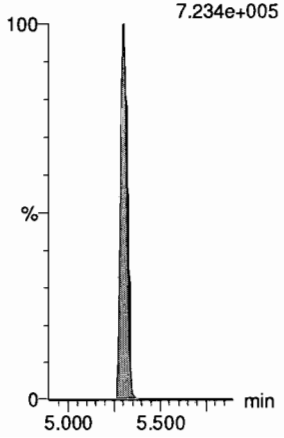
13C4-PFOS



13C6-PFDA



13C7-PFUdA



INITIAL CALIBRATION (ICAL)

INCLUDING ASSOCIATED

INITIAL CALIBRATION VERIFICATION (ICV) AND INSTRUMENT BLANK (IB)

Low PC
1IC1-PF3OUdS=0.5

High PC
3:3 FTCA = 100
5:3 FTCA
7:3 FTCA
PFOS

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:27:26 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

JM 7/2/19

Compound name: PFBA
Correlation coefficient: r = 0.998908, r^2 = 0.997818
Calibration curve: 1.27954 * x + -0.15622
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	190701M1_3	Standard	0.250	1.35	154.232	7859.143	0.245	0.3	25.5	NO	0.998	NO	MM
2	2	190701M1_4	Standard	0.500	1.35	311.448	7017.500	0.555	0.6	11.1	NO	0.998	NO	MM
3	3	190701M1_5	Standard	1.000	1.34	625.318	7121.135	1.098	1.0	-2.0	NO	0.998	NO	MM
4	4	190701M1_6	Standard	2.000	1.35	1241.875	7137.009	2.175	1.8	-8.9	NO	0.998	NO	bb
5	5	190701M1_7	Standard	5.000	1.35	3288.363	7448.695	5.518	4.4	-11.3	NO	0.998	NO	bb
6	6	190701M1_8	Standard	10.000	1.34	6841.193	7157.414	11.948	9.5	-5.4	NO	0.998	NO	MM
7	7	190701M1_9	Standard	50.000	1.35	35266.898	7262.408	60.701	47.6	-4.9	NO	0.998	NO	bb
8	8	190701M1_10	Standard	100.000	1.35	68545.141	6877.840	124.576	97.5	-2.5	NO	0.998	NO	bb
9	9	190701M1_11	Standard	250.000	1.35	173186.422	7183.977	301.341	235.6	-5.7	NO	0.998	NO	bb
10	10	190701M1_12	Standard	500.000	1.35	341229.094	6405.827	665.857	520.5	4.1	NO	0.998	NO	bb

Compound name: PFPrS
Coefficient of Determination: R^2 = 0.998683
Calibration curve: 0.000832196 * x^2 + 1.27167 * x + -0.0175393
Response type: Internal Std (Ref 49), 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	190701M1_3	Standard	0.250	1.70	32.807	1387.651	0.296	0.2	-1.5	NO	0.999	NO	MM
2	2	190701M1_4	Standard	0.500	1.70	63.654	1259.104	0.632	0.5	2.1	NO	0.999	NO	MM
3	3	190701M1_5	Standard	1.000	1.69	120.432	1259.106	1.196	1.0	-4.7	NO	0.999	NO	MM
4	4	190701M1_6	Standard	2.000	1.70	241.766	1269.525	2.380	1.9	-5.8	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	1.70	719.799	1369.346	6.571	5.2	3.3	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	1.70	1276.577	1258.471	12.680	9.9	-0.8	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	1.70	6779.200	1225.593	69.142	52.6	5.2	NO	0.999	NO	bd
8	8	190701M1_10	Standard	100.000	1.70	12751.382	1102.075	144.629	106.3	6.3	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	1.70	31278.057	1119.792	349.150	237.6	-5.0	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	1.70	57284.090	840.372	852.064	503.9	0.8	NO	0.999	NO	bb

Calt 7/2/19

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999047
Calibration curve: 2.95644e-005 * x^2 + 0.0324756 * x + -0.0041484
Response type: Internal Std (Ref 48), 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	190701M1_3	Standard	0.250	2.16	5.091	11001.018	0.006	0.3	22.3	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	2.18	10.309	9710.131	0.013	0.5	7.2	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	2.17	15.969	10026.007	0.020	0.7	-26.0	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	2.17	50.245	9745.816	0.064	2.1	5.4	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	2.18	118.333	10471.772	0.141	4.5	-10.8	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	2.18	265.270	10221.992	0.324	10.0	0.2	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	2.18	1349.320	9751.743	1.730	51.0	2.0	NO	0.999	NO	bd
8	8	190701M1_10	Standard	100.000	2.18	2548.287	9044.598	3.522	99.6	-0.4	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	2.18	1387.459	9358.146	1.853	54.5	-78.2	YES	0.999	NO	bbX
10	10	190701M1_12	Standard	500.000	2.18	2584.069	7802.088	4.140	115.5	-76.9	YES	0.999	NO	bbX

Compound name: PFPeA
Correlation coefficient: r = 0.998899, r^2 = 0.997799
Calibration curve: 0.997338 * x + -0.0430201
Response type: Internal Std (Ref 48), 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	190701M1_3	Standard	0.250	2.33	230.900	11001.018	0.262	0.3	22.5	NO	0.998	NO	bb
2	2	190701M1_4	Standard	0.500	2.33	352.399	9710.131	0.454	0.5	-0.4	NO	0.998	NO	bb
3	3	190701M1_5	Standard	1.000	2.33	716.235	10026.007	0.893	0.9	-6.2	NO	0.998	NO	bb
4	4	190701M1_6	Standard	2.000	2.32	1526.566	9745.816	1.958	2.0	0.3	NO	0.998	NO	bb
5	5	190701M1_7	Standard	5.000	2.33	4040.862	10471.772	4.824	4.9	-2.4	NO	0.998	NO	bb
6	6	190701M1_8	Standard	10.000	2.33	7542.322	10221.992	9.223	9.3	-7.1	NO	0.998	NO	bb
7	7	190701M1_9	Standard	50.000	2.33	37448.789	9751.743	48.003	48.2	-3.7	NO	0.998	NO	bb
8	8	190701M1_10	Standard	100.000	2.33	71848.102	9044.598	99.297	99.6	-0.4	NO	0.998	NO	bb
9	9	190701M1_11	Standard	250.000	2.33	174288.594	9358.146	232.803	233.5	-6.6	NO	0.998	NO	bb
10	10	190701M1_12	Standard	500.000	2.33	323416.906	7802.088	518.158	519.6	3.9	NO	0.998	NO	bb

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Compound name: PFBS
Coefficient of Determination: R^2 = 0.997879
Calibration curve: 0.000780194 * x^2 + 2.12737 * x + -0.0545876
Response type: Internal Std (Ref 49), 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 190701M1_3	Standard	0.250	2.61	43.513	1387.651	0.392	0.2	-16.0	NO	0.998	NO	bb
2	2 190701M1_4	Standard	0.500	2.61	115.529	1259.104	1.147	0.6	12.9	NO	0.998	NO	bb
3	3 190701M1_5	Standard	1.000	2.61	169.304	1259.106	1.681	0.8	-18.5	NO	0.998	NO	bb
4	4 190701M1_6	Standard	2.000	2.61	444.581	1269.525	4.377	2.1	4.1	NO	0.998	NO	bb
5	5 190701M1_7	Standard	5.000	2.61	1173.622	1369.346	10.713	5.1	1.0	NO	0.998	NO	bb
6	6 190701M1_8	Standard	10.000	2.61	2330.653	1258.471	23.150	10.9	8.6	NO	0.998	NO	bb
7	7 190701M1_9	Standard	50.000	2.62	11299.018	1225.593	115.240	53.2	6.3	NO	0.998	NO	bb
8	8 190701M1_10	Standard	100.000	2.62	20804.957	1102.075	235.975	106.8	6.8	NO	0.998	NO	bb
9	9 190701M1_11	Standard	250.000	2.61	48347.141	1119.792	539.689	233.7	-6.5	NO	0.998	NO	bb
10	10 190701M1_12	Standard	500.000	2.62	85736.430	840.372	1275.275	505.7	1.1	NO	0.998	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999758
Calibration curve: 9.27152e-005 * x^2 + 2.14789 * x + -0.00838939
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 190701M1_3	Standard	0.250	3.02	106.954	2343.219	0.571	0.3	7.8	NO	1.000	NO	bb
2	2 190701M1_4	Standard	0.500	3.02	157.856	2237.596	0.882	0.4	-17.1	NO	1.000	NO	bb
3	3 190701M1_5	Standard	1.000	3.02	353.649	2018.838	2.190	1.0	2.3	NO	1.000	NO	bb
4	4 190701M1_6	Standard	2.000	3.02	726.770	2229.632	4.074	1.9	-5.0	NO	1.000	NO	bb
5	5 190701M1_7	Standard	5.000	3.02	2087.059	2233.830	11.679	5.4	8.8	NO	1.000	NO	bb
6	6 190701M1_8	Standard	10.000	3.02	3780.276	2172.637	21.749	10.1	1.3	NO	1.000	NO	bb
7	7 190701M1_9	Standard	50.000	3.02	17820.051	1980.448	112.475	52.3	4.5	NO	1.000	NO	bb
8	8 190701M1_10	Standard	100.000	3.02	31548.039	1872.227	210.632	97.7	-2.3	NO	1.000	NO	bb
9	9 190701M1_11	Standard	250.000	3.02	67767.047	1567.674	540.347	248.9	-0.4	NO	1.000	NO	bb
10	10 190701M1_12	Standard	500.000	3.02	116292.352	1322.901	1098.838	500.8	0.2	NO	1.000	NO	bb

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Compound name: PFHxA
Correlation coefficient: r = 0.999688, r^2 = 0.999376
Calibration curve: 0.86194 * x + 0.0203203
Response type: Internal Std (Ref 52), 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 190701M1_3	Standard	0.250	3.11	396.408	8643.938	0.229	0.2	-3.0	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	3.11	670.947	7481.935	0.448	0.5	-0.7	NO	0.999	NO	bd
3	3 190701M1_5	Standard	1.000	3.11	1318.878	7530.073	0.876	1.0	-0.8	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	3.11	2627.758	7570.965	1.735	2.0	-0.5	NO	0.999	NO	bb
5	5 190701M1_7	Standard	5.000	3.11	7193.212	8191.098	4.391	5.1	1.4	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	3.11	13567.120	7612.474	8.911	10.3	3.1	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	3.11	67258.930	7206.017	46.669	54.1	8.2	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	3.11	124188.578	6991.337	88.816	103.0	3.0	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	3.11	302164.188	7000.579	215.814	250.4	0.1	NO	0.999	NO	bb
10	10 190701M1_12	Standard	500.000	3.11	542198.750	6390.512	424.222	492.1	-1.6	NO	0.999	NO	bb

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.997995
Calibration curve: 1.55836e-005 * x^2 + 1.69505 * x + -0.0036826
Response type: Internal Std (Ref 49), 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 190701M1_3	Standard	0.250	3.32	49.792	1387.651	0.449	0.3	6.7	NO	0.998	NO	bb
2	2 190701M1_4	Standard	0.500	3.31	76.871	1259.104	0.763	0.5	-9.5	NO	0.998	NO	bb
3	3 190701M1_5	Standard	1.000	3.31	156.229	1259.106	1.551	0.9	-8.3	NO	0.998	NO	bb
4	4 190701M1_6	Standard	2.000	3.31	349.455	1269.525	3.441	2.0	1.6	NO	0.998	NO	bb
5	5 190701M1_7	Standard	5.000	3.31	911.138	1369.346	8.317	4.9	-1.8	NO	0.998	NO	bb
6	6 190701M1_8	Standard	10.000	3.31	1754.755	1258.471	17.429	10.3	2.8	NO	0.998	NO	bb
7	7 190701M1_9	Standard	50.000	3.31	8991.838	1225.593	91.709	54.1	8.2	NO	0.998	NO	bb
8	8 190701M1_10	Standard	100.000	3.32	15786.177	1102.075	179.051	105.5	5.5	NO	0.998	NO	bb
9	9 190701M1_11	Standard	250.000	3.31	35554.246	1119.792	396.884	233.6	-6.5	NO	0.998	NO	bb
10	10 190701M1_12	Standard	500.000	3.31	58003.305	840.372	862.762	506.6	1.3	NO	0.998	NO	bb

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999633
Calibration curve: 9.5064e-005 * x^2 + 0.471809 * x + 0.0215888
Response type: Internal Std (Ref 50), 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 190701M1_3	Standard	0.250	3.32	36.116	1732.481	0.104	0.2	-29.9	NO	1.000	NO	bb
2	2 190701M1_4	Standard	0.500	3.33	84.335	1461.787	0.288	0.6	13.1	NO	1.000	NO	bb
3	3 190701M1_5	Standard	1.000	3.32	149.728	1468.807	0.510	1.0	3.4	NO	1.000	NO	bb
4	4 190701M1_6	Standard	2.000	3.33	315.251	1613.802	0.977	2.0	1.2	NO	1.000	NO	bb
5	5 190701M1_7	Standard	5.000	3.32	836.085	1471.082	2.842	6.0	19.4	NO	1.000	NO	bb
6	6 190701M1_8	Standard	10.000	3.32	1382.105	1520.266	4.546	9.6	-4.3	NO	1.000	NO	bb
7	7 190701M1_9	Standard	50.000	3.33	6722.854	1440.145	23.341	48.9	-2.1	NO	1.000	NO	bb
8	8 190701M1_10	Standard	100.000	3.32	13106.874	1389.850	47.152	98.0	-2.0	NO	1.000	NO	bb
9	9 190701M1_11	Standard	250.000	3.33	33277.957	1321.837	125.878	253.8	1.5	NO	1.000	NO	bb
10	10 190701M1_12	Standard	500.000	3.33	55149.793	1064.827	258.961	498.7	-0.3	NO	1.000	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999388
Calibration curve: 0.000191213 * x^2 + 0.156195 * x + -0.0204089
Response type: Internal Std (Ref 53), 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 190701M1_3	Standard	0.250	3.67	28.553	11811.953	0.030	0.3	29.6	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	3.66	40.658	10279.227	0.049	0.4	-10.6	NO	0.999	NO	bb
3	3 190701M1_5	Standard	1.000	3.66	99.897	10146.845	0.123	0.9	-8.2	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	3.66	211.760	10359.755	0.256	1.8	-11.9	NO	0.999	NO	bb
5	5 190701M1_7	Standard	5.000	3.67	696.149	10887.439	0.799	5.2	4.3	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	3.66	1205.796	10138.095	1.487	9.5	-4.6	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	3.67	6749.470	10010.446	8.428	50.9	1.8	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	3.67	12986.771	9309.532	17.437	99.6	-0.4	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	3.67	7045.728	9099.720	9.678	58.0	-76.8	YES	0.999	NO	bdX
10	10 190701M1_12	Standard	500.000	3.67	12609.900	7309.118	21.565	120.4	-75.9	YES	0.999	NO	bbX

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Compound name: PFHpA
Correlation coefficient: r = 0.998727, r^2 = 0.997456
Calibration curve: 1.36438 * x + -0.10417
Response type: Internal Std (Ref 53), 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	190701M1_3	Standard	0.250	3.73	289.332	11811.953	0.306	0.3	20.3	NO	0.997	NO	bb
2	2	190701M1_4	Standard	0.500	3.73	446.562	10279.227	0.543	0.5	-5.1	NO	0.997	NO	bb
3	3	190701M1_5	Standard	1.000	3.73	1088.052	10146.845	1.340	1.1	5.9	NO	0.997	NO	bb
4	4	190701M1_6	Standard	2.000	3.73	2142.391	10359.755	2.585	2.0	-1.5	NO	0.997	NO	bb
5	5	190701M1_7	Standard	5.000	3.73	5520.118	10887.439	6.338	4.7	-5.6	NO	0.997	NO	bb
6	6	190701M1_8	Standard	10.000	3.73	10568.288	10138.095	13.030	9.6	-3.7	NO	0.997	NO	bb
7	7	190701M1_9	Standard	50.000	3.73	52072.754	10010.446	65.023	47.7	-4.5	NO	0.997	NO	bb
8	8	190701M1_10	Standard	100.000	3.73	97469.883	9309.532	130.874	96.0	-4.0	NO	0.997	NO	bb
9	9	190701M1_11	Standard	250.000	3.73	232647.859	9099.720	319.581	234.3	-6.3	NO	0.997	NO	bb
10	10	190701M1_12	Standard	500.000	3.73	416831.625	7309.118	712.862	522.6	4.5	NO	0.997	NO	bb

Compound name: ADONA
Coefficient of Determination: R^2 = 0.999445
Calibration curve: 0.00128658 * x^2 + 2.75204 * x + 0.0529361
Response type: Internal Std (Ref 53), 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	190701M1_3	Standard	0.250	3.85	636.933	11811.953	0.674	0.2	-9.7	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	3.84	1083.339	10279.227	1.317	0.5	-8.1	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	3.84	2213.193	10146.845	2.726	1.0	-2.9	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	3.84	4675.292	10359.755	5.641	2.0	1.4	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	3.84	13124.717	10887.439	15.069	5.4	8.8	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	3.84	23979.865	10138.095	29.567	10.7	6.7	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	3.84	117484.859	10010.446	146.703	52.0	4.0	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	3.85	219886.594	9309.532	295.244	102.4	2.4	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	3.84	539332.625	9099.720	740.864	241.8	-3.3	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	3.85	999573.250	7309.118	1709.463	502.9	0.6	NO	0.999	NO	bb

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Compound name: L-PFHxS
Correlation coefficient: r = 0.999933, r^2 = 0.999866
Calibration curve: 0.981182 * x + -0.0696979
Response type: Internal Std (Ref 54), 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	190701M1_3	Standard	0.250	3.89	34.718	2988.028	0.145	0.2	-12.4	NO	1.000	NO	MM
2	2	190701M1_4	Standard	0.500	3.88	106.853	2450.531	0.545	0.6	25.3	NO	1.000	NO	MM
3	3	190701M1_5	Standard	1.000	3.88	182.653	2435.814	0.937	1.0	2.6	NO	1.000	NO	MM
4	4	190701M1_6	Standard	2.000	3.88	353.729	2521.415	1.754	1.9	-7.1	NO	1.000	NO	MM
5	5	190701M1_7	Standard	5.000	3.88	989.429	2692.550	4.593	4.8	-5.0	NO	1.000	NO	MM
6	6	190701M1_8	Standard	10.000	3.88	1860.395	2467.878	9.423	9.7	-3.3	NO	1.000	NO	MM
7	7	190701M1_9	Standard	50.000	3.89	9446.277	2392.303	49.358	50.4	0.8	NO	1.000	NO	MM
8	8	190701M1_10	Standard	100.000	3.88	18220.328	2340.620	97.305	99.2	-0.8	NO	1.000	NO	MM
9	9	190701M1_11	Standard	250.000	3.88	43301.559	2227.986	242.941	247.7	-0.9	NO	1.000	NO	MM
10	10	190701M1_12	Standard	500.000	3.89	77960.398	1973.632	493.762	503.3	0.7	NO	1.000	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.996581
Calibration curve: 0.000409289 * x^2 + 2.80751 * x + 0.106577
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190701M1_3	Standard	0.250	4.20	97.717	1939.044	0.630	0.2	-25.4	NO	0.997	NO	bb
2	2	190701M1_4	Standard	0.500	4.20	231.644	1781.386	1.625	0.5	8.2	NO	0.997	NO	bb
3	3	190701M1_5	Standard	1.000	4.20	412.108	1789.205	2.879	1.0	-1.3	NO	0.997	NO	bb
4	4	190701M1_6	Standard	2.000	4.20	894.532	1780.797	6.279	2.2	9.9	NO	0.997	NO	bb
5	5	190701M1_7	Standard	5.000	4.20	2229.879	1911.603	14.581	5.2	3.0	NO	0.997	NO	bb
6	6	190701M1_8	Standard	10.000	4.20	4387.854	1746.355	31.407	11.1	11.3	NO	0.997	NO	bb
7	7	190701M1_9	Standard	50.000	4.20	19900.199	1608.471	154.652	54.6	9.2	NO	0.997	NO	bb
8	8	190701M1_10	Standard	100.000	4.20	35645.336	1458.206	305.558	107.1	7.1	NO	0.997	NO	bb
9	9	190701M1_11	Standard	250.000	4.20	79851.781	1505.659	662.930	228.5	-8.6	NO	0.997	NO	bb
10	10	190701M1_12	Standard	500.000	4.20	137627.469	1122.213	1532.992	508.3	1.7	NO	0.997	NO	bb

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Compound name: L-PFOA
Correlation coefficient: r = 0.999429, r^2 = 0.998858
Calibration curve: 1.42539 * x + 0.0314967
Response type: Internal Std (Ref 58), 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	190701M1_3	Standard	0.250	4.26	639.612	19277.365	0.415	0.3	7.5	NO	0.999	NO	MM
2	2	190701M1_4	Standard	0.500	4.26	1007.743	17095.941	0.737	0.5	-1.0	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	4.25	2044.766	17293.736	1.478	1.0	1.5	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	4.25	3729.519	16963.230	2.748	1.9	-4.7	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	4.25	10539.423	18248.066	7.220	5.0	0.9	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	4.25	19572.291	17591.018	13.908	9.7	-2.6	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	4.25	94923.563	16747.066	70.851	49.7	-0.6	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	4.25	177901.359	15281.182	145.523	102.1	2.1	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	4.25	400247.000	14823.402	337.513	236.8	-5.3	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	4.25	679525.625	11643.679	729.501	511.8	2.4	NO	0.999	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999799
Calibration curve: 9.70125e-005 * x^2 + 0.203947 * x + -0.0228863
Response type: Internal Std (Ref 58), 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	190701M1_3	Standard	0.250	4.28	54.812	19277.365	0.036	0.3	14.6	NO	1.000	NO	MM
2	2	190701M1_4	Standard	0.500	4.28	97.054	17095.941	0.071	0.5	-8.0	NO	1.000	NO	bb
3	3	190701M1_5	Standard	1.000	4.26	249.099	17293.736	0.180	1.0	-0.5	NO	1.000	NO	bb
4	4	190701M1_6	Standard	2.000	4.26	489.391	16963.230	0.361	1.9	-6.1	NO	1.000	NO	bb
5	5	190701M1_7	Standard	5.000	4.26	1449.344	18248.066	0.993	5.0	-0.6	NO	1.000	NO	bb
6	6	190701M1_8	Standard	10.000	4.26	2793.947	17591.018	1.985	9.8	-2.0	NO	1.000	NO	bb
7	7	190701M1_9	Standard	50.000	4.26	14140.556	16747.066	10.555	50.6	1.3	NO	1.000	NO	bb
8	8	190701M1_10	Standard	100.000	4.26	26858.902	15281.182	21.971	102.8	2.8	NO	1.000	NO	bb
9	9	190701M1_11	Standard	250.000	4.27	66313.906	14823.402	55.920	245.6	-1.8	NO	1.000	NO	bb
10	10	190701M1_12	Standard	500.000	4.27	117944.867	11643.679	126.619	501.4	0.3	NO	1.000	NO	bb

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Compound name: PFHpS
Correlation coefficient: r = 0.999269, r^2 = 0.998539
Calibration curve: 0.971788 * x + -0.0147429
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	190701M1_3	Standard	0.250	4.37	70.899	3165.737	0.280	0.3	21.3	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	4.36	76.264	2680.775	0.356	0.4	-23.8	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	4.36	183.407	2789.072	0.822	0.9	-13.9	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	4.36	471.663	2914.683	2.023	2.1	4.8	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	4.36	1162.779	3081.590	4.717	4.9	-2.6	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	4.36	2205.378	2769.122	9.955	10.3	2.6	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	4.36	11098.073	2732.554	50.768	52.3	4.5	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	4.36	20626.707	2429.840	106.111	109.2	9.2	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	4.36	49186.324	2523.169	243.673	250.8	0.3	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	4.36	85362.297	2251.221	473.978	487.8	-2.4	NO	0.999	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.999469
Calibration curve: 0.000115285 * x^2 + 0.0952311 * x + -0.00880497
Response type: Internal Std (Ref 56), 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	190701M1_3	Standard	0.250	4.69	23.146	20160.236	0.014	0.2	-2.8	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	4.68	56.537	18527.377	0.038	0.5	-1.5	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	4.68	141.266	17903.359	0.099	1.1	12.7	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	4.68	258.603	17765.660	0.182	2.0	-0.1	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	4.68	701.783	19463.697	0.451	4.8	-4.1	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	4.68	1315.769	18378.016	0.895	9.4	-6.2	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	4.68	7584.487	18354.287	5.165	51.2	2.3	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	4.68	14210.633	16739.117	10.612	99.5	-0.5	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	4.68	7488.331	17132.023	5.464	53.9	-78.4	YES	0.999	NO	bbX
10	10	190701M1_12	Standard	500.000	4.68	13452.784	13514.141	12.443	114.8	-77.0	YES	0.999	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.999097, r^2 = 0.998196
Calibration curve: 1.21237 * x + -0.0564818
Response type: Internal Std (Ref 56), 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	190701M1_3	Standard	0.250	4.69	472.865	20160.236	0.293	0.3	15.4	NO	0.998	NO	bb
2	2	190701M1_4	Standard	0.500	4.69	780.283	18527.377	0.526	0.5	-3.8	NO	0.998	NO	bb
3	3	190701M1_5	Standard	1.000	4.68	1715.184	17903.359	1.198	1.0	3.4	NO	0.998	NO	bb
4	4	190701M1_6	Standard	2.000	4.68	3407.384	17765.660	2.397	2.0	1.2	NO	0.998	NO	bb
5	5	190701M1_7	Standard	5.000	4.68	9038.208	19463.697	5.805	4.8	-3.3	NO	0.998	NO	bb
6	6	190701M1_8	Standard	10.000	4.68	16690.916	18378.016	11.353	9.4	-5.9	NO	0.998	NO	bb
7	7	190701M1_9	Standard	50.000	4.69	84653.555	18354.287	57.652	47.6	-4.8	NO	0.998	NO	bb
8	8	190701M1_10	Standard	100.000	4.69	162583.375	16739.117	121.410	100.2	0.2	NO	0.998	NO	bb
9	9	190701M1_11	Standard	250.000	4.69	390983.219	17132.023	285.272	235.3	-5.9	NO	0.998	NO	bb
10	10	190701M1_12	Standard	500.000	4.69	678291.750	13514.141	627.391	517.5	3.5	NO	0.998	NO	bb

Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999806
Calibration curve: 0.000143509 * x^2 + 1.09269 * x + 0.0627892
Response type: Internal Std (Ref 57), 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	190701M1_3	Standard	0.250	4.75	118.590	3822.438	0.388	0.3	19.0	NO	1.000	NO	bb
2	2	190701M1_4	Standard	0.500	4.76	148.560	3328.207	0.558	0.5	-9.4	NO	1.000	NO	bb
3	3	190701M1_5	Standard	1.000	4.75	312.172	3633.368	1.074	0.9	-7.5	NO	1.000	NO	bb
4	4	190701M1_6	Standard	2.000	4.75	629.279	3396.273	2.316	2.1	3.1	NO	1.000	NO	bb
5	5	190701M1_7	Standard	5.000	4.75	1624.410	3894.382	5.214	4.7	-5.8	NO	1.000	NO	bb
6	6	190701M1_8	Standard	10.000	4.75	3085.508	3589.383	10.745	9.8	-2.4	NO	1.000	NO	bb
7	7	190701M1_9	Standard	50.000	4.76	15718.251	3491.316	56.276	51.1	2.2	NO	1.000	NO	bb
8	8	190701M1_10	Standard	100.000	4.76	27990.580	3094.417	113.069	102.1	2.1	NO	1.000	NO	bb
9	9	190701M1_11	Standard	250.000	4.75	68692.375	3094.409	277.486	245.9	-1.6	NO	1.000	NO	bb
10	10	190701M1_12	Standard	500.000	4.75	121610.594	2602.650	584.071	501.4	0.3	NO	1.000	NO	bb

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Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999203
Calibration curve: 0.00169096 * x^2 + 1.03212 * x + -0.0827669
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	190701M1_3	Standard	0.250	4.78	39.039	3165.737	0.154	0.2	-8.2	NO	0.999	NO	MM
2	2	190701M1_4	Standard	0.500	4.78	79.201	2680.775	0.369	0.4	-12.5	NO	0.999	NO	MM
3	3	190701M1_5	Standard	1.000	4.77	181.491	2789.072	0.813	0.9	-13.3	NO	0.999	NO	MM
4	4	190701M1_6	Standard	2.000	4.77	448.903	2914.683	1.925	1.9	-3.0	NO	0.999	NO	MM
5	5	190701M1_7	Standard	5.000	4.77	1223.160	3081.590	4.962	4.8	-3.0	NO	0.999	NO	MM
6	6	190701M1_8	Standard	10.000	4.77	2522.152	2769.122	11.385	10.9	9.2	NO	0.999	NO	MM
7	7	190701M1_9	Standard	50.000	4.77	11992.320	2732.554	54.859	49.3	-1.5	NO	0.999	NO	MM
8	8	190701M1_10	Standard	100.000	4.77	23403.777	2429.840	120.398	100.3	0.3	NO	0.999	NO	MM
9	9	190701M1_11	Standard	250.000	4.77	56634.785	2523.169	280.574	203.8	-18.5	NO	0.999	NO	MMX
10	10	190701M1_12	Standard	500.000	4.77	103471.203	2251.221	574.528	352.8	-29.4	NO	0.999	NO	MMX

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999441
Calibration curve: -0.000123382 * x^2 + 1.97563 * x + -0.131619
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	190701M1_3	Standard	0.250	4.99	109.897	3165.737	0.434	0.3	14.5	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	4.99	206.379	2680.775	0.962	0.6	10.7	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	4.99	407.392	2789.072	1.826	1.0	-0.9	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	4.99	811.700	2914.683	3.481	1.8	-8.6	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	4.99	2087.920	3081.590	8.469	4.4	-12.9	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	4.99	4213.747	2769.122	19.021	9.7	-3.0	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	4.99	20613.340	2732.554	94.295	47.9	-4.1	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	4.99	40092.926	2429.840	206.253	105.2	5.2	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	4.99	97151.477	2523.169	481.297	247.5	-1.0	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	4.99	172469.391	2251.221	957.644	500.4	0.1	NO	0.999	NO	bb

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Compound name: PFDA
Correlation coefficient: r = 0.999579, r^2 = 0.999159
Calibration curve: 1.40069 * x + -0.0183493
Response type: Internal Std (Ref 60), 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	190701M1_3	Standard	0.250	5.06	574.163	19063.076	0.376	0.3	12.8	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	5.06	881.123	16338.149	0.674	0.5	-1.1	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	5.06	1753.861	16486.750	1.330	1.0	-3.8	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	5.06	3627.706	17166.838	2.642	1.9	-5.1	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	5.06	10192.240	18240.092	6.985	5.0	-0.0	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	5.06	18738.020	16786.326	13.953	10.0	-0.3	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	5.06	93198.648	16557.846	70.358	50.2	0.5	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	5.06	169170.391	15268.243	138.499	98.9	-1.1	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	5.06	400246.781	14930.285	335.096	239.2	-4.3	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	5.06	710870.750	12396.811	716.788	511.8	2.4	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998772
Calibration curve: -0.000226625 * x^2 + 1.74522 * x + -0.176865
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	190701M1_3	Standard	0.250	5.04	50.220	1941.526	0.323	0.3	14.6	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	5.03	65.577	1717.230	0.477	0.4	-25.0	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	5.03	234.898	1973.946	1.487	1.0	-4.6	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	5.03	454.718	1668.911	3.406	2.1	2.7	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	5.03	1192.514	1883.873	7.913	4.6	-7.2	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	5.03	2524.566	1576.210	20.021	11.6	15.9	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	5.03	11686.721	1623.929	89.957	52.0	4.0	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	5.03	21603.965	1520.130	177.649	103.3	3.3	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	5.03	44745.789	1388.012	402.967	238.4	-4.6	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	5.03	75593.375	1147.069	823.767	505.3	1.1	NO	0.999	NO	bb

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Compound name: PFNS
Correlation coefficient: r = 0.999302, r^2 = 0.998604
Calibration curve: 0.775503 * x + -0.0929333
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 190701M1_3	Standard	0.250	5.13	27.709	3165.737	0.109	0.3	4.4	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	5.13	54.294	2680.775	0.253	0.4	-10.7	NO	0.999	NO	bb
3	3 190701M1_5	Standard	1.000	5.12	139.231	2789.072	0.624	0.9	-7.6	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	5.13	346.778	2914.683	1.487	2.0	1.9	NO	0.999	NO	bb
5	5 190701M1_7	Standard	5.000	5.13	947.066	3081.590	3.842	5.1	1.5	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	5.13	1683.441	2769.122	7.599	9.9	-0.8	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	5.13	8857.820	2732.554	40.520	52.4	4.7	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	5.13	16522.408	2429.840	84.997	109.7	9.7	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	5.12	38589.629	2523.169	191.176	246.6	-1.3	NO	0.999	NO	bb
10	10 190701M1_12	Standard	500.000	5.13	68609.180	2251.221	380.955	491.4	-1.7	NO	0.999	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999224
Calibration curve: 0.000282873 * x^2 + 2.51405 * x + -0.20232
Response type: Internal Std (Ref 62), 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 190701M1_3	Standard	0.250	5.21	103.442	4124.403	0.314	0.2	-17.9	NO	0.999	NO	MM
2	2 190701M1_4	Standard	0.500	5.21	359.034	3653.294	1.228	0.6	13.8	NO	0.999	NO	MM
3	3 190701M1_5	Standard	1.000	5.21	676.077	3616.352	2.337	1.0	1.0	NO	0.999	NO	MM
4	4 190701M1_6	Standard	2.000	5.21	1303.219	3665.892	4.444	1.8	-7.6	NO	0.999	NO	MM
5	5 190701M1_7	Standard	5.000	5.21	3750.213	3754.330	12.486	5.0	0.9	NO	0.999	NO	MM
6	6 190701M1_8	Standard	10.000	5.21	7672.208	3608.061	26.580	10.6	6.4	NO	0.999	NO	MM
7	7 190701M1_9	Standard	50.000	5.21	36603.059	3546.265	129.020	51.1	2.2	NO	0.999	NO	MM
8	8 190701M1_10	Standard	100.000	5.21	70361.695	3314.232	265.377	104.4	4.4	NO	0.999	NO	MM
9	9 190701M1_11	Standard	250.000	5.21	166996.563	3366.971	619.981	240.2	-3.9	NO	0.999	NO	MM
10	10 190701M1_12	Standard	500.000	5.21	292331.188	2731.128	1337.960	503.7	0.7	NO	0.999	NO	MM

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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.998269, r^2 = 0.996541
Calibration curve: 1.72123 * x + -0.14259
Response type: Internal Std (Ref 64), 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	190701M1_3	Standard	0.250	5.37	116.228	4846.071	0.300	0.3	2.8	NO	0.997	NO	MM
2	2	190701M1_4	Standard	0.500	5.37	241.481	4061.948	0.743	0.5	2.9	NO	0.997	NO	MM
3	3	190701M1_5	Standard	1.000	5.37	462.755	4100.160	1.411	0.9	-9.8	NO	0.997	NO	MM
4	4	190701M1_6	Standard	2.000	5.37	890.639	4146.013	2.685	1.6	-17.9	NO	0.997	NO	MM
5	5	190701M1_7	Standard	5.000	5.37	2790.507	4071.606	8.567	5.1	1.2	NO	0.997	NO	MM
6	6	190701M1_8	Standard	10.000	5.37	5520.905	4379.793	15.757	9.2	-7.6	NO	0.997	NO	MM
7	7	190701M1_9	Standard	50.000	5.37	26321.645	3898.104	84.405	49.1	-1.8	NO	0.997	NO	MM
8	8	190701M1_10	Standard	100.000	5.37	48480.410	3483.605	173.959	101.1	1.1	NO	0.997	NO	MM
9	9	190701M1_11	Standard	250.000	5.37	113440.180	3613.932	392.371	228.0	-8.8	NO	0.997	NO	MM
10	10	190701M1_12	Standard	500.000	5.37	186853.672	2595.895	899.756	522.8	4.6	NO	0.997	NO	MM

Compound name: PFUdA
Correlation coefficient: r = 0.999549, r^2 = 0.999099
Calibration curve: 0.947115 * x + 0.0265677
Response type: Internal Std (Ref 63), 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	190701M1_3	Standard	0.250	5.39	517.172	26474.295	0.244	0.2	-8.1	NO	0.999	NO	bb
2	2	190701M1_4	Standard	0.500	5.39	1012.151	24192.553	0.523	0.5	4.8	NO	0.999	NO	bd
3	3	190701M1_5	Standard	1.000	5.39	2031.554	23792.217	1.067	1.1	9.9	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	5.39	3355.967	23809.865	1.762	1.8	-8.4	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	5.39	9944.292	24949.557	4.982	5.2	4.6	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	5.39	17948.141	23852.160	9.406	9.9	-1.0	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	5.39	88002.500	22549.758	48.782	51.5	3.0	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	5.39	162134.063	22120.160	91.621	96.7	-3.3	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	5.39	377881.844	20743.678	227.709	240.4	-3.8	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	5.39	644377.813	16630.627	484.331	511.3	2.3	NO	0.999	NO	bb

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.999741
Calibration curve: 0.000442645 * x^2 + 1.8108 * x + -0.117379
Response type: Internal Std (Ref 61), 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	190701M1_3	Standard	0.250	5.43	71.135	1941.526	0.458	0.3	27.1	NO	1.000	NO	bb
2	2	190701M1_4	Standard	0.500	5.43	97.586	1717.230	0.710	0.5	-8.6	NO	1.000	NO	bb
3	3	190701M1_5	Standard	1.000	5.43	197.400	1973.946	1.250	0.8	-24.5	NO	1.000	NO	bb
4	4	190701M1_6	Standard	2.000	5.43	400.150	1668.911	2.997	1.7	-14.0	NO	1.000	NO	bb
5	5	190701M1_7	Standard	5.000	5.43	1232.142	1883.873	8.176	4.6	-8.5	NO	1.000	NO	bb
6	6	190701M1_8	Standard	10.000	5.43	2325.903	1576.210	18.445	10.2	2.3	NO	1.000	NO	bb
7	7	190701M1_9	Standard	50.000	5.43	12043.968	1623.929	92.707	50.6	1.3	NO	1.000	NO	bb
8	8	190701M1_10	Standard	100.000	5.43	22104.275	1520.130	181.763	98.1	-1.9	NO	1.000	NO	bb
9	9	190701M1_11	Standard	250.000	5.43	54017.379	1388.012	486.464	253.1	1.2	NO	1.000	NO	bb
10	10	190701M1_12	Standard	500.000	5.43	92999.375	1147.069	1013.446	498.9	-0.2	NO	1.000	NO	bb

Compound name: 11Cl-PF30UdS
Correlation coefficient: r = 0.999479, r^2 = 0.998958
Calibration curve: 0.0663494 * x + -0.0146238
Response type: Internal Std (Ref 65), 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	190701M1_3	Standard	0.250	5.60	27.589	24633.080	0.014	0.4	72.6	YES	0.999	NO	bbX
2	2	190701M1_4	Standard	0.500	5.61	28.433	21591.344	0.016	0.5	-6.3	NO	0.999	NO	bb
3	3	190701M1_5	Standard	1.000	5.60	105.285	21876.676	0.060	1.1	12.7	NO	0.999	NO	bb
4	4	190701M1_6	Standard	2.000	5.60	194.449	21924.826	0.111	1.9	-5.4	NO	0.999	NO	bb
5	5	190701M1_7	Standard	5.000	5.60	566.950	22389.029	0.317	5.0	-0.2	NO	0.999	NO	bb
6	6	190701M1_8	Standard	10.000	5.60	1157.762	21415.625	0.676	10.4	4.1	NO	0.999	NO	bb
7	7	190701M1_9	Standard	50.000	5.60	5509.118	21534.744	3.198	48.4	-3.2	NO	0.999	NO	bb
8	8	190701M1_10	Standard	100.000	5.60	10598.576	19911.600	6.654	100.5	0.5	NO	0.999	NO	bb
9	9	190701M1_11	Standard	250.000	5.60	25448.697	20130.902	15.802	238.4	-4.6	NO	0.999	NO	bb
10	10	190701M1_12	Standard	500.000	5.60	47777.633	17577.086	33.977	512.3	2.5	NO	0.999	NO	bb

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998741
Calibration curve: -0.000811086 * x^2 + 2.36532 * x + 0.223331
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 190701M1_3	Standard	0.250	5.65	109.190	1941.526	0.703	0.2	-18.9	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	5.66	190.199	1717.230	1.384	0.5	-1.8	NO	0.999	NO	bb
3	3 190701M1_5	Standard	1.000	5.65	388.116	1973.946	2.458	0.9	-5.5	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	5.65	675.398	1668.911	5.059	2.0	2.3	NO	0.999	NO	bb
5	5 190701M1_7	Standard	5.000	5.65	1888.029	1883.873	12.528	5.2	4.2	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	5.65	3505.766	1576.210	27.802	11.7	17.1	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	5.65	15764.061	1623.929	121.342	52.1	4.3	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	5.65	28323.805	1520.130	232.906	101.9	1.9	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	5.65	57378.297	1388.012	516.731	237.7	-4.9	NO	0.999	NO	bb
10	10 190701M1_12	Standard	500.000	5.65	90917.063	1147.069	990.754	506.9	1.4	NO	0.999	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999261
Calibration curve: -0.000118706 * x^2 + 1.07506 * x + 0.0526029
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 190701M1_3	Standard	0.250	5.67	502.613	24633.080	0.255	0.2	-24.7	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	5.67	1063.086	21591.344	0.615	0.5	4.7	NO	0.999	NO	bb
3	3 190701M1_5	Standard	1.000	5.67	2052.075	21876.676	1.173	1.0	4.2	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	5.66	3803.705	21924.826	2.169	2.0	-1.6	NO	0.999	NO	bb
5	5 190701M1_7	Standard	5.000	5.66	10678.750	22389.029	5.962	5.5	10.0	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	5.66	19174.197	21415.625	11.192	10.4	3.7	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	5.67	95864.844	21534.744	55.645	52.0	4.0	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	5.67	173934.328	19911.600	109.192	102.7	2.7	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	5.67	404633.000	20130.902	251.251	240.0	-4.0	NO	0.999	NO	bb
10	10 190701M1_12	Standard	500.000	5.67	720222.500	17577.086	512.188	504.5	0.9	NO	0.999	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999306
Calibration curve: -4.31261e-005 * x^2 + 1.13745 * x + 0.0203173
Response type: Internal Std (Ref 66), 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 190701M1_3	Standard	1.250	5.81	103.222	11186.576	1.384	1.2	-4.1	NO	0.999	NO	bb
2	2 190701M1_4	Standard	2.500	5.82	187.859	9944.334	2.834	2.5	-1.1	NO	0.999	NO	bb
3	3 190701M1_5	Standard	5.000	5.82	401.208	9529.736	6.315	5.5	10.7	NO	0.999	NO	bb
4	4 190701M1_6	Standard	10.000	5.82	726.346	10514.570	10.362	9.1	-9.0	NO	0.999	NO	bb
5	5 190701M1_7	Standard	25.000	5.81	2025.657	10529.539	28.857	25.4	1.5	NO	0.999	NO	bb
6	6 190701M1_8	Standard	50.000	5.81	3697.470	10010.348	55.405	48.8	-2.4	NO	0.999	NO	bd
7	7 190701M1_9	Standard	250.000	5.82	19179.227	9509.348	302.532	268.7	7.5	NO	0.999	NO	bb
8	8 190701M1_10	Standard	500.000	5.81	34702.227	9251.603	562.641	504.3	0.9	NO	0.999	NO	bb
9	9 190701M1_11	Standard	1250.000	5.81	85080.086	9724.895	1312.303	1209.1	-3.3	NO	0.999	NO	bb
10	10 190701M1_12	Standard	2500.000	5.81	152861.000	8845.528	2592.174	2519.6	0.8	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999573
Calibration curve: -0.000320084 * x^2 + 1.18356 * x + -0.00161666
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 190701M1_3	Standard	0.250	5.91	546.011	24633.080	0.277	0.2	-5.8	NO	1.000	NO	bb
2	2 190701M1_4	Standard	0.500	5.92	1090.924	21591.344	0.632	0.5	7.0	NO	1.000	NO	bb
3	3 190701M1_5	Standard	1.000	5.91	1977.057	21876.676	1.130	1.0	-4.4	NO	1.000	NO	bb
4	4 190701M1_6	Standard	2.000	5.91	3964.490	21924.826	2.260	1.9	-4.4	NO	1.000	NO	bb
5	5 190701M1_7	Standard	5.000	5.91	10873.136	22389.029	6.071	5.1	2.8	NO	1.000	NO	bb
6	6 190701M1_8	Standard	10.000	5.91	20803.975	21415.625	12.143	10.3	2.9	NO	1.000	NO	bb
7	7 190701M1_9	Standard	50.000	5.91	101375.516	21534.744	58.844	50.4	0.8	NO	1.000	NO	bb
8	8 190701M1_10	Standard	100.000	5.91	189595.281	19911.600	119.023	103.5	3.5	NO	1.000	NO	bb
9	9 190701M1_11	Standard	250.000	5.91	431804.281	20130.902	268.123	242.4	-3.0	NO	1.000	NO	bb
10	10 190701M1_12	Standard	500.000	5.91	723909.000	17577.086	514.810	503.5	0.7	NO	1.000	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999850
Calibration curve: -2.48379e-006 * x^2 + 0.175562 * x + -0.0189032
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	190701M1_3	Standard	0.250	5.94	44.119	17276.939	0.032	0.3	15.8	NO	1.000	NO	bb
2	2	190701M1_4	Standard	0.500	5.94	62.598	15274.221	0.051	0.4	-20.1	NO	1.000	NO	bb
3	3	190701M1_5	Standard	1.000	5.94	173.944	14709.894	0.148	0.9	-5.0	NO	1.000	NO	bb
4	4	190701M1_6	Standard	2.000	5.94	407.886	15009.819	0.340	2.0	2.1	NO	1.000	NO	bb
5	5	190701M1_7	Standard	5.000	5.94	1158.415	15600.711	0.928	5.4	7.9	NO	1.000	NO	bb
6	6	190701M1_8	Standard	10.000	5.94	2032.448	14980.120	1.696	9.8	-2.3	NO	1.000	NO	bb
7	7	190701M1_9	Standard	50.000	5.94	10273.329	14419.537	8.906	50.9	1.7	NO	1.000	NO	bb
8	8	190701M1_10	Standard	100.000	5.94	19453.258	13760.477	17.671	100.9	0.9	NO	1.000	NO	bb
9	9	190701M1_11	Standard	250.000	5.94	43770.074	12678.512	43.154	246.8	-1.3	NO	1.000	NO	bb
10	10	190701M1_12	Standard	500.000	5.94	78365.586	11210.996	87.376	501.4	0.3	NO	1.000	NO	bb

Compound name: PFTeDA
Correlation coefficient: r = 0.999839, r^2 = 0.999677
Calibration curve: 1.49116 * x + 0.029048
Response type: Internal Std (Ref 67), 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	190701M1_3	Standard	0.250	6.13	549.731	17276.939	0.398	0.2	-1.1	NO	1.000	NO	bb
2	2	190701M1_4	Standard	0.500	6.13	941.255	15274.221	0.770	0.5	-0.6	NO	1.000	NO	bb
3	3	190701M1_5	Standard	1.000	6.13	1800.926	14709.894	1.530	1.0	0.7	NO	1.000	NO	bb
4	4	190701M1_6	Standard	2.000	6.13	3593.066	15009.819	2.992	2.0	-0.6	NO	1.000	NO	bb
5	5	190701M1_7	Standard	5.000	6.13	9474.885	15600.711	7.592	5.1	1.4	NO	1.000	NO	bb
6	6	190701M1_8	Standard	10.000	6.13	17526.930	14980.120	14.625	9.8	-2.1	NO	1.000	NO	bb
7	7	190701M1_9	Standard	50.000	6.13	87504.758	14419.537	75.856	50.9	1.7	NO	1.000	NO	bb
8	8	190701M1_10	Standard	100.000	6.13	163005.469	13760.477	148.074	99.3	-0.7	NO	1.000	NO	bb
9	9	190701M1_11	Standard	250.000	6.13	388248.594	12678.512	382.782	256.7	2.7	NO	1.000	NO	bb
10	10	190701M1_12	Standard	500.000	6.13	659812.000	11210.996	735.675	493.3	-1.3	NO	1.000	NO	bb

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999747
Calibration curve: 3.23713e-005 * x^2 + 0.926697 * x + 0.169234
Response type: Internal Std (Ref 68), 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 190701M1_3	Standard	1.250	6.21	109.027	14516.421	1.127	1.0	-17.4	NO	1.000	NO	bb
2	2 190701M1_4	Standard	2.500	6.21	193.184	12561.396	2.307	2.3	-7.7	NO	1.000	NO	bb
3	3 190701M1_5	Standard	5.000	6.21	475.912	13314.040	5.362	5.6	12.0	NO	1.000	NO	bb
4	4 190701M1_6	Standard	10.000	6.21	831.595	12901.615	9.668	10.2	2.5	NO	1.000	NO	bb
5	5 190701M1_7	Standard	25.000	6.21	2254.900	13681.523	24.722	26.5	5.9	NO	1.000	NO	bb
6	6 190701M1_8	Standard	50.000	6.21	4230.033	13171.471	48.173	51.7	3.4	NO	1.000	NO	bb
7	7 190701M1_9	Standard	250.000	6.21	20226.527	12868.468	235.768	252.0	0.8	NO	1.000	NO	bb
8	8 190701M1_10	Standard	500.000	6.21	38662.336	12026.530	482.213	511.1	2.2	NO	1.000	NO	bb
9	9 190701M1_11	Standard	1250.000	6.21	92252.883	11706.144	1182.109	1223.2	-2.1	NO	1.000	NO	bb
10	10 190701M1_12	Standard	2500.000	6.21	163263.234	9678.181	2530.381	2510.2	0.4	NO	1.000	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999222
Calibration curve: -8.02491e-005 * x^2 + 0.616647 * x + 0.0277147
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 190701M1_3	Standard	0.250	6.47	289.986	8143.546	0.178	0.2	-2.5	NO	0.999	NO	bb
2	2 190701M1_4	Standard	0.500	6.47	502.558	7719.967	0.325	0.5	-3.4	NO	0.999	NO	bb
3	3 190701M1_5	Standard	1.000	6.47	961.112	7198.960	0.668	1.0	3.8	NO	0.999	NO	bb
4	4 190701M1_6	Standard	2.000	6.47	1747.354	7351.967	1.188	1.9	-5.9	NO	0.999	NO	bd
5	5 190701M1_7	Standard	5.000	6.47	5035.252	7709.777	3.265	5.3	5.1	NO	0.999	NO	bb
6	6 190701M1_8	Standard	10.000	6.47	9118.818	7410.878	6.152	9.9	-0.6	NO	0.999	NO	bb
7	7 190701M1_9	Standard	50.000	6.47	45504.094	7295.890	31.185	50.9	1.7	NO	0.999	NO	bb
8	8 190701M1_10	Standard	100.000	6.47	86135.547	6746.925	63.833	104.9	4.9	NO	0.999	NO	bb
9	9 190701M1_11	Standard	250.000	6.47	198621.172	6925.325	143.402	240.0	-4.0	NO	0.999	NO	bb
10	10 190701M1_12	Standard	500.000	6.47	374597.750	6446.726	290.533	504.2	0.8	NO	0.999	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.999180, r^2 = 0.998360
Calibration curve: 0.75742 * x + 0.0294746
Response type: Internal Std (Ref 69), 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	190701M1_3	Standard	0.250	6.70	325.590	8143.546	0.200	0.2	-10.0	NO	0.998	NO	bb
2	2	190701M1_4	Standard	0.500	6.70	588.715	7719.967	0.381	0.5	-7.1	NO	0.998	NO	bb
3	3	190701M1_5	Standard	1.000	6.70	1207.816	7198.960	0.839	1.1	6.9	NO	0.998	NO	bb
4	4	190701M1_6	Standard	2.000	6.70	2318.808	7351.967	1.577	2.0	2.2	NO	0.998	NO	MM
5	5	190701M1_7	Standard	5.000	6.70	6235.701	7709.777	4.044	5.3	6.0	NO	0.998	NO	bb
6	6	190701M1_8	Standard	10.000	6.70	11715.095	7410.878	7.904	10.4	4.0	NO	0.998	NO	bb
7	7	190701M1_9	Standard	50.000	6.70	59367.488	7295.890	40.686	53.7	7.4	NO	0.998	NO	bb
8	8	190701M1_10	Standard	100.000	6.70	111082.625	6746.925	82.321	108.6	8.6	NO	0.998	NO	bb
9	9	190701M1_11	Standard	250.000	6.70	263781.500	6925.325	190.447	251.4	0.6	NO	0.998	NO	bb
10	10	190701M1_12	Standard	500.000	6.70	474189.563	6446.726	367.775	485.5	-2.9	NO	0.998	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999222, r^2 = 0.998445
Calibration curve: 1.13807 * x + -0.148891
Response type: Internal Std (Ref 70), 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	190701M1_3	Standard	1.250	6.35	90.315	8329.760	1.626	1.6	24.8	NO	0.998	NO	bb
2	2	190701M1_4	Standard	2.500	6.35	130.026	7401.065	2.635	2.4	-2.1	NO	0.998	NO	bb
3	3	190701M1_5	Standard	5.000	6.35	245.343	7269.145	5.063	4.6	-8.4	NO	0.998	NO	bb
4	4	190701M1_6	Standard	10.000	6.35	517.405	7254.994	10.698	9.5	-4.7	NO	0.998	NO	bd
5	5	190701M1_7	Standard	25.000	6.35	1463.259	7705.333	28.485	25.2	0.6	NO	0.998	NO	bb
6	6	190701M1_8	Standard	50.000	6.35	2686.293	7462.034	53.999	47.6	-4.8	NO	0.998	NO	bb
7	7	190701M1_9	Standard	250.000	6.35	13873.259	7225.770	287.995	253.2	1.3	NO	0.998	NO	bb
8	8	190701M1_10	Standard	500.000	6.35	26425.990	7369.541	537.876	472.8	-5.4	NO	0.998	NO	bb
9	9	190701M1_11	Standard	1250.000	6.35	67111.242	7409.624	1358.596	1193.9	-4.5	NO	0.998	NO	bb
10	10	190701M1_12	Standard	2500.000	6.35	135636.234	6921.324	2939.529	2583.0	3.3	NO	0.998	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999025, r^2 = 0.998051
Calibration curve: 1.42687 * x + -0.492969
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	190701M1_3	Standard	1.250	6.51	98.716	8202.859	1.805	1.6	28.8	NO	0.998	NO	bb
2	2	190701M1_4	Standard	2.500	6.50	152.291	7127.454	3.205	2.6	3.7	NO	0.998	NO	bb
3	3	190701M1_5	Standard	5.000	6.50	333.156	7723.248	6.471	4.9	-2.4	NO	0.998	NO	bb
4	4	190701M1_6	Standard	10.000	6.50	617.289	7456.727	12.417	9.0	-9.5	NO	0.998	NO	bb
5	5	190701M1_7	Standard	25.000	6.50	1733.129	7913.089	32.853	23.4	-6.5	NO	0.998	NO	bb
6	6	190701M1_8	Standard	50.000	6.50	3325.515	7283.188	68.490	48.3	-3.3	NO	0.998	NO	bb
7	7	190701M1_9	Standard	250.000	6.50	16187.452	7200.394	337.220	236.7	-5.3	NO	0.998	NO	bb
8	8	190701M1_10	Standard	500.000	6.50	31546.969	6969.357	678.979	476.2	-4.8	NO	0.998	NO	bb
9	9	190701M1_11	Standard	1250.000	6.50	85217.797	7518.760	1700.103	1191.8	-4.7	NO	0.998	NO	bb
10	10	190701M1_12	Standard	2500.000	6.50	168109.375	6800.165	3708.205	2599.2	4.0	NO	0.998	NO	bb

Compound name: 13C3-PFBA
Response Factor: 0.769474
RRF SD: 0.0173464, Relative SD: 2.25432
Response type: Internal Std (Ref 72), 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	190701M1_3	Standard	12.500	1.35	7859.143	10014.119	9.810	12.7	2.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	1.35	7017.500	8816.097	9.950	12.9	3.4	NO		NO	bb
3	3	190701M1_5	Standard	12.500	1.34	7121.135	9331.931	9.539	12.4	-0.8	NO		NO	bb
4	4	190701M1_6	Standard	12.500	1.34	7137.009	9242.064	9.653	12.5	0.4	NO		NO	bb
5	5	190701M1_7	Standard	12.500	1.35	7448.695	9624.726	9.674	12.6	0.6	NO		NO	bb
6	6	190701M1_8	Standard	12.500	1.34	7157.414	9050.870	9.885	12.8	2.8	NO		NO	bb
7	7	190701M1_9	Standard	12.500	1.35	7262.408	9518.712	9.537	12.4	-0.8	NO		NO	MM
8	8	190701M1_10	Standard	12.500	1.35	6877.840	9256.797	9.288	12.1	-3.4	NO		NO	bb
9	9	190701M1_11	Standard	12.500	1.35	7183.977	9571.834	9.382	12.2	-2.5	NO		NO	bb
10	10	190701M1_12	Standard	12.500	1.35	6405.827	8457.517	9.468	12.3	-1.6	NO		NO	bb

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Compound name: 13C3-PFPeA
Response Factor: 0.524413
RRF SD: 0.011852, Relative SD: 2.26005
Response type: Internal Std (Ref 73), 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 190701M1_3	Standard	12.500	2.33	11001.018	20939.059	6.567	12.5	0.2	NO		NO	bb
2	2 190701M1_4	Standard	12.500	2.33	9710.131	18628.795	6.516	12.4	-0.6	NO		NO	bb
3	3 190701M1_5	Standard	12.500	2.32	10026.007	19375.059	6.468	12.3	-1.3	NO		NO	bb
4	4 190701M1_6	Standard	12.500	2.32	9745.816	19176.105	6.353	12.1	-3.1	NO		NO	bb
5	5 190701M1_7	Standard	12.500	2.33	10471.772	20445.602	6.402	12.2	-2.3	NO		NO	bb
6	6 190701M1_8	Standard	12.500	2.33	10221.992	18898.736	6.761	12.9	3.1	NO		NO	bb
7	7 190701M1_9	Standard	12.500	2.33	9751.743	18201.396	6.697	12.8	2.2	NO		NO	bb
8	8 190701M1_10	Standard	12.500	2.33	9044.598	17529.344	6.450	12.3	-1.6	NO		NO	bb
9	9 190701M1_11	Standard	12.500	2.33	9358.146	17836.471	6.558	12.5	0.0	NO		NO	bb
10	10 190701M1_12	Standard	12.500	2.33	7802.088	14385.680	6.779	12.9	3.4	NO		NO	bb

Compound name: 13C3-PFBS
Response Factor: 1.06713
RRF SD: 0.0654432, Relative SD: 6.13263
Response type: Internal Std (Ref 74), 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 190701M1_3	Standard	12.500	2.61	1387.651	1217.988	14.241	13.3	6.8	NO		NO	bb
2	2 190701M1_4	Standard	12.500	2.61	1259.104	1158.041	13.591	12.7	1.9	NO		NO	bb
3	3 190701M1_5	Standard	12.500	2.61	1259.106	1145.348	13.742	12.9	3.0	NO		NO	bb
4	4 190701M1_6	Standard	12.500	2.61	1269.525	1155.390	13.735	12.9	3.0	NO		NO	bb
5	5 190701M1_7	Standard	12.500	2.62	1369.346	1377.330	12.428	11.6	-6.8	NO		NO	bb
6	6 190701M1_8	Standard	12.500	2.61	1258.471	1133.700	13.876	13.0	4.0	NO		NO	bb
7	7 190701M1_9	Standard	12.500	2.62	1225.593	1133.189	13.519	12.7	1.4	NO		NO	bb
8	8 190701M1_10	Standard	12.500	2.62	1102.075	1175.176	11.722	11.0	-12.1	NO		NO	bb
9	9 190701M1_11	Standard	12.500	2.61	1119.792	1000.226	13.994	13.1	4.9	NO		NO	bb
10	10 190701M1_12	Standard	12.500	2.61	840.372	837.451	12.544	11.8	-6.0	NO		NO	bb

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Compound name: 13C3-HFPO-DA
Response Factor: 0.195027
RRF SD: 0.00992486, Relative SD: 5.08898
Response type: Internal Std (Ref 73), 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	190701M1_3	Standard	5.000	3.32	1732.481	20939.059	1.034	5.3	6.1	NO		NO	bb
2	2	190701M1_4	Standard	5.000	3.32	1461.787	18628.795	0.981	5.0	0.6	NO		NO	bb
3	3	190701M1_5	Standard	5.000	3.32	1468.807	19375.059	0.948	4.9	-2.8	NO		NO	bb
4	4	190701M1_6	Standard	5.000	3.32	1613.802	19176.105	1.052	5.4	7.9	NO		NO	bb
5	5	190701M1_7	Standard	5.000	3.32	1471.082	20445.602	0.899	4.6	-7.8	NO		NO	bb
6	6	190701M1_8	Standard	5.000	3.32	1520.266	18898.736	1.006	5.2	3.1	NO		NO	bb
7	7	190701M1_9	Standard	5.000	3.32	1440.145	18201.396	0.989	5.1	1.4	NO		NO	bb
8	8	190701M1_10	Standard	5.000	3.33	1389.850	17529.344	0.991	5.1	1.6	NO		NO	bb
9	9	190701M1_11	Standard	5.000	3.33	1321.837	17836.471	0.926	4.7	-5.0	NO		NO	bb
10	10	190701M1_12	Standard	5.000	3.33	1064.827	14385.680	0.925	4.7	-5.1	NO		NO	bb

Compound name: 13C2-4:2 FTS
Response Factor: 1.75746
RRF SD: 0.158623, Relative SD: 9.02574
Response type: Internal Std (Ref 74), 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	190701M1_3	Standard	12.500	3.02	2343.219	1217.988	24.048	13.7	9.5	NO		NO	bb
2	2	190701M1_4	Standard	12.500	3.02	2237.596	1158.041	24.153	13.7	9.9	NO		NO	bb
3	3	190701M1_5	Standard	12.500	3.02	2018.838	1145.348	22.033	12.5	0.3	NO		NO	bb
4	4	190701M1_6	Standard	12.500	3.02	2229.632	1155.390	24.122	13.7	9.8	NO		NO	bb
5	5	190701M1_7	Standard	12.500	3.02	2233.830	1377.330	20.273	11.5	-7.7	NO		NO	bb
6	6	190701M1_8	Standard	12.500	3.02	2172.637	1133.700	23.955	13.6	9.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	3.02	1980.448	1133.189	21.846	12.4	-0.6	NO		NO	bb
8	8	190701M1_10	Standard	12.500	3.02	1872.227	1175.176	19.914	11.3	-9.3	NO		NO	bb
9	9	190701M1_11	Standard	12.500	3.02	1567.674	1000.226	19.591	11.1	-10.8	NO		NO	bb
10	10	190701M1_12	Standard	12.500	3.02	1322.901	837.451	19.746	11.2	-10.1	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 1.0082
RRF SD: 0.0395635, Relative SD: 3.92418
Response type: Internal Std (Ref 73), 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 190701M1_3	Standard	5.000	3.11	8643.938	20939.059	5.160	5.1	2.4	NO		NO	bb
2	2 190701M1_4	Standard	5.000	3.11	7481.935	18628.795	5.020	5.0	-0.4	NO		NO	bb
3	3 190701M1_5	Standard	5.000	3.11	7530.073	19375.059	4.858	4.8	-3.6	NO		NO	bb
4	4 190701M1_6	Standard	5.000	3.11	7570.965	19176.105	4.935	4.9	-2.1	NO		NO	bb
5	5 190701M1_7	Standard	5.000	3.11	8191.098	20445.602	5.008	5.0	-0.7	NO		NO	bb
6	6 190701M1_8	Standard	5.000	3.11	7612.474	18898.736	5.035	5.0	-0.1	NO		NO	bb
7	7 190701M1_9	Standard	5.000	3.11	7206.017	18201.396	4.949	4.9	-1.8	NO		NO	bb
8	8 190701M1_10	Standard	5.000	3.11	6991.337	17529.344	4.985	4.9	-1.1	NO		NO	bb
9	9 190701M1_11	Standard	5.000	3.11	7000.579	17836.471	4.906	4.9	-2.7	NO		NO	bb
10	10 190701M1_12	Standard	5.000	3.11	6390.512	14385.680	5.553	5.5	10.2	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.534813
RRF SD: 0.0178669, Relative SD: 3.34078
Response type: Internal Std (Ref 73), 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 190701M1_3	Standard	12.500	3.73	11811.953	20939.059	7.051	13.2	5.5	NO		NO	bb
2	2 190701M1_4	Standard	12.500	3.73	10279.227	18628.795	6.897	12.9	3.2	NO		NO	bb
3	3 190701M1_5	Standard	12.500	3.73	10146.845	19375.059	6.546	12.2	-2.1	NO		NO	bb
4	4 190701M1_6	Standard	12.500	3.73	10359.755	19176.105	6.753	12.6	1.0	NO		NO	bb
5	5 190701M1_7	Standard	12.500	3.73	10887.439	20445.602	6.656	12.4	-0.4	NO		NO	bb
6	6 190701M1_8	Standard	12.500	3.73	10138.095	18898.736	6.706	12.5	0.3	NO		NO	bb
7	7 190701M1_9	Standard	12.500	3.73	10010.446	18201.396	6.875	12.9	2.8	NO		NO	bb
8	8 190701M1_10	Standard	12.500	3.73	9309.532	17529.344	6.639	12.4	-0.7	NO		NO	bb
9	9 190701M1_11	Standard	12.500	3.73	9099.720	17836.471	6.377	11.9	-4.6	NO		NO	bb
10	10 190701M1_12	Standard	12.500	3.73	7309.118	14385.680	6.351	11.9	-5.0	NO		NO	bb

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Compound name: 13C3-PFHxS
Response Factor: 2.16971
RRF SD: 0.150882, Relative SD: 6.95403
Response type: Internal Std (Ref 74), 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	190701M1_3	Standard	12.500	3.88	2988.028	1217.988	30.666	14.1	13.1	NO		NO	bb
2	2	190701M1_4	Standard	12.500	3.88	2450.531	1158.041	26.451	12.2	-2.5	NO		NO	bb
3	3	190701M1_5	Standard	12.500	3.88	2435.814	1145.348	26.584	12.3	-2.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	3.88	2521.415	1155.390	27.279	12.6	0.6	NO		NO	bb
5	5	190701M1_7	Standard	12.500	3.88	2692.550	1377.330	24.436	11.3	-9.9	NO		NO	bb
6	6	190701M1_8	Standard	12.500	3.88	2467.878	1133.700	27.210	12.5	0.3	NO		NO	bb
7	7	190701M1_9	Standard	12.500	3.88	2392.303	1133.189	26.389	12.2	-2.7	NO		NO	bb
8	8	190701M1_10	Standard	12.500	3.88	2340.620	1175.176	24.896	11.5	-8.2	NO		NO	bb
9	9	190701M1_11	Standard	12.500	3.88	2227.986	1000.226	27.844	12.8	2.7	NO		NO	bb
10	10	190701M1_12	Standard	12.500	3.89	1973.632	837.451	29.459	13.6	8.6	NO		NO	bb

Compound name: 13C2-6:2 FTS
Response Factor: 0.603839
RRF SD: 0.0385615, Relative SD: 6.38606
Response type: Internal Std (Ref 77), 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	190701M1_3	Standard	12.500	4.20	1939.044	3078.788	7.873	13.0	4.3	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.20	1781.386	2813.891	7.913	13.1	4.8	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.20	1789.205	2687.067	8.323	13.8	10.3	NO		NO	bd
4	4	190701M1_6	Standard	12.500	4.20	1780.797	2961.738	7.516	12.4	-0.4	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.20	1911.603	3171.323	7.535	12.5	-0.2	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.20	1746.355	2902.351	7.521	12.5	-0.4	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.20	1608.471	2628.206	7.650	12.7	1.4	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.20	1458.206	2736.419	6.661	11.0	-11.7	NO		NO	bd
9	9	190701M1_11	Standard	12.500	4.19	1505.659	2473.357	7.609	12.6	0.8	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.20	1122.213	2039.424	6.878	11.4	-8.9	NO		NO	bb

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Compound name: 13C5-PFNA
Response Factor: 1.01417
RRF SD: 0.0298306, Relative SD: 2.94139
Response type: Internal Std (Ref 76), 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 190701M1_3	Standard	12.500	4.69	20160.236	20145.668	12.509	12.3	-1.3	NO		NO	bb
2	2 190701M1_4	Standard	12.500	4.69	18527.377	17525.662	13.214	13.0	4.2	NO		NO	bb
3	3 190701M1_5	Standard	12.500	4.68	17903.359	18388.854	12.170	12.0	-4.0	NO		NO	bb
4	4 190701M1_6	Standard	12.500	4.68	17765.660	18392.109	12.074	11.9	-4.8	NO		NO	bb
5	5 190701M1_7	Standard	12.500	4.68	19463.697	19254.654	12.636	12.5	-0.3	NO		NO	bb
6	6 190701M1_8	Standard	12.500	4.68	18378.016	18093.246	12.697	12.5	0.2	NO		NO	bb
7	7 190701M1_9	Standard	12.500	4.69	18354.287	17867.957	12.840	12.7	1.3	NO		NO	bb
8	8 190701M1_10	Standard	12.500	4.69	16739.117	16640.352	12.574	12.4	-0.8	NO		NO	bb
9	9 190701M1_11	Standard	12.500	4.69	17132.023	16289.623	13.146	13.0	3.7	NO		NO	bb
10	10 190701M1_12	Standard	12.500	4.69	13514.141	13085.052	12.910	12.7	1.8	NO		NO	bb

Compound name: 13C8-PFOSA
Response Factor: 0.156182
RRF SD: 0.00641133, Relative SD: 4.10504
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	12.500	4.76	3822.438	25103.785	1.903	12.2	-2.5	NO		NO	bb
2	2 190701M1_4	Standard	12.500	4.75	3328.207	22624.662	1.839	11.8	-5.8	NO		NO	bb
3	3 190701M1_5	Standard	12.500	4.75	3633.368	22256.684	2.041	13.1	4.5	NO		NO	bb
4	4 190701M1_6	Standard	12.500	4.75	3396.273	22959.154	1.849	11.8	-5.3	NO		NO	bb
5	5 190701M1_7	Standard	12.500	4.75	3894.382	23794.830	2.046	13.1	4.8	NO		NO	bb
6	6 190701M1_8	Standard	12.500	4.75	3589.383	22253.924	2.016	12.9	3.3	NO		NO	bb
7	7 190701M1_9	Standard	12.500	4.75	3491.316	22544.059	1.936	12.4	-0.8	NO		NO	bb
8	8 190701M1_10	Standard	12.500	4.76	3094.417	20510.857	1.886	12.1	-3.4	NO		NO	bb
9	9 190701M1_11	Standard	12.500	4.75	3094.409	19553.240	1.978	12.7	1.3	NO		NO	bb
10	10 190701M1_12	Standard	12.500	4.75	2602.650	16033.462	2.029	13.0	3.9	NO		NO	bb

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Compound name: 13C2-PFOA
Response Factor: 0.743944
RRF SD: 0.011325, Relative SD: 1.52229
Response type: Internal Std (Ref 75), 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	190701M1_3	Standard	12.500	4.25	19277.365	25305.508	9.522	12.8	2.4	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.25	17095.941	23010.512	9.287	12.5	-0.1	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.25	17293.736	23269.111	9.290	12.5	-0.1	NO		NO	bb
4	4	190701M1_6	Standard	12.500	4.25	16963.230	23443.816	9.045	12.2	-2.7	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.25	18248.066	24550.000	9.291	12.5	-0.1	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.25	17591.018	23644.592	9.300	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.25	16747.066	22736.389	9.207	12.4	-1.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.25	15281.182	20816.635	9.176	12.3	-1.3	NO		NO	bb
9	9	190701M1_11	Standard	12.500	4.25	14823.402	19723.469	9.395	12.6	1.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.25	11643.679	15352.642	9.480	12.7	1.9	NO		NO	bb

Compound name: 13C8-PFOS
Response Factor: 0.998047
RRF SD: 0.0604776, Relative SD: 6.0596
Response type: Internal Std (Ref 77), 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	190701M1_3	Standard	12.500	4.77	3165.737	3078.788	12.853	12.9	3.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.77	2680.775	2813.891	11.909	11.9	-4.5	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.77	2789.072	2687.067	12.975	13.0	4.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	4.77	2914.683	2961.738	12.301	12.3	-1.4	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.77	3081.590	3171.323	12.146	12.2	-2.6	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.77	2769.122	2902.351	11.926	11.9	-4.4	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.77	2732.554	2628.206	12.996	13.0	4.2	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.77	2429.840	2736.419	11.100	11.1	-11.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	4.77	2523.169	2473.357	12.752	12.8	2.2	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.77	2251.221	2039.424	13.798	13.8	10.6	NO		NO	bb

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Compound name: 13C2-PFDA
Response Factor: 0.836149
RRF SD: 0.0135379, Relative SD: 1.61908
Response type: Internal Std (Ref 78), 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 190701M1_3	Standard	12.500	5.06	19063.076	22601.510	10.543	12.6	0.9	NO		NO	bb
2	2 190701M1_4	Standard	12.500	5.06	16338.149	20176.293	10.122	12.1	-3.2	NO		NO	bb
3	3 190701M1_5	Standard	12.500	5.06	16486.750	19921.443	10.345	12.4	-1.0	NO		NO	bb
4	4 190701M1_6	Standard	12.500	5.06	17166.838	20149.570	10.650	12.7	1.9	NO		NO	bb
5	5 190701M1_7	Standard	12.500	5.06	18240.092	21310.893	10.699	12.8	2.4	NO		NO	bb
6	6 190701M1_8	Standard	12.500	5.06	16786.326	20236.594	10.369	12.4	-0.8	NO		NO	bd
7	7 190701M1_9	Standard	12.500	5.06	16557.846	19740.285	10.485	12.5	0.3	NO		NO	bb
8	8 190701M1_10	Standard	12.500	5.06	15268.243	18491.441	10.321	12.3	-1.3	NO		NO	bb
9	9 190701M1_11	Standard	12.500	5.06	14930.285	17819.154	10.473	12.5	0.2	NO		NO	bb
10	10 190701M1_12	Standard	12.500	5.06	12396.811	14741.395	10.512	12.6	0.6	NO		NO	bb

Compound name: 13C2-8:2 FTS
Response Factor: 0.597313
RRF SD: 0.0566803, Relative SD: 9.48921
Response type: Internal Std (Ref 77), 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 190701M1_3	Standard	12.500	5.03	1941.526	3078.788	7.883	13.2	5.6	NO		NO	bb
2	2 190701M1_4	Standard	12.500	5.03	1717.230	2813.891	7.628	12.8	2.2	NO		NO	bb
3	3 190701M1_5	Standard	12.500	5.03	1973.946	2687.067	9.183	15.4	23.0	NO		NO	bb
4	4 190701M1_6	Standard	12.500	5.03	1668.911	2961.738	7.044	11.8	-5.7	NO		NO	bb
5	5 190701M1_7	Standard	12.500	5.03	1883.873	3171.323	7.425	12.4	-0.5	NO		NO	bb
6	6 190701M1_8	Standard	12.500	5.03	1576.210	2902.351	6.789	11.4	-9.1	NO		NO	bb
7	7 190701M1_9	Standard	12.500	5.04	1623.929	2628.206	7.724	12.9	3.4	NO		NO	bb
8	8 190701M1_10	Standard	12.500	5.03	1520.130	2736.419	6.944	11.6	-7.0	NO		NO	bb
9	9 190701M1_11	Standard	12.500	5.03	1388.012	2473.357	7.015	11.7	-6.0	NO		NO	bb
10	10 190701M1_12	Standard	12.500	5.03	1147.069	2039.424	7.031	11.8	-5.8	NO		NO	bb

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Compound name: d3-N-MeFOSAA
Response Factor: 0.162926
RRF SD: 0.004901, Relative SD: 3.00812
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	12.500	5.21	4124.403	25103.785	2.054	12.6	0.8	NO		NO	bb
2	2 190701M1_4	Standard	12.500	5.21	3653.294	22624.662	2.018	12.4	-0.9	NO		NO	bb
3	3 190701M1_5	Standard	12.500	5.21	3616.352	22256.684	2.031	12.5	-0.3	NO		NO	bb
4	4 190701M1_6	Standard	12.500	5.21	3665.892	22959.154	1.996	12.3	-2.0	NO		NO	bb
5	5 190701M1_7	Standard	12.500	5.21	3754.330	23794.830	1.972	12.1	-3.2	NO		NO	bb
6	6 190701M1_8	Standard	12.500	5.21	3608.061	22253.924	2.027	12.4	-0.5	NO		NO	bb
7	7 190701M1_9	Standard	12.500	5.21	3546.265	22544.059	1.966	12.1	-3.5	NO		NO	bb
8	8 190701M1_10	Standard	12.500	5.21	3314.232	20510.857	2.020	12.4	-0.8	NO		NO	bb
9	9 190701M1_11	Standard	12.500	5.21	3366.971	19553.240	2.152	13.2	5.7	NO		NO	bb
10	10 190701M1_12	Standard	12.500	5.21	2731.128	16033.462	2.129	13.1	4.6	NO		NO	bb

Compound name: 13C2-PFUdA
Response Factor: 1.05271
RRF SD: 0.0233153, Relative SD: 2.21479
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	12.500	5.39	26474.295	25103.785	13.182	12.5	0.2	NO		NO	bb
2	2 190701M1_4	Standard	12.500	5.39	24192.553	22624.662	13.366	12.7	1.6	NO		NO	bb
3	3 190701M1_5	Standard	12.500	5.38	23792.217	22256.684	13.362	12.7	1.5	NO		NO	bb
4	4 190701M1_6	Standard	12.500	5.39	23809.865	22959.154	12.963	12.3	-1.5	NO		NO	bb
5	5 190701M1_7	Standard	12.500	5.39	24949.557	23794.830	13.107	12.5	-0.4	NO		NO	bb
6	6 190701M1_8	Standard	12.500	5.38	23852.160	22253.924	13.398	12.7	1.8	NO		NO	bb
7	7 190701M1_9	Standard	12.500	5.39	22549.758	22544.059	12.503	11.9	-5.0	NO		NO	bb
8	8 190701M1_10	Standard	12.500	5.39	22120.160	20510.857	13.481	12.8	2.4	NO		NO	bb
9	9 190701M1_11	Standard	12.500	5.39	20743.678	19553.240	13.261	12.6	0.8	NO		NO	bb
10	10 190701M1_12	Standard	12.500	5.39	16630.627	16033.462	12.966	12.3	-1.5	NO		NO	bb

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Compound name: d5-N-EtFOSAA
Response Factor: 0.179479
RRF SD: 0.0108087, Relative SD: 6.02228
Response type: Internal Std (Ref 79), 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	190701M1_3	Standard	12.500	5.37	4846.071	25103.785	2.413	13.4	7.6	NO		NO	bb
2	2	190701M1_4	Standard	12.500	5.37	4061.948	22624.662	2.244	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	5.37	4100.160	22256.684	2.303	12.8	2.6	NO		NO	bb
4	4	190701M1_6	Standard	12.500	5.37	4146.013	22959.154	2.257	12.6	0.6	NO		NO	bb
5	5	190701M1_7	Standard	12.500	5.37	4071.606	23794.830	2.139	11.9	-4.7	NO		NO	bb
6	6	190701M1_8	Standard	12.500	5.37	4379.793	22253.924	2.460	13.7	9.7	NO		NO	bb
7	7	190701M1_9	Standard	12.500	5.37	3898.104	22544.059	2.161	12.0	-3.7	NO		NO	bb
8	8	190701M1_10	Standard	12.500	5.37	3483.605	20510.857	2.123	11.8	-5.4	NO		NO	bb
9	9	190701M1_11	Standard	12.500	5.36	3613.932	19553.240	2.310	12.9	3.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	5.36	2595.895	16033.462	2.024	11.3	-9.8	NO		NO	bd

Compound name: 13C2-PFDoA
Response Factor: 1.09449
RRF SD: 0.0408997, Relative SD: 3.73686
Response type: Internal Std (Ref 78), 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	190701M1_3	Standard	12.500	5.67	24633.080	22601.510	13.624	12.4	-0.4	NO		NO	bb
2	2	190701M1_4	Standard	12.500	5.67	21591.344	20176.293	13.377	12.2	-2.2	NO		NO	bb
3	3	190701M1_5	Standard	12.500	5.66	21876.676	19921.443	13.727	12.5	0.3	NO		NO	bb
4	4	190701M1_6	Standard	12.500	5.67	21924.826	20149.570	13.601	12.4	-0.6	NO		NO	bb
5	5	190701M1_7	Standard	12.500	5.66	22389.029	21310.893	13.132	12.0	-4.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	5.66	21415.625	20236.594	13.228	12.1	-3.3	NO		NO	bb
7	7	190701M1_9	Standard	12.500	5.67	21534.744	19740.285	13.636	12.5	-0.3	NO		NO	bb
8	8	190701M1_10	Standard	12.500	5.67	19911.600	18491.441	13.460	12.3	-1.6	NO		NO	bb
9	9	190701M1_11	Standard	12.500	5.66	20130.902	17819.154	14.122	12.9	3.2	NO		NO	bb
10	10	190701M1_12	Standard	12.500	5.67	17577.086	14741.395	14.905	13.6	8.9	NO		NO	bb

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Compound name: d3-N-MeFOSA
Response Factor: 0.0382129
RRF SD: 0.00321218, Relative SD: 8.40602
Response type: Internal Std (Ref 79), 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	190701M1_3	Standard	150.000	5.84	11186.576	25103.785	5.570	145.8	-2.8	NO		NO	bb
2	2	190701M1_4	Standard	150.000	5.84	9944.334	22624.662	5.494	143.8	-4.1	NO		NO	bb
3	3	190701M1_5	Standard	150.000	5.84	9529.736	22256.684	5.352	140.1	-6.6	NO		NO	bb
4	4	190701M1_6	Standard	150.000	5.84	10514.570	22959.154	5.725	149.8	-0.1	NO		NO	bb
5	5	190701M1_7	Standard	150.000	5.84	10529.539	23794.830	5.531	144.8	-3.5	NO		NO	bb
6	6	190701M1_8	Standard	150.000	5.84	10010.348	22253.924	5.623	147.1	-1.9	NO		NO	bb
7	7	190701M1_9	Standard	150.000	5.84	9509.348	22544.059	5.273	138.0	-8.0	NO		NO	bb
8	8	190701M1_10	Standard	150.000	5.84	9251.603	20510.857	5.638	147.5	-1.6	NO		NO	bb
9	9	190701M1_11	Standard	150.000	5.84	9724.895	19553.240	6.217	162.7	8.5	NO		NO	bb
10	10	190701M1_12	Standard	150.000	5.84	8845.528	16033.462	6.896	180.5	20.3	NO		NO	bb

Compound name: 13C2-PFTeDA
Response Factor: 0.666493
RRF SD: 0.0183841, Relative SD: 2.75833
Response type: Internal Std (Ref 79), 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	190701M1_3	Standard	12.500	6.13	17276.939	25103.785	8.603	12.9	3.3	NO		NO	bb
2	2	190701M1_4	Standard	12.500	6.13	15274.221	22624.662	8.439	12.7	1.3	NO		NO	bb
3	3	190701M1_5	Standard	12.500	6.13	14709.894	22256.684	8.262	12.4	-0.8	NO		NO	bb
4	4	190701M1_6	Standard	12.500	6.13	15009.819	22959.154	8.172	12.3	-1.9	NO		NO	bb
5	5	190701M1_7	Standard	12.500	6.13	15600.711	23794.830	8.195	12.3	-1.6	NO		NO	bb
6	6	190701M1_8	Standard	12.500	6.13	14980.120	22253.924	8.414	12.6	1.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	6.13	14419.537	22544.059	7.995	12.0	-4.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	6.13	13760.477	20510.857	8.386	12.6	0.7	NO		NO	bb
9	9	190701M1_11	Standard	12.500	6.13	12678.512	19553.240	8.105	12.2	-2.7	NO		NO	bb
10	10	190701M1_12	Standard	12.500	6.13	11210.996	16033.462	8.740	13.1	4.9	NO		NO	bb

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Compound name: d5-N-ETFOSA
Response Factor: 0.0484994
RRF SD: 0.0013703, Relative SD: 2.82539
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	150.000	6.23	14516.421	25103.785	7.228	149.0	-0.6	NO		NO	bb
2	2 190701M1_4	Standard	150.000	6.22	12561.396	22624.662	6.940	143.1	-4.6	NO		NO	bb
3	3 190701M1_5	Standard	150.000	6.22	13314.040	22256.684	7.478	154.2	2.8	NO		NO	bb
4	4 190701M1_6	Standard	150.000	6.22	12901.615	22959.154	7.024	144.8	-3.4	NO		NO	bb
5	5 190701M1_7	Standard	150.000	6.22	13681.523	23794.830	7.187	148.2	-1.2	NO		NO	bb
6	6 190701M1_8	Standard	150.000	6.22	13171.471	22253.924	7.398	152.5	1.7	NO		NO	bb
7	7 190701M1_9	Standard	150.000	6.22	12868.468	22544.059	7.135	147.1	-1.9	NO		NO	bb
8	8 190701M1_10	Standard	150.000	6.22	12026.530	20510.857	7.329	151.1	0.7	NO		NO	bb
9	9 190701M1_11	Standard	150.000	6.22	11706.144	19553.240	7.484	154.3	2.9	NO		NO	bb
10	10 190701M1_12	Standard	150.000	6.23	9678.181	16033.462	7.545	155.6	3.7	NO		NO	bb

Compound name: 13C2-PFHxDA
Response Factor: 0.843785
RRF SD: 0.0623494, Relative SD: 7.38925
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	5.000	6.47	8143.546	25103.785	4.055	4.8	-3.9	NO		NO	bb
2	2 190701M1_4	Standard	5.000	6.47	7719.967	22624.662	4.265	5.1	1.1	NO		NO	bd
3	3 190701M1_5	Standard	5.000	6.47	7198.960	22256.684	4.043	4.8	-4.2	NO		NO	bb
4	4 190701M1_6	Standard	5.000	6.47	7351.967	22959.154	4.003	4.7	-5.1	NO		NO	bb
5	5 190701M1_7	Standard	5.000	6.47	7709.777	23794.830	4.050	4.8	-4.0	NO		NO	bb
6	6 190701M1_8	Standard	5.000	6.47	7410.878	22253.924	4.163	4.9	-1.3	NO		NO	bb
7	7 190701M1_9	Standard	5.000	6.47	7295.890	22544.059	4.045	4.8	-4.1	NO		NO	bb
8	8 190701M1_10	Standard	5.000	6.47	6746.925	20510.857	4.112	4.9	-2.5	NO		NO	bb
9	9 190701M1_11	Standard	5.000	6.47	6925.325	19553.240	4.427	5.2	4.9	NO		NO	bb
10	10 190701M1_12	Standard	5.000	6.47	6446.726	16033.462	5.026	6.0	19.1	NO		NO	bb

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Compound name: d7-N-MeFOSE
Response Factor: 0.0287593
RRF SD: 0.00300268, Relative SD: 10.4407
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	150.000	6.34	8329.760	25103.785	4.148	144.2	-3.9	NO		NO	bb
2	2 190701M1_4	Standard	150.000	6.34	7401.065	22624.662	4.089	142.2	-5.2	NO		NO	bb
3	3 190701M1_5	Standard	150.000	6.34	7269.145	22256.684	4.083	142.0	-5.4	NO		NO	bb
4	4 190701M1_6	Standard	150.000	6.34	7254.994	22959.154	3.950	137.3	-8.4	NO		NO	bb
5	5 190701M1_7	Standard	150.000	6.34	7705.333	23794.830	4.048	140.7	-6.2	NO		NO	bb
6	6 190701M1_8	Standard	150.000	6.34	7462.034	22253.924	4.191	145.7	-2.8	NO		NO	bb
7	7 190701M1_9	Standard	150.000	6.34	7225.770	22544.059	4.006	139.3	-7.1	NO		NO	bb
8	8 190701M1_10	Standard	150.000	6.34	7369.541	20510.857	4.491	156.2	4.1	NO		NO	bb
9	9 190701M1_11	Standard	150.000	6.34	7409.624	19553.240	4.737	164.7	9.8	NO		NO	bb
10	10 190701M1_12	Standard	150.000	6.34	6921.324	16033.462	5.396	187.6	25.1	NO		NO	bb

Compound name: d9-N-EtFOSE
Response Factor: 0.028677
RRF SD: 0.00286137, Relative SD: 9.97792
Response type: Internal Std (Ref 79), 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 190701M1_3	Standard	150.000	6.50	8202.859	25103.785	4.084	142.4	-5.0	NO		NO	bb
2	2 190701M1_4	Standard	150.000	6.49	7127.454	22624.662	3.938	137.3	-8.5	NO		NO	bb
3	3 190701M1_5	Standard	150.000	6.49	7723.248	22256.684	4.338	151.3	0.8	NO		NO	bd
4	4 190701M1_6	Standard	150.000	6.49	7456.727	22959.154	4.060	141.6	-5.6	NO		NO	bd
5	5 190701M1_7	Standard	150.000	6.49	7913.089	23794.830	4.157	145.0	-3.4	NO		NO	bb
6	6 190701M1_8	Standard	150.000	6.49	7283.188	22253.924	4.091	142.7	-4.9	NO		NO	bb
7	7 190701M1_9	Standard	150.000	6.49	7200.394	22544.059	3.992	139.2	-7.2	NO		NO	bb
8	8 190701M1_10	Standard	150.000	6.49	6969.357	20510.857	4.247	148.1	-1.3	NO		NO	bb
9	9 190701M1_11	Standard	150.000	6.49	7518.760	19553.240	4.807	167.6	11.7	NO		NO	bb
10	10 190701M1_12	Standard	150.000	6.50	6800.165	16033.462	5.302	184.9	23.2	NO		NO	bb

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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 72), 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	190701M1_3	Standard	12.500	1.35	10014.119	10014.119	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	1.35	8816.097	8816.097	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	1.34	9331.931	9331.931	12.500	12.5	0.0	NO		NO	MM
4	4	190701M1_6	Standard	12.500	1.35	9242.064	9242.064	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	1.35	9624.726	9624.726	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	1.34	9050.870	9050.870	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	1.35	9518.712	9518.712	12.500	12.5	0.0	NO		NO	MM
8	8	190701M1_10	Standard	12.500	1.35	9256.797	9256.797	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	1.35	9571.834	9571.834	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	1.35	8457.517	8457.517	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 73), 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	190701M1_3	Standard	12.500	3.11	20939.059	20939.059	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	3.11	18628.795	18628.795	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	3.11	19375.059	19375.059	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	3.11	19176.105	19176.105	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	3.11	20445.602	20445.602	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	3.11	18898.736	18898.736	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	3.11	18201.396	18201.396	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	3.11	17529.344	17529.344	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	3.11	17836.471	17836.471	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	3.11	14385.680	14385.680	12.500	12.5	0.0	NO		NO	bb

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Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 74), 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	190701M1_3	Standard	12.500	3.88	1217.988	1217.988	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	3.88	1158.041	1158.041	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	3.88	1145.348	1145.348	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	3.88	1155.390	1155.390	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	3.88	1377.330	1377.330	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	3.88	1133.700	1133.700	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	3.88	1133.189	1133.189	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	3.88	1175.176	1175.176	12.500	12.5	0.0	NO		NO	bd
9	9	190701M1_11	Standard	12.500	3.88	1000.226	1000.226	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	3.89	837.451	837.451	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 75), 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	190701M1_3	Standard	12.500	4.25	25305.508	25305.508	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.25	23010.512	23010.512	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.25	23269.111	23269.111	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	4.25	23443.816	23443.816	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.25	24550.000	24550.000	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.25	23644.592	23644.592	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.25	22736.389	22736.389	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.25	20816.635	20816.635	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	4.25	19723.469	19723.469	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.25	15352.642	15352.642	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:29:31 Pacific Daylight Time

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 76), 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	190701M1_3	Standard	12.500	4.69	20145.668	20145.668	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.69	17525.662	17525.662	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.68	18388.854	18388.854	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	4.68	18392.109	18392.109	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.68	19254.654	19254.654	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.68	18093.246	18093.246	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.69	17867.957	17867.957	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.69	16640.352	16640.352	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	4.69	16289.623	16289.623	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.69	13085.052	13085.052	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 77), 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	190701M1_3	Standard	12.500	4.77	3078.788	3078.788	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	4.77	2813.891	2813.891	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	4.77	2687.067	2687.067	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	4.77	2961.738	2961.738	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	4.77	3171.323	3171.323	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	4.77	2902.351	2902.351	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	4.77	2628.206	2628.206	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	4.77	2736.419	2736.419	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	4.77	2473.357	2473.357	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	4.77	2039.424	2039.424	12.500	12.5	0.0	NO		NO	bd

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:29:31 Pacific Daylight Time

Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 78), 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	190701M1_3	Standard	12.500	5.06	22601.510	22601.510	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	5.06	20176.293	20176.293	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	5.06	19921.443	19921.443	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	5.06	20149.570	20149.570	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	5.06	21310.893	21310.893	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	5.06	20236.594	20236.594	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	5.06	19740.285	19740.285	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	5.06	18491.441	18491.441	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	5.06	17819.154	17819.154	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	5.06	14741.395	14741.395	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 79), 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	190701M1_3	Standard	12.500	5.39	25103.785	25103.785	12.500	12.5	0.0	NO		NO	bb
2	2	190701M1_4	Standard	12.500	5.39	22624.662	22624.662	12.500	12.5	0.0	NO		NO	bb
3	3	190701M1_5	Standard	12.500	5.38	22256.684	22256.684	12.500	12.5	0.0	NO		NO	bb
4	4	190701M1_6	Standard	12.500	5.39	22959.154	22959.154	12.500	12.5	0.0	NO		NO	bb
5	5	190701M1_7	Standard	12.500	5.38	23794.830	23794.830	12.500	12.5	0.0	NO		NO	bb
6	6	190701M1_8	Standard	12.500	5.39	22253.924	22253.924	12.500	12.5	0.0	NO		NO	bb
7	7	190701M1_9	Standard	12.500	5.39	22544.059	22544.059	12.500	12.5	0.0	NO		NO	bb
8	8	190701M1_10	Standard	12.500	5.39	20510.857	20510.857	12.500	12.5	0.0	NO		NO	bb
9	9	190701M1_11	Standard	12.500	5.38	19553.240	19553.240	12.500	12.5	0.0	NO		NO	bb
10	10	190701M1_12	Standard	12.500	5.39	16033.462	16033.462	12.500	12.5	0.0	NO		NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:30:40 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9978	NO	
2	2	PFPrS	49	0.9987	NO	
3	3	3:3 FTCA	48	0.9990	NO	
4	4	PFPeA	48	0.9978	NO	
5	5	PFBS	49	0.9979	NO	
6	6	4:2 FTS	51	0.9998	NO	
7	7	PFHxA	52	0.9994	NO	
8	8	PFPeS	49	0.9980	NO	
9	9	HFPO-DA	50	0.9996	NO	
10	10	5:3 FTCA	53	0.9994	NO	
11	11	PFHpA	53	0.9975	NO	
12	12	ADONA	53	0.9994	NO	
13	13	L-PFHxS	54	0.9999	NO	
14	15	6:2 FTS	55	0.9966	NO	
15	16	L-PFOA	58	0.9989	NO	
16	18	PFecHS	58	0.9998	NO	
17	19	PFHpS	59	0.9985	NO	
18	20	7:3 FTCA	56	0.9995	NO	
19	21	PFNA	56	0.9982	NO	
20	22	PFOSA	57	0.9998	NO	
21	23	L-PFOS	59	0.9992	NO	
22	25	9Cl-PF30NS	59	0.9994	NO	
23	26	PFDA	60	0.9992	NO	
24	27	8:2 FTS	61	0.9988	NO	
25	28	PFNS	59	0.9986	NO	
26	29	L-MeFOSAA	62	0.9992	NO	

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:30:51 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	64	0.9965	NO	
2	33	PFUdA	63	0.9991	NO	
3	34	PFDS	61	0.9997	NO	
4	35	11Cl-PF30UdS	65	0.9990	NO	
5	36	10:2 FTS	61	0.9987	NO	
6	37	PFDoA	65	0.9993	NO	
7	38	N-MeFOSA	66	0.9993	NO	
8	39	PFTrDA	65	0.9996	NO	
9	40	PFDoS	67	0.9999	NO	
10	41	PFTeDA	67	0.9997	NO	
11	42	N-EtFOSA	68	0.9997	NO	
12	43	PFHxDA	69	0.9992	NO	
13	44	PFODA	69	0.9984	NO	
14	45	N-MeFOSE	70	0.9984	NO	
15	46	N-EtFOSE	71	0.9981	NO	
16	47	13C3-PFBA	72		NO	2.254
17	48	13C3-PFPeA	73		NO	2.260
18	49	13C3-PFBS	74		NO	6.133
19	50	13C3-HFPO-DA	73		NO	5.089
20	51	13C2-4:2 FTS	74		NO	9.026
21	52	13C2-PFHxA	73		NO	3.924
22	53	13C4-PFHpA	73		NO	3.341
23	54	13C3-PFHxS	74		NO	6.954
24	55	13C2-6:2 FTS	77		NO	6.386
25	56	13C5-PFNA	76		NO	2.941
26	57	13C8-PFOSA	79		NO	4.105
27	58	13C2-PFOA	75		NO	1.522
28	59	13C8-PFOS	77		NO	6.060
29	60	13C2-PFDA	78		NO	1.619
30	61	13C2-8:2 FTS	77		NO	9.489
31	62	d3-N-MeFOSAA	79		NO	3.008
32	63	13C2-PFUdA	79		NO	2.215

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:30:51 Pacific Daylight Time

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	d5-N-EtFOSAA	79		NO	6.022
34	65	13C2-PFDoA	78		NO	3.737
35	66	d3-N-MeFOSA	79		NO	8.406
36	67	13C2-PFTeDA	79		NO	2.758
37	68	d5-N-ETFOSA	79		NO	2.825
38	69	13C2-PFHxDA	79		NO	7.389
39	70	d7-N-MeFOSE	79		NO	10.441
40	71	d9-N-EtFOSE	79		NO	9.978
41	72	13C4-PFBA	72		NO	0.000
42	73	13C5-PFHxA	73		NO	0.000
43	74	18O2-PFHxS	74		NO	0.000
44	75	13C8-PFOA	75		NO	0.000
45	76	13C9-PFNA	76		NO	0.000
46	77	13C4-PFOS	77		NO	0.000
47	78	13C6-PFDA	78		NO	0.000
48	79	13C7-PFUdA	79		NO	0.000

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:32:33 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.34	1.34			
2	PFPrS	1.70	1.70	2.481	2.481	NO
3	3:3 FTCA	2.18	2.18	2.412	2.412	NO
4	PFPeA	2.33	2.33			
5	PFBS	2.61	2.61	2.815	2.815	NO
6	4:2 FTS	3.02	3.02	1.581	1.581	NO
7	PFHxA	3.11	3.11	15.241	15.241	NO
8	PFPeS	3.31	3.31	1.644	1.644	NO
9	HFPO-DA	3.32	3.32	1.870	1.870	NO
10	5:3 FTCA	3.65	3.66	1.609	1.609	NO
11	PFHpA	3.73	3.73	13.001	13.001	NO
12	ADONA	3.84	3.84	3.718	3.718	NO
13	L-PFHxS	3.88	3.88	1.978	1.978	NO
14	6:2 FTS	4.20	4.20	2.273	2.273	NO
15	L-PFOA	4.25	4.25	3.546	3.546	NO
16	PFecHS	4.26	4.26	0.831	0.831	NO
17	PFHpS	4.36	4.36	1.941	1.941	NO
18	7:3 FTCA	4.68	4.68	1.446	1.446	NO
19	PFNA	4.68	4.68	4.560	4.560	NO
20	PFOSA	4.75	4.75	45.547	45.547	NO
21	L-PFOS	4.77	4.77	1.980	1.980	NO
22	9Cl-PF30NS	4.99	4.99	19.534	19.534	NO
23	PFDA	5.06	5.06	5.972	5.972	NO
24	8:2 FTS	5.03	5.03	1.045	1.045	NO
25	PFNS	5.13	5.13	1.778	1.778	NO
26	L-MeFOSAA	5.21	5.21	2.603	2.603	NO

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:32:57 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.37	5.37	1.394	1.394	NO
2	PFUdA	5.38	5.39	10.691	10.691	NO
3	PFDS	5.43	5.43	1.709	1.709	NO
4	11Cl-PF30UdS	5.60	5.60	6.063	6.063	NO
5	10:2 FTS	5.65	5.65	1.597	1.597	NO
6	PFDoA	5.66	5.66	7.934	7.934	NO
7	N-MeFOSA	5.81	5.81	1.518	1.518	NO
8	PFTrDA	5.91	5.91	22.867	22.867	NO
9	PFDoS	5.94	5.94	1.779	1.779	NO
10	PFTeDA	6.13	6.13	13.806	13.806	NO
11	N-EtFOSA	6.21	6.21	1.580	1.580	NO
12	PFHxDA	6.47	6.47	36.876	36.876	NO
13	PFODA	6.70	6.70			
14	N-MeFOSE	6.35	6.35			
15	N-EtFOSE	6.50	6.50			

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Dataset: Untitled

Last Altered: Tuesday, July 02, 2019 10:35:04 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:35:29 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time
1	1	190701M1_2	IPA	01-Jul-19	15:52:33
2	2	190701M1_3	ST190701M1-1 PFC CS-2 19F2412	01-Jul-19	16:03:10
3	3	190701M1_4	ST190701M1-2 PFC CS-1 19F2413	01-Jul-19	16:13:44
4	4	190701M1_5	ST190701M1-3 PFC CS0 19F2414	01-Jul-19	16:24:22
5	5	190701M1_6	ST190701M1-4 PFC CS1 19F2415	01-Jul-19	16:34:54
6	6	190701M1_7	ST190701M1-5 PFC CS2 19F2416	01-Jul-19	16:45:33
7	7	190701M1_8	ST190701M1-6 PFC CS3 19F2417	01-Jul-19	16:56:11
8	8	190701M1_9	ST190701M1-7 PFC CS4 19F2418	01-Jul-19	17:06:44
9	9	190701M1_10	ST190701M1-8 PFC CS5 19F2419	01-Jul-19	17:17:22
10	10	190701M1_11	ST190701M1-9 PFC CS6 19F2420	01-Jul-19	17:27:56
11	11	190701M1_12	ST190701M1-10 PFC CS7 19F2421	01-Jul-19	17:38:34
12	12	190701M1_13	IB	01-Jul-19	17:49:13
13	13	190701M1_14	ICV190701M1-1 PFC ICV 19F2422	01-Jul-19	17:59:45
14	14	190701M1_15	IPA	01-Jul-19	18:10:24

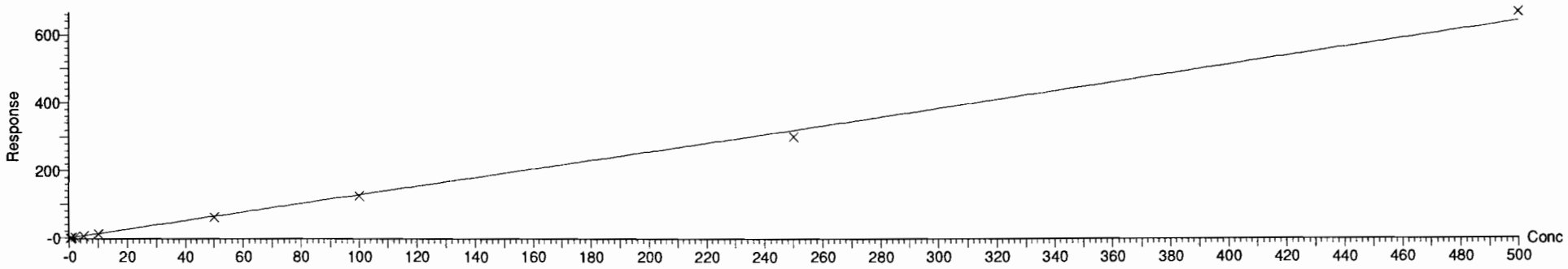
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

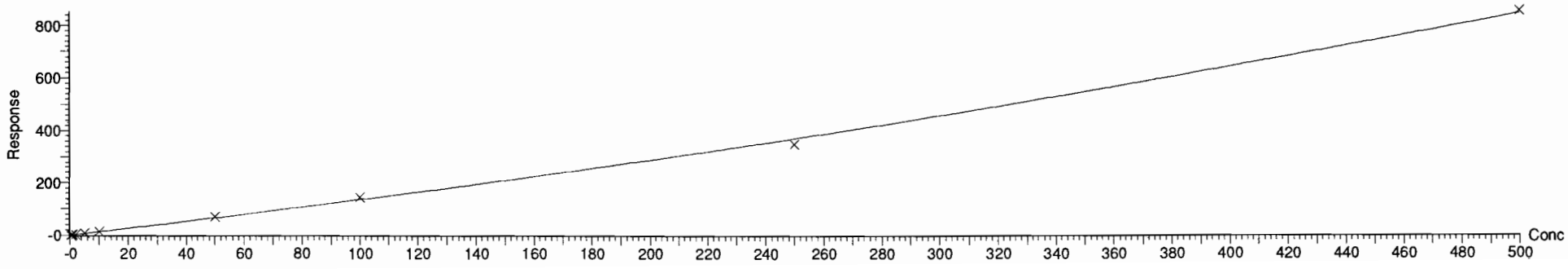
Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: PFBA
Correlation coefficient: r = 0.998908, r^2 = 0.997818
Calibration curve: 1.27954 * x + -0.15622
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



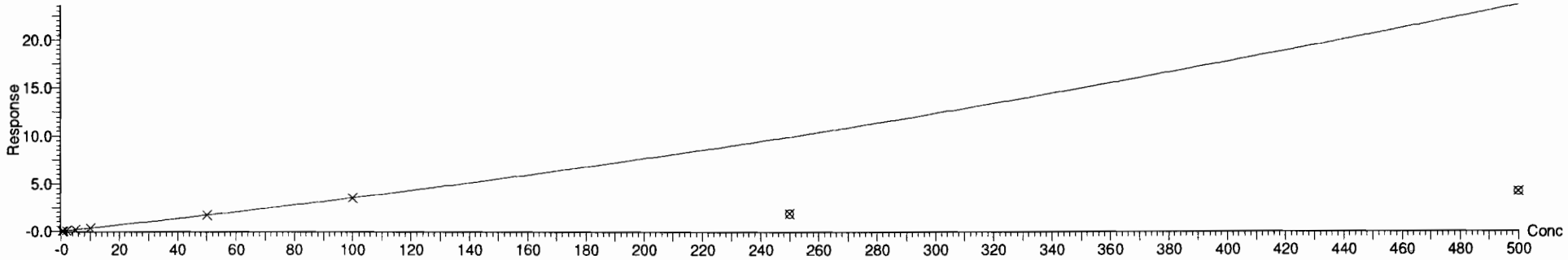
Compound name: PFPrS
Coefficient of Determination: R^2 = 0.998683
Calibration curve: 0.000832196 * x^2 + 1.27167 * x + -0.0175393
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



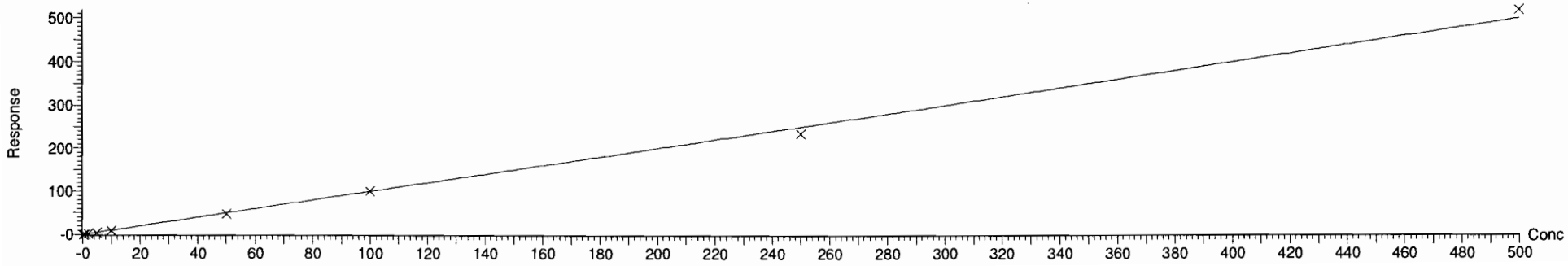
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.999047
Calibration curve: 2.95644e-005 * x^2 + 0.0324756 * x + -0.0041484
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



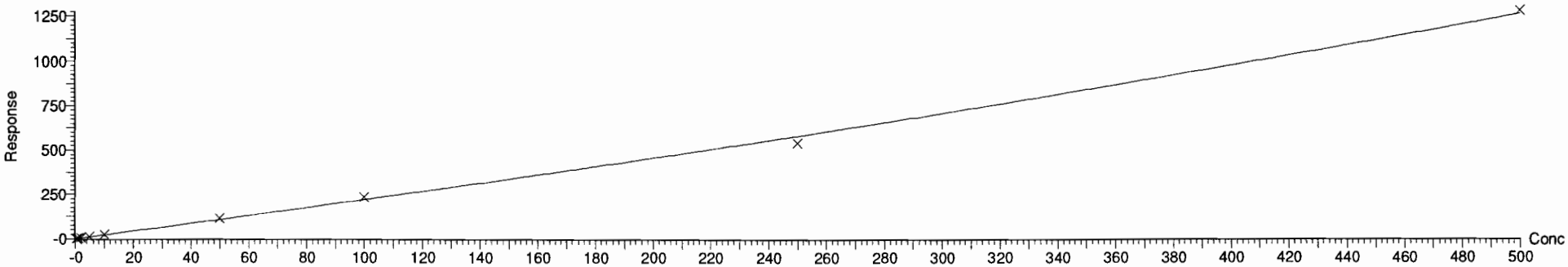
Compound name: PFPeA
Correlation coefficient: r = 0.998899, r^2 = 0.997799
Calibration curve: 0.997338 * x + -0.0430201
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



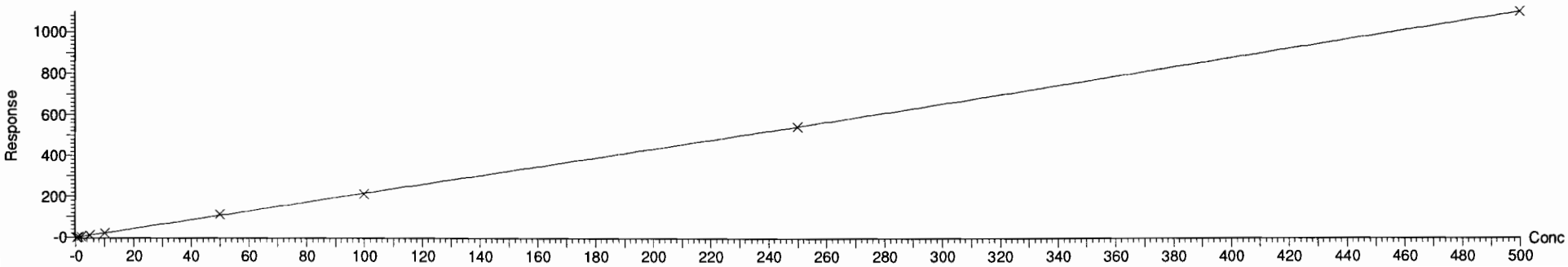
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFBS
Coefficient of Determination: R^2 = 0.997879
Calibration curve: 0.000780194 * x^2 + 2.12737 * x + -0.0545876
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



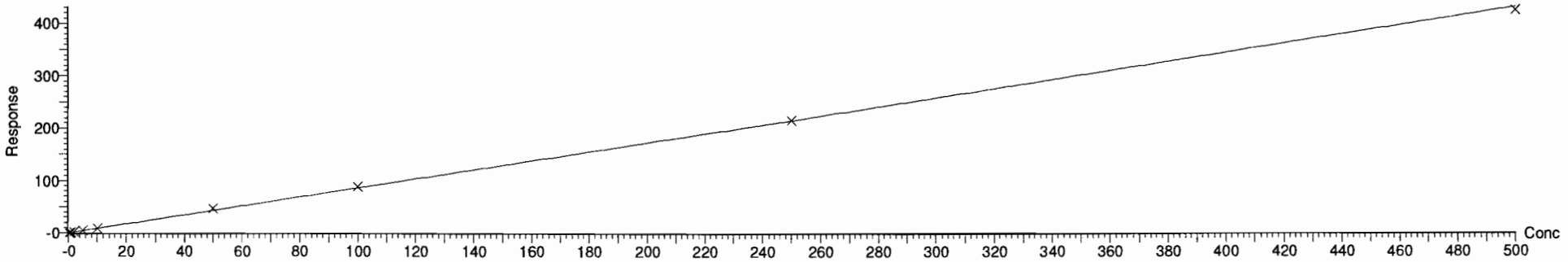
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999758
Calibration curve: 9.27152e-005 * x^2 + 2.14789 * x + -0.00838939
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



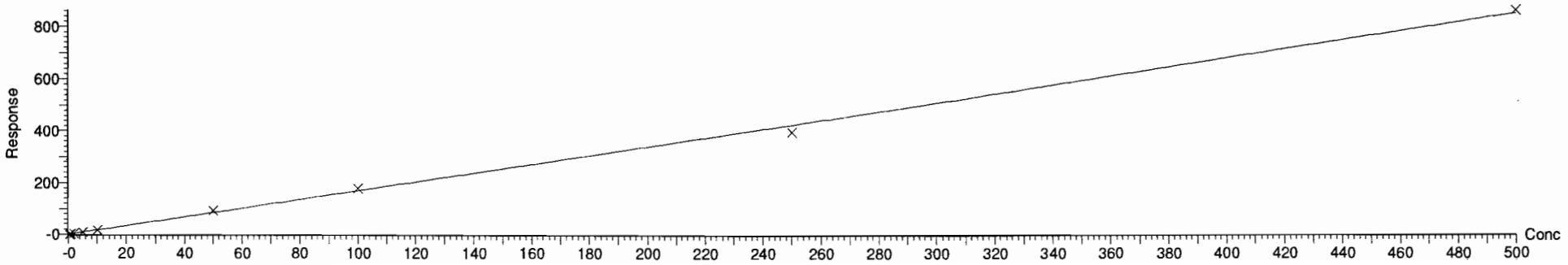
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFHxA
Correlation coefficient: r = 0.999688, r^2 = 0.999376
Calibration curve: 0.86194 * x + 0.0203203
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



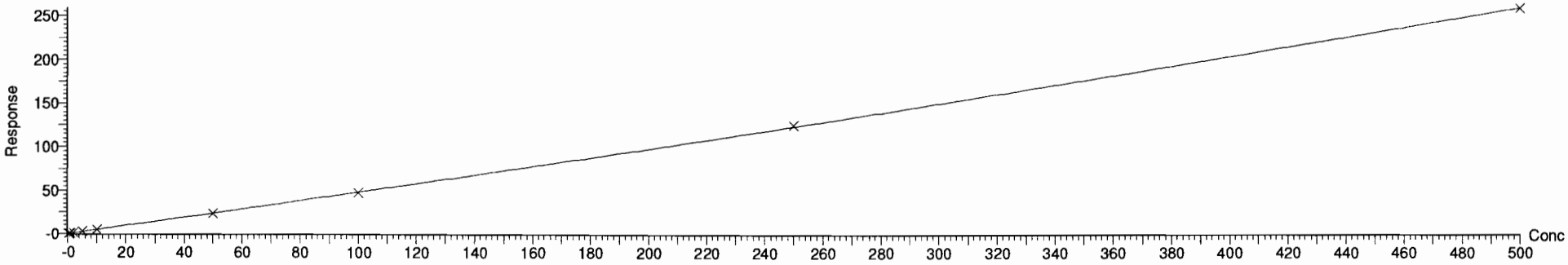
Compound name: PFPeS
Coefficient of Determination: R^2 = 0.997995
Calibration curve: 1.55836e-005 * x^2 + 1.69505 * x + -0.0036826
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



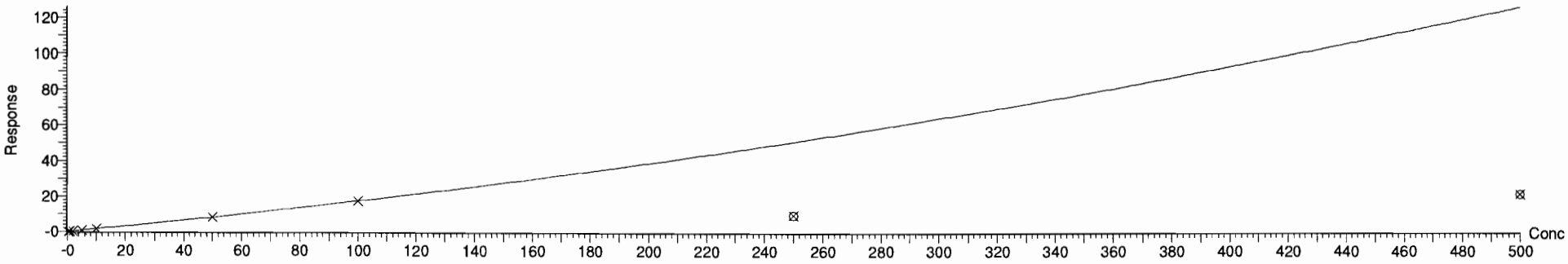
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999633
Calibration curve: 9.5064e-005 * x^2 + 0.471809 * x + 0.0215888
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



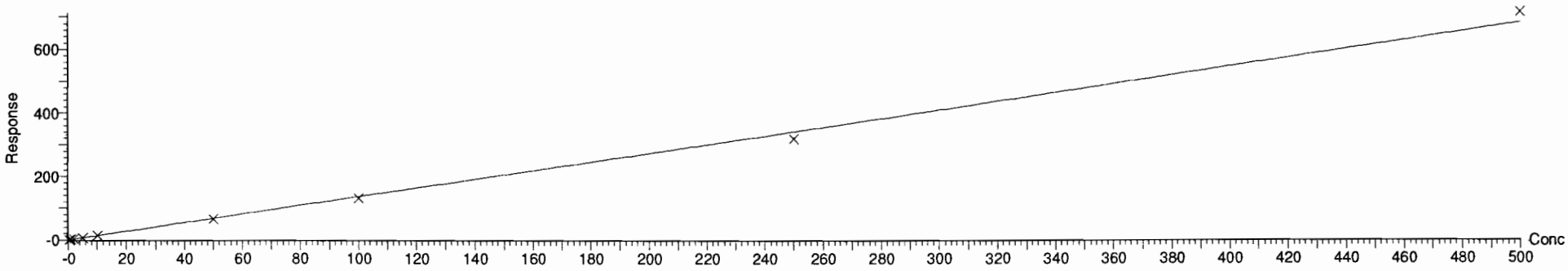
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999388
Calibration curve: 0.000191213 * x^2 + 0.156195 * x + -0.0204089
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



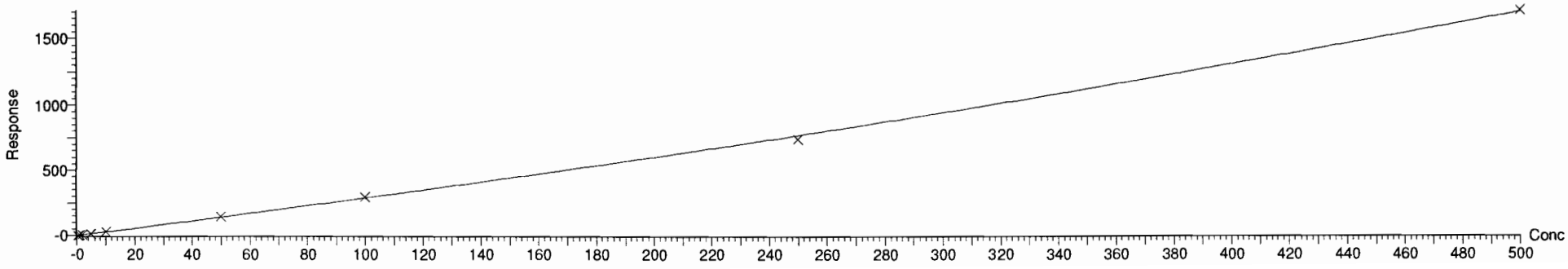
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFHpA
Correlation coefficient: r = 0.998727, r^2 = 0.997456
Calibration curve: 1.36438 * x + -0.10417
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



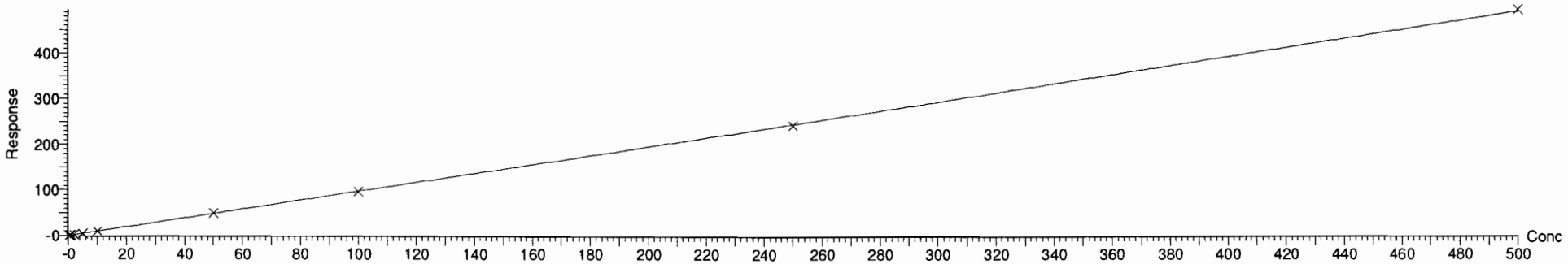
Compound name: ADONA
Coefficient of Determination: R^2 = 0.999445
Calibration curve: 0.00128658 * x^2 + 2.75204 * x + 0.0529361
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



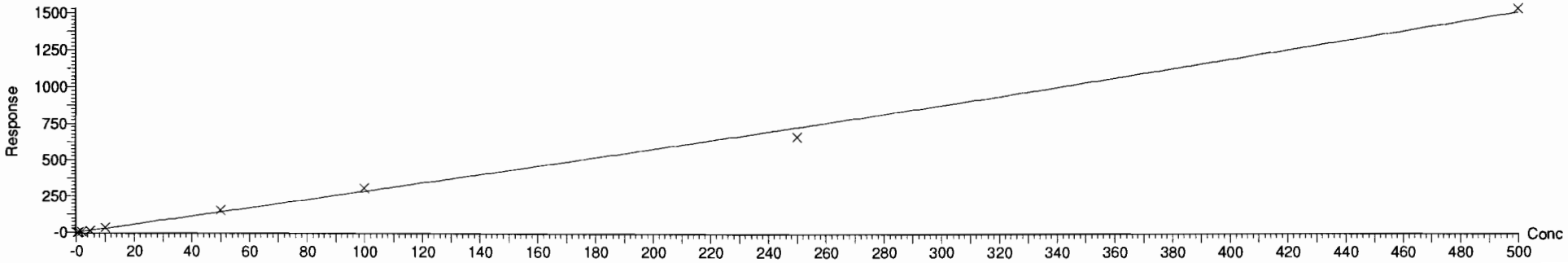
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: L-PFHxS
Correlation coefficient: r = 0.999933, r^2 = 0.999866
Calibration curve: 0.981182 * x + -0.0696979
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



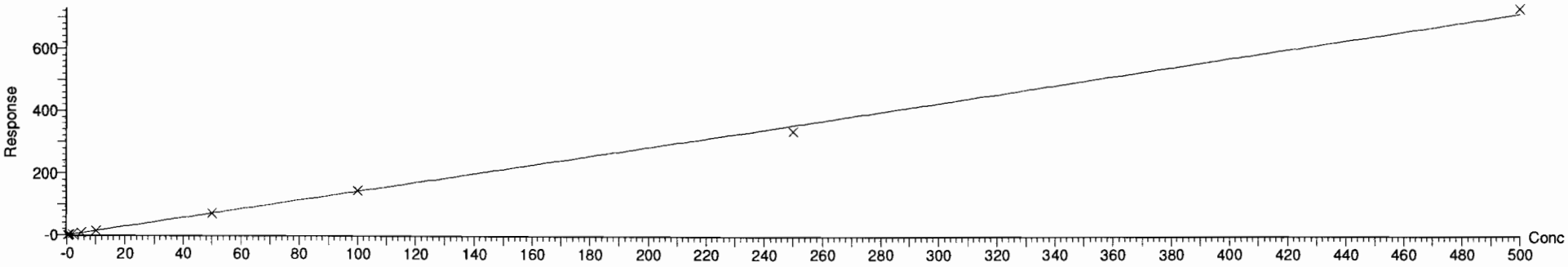
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.996581
Calibration curve: 0.000409289 * x^2 + 2.80751 * x + 0.106577
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



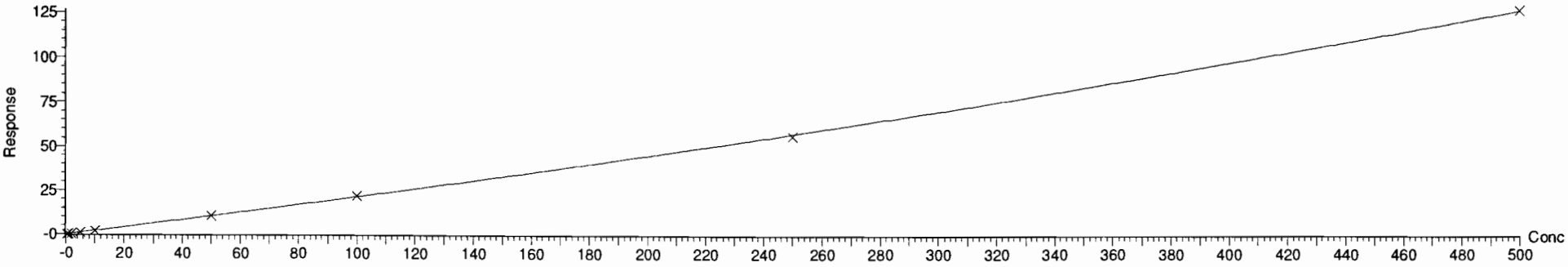
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: L-PFOA
Correlation coefficient: r = 0.999429, r^2 = 0.998858
Calibration curve: 1.42539 * x + 0.0314967
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



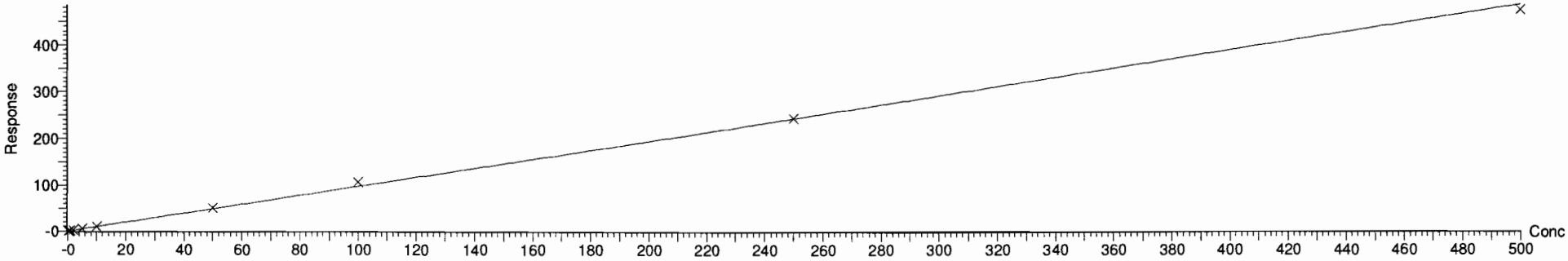
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999799
Calibration curve: 9.70125e-005 * x^2 + 0.203947 * x + -0.0228863
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



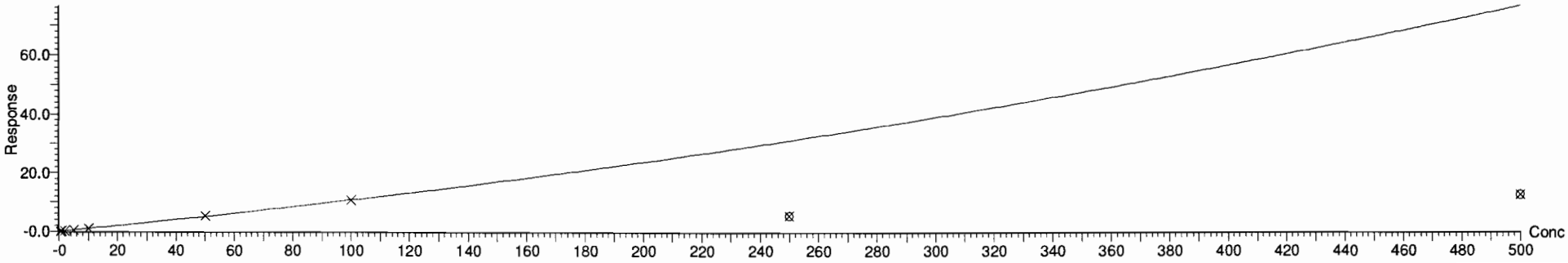
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFHpS
Correlation coefficient: r = 0.999269, r^2 = 0.998539
Calibration curve: 0.971788 * x + -0.0147429
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



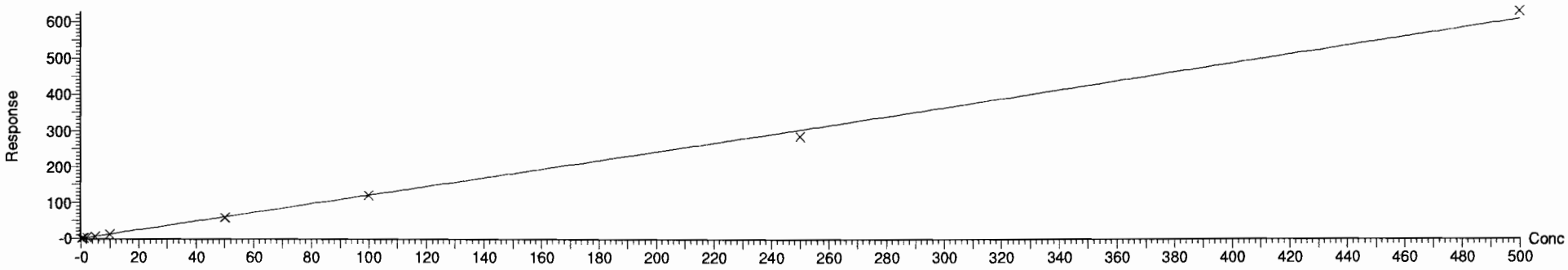
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.999469
Calibration curve: 0.000115285 * x^2 + 0.0952311 * x + -0.00880497
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



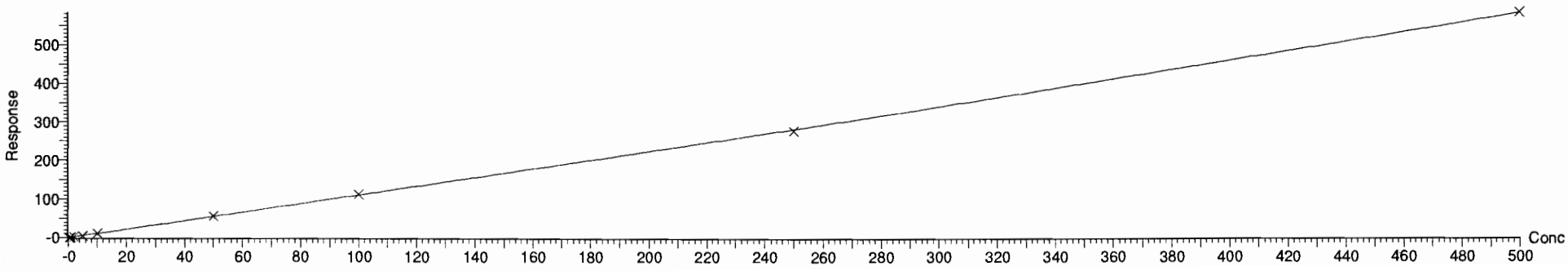
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.999097, r^2 = 0.998196
Calibration curve: 1.21237 * x + -0.0564818
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



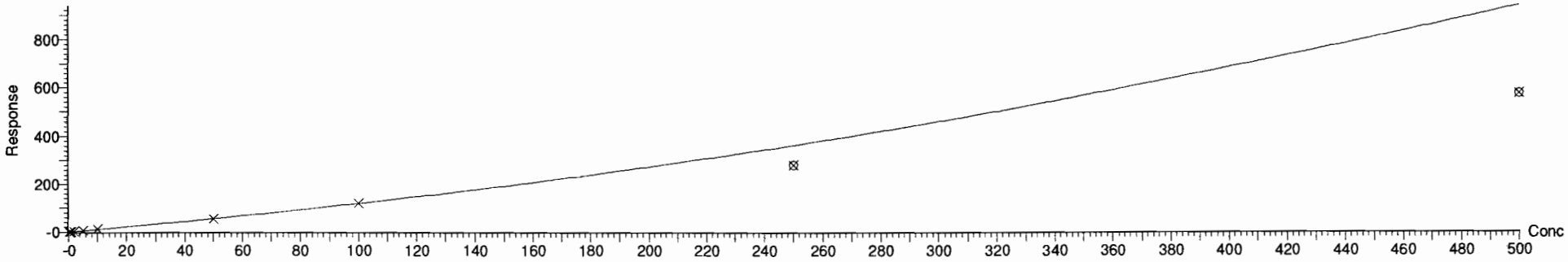
Compound name: PFOSA
Coefficient of Determination: R^2 = 0.999806
Calibration curve: 0.000143509 * x^2 + 1.09269 * x + 0.0627892
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



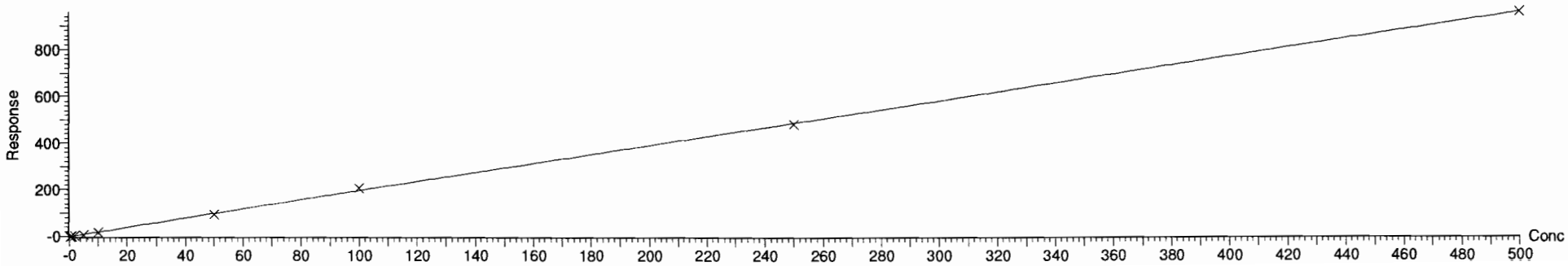
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.999203
Calibration curve: 0.00169096 * x^2 + 1.03212 * x + -0.0827669
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



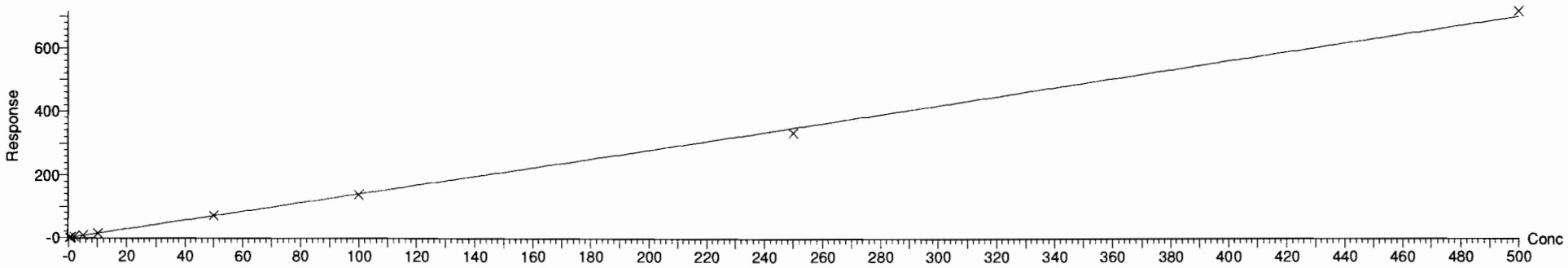
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999441
Calibration curve: -0.000123382 * x^2 + 1.97563 * x + -0.131619
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



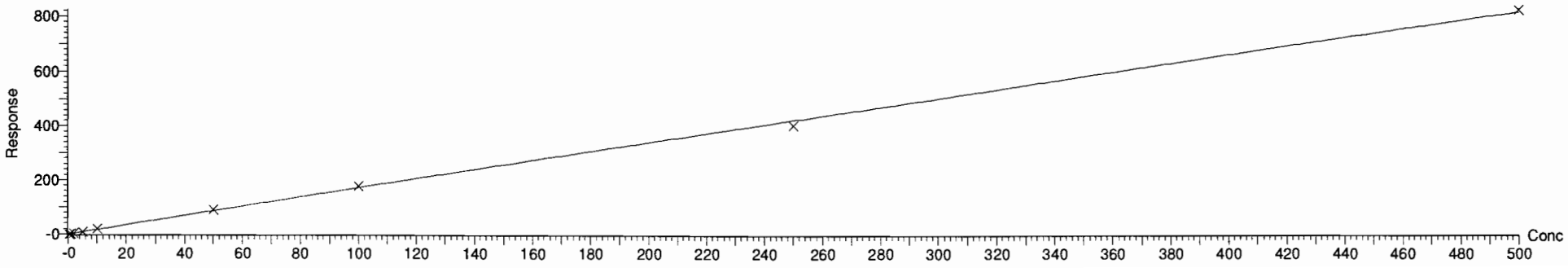
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFDA
Correlation coefficient: r = 0.999579, r^2 = 0.999159
Calibration curve: 1.40069 * x + -0.0183493
Response type: Internal Std (Ref 60), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



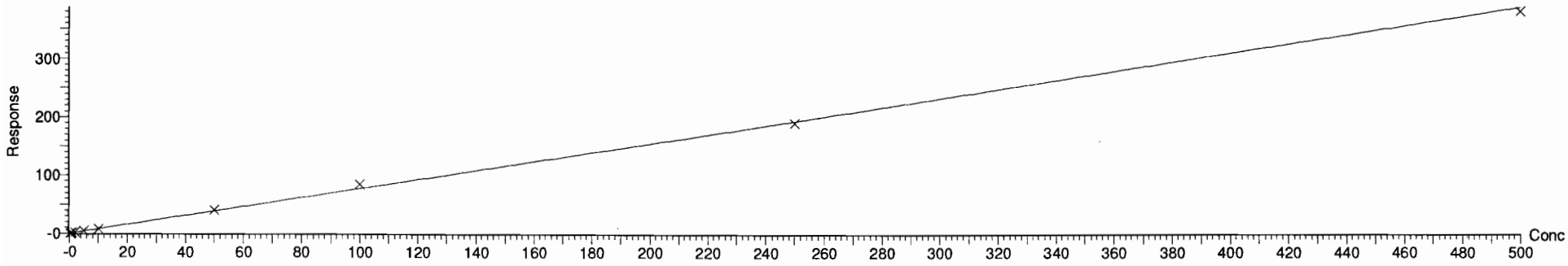
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.998772
Calibration curve: -0.000226625 * x^2 + 1.74522 * x + -0.176865
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



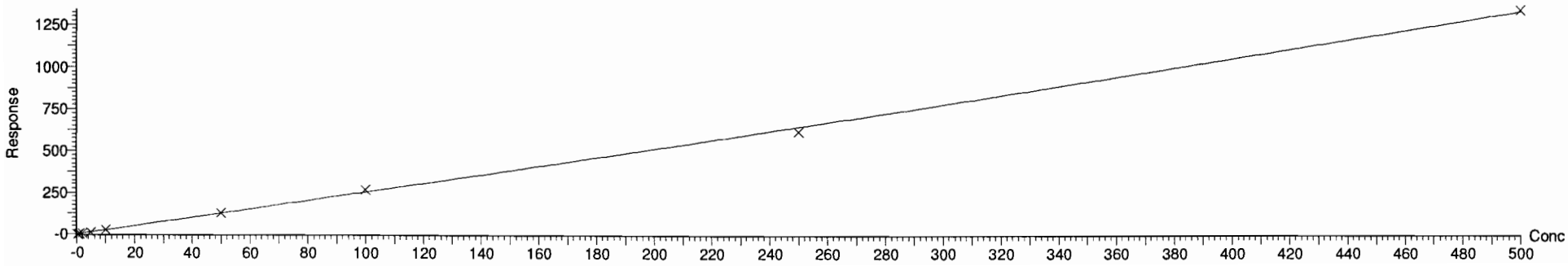
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:33:53 Pacific Daylight Time

Compound name: PFNS
Correlation coefficient: r = 0.999302, r^2 = 0.998604
Calibration curve: 0.775503 * x + -0.0929333
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999224
Calibration curve: 0.000282873 * x^2 + 2.51405 * x + -0.20232
Response type: Internal Std (Ref 62), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



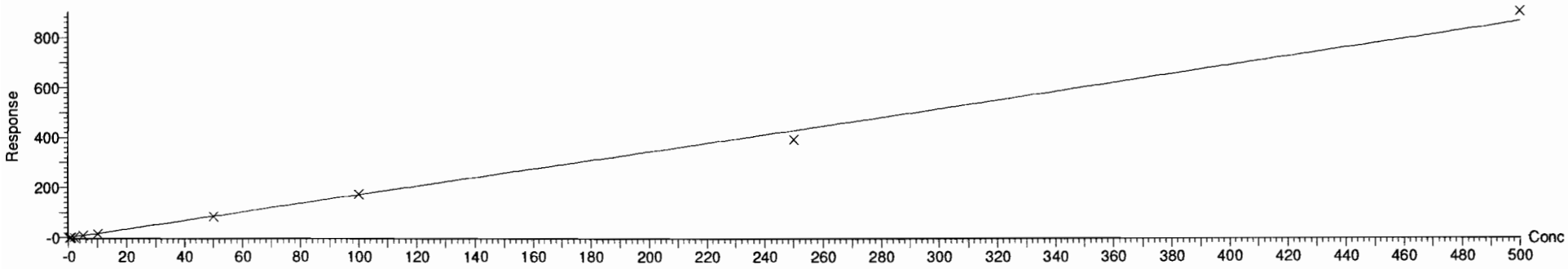
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

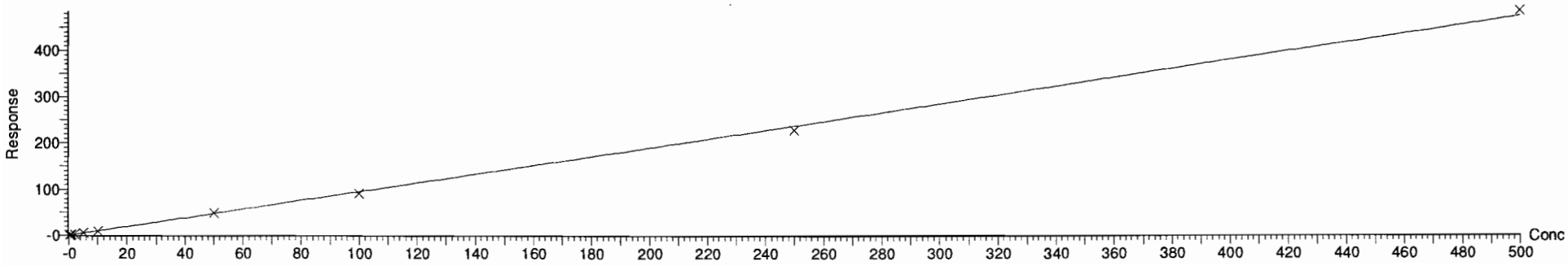
Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.998269, r^2 = 0.996541
Calibration curve: 1.72123 * x + -0.14259
Response type: Internal Std (Ref 64), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



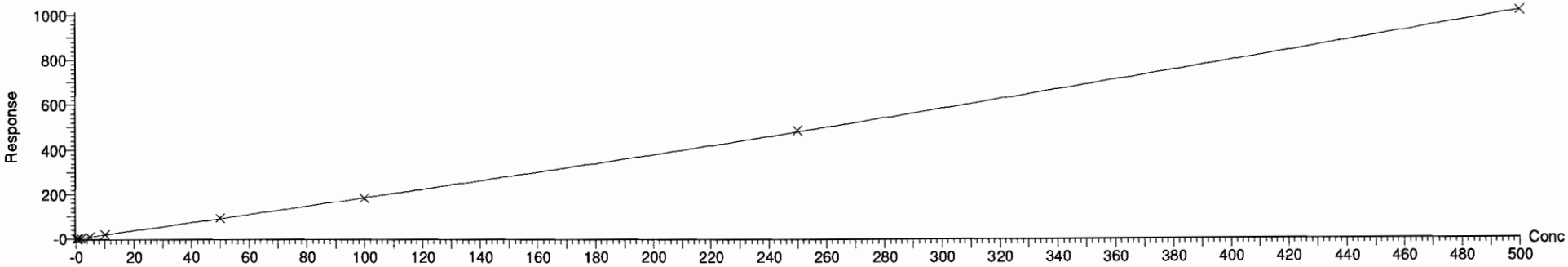
Compound name: PFUdA
Correlation coefficient: r = 0.999549, r^2 = 0.999099
Calibration curve: 0.947115 * x + 0.0265677
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



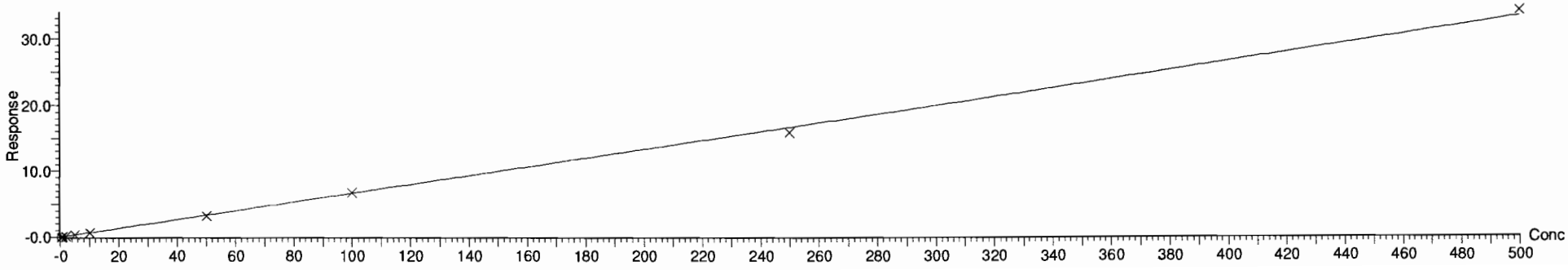
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: PFDS
Coefficient of Determination: R^2 = 0.999741
Calibration curve: 0.000442645 * x^2 + 1.8108 * x + -0.117379
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



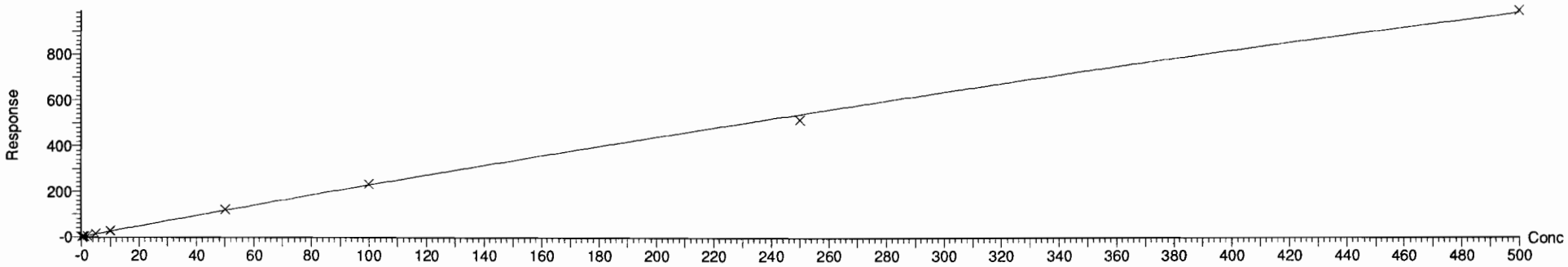
Compound name: 11Cl-PF30UdS
Correlation coefficient: r = 0.999479, r^2 = 0.998958
Calibration curve: 0.0663494 * x + -0.0146238
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



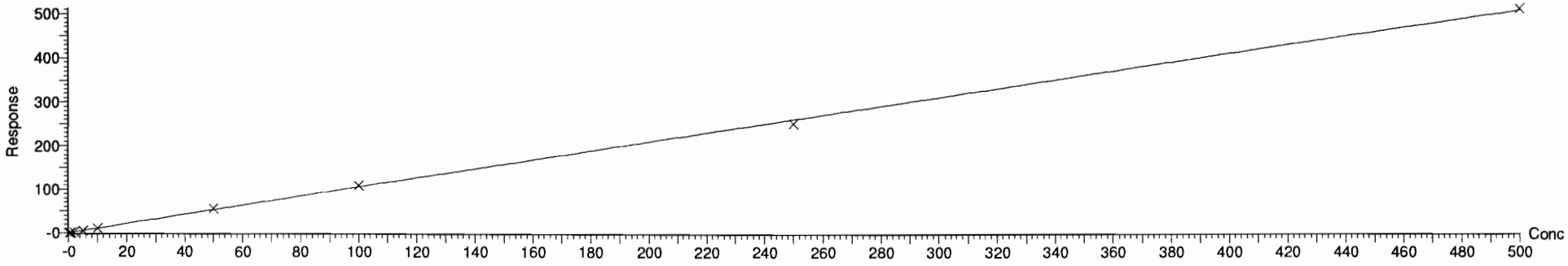
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998741
Calibration curve: -0.000811086 * x^2 + 2.36532 * x + 0.223331
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



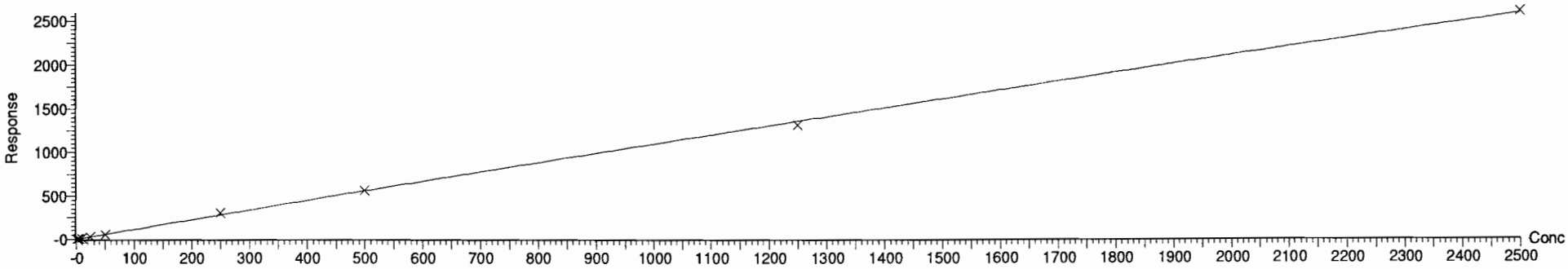
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999261
Calibration curve: -0.000118706 * x^2 + 1.07506 * x + 0.0526029
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



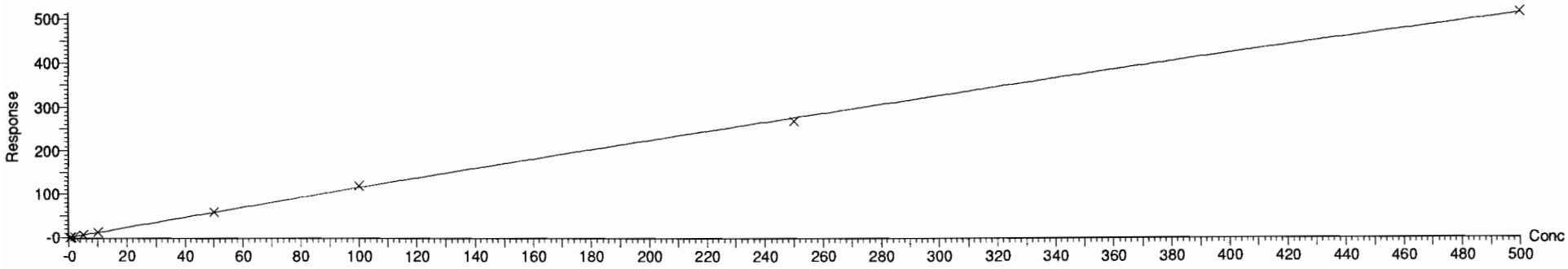
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999306
Calibration curve: -4.31261e-005 * x^2 + 1.13745 * x + 0.0203173
Response type: Internal Std (Ref 66), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



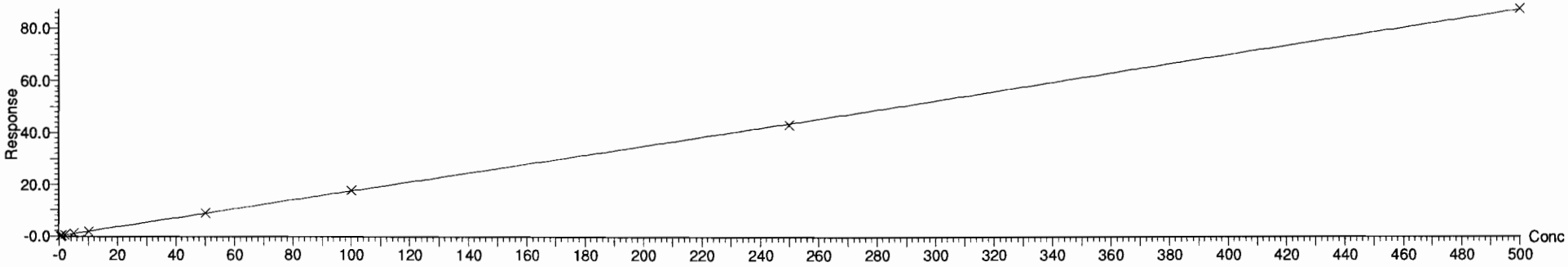
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999573
Calibration curve: -0.000320084 * x^2 + 1.18356 * x + -0.00161666
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



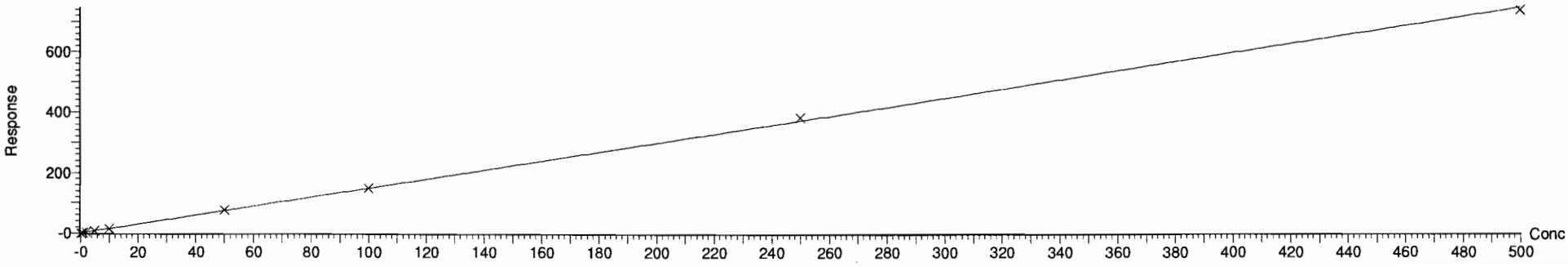
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999850
Calibration curve: -2.48379e-006 * x^2 + 0.175562 * x + -0.0189032
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



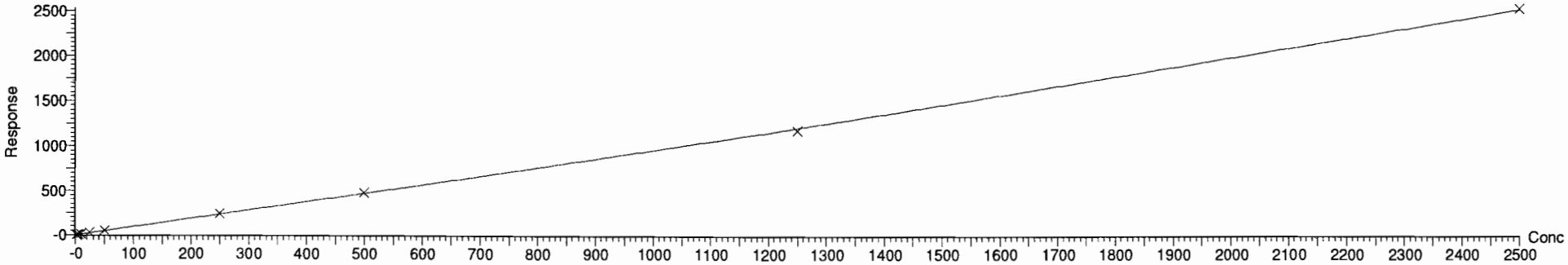
Compound name: PFTeDA
Correlation coefficient: r = 0.999839, r^2 = 0.999677
Calibration curve: 1.49116 * x + 0.029048
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



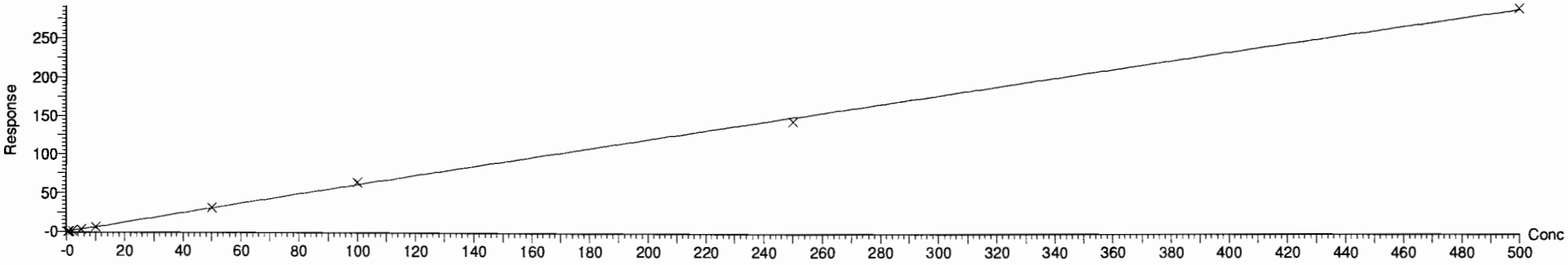
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999747
Calibration curve: 3.23713e-005 * x^2 + 0.926697 * x + 0.169234
Response type: Internal Std (Ref 68), 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 = 0.999222
Calibration curve: -8.02491e-005 * x^2 + 0.616647 * x + 0.0277147
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

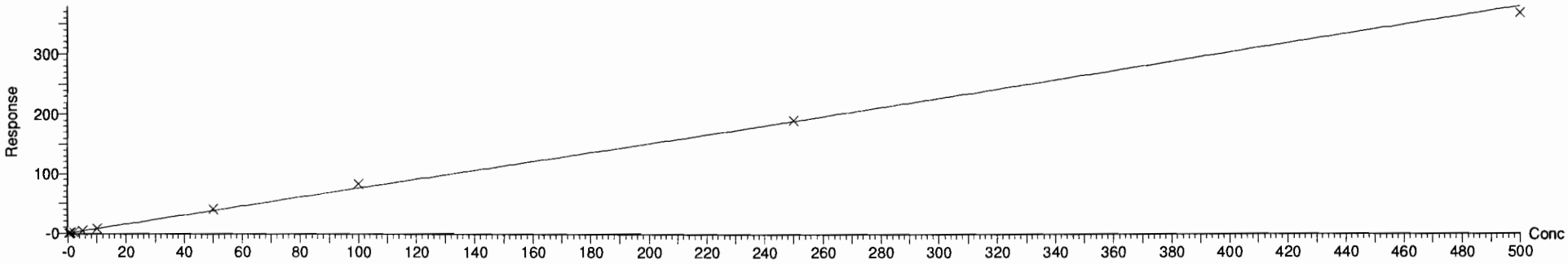


Vista Analytical Laboratory Q1

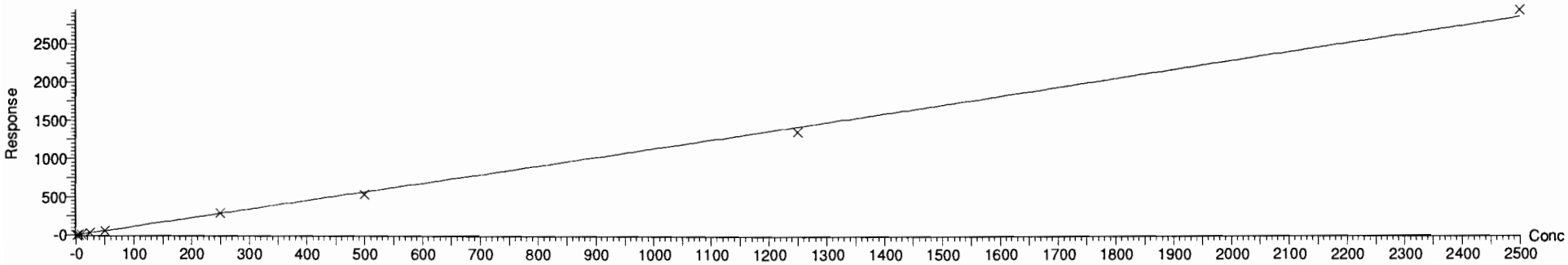
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: PFODA
Correlation coefficient: r = 0.999180, r^2 = 0.998360
Calibration curve: 0.75742 * x + 0.0294746
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



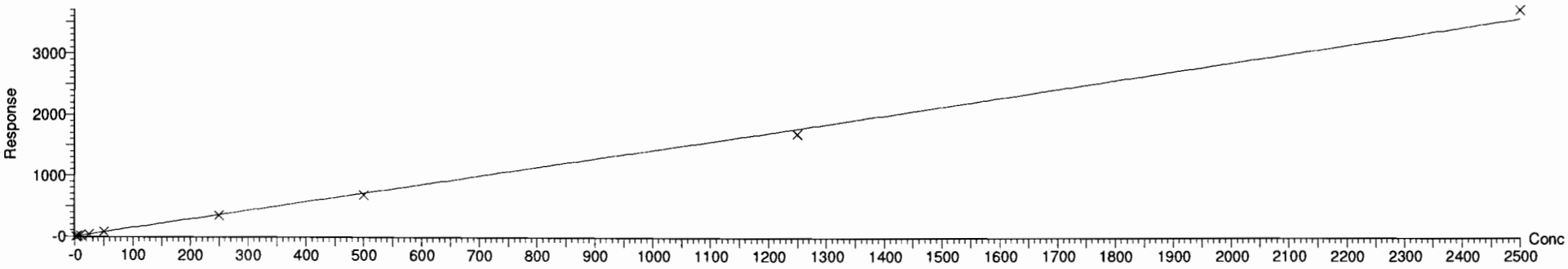
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999222, r^2 = 0.998445
Calibration curve: 1.13807 * x + -0.148891
Response type: Internal Std (Ref 70), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 10:20:51 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:34:06 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999025, r^2 = 0.998051
Calibration curve: 1.42687 * x + -0.492969
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



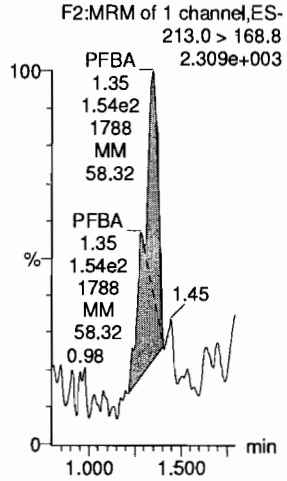
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

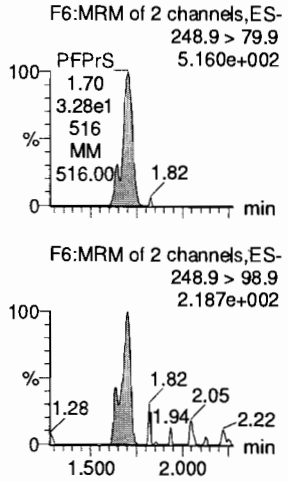
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 08:30:56

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

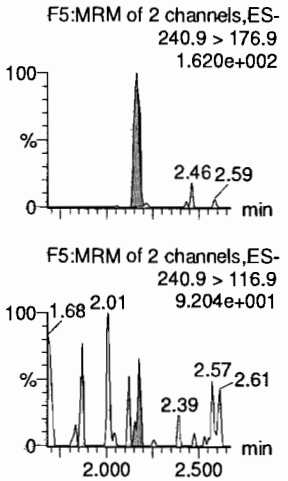
PFBA



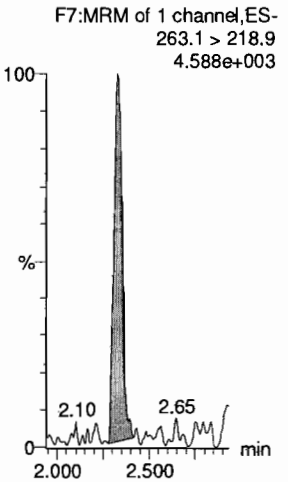
PFPrS



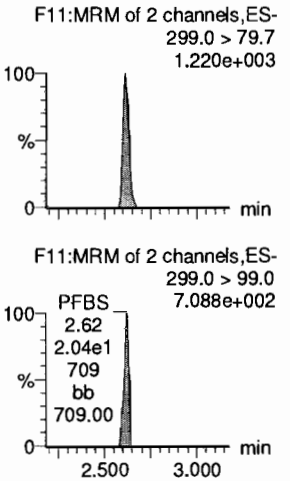
3:3 FTCA



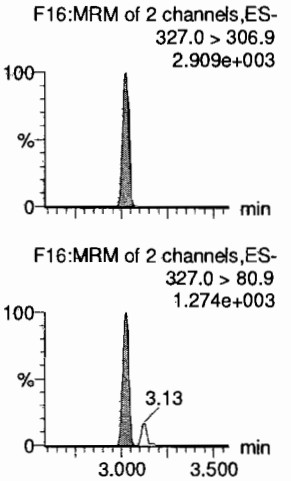
PFPeA



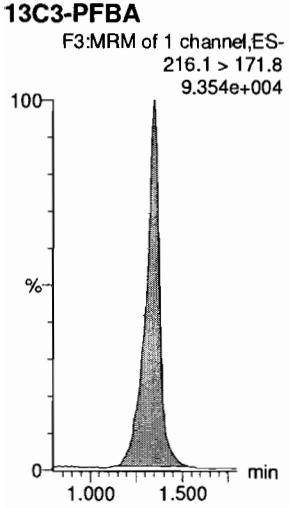
PFBS



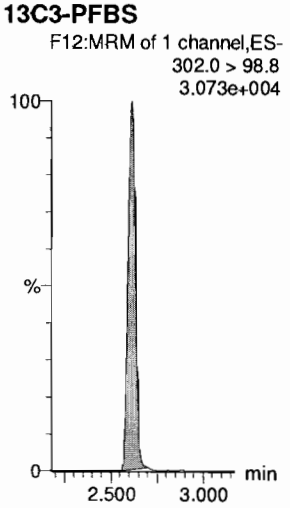
4:2 FTS



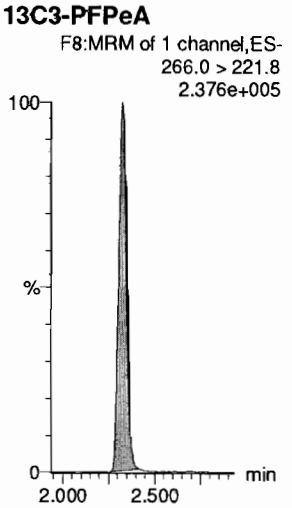
13C3-PFBA



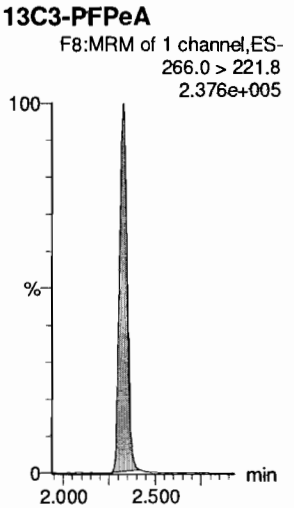
13C3-PFBS



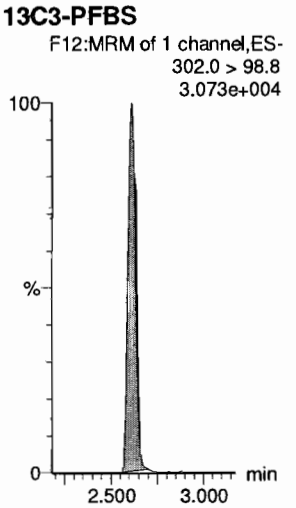
13C3-PFPeA



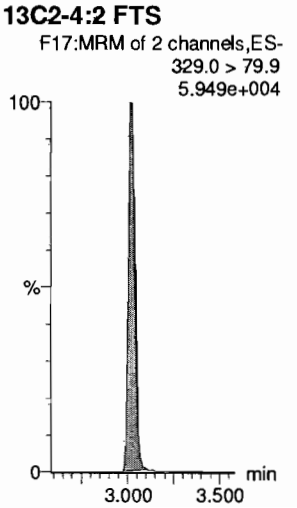
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

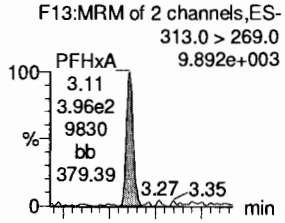


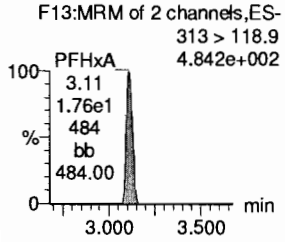
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

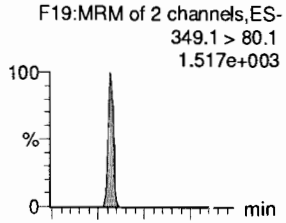
Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

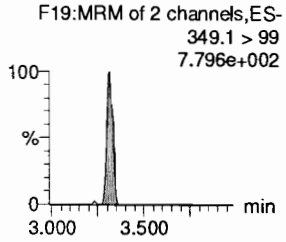
PFHxA



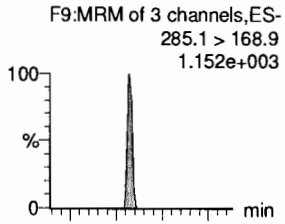


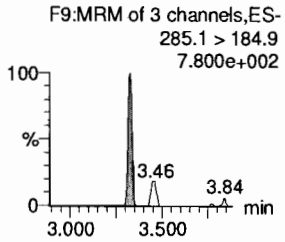
PFPeS



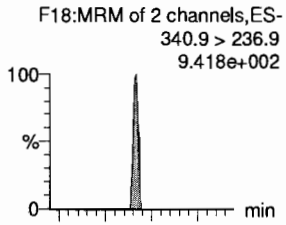


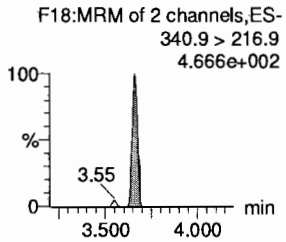
HFPO-DA



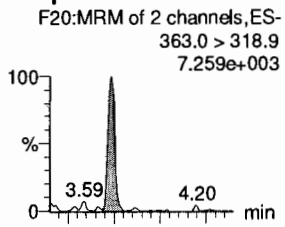


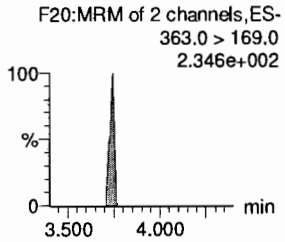
5:3 FTCA



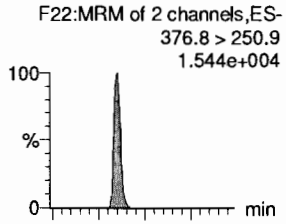


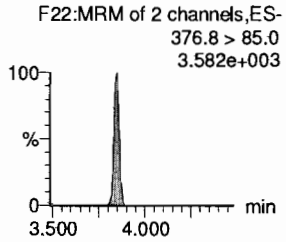
PFHpA



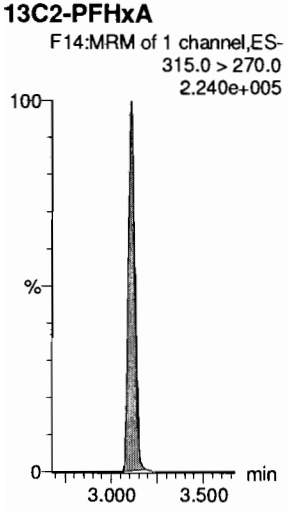


ADONA

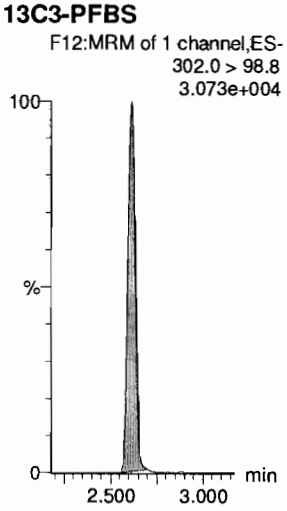




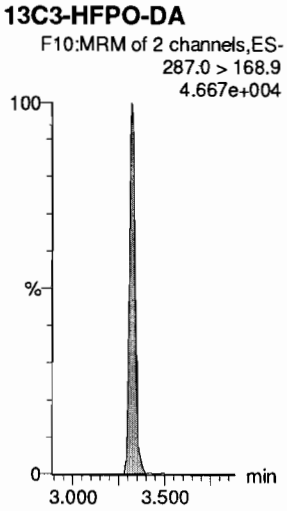
13C2-PFHxA



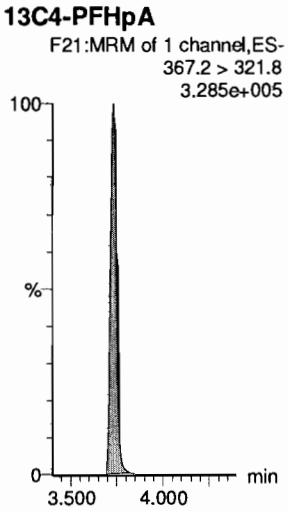
13C3-PFBS



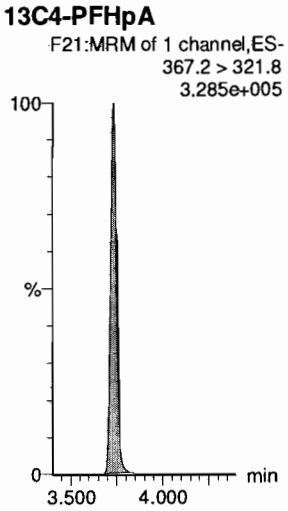
13C3-HFPO-DA



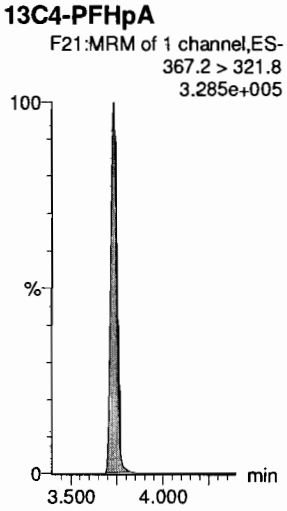
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

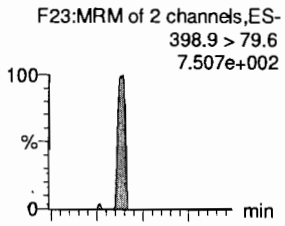


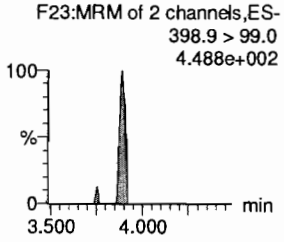
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

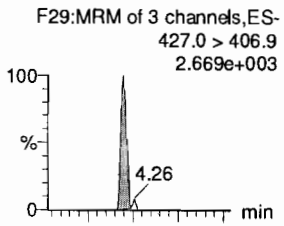
Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

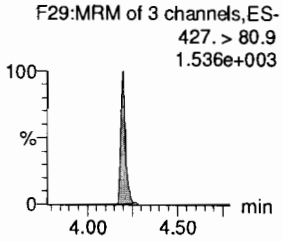
L-PFHxS





6:2 FTS





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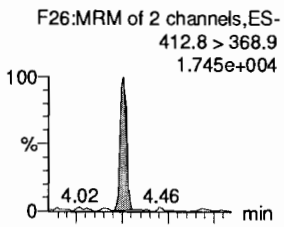

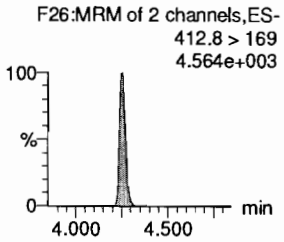

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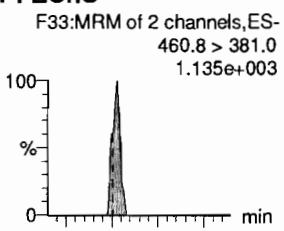

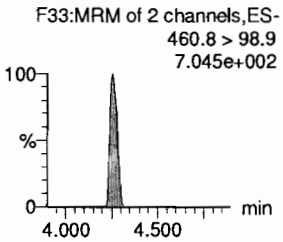

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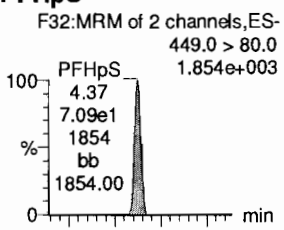
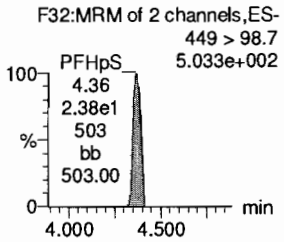
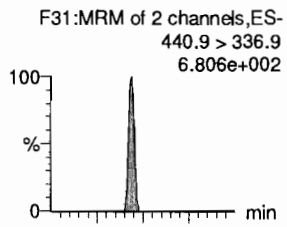
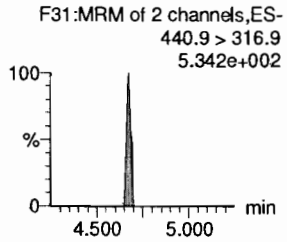




7:3 FTCA





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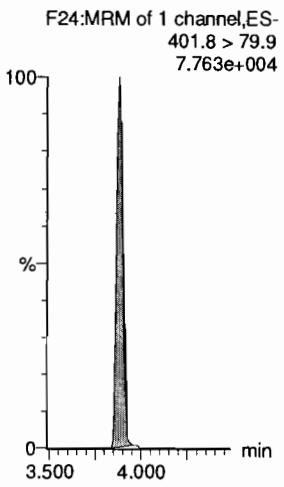
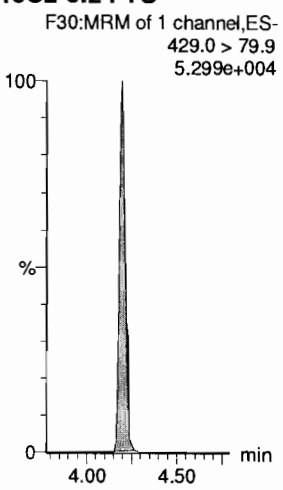


13C2-6:2 FTS



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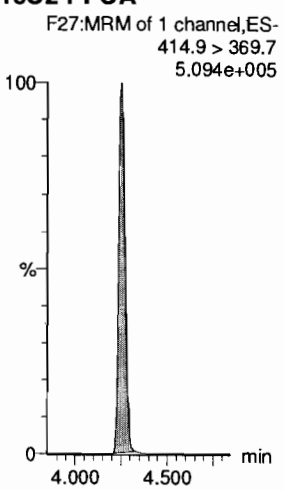

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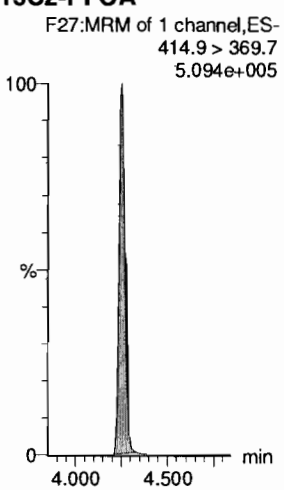
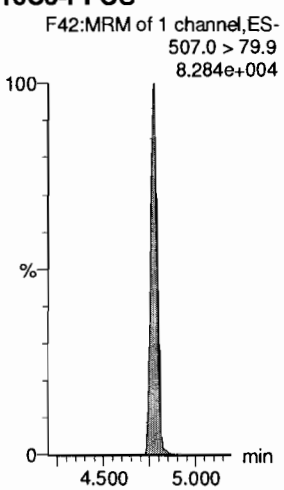
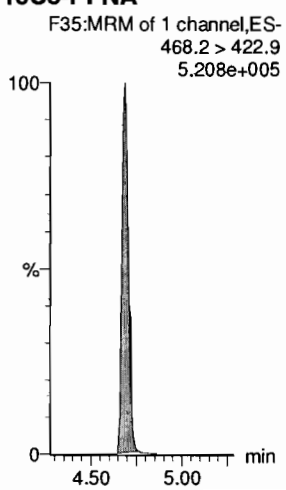


13C8-PFOS



13C5-PFNA

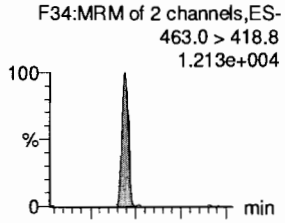


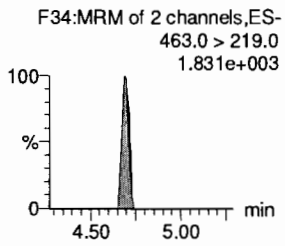
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

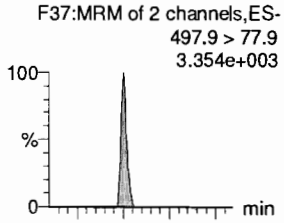
Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

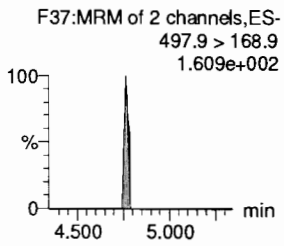
PFNA



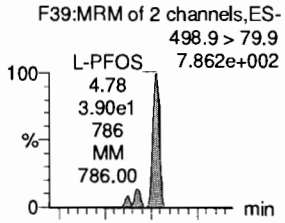


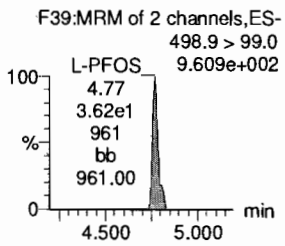
PFOSA





L-PFOS





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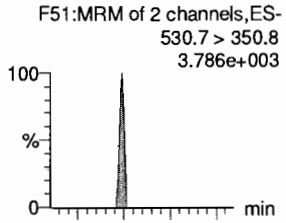

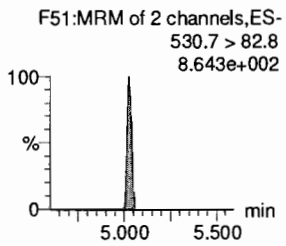

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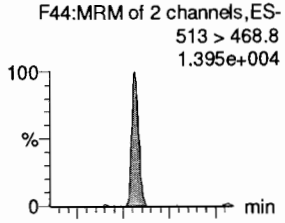

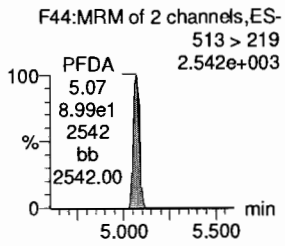

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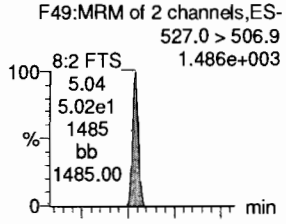

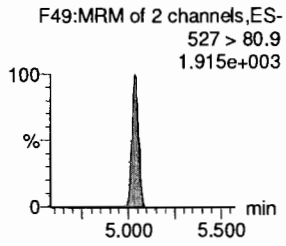

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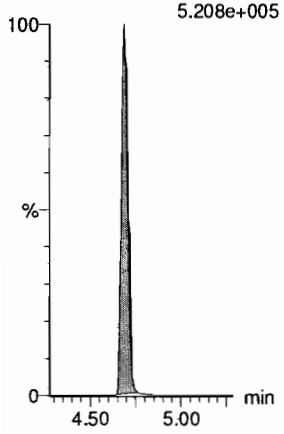

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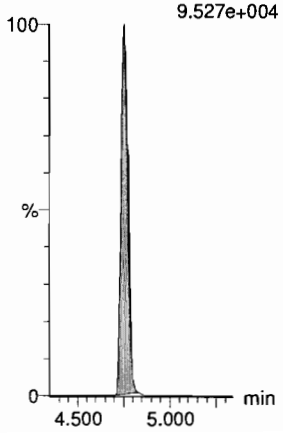

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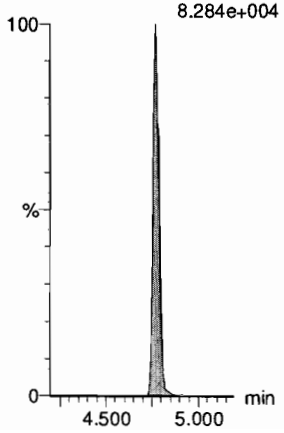

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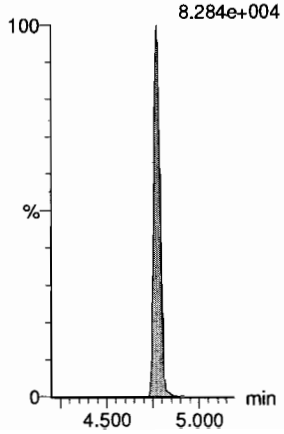
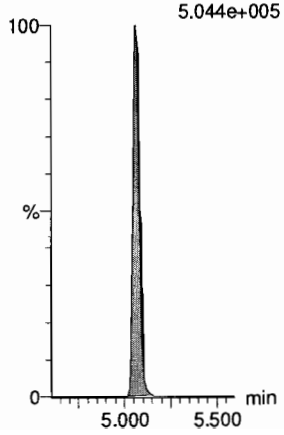
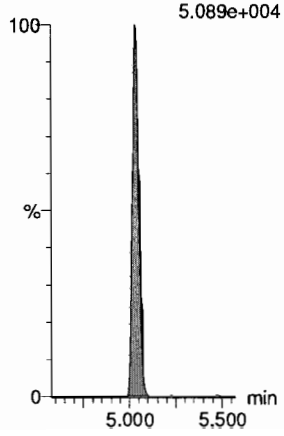


13C2-PFDA



13C2-8:2 FTS

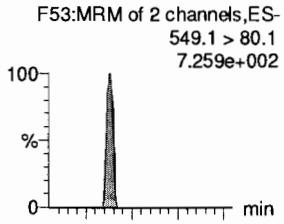


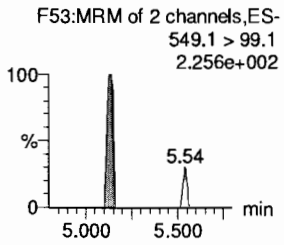
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

PFNS





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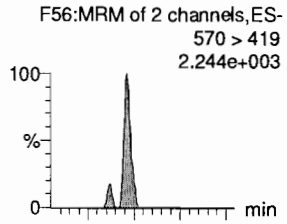
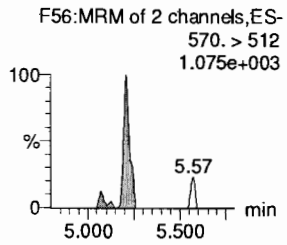
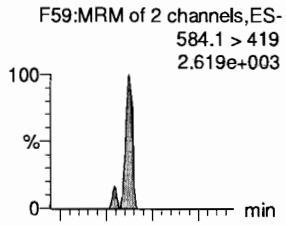
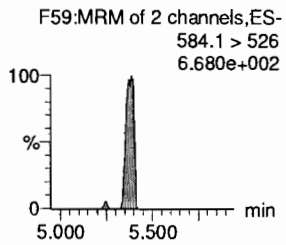


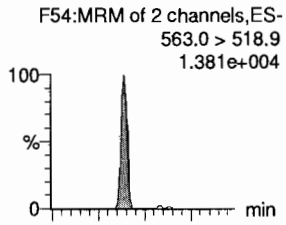


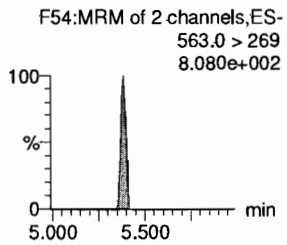
L-EtFOSAA





PFUdA





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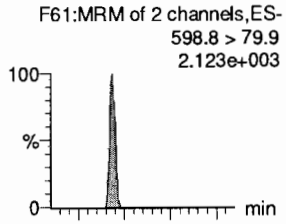

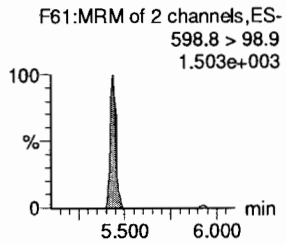

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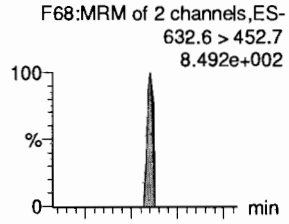
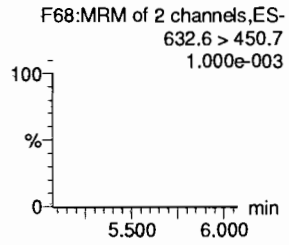
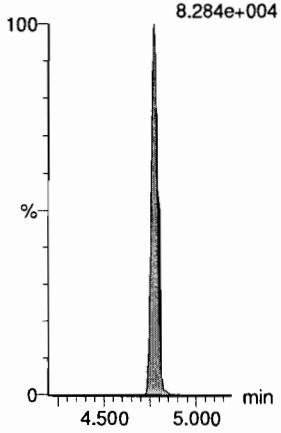




13C8-PFOS



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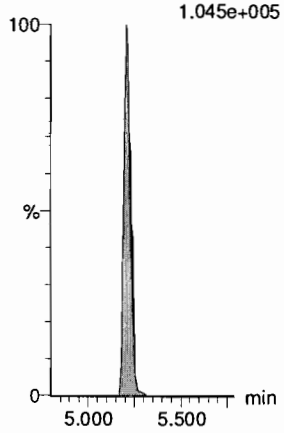
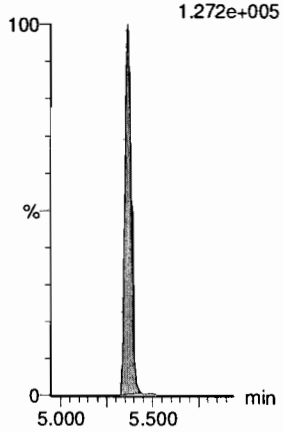
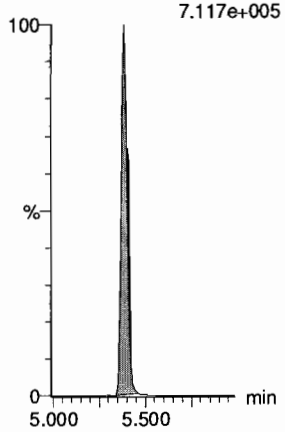


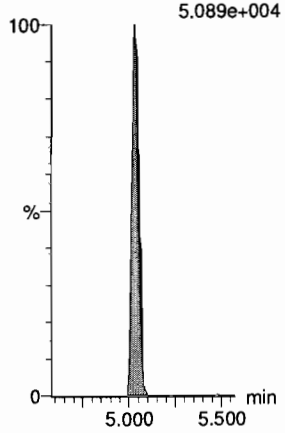
d5-N-EtFOSAA



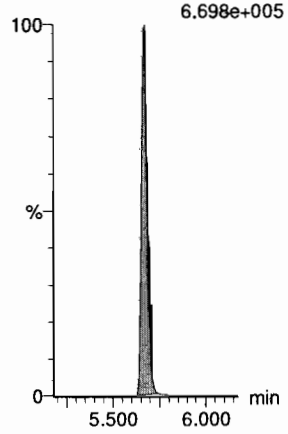
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

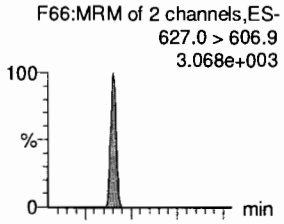


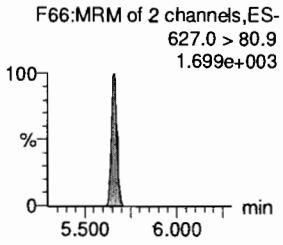
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

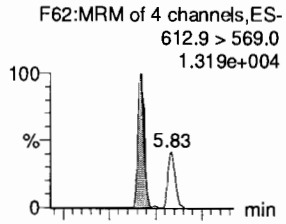
Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

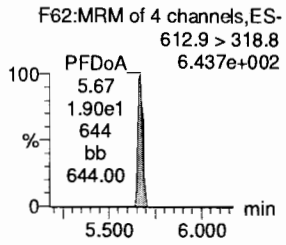
10:2 FTS



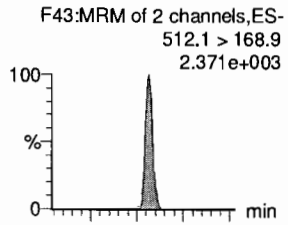


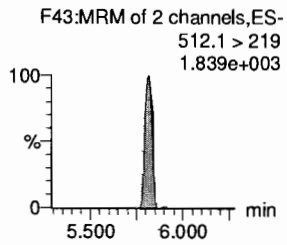
PFDoA





N-MeFOSA





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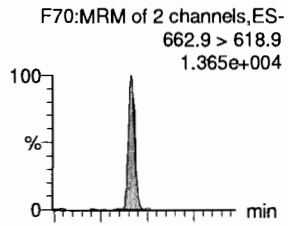
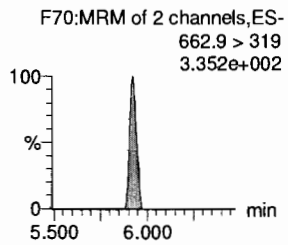
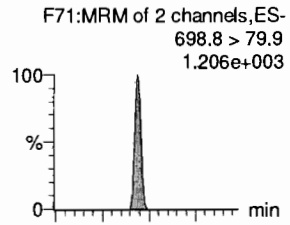
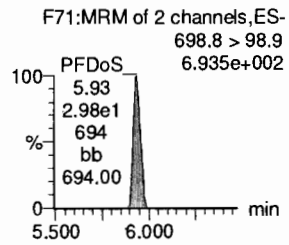


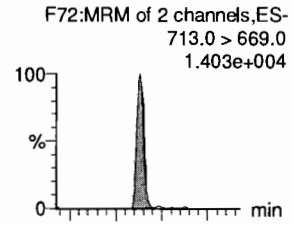


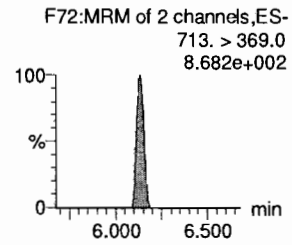
PFDoS



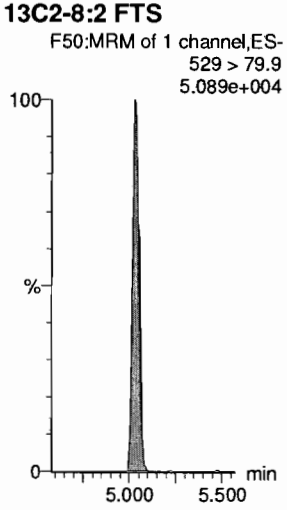


PFTeDA

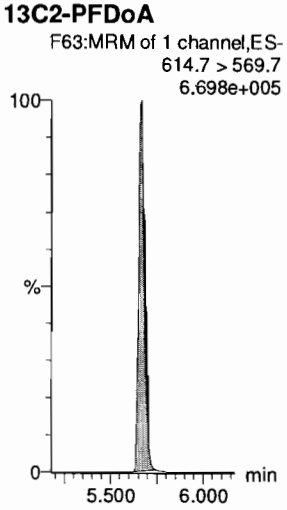




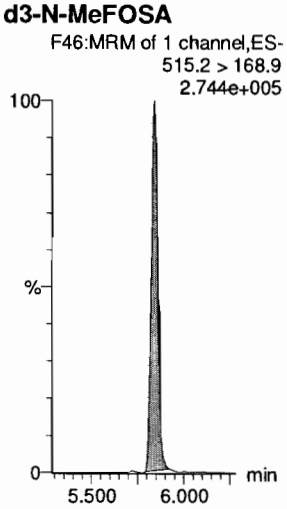
13C2-8:2 FTS



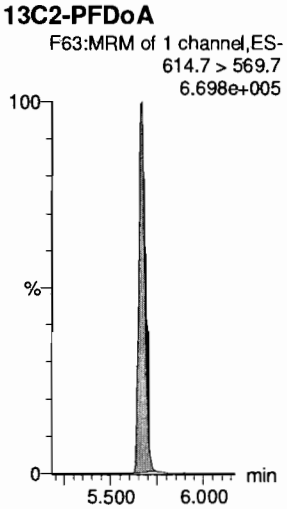
13C2-PFDoA



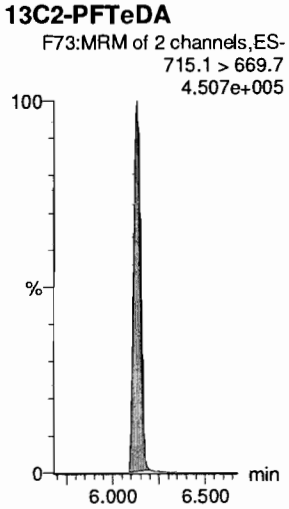
d3-N-MeFOSA



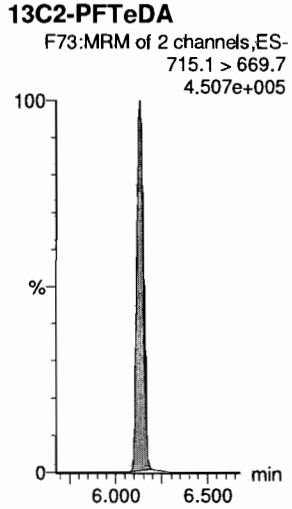
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

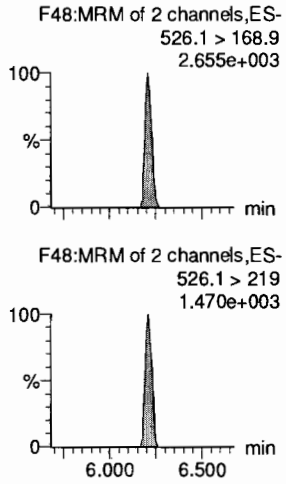


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

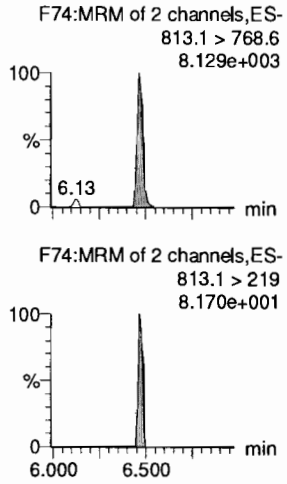
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

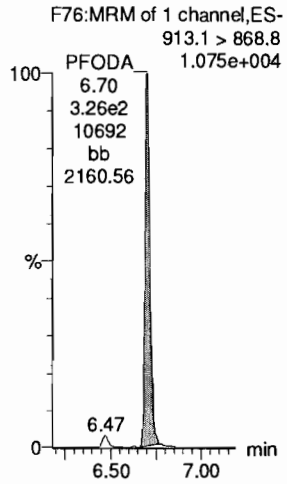
N-EtFOSA



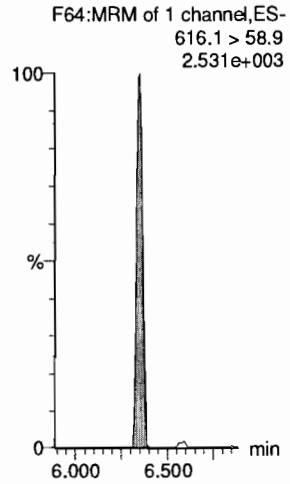
PFHxDA



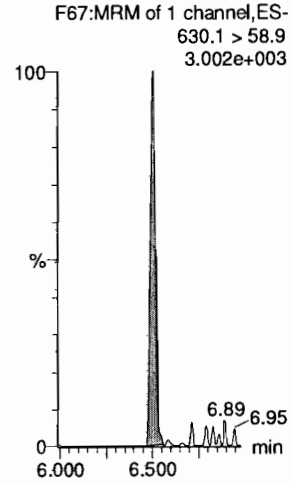
PFODA



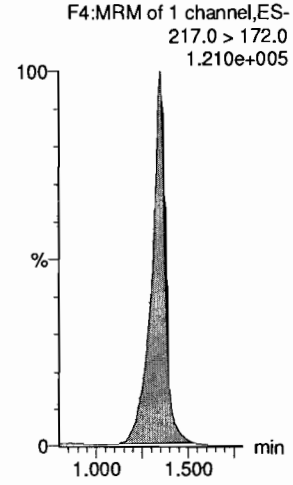
N-MeFOSE



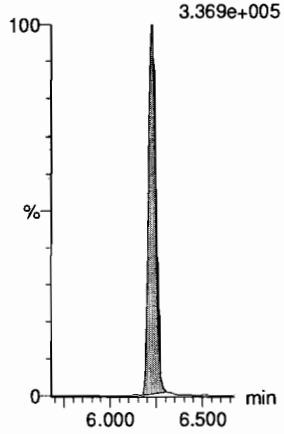
N-EtFOSE



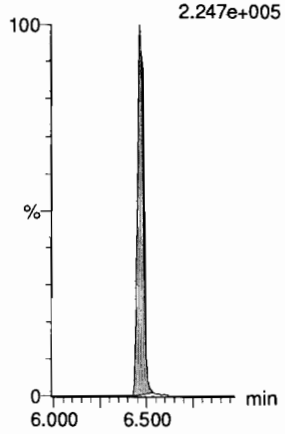
13C4-PFBA



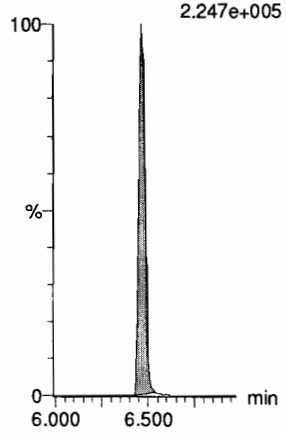
d5-N-ETFOSA



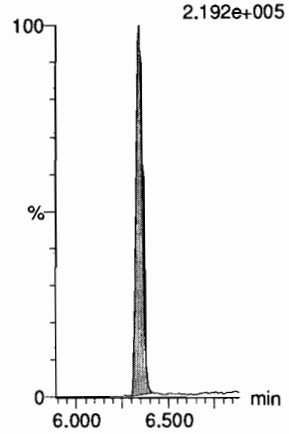
13C2-PFHxDA



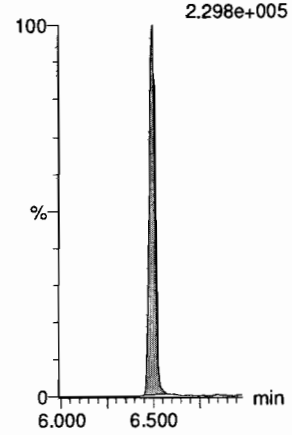
13C2-PFHxDA



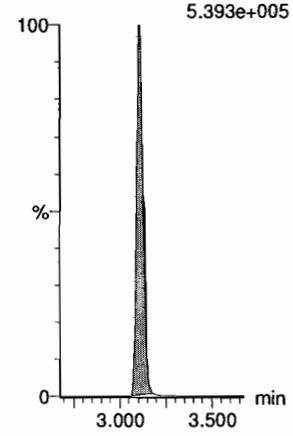
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

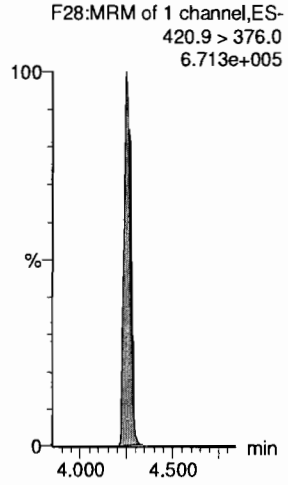


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

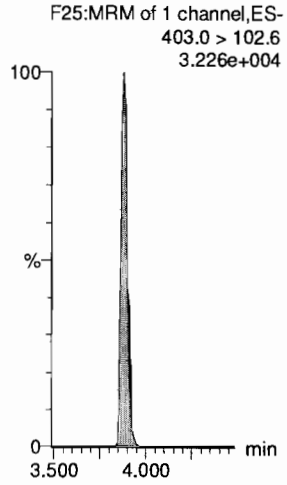
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_3, Date: 01-Jul-2019, Time: 16:03:10, ID: ST190701M1-1 PFC CS-2 19F2412, Description: PFC CS-2 19F2412

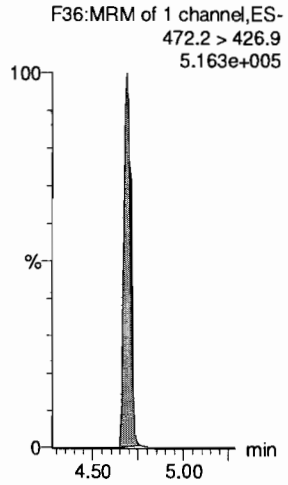
13C8-PFOA



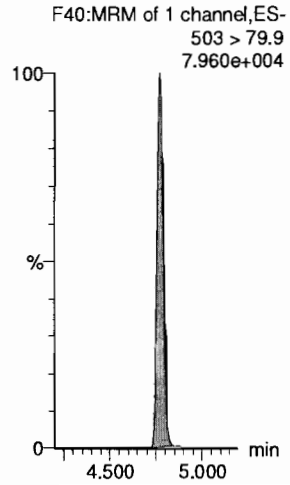
18O2-PFHxS



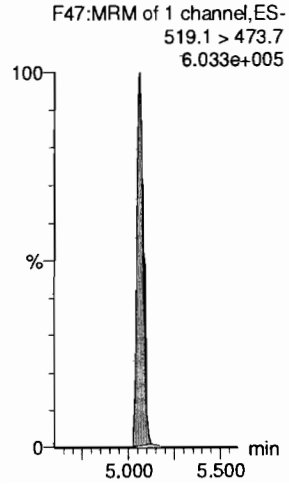
13C9-PFNA



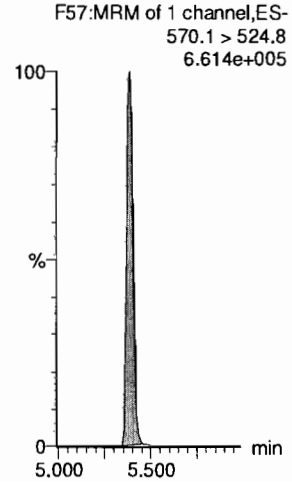
13C4-PFOS



13C6-PFDA



13C7-PFUdA

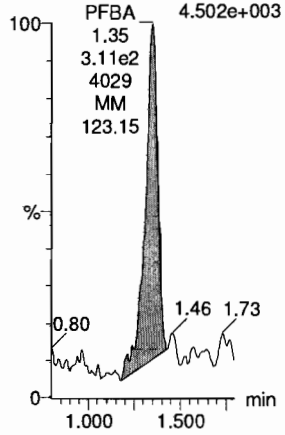


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

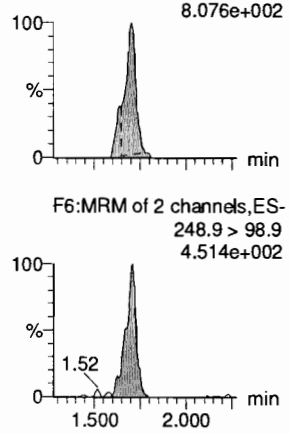
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

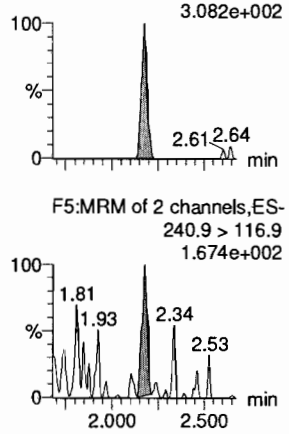
PFBA



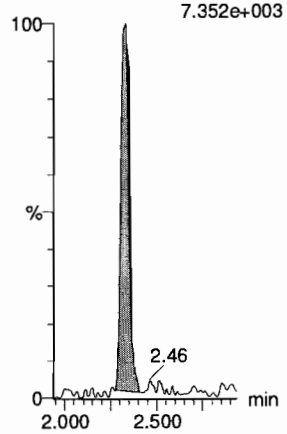
PFPrS



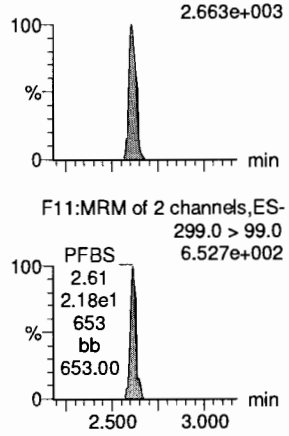
3:3 FTCA



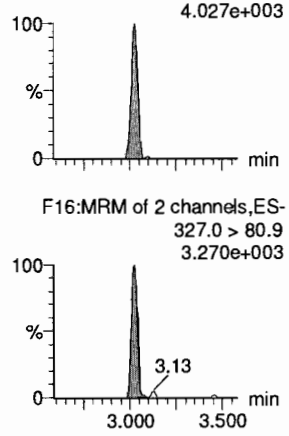
PFPeA



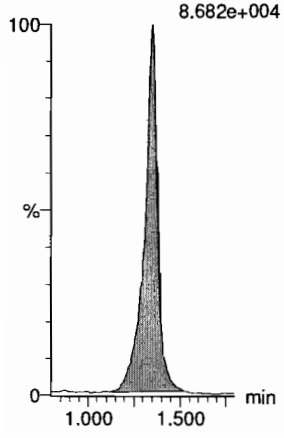
PFBS



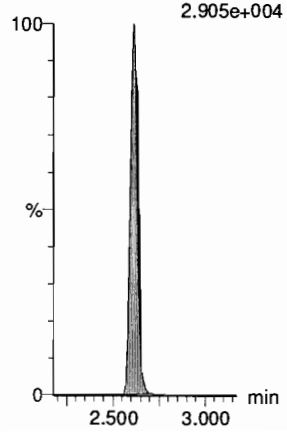
4:2 FTS



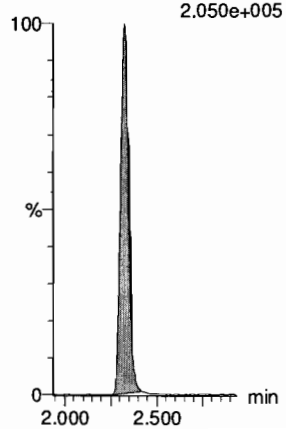
13C3-PFBA



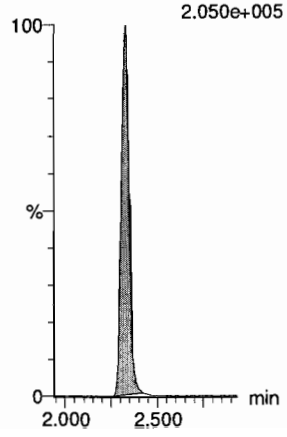
13C3-PFBS



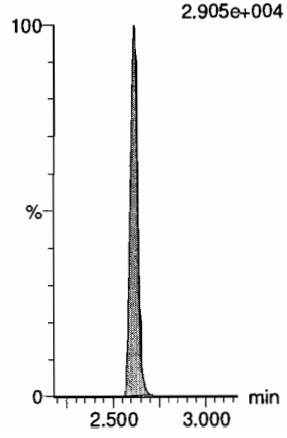
13C3-PFPeA



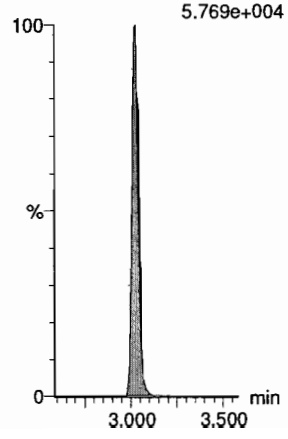
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

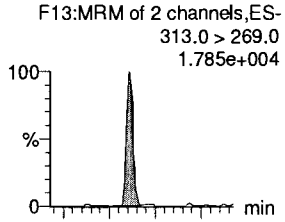


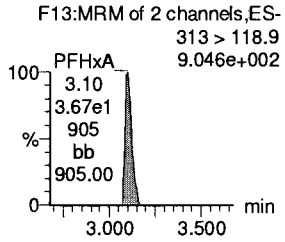
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

PFHxA





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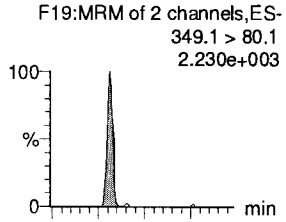
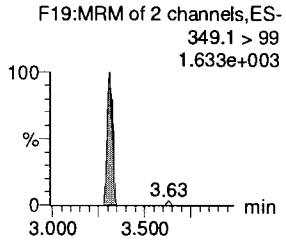
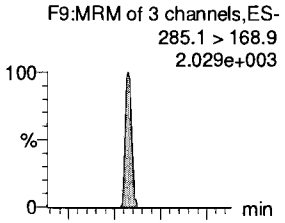
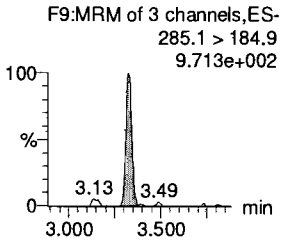


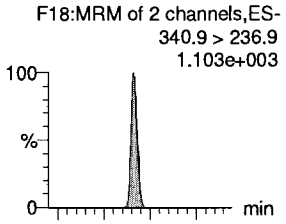


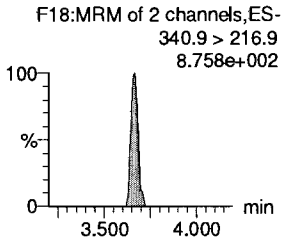
HFPO-DA





5:3 FTCA





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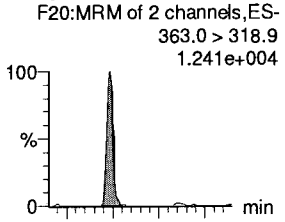

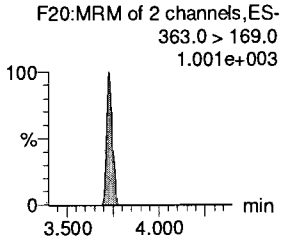

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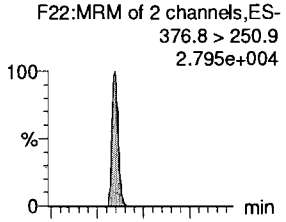

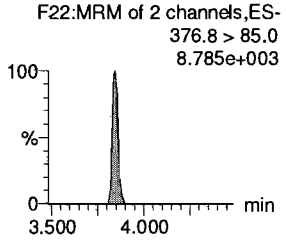

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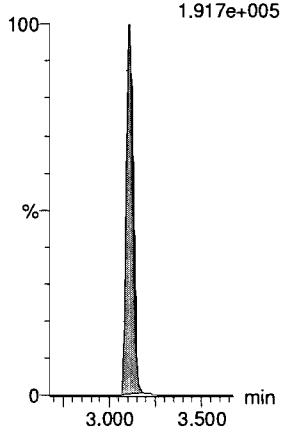

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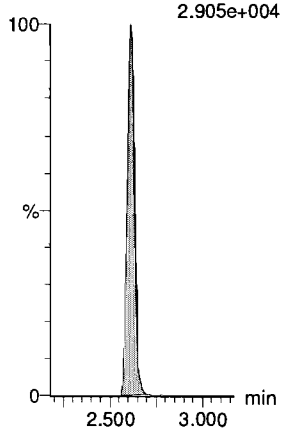

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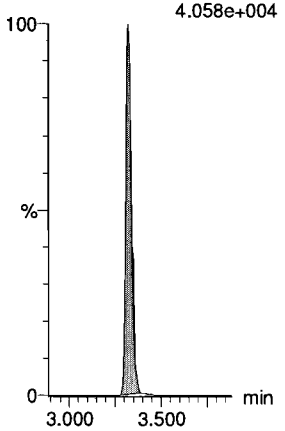
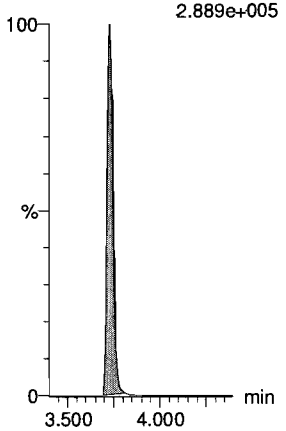


13C4-PFHpA



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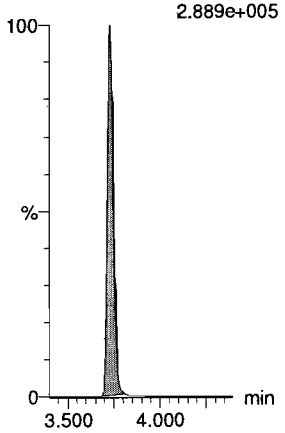

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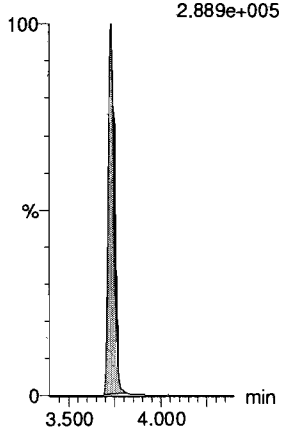

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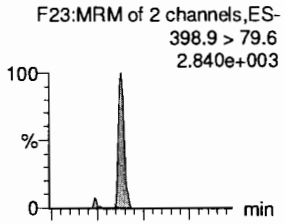
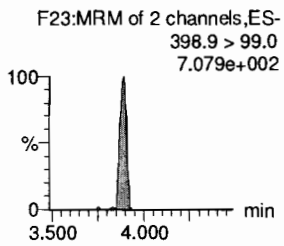
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

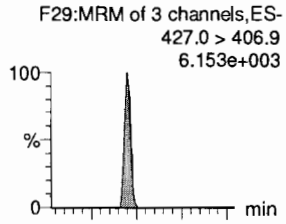
Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

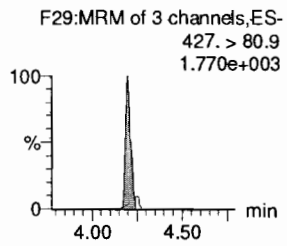
L-PFHxS





6:2 FTS





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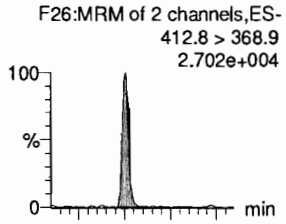

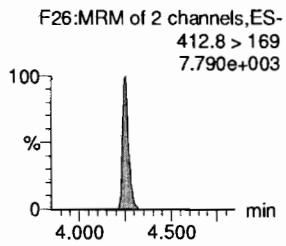

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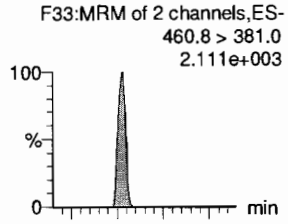

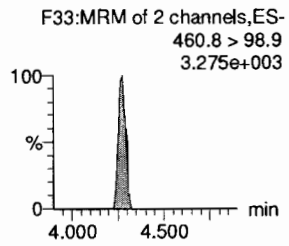

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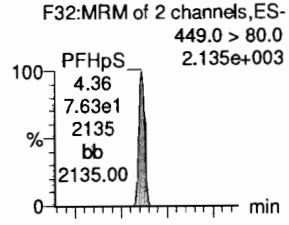
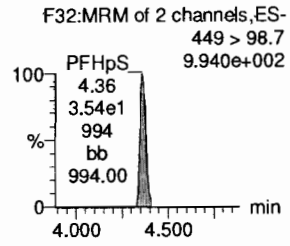
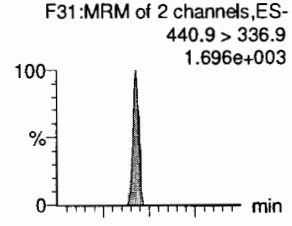
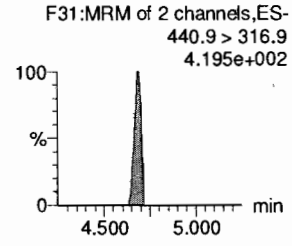




7:3 FTCA





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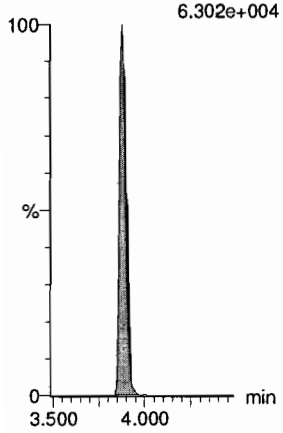
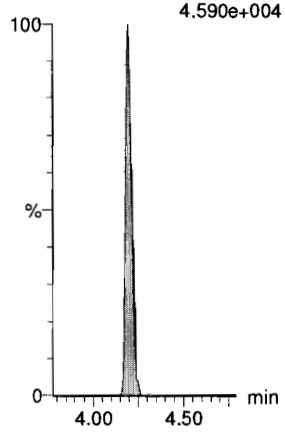


13C2-6:2 FTS



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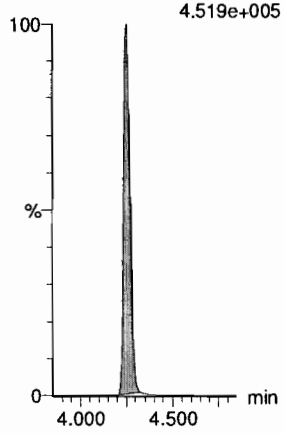

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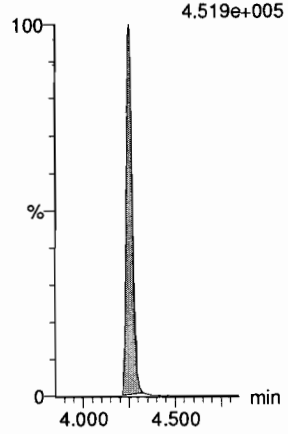
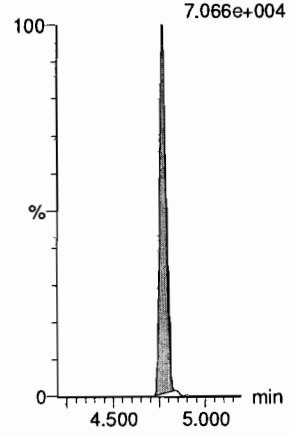


13C8-PFOS



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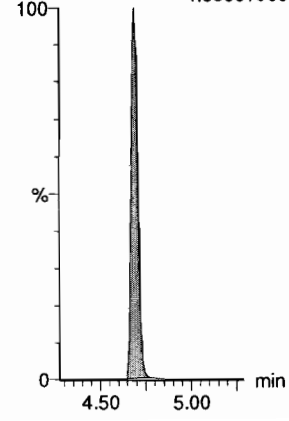

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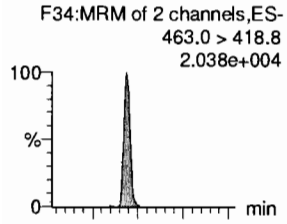

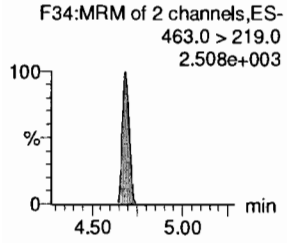

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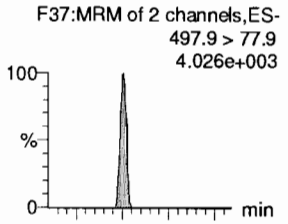
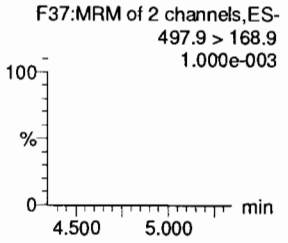
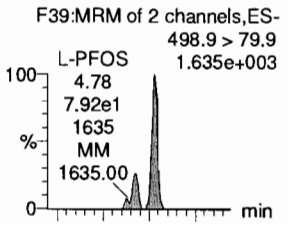
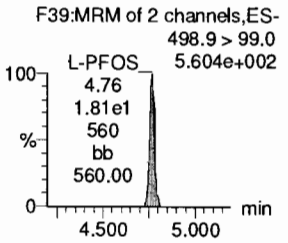


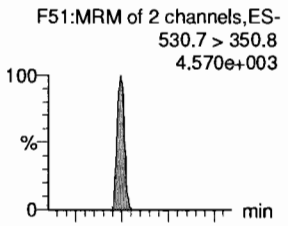


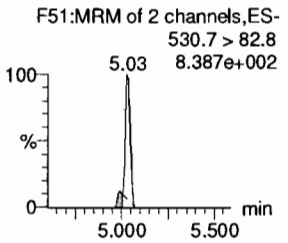
L-PFOS





9Cl-PF30NS





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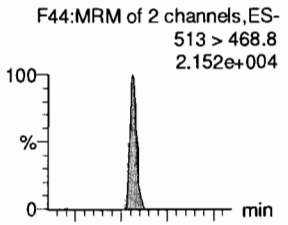

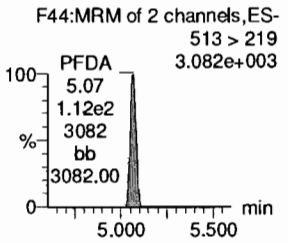

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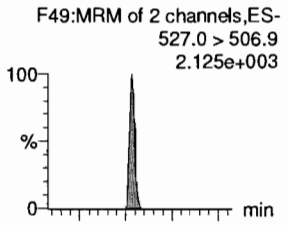

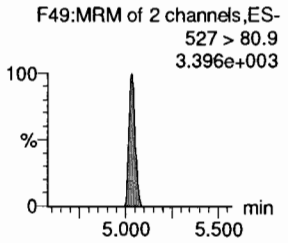

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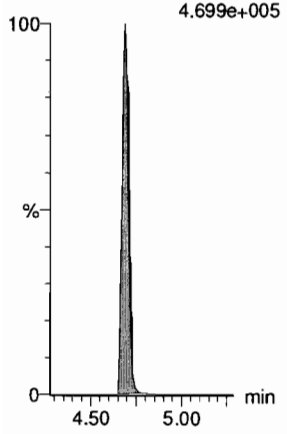
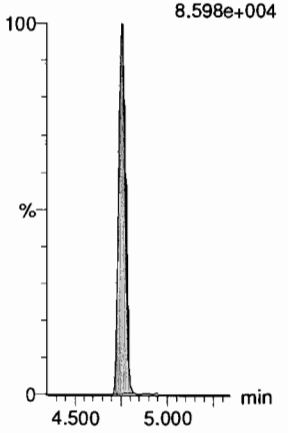


13C8-PFOSA



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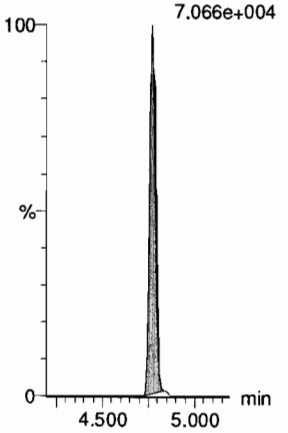

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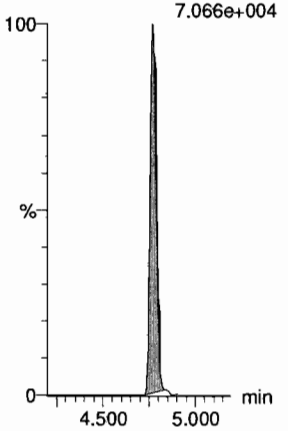

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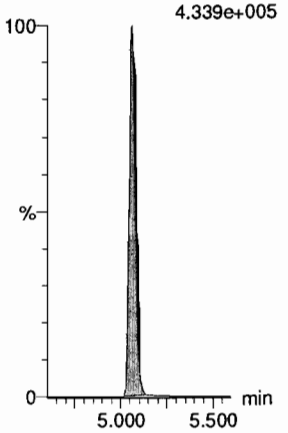

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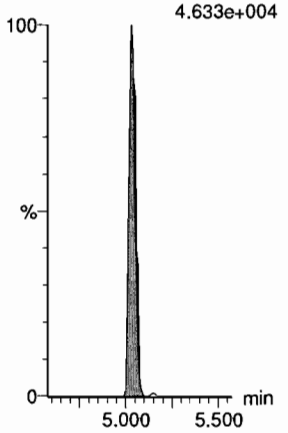

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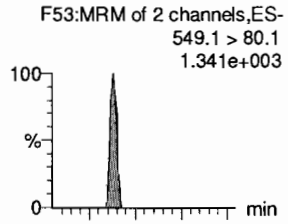
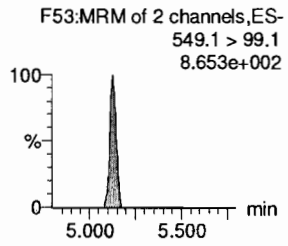
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

PFNS





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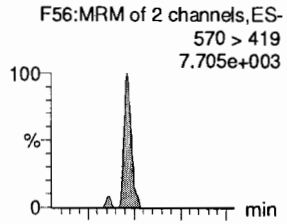

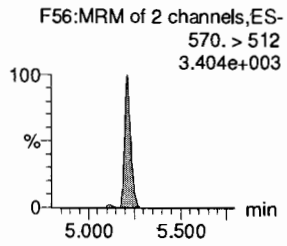

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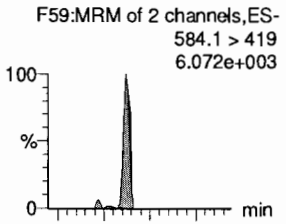

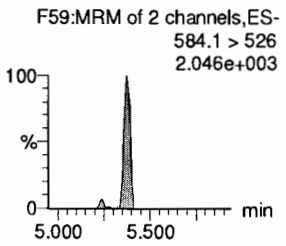

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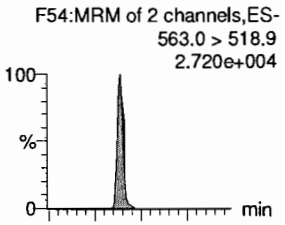

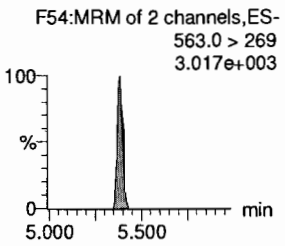

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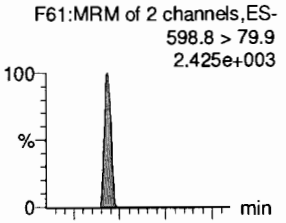

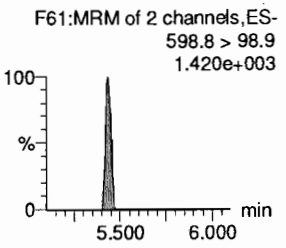

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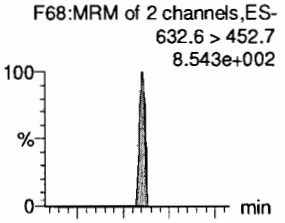

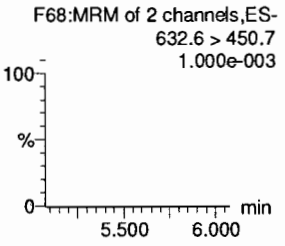

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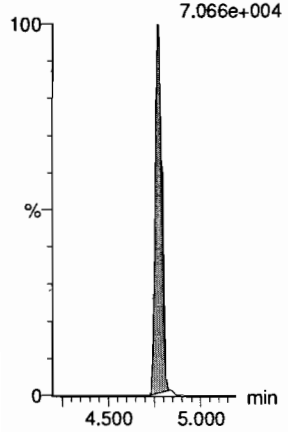

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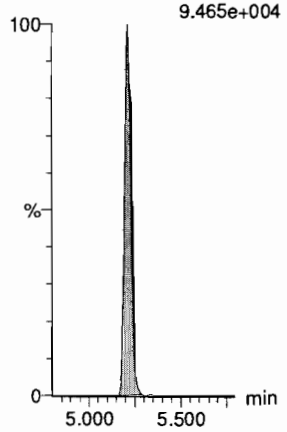

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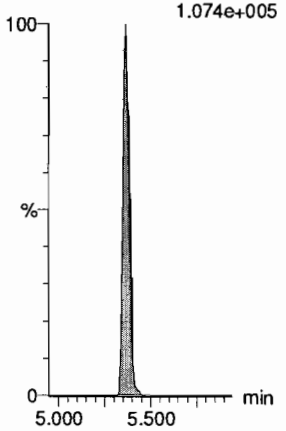

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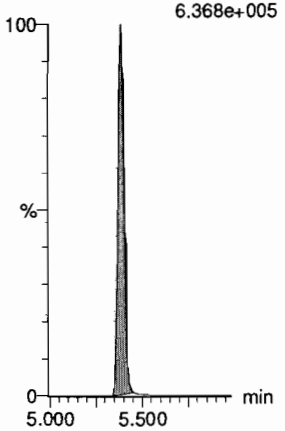
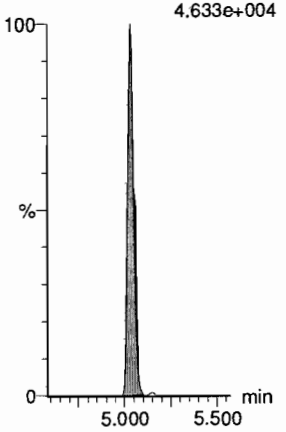


13C2-8:2 FTS



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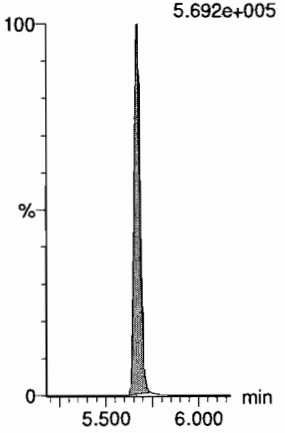

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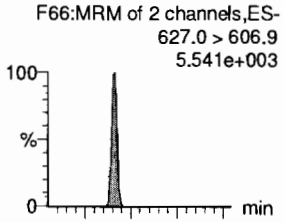
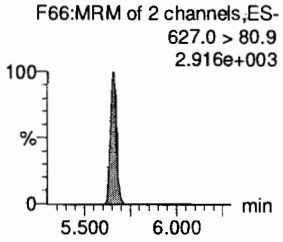
Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

10:2 FTS





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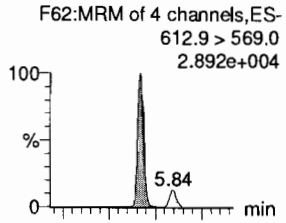

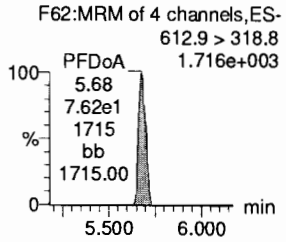

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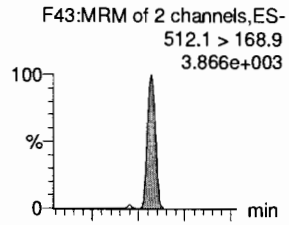

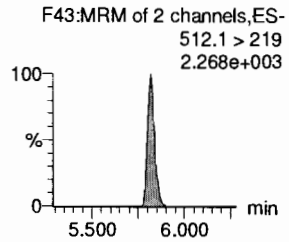

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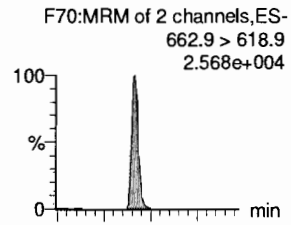

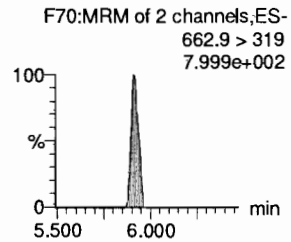

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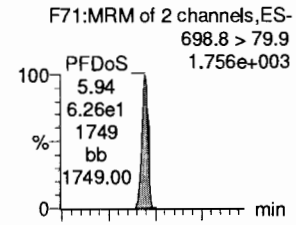

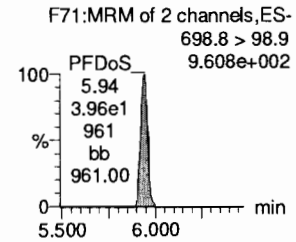

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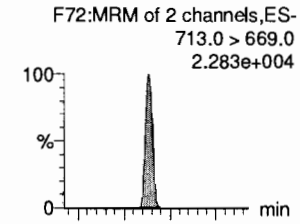

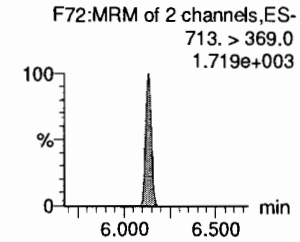

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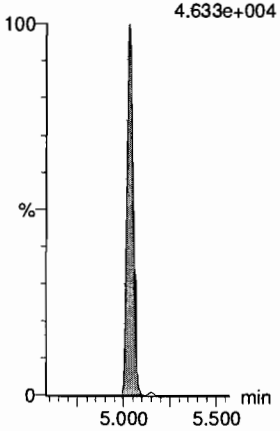

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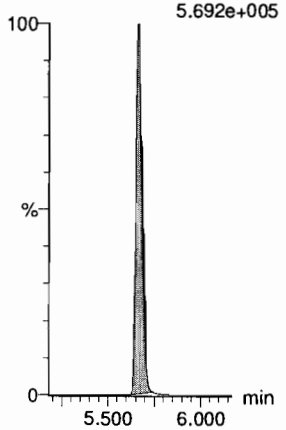

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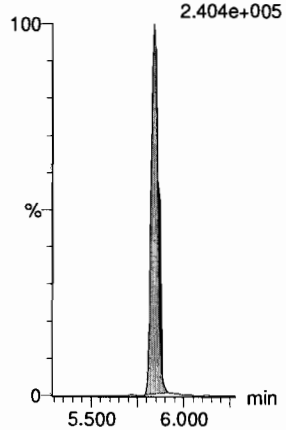

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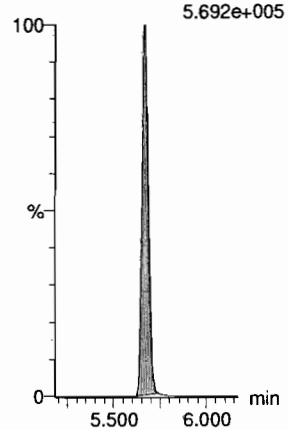

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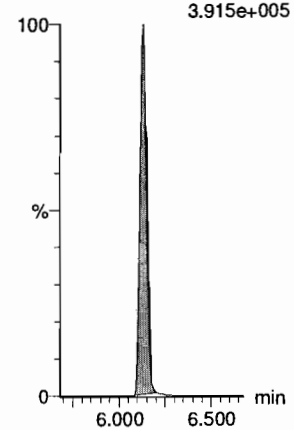

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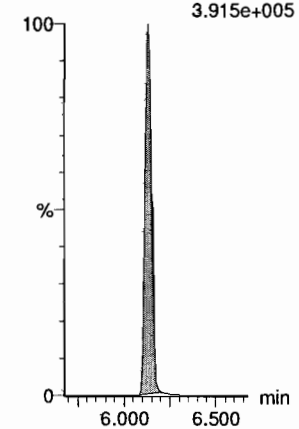

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Name: 190701M1_4, Date: 01-Jul-2019, Time: 16:13:44, ID: ST190701M1-2 PFC CS-1 19F2413, Description: PFC CS-1 19F2413

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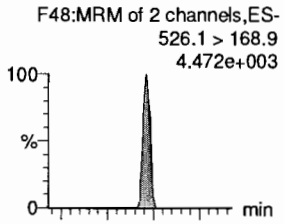

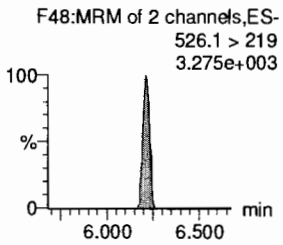

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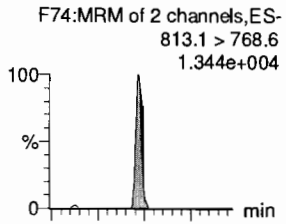

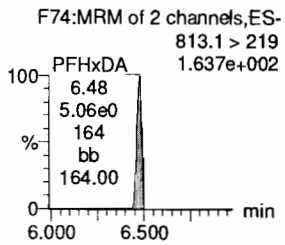

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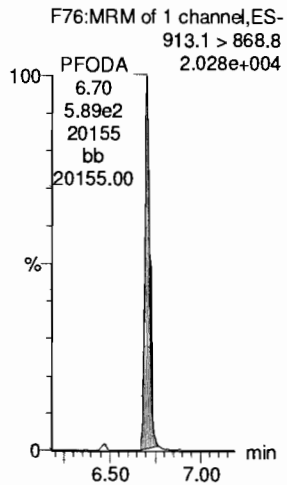

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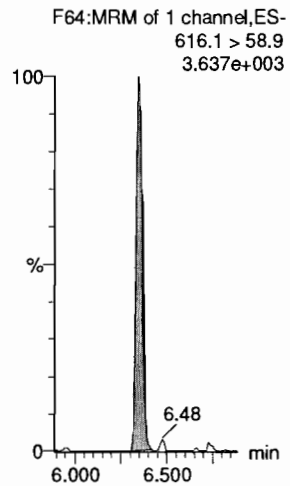

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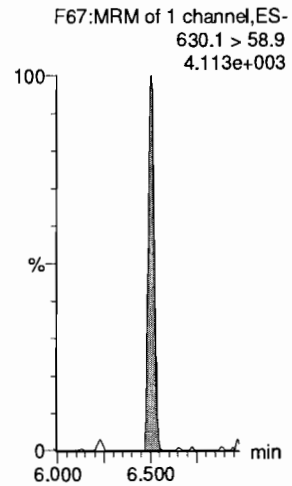

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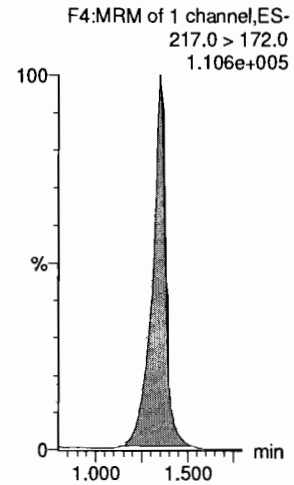
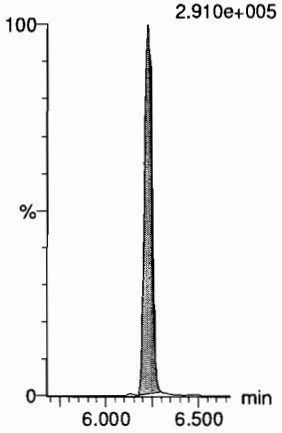


d5-N-ETFOSA



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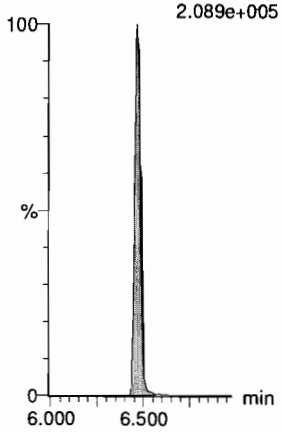

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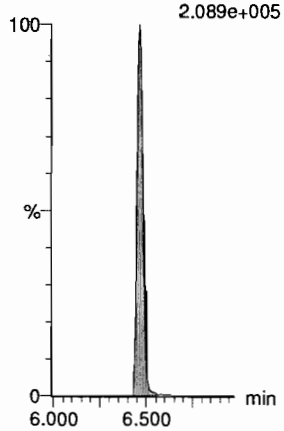

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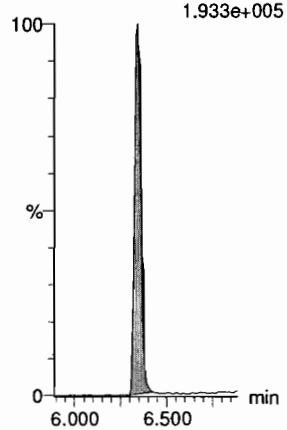

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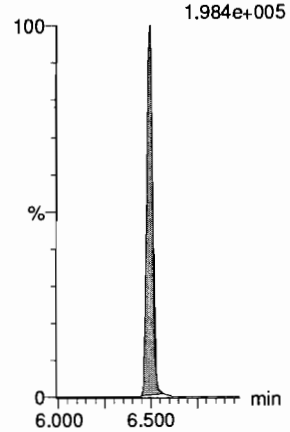

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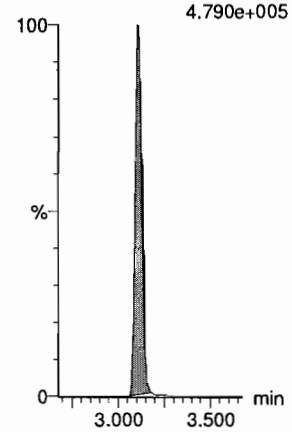

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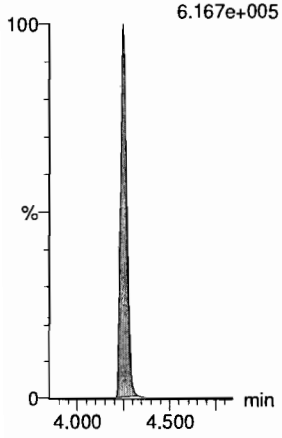

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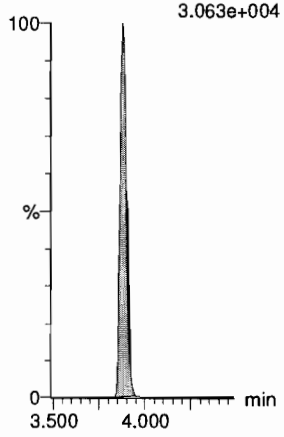

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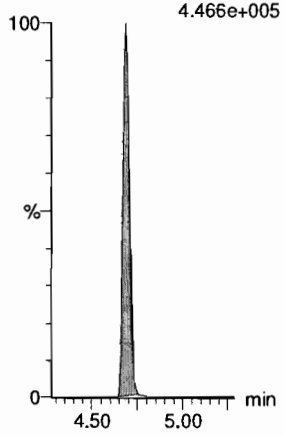
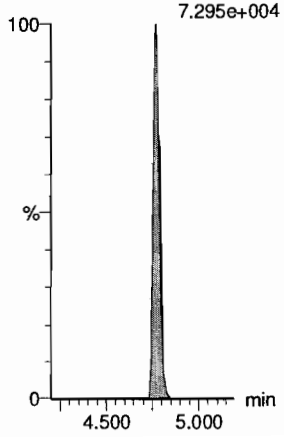
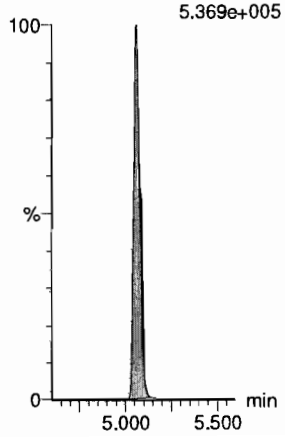


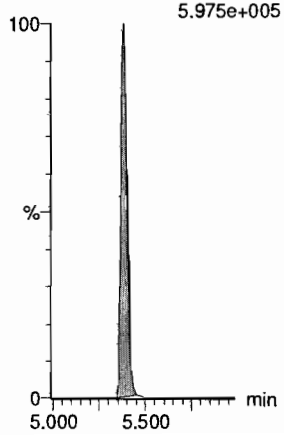
13C4-PFOS



13C6-PFDA



13C7-PFUdA

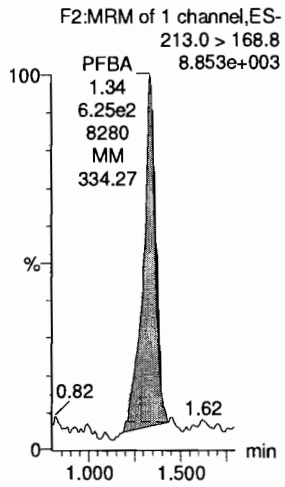


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

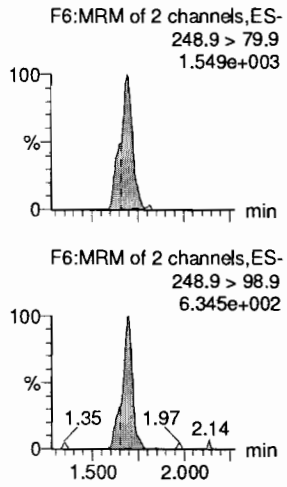
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

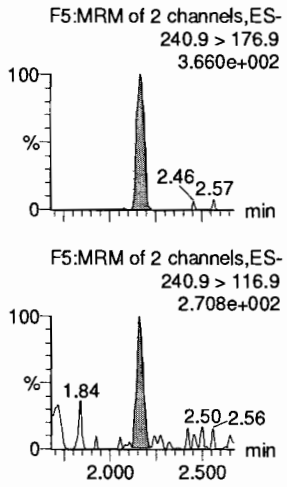
PFBA



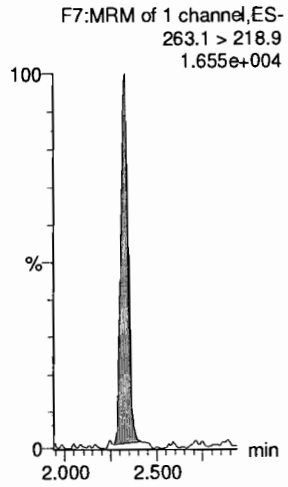
PFPrS



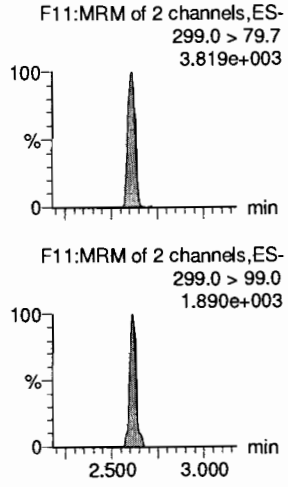
3:3 FTCA



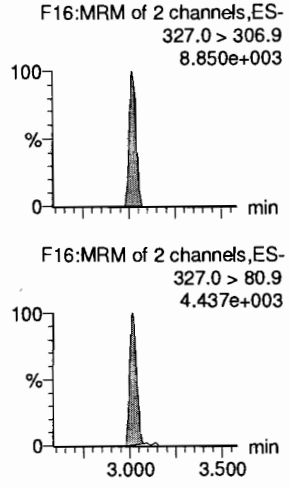
PFPeA



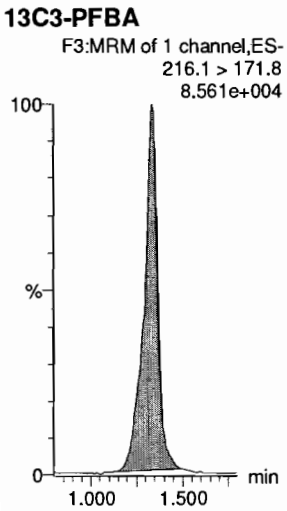
PFBS



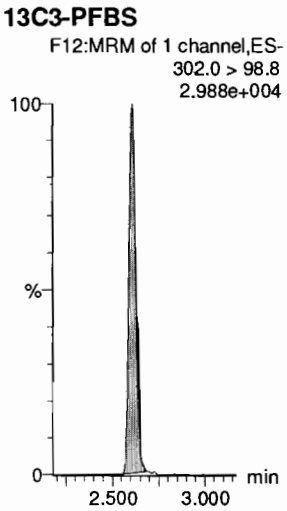
4:2 FTS



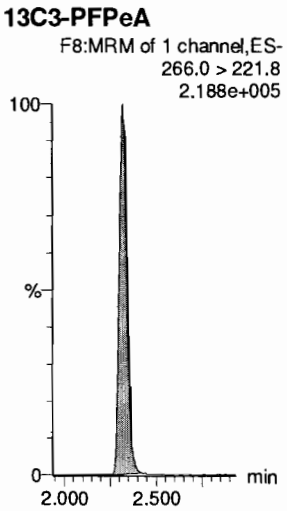
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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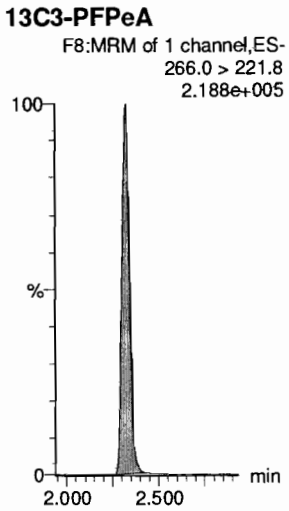

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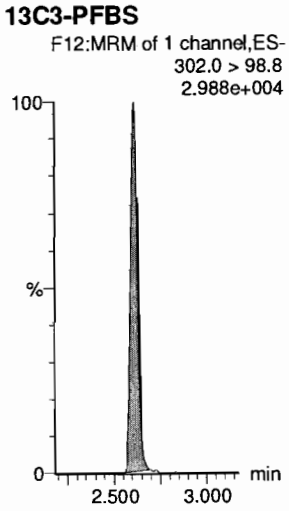
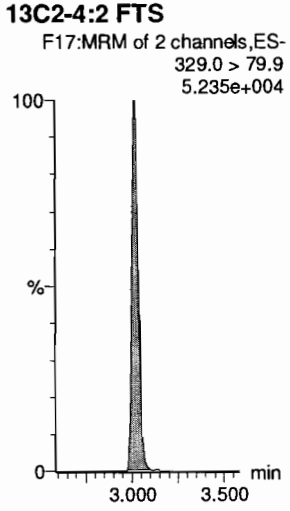


13C2-4:2 FTS

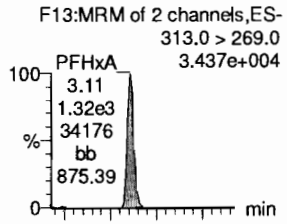


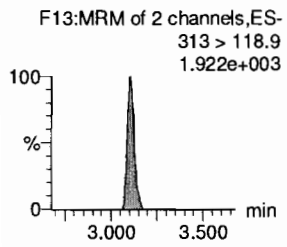
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

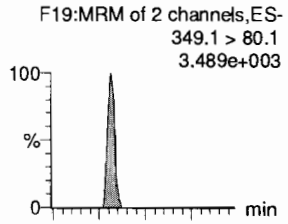
Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

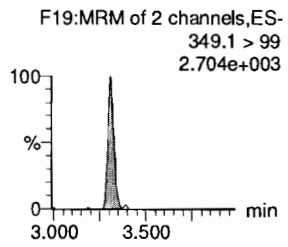
PFHxA



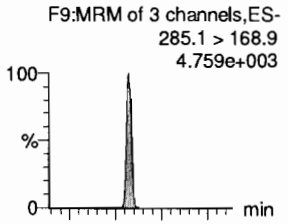


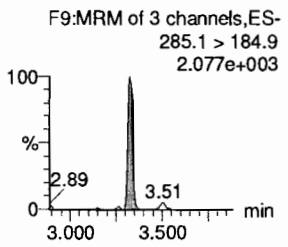
PFPeS



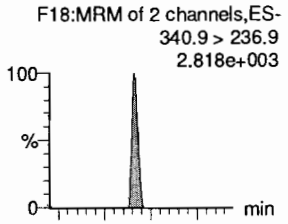


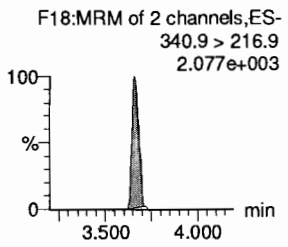
HFPO-DA



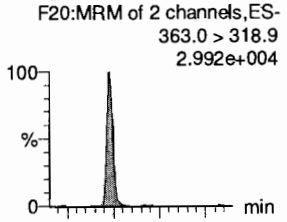


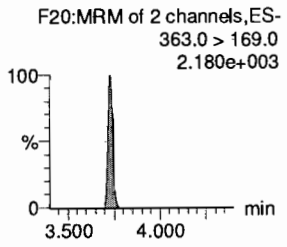
5:3 FTCA



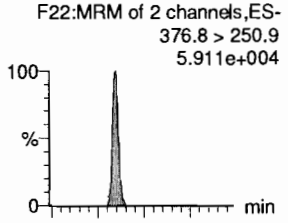


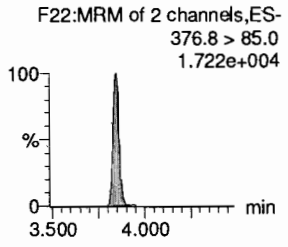
PFHpA



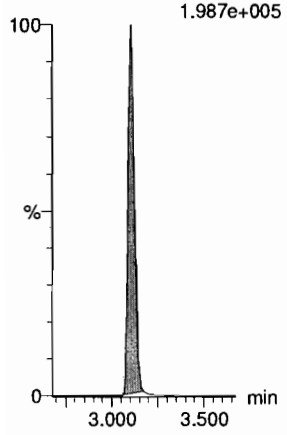


ADONA

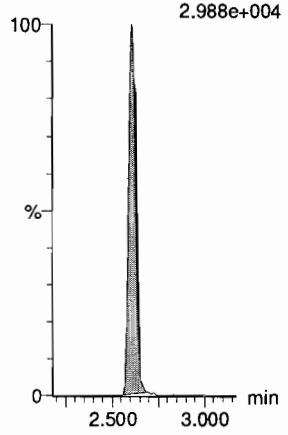




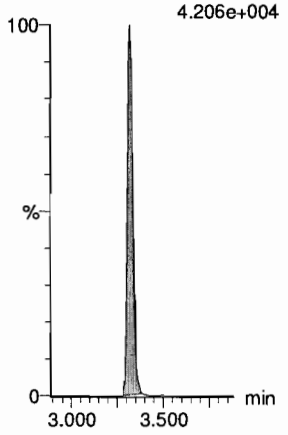
13C2-PFHxA



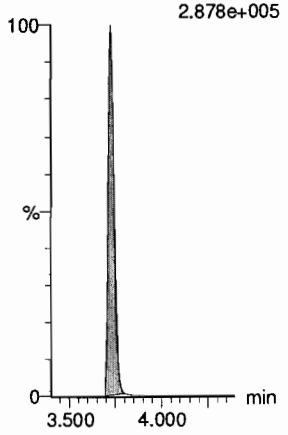
13C3-PFBS



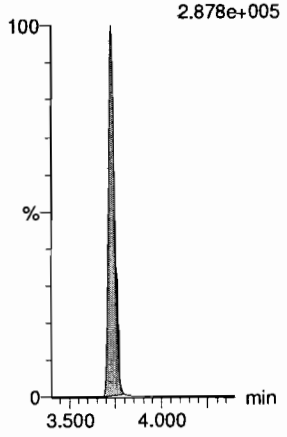
13C3-HFPO-DA



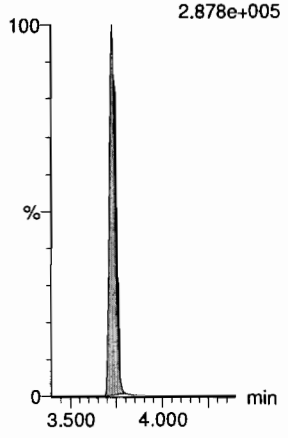
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA



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Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
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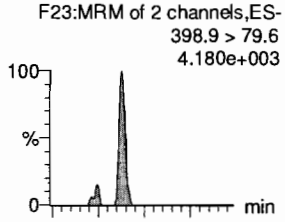
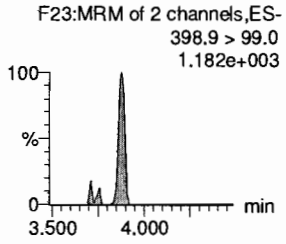
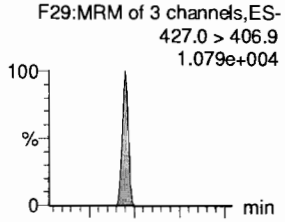
Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

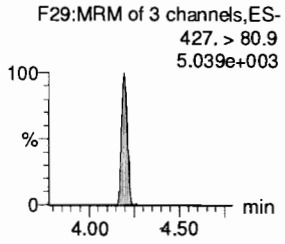
L-PFHxS



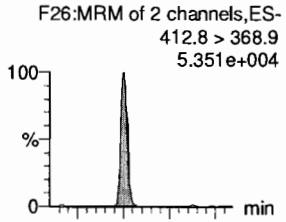


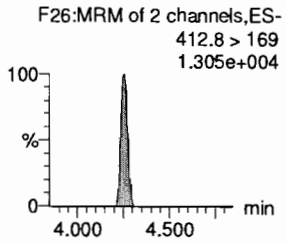
6:2 FTS



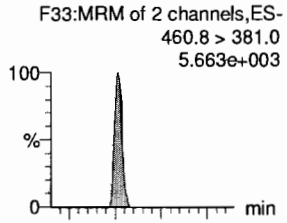


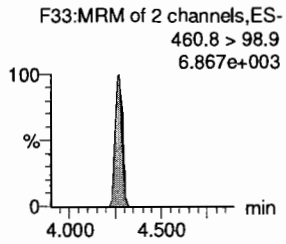
L-PFOA



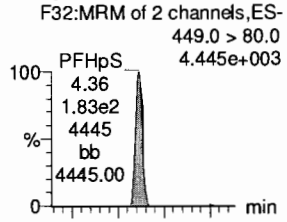


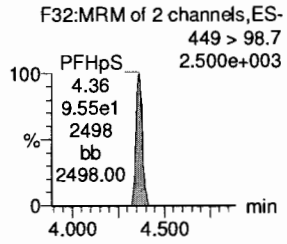
PFEChS



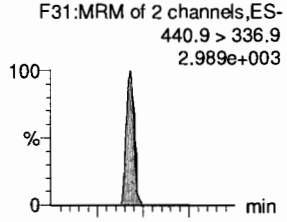


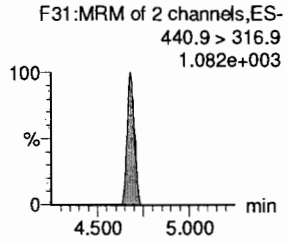
PFHpS



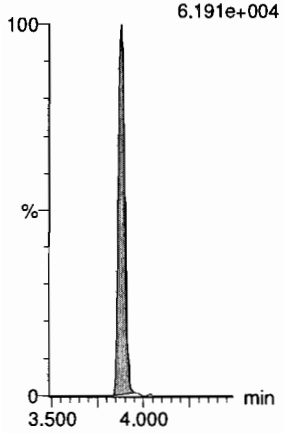


7:3 FTCA

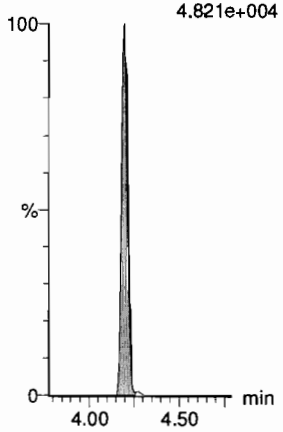




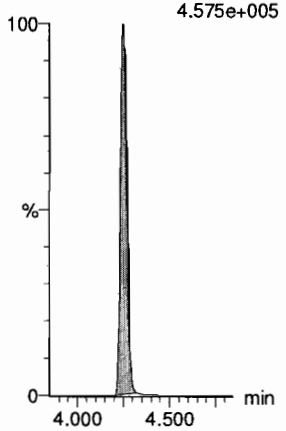
13C3-PFHxS



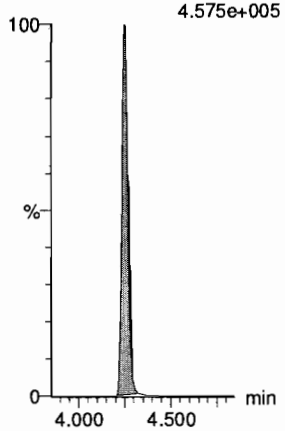
13C2-6:2 FTS



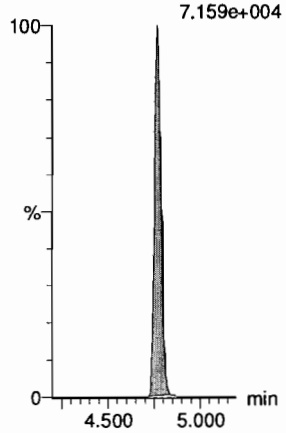
13C2-PFOA



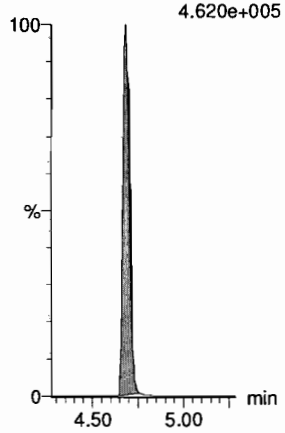
13C2-PFOA



13C8-PFOS



13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
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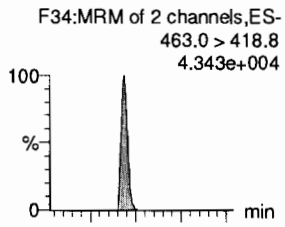
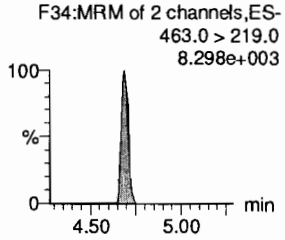
Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

PFNA





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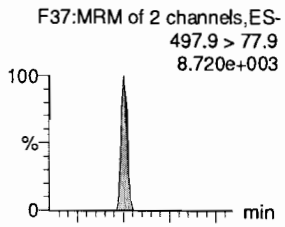
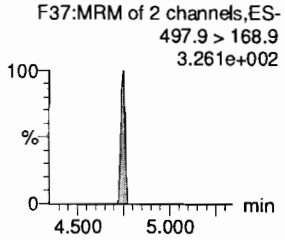
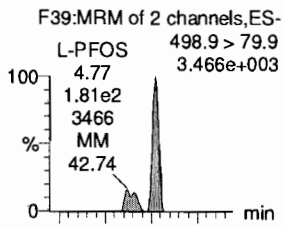
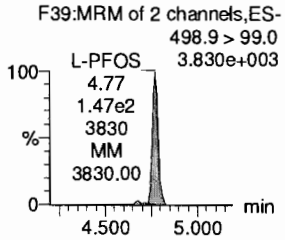


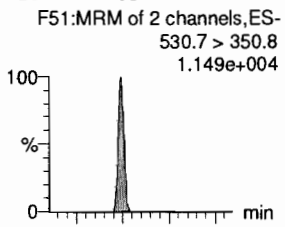


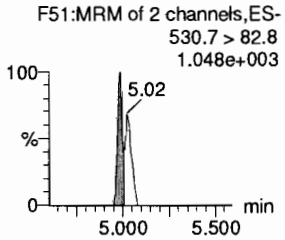
L-PFOS





9Cl-PF30NS





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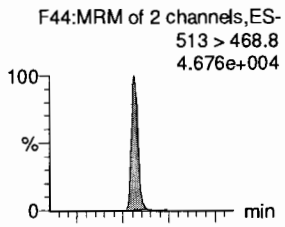
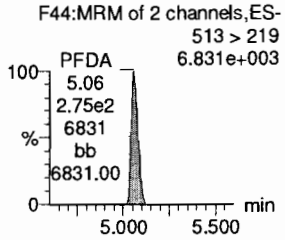
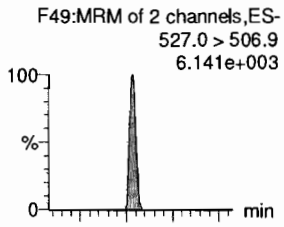
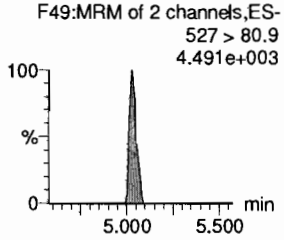


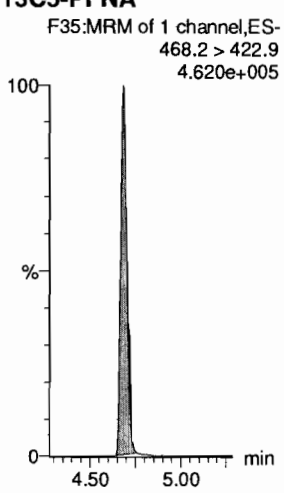


8:2 FTS

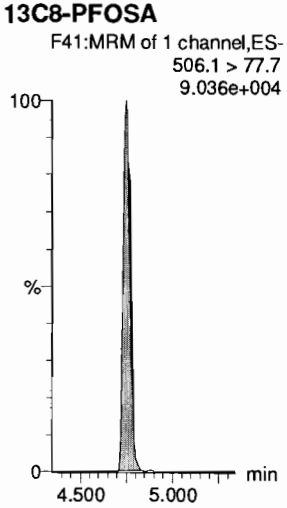




13C5-PFNA



13C8-PFOSA



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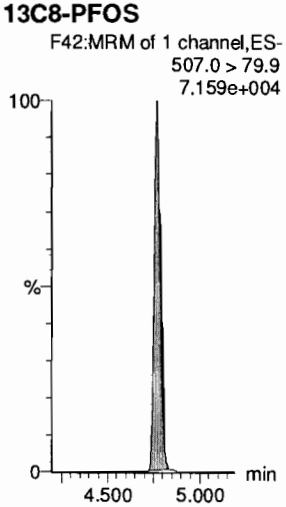

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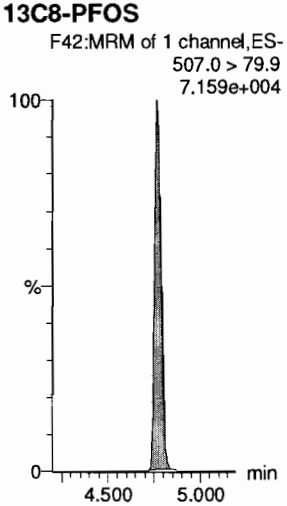

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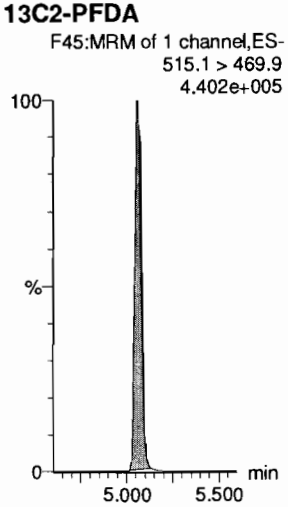

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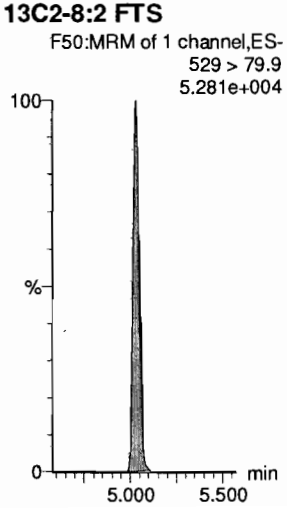

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Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

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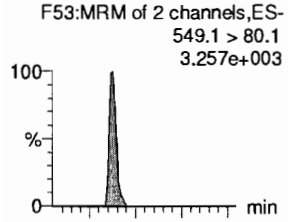

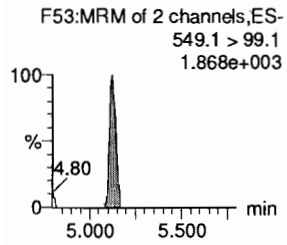

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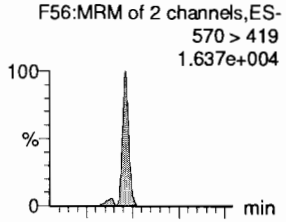

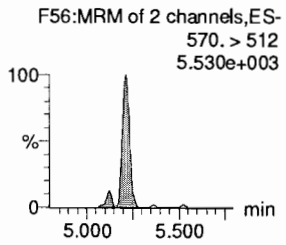

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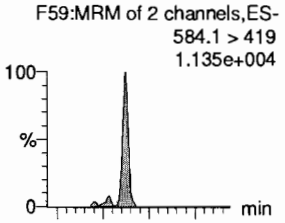

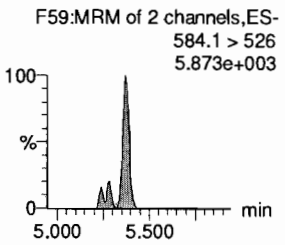

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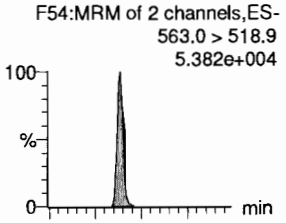

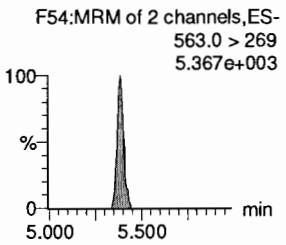

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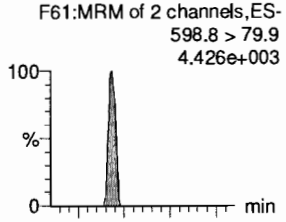

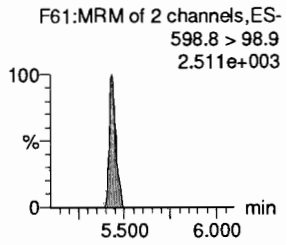

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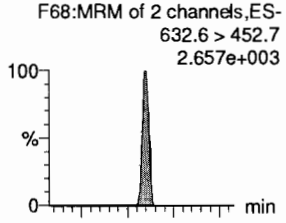
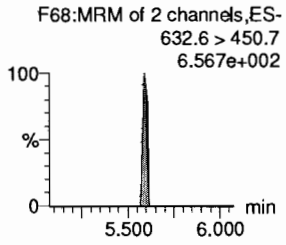
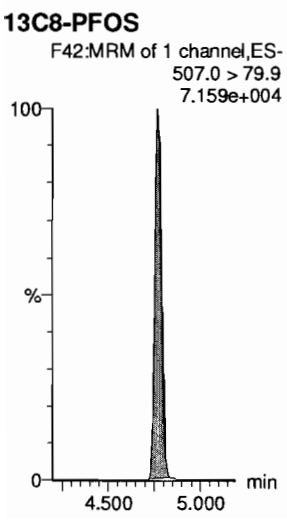




13C8-PFOS



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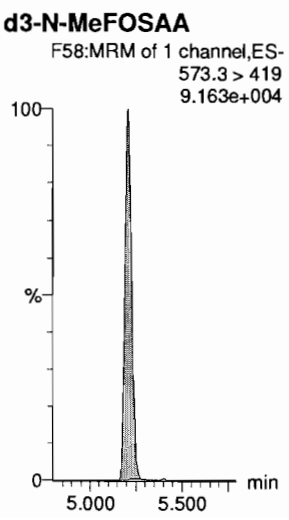
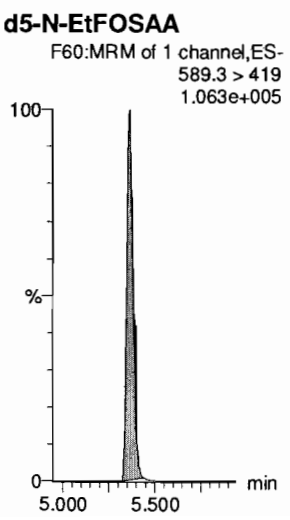
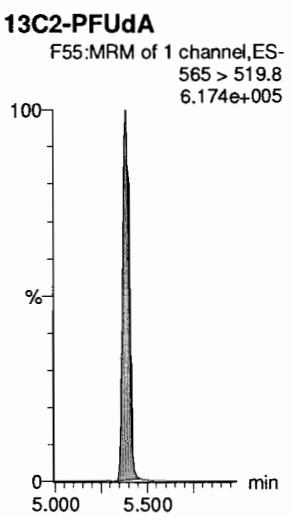


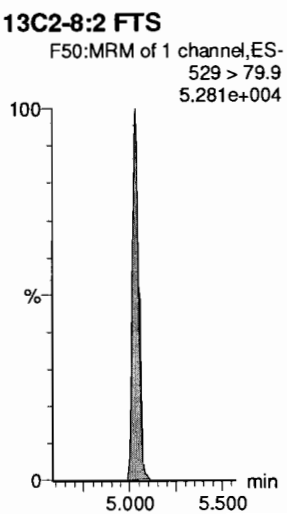
d5-N-EtFOSAA



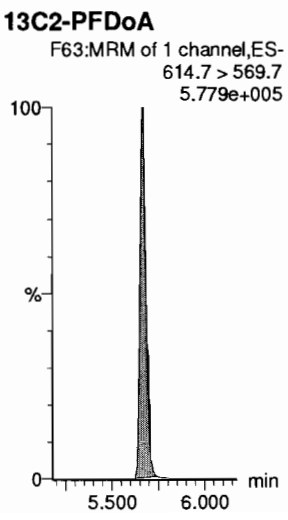
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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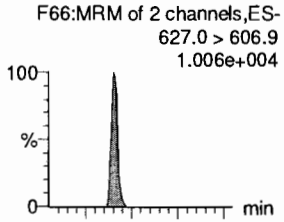
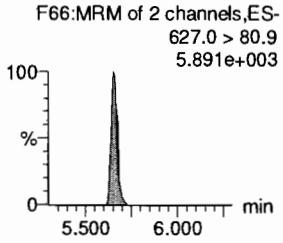
Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

10:2 FTS





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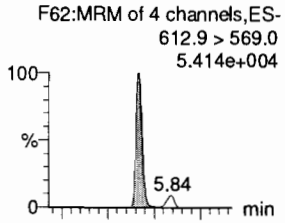
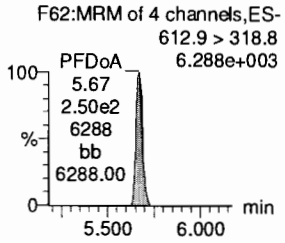
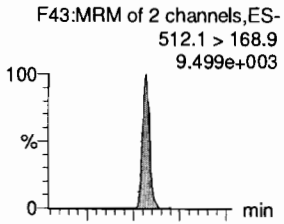
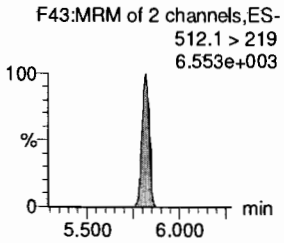




N-MeFOSA





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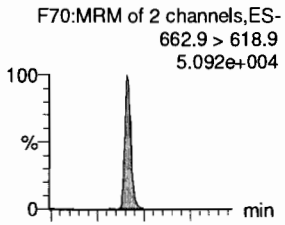

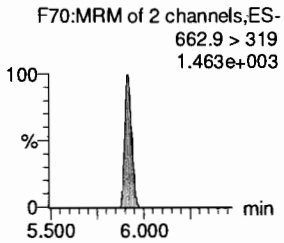

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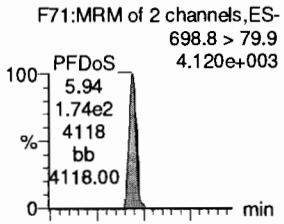

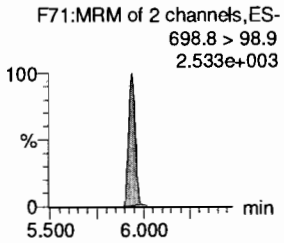

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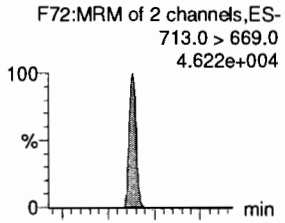
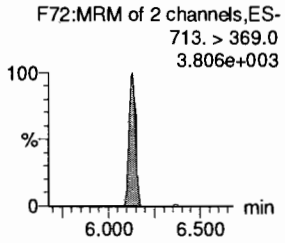
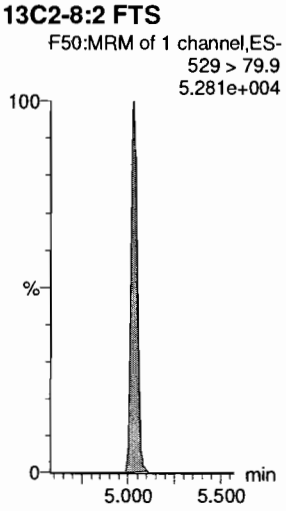




13C2-8:2 FTS



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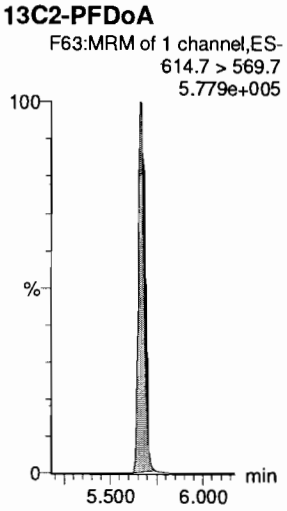
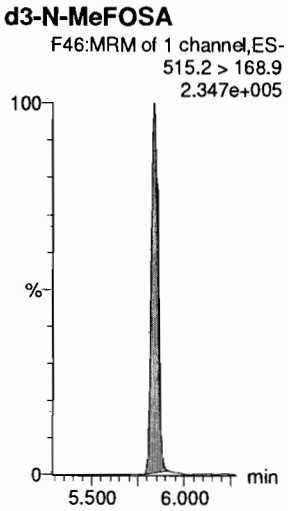


d3-N-MeFOSA



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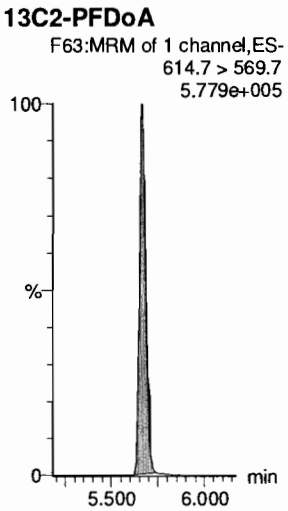

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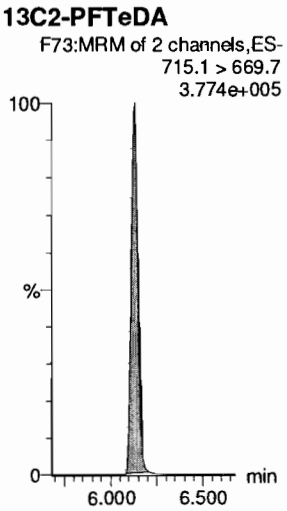

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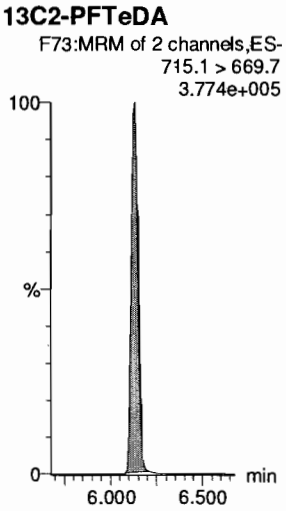

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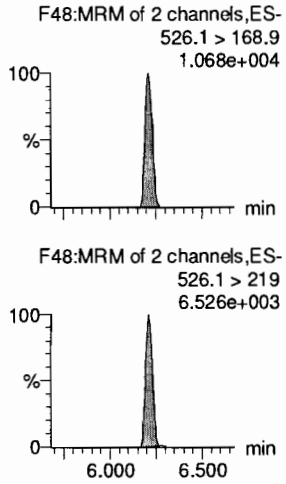
Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

N-EtFOSA



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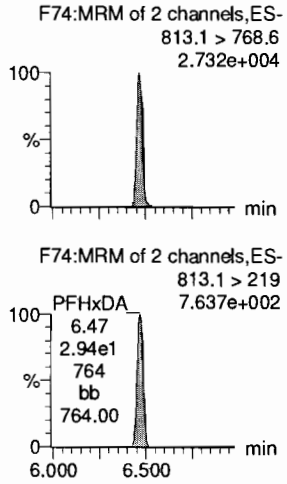

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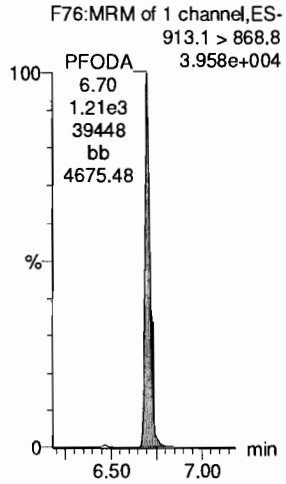
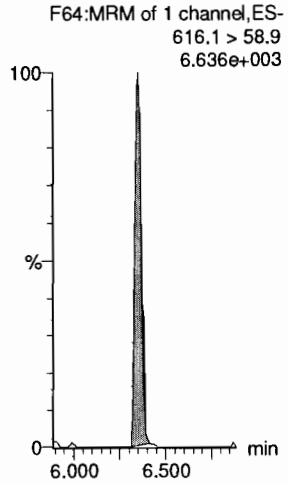


N-MeFOSE



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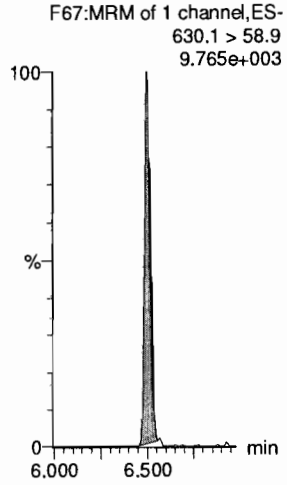
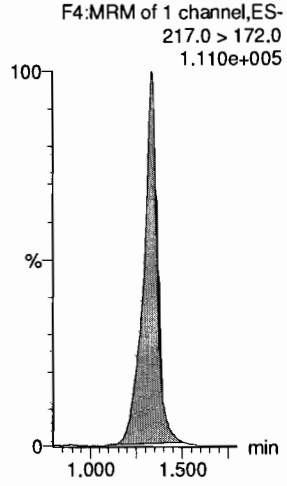
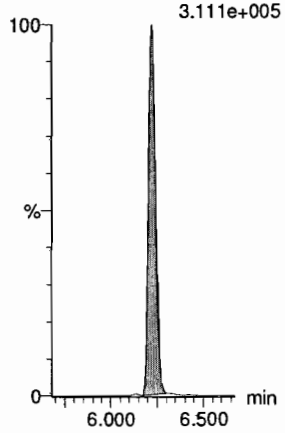


13C4-PFBA



d5-N-ETFOSA



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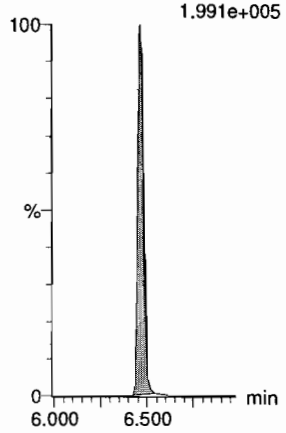

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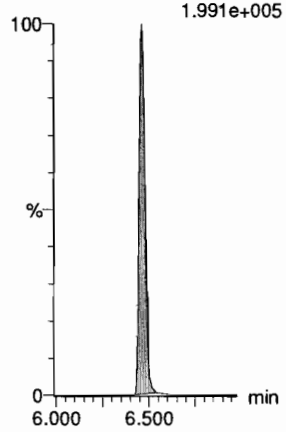
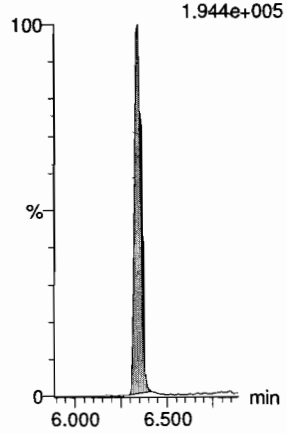


d7-N-MeFOSE



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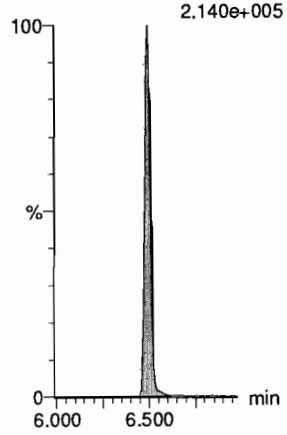
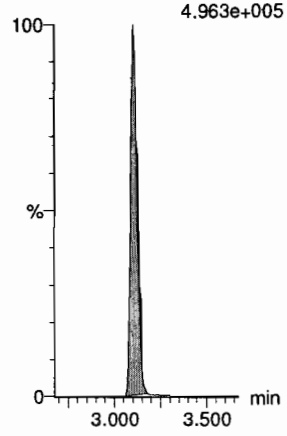


13C5-PFHxA

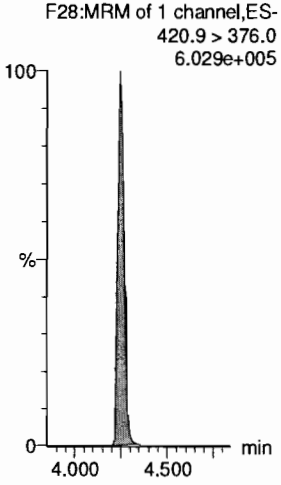


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

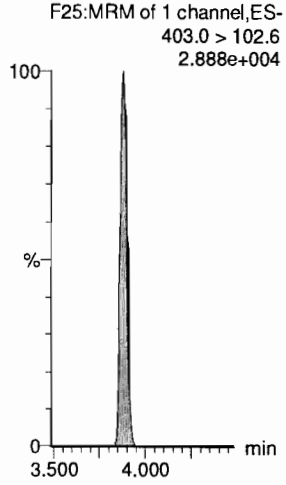
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_5, Date: 01-Jul-2019, Time: 16:24:22, ID: ST190701M1-3 PFC CS0 19F2414, Description: PFC CS0 19F2414

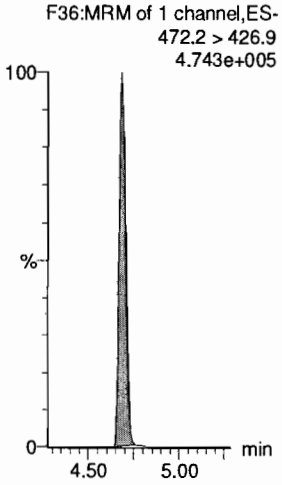
13C8-PFOA



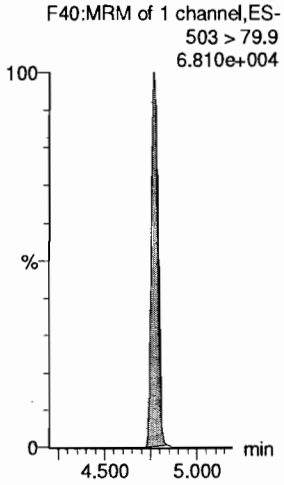
18O2-PFHxS



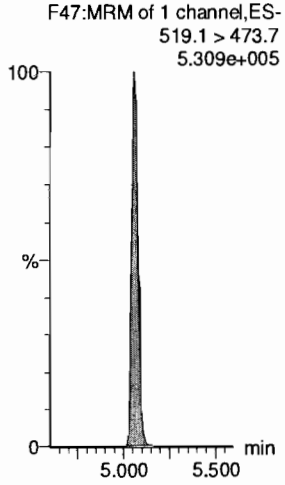
13C9-PFNA



13C4-PFOS



13C6-PFDA



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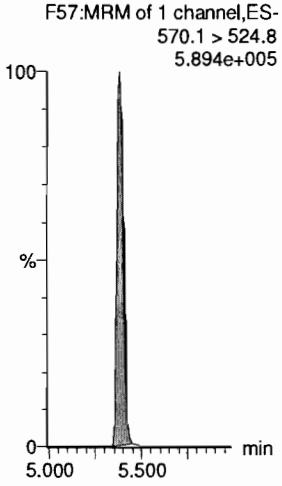
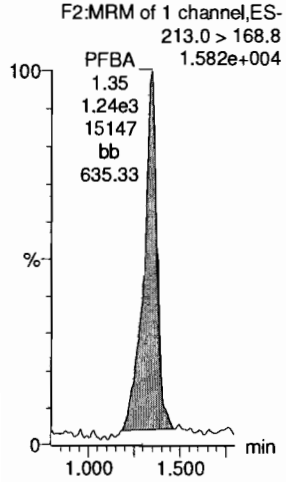


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

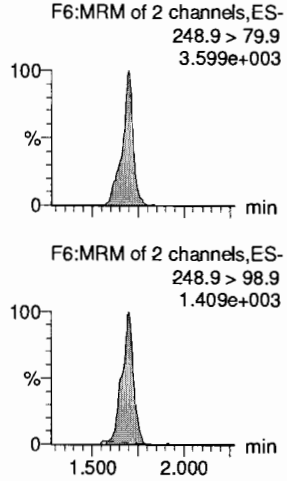
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

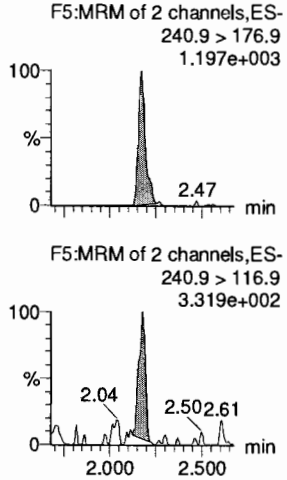
PFBA



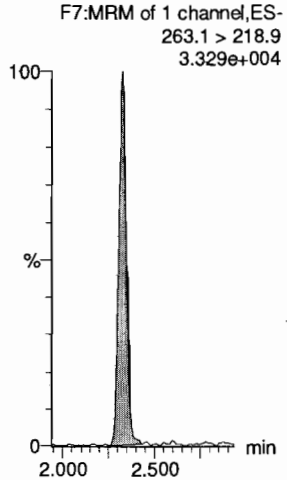
PFPrS



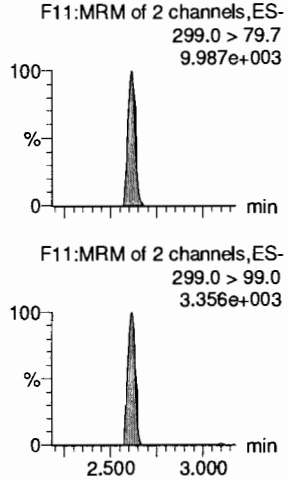
3:3 FTCA



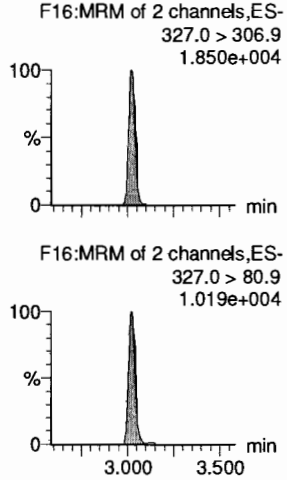
PFPeA



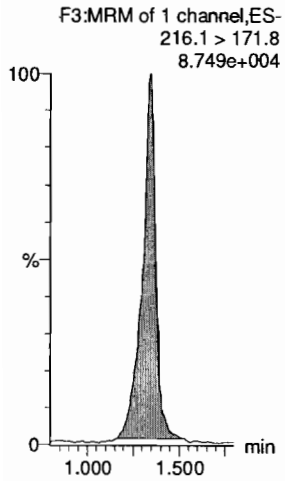
PFBS



4:2 FTS



13C3-PFBA



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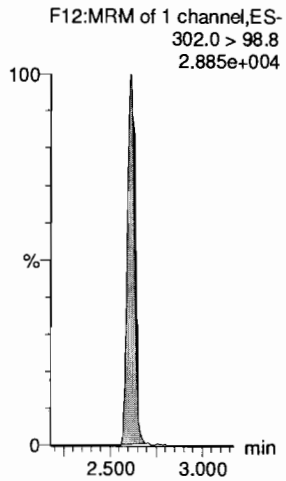

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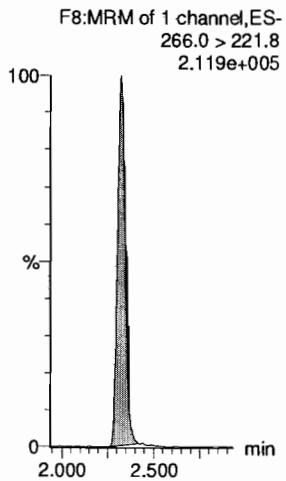

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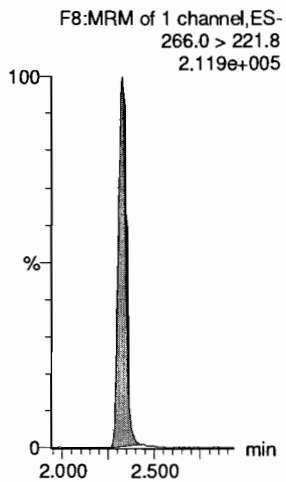

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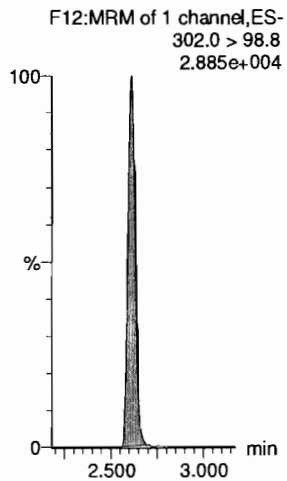
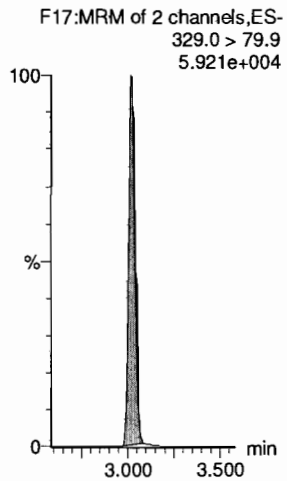


13C2-4:2 FTS

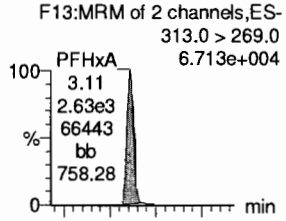


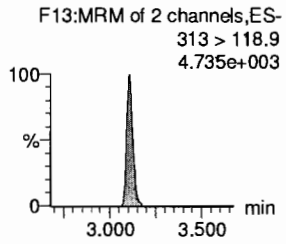
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

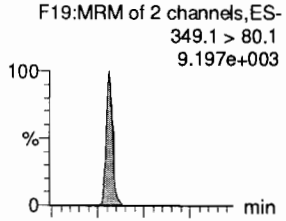
Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

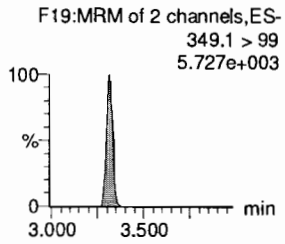
PFHxA



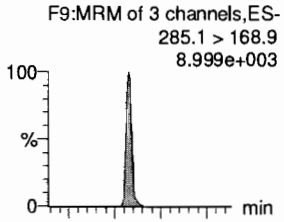


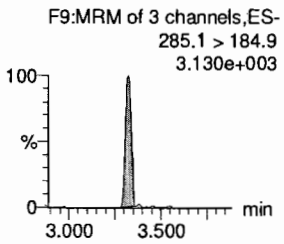
PFPeS



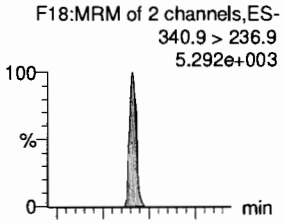


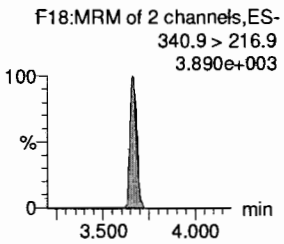
HFPO-DA



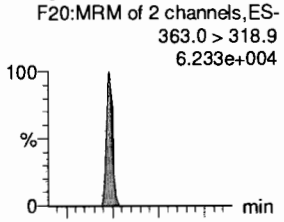


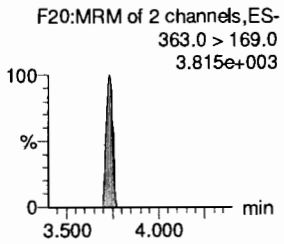
5:3 FTCA



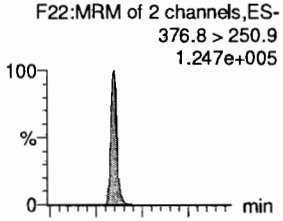


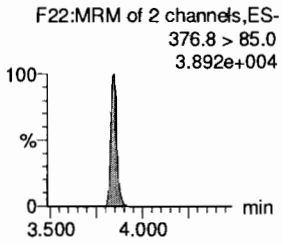
PFHpA



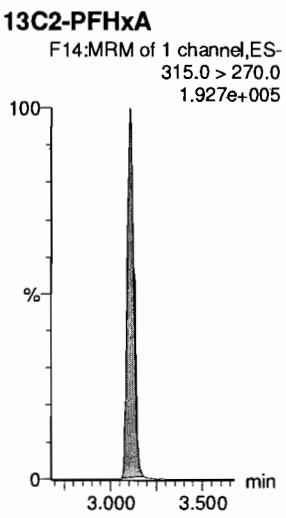


ADONA

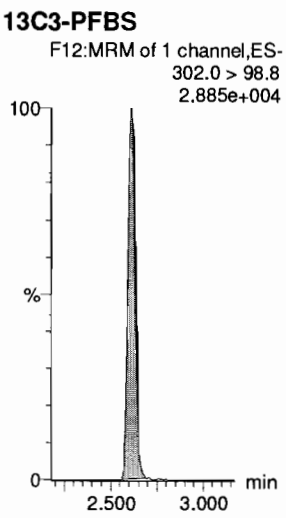




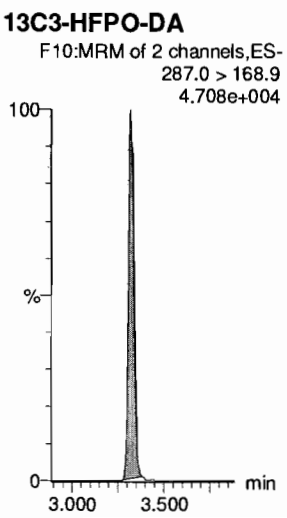
13C2-PFHxA



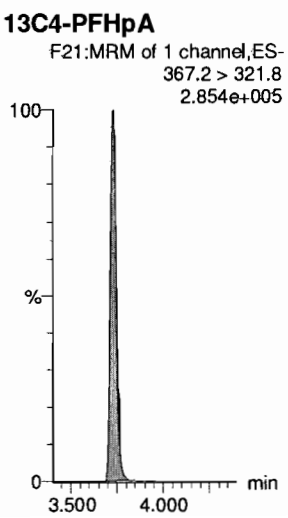
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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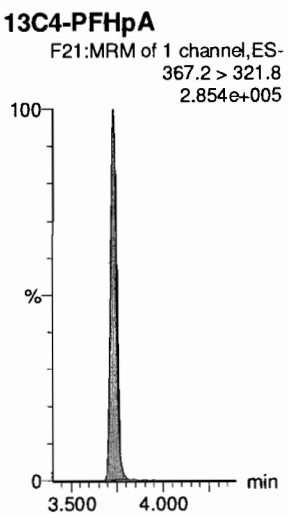
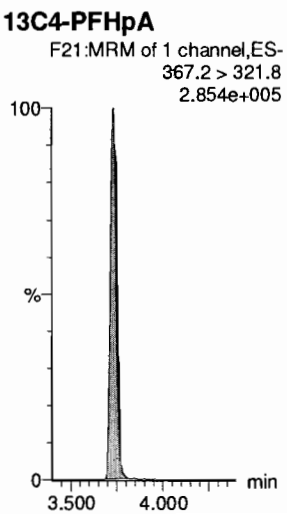


13C4-PFHpA

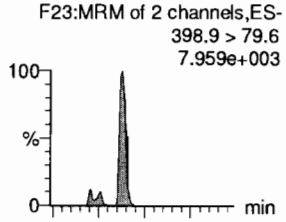


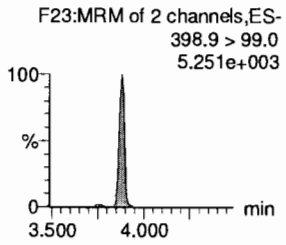
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

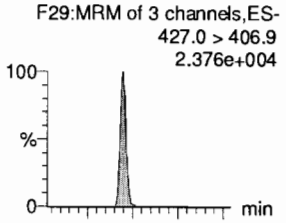
Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

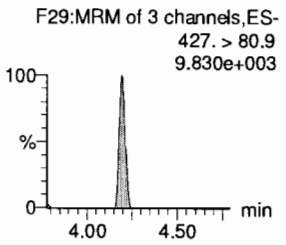
L-PFHxS



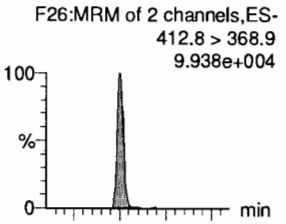


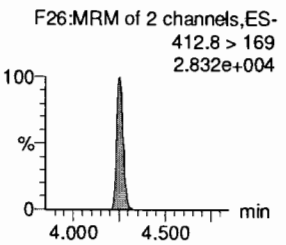
6:2 FTS



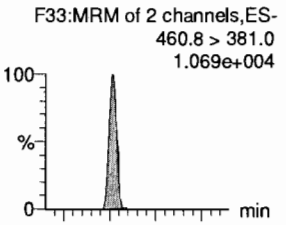


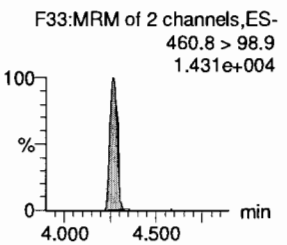
L-PFOA



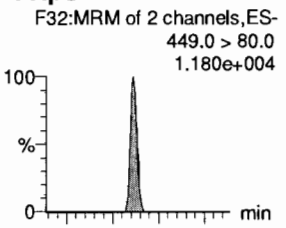


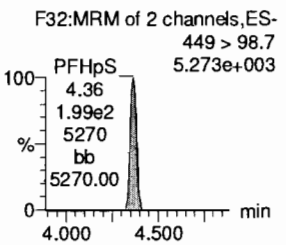
PFEChS



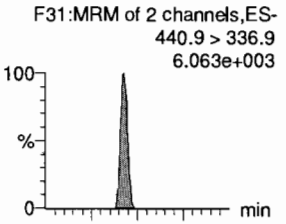


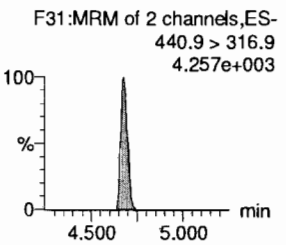
PFHpS



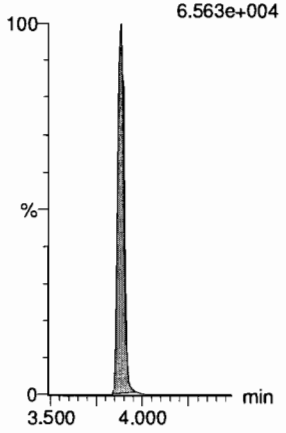


7:3 FTCA

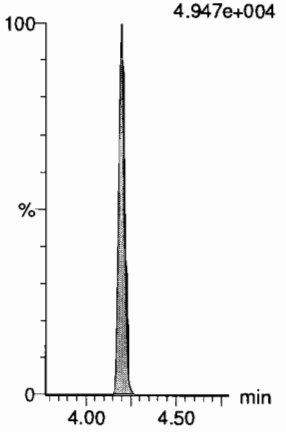




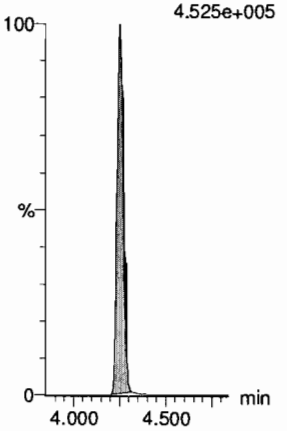
13C3-PFHxS



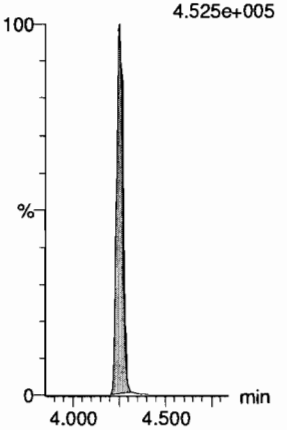
13C2-6:2 FTS



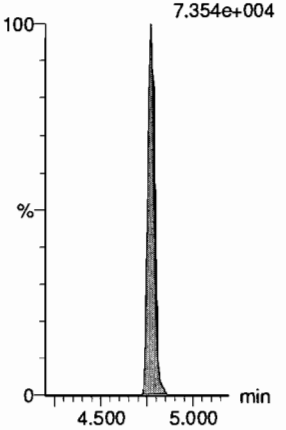
13C2-PFOA



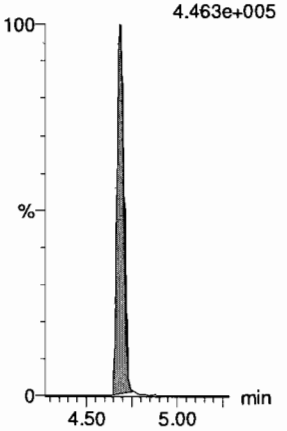
13C2-PFOA



13C8-PFOS



13C5-PFNA

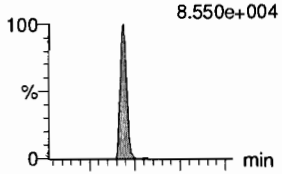


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

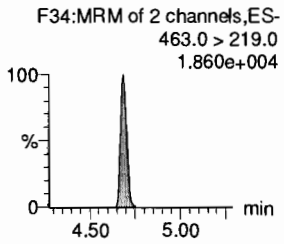
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

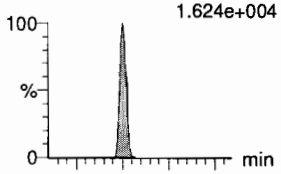
PFNA
F34:MRM of 2 channels,ES-
463.0 > 418.8
8.550e+004



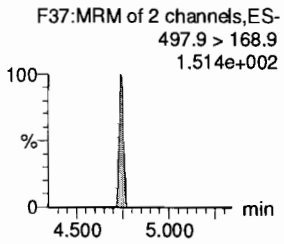
F34:MRM of 2 channels,ES-
463.0 > 219.0
1.860e+004



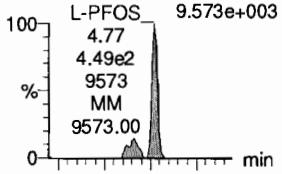
PFOSA
F37:MRM of 2 channels,ES-
497.9 > 77.9
1.624e+004



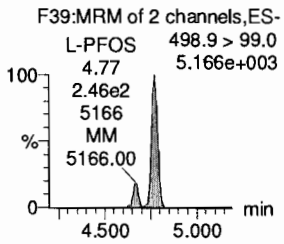
F37:MRM of 2 channels,ES-
497.9 > 168.9
1.514e+002



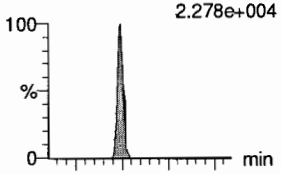
L-PFOS
F39:MRM of 2 channels,ES-
498.9 > 79.9
9.573e+003



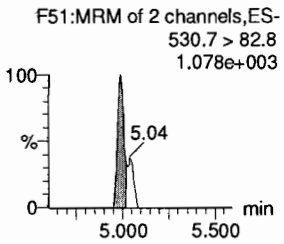
F39:MRM of 2 channels,ES-
498.9 > 99.0
5.166e+003



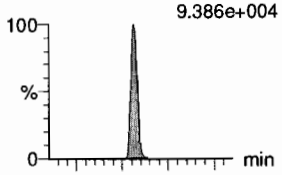
9Cl-PF30NS
F51:MRM of 2 channels,ES-
530.7 > 350.8
2.278e+004



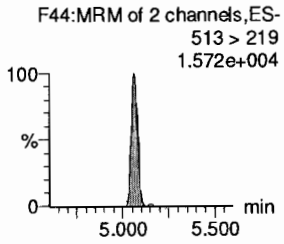
F51:MRM of 2 channels,ES-
530.7 > 82.8
1.078e+003



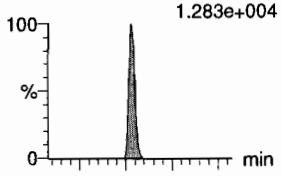
PFDA
F44:MRM of 2 channels,ES-
513 > 468.8
9.386e+004



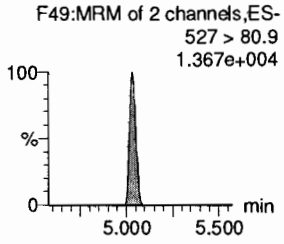
F44:MRM of 2 channels,ES-
513 > 219
1.572e+004



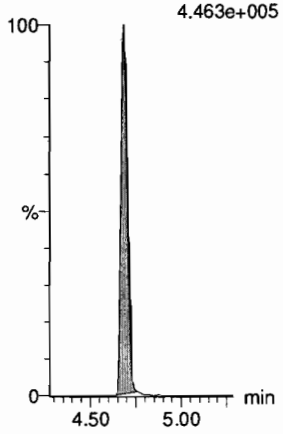
8:2 FTS
F49:MRM of 2 channels,ES-
527.0 > 506.9
1.283e+004



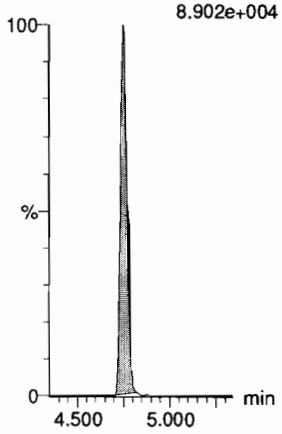
F49:MRM of 2 channels,ES-
527 > 80.9
1.367e+004



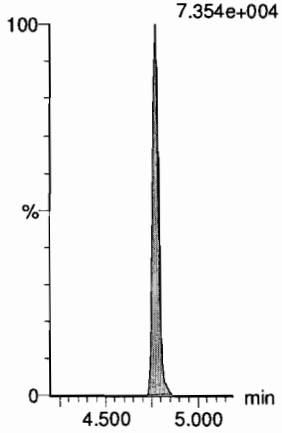
13C5-PFNA
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.463e+005



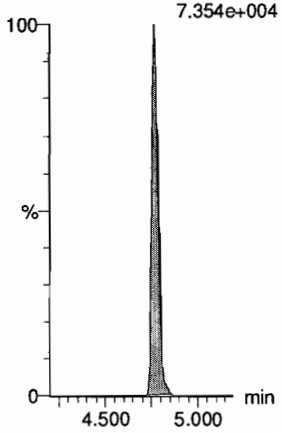
13C8-PFOSA
F41:MRM of 1 channel,ES-
506.1 > 77.7
8.902e+004



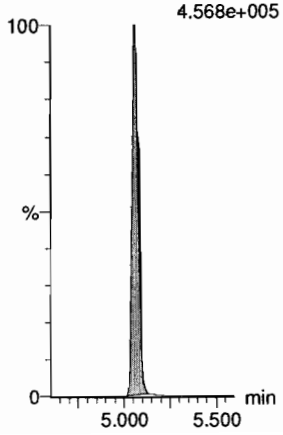
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.354e+004



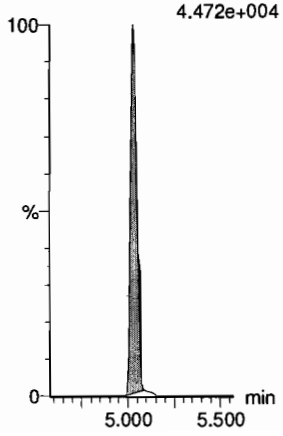
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.354e+004



13C2-PFDA
F45:MRM of 1 channel,ES-
515.1 > 469.9
4.568e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.472e+004



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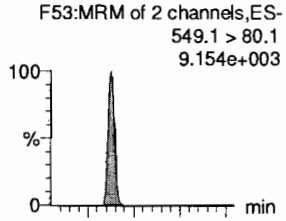
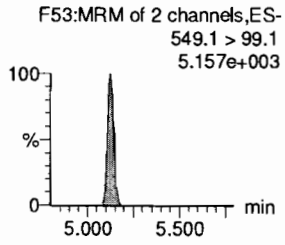
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

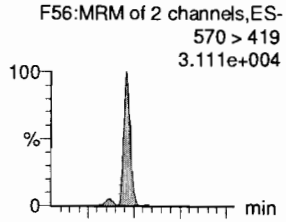
Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

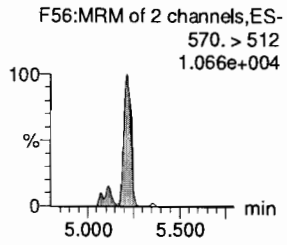
PFNS



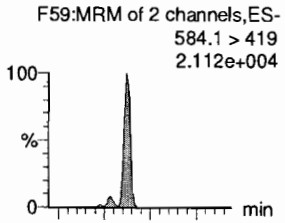


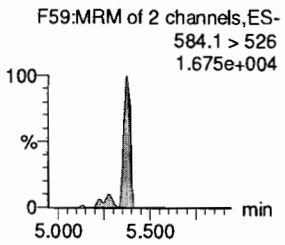
L-MeFOSAA



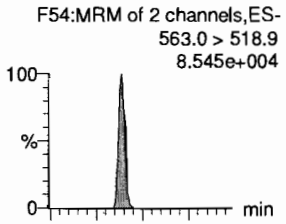


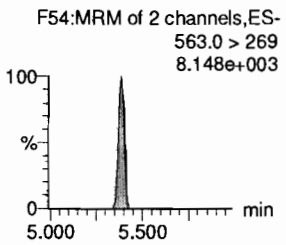
L-EtFOSAA



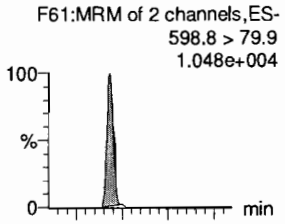


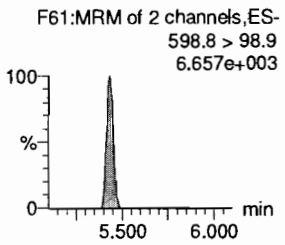
PFUdA



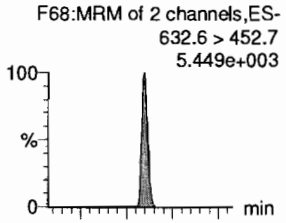


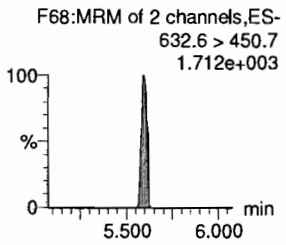
PFDS



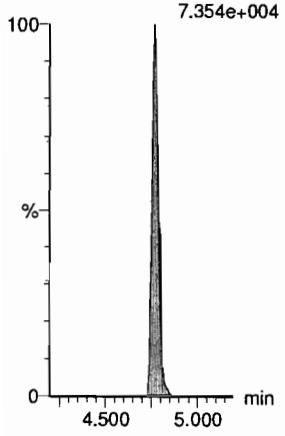


11Cl-PF30UdS

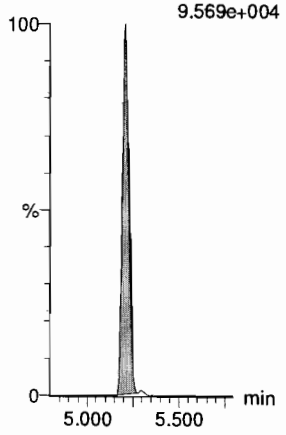




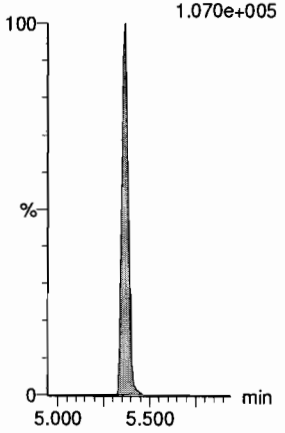
13C8-PFOS



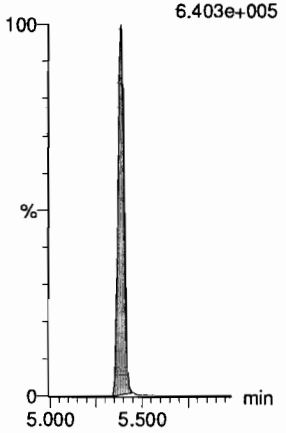
d3-N-MeFOSAA



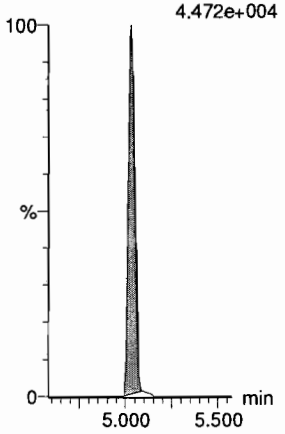
d5-N-EtFOSAA



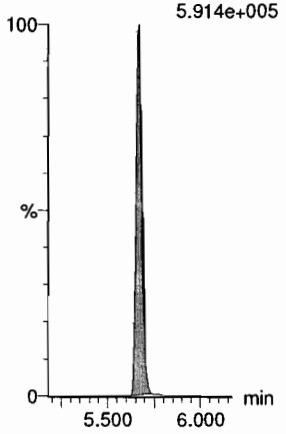
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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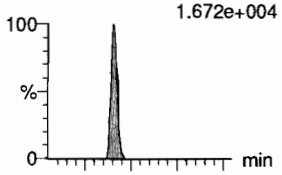
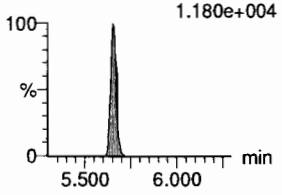
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

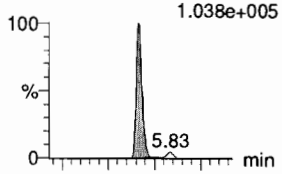
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
1.672e+004



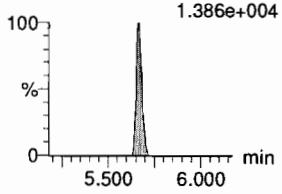
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.180e+004



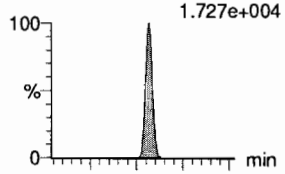
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.038e+005



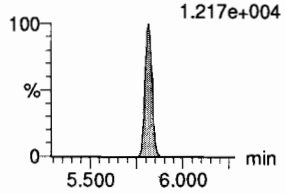
F62:MRM of 4 channels,ES-
612.9 > 318.8
1.386e+004



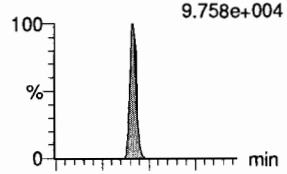
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.727e+004



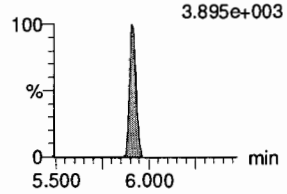
F43:MRM of 2 channels,ES-
512.1 > 219
1.217e+004



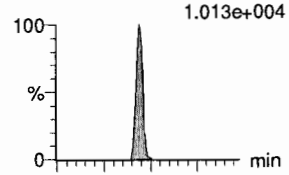
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
9.758e+004



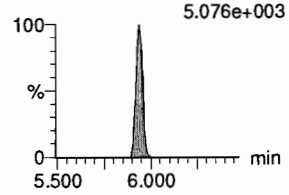
F70:MRM of 2 channels,ES-
662.9 > 319
3.895e+003



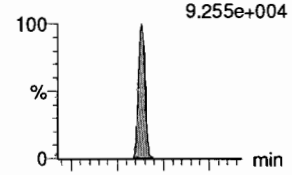
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.013e+004



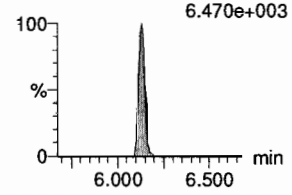
F71:MRM of 2 channels,ES-
698.8 > 98.9
5.076e+003



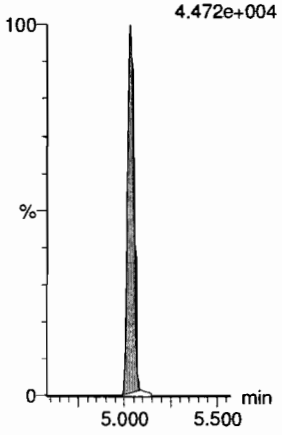
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
9.255e+004



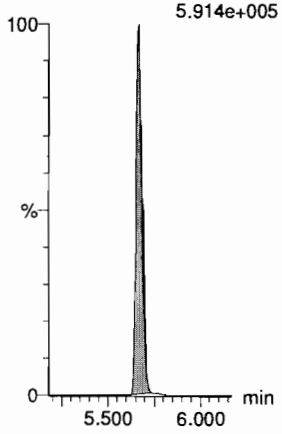
F72:MRM of 2 channels,ES-
713. > 369.0
6.470e+003



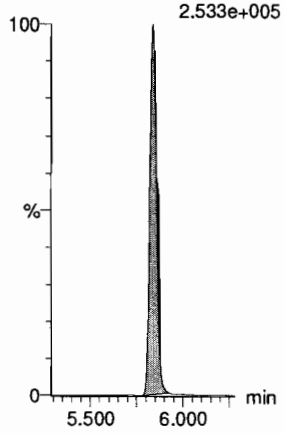
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.472e+004



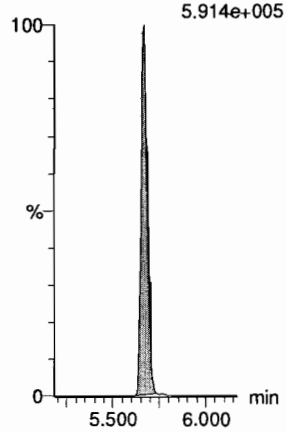
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.914e+005



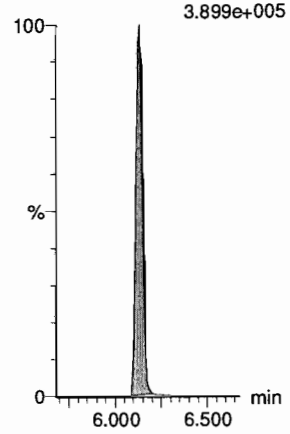
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.533e+005



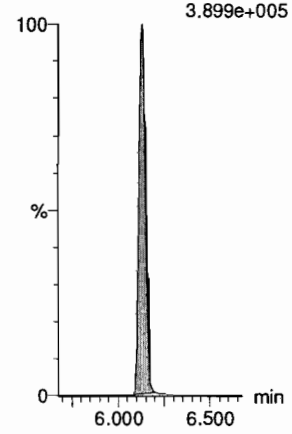
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.914e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.899e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.899e+005



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
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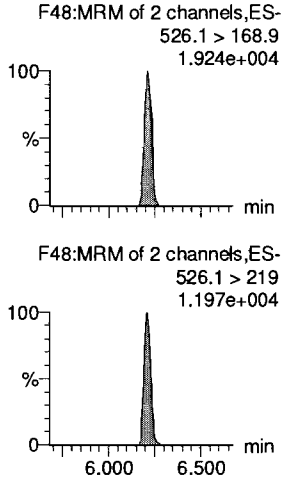
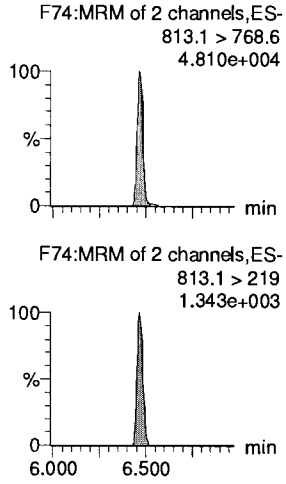
Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

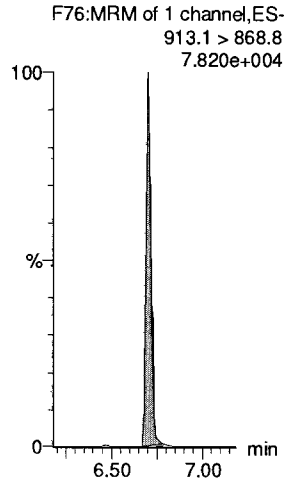
N-EtFOSA



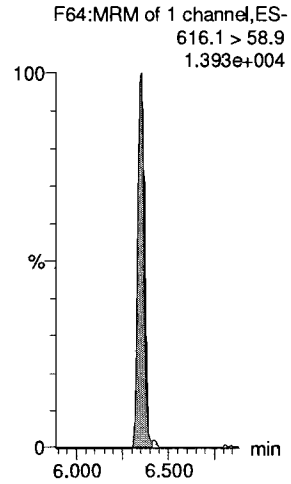
PFHxDA



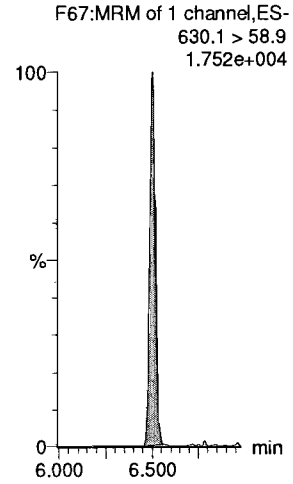
PFODA



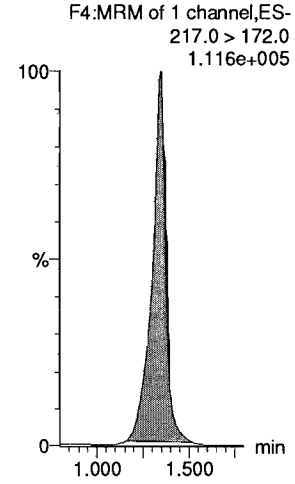
N-MeFOSE



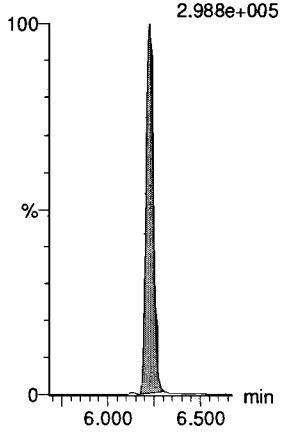
N-EtFOSE



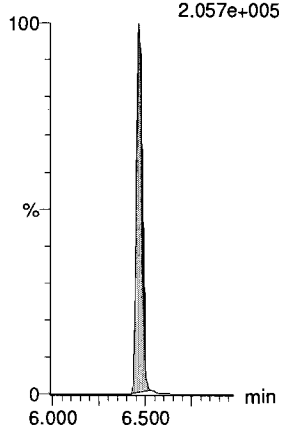
13C4-PFBA



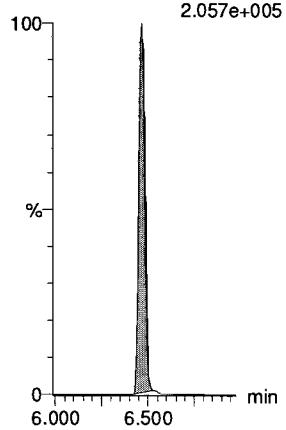
d5-N-ETFOSA



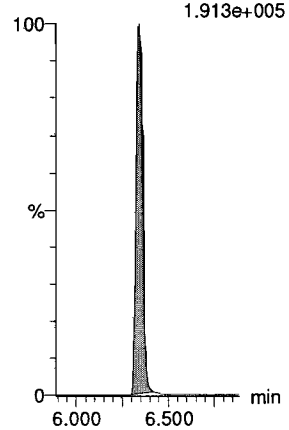
13C2-PFHxDA



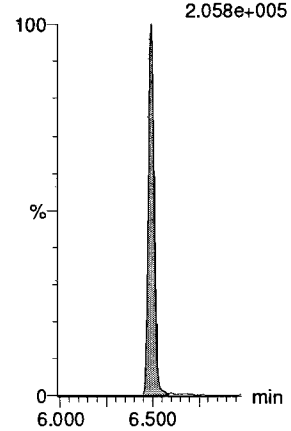
13C2-PFHxDA



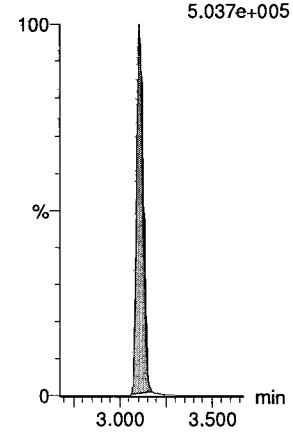
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

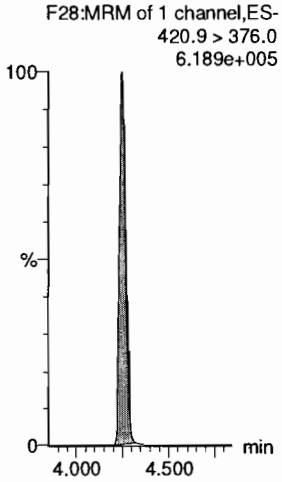


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

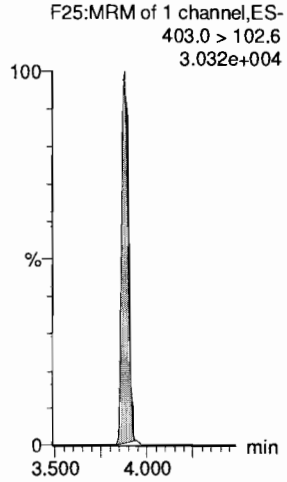
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_6, Date: 01-Jul-2019, Time: 16:34:54, ID: ST190701M1-4 PFC CS1 19F2415, Description: PFC CS1 19F2415

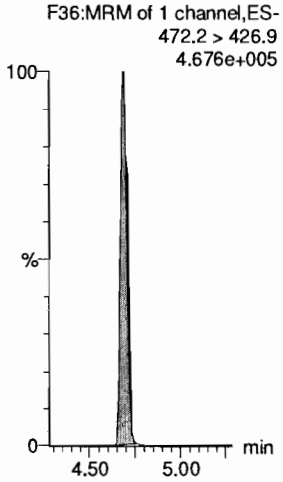
13C8-PFOA



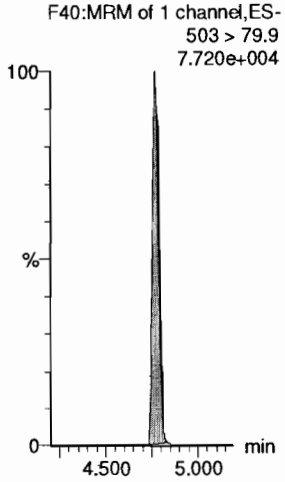
18O2-PFHxS



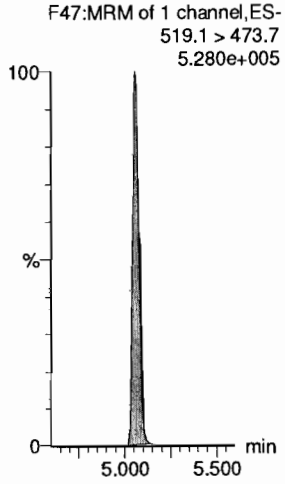
13C9-PFNA



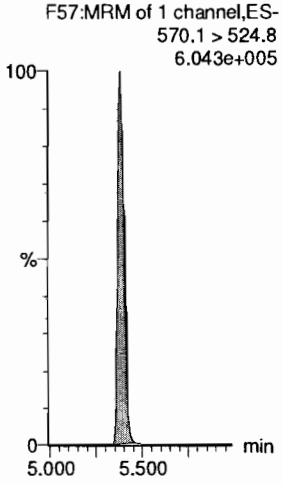
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
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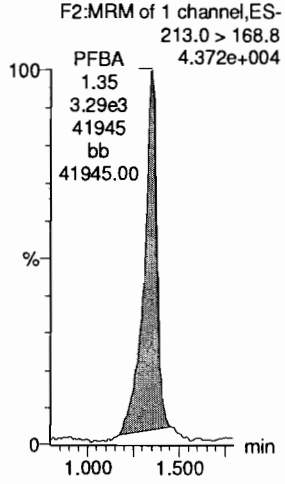
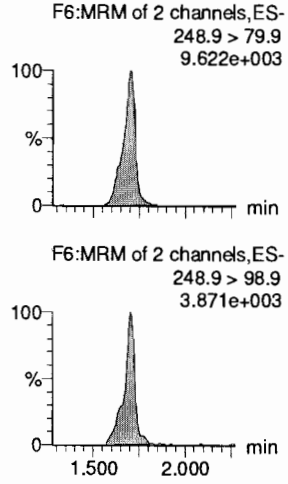
Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

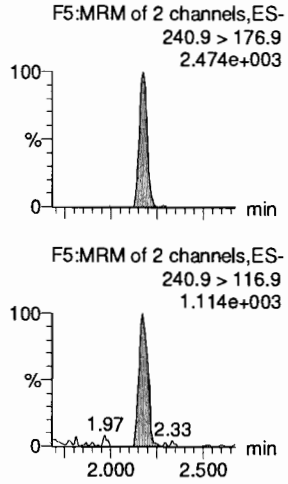
PFBA



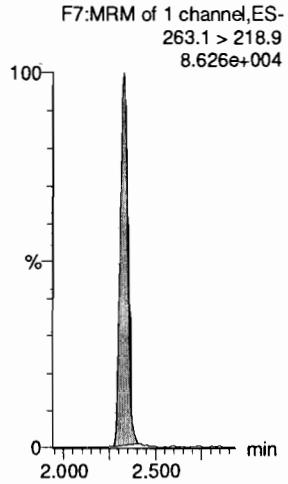
PFPrS



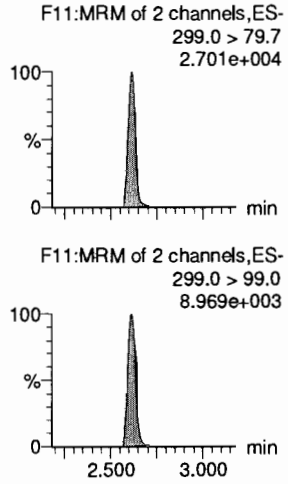
3:3 FTCA



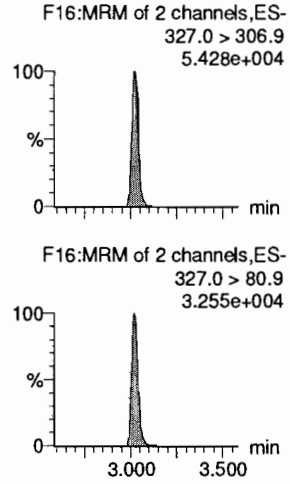
PFPeA



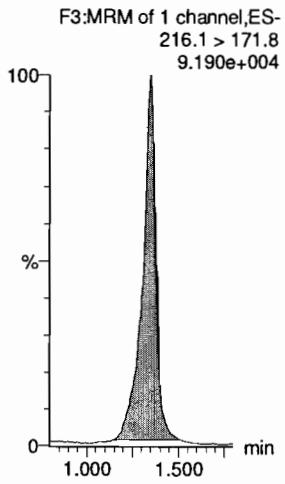
PFBS



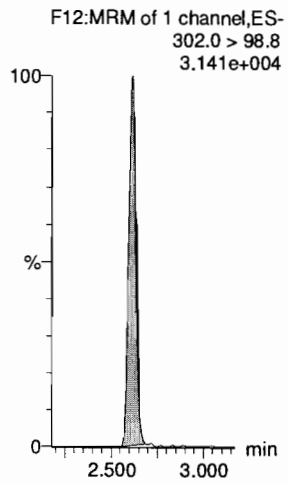
4:2 FTS



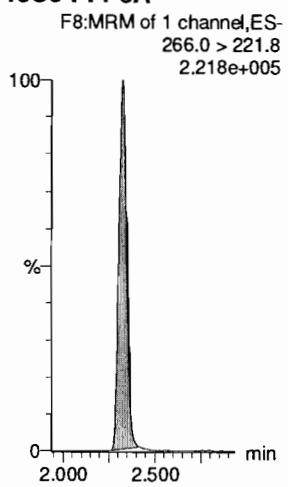
13C3-PFBA



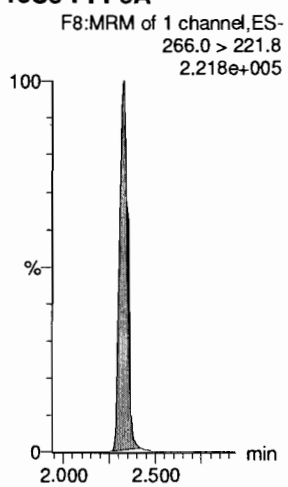
13C3-PFBS



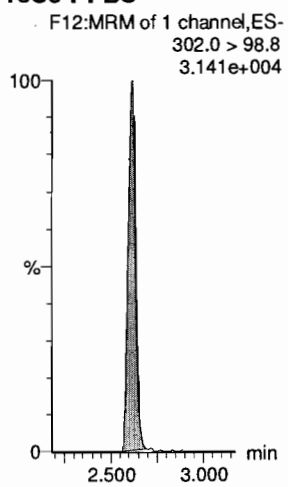
13C3-PFPeA



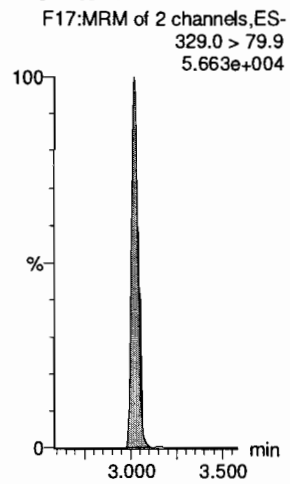
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
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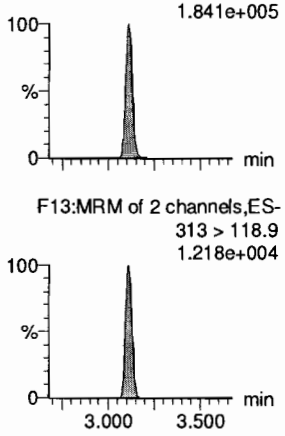
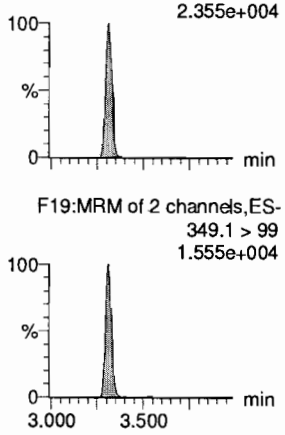
Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

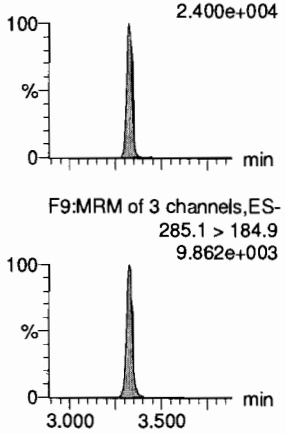
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.841e+005
F13:MRM of 2 channels,ES-
313 > 118.9
1.218e+004



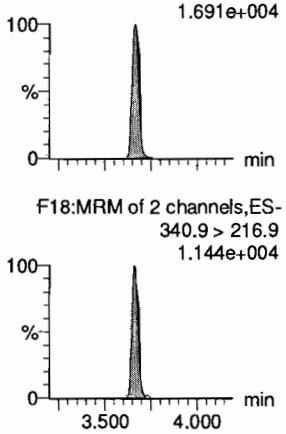
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
2.355e+004
F19:MRM of 2 channels,ES-
349.1 > 99
1.555e+004



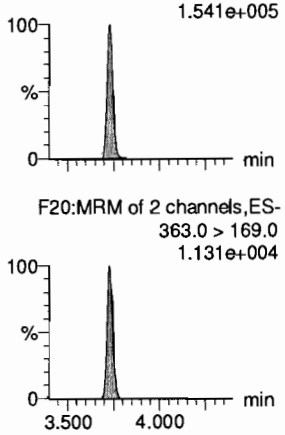
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
2.400e+004
F9:MRM of 3 channels,ES-
285.1 > 184.9
9.862e+003



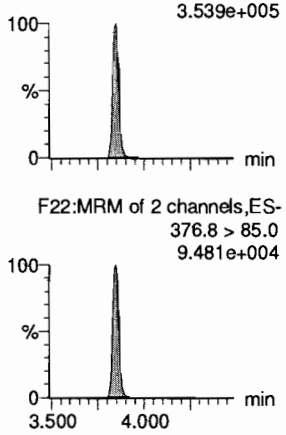
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
1.691e+004
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.144e+004



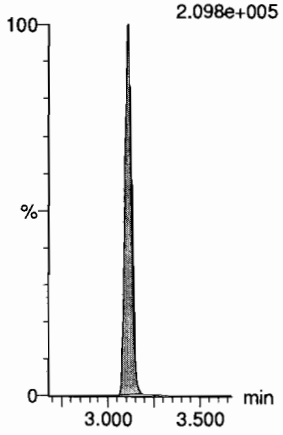
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
1.541e+005
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.131e+004



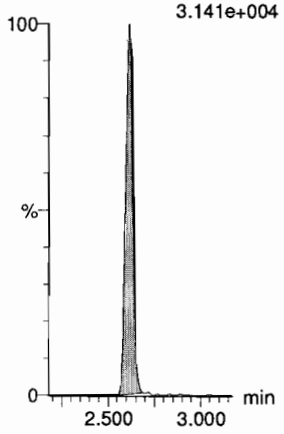
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
3.539e+005
F22:MRM of 2 channels,ES-
376.8 > 85.0
9.481e+004



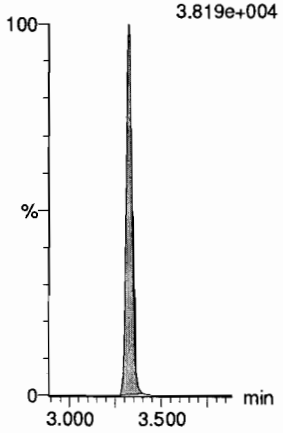
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
2.098e+005



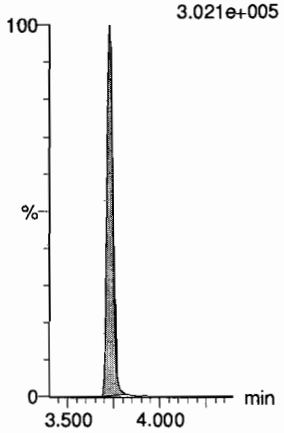
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.141e+004



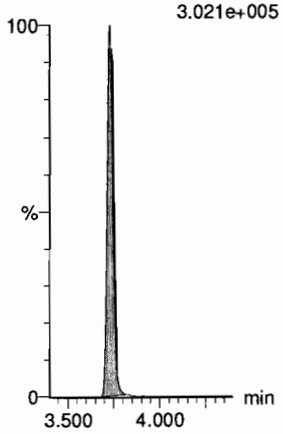
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
3.819e+004



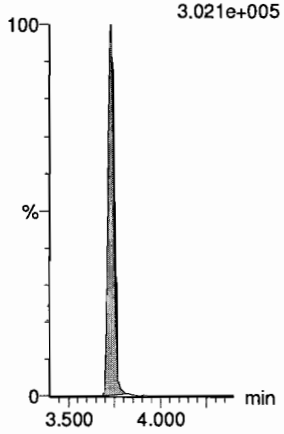
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.021e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.021e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
3.021e+005

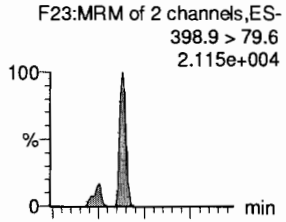


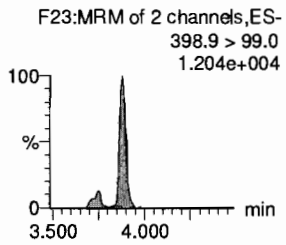
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

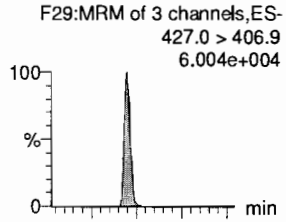
Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

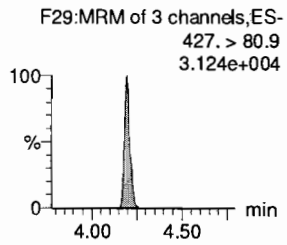
L-PFHxS



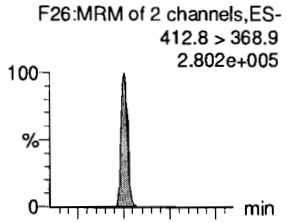


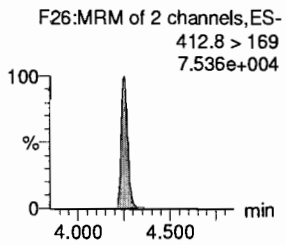
6:2 FTS



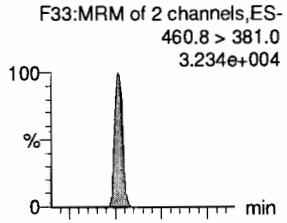


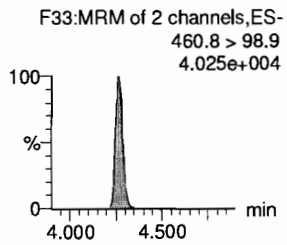
L-PFOA



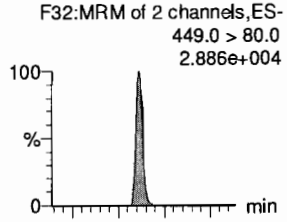


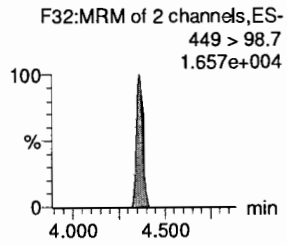
PFEChS



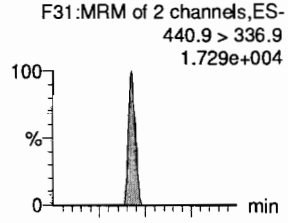


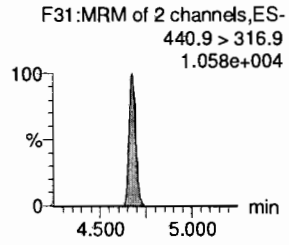
PFHpS



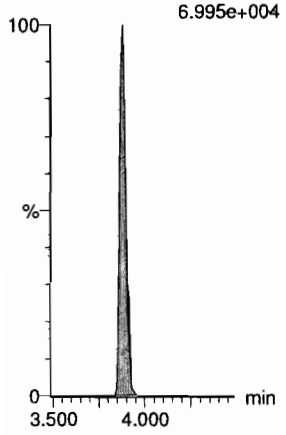


7:3 FTCA

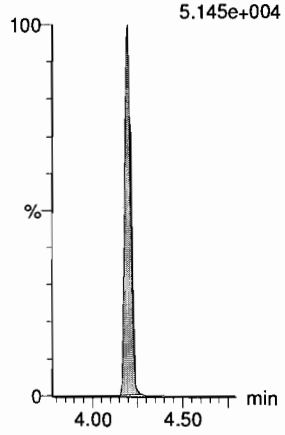




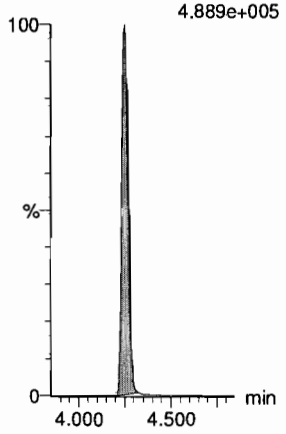
13C3-PFHxS



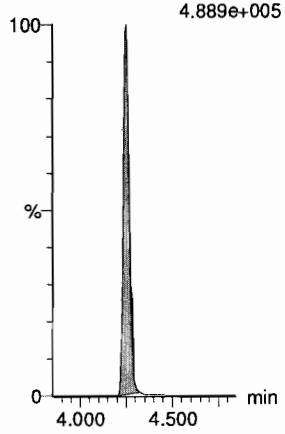
13C2-6:2 FTS



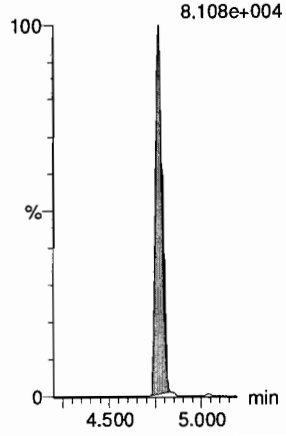
13C2-PFOA



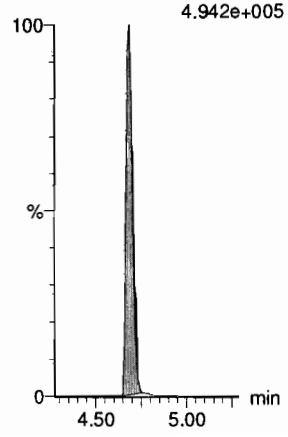
13C2-PFOA



13C8-PFOS



13C5-PFNA

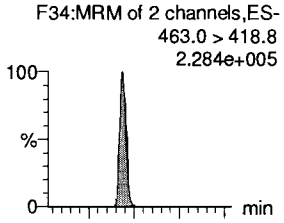


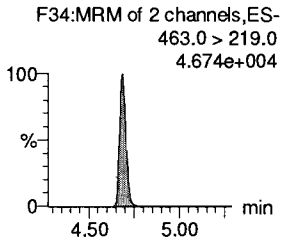
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

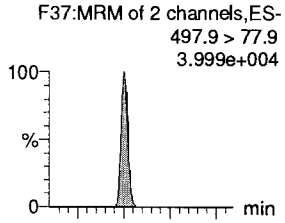
Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

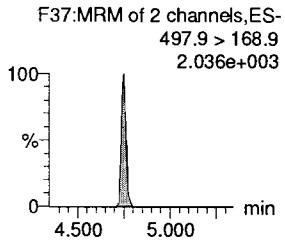
PFNA



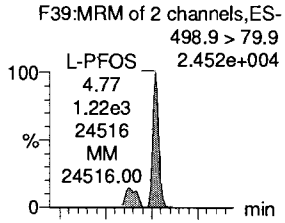


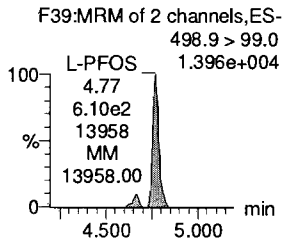
PFOSA



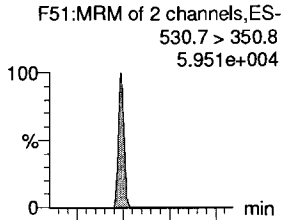


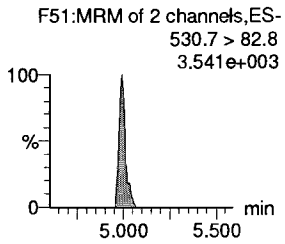
L-PFOS



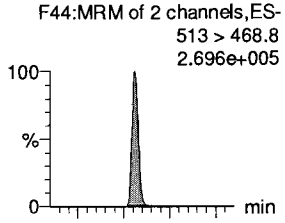


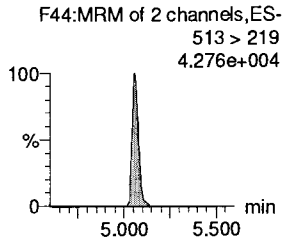
9Cl-PF30NS



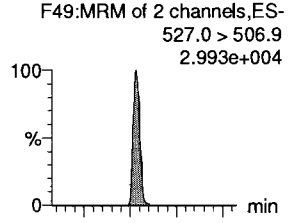


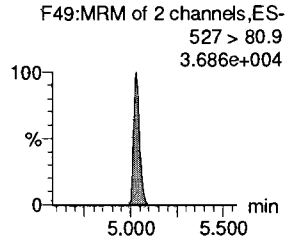
PFDA



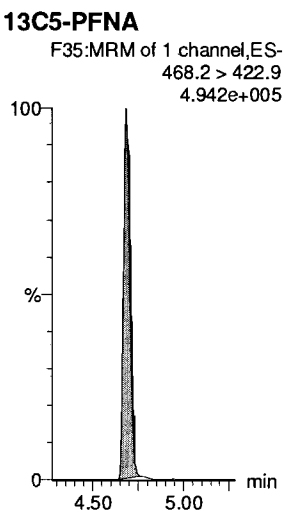


8:2 FTS

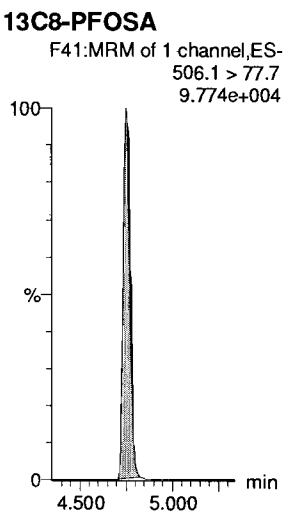




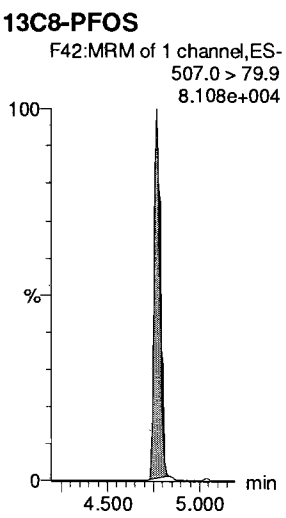
13C5-PFNA



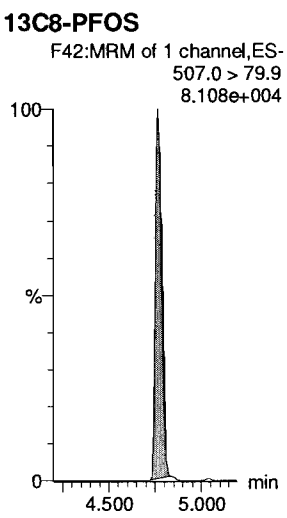
13C8-PFOSA



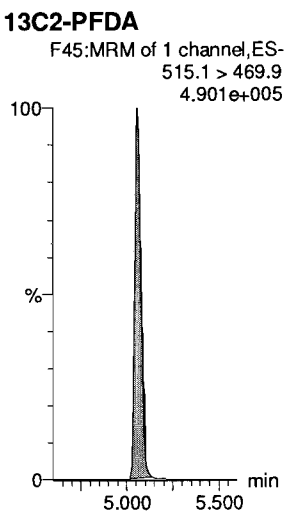
13C8-PFOS



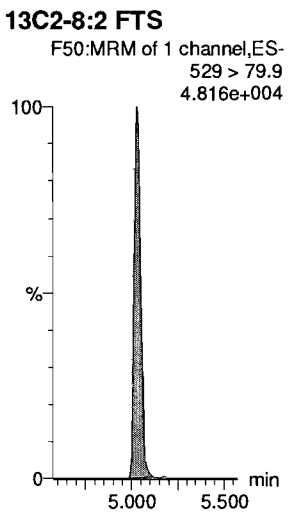
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

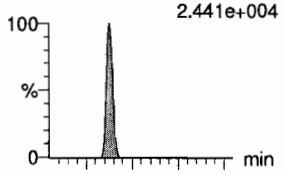


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

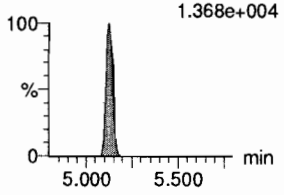
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

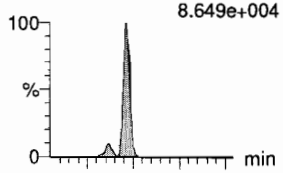
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
2.441e+004



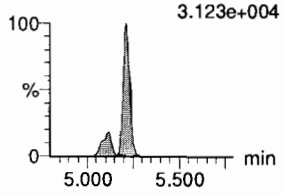
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.368e+004



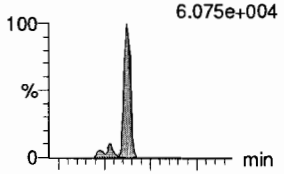
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
8.649e+004



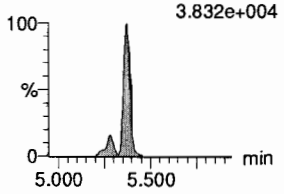
F56:MRM of 2 channels,ES-
570. > 512
3.123e+004



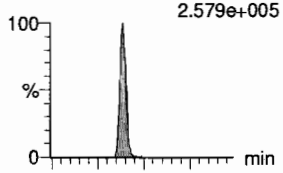
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
6.075e+004



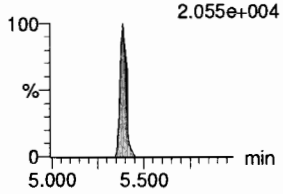
F59:MRM of 2 channels,ES-
584.1 > 526
3.832e+004



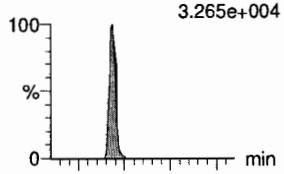
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
2.579e+005



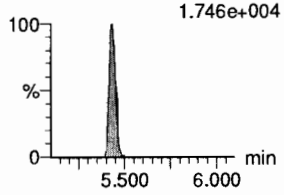
F54:MRM of 2 channels,ES-
563.0 > 269
2.055e+004



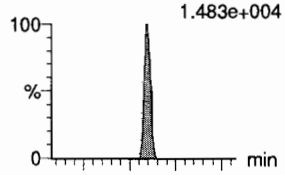
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
3.265e+004



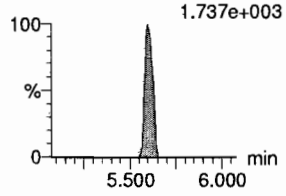
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.746e+004



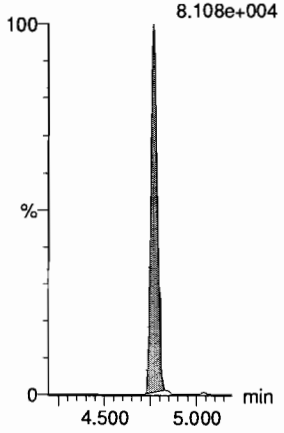
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.483e+004



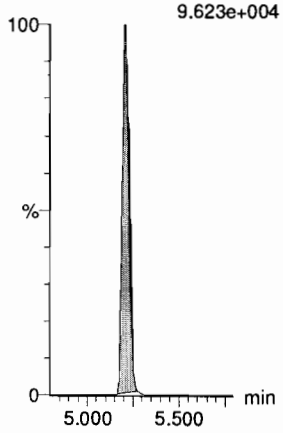
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.737e+003



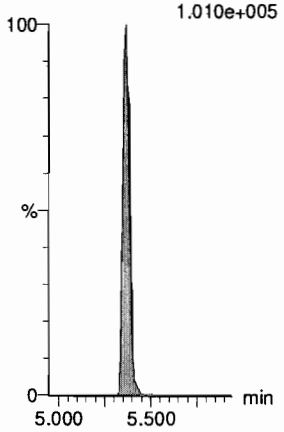
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
8.108e+004



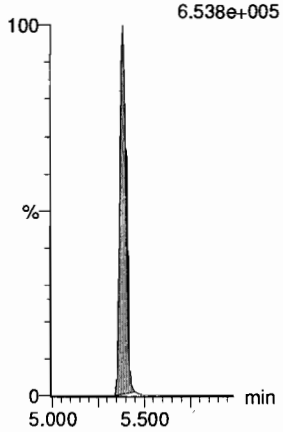
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
9.623e+004



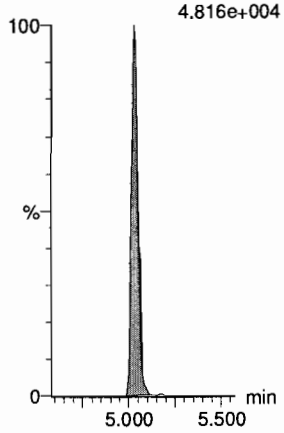
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.010e+005



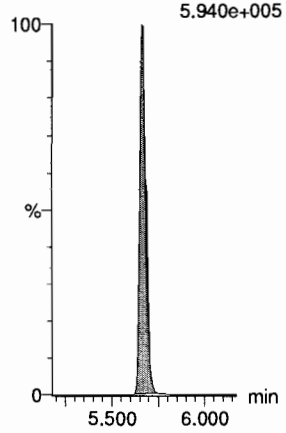
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.538e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.816e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.940e+005

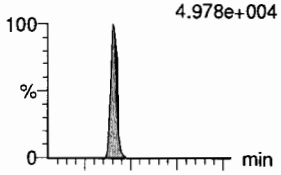


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

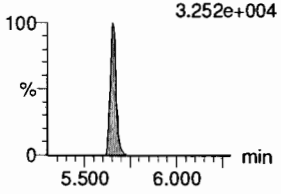
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

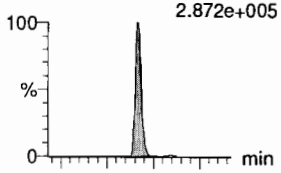
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
4.978e+004



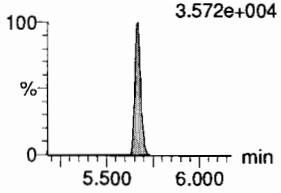
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.252e+004



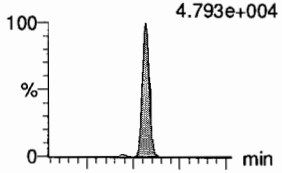
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.872e+005



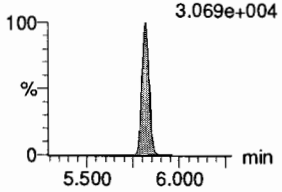
F62:MRM of 4 channels,ES-
612.9 > 318.8
3.572e+004



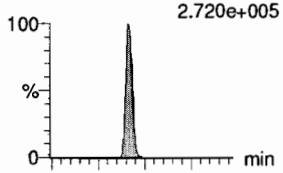
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
4.793e+004



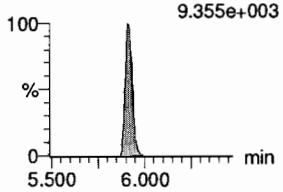
F43:MRM of 2 channels,ES-
512.1 > 219
3.069e+004



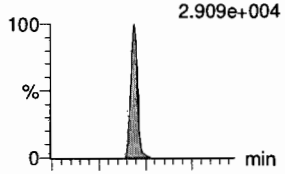
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.720e+005



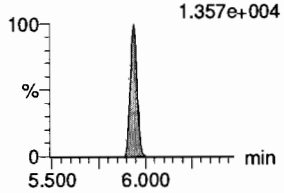
F70:MRM of 2 channels,ES-
662.9 > 319
9.355e+003



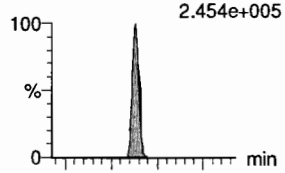
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
2.909e+004



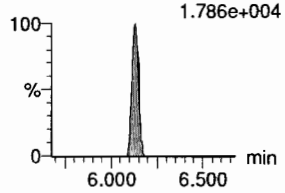
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.357e+004



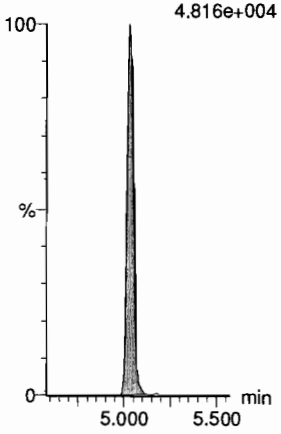
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
2.454e+005



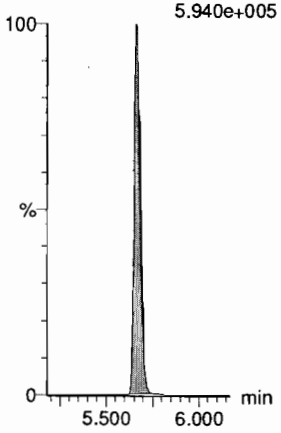
F72:MRM of 2 channels,ES-
713. > 369.0
1.786e+004



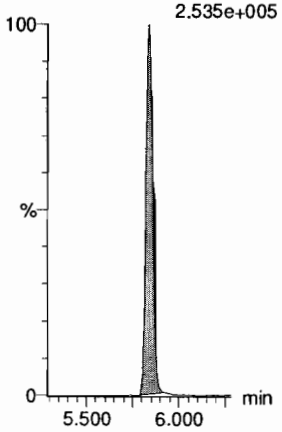
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.816e+004



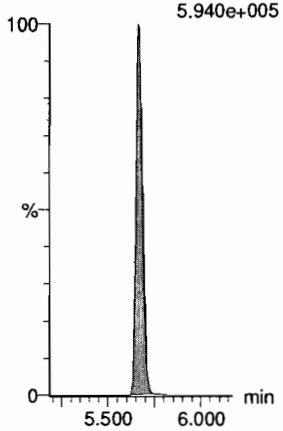
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.940e+005



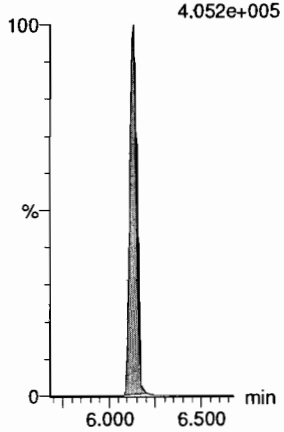
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.535e+005



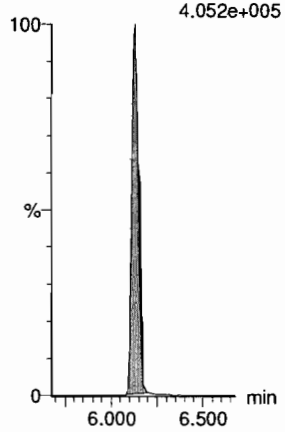
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.940e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
4.052e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
4.052e+005

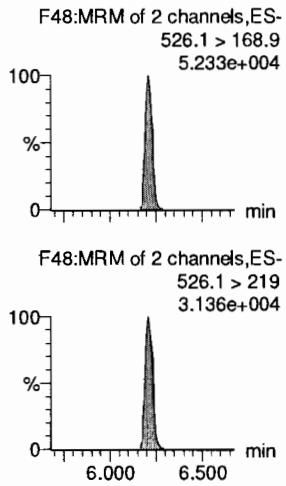


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

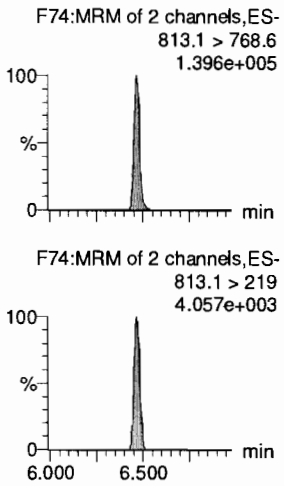
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

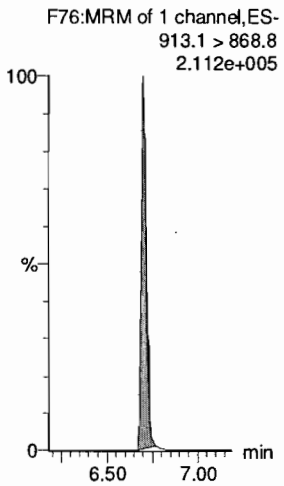
N-EtFOSA



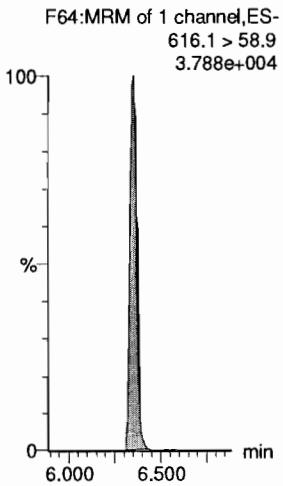
PFHxDA



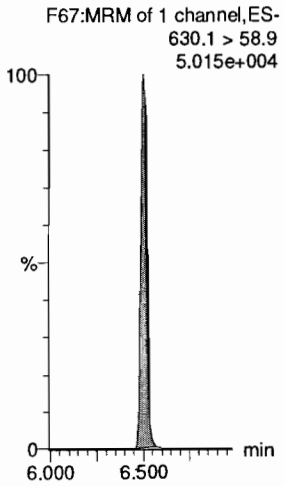
PFODA



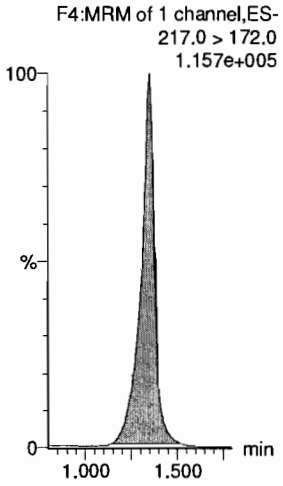
N-MeFOSE



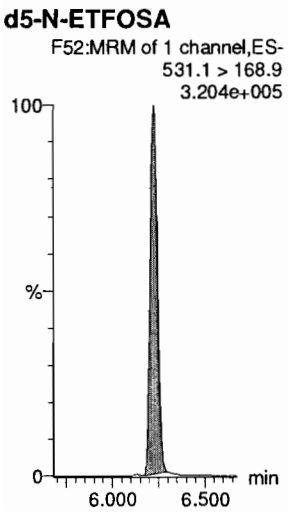
N-EtFOSE



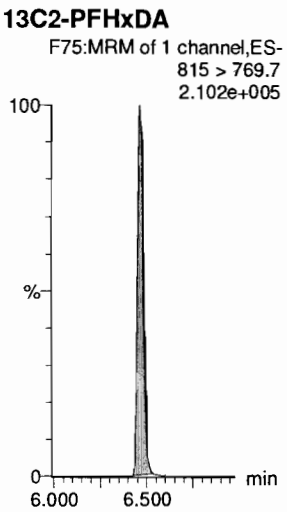
13C4-PFBA



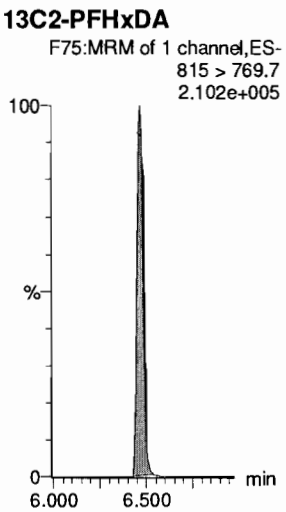
d5-N-ETFOSA



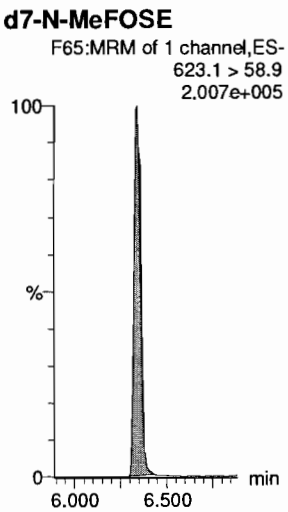
13C2-PFHxDA



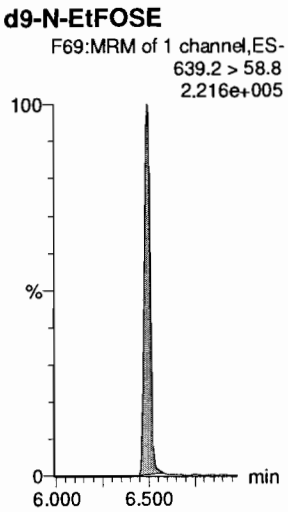
13C2-PFHxDA



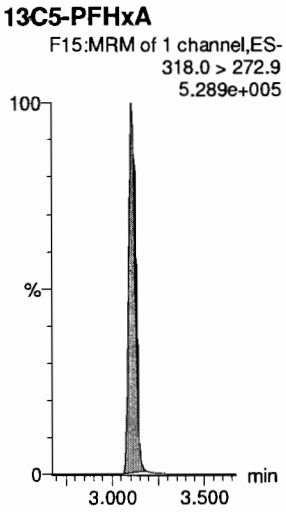
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

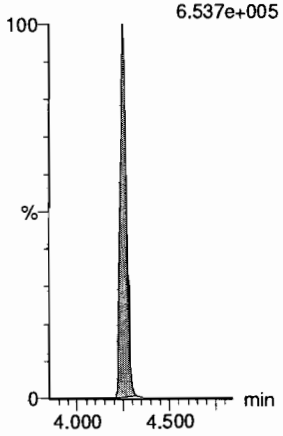


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

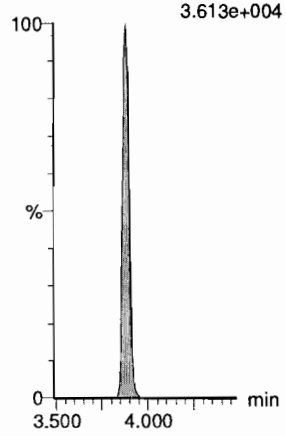
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_7, Date: 01-Jul-2019, Time: 16:45:33, ID: ST190701M1-5 PFC CS2 19F2416, Description: PFC CS2 19F2416

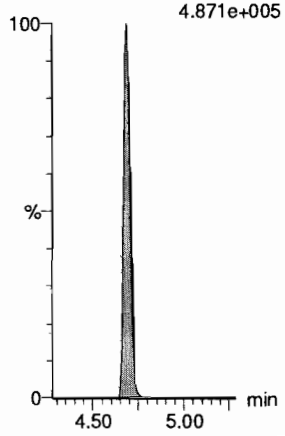
13C8-PFOA



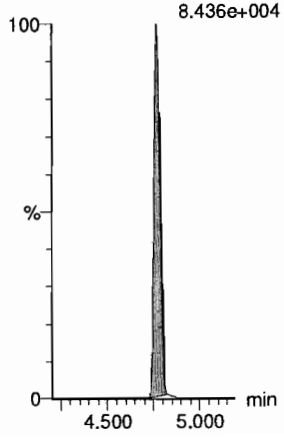
18O2-PFHxS



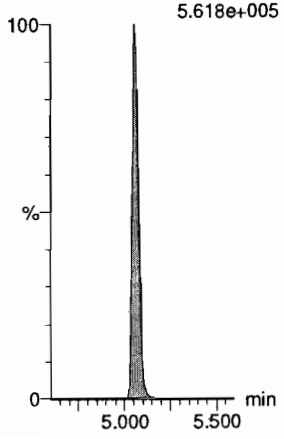
13C9-PFNA



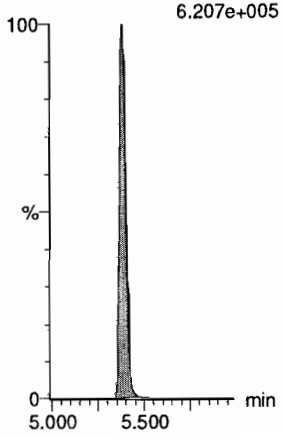
13C4-PFOS



13C6-PFDA



13C7-PFUdA

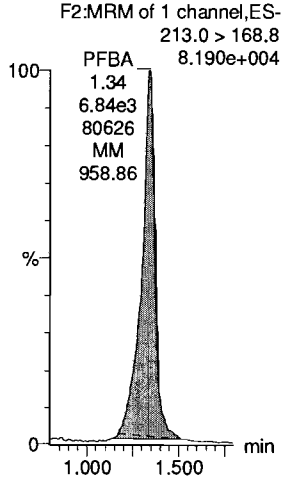


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

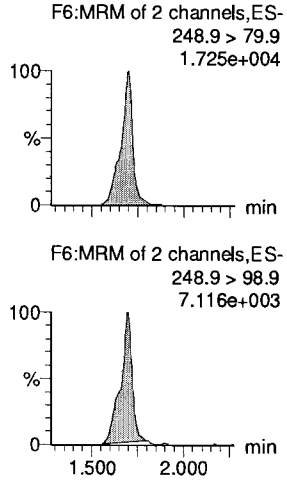
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

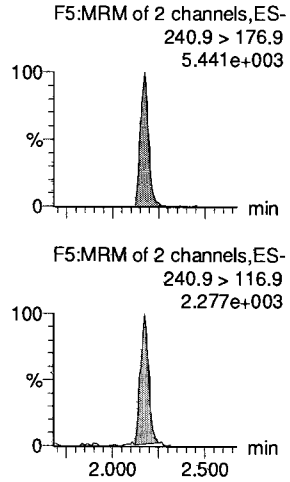
PFBA



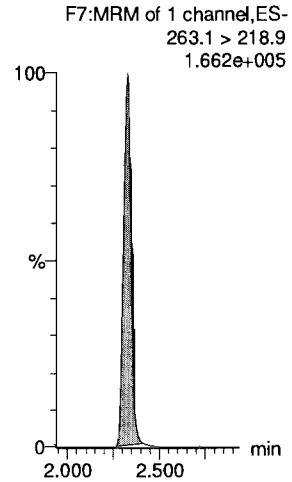
PFPrS



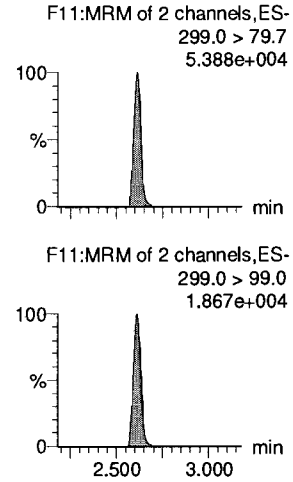
3:3 FTCA



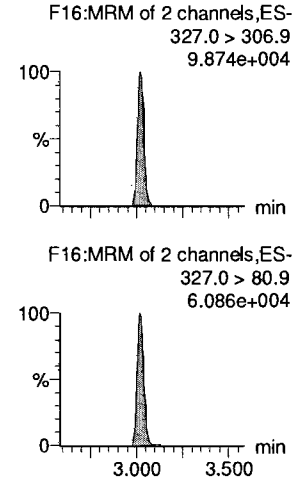
PFPeA



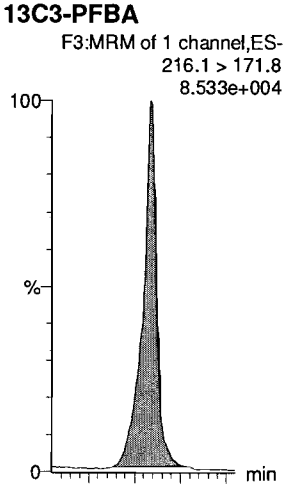
PFBS



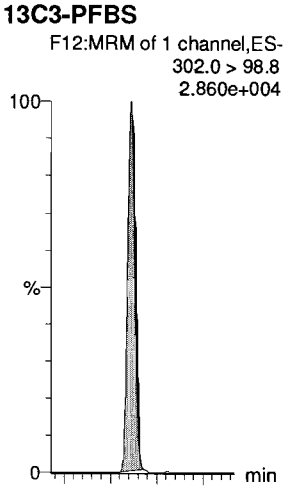
4:2 FTS



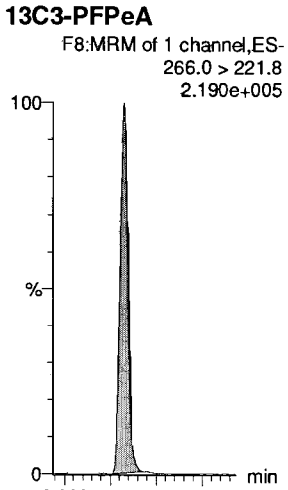
13C3-PFBA



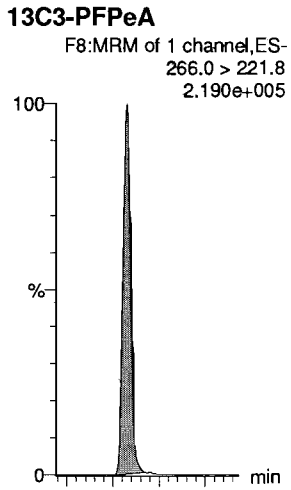
13C3-PFBS



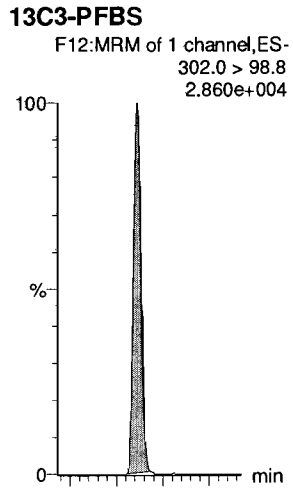
13C3-PFPeA



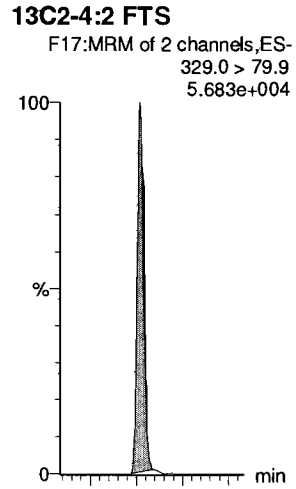
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

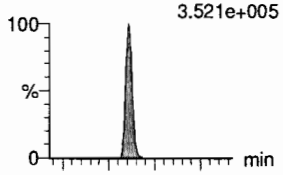


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

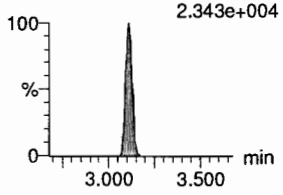
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

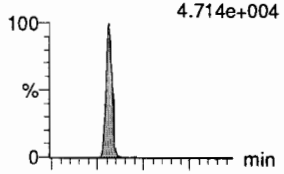
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
3.521e+005



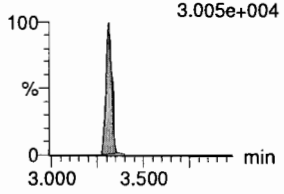
F13:MRM of 2 channels,ES-
313 > 118.9
2.343e+004



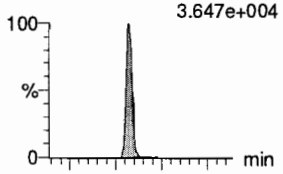
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
4.714e+004



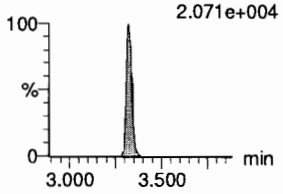
F19:MRM of 2 channels,ES-
349.1 > 99
3.005e+004



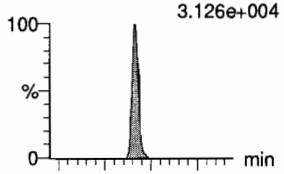
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
3.647e+004



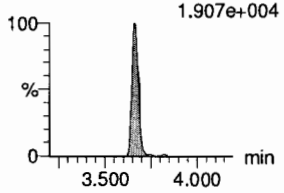
F9:MRM of 3 channels,ES-
285.1 > 184.9
2.071e+004



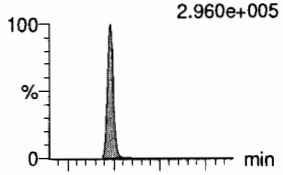
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
3.126e+004



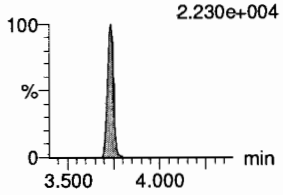
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.907e+004



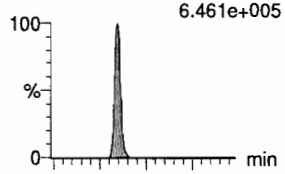
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
2.960e+005



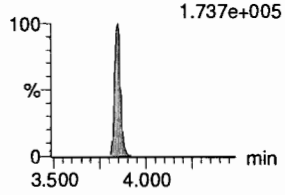
F20:MRM of 2 channels,ES-
363.0 > 169.0
2.230e+004



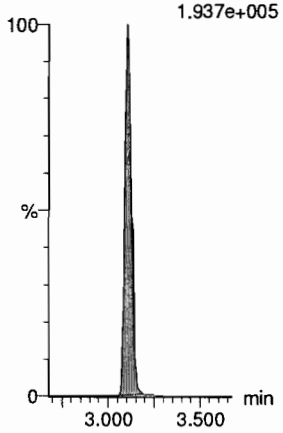
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
6.461e+005



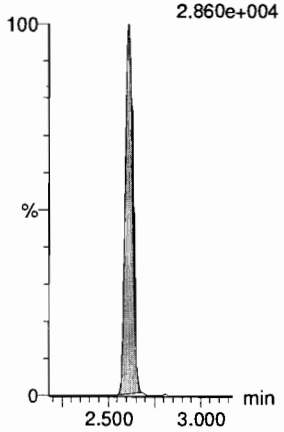
F22:MRM of 2 channels,ES-
376.8 > 85.0
1.737e+005



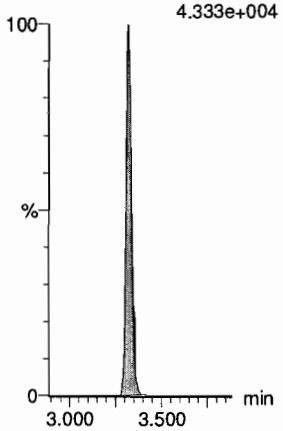
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.937e+005



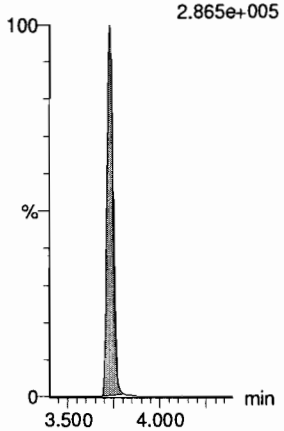
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.860e+004



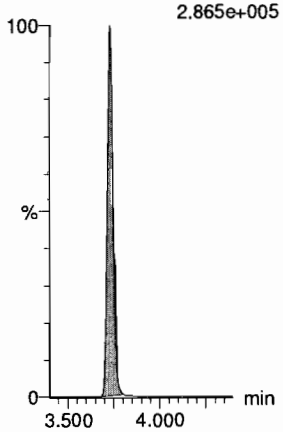
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
4.333e+004



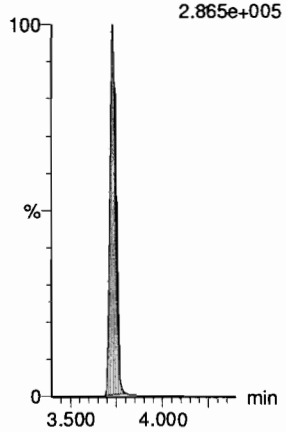
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.865e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.865e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.865e+005

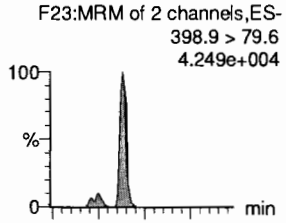


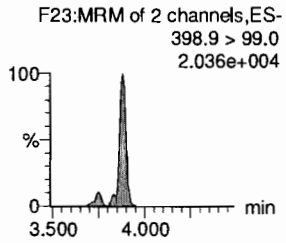
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

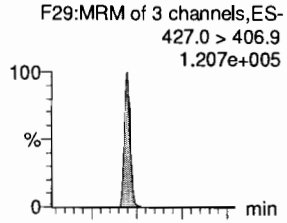
Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

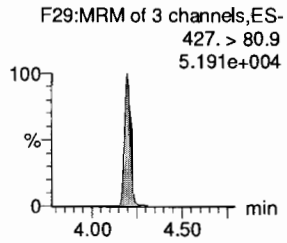
L-PFHxS



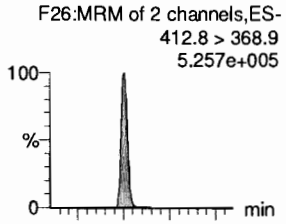


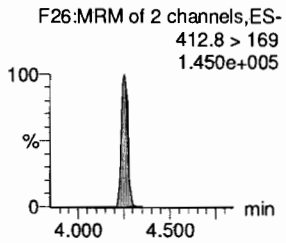
6:2 FTS



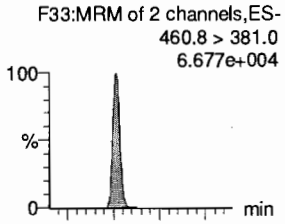


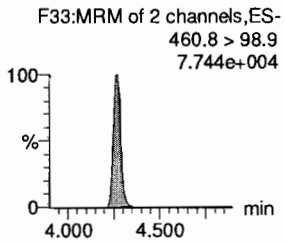
L-PFOA



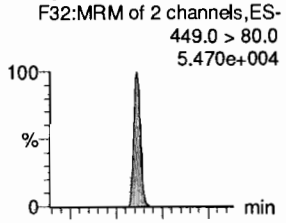


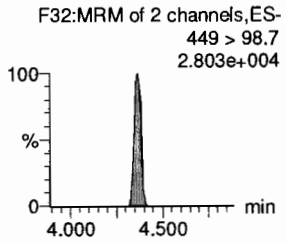
PFEChS



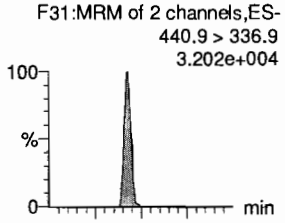


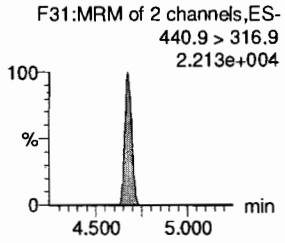
PFHpS



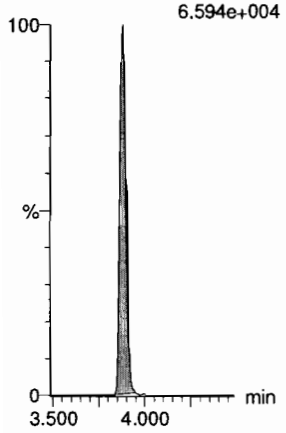


7:3 FTCA

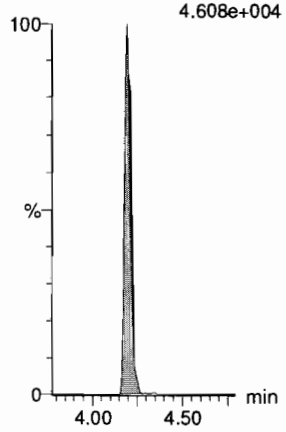




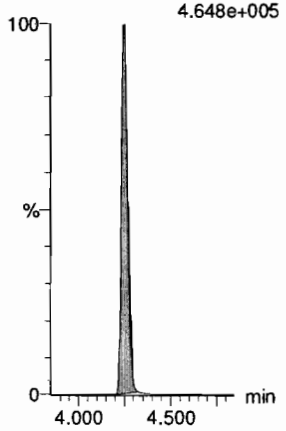
13C3-PFHxS



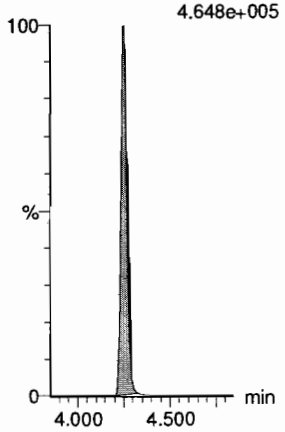
13C2-6:2 FTS



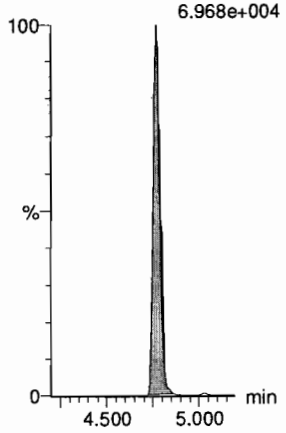
13C2-PFOA



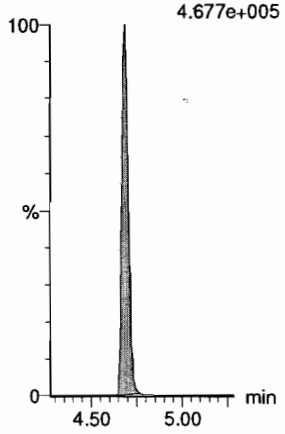
13C2-PFOA



13C8-PFOS



13C5-PFNA

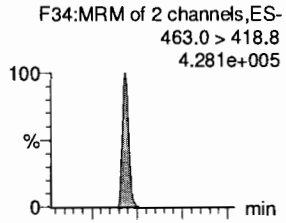


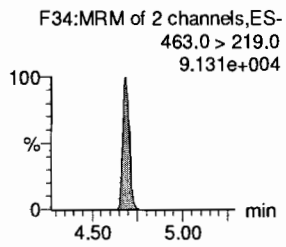
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

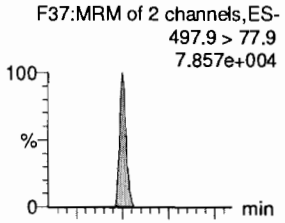
Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

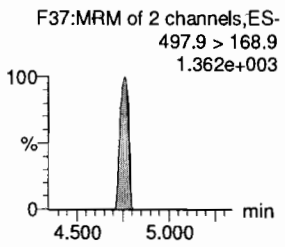
PFNA



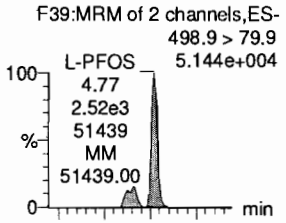


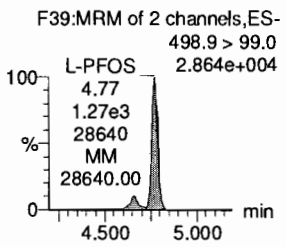
PFOSA



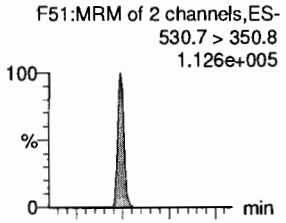


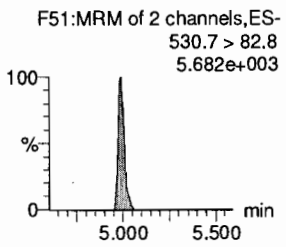
L-PFOS



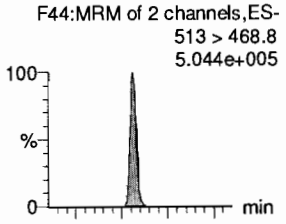


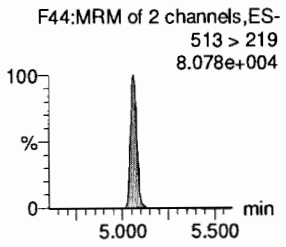
9Cl-PF30NS



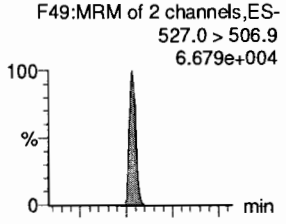


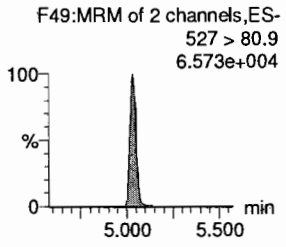
PFDA



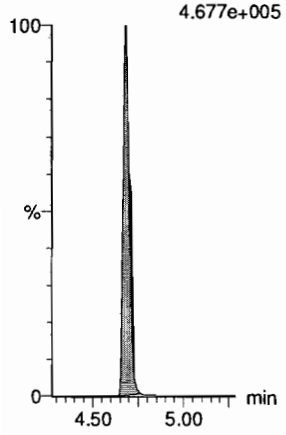


8:2 FTS

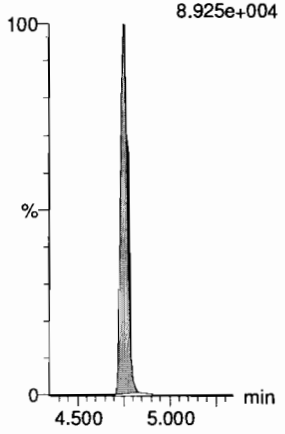




13C5-PFNA



13C8-PFOSA



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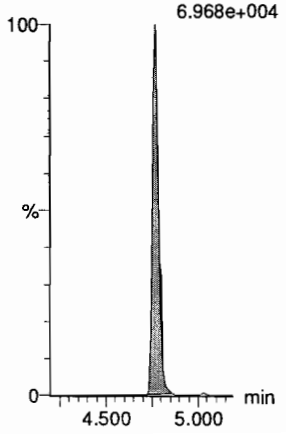
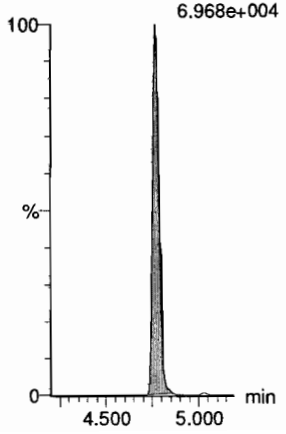
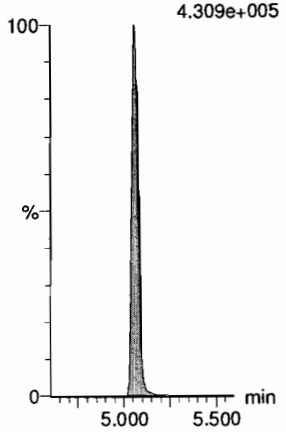


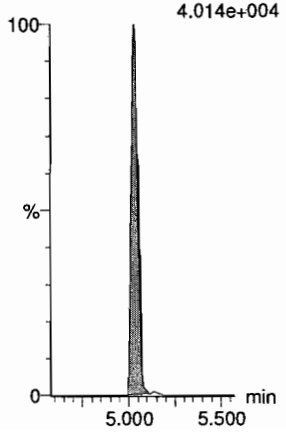
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

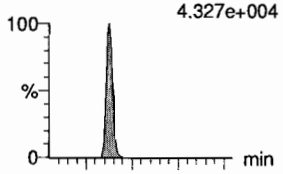


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

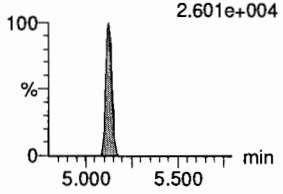
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

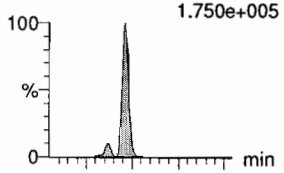
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
4.327e+004



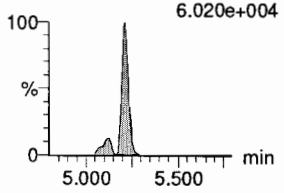
F53:MRM of 2 channels,ES-
549.1 > 99.1
2.601e+004



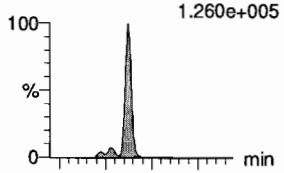
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.750e+005



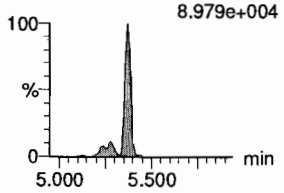
F56:MRM of 2 channels,ES-
570. > 512
6.020e+004



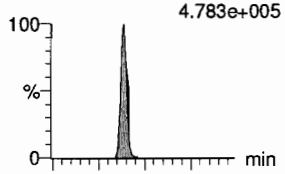
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.260e+005



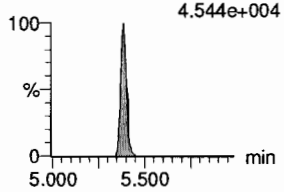
F59:MRM of 2 channels,ES-
584.1 > 526
8.979e+004



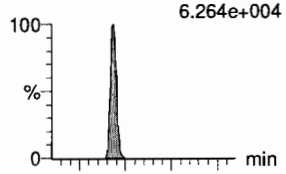
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.783e+005



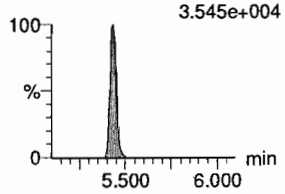
F54:MRM of 2 channels,ES-
563.0 > 269
4.544e+004



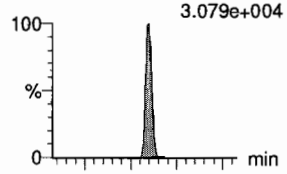
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
6.264e+004



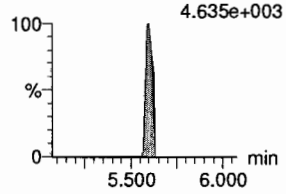
F61:MRM of 2 channels,ES-
598.8 > 98.9
3.545e+004



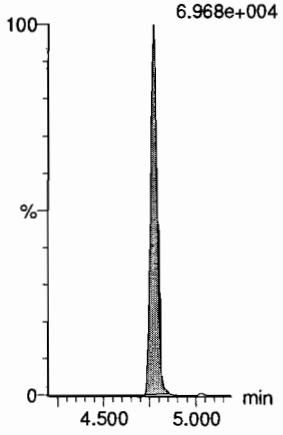
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
3.079e+004



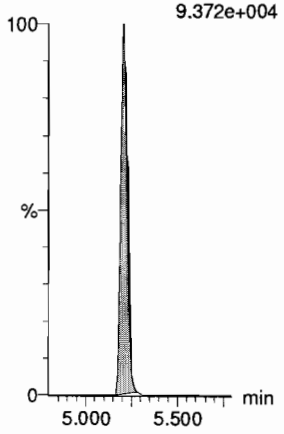
F68:MRM of 2 channels,ES-
632.6 > 450.7
4.635e+003



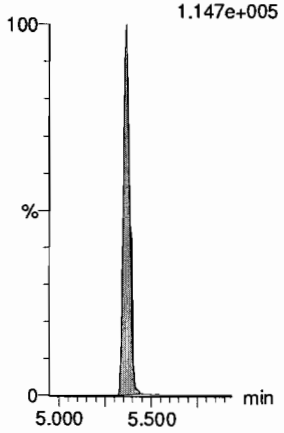
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.968e+004



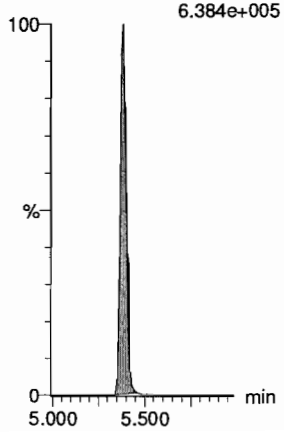
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
9.372e+004



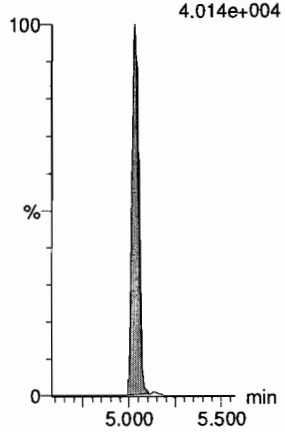
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.147e+005



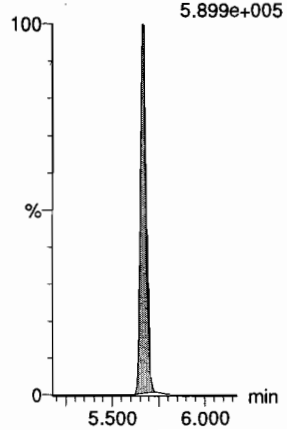
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.384e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.014e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.899e+005

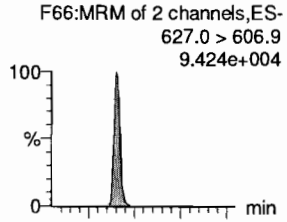


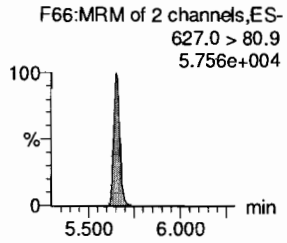
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

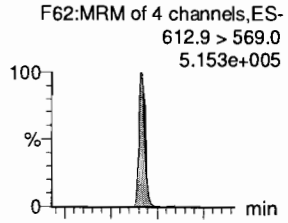
Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

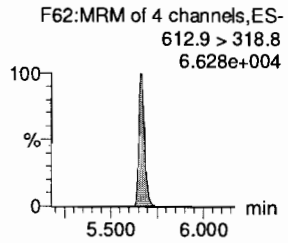
10:2 FTS



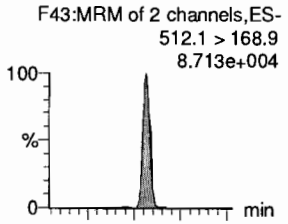


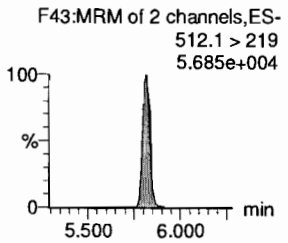
PFDoA





N-MeFOSA





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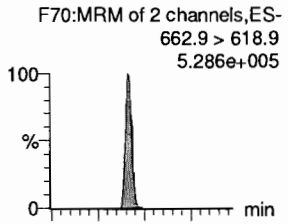
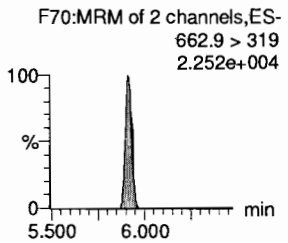
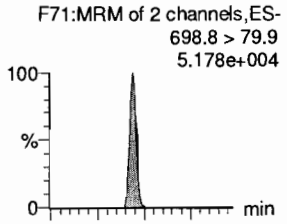
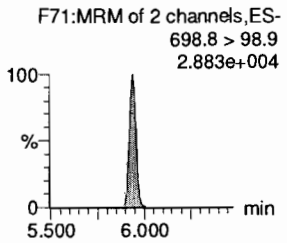


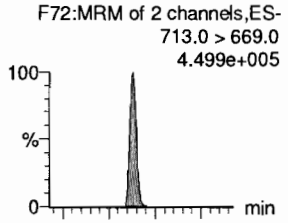


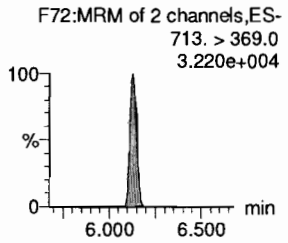
PFDoS



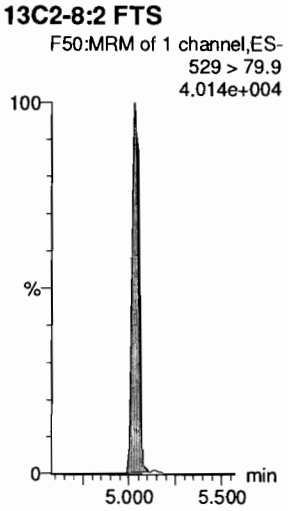


PFTeDA

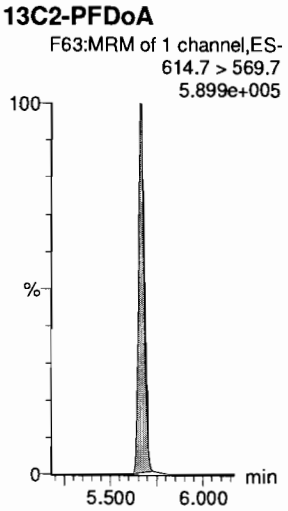




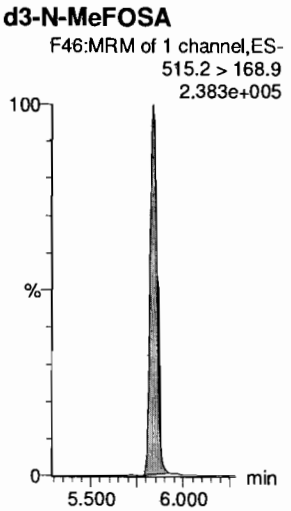
13C2-8:2 FTS



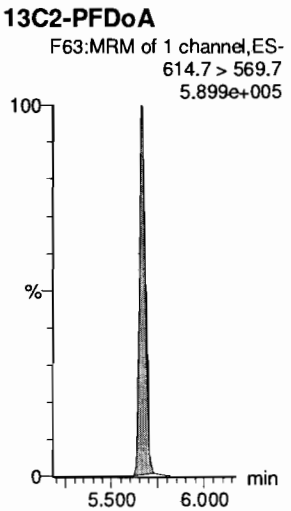
13C2-PFDoA



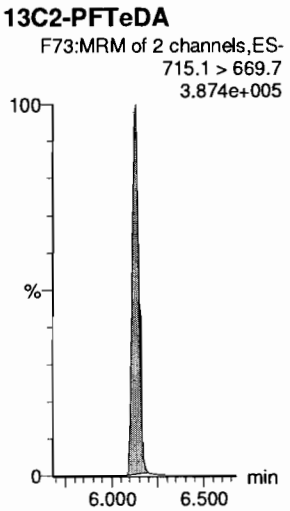
d3-N-MeFOSA



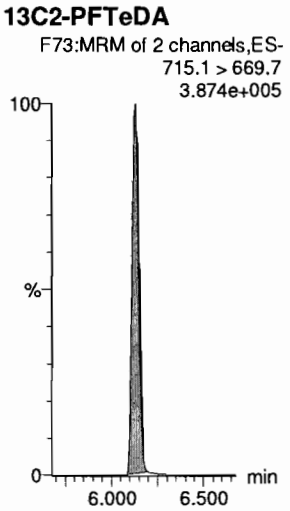
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

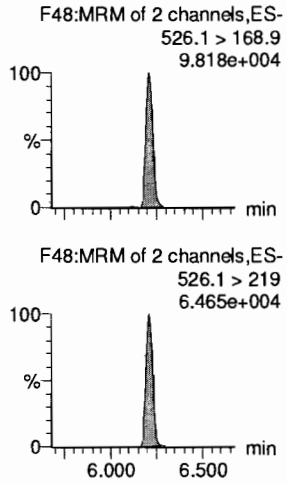


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

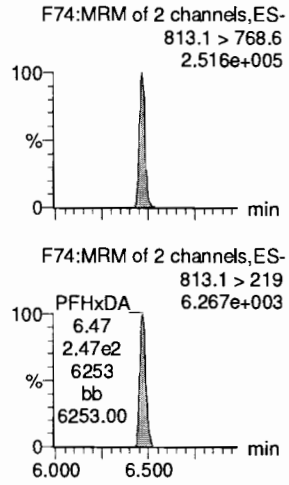
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

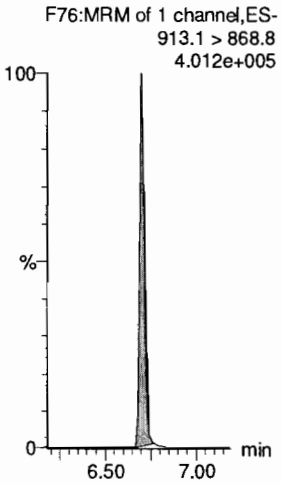
N-EtFOSA



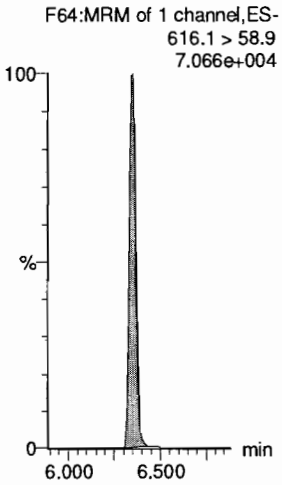
PFHxDA



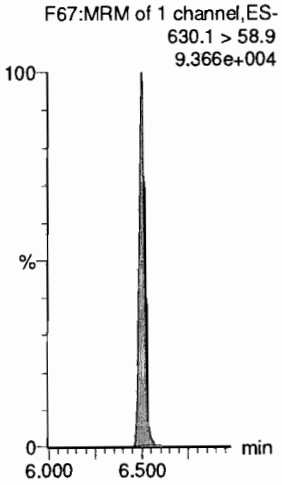
PFODA



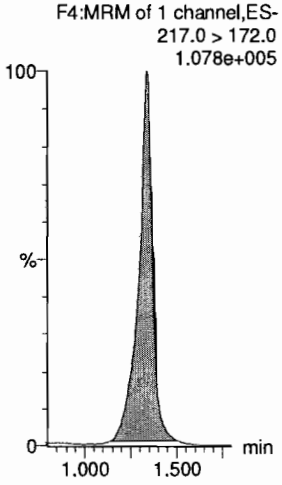
N-MeFOSE



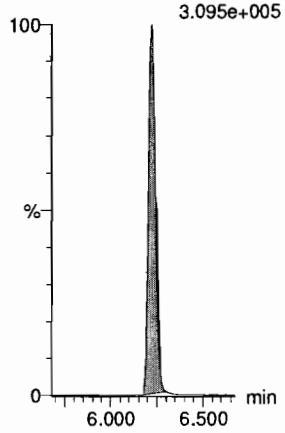
N-EtFOSE



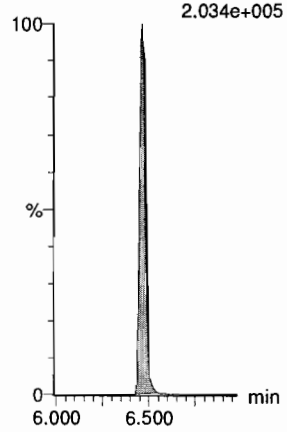
13C4-PFBA



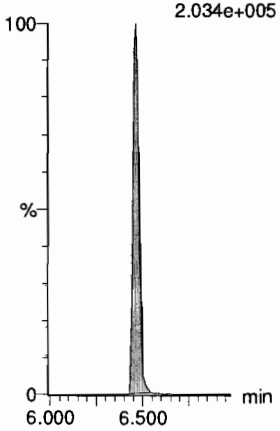
d5-N-ETFOSA



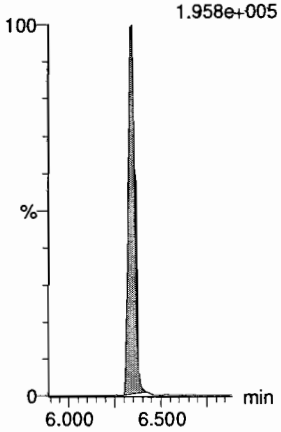
13C2-PFHxDA



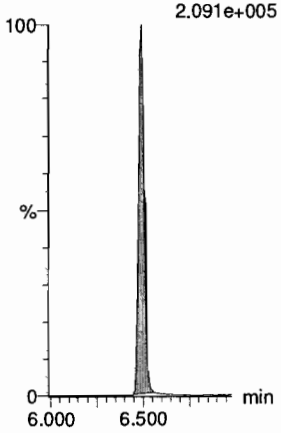
13C2-PFHxDA



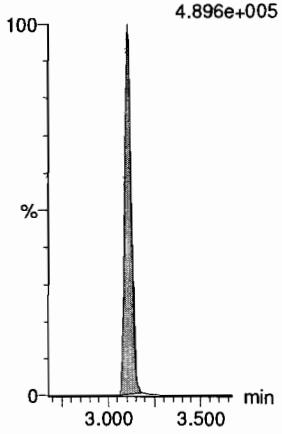
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

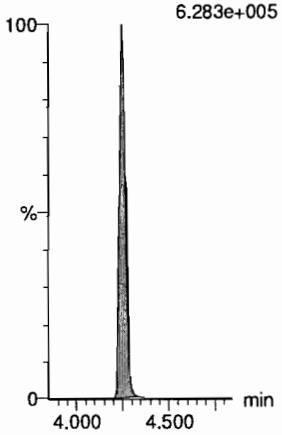


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

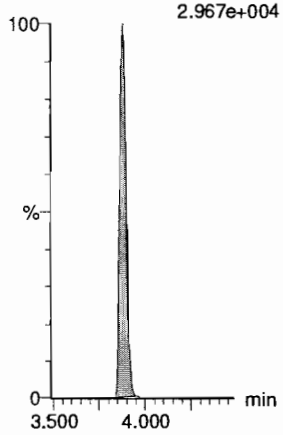
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_8, Date: 01-Jul-2019, Time: 16:56:11, ID: ST190701M1-6 PFC CS3 19F2417, Description: PFC CS3 19F2417

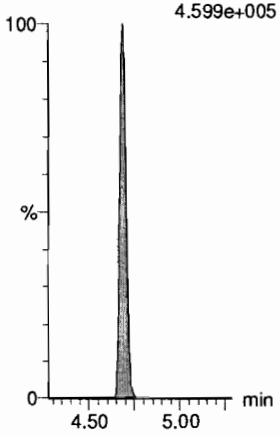
13C8-PFOA



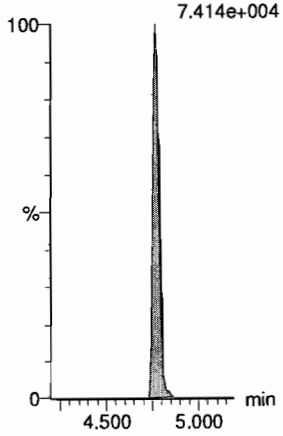
18O2-PFHxS



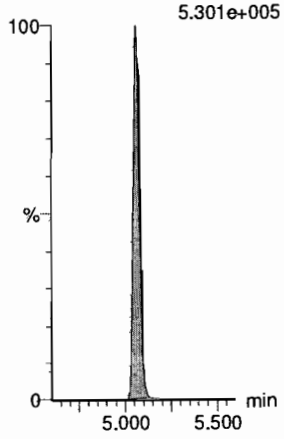
13C9-PFNA



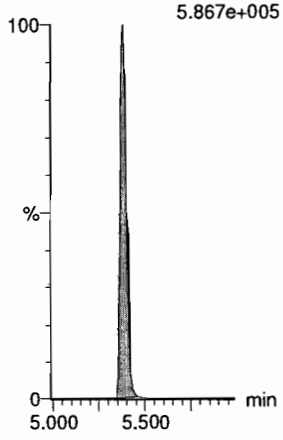
13C4-PFOS



13C6-PFDA



13C7-PFUdA

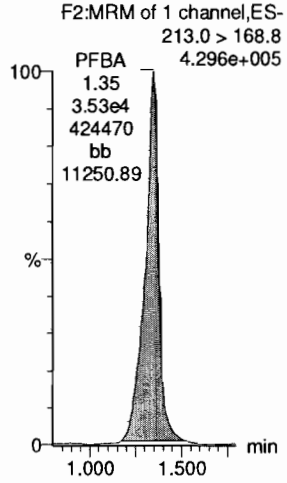


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

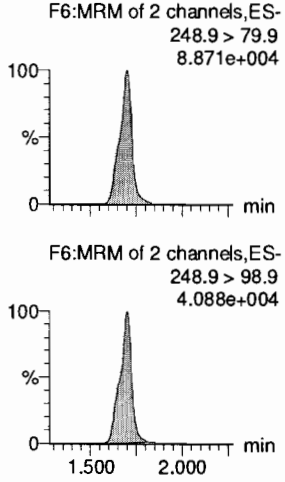
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

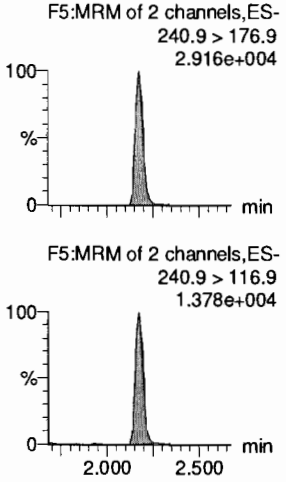
PFBA



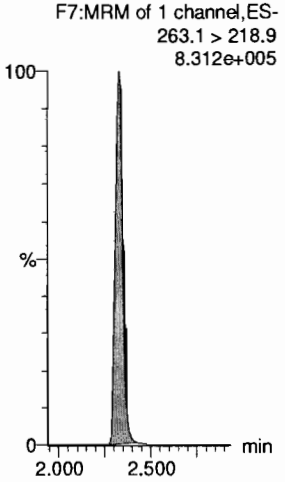
PFPrS



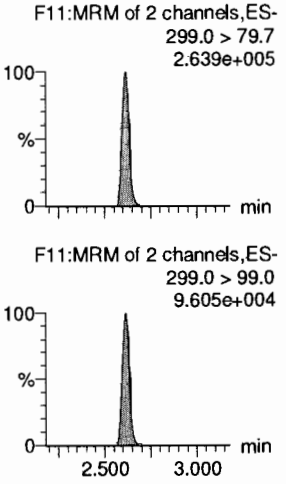
3:3 FTCA



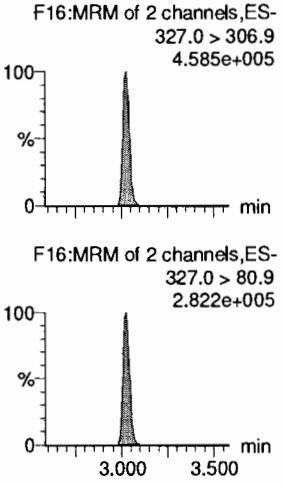
PFPeA



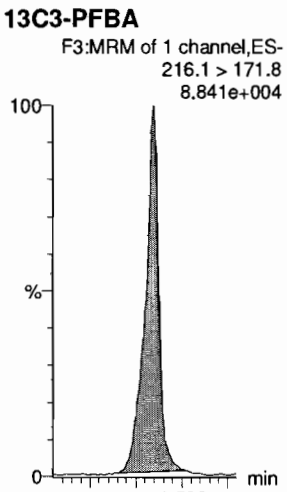
PFBS



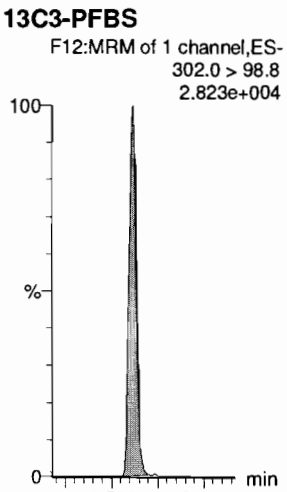
4:2 FTS



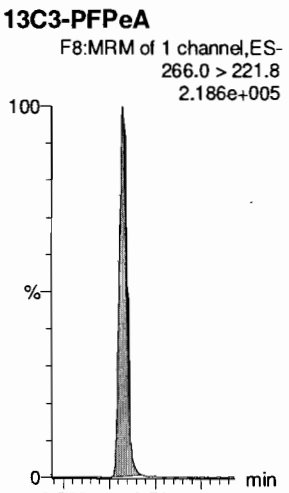
13C3-PFBA



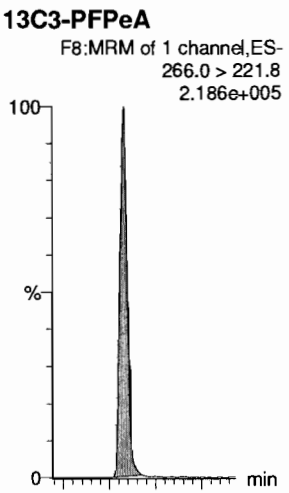
13C3-PFBS



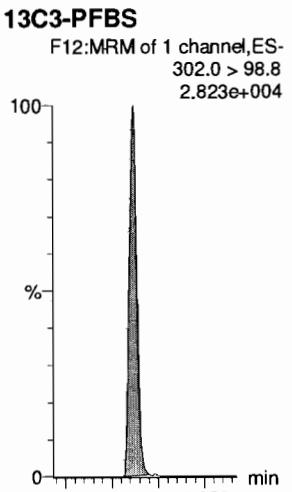
13C3-PFPeA



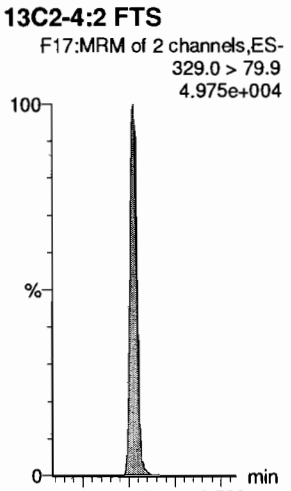
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

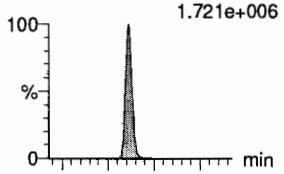


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

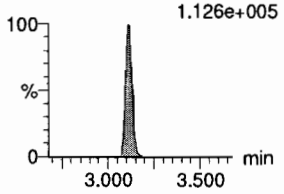
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

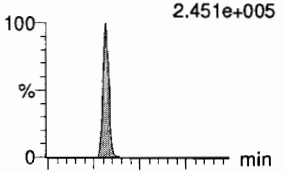
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.721e+006



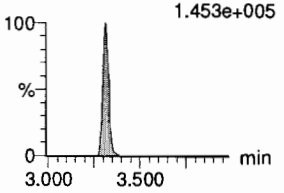
F13:MRM of 2 channels,ES-
313 > 118.9
1.126e+005



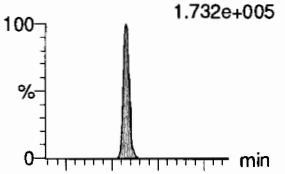
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
2.451e+005



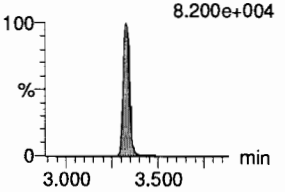
F19:MRM of 2 channels,ES-
349.1 > 99
1.453e+005



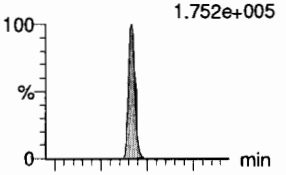
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
1.732e+005



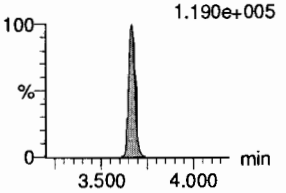
F9:MRM of 3 channels,ES-
285.1 > 184.9
8.200e+004



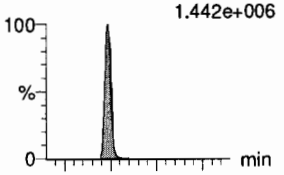
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
1.752e+005



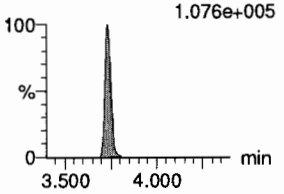
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.190e+005



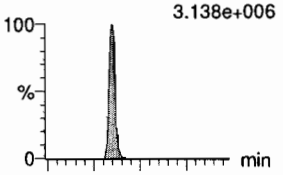
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
1.442e+006



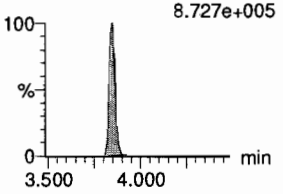
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.076e+005



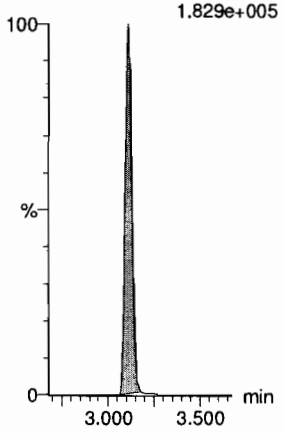
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
3.138e+006



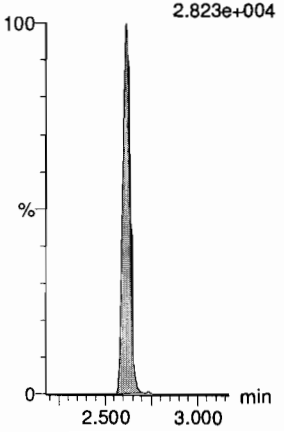
F22:MRM of 2 channels,ES-
376.8 > 85.0
8.727e+005



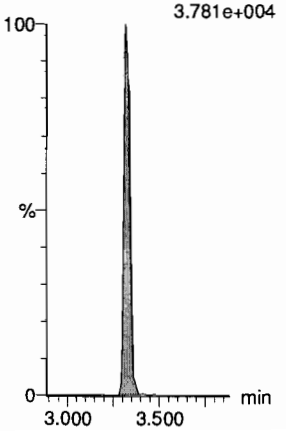
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.829e+005



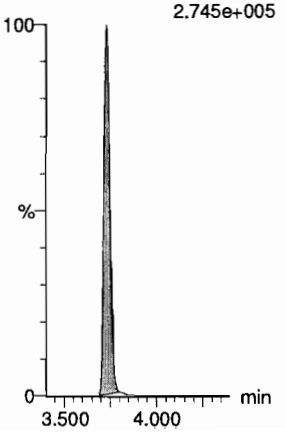
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.823e+004



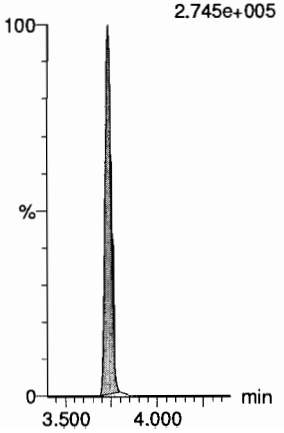
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
3.781e+004



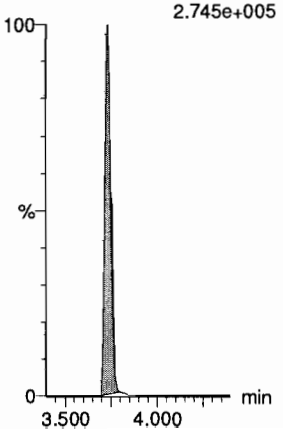
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.745e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.745e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.745e+005

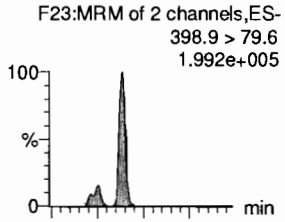


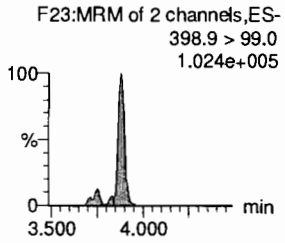
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

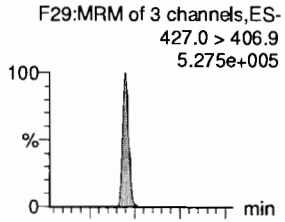
Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

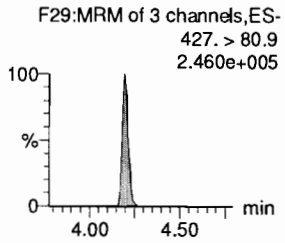
L-PFHxS



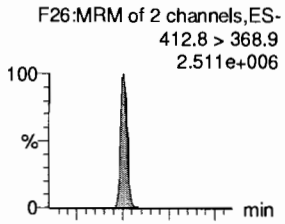


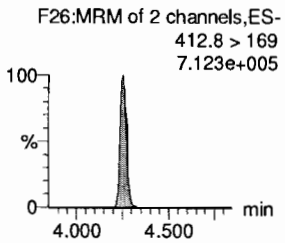
6:2 FTS



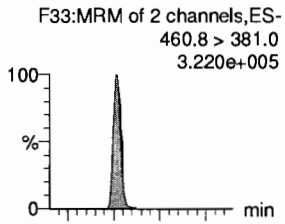


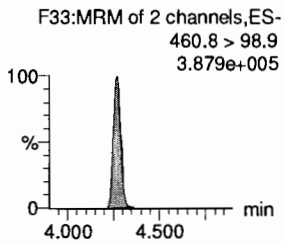
L-PFOA



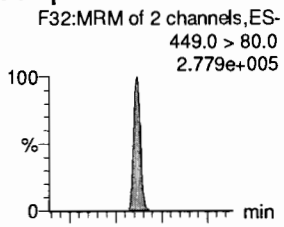


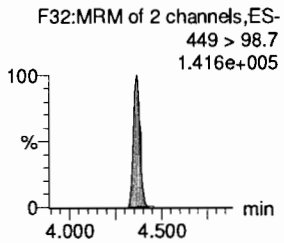
PFEChS



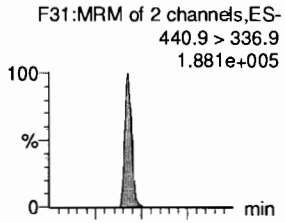


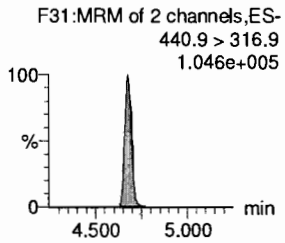
PFHpS



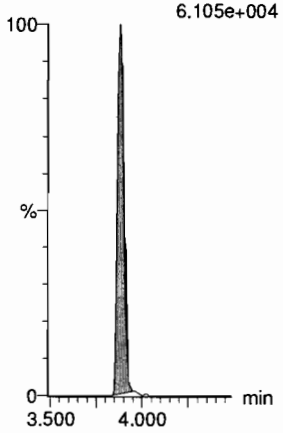


7:3 FTCA

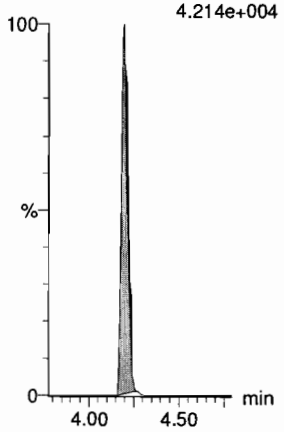




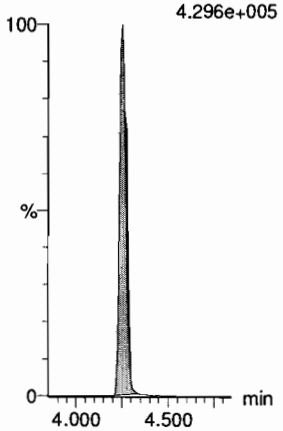
13C3-PFHxS



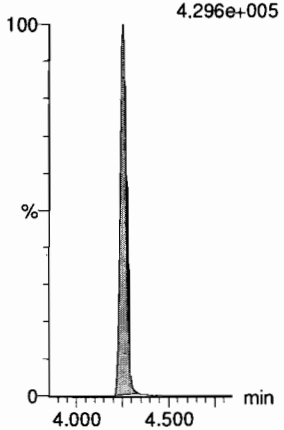
13C2-6:2 FTS



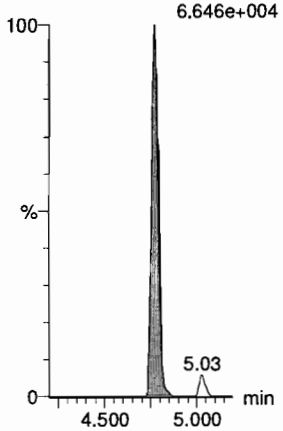
13C2-PFOA



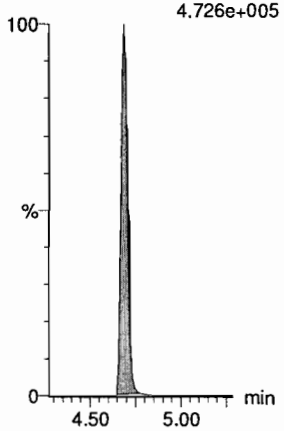
13C2-PFOA



13C8-PFOS



13C5-PFNA

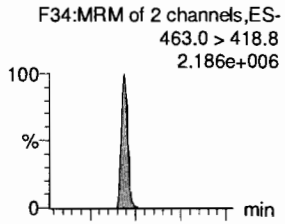


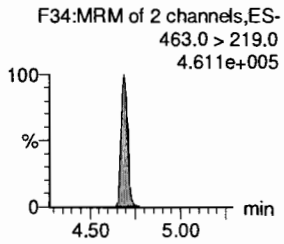
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

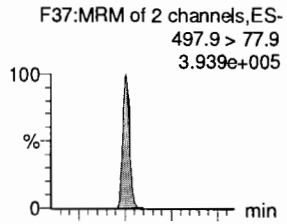
Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

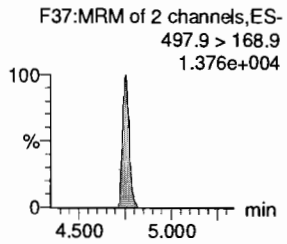
PFNA



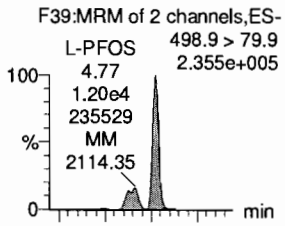


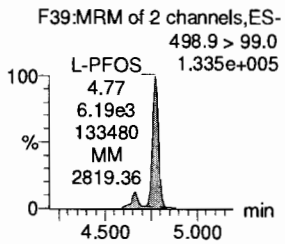
PFOSA



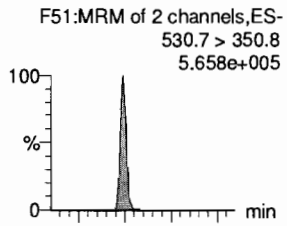


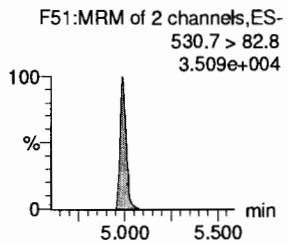
L-PFOS



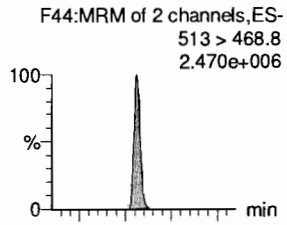


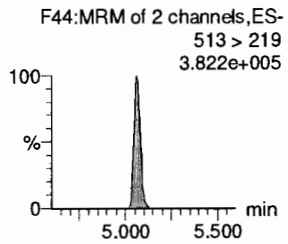
9Cl-PF30NS



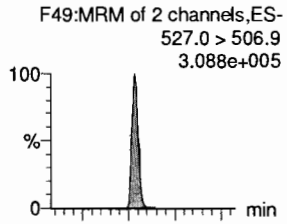


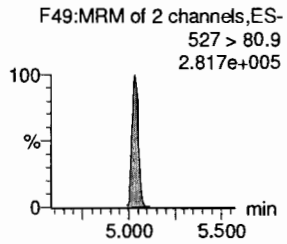
PFDA



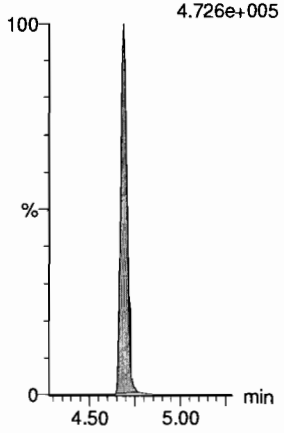


8:2 FTS

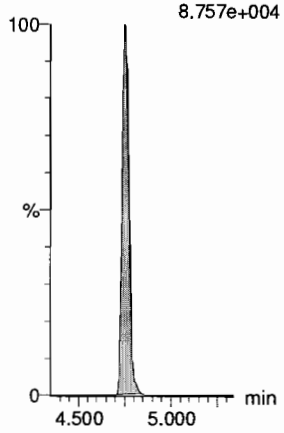




13C5-PFNA



13C8-PFOSA



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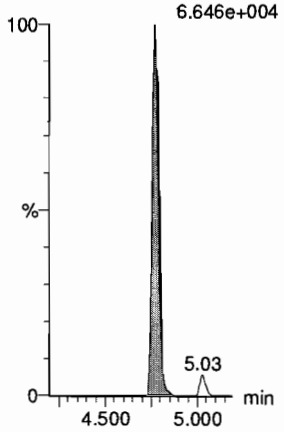
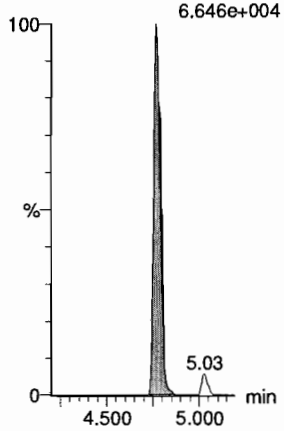
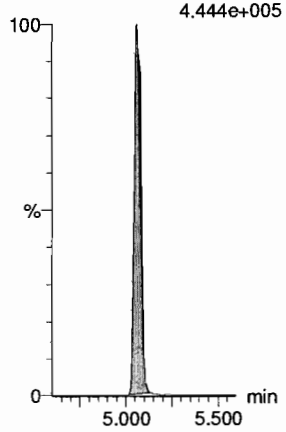


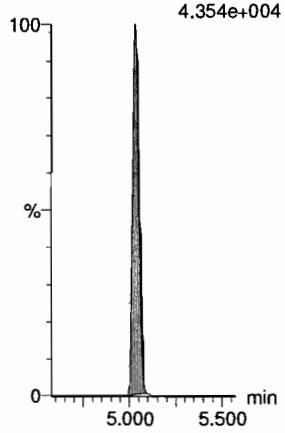
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

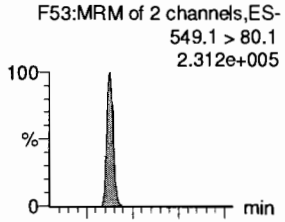


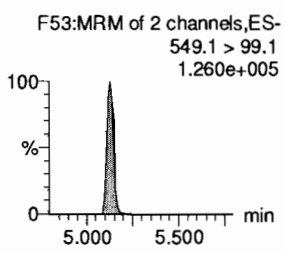
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

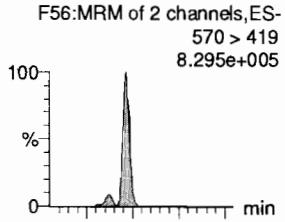
Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

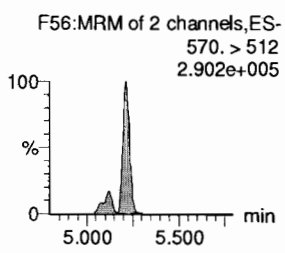
PFNS



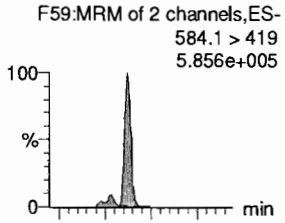


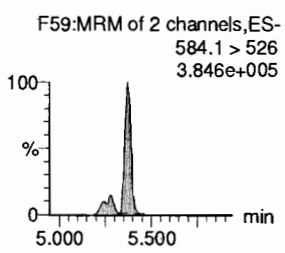
L-MeFOSAA



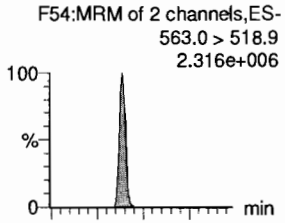


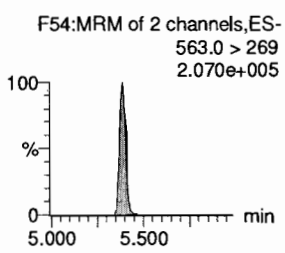
L-EtFOSAA



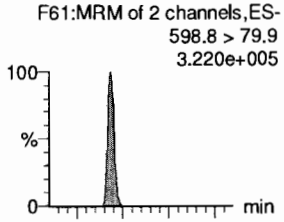


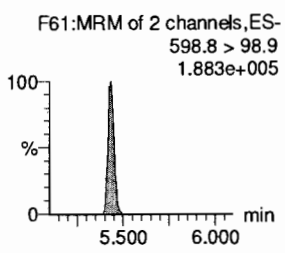
PFUdA



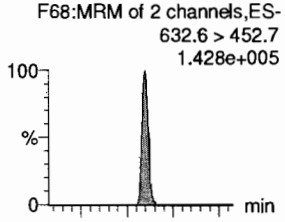


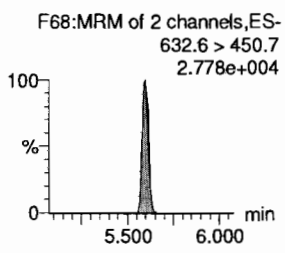
PFDS



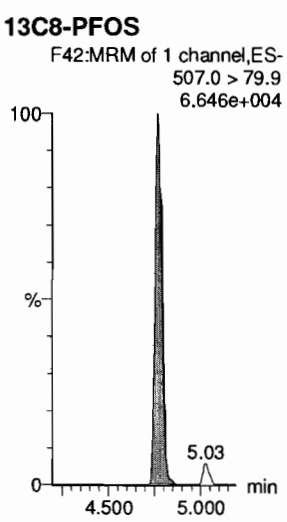


11Cl-PF30UdS

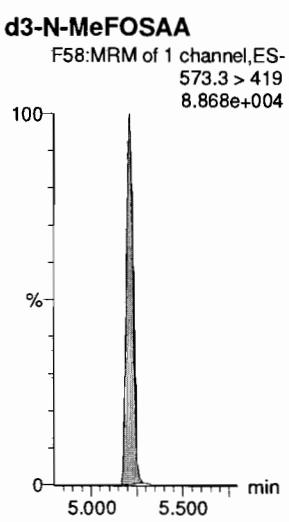




13C8-PFOS



d3-N-MeFOSAA



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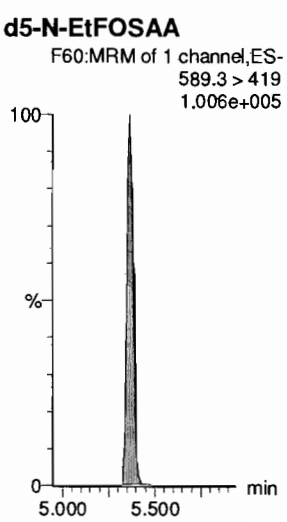
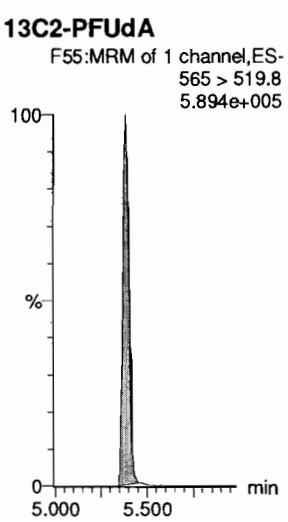
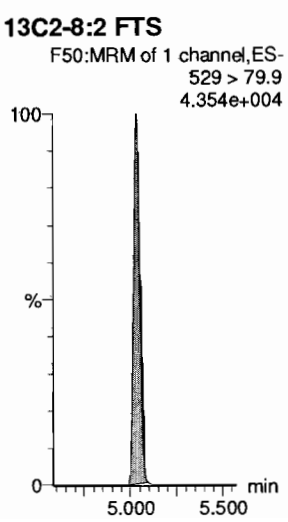


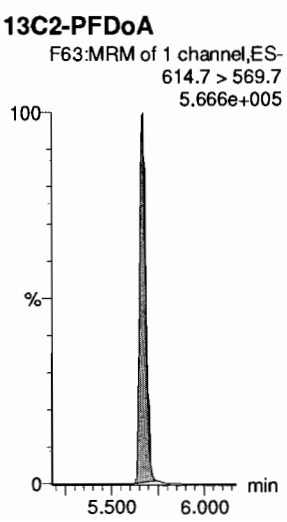
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

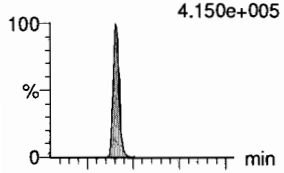


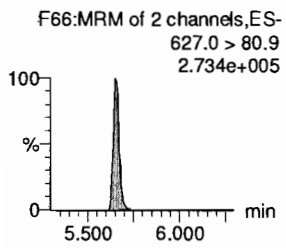
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

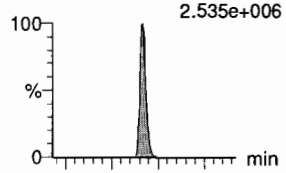
Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

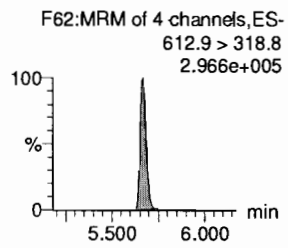
10:2 FTS



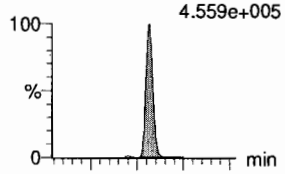


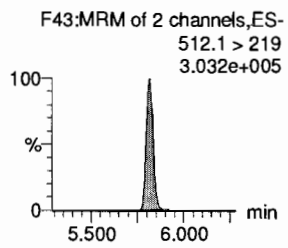
PFDoA



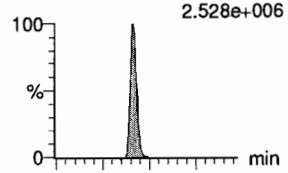


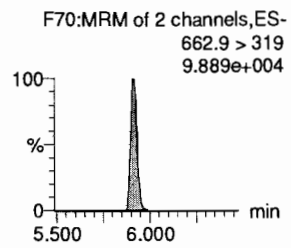
N-MeFOSA



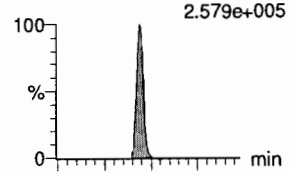


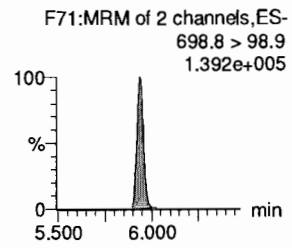
PFTrDA



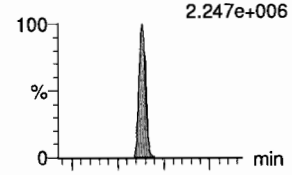


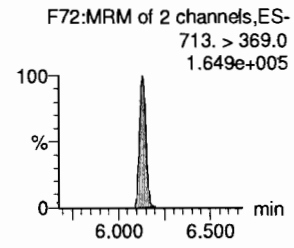
PFDoS



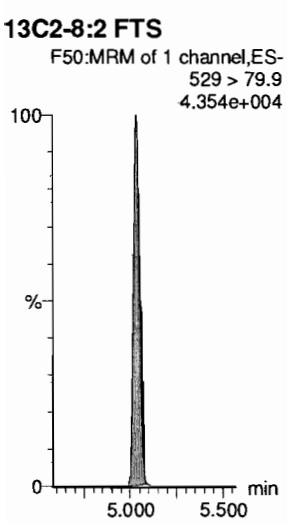


PFTeDA

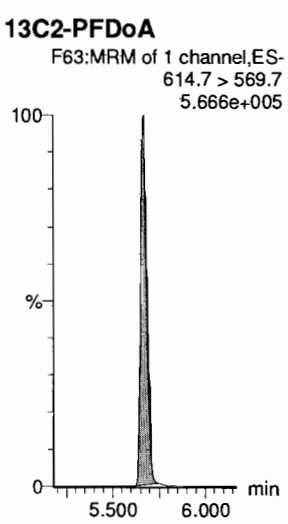




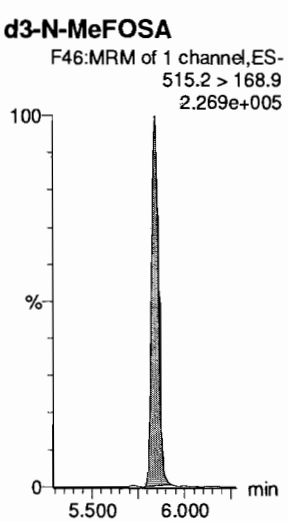
13C2-8:2 FTS



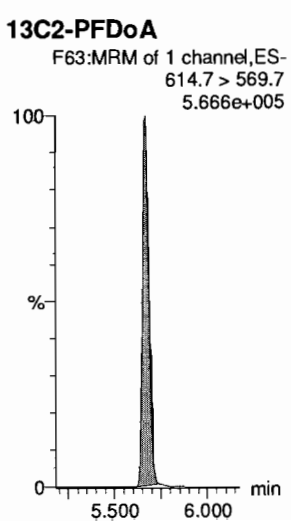
13C2-PFDoA



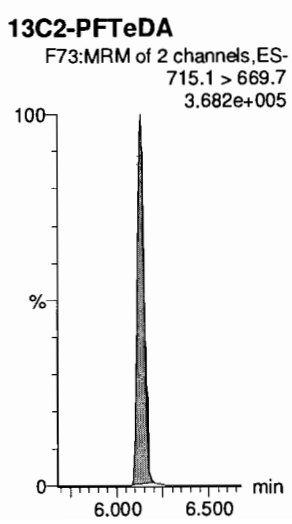
d3-N-MeFOSA



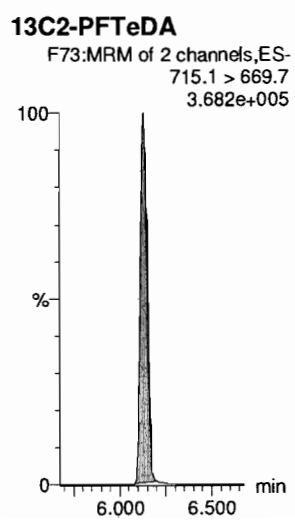
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

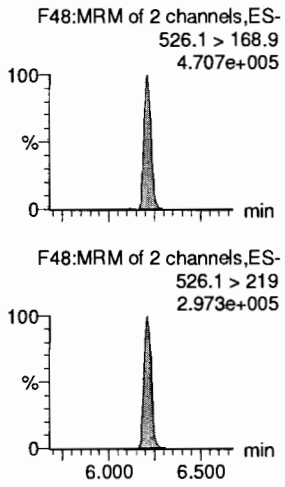


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

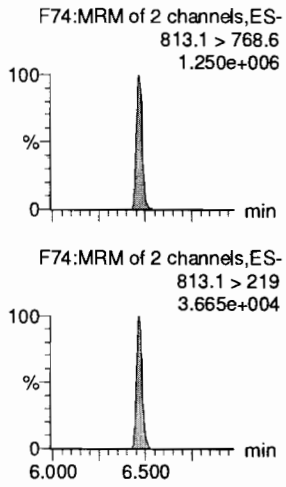
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

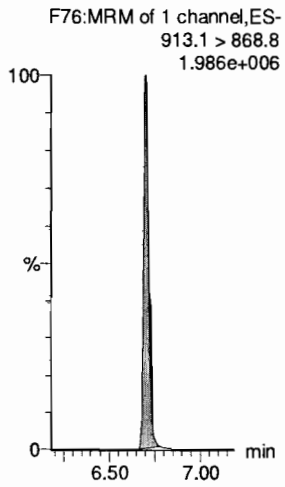
N-EtFOSA



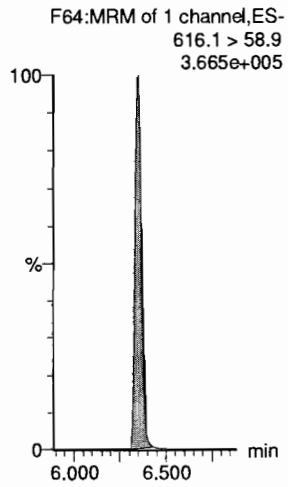
PFHxDA



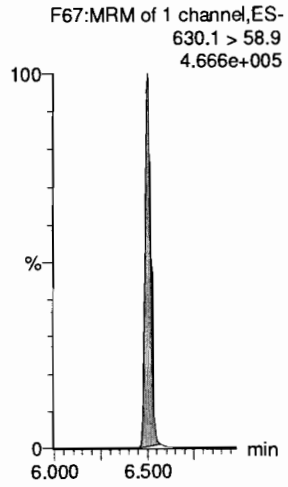
PFODA



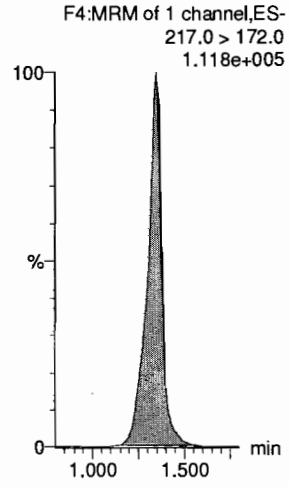
N-MeFOSE



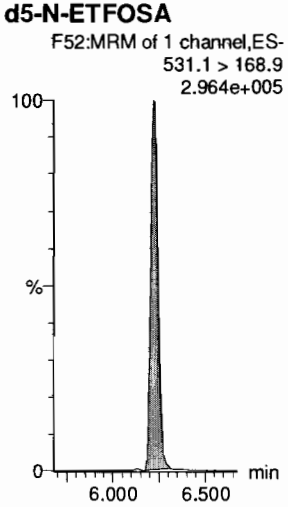
N-EtFOSE



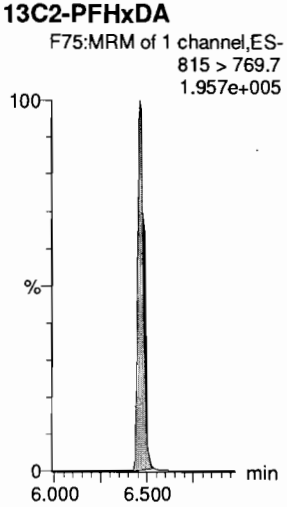
13C4-PFBA



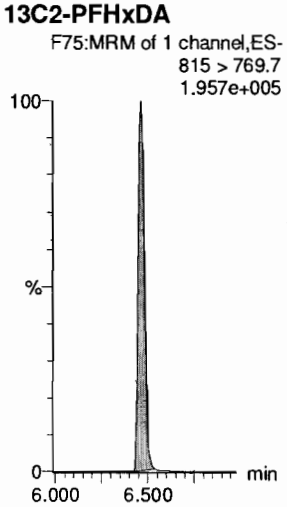
d5-N-ETFOSA



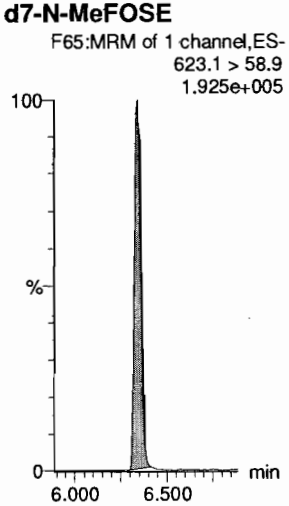
13C2-PFHxDA



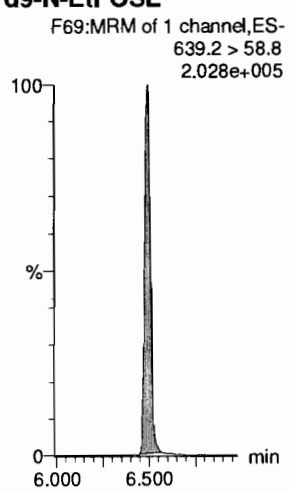
13C2-PFHxDA



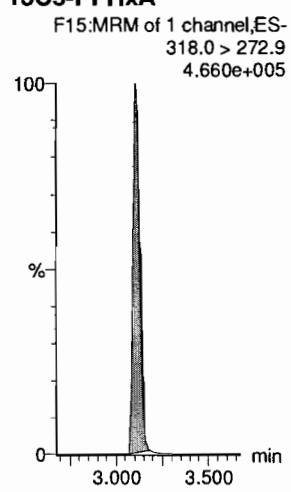
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

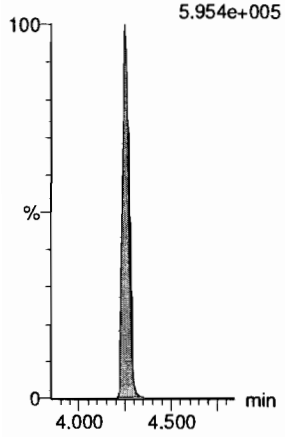


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

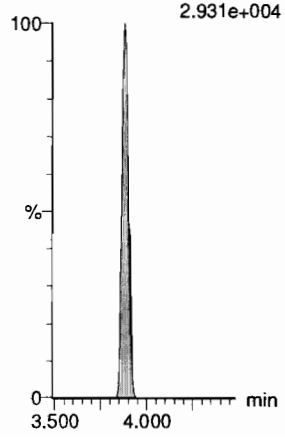
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_9, Date: 01-Jul-2019, Time: 17:06:44, ID: ST190701M1-7 PFC CS4 19F2418, Description: PFC CS4 19F2418

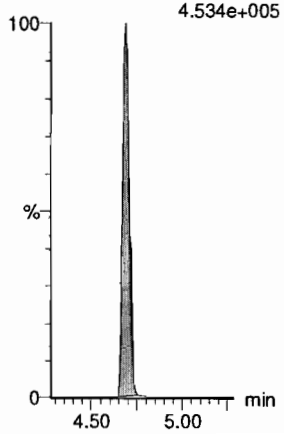
13C8-PFOA



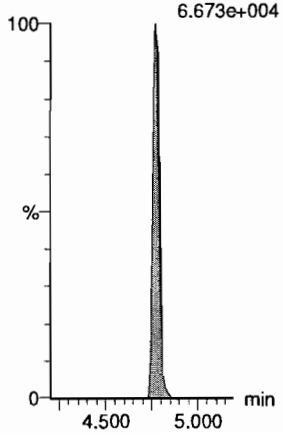
18O2-PFHxS



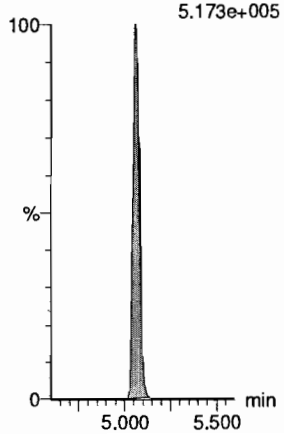
13C9-PFNA



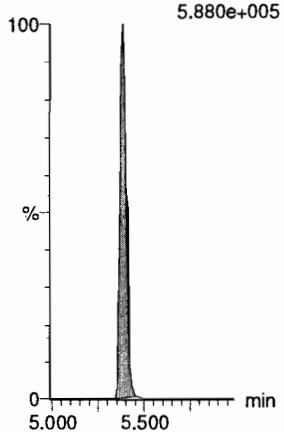
13C4-PFOS



13C6-PFDA



13C7-PFUdA

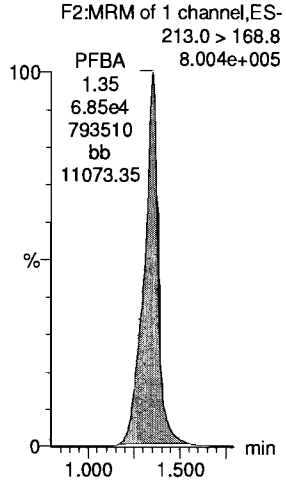


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

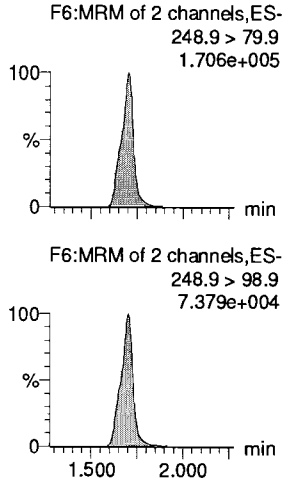
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

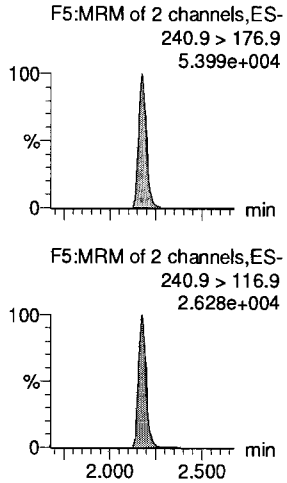
PFBA



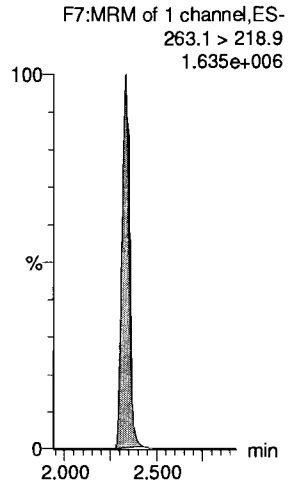
PFPrS



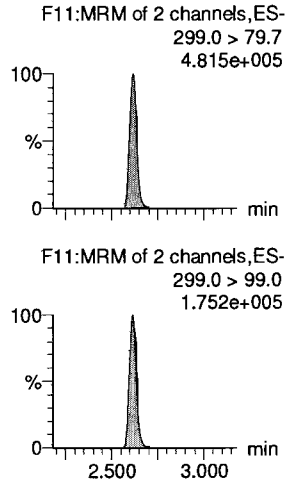
3:3 FTCA



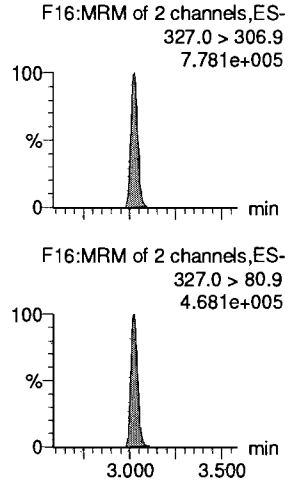
PFPeA



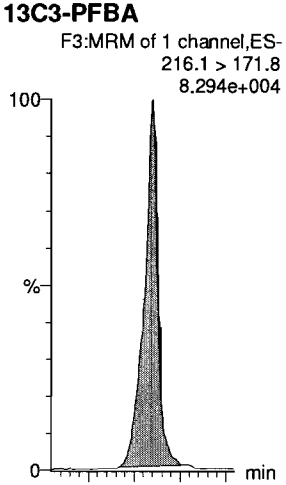
PFBS



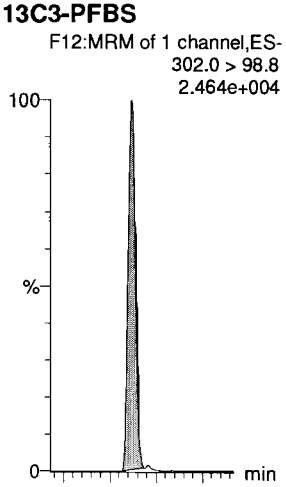
4:2 FTS



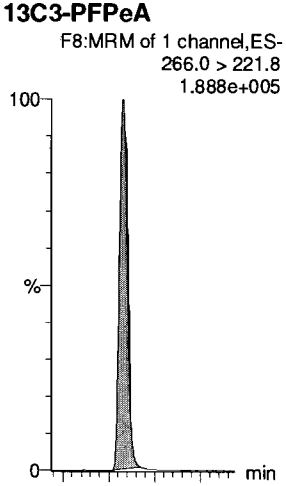
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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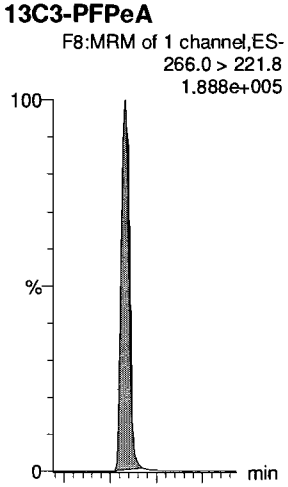

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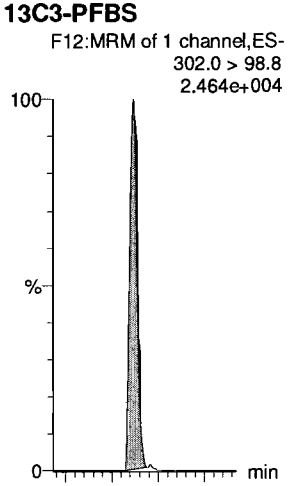
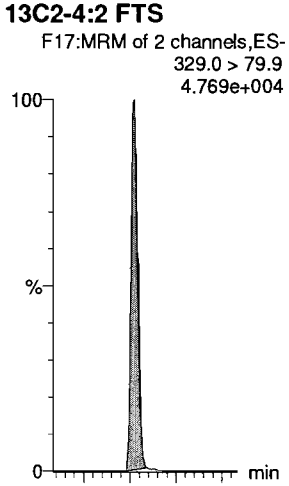


13C2-4:2 FTS



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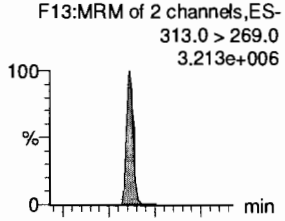
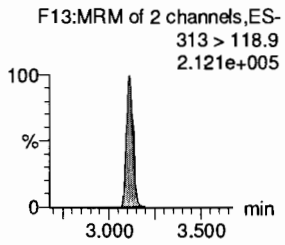
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

PFHxA





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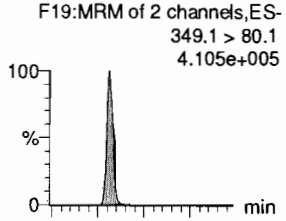
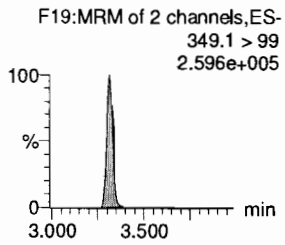
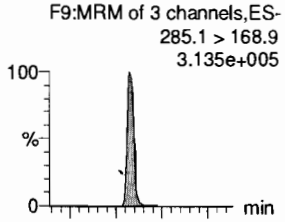
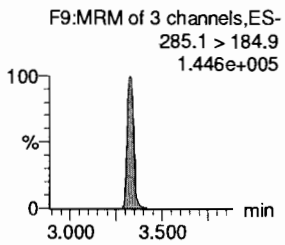




HFPO-DA





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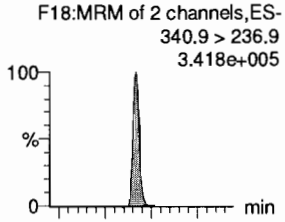

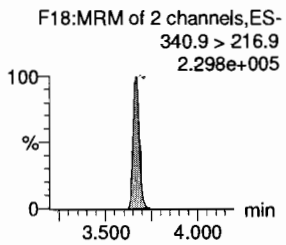

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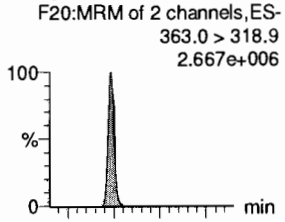

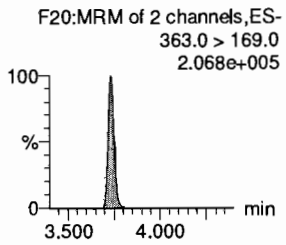

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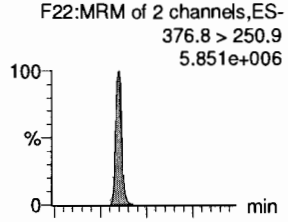

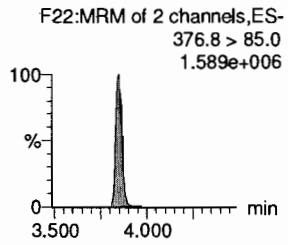

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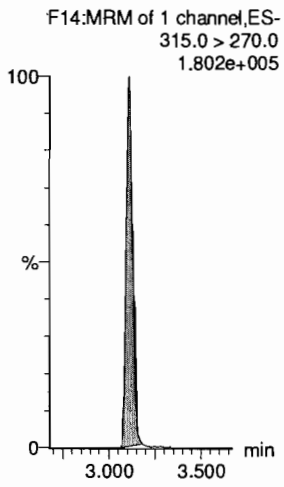

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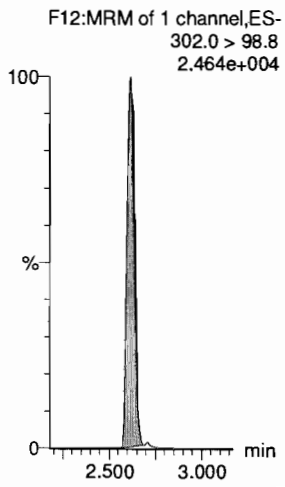

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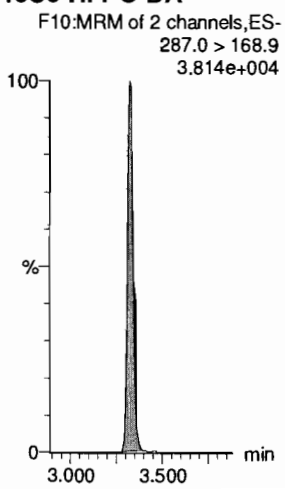
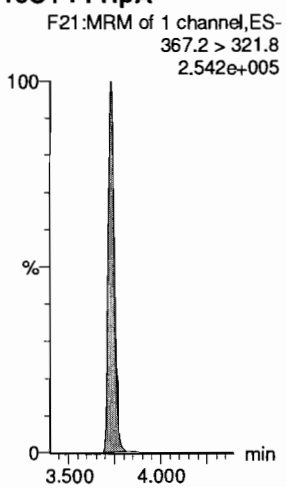


13C4-PFHpA



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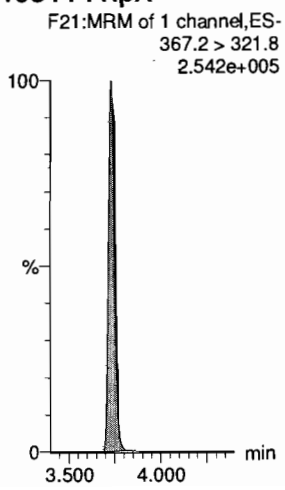

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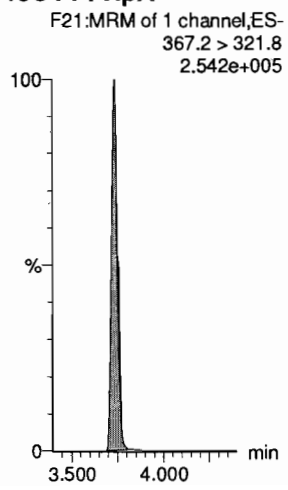

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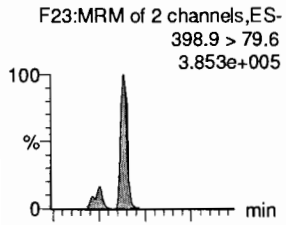
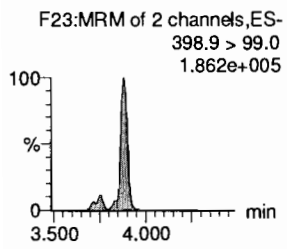
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

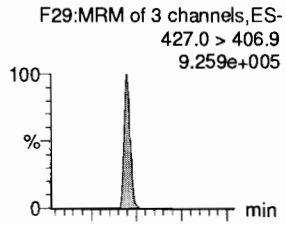
Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

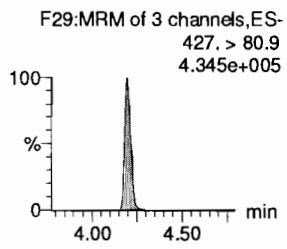
L-PFHxS





6:2 FTS





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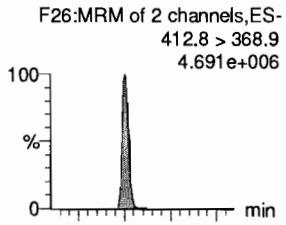

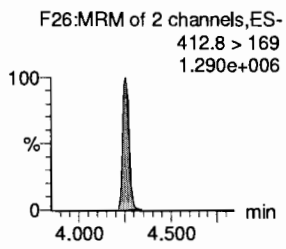

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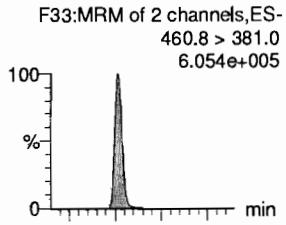

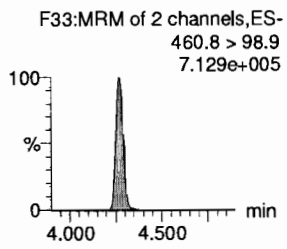

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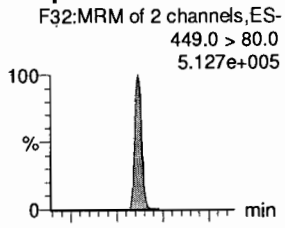
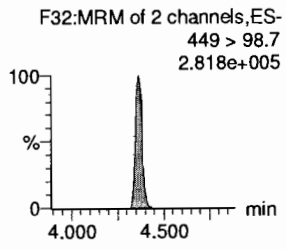
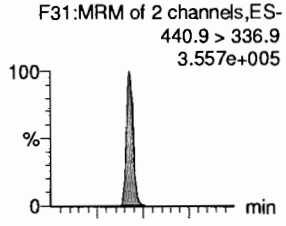
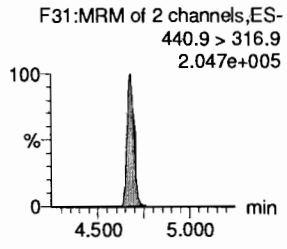


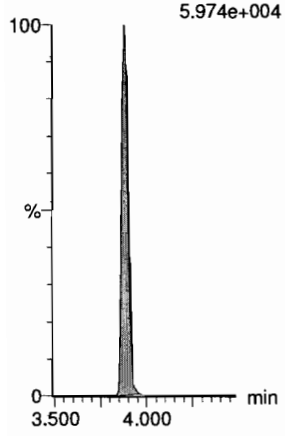


7:3 FTCA

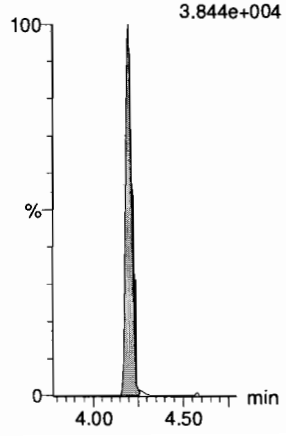




13C3-PFHxS



13C2-6:2 FTS



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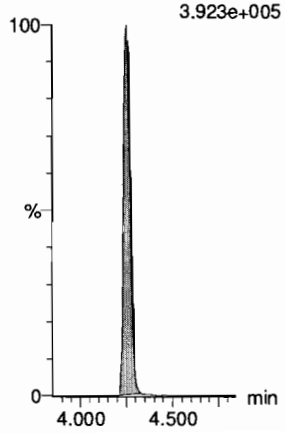

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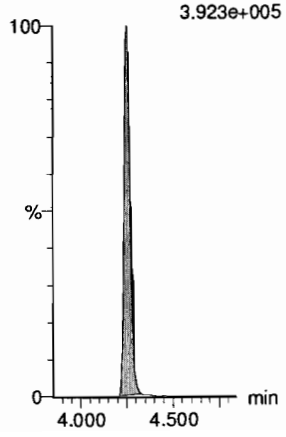
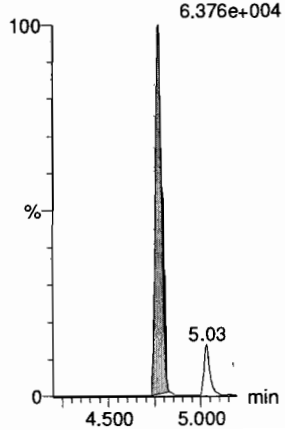


13C8-PFOS



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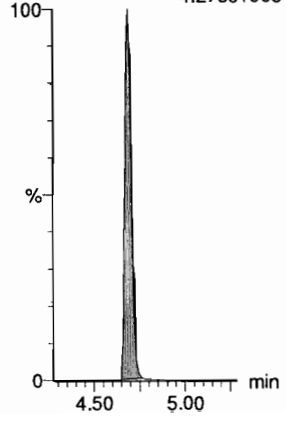
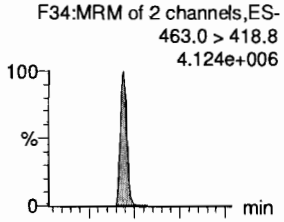


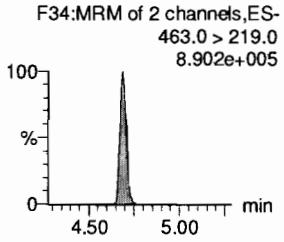
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

PFNA





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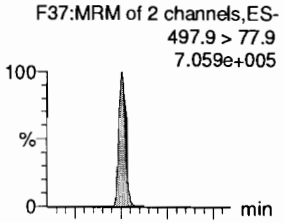
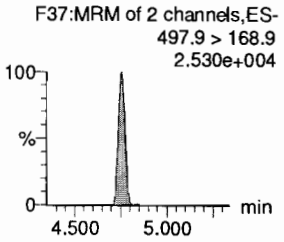
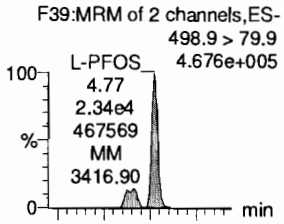
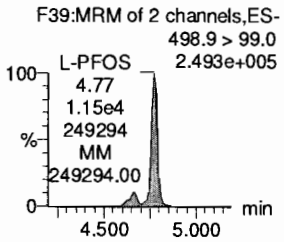


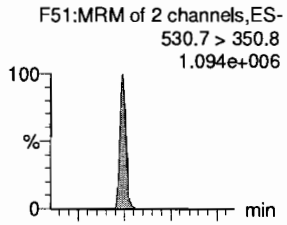


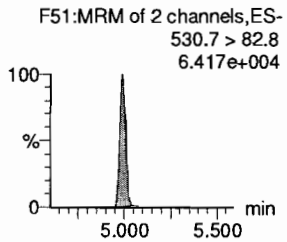
L-PFOS



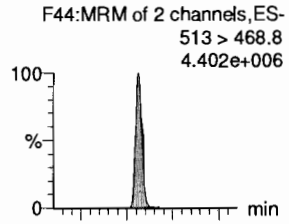


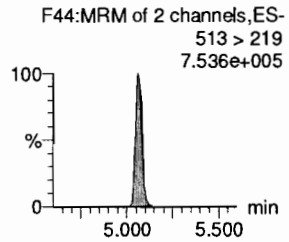
9Cl-PF30NS



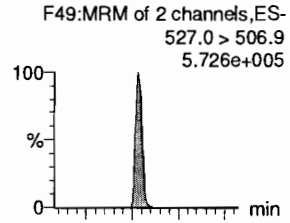


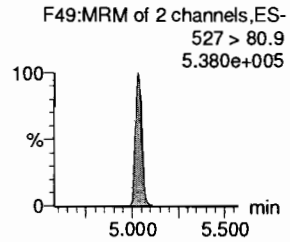
PFDA



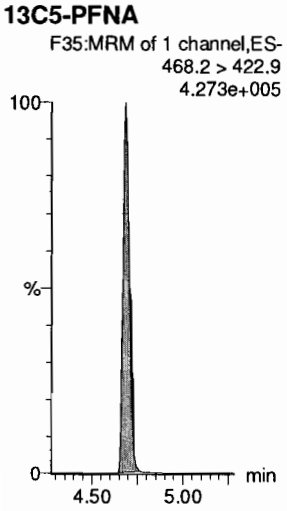


8:2 FTS

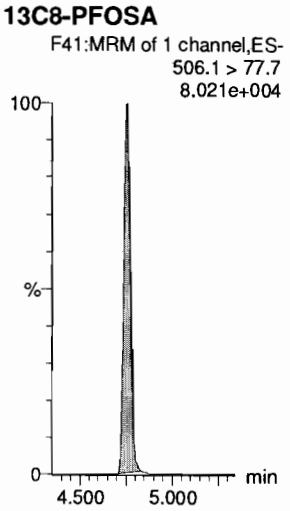




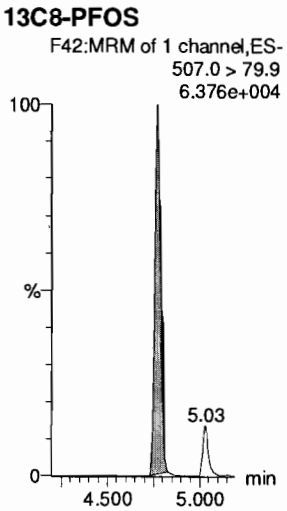
13C5-PFNA



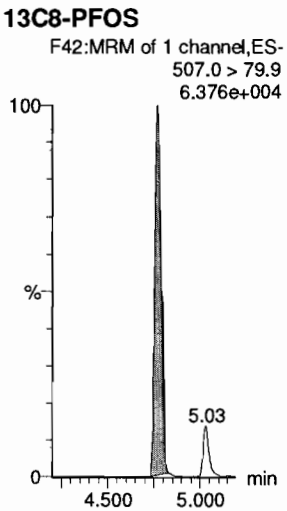
13C8-PFOSA



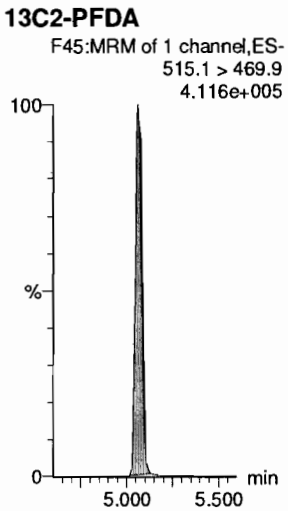
13C8-PFOS



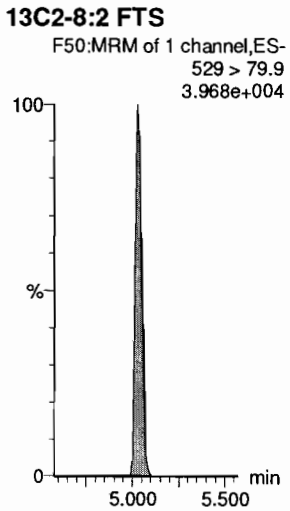
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

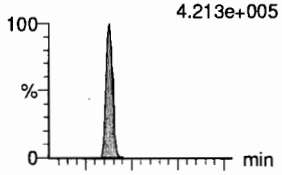


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

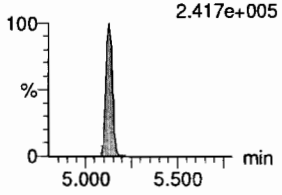
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

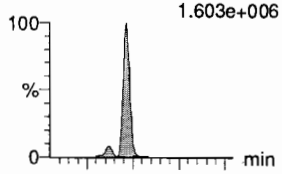
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
4.213e+005



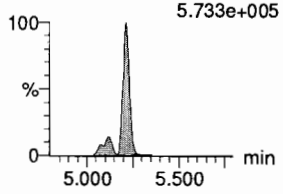
F53:MRM of 2 channels,ES-
549.1 > 99.1
2.417e+005



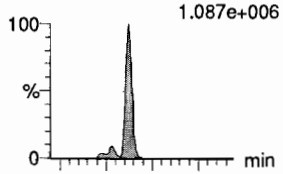
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.603e+006



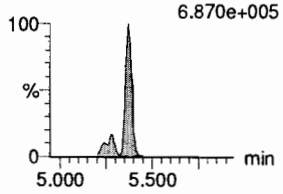
F56:MRM of 2 channels,ES-
570. > 512
5.733e+005



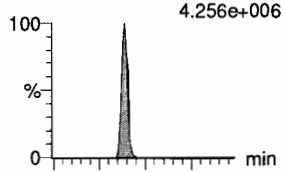
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.087e+006



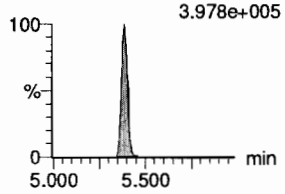
F59:MRM of 2 channels,ES-
584.1 > 526
6.870e+005



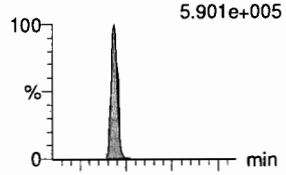
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.256e+006



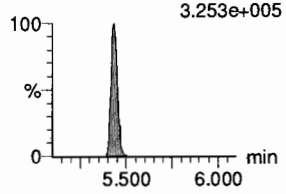
F54:MRM of 2 channels,ES-
563.0 > 269
3.978e+005



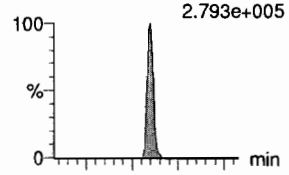
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
5.901e+005



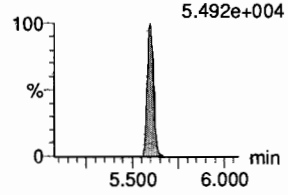
F61:MRM of 2 channels,ES-
598.8 > 98.9
3.253e+005



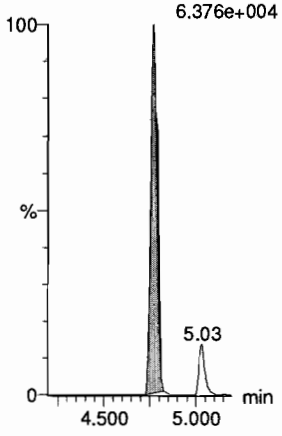
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
2.793e+005



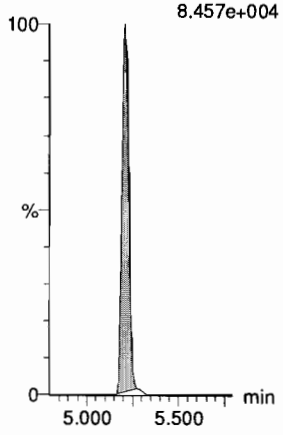
F68:MRM of 2 channels,ES-
632.6 > 450.7
5.492e+004



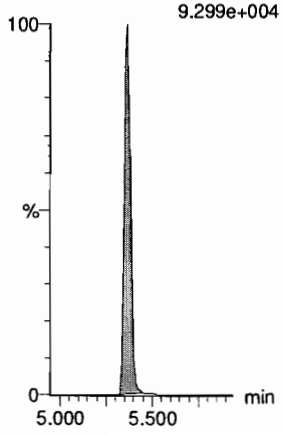
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.376e+004



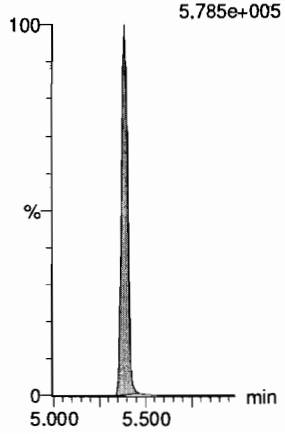
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.457e+004



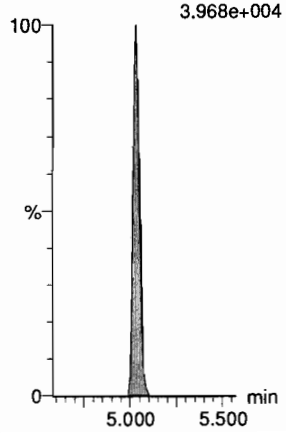
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
9.299e+004



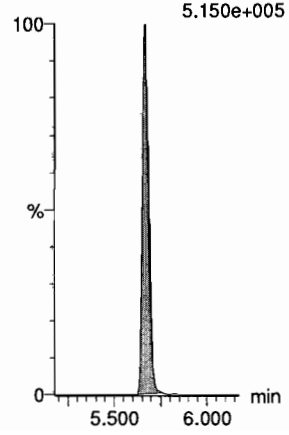
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.785e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.968e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.150e+005

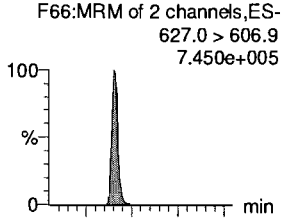


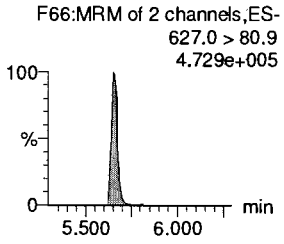
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

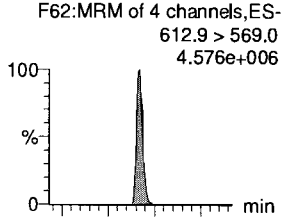
Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

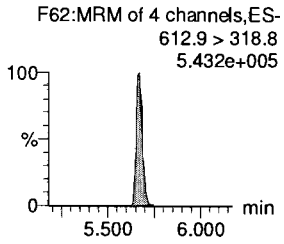
10:2 FTS



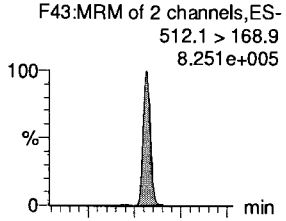


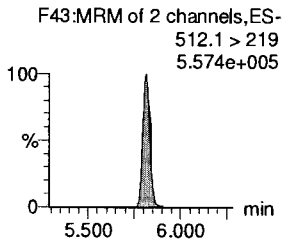
PFDoA



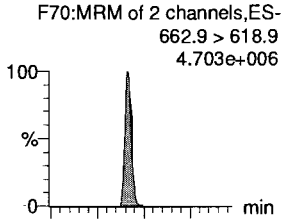


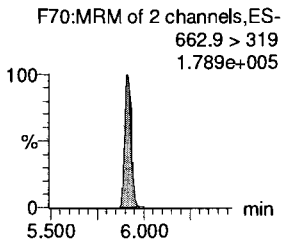
N-MeFOSA



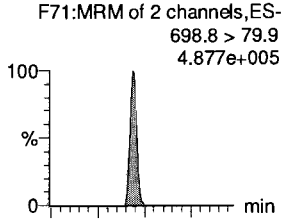


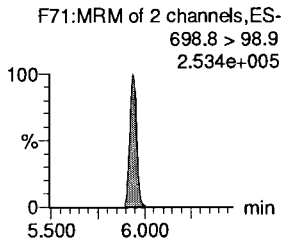
PFTrDA



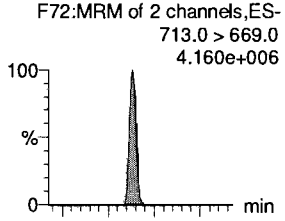


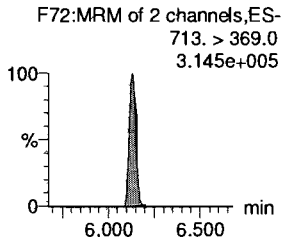
PFDoS



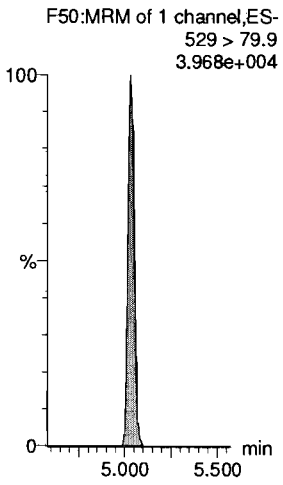


PFTeDA

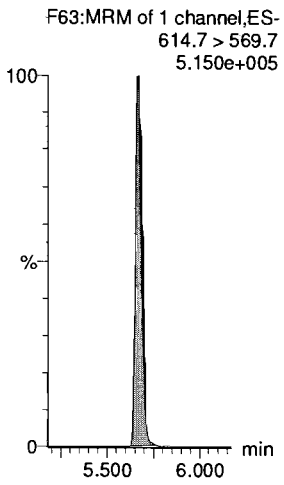




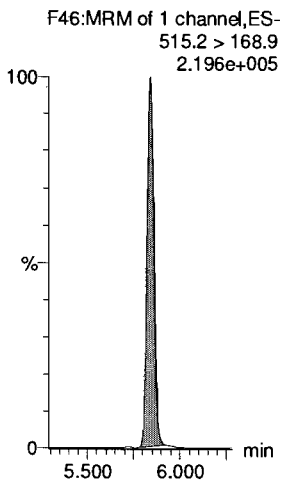
13C2-8:2 FTS



13C2-PFDoA



d3-N-MeFOSA



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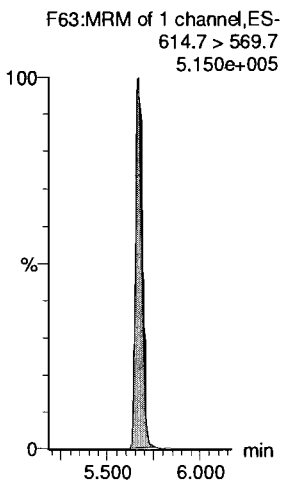
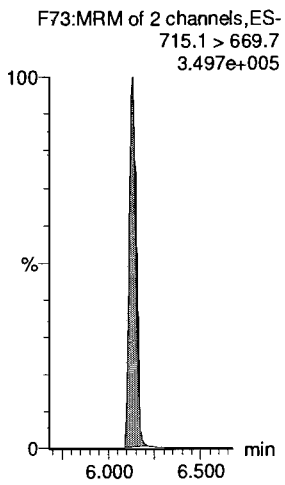
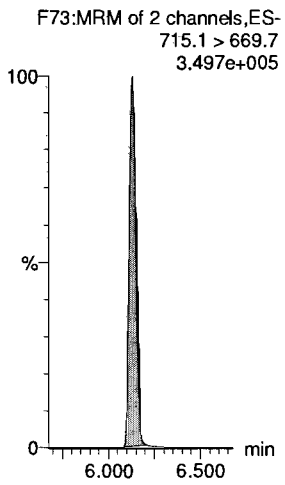


13C2-PFTeDA



13C2-PFTeDA

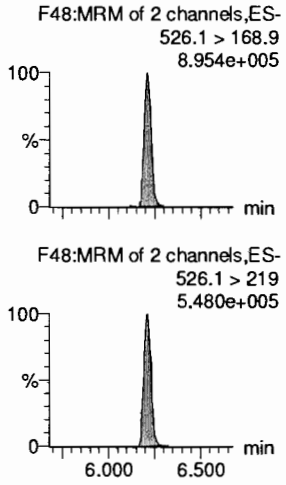


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

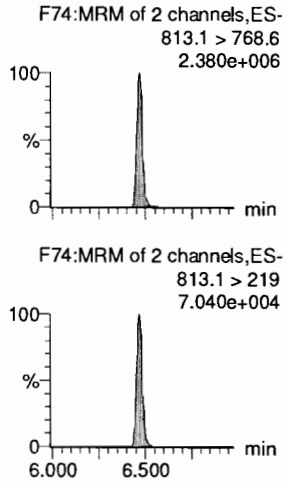
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

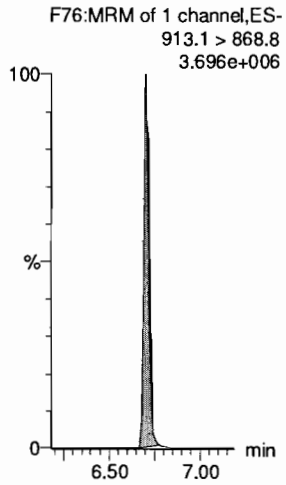
N-EtFOSA



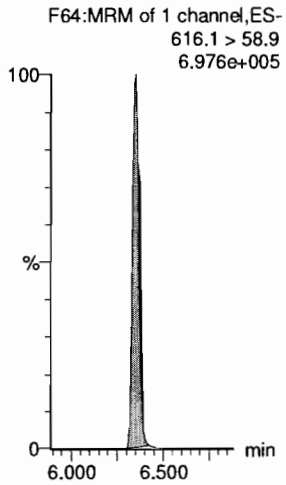
PFHxDA



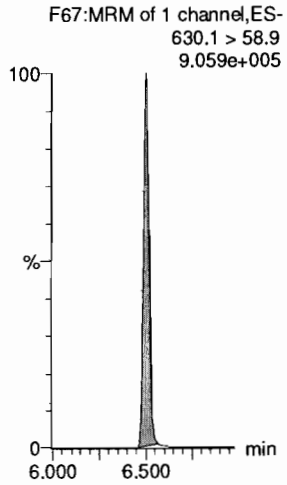
PFODA



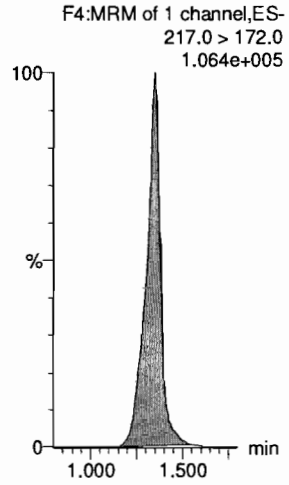
N-MeFOSE



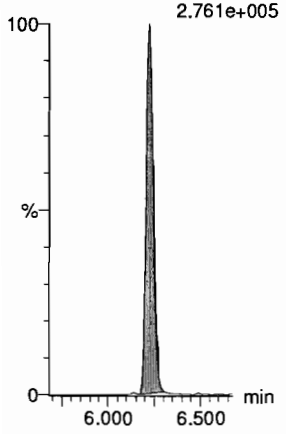
N-EtFOSE



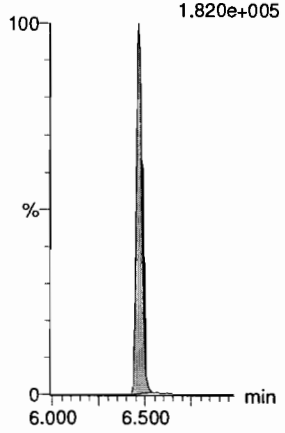
13C4-PFBA



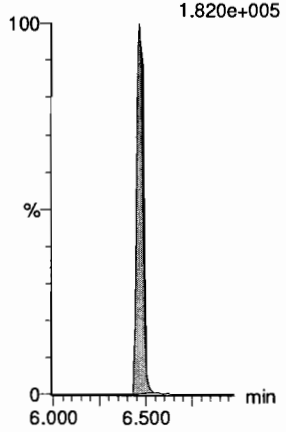
d5-N-ETFOSA



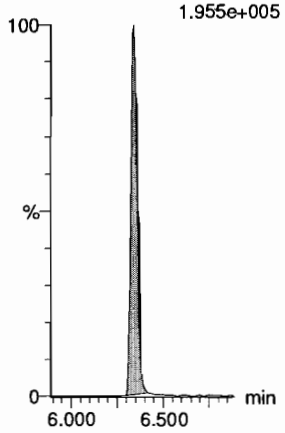
13C2-PFHxDA



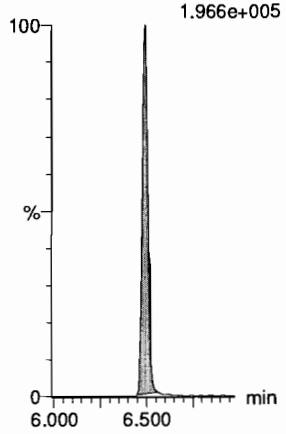
13C2-PFHxDA



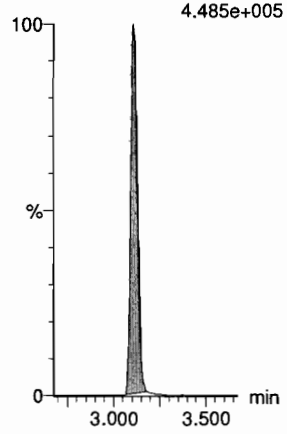
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

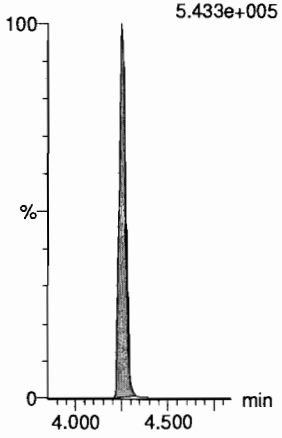


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

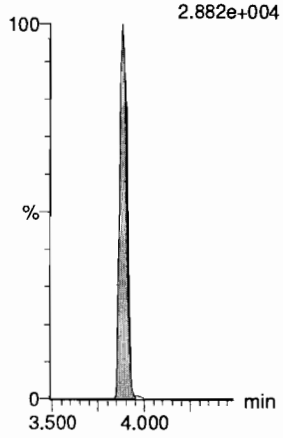
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_10, Date: 01-Jul-2019, Time: 17:17:22, ID: ST190701M1-8 PFC CS5 19F2419, Description: PFC CS5 19F2419

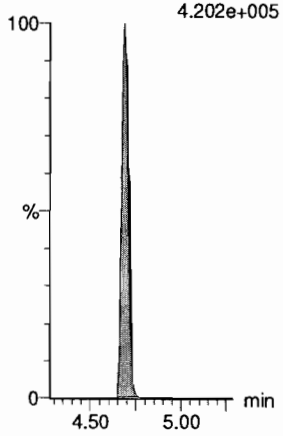
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
5.433e+005



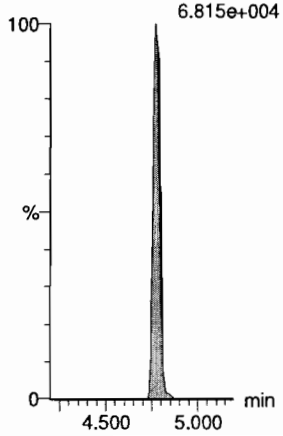
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
2.882e+004



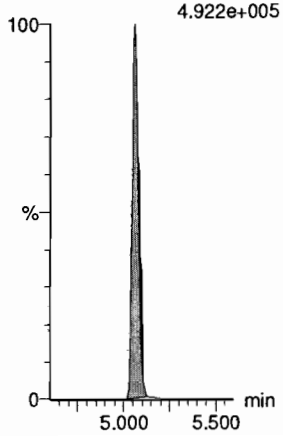
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.202e+005



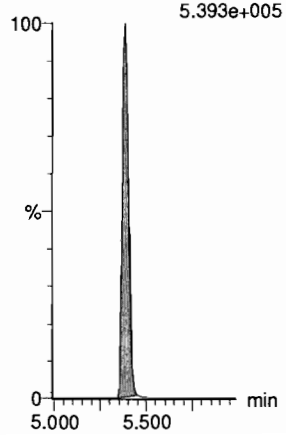
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
6.815e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
4.922e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.393e+005

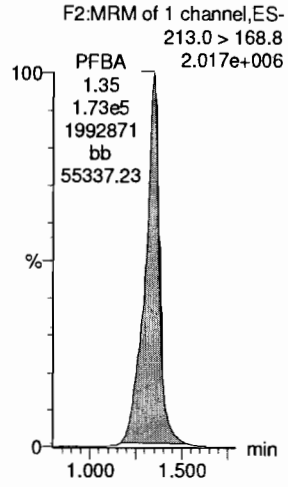


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

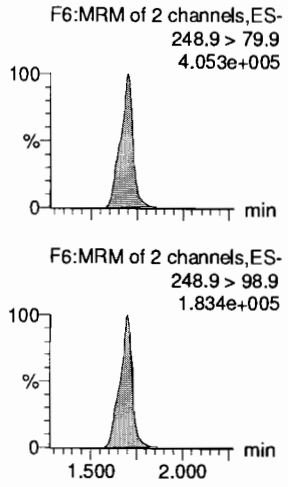
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

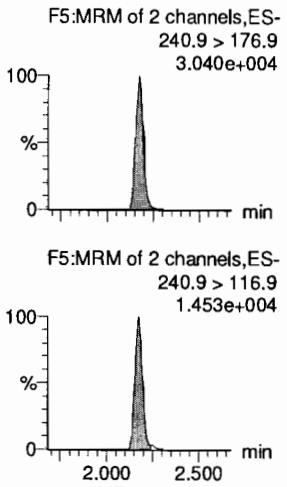
PFBA



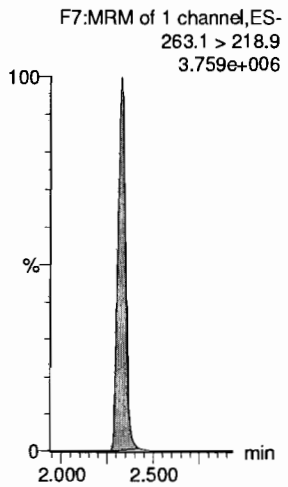
PFPrS



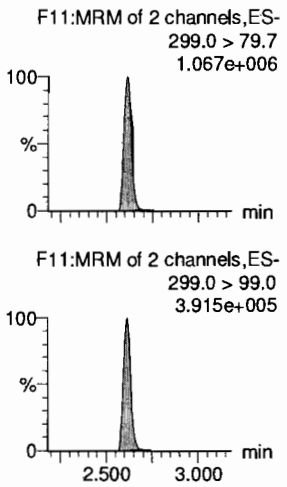
3:3 FTCA



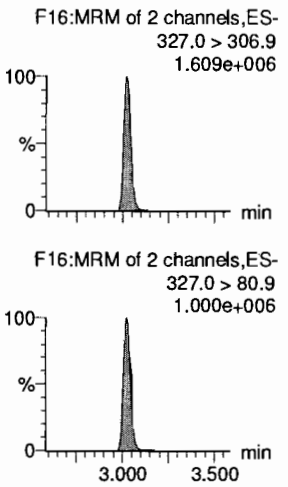
PFPeA



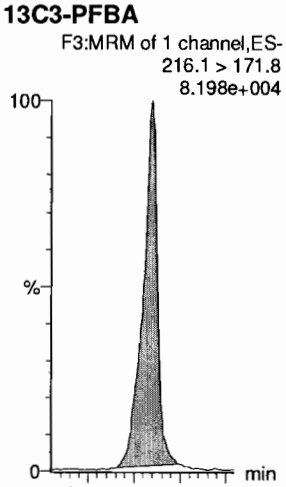
PFBS



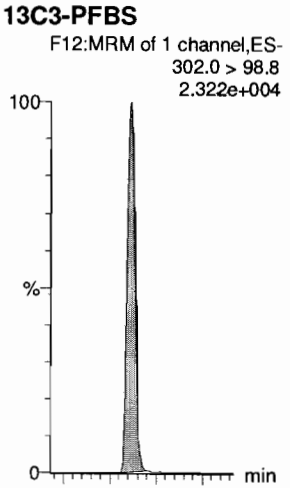
4:2 FTS



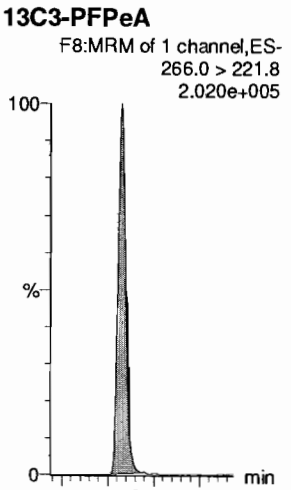
13C3-PFBA



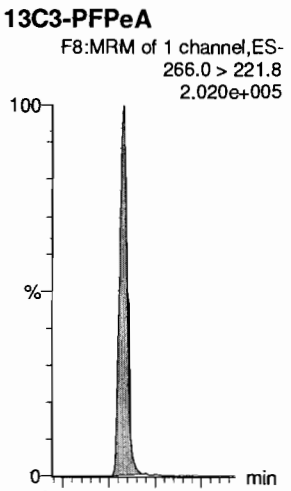
13C3-PFBS



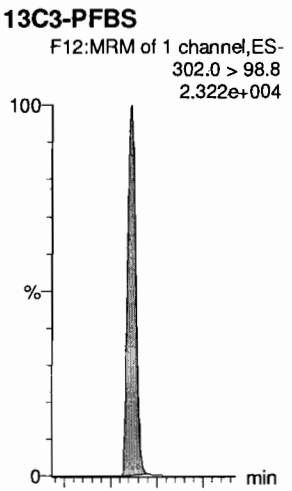
13C3-PFPeA



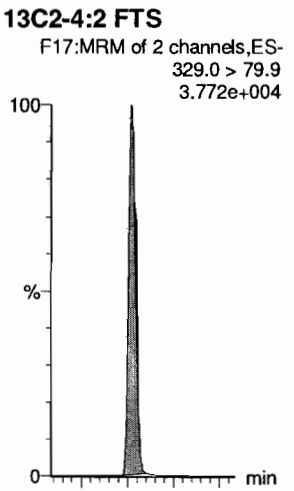
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

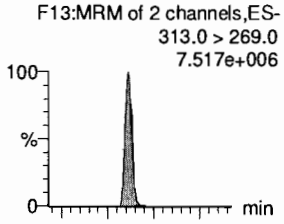


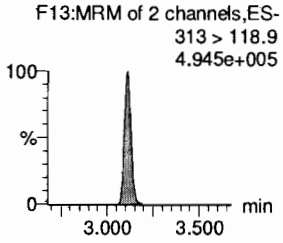
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

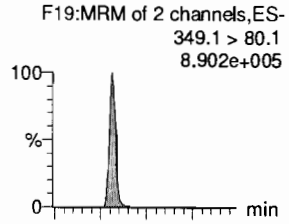
Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

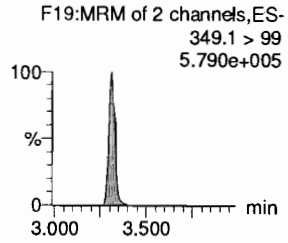
PFHxA



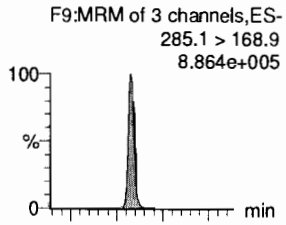


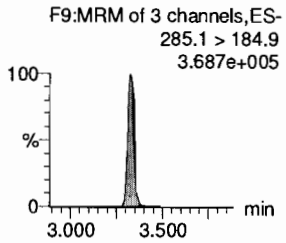
PFPeS



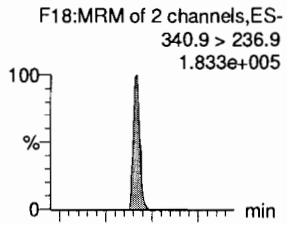


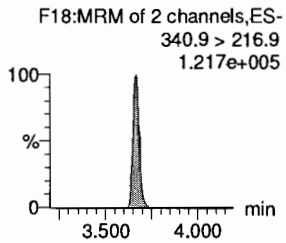
HFPO-DA



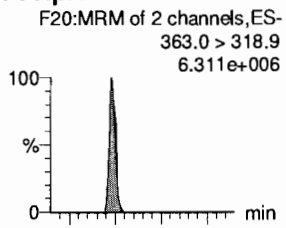


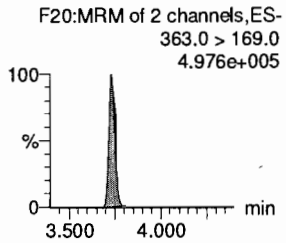
5:3 FTCA



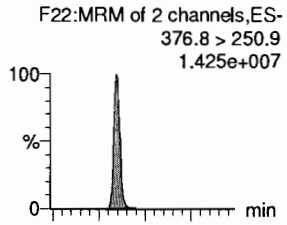


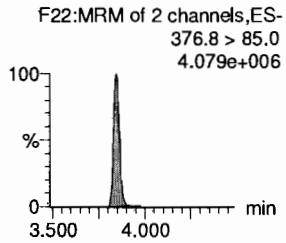
PFHpA



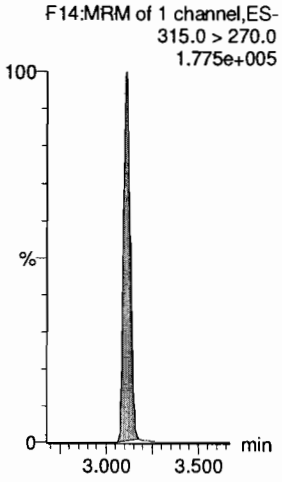


ADONA

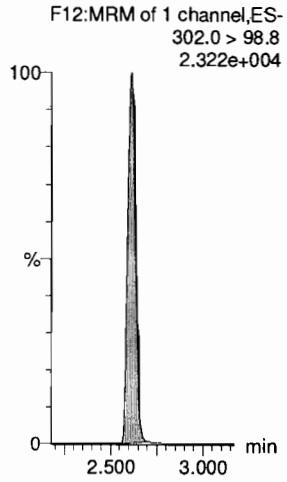




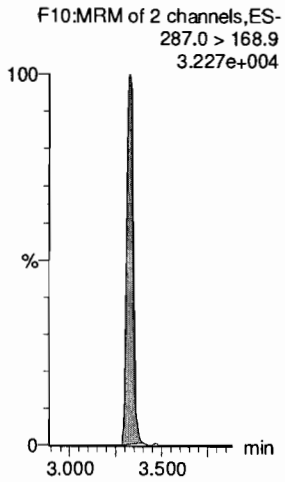
13C2-PFHxA



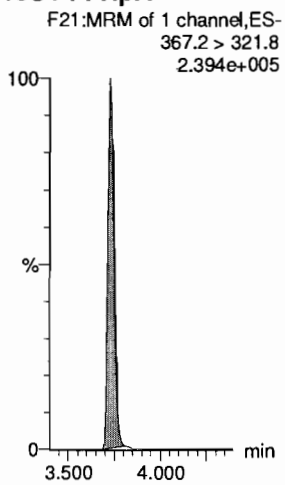
13C3-PFBS



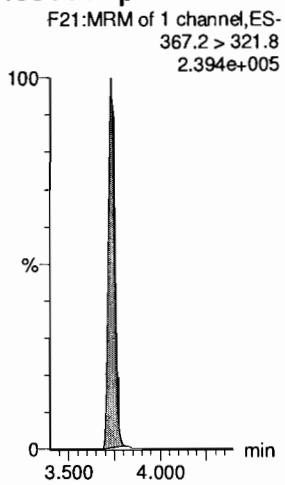
13C3-HFPO-DA



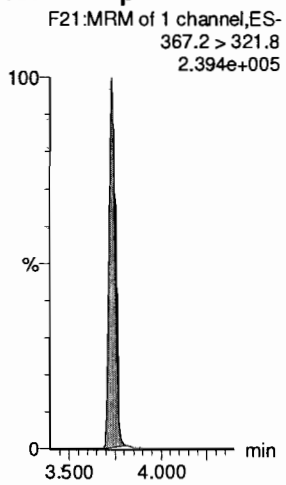
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

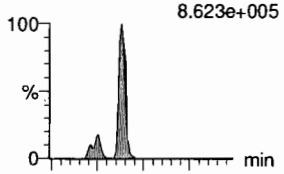


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

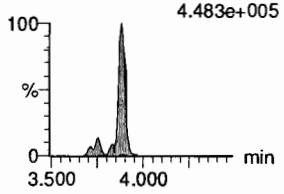
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

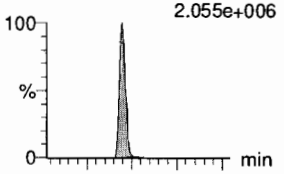
L-PFHxS
F23:MRM of 2 channels,ES-
398.9 > 79.6
8.623e+005



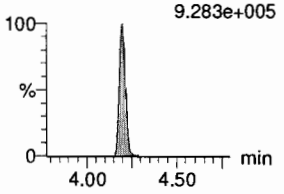
F23:MRM of 2 channels,ES-
398.9 > 99.0
4.483e+005



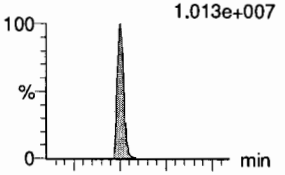
6:2 FTS
F29:MRM of 3 channels,ES-
427.0 > 406.9
2.055e+006



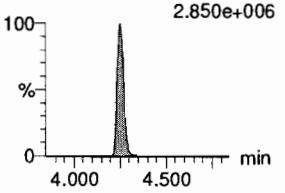
F29:MRM of 3 channels,ES-
427. > 80.9
9.283e+005



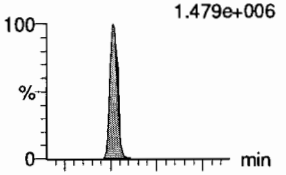
L-PFOA
F26:MRM of 2 channels,ES-
412.8 > 368.9
1.013e+007



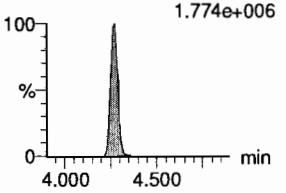
F26:MRM of 2 channels,ES-
412.8 > 169
2.850e+006



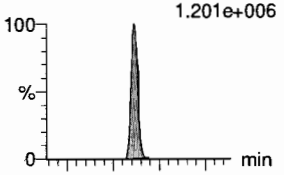
PFEChS
F33:MRM of 2 channels,ES-
460.8 > 381.0
1.479e+006



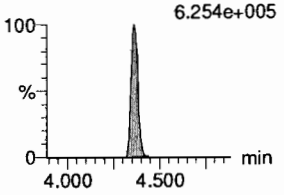
F33:MRM of 2 channels,ES-
460.8 > 98.9
1.774e+006



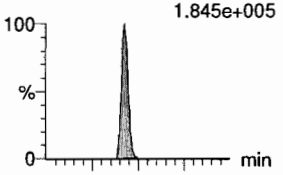
PFHpS
F32:MRM of 2 channels,ES-
449.0 > 80.0
1.201e+006



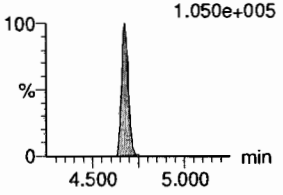
F32:MRM of 2 channels,ES-
449 > 98.7
6.254e+005



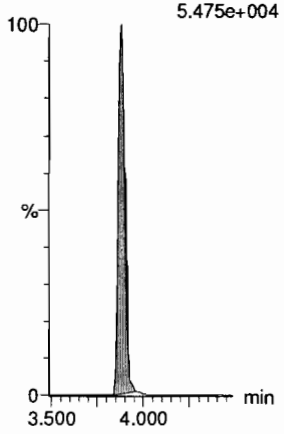
7:3 FTCA
F31:MRM of 2 channels,ES-
440.9 > 336.9
1.845e+005



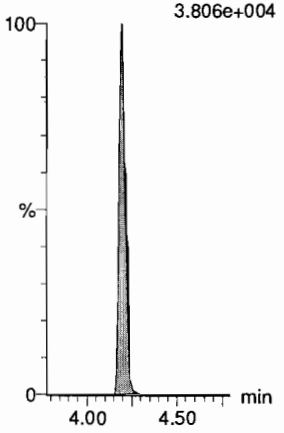
F31:MRM of 2 channels,ES-
440.9 > 316.9
1.050e+005



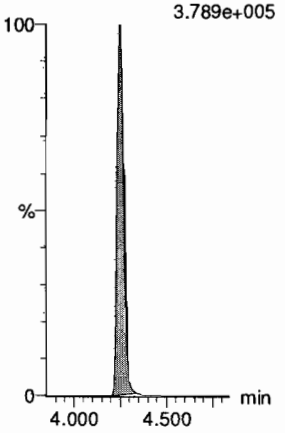
13C3-PFHxS
F24:MRM of 1 channel,ES-
401.8 > 79.9
5.475e+004



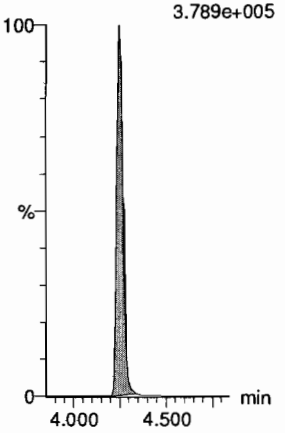
13C2-6:2 FTS
F30:MRM of 1 channel,ES-
429.0 > 79.9
3.806e+004



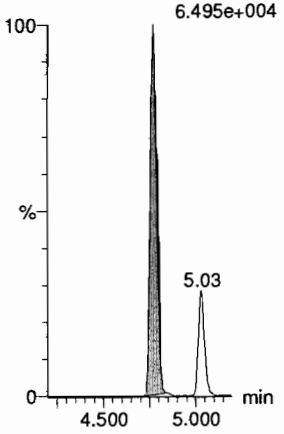
13C2-PFOA
F27:MRM of 1 channel,ES-
414.9 > 369.7
3.789e+005



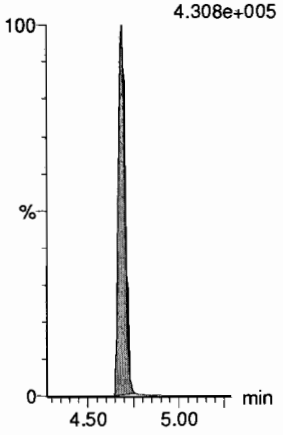
13C2-PFOA
F27:MRM of 1 channel,ES-
414.9 > 369.7
3.789e+005



13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.495e+004



13C5-PFNA
F35:MRM of 1 channel,ES-
468.2 > 422.9
4.308e+005

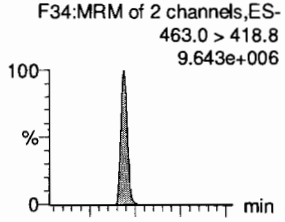


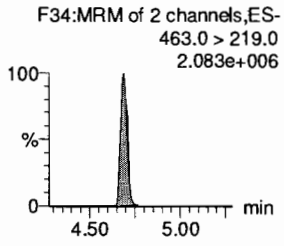
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

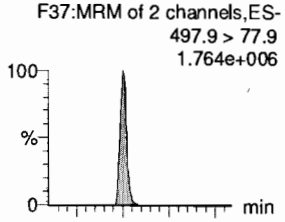
Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

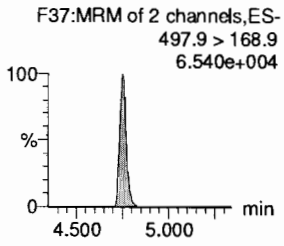
PFNA



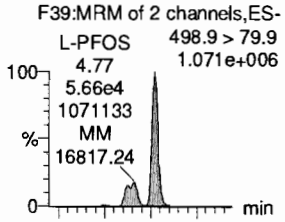


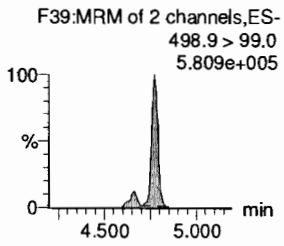
PFOSA



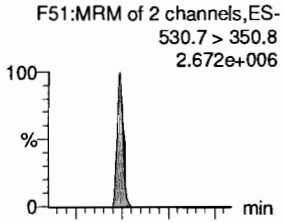


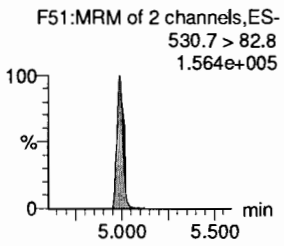
L-PFOS



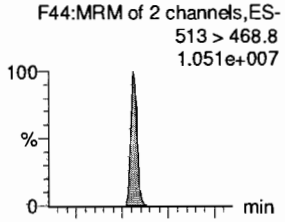


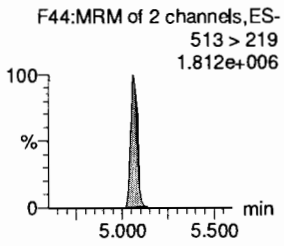
9Cl-PF30NS



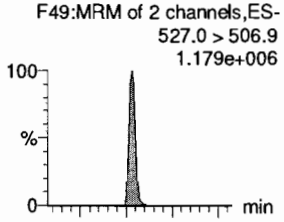


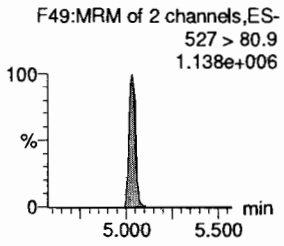
PFDA



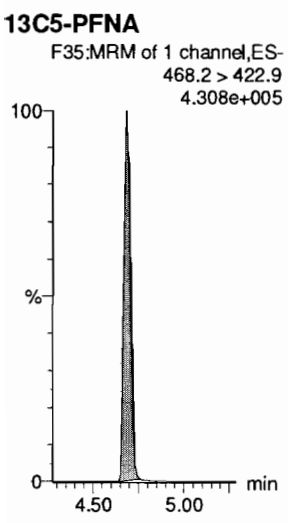


8:2 FTS

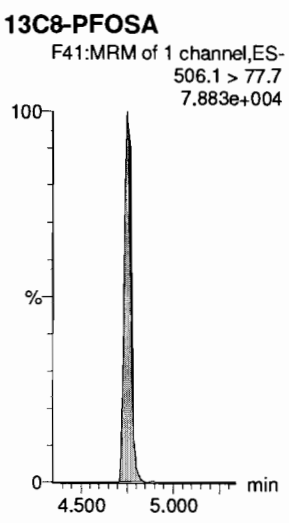




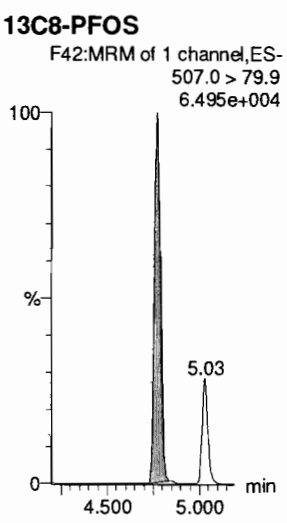
13C5-PFNA



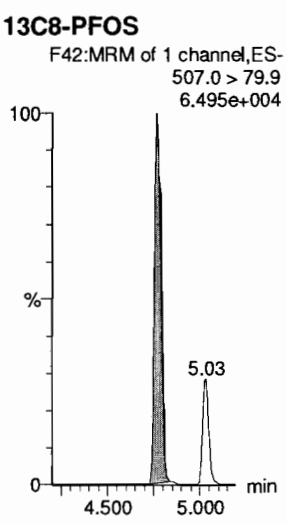
13C8-PFOSA



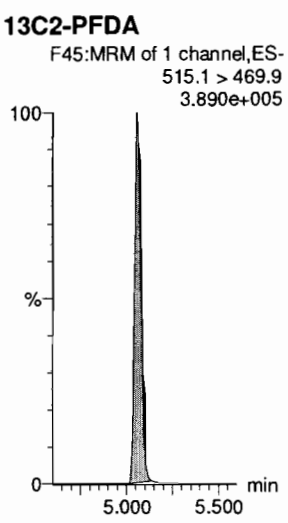
13C8-PFOS



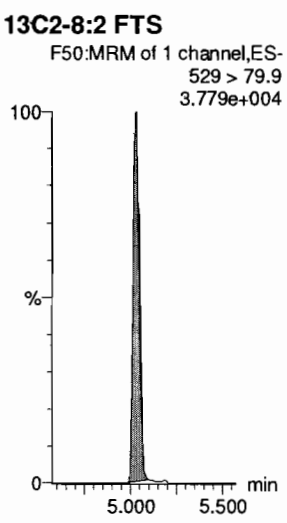
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

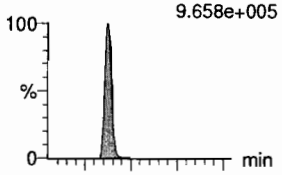


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

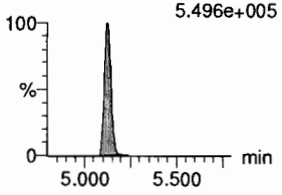
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

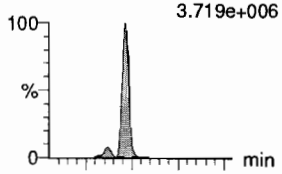
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
9.658e+005



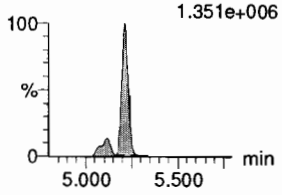
F53:MRM of 2 channels,ES-
549.1 > 99.1
5.496e+005



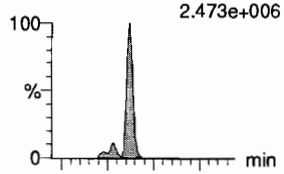
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
3.719e+006



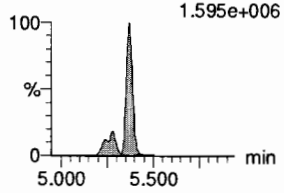
F56:MRM of 2 channels,ES-
570. > 512
1.351e+006



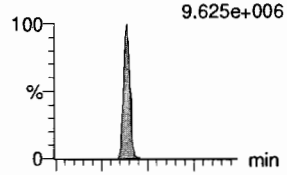
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
2.473e+006



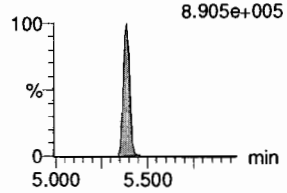
F59:MRM of 2 channels,ES-
584.1 > 526
1.595e+006



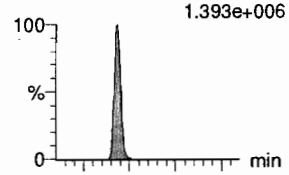
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
9.625e+006



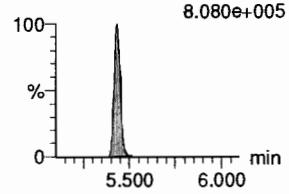
F54:MRM of 2 channels,ES-
563.0 > 269
8.905e+005



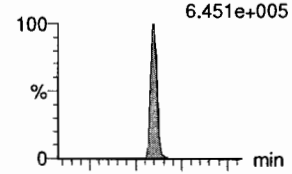
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
1.393e+006



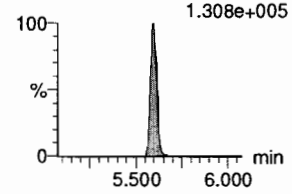
F61:MRM of 2 channels,ES-
598.8 > 98.9
8.080e+005



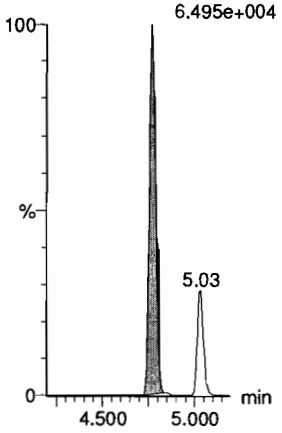
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
6.451e+005



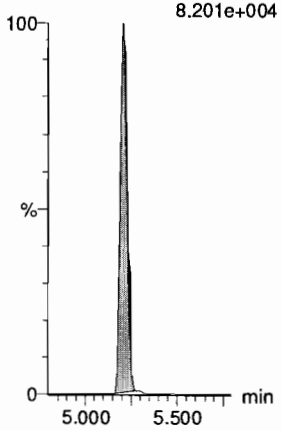
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.308e+005



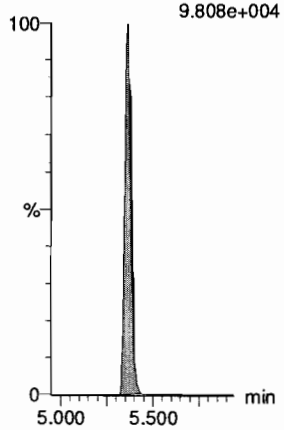
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.495e+004



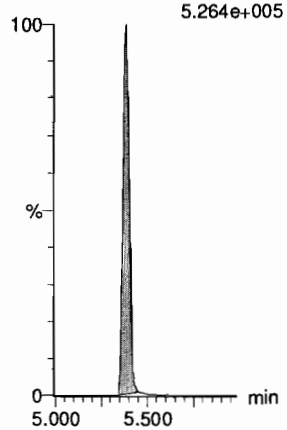
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.201e+004



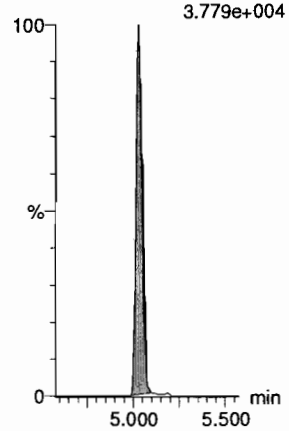
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
9.808e+004



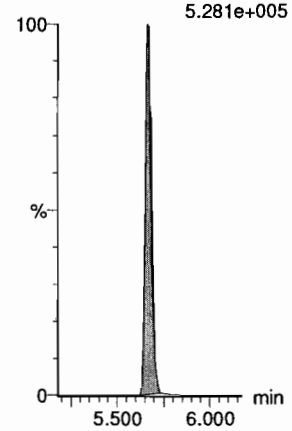
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.264e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.779e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.281e+005

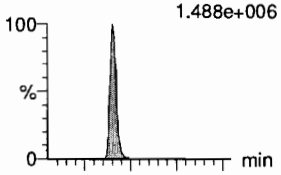


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

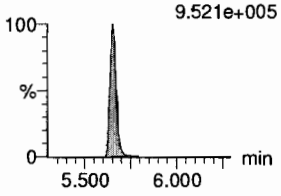
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

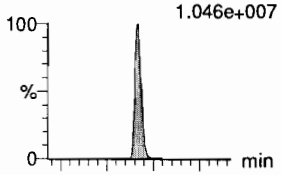
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
1.488e+006



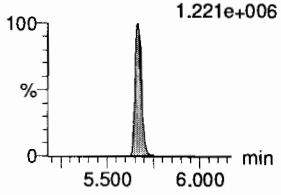
F66:MRM of 2 channels,ES-
627.0 > 80.9
9.521e+005



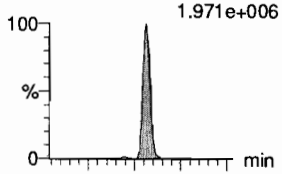
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.046e+007



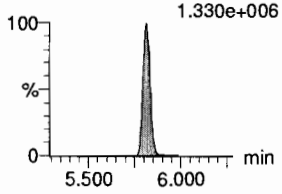
F62:MRM of 4 channels,ES-
612.9 > 318.8
1.221e+006



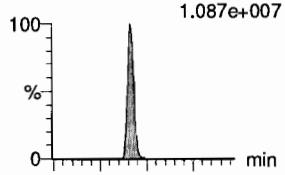
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.971e+006



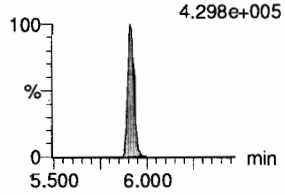
F43:MRM of 2 channels,ES-
512.1 > 219
1.330e+006



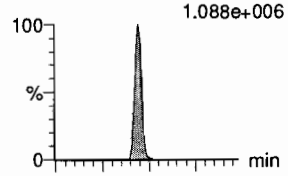
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.087e+007



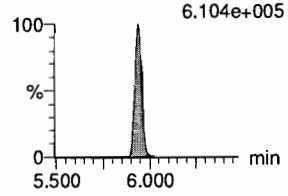
F70:MRM of 2 channels,ES-
662.9 > 319
4.298e+005



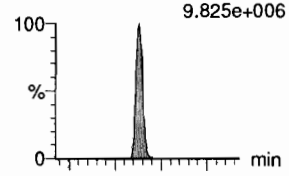
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.088e+006



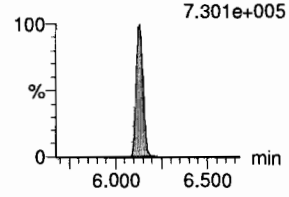
F71:MRM of 2 channels,ES-
698.8 > 98.9
6.104e+005



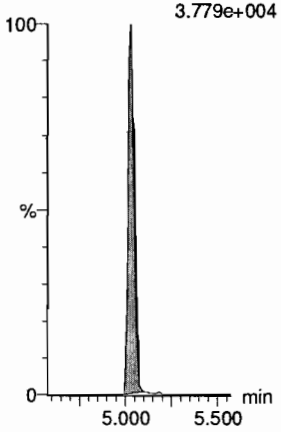
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
9.825e+006



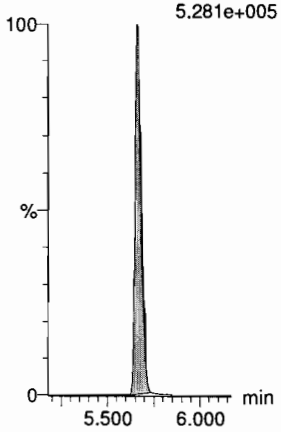
F72:MRM of 2 channels,ES-
713. > 369.0
7.301e+005



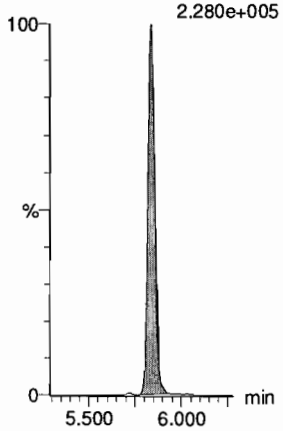
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.779e+004



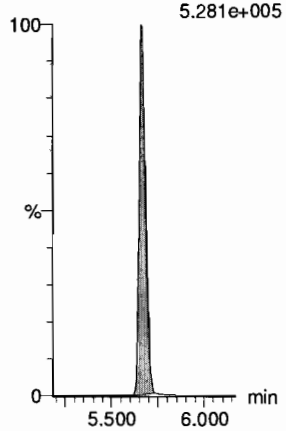
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.281e+005



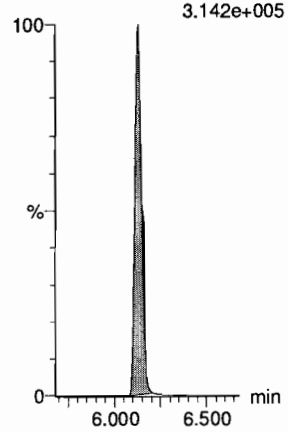
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.280e+005



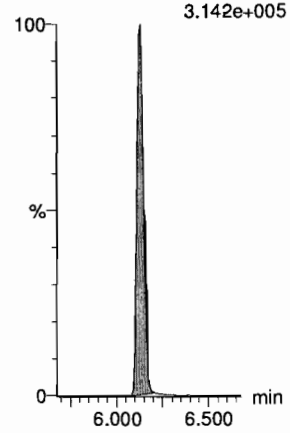
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.281e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.142e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.142e+005

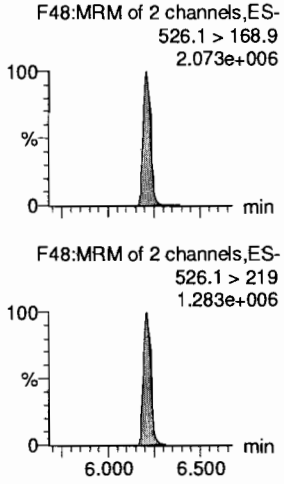


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

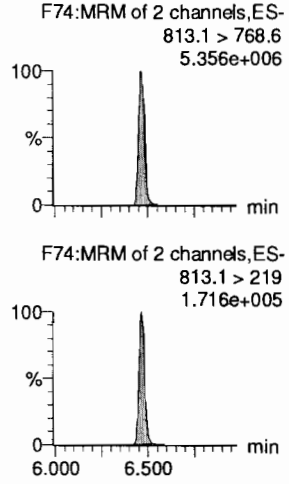
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

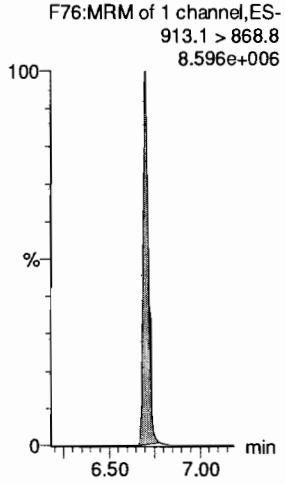
N-EtFOSA



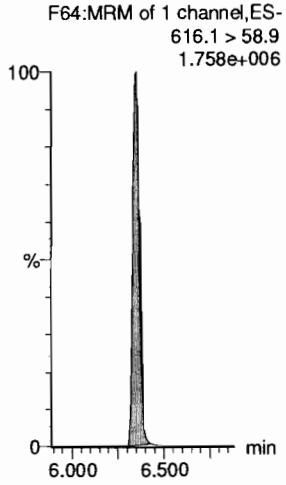
PFHxDA



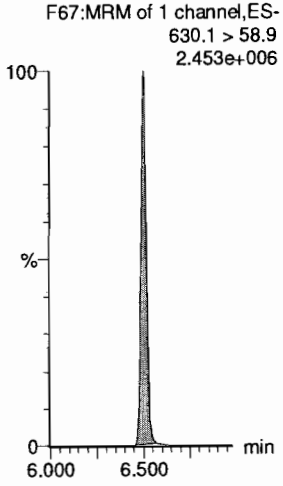
PFODA



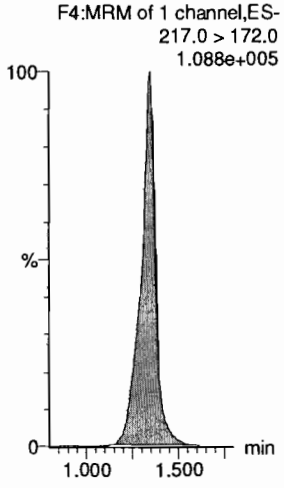
N-MeFOSE



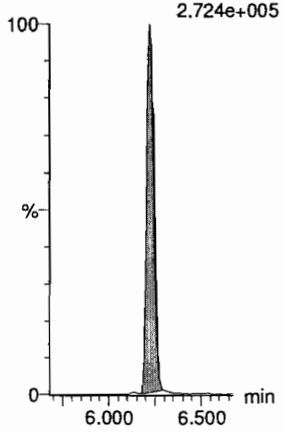
N-EtFOSE



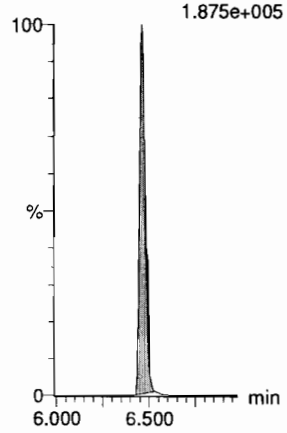
13C4-PFBA



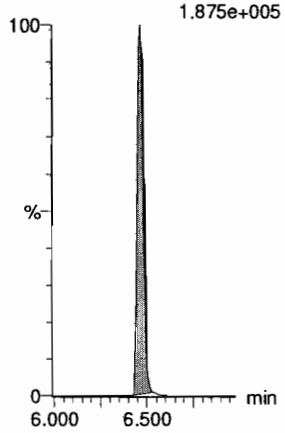
d5-N-ETFOSA



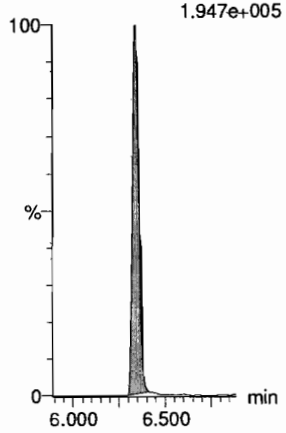
13C2-PFHxDA



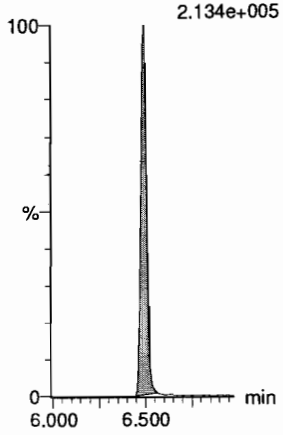
13C2-PFHxDA



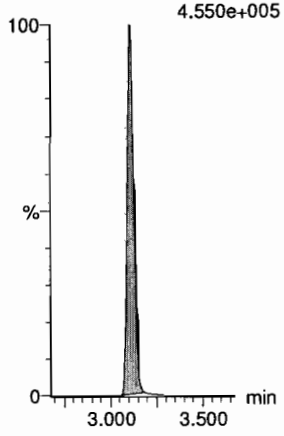
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

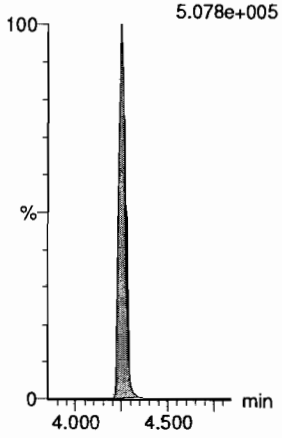


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

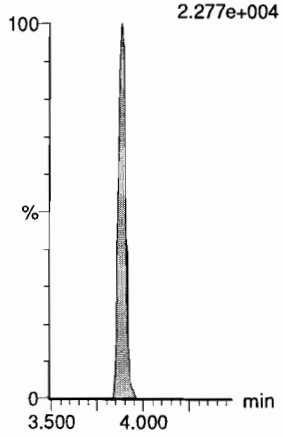
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_11, Date: 01-Jul-2019, Time: 17:27:56, ID: ST190701M1-9 PFC CS6 19F2420, Description: PFC CS6 19F2420

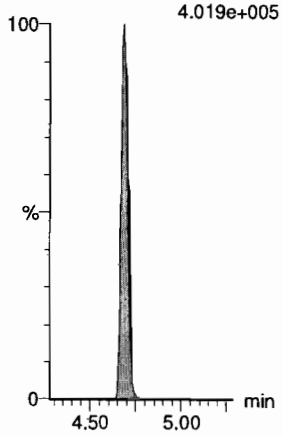
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
5.078e+005



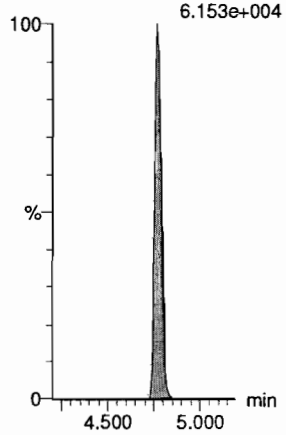
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
2.277e+004



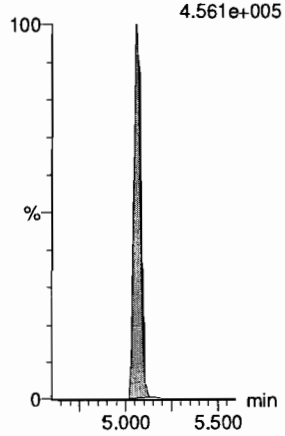
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
4.019e+005



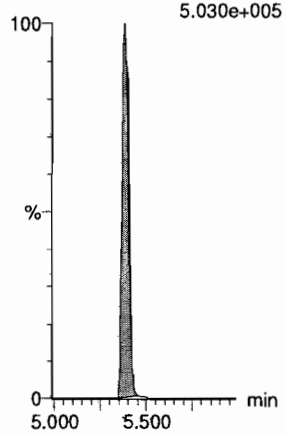
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
6.153e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
4.561e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
5.030e+005

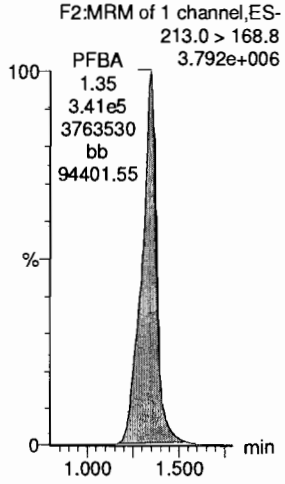


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

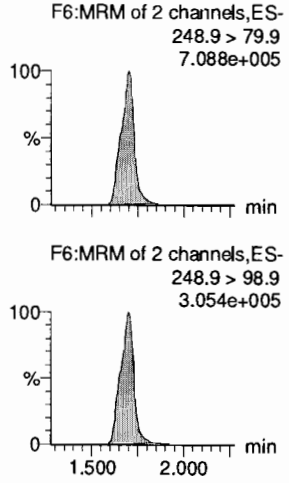
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

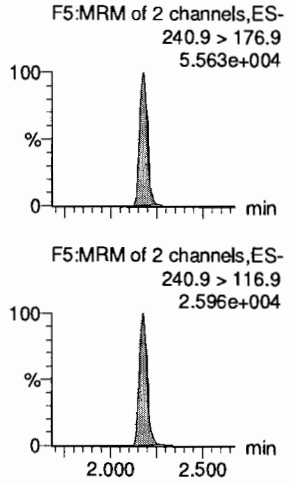
PFBA



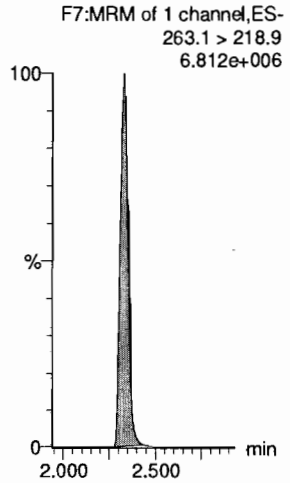
PFPrS



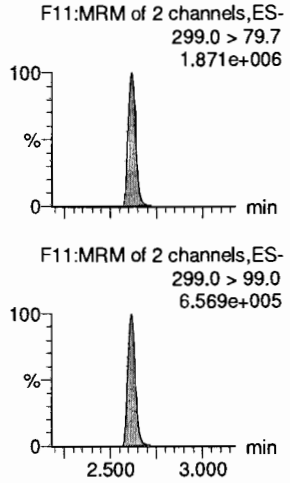
3:3 FTCA



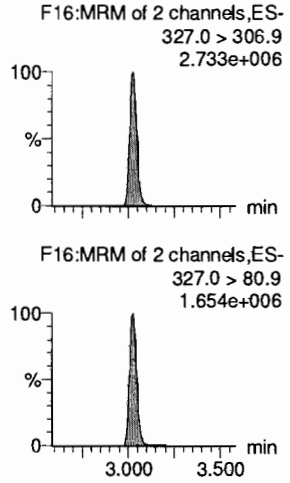
PFPeA



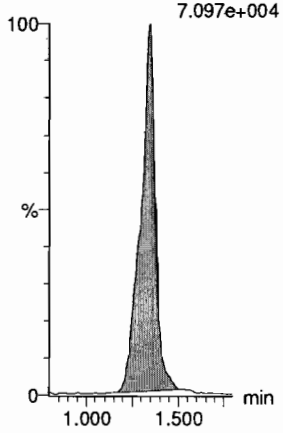
PFBS



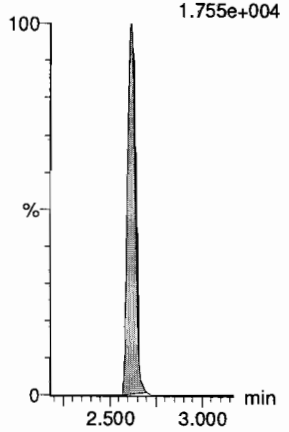
4:2 FTS



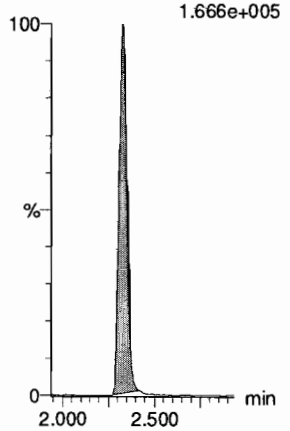
13C3-PFBA



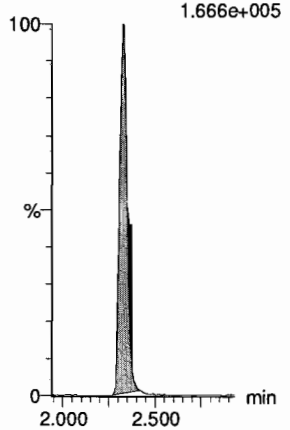
13C3-PFBS



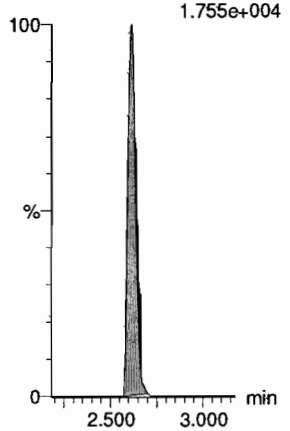
13C3-PFPeA



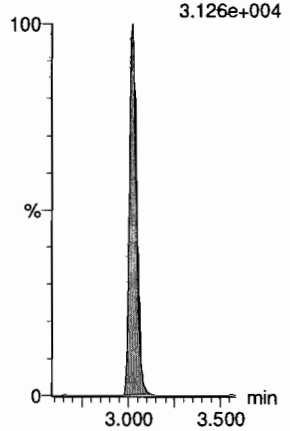
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

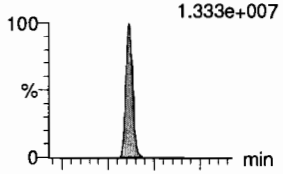


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

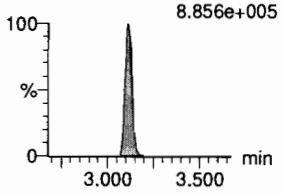
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

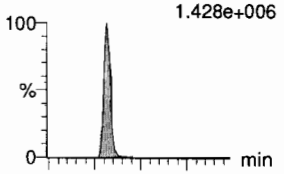
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.333e+007



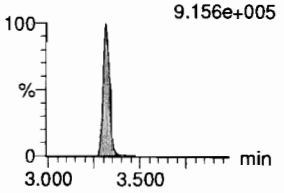
F13:MRM of 2 channels,ES-
313 > 118.9
8.856e+005



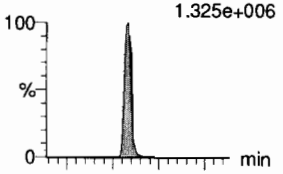
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
1.428e+006



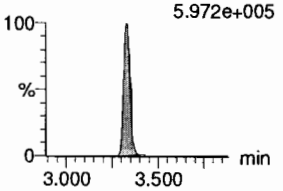
F19:MRM of 2 channels,ES-
349.1 > 99
9.156e+005



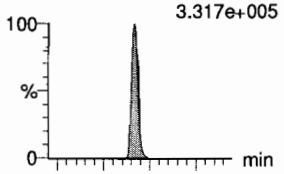
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
1.325e+006



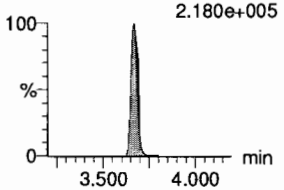
F9:MRM of 3 channels,ES-
285.1 > 184.9
5.972e+005



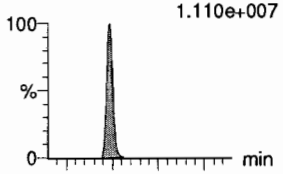
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
3.317e+005



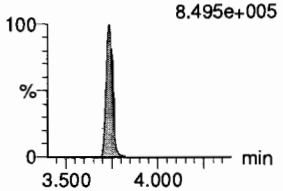
F18:MRM of 2 channels,ES-
340.9 > 216.9
2.180e+005



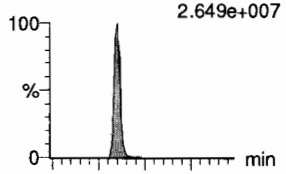
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
1.110e+007



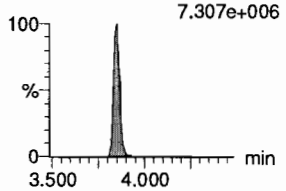
F20:MRM of 2 channels,ES-
363.0 > 169.0
8.495e+005



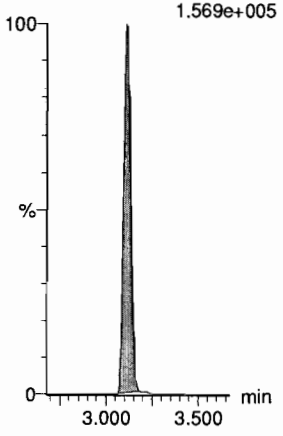
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
2.649e+007



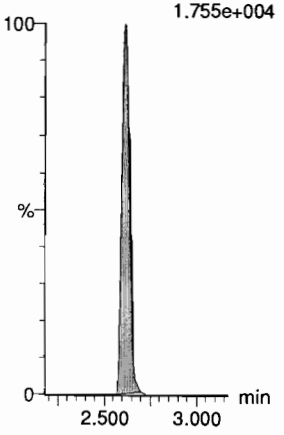
F22:MRM of 2 channels,ES-
376.8 > 85.0
7.307e+006



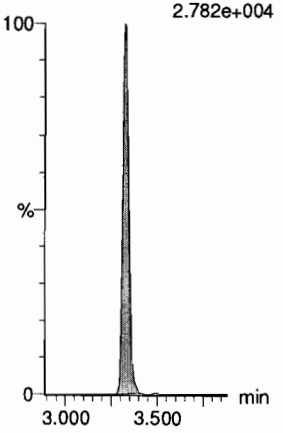
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.569e+005



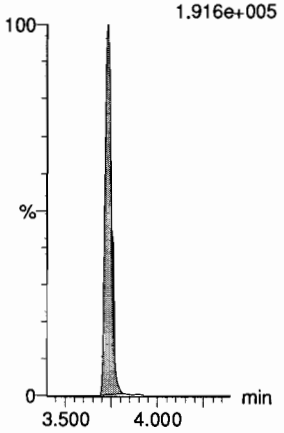
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.755e+004



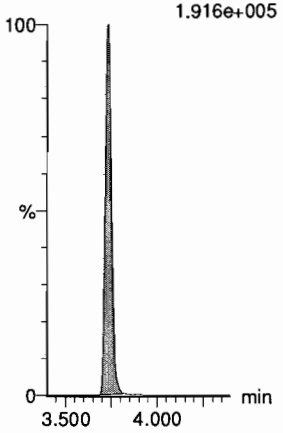
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
2.782e+004



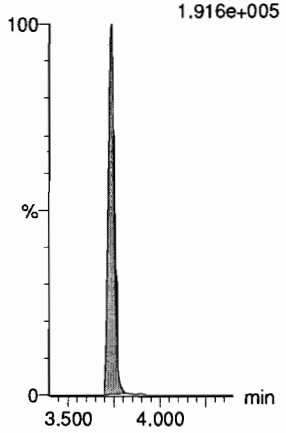
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.916e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.916e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.916e+005



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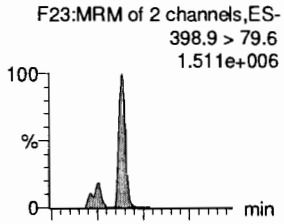
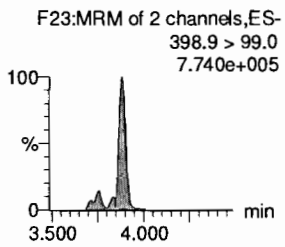
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

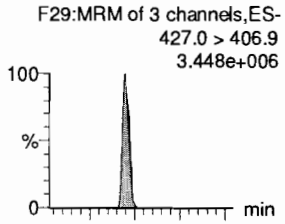
Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

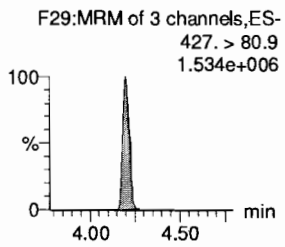
L-PFHxS



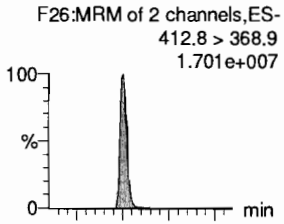


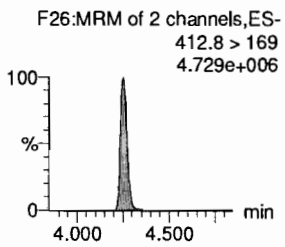
6:2 FTS





L-PFOA





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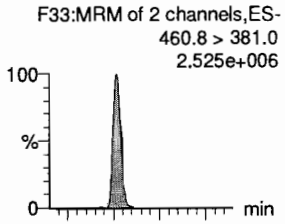
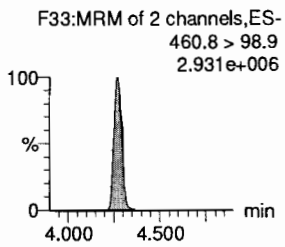
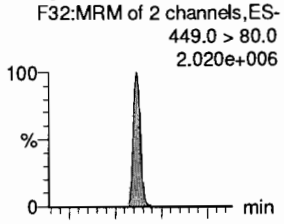
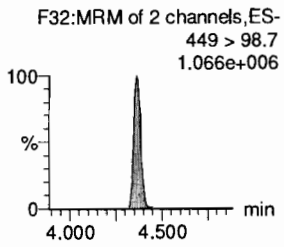


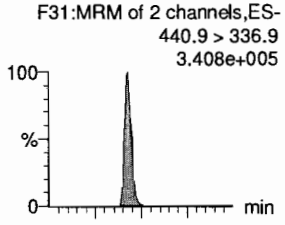


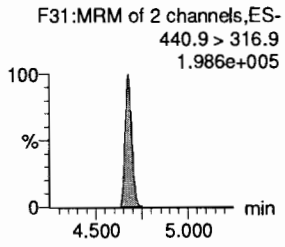
PFHpS



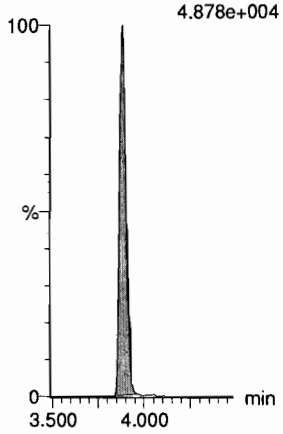


7:3 FTCA

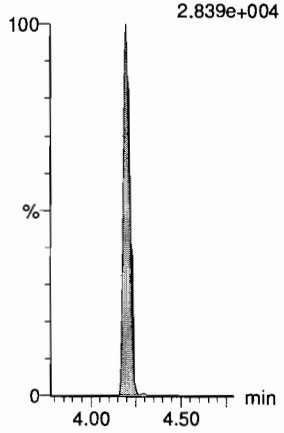




13C3-PFHxS



13C2-6:2 FTS



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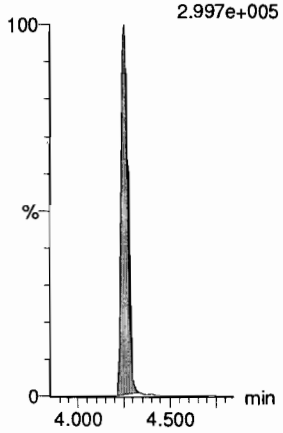
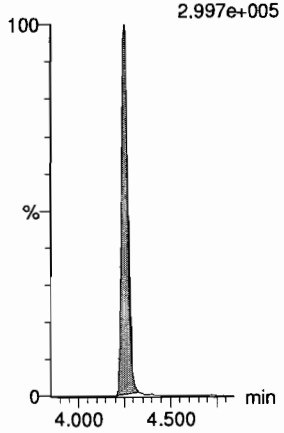
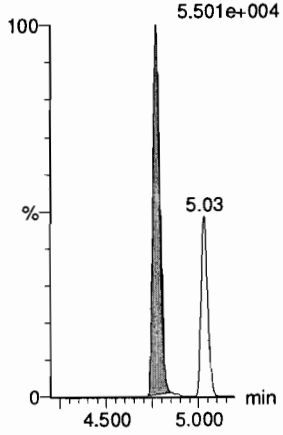


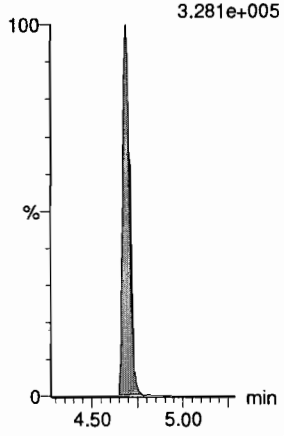
13C2-PFOA



13C8-PFOS



13C5-PFNA



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Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

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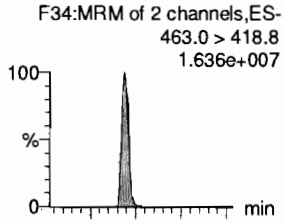

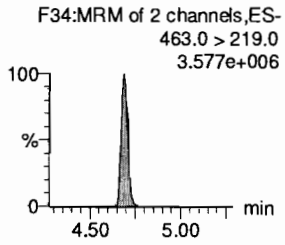

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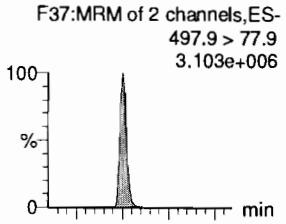
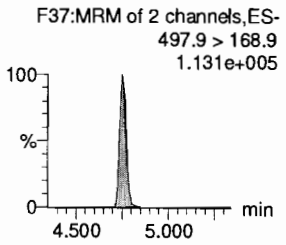
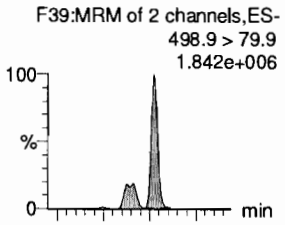
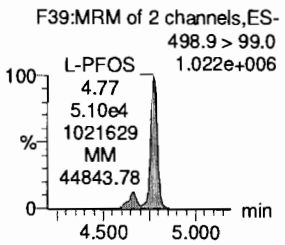


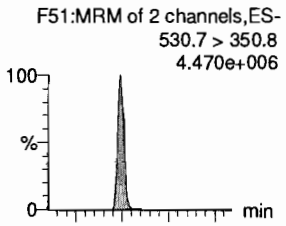


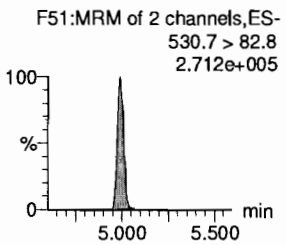
L-PFOS



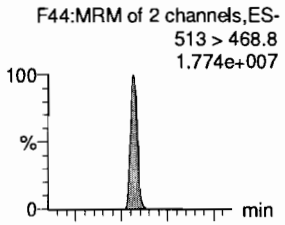


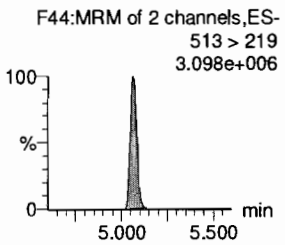
9Cl-PF30NS



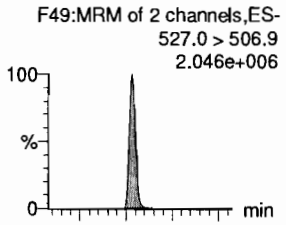


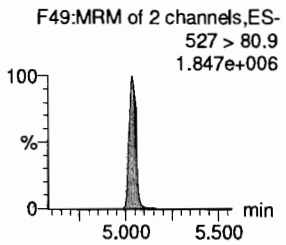
PFDA



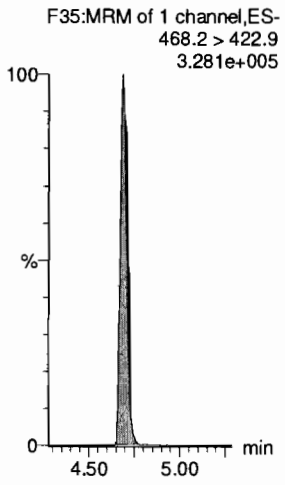


8:2 FTS

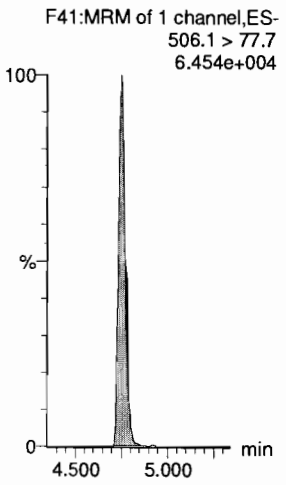




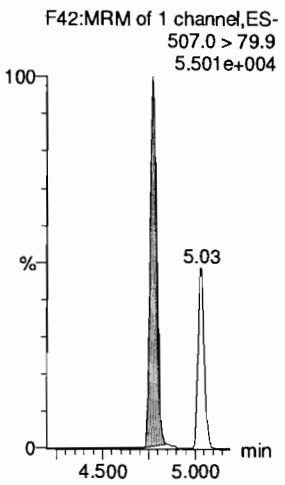
13C5-PFNA



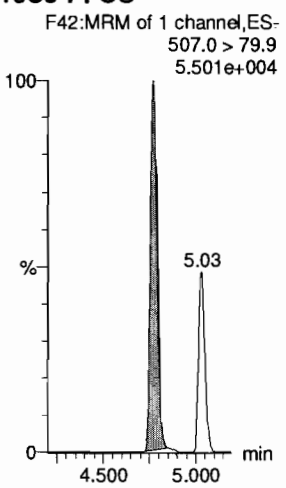
13C8-PFOSA



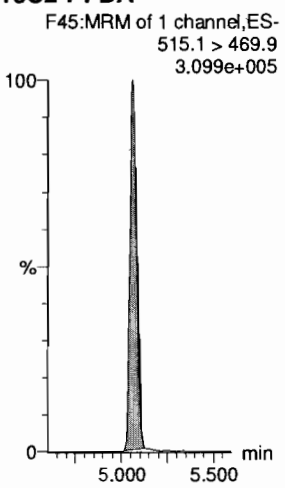
13C8-PFOS



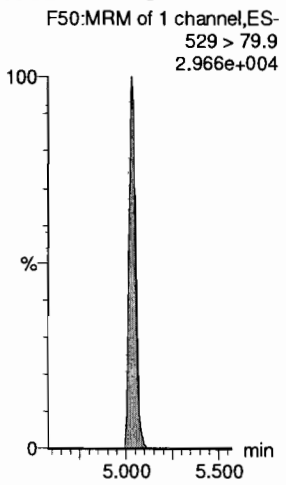
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

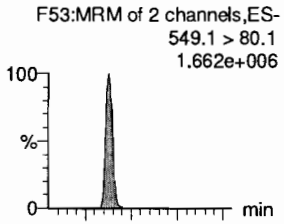


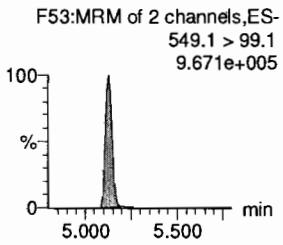
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

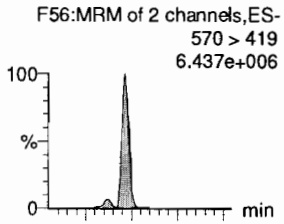
Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

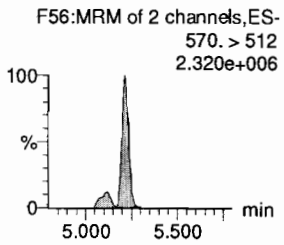
PFNS



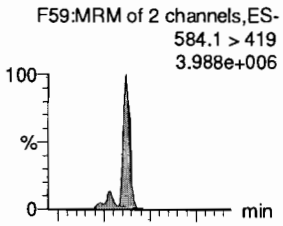


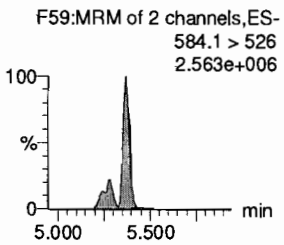
L-MeFOSAA



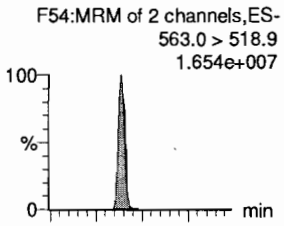


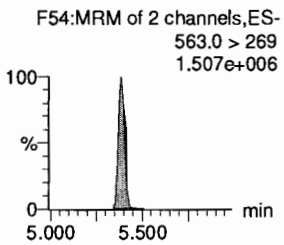
L-EtFOSAA



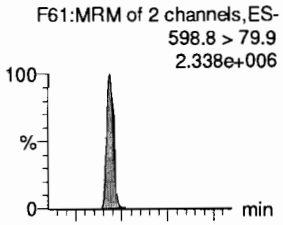


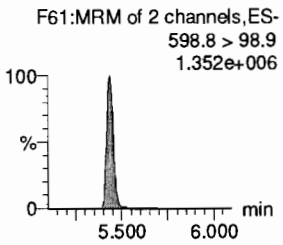
PFUdA





PFDS





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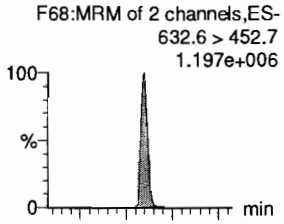
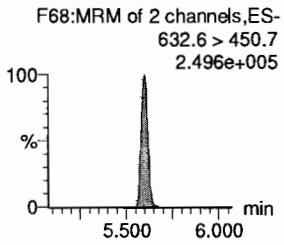
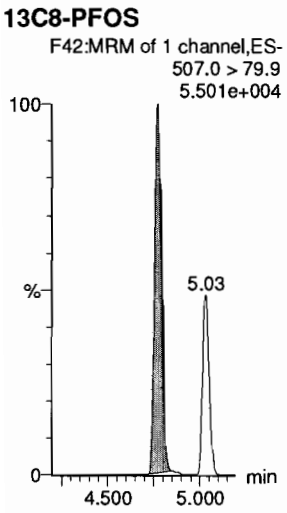
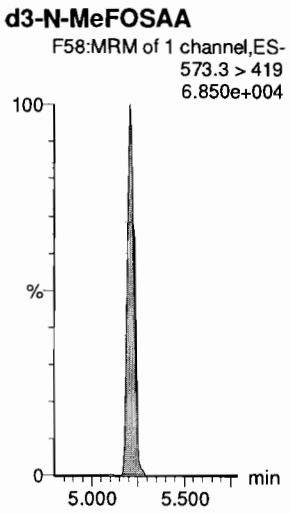




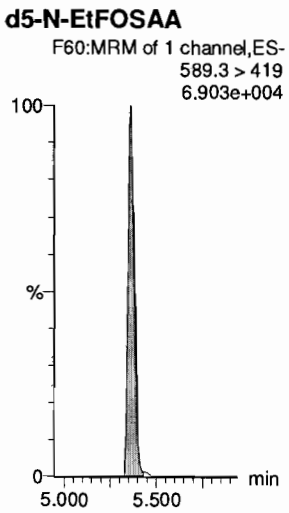
13C8-PFOS



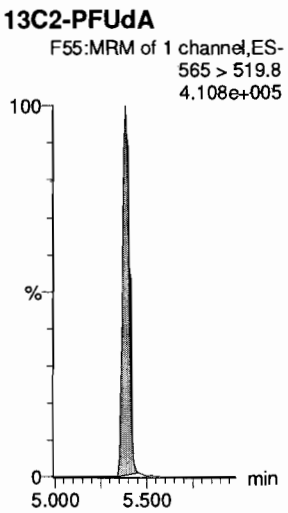
d3-N-MeFOSAA



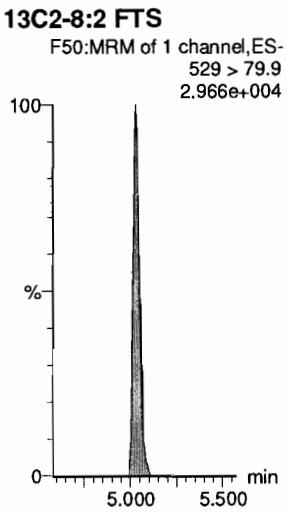
d5-N-EtFOSAA



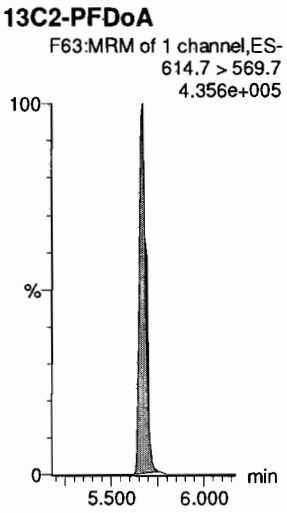
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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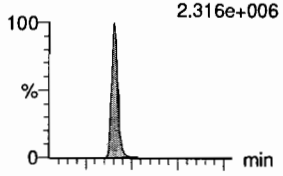
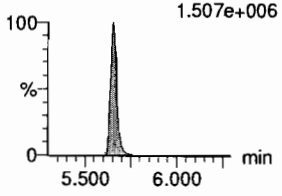
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

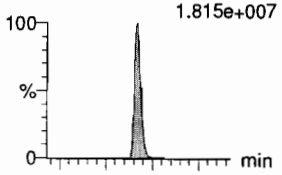
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
2.316e+006



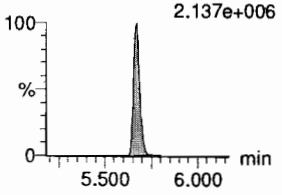
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.507e+006



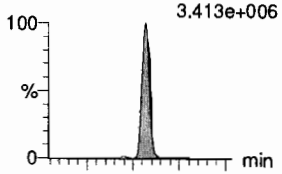
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.815e+007



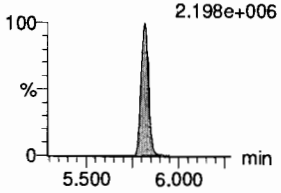
F62:MRM of 4 channels,ES-
612.9 > 318.8
2.137e+006



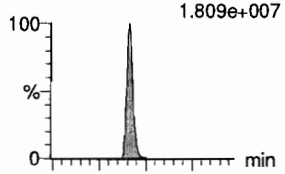
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
3.413e+006



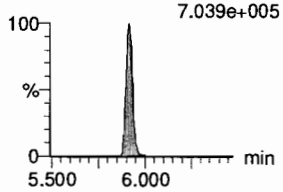
F43:MRM of 2 channels,ES-
512.1 > 219
2.198e+006



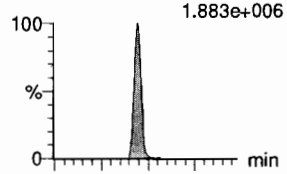
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.809e+007



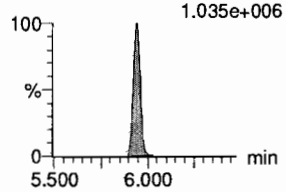
F70:MRM of 2 channels,ES-
662.9 > 319
7.039e+005



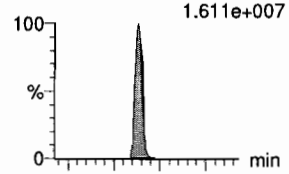
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.883e+006



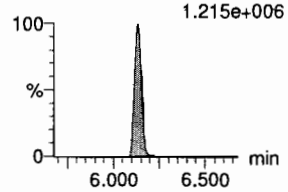
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.035e+006



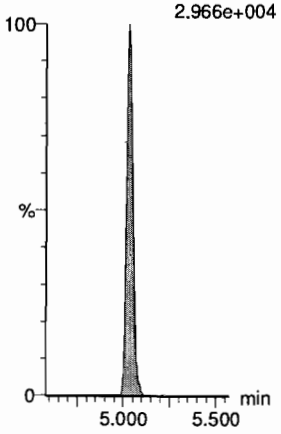
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.611e+007



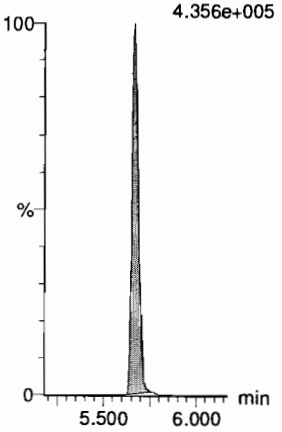
F72:MRM of 2 channels,ES-
713. > 369.0
1.215e+006



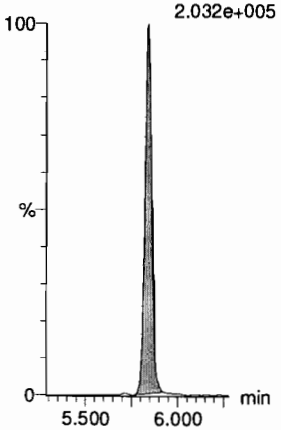
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.966e+004



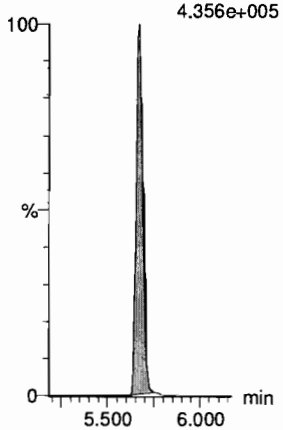
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.356e+005



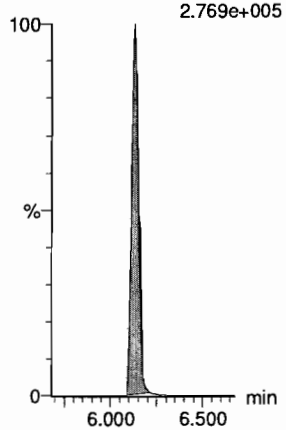
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.032e+005



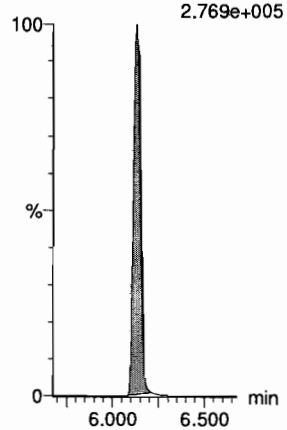
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.356e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.769e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.769e+005

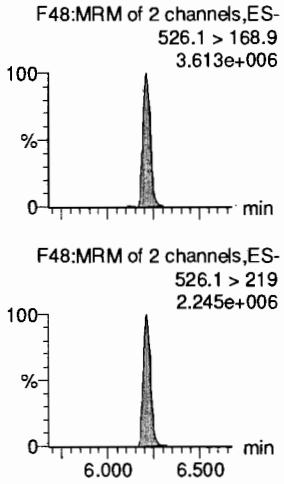


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

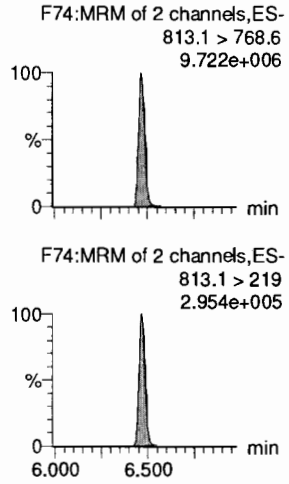
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

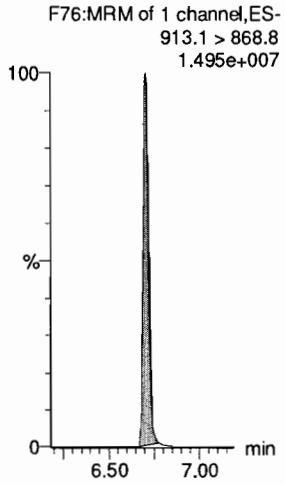
N-EtFOSA



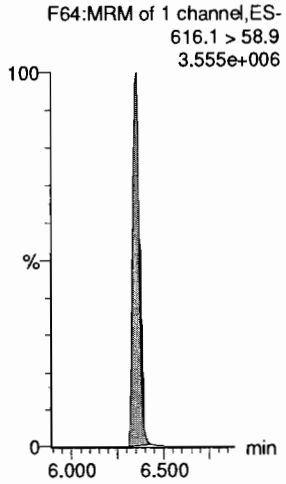
PFHxDA



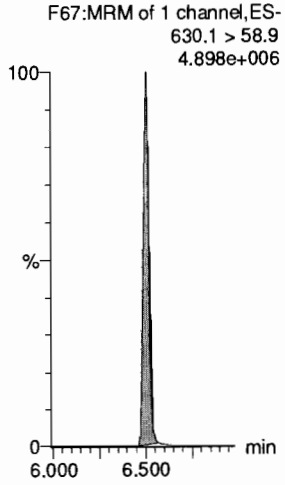
PFODA



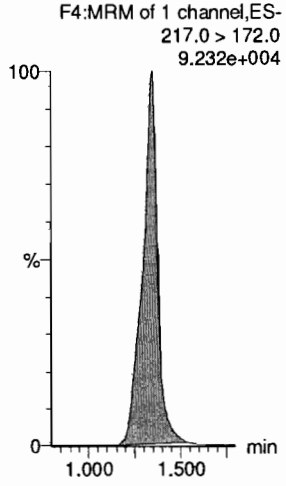
N-MeFOSE



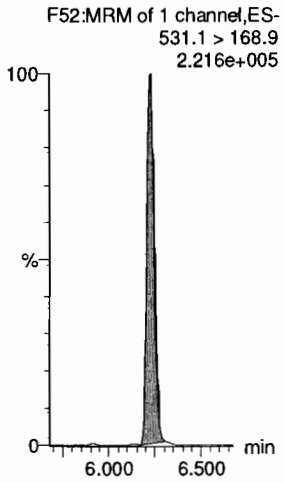
N-EtFOSE



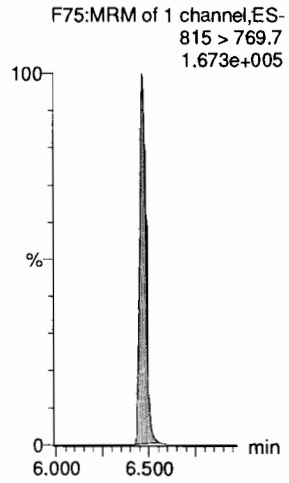
13C4-PFBA



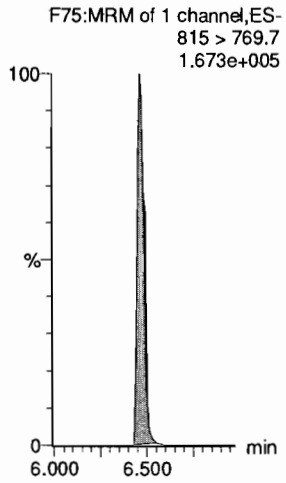
d5-N-ETFOSA



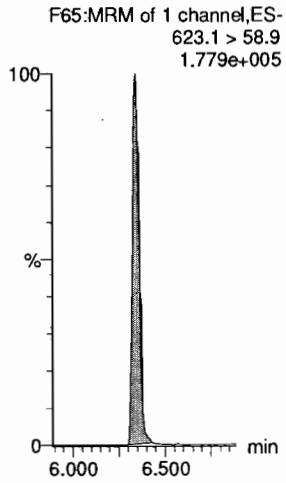
13C2-PFHxDA



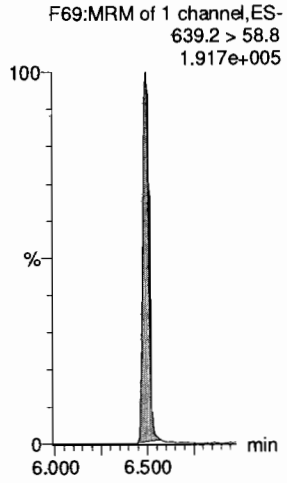
13C2-PFHxDA



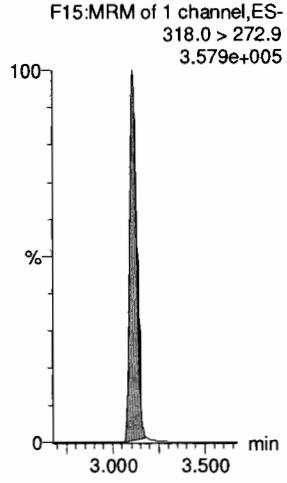
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

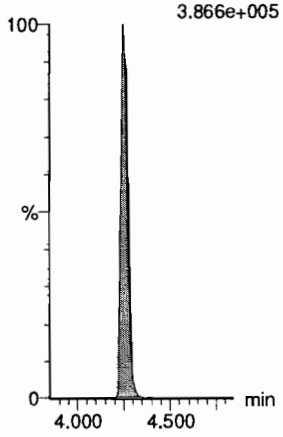


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-CRV.qld

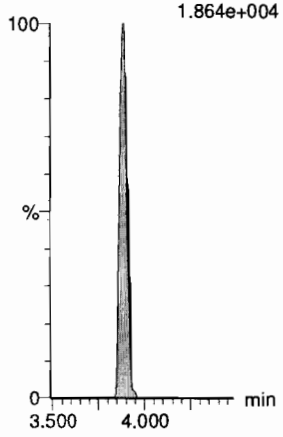
Last Altered: Tuesday, July 02, 2019 08:31:25 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 08:32:18 Pacific Daylight Time

Name: 190701M1_12, Date: 01-Jul-2019, Time: 17:38:34, ID: ST190701M1-10 PFC CS7 19F2421, Description: PFC CS7 19F2421

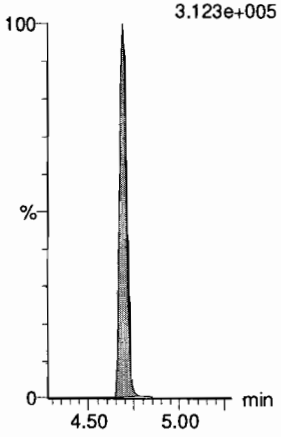
13C8-PFOA



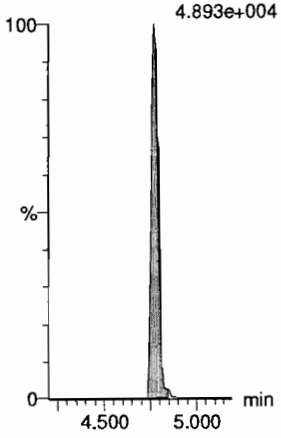
18O2-PFHxS



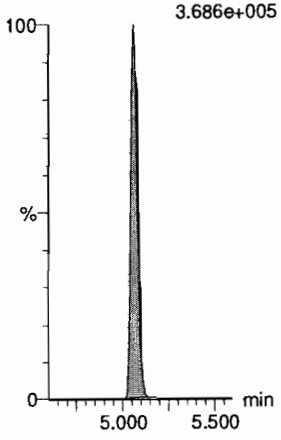
13C9-PFNA



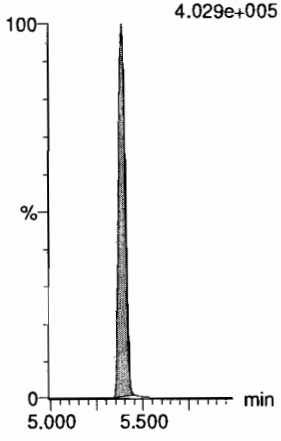
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

(A) Compound not present in ICV

7/2/19

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	5539.430	7453.749	1.00	1.36	9.290	7.4	73.8	NO		
2	2	PFPrS	248.9 > 79.9		1333.513	1.00				(A)	NO		
3	3	3:3 FTCA	240.9 > 176.9		10203.539	1.00				↓	NO		
4	4	PFPeA	263.1 > 218.9	6507.833	10203.539	1.00	2.33	7.973	8.0	80.4	NO		
5	5	PFBS	299.0 > 79.7	1516.721	1333.513	1.00	2.62	14.217	6.7	75.7	NO	2.556	NO
6	6	4:2 FTS	327.0 > 306.9	2697.747	2133.190	1.00	3.02	15.808	7.4	78.6	NO	1.613	NO
7	47	13C3-PFBA	216.1 > 171.8	7453.749	9675.291	1.00	1.36	9.630	12.5	100.1	NO		
8	49	13C3-PFBS	302.0 > 98.8	1333.513	1193.496	1.00	2.62	13.966	13.1	104.7	NO		
9	48	13C3-PFPeA	266.0 > 221.8	10203.539	19493.865	1.00	2.33	6.543	12.5	99.8	NO		
10	48	13C3-PFPeA	266.0 > 221.8	10203.539	19493.865	1.00	2.33	6.543	12.5	99.8	NO		
11	49	13C3-PFBS	302.0 > 98.8	1333.513	1193.496	1.00	2.62	13.966	13.1	104.7	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2133.190	1193.496	1.00	3.02	22.342	12.7	101.7	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	11200.283	7863.010	1.00	3.11	7.122	8.2	82.4	NO	14.718	NO
15	8	PFPeS	349.1>80.1	1367.623	1333.513	1.00	3.32	12.820	7.6	75.6	NO	1.468	NO
16	9	HFPO-DA	285.1 > 168.9		1791.696	1.00				(A)	NO		
17	10	5:3 FTCA	340.9 > 236.9		10334.696	1.00				↓	NO		
18	11	PFHpA	363.0 > 318.9	8876.684	10334.696	1.00	3.73	10.737	7.9	79.5	NO	14.184	NO
19	12	ADONA	376.8 > 250.9		10334.696	1.00				(A)	NO		
20	52	13C2-PFHxA	315.0 > 270.0	7863.010	19493.865	1.00	3.11	5.042	5.0	100.0	NO		
21	49	13C3-PFBS	302.0 > 98.8	1333.513	1193.496	1.00	2.62	13.966	13.1	104.7	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1791.696	19493.865	1.00	3.33	1.149	5.9	117.8	NO		
23	53	13C4-PFHpA	367.2 > 321.8	10334.696	19493.865	1.00	3.73	6.627	12.4	99.1	NO		
24	53	13C4-PFHpA	367.2 > 321.8	10334.696	19493.865	1.00	3.73	6.627	12.4	99.1	NO		
25	53	13C4-PFHpA	367.2 > 321.8	10334.696	19493.865	1.00	3.73	6.627	12.4	99.1	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	1348.958	2569.817	1.00	3.88	6.562	6.8	74.1	NO	1.947	NO
28	15	6:2 FTS	427.0 > 406.9	3246.033	1792.437	1.00	4.20	22.637	8.0	84.2	NO	2.176	NO
29	16	L-PFOA	412.8 > 368.9	15744.201	17229.082	1.00	4.25	11.423	8.0	79.9	NO	3.718	NO
30	18	PFecHS	460.8 > 381.0		17229.082	1.00				(A)	NO		
31	19	PFHpS	449.0 > 80.0	1592.220	2932.382	1.00	4.36	6.787	7.0	73.5	NO	1.872	NO
32	20	7:3 FTCA	440.9 > 336.9		18260.320	1.00				(A)	NO		
33	54	13C3-PFHxS	401.8 > 79.9	2569.817	1193.496	1.00	3.88	26.915	12.4	99.2	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1792.437	2845.829	1.00	4.20	7.873	13.0	104.3	NO		
35	58	13C2-PFOA	414.9 > 369.7	17229.082	23199.836	1.00	4.25	9.283	12.5	99.8	NO		
36	58	13C2-PFOA	414.9 > 369.7	17229.082	23199.836	1.00	4.25	9.283	12.5	99.8	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
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Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2932.382	2845.829	1.00	4.77	12.880	12.9	103.2	NO		
38	56	13C5-PFNA	468.2 > 422.9	18260.320	18920.789	1.00	4.69	12.064	11.9	95.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	14209.206	18260.320	1.00	4.69	9.727	8.1	80.7	NO	4.785	NO
41	22	PFOSA	497.9 > 77.9	2523.657	3502.916	1.00	4.76	9.006	8.2	81.8	NO	37.914	NO
42	23	L-PFOS	498.9 > 79.9	1586.920	2932.382	1.00	4.77	6.765	6.6	71.0	NO	1.694	NO
43	25	9Cl-PF30NS	530.7 > 350.8		2932.382	1.00				(A)	NO		
44	26	PFDA	513 > 468.8	14685.586	16836.982	1.00	5.06	10.903	7.8	78.0	NO	5.740	NO
45	27	8:2 FTS	527.0 > 506.9	1800.369	1614.635	1.00	5.03	13.938	8.1	84.3	NO	1.068	NO
46	56	13C5-PFNA	468.2 > 422.9	18260.320	18920.789	1.00	4.69	12.064	11.9	95.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3502.916	22843.414	1.00	4.75	1.917	12.3	98.2	NO		
48	59	13C8-PFOS	507.0 > 79.9	2932.382	2845.829	1.00	4.77	12.880	12.9	103.2	NO		
49	59	13C8-PFOS	507.0 > 79.9	2932.382	2845.829	1.00	4.77	12.880	12.9	103.2	NO		
50	60	13C2-PFDA	515.1 > 469.9	16836.982	20004.791	1.00	5.06	10.521	12.6	100.7	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1614.635	2845.829	1.00	5.03	7.092	11.9	95.0	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1485.100	2932.382	1.00	5.13	6.331	8.3	82.8	NO	2.175	NO
54	29	L-MeFOSAA	570 > 419	6500.503	3650.764	1.00	5.21	22.257	8.9	89.2	NO	2.757	NO
55	31	L-EtFOSAA	584.1 > 419	5367.932	3994.833	1.00	5.37	16.796	9.8	98.4	NO	1.594	NO
56	33	PFUdA	563.0 > 518.9	14832.290	24403.854	1.00	5.39	7.597	8.0	79.9	NO	10.905	NO
57	34	PFDS	598.8 > 79.9	1824.910	1614.635	1.00	5.43	14.128	7.9	81.4	NO	1.881	NO
58	35	11Cl-PF30UdS	632.6 > 452.7		21617.393	1.00				(A)	NO		
59	59	13C8-PFOS	507.0 > 79.9	2932.382	2845.829	1.00	4.77	12.880	12.9	103.2	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3650.764	22843.414	1.00	5.21	1.998	12.3	98.1	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	3994.833	22843.414	1.00	5.37	2.186	12.2	97.4	NO		
62	63	13C2-PFUdA	565 > 519.8	24403.854	22843.414	1.00	5.39	13.354	12.7	101.5	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1614.635	2845.829	1.00	5.03	7.092	11.9	95.0	NO		
64	65	13C2-PFDoA	614.7 > 569.7	21617.393	20004.791	1.00	5.66	13.508	12.3	98.7	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1614.635	1.00					NO		
67	37	PFDoA	612.9 > 569.0	15854.526	21617.393	1.00	5.66	9.168	8.5	84.9	NO	8.086	NO
68	38	N-MeFOSA	512.1 > 168.9		10053.452	1.00				(A)	NO		
69	39	PFTrDA	662.9 > 618.9	15904.217	21617.393	1.00	5.91	9.196	7.8	77.9	NO	24.549	NO
70	40	PFDoS	698.8 > 79.9		14718.503	1.00				(A)	NO		
71	41	PFTeDA	713.0 > 669.0	14364.715	14718.503	1.00	6.13	12.200	8.2	81.6	NO	13.693	NO
72	65	13C2-PFDoA	614.7 > 569.7	21617.393	20004.791	1.00	5.66	13.508	12.3	98.7	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
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Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	21617.393	20004.791	1.00	5.66	13.508	12.3	98.7	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	10053.452	22843.414	1.00	5.84	5.501	144.0	96.0	NO		
75	65	13C2-PFDoA	614.7 > 569.7	21617.393	20004.791	1.00	5.66	13.508	12.3	98.7	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	14718.503	22843.414	1.00	6.13	8.054	12.1	96.7	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	14718.503	22843.414	1.00	6.13	8.054	12.1	96.7	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		13319.979	1.00				(A)	NO		
80	43	PFHxDA	813.1 > 768.6		7515.308	1.00					NO		
81	44	PFODA	913.1 > 868.8		7515.308	1.00					NO		
82	45	N-MeFOSE	616.1 > 58.9		7680.065	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		7398.973	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	9675.291	9675.291	1.00	1.35	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	13319.979	22843.414	1.00	6.22	7.289	150.3	100.2	NO		
86	69	13C2-PFHxDA	815 > 769.7	7515.308	22843.414	1.00	6.47	4.112	4.9	97.5	NO		
87	69	13C2-PFHxDA	815 > 769.7	7515.308	22843.414	1.00	6.47	4.112	4.9	97.5	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	7680.065	22843.414	1.00	6.34	4.203	146.1	97.4	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	7398.973	22843.414	1.00	6.49	4.049	141.2	94.1	NO		
90	73	13C5-PFHxA	318.0 > 272.9	19493.865	19493.865	1.00	3.11	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	23199.836	23199.836	1.00	4.25	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1193.496	1193.496	1.00	3.88	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	18920.789	18920.789	1.00	4.69	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2845.829	2845.829	1.00	4.77	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	20004.791	20004.791	1.00	5.06	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	22843.414	22843.414	1.00	5.39	12.500	12.5	100.0	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

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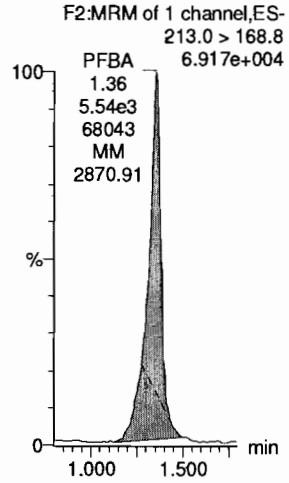
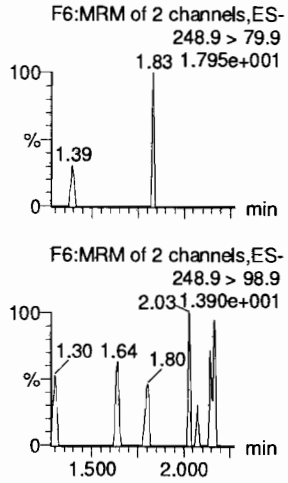
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119_ICV.mdb 02 Jul 2019 10:39:26
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

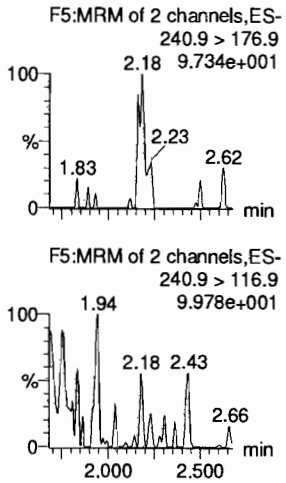
PFBA



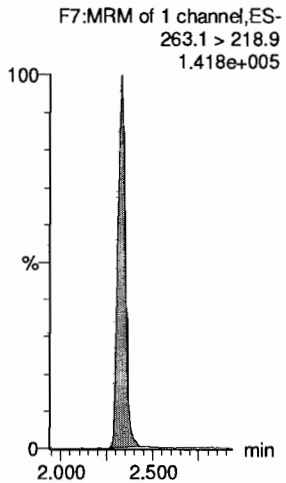
PFPrS



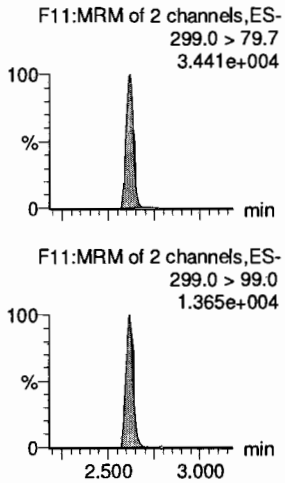
3:3 FTCA



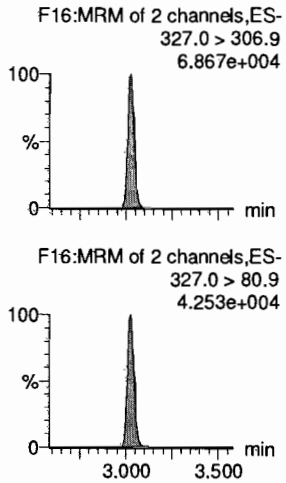
PFPeA



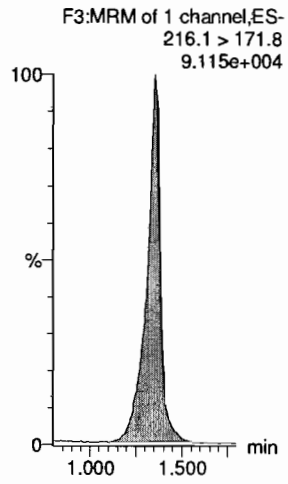
PFBS



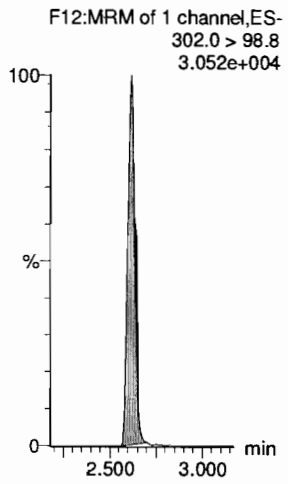
4:2 FTS



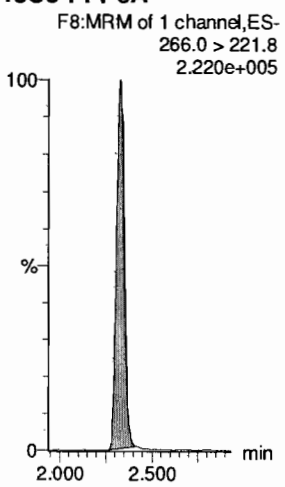
13C3-PFBA



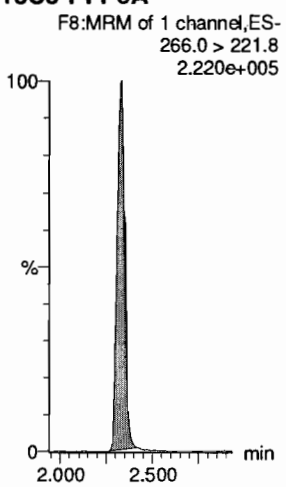
13C3-PFBS



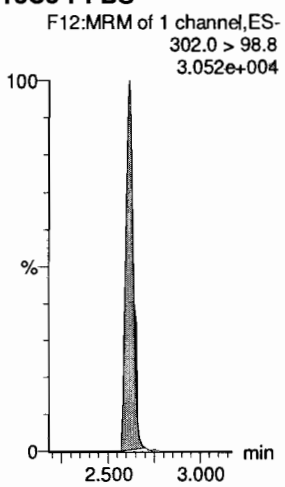
13C3-PFPeA



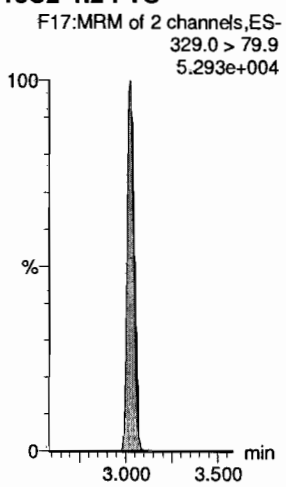
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

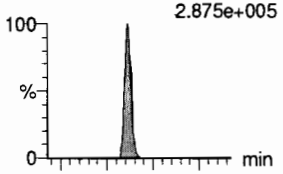


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

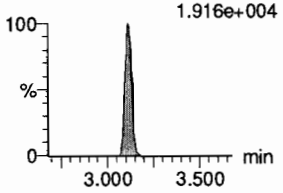
Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

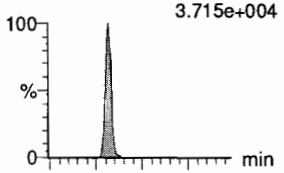
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
2.875e+005



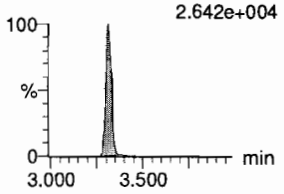
F13:MRM of 2 channels,ES-
313 > 118.9
1.916e+004



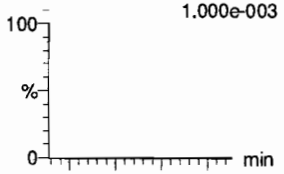
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
3.715e+004



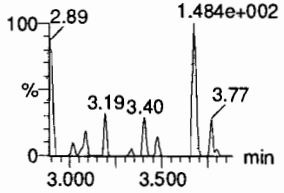
F19:MRM of 2 channels,ES-
349.1 > 99
2.642e+004



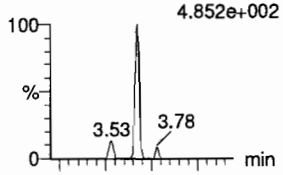
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
1.000e-003



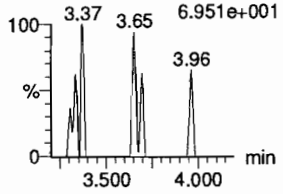
F9:MRM of 3 channels,ES-
285.1 > 184.9
1.484e+002



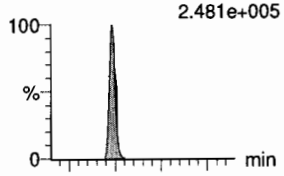
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
4.852e+002



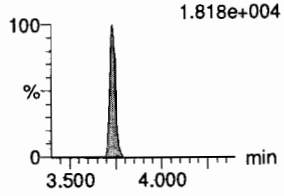
F18:MRM of 2 channels,ES-
340.9 > 216.9
6.951e+001



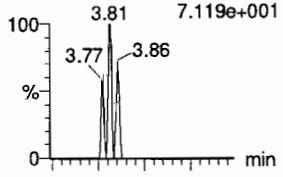
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
2.481e+005



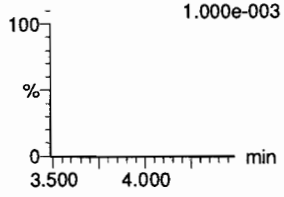
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.818e+004



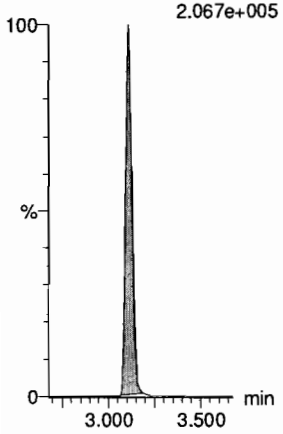
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
7.119e+001



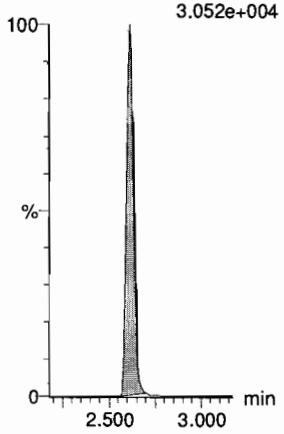
F22:MRM of 2 channels,ES-
376.8 > 85.0
1.000e-003



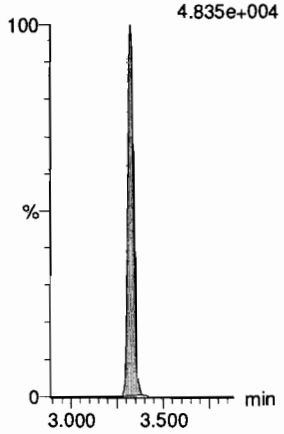
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
2.067e+005



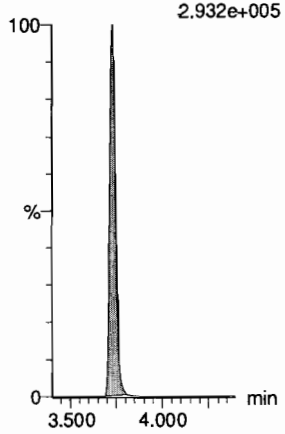
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.052e+004



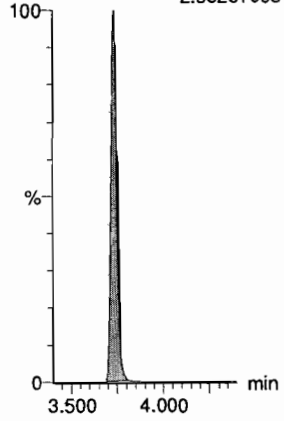
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
4.835e+004



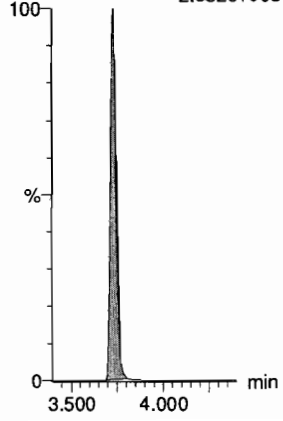
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.932e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.932e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.932e+005

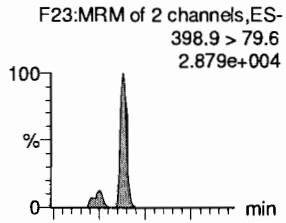


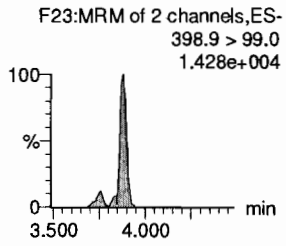
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

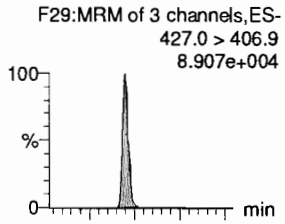
Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

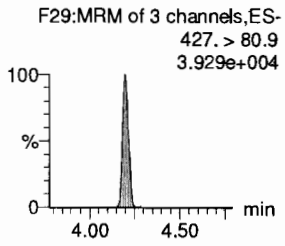
L-PFHxS



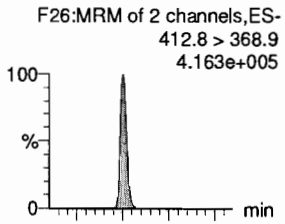


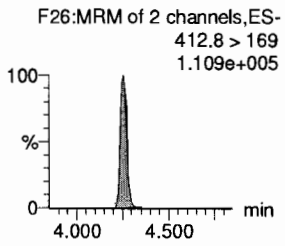
6:2 FTS



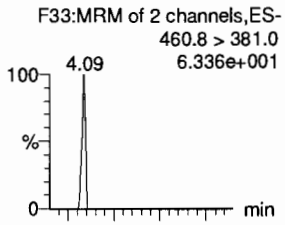


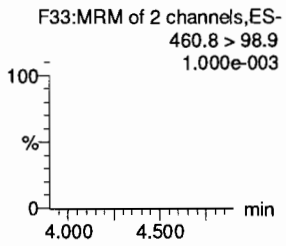
L-PFOA



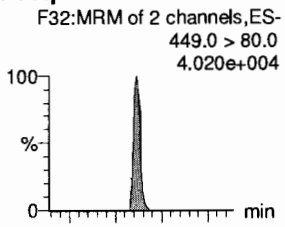


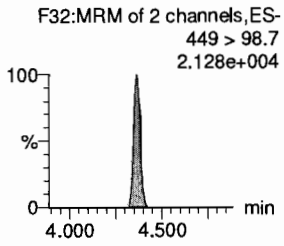
PFEChS



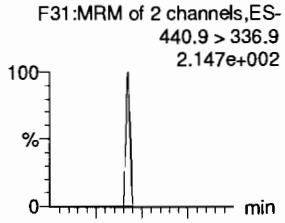


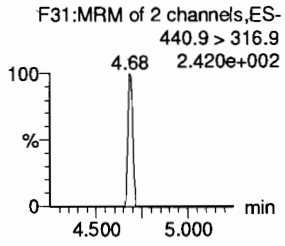
PFHpS



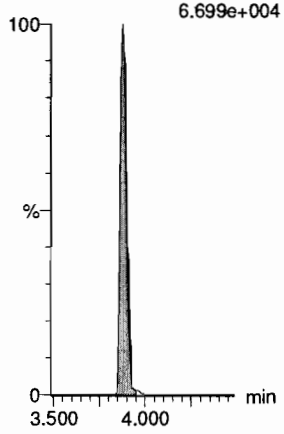


7:3 FTCA

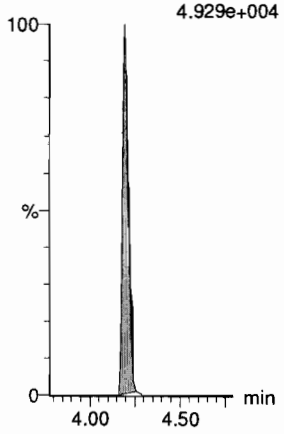




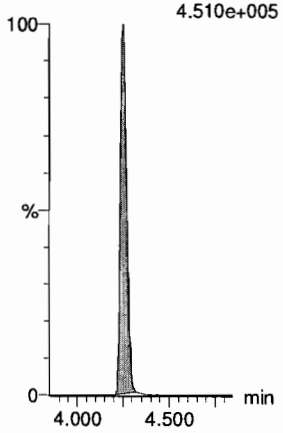
13C3-PFHxS



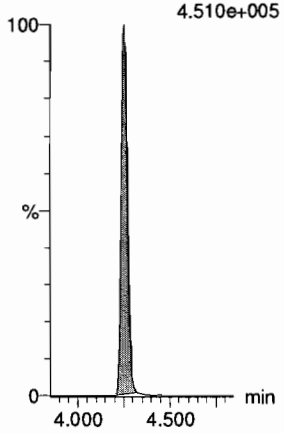
13C2-6:2 FTS



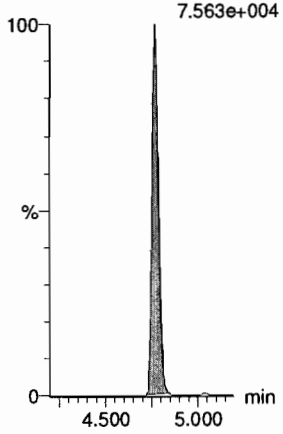
13C2-PFOA



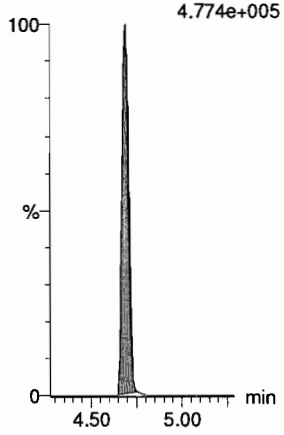
13C2-PFOA



13C8-PFOS



13C5-PFNA

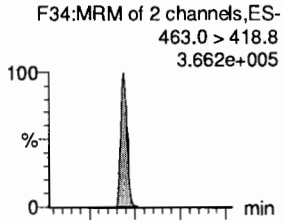


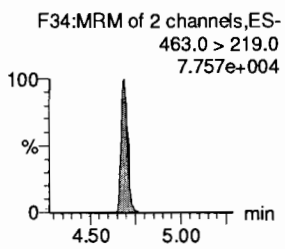
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

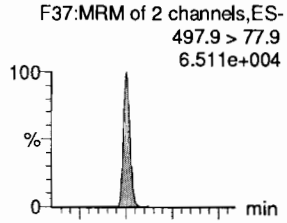
Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

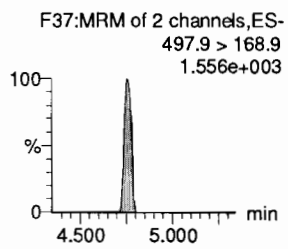
PFNA



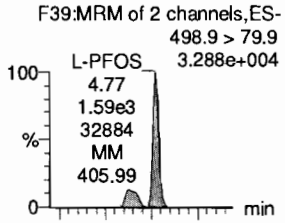


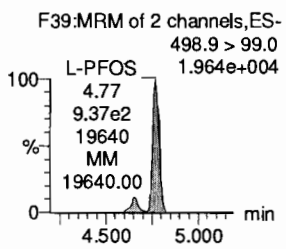
PFOSA



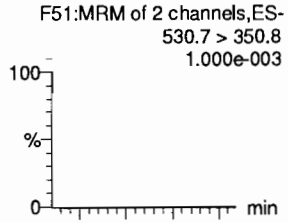


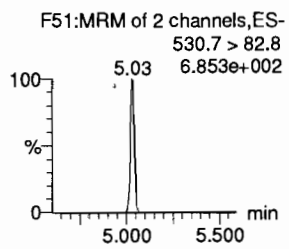
L-PFOS



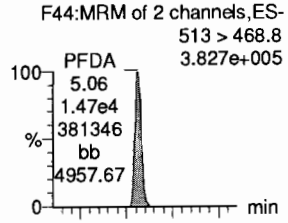


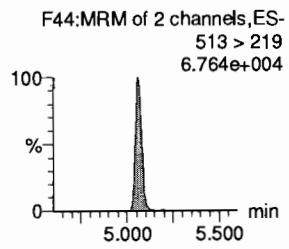
9Cl-PF30NS



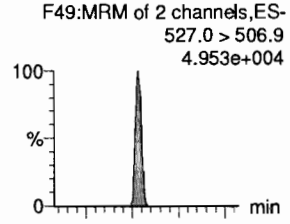


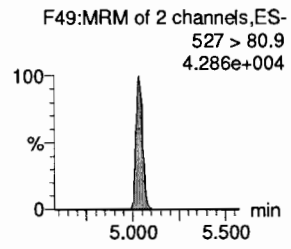
PFDA



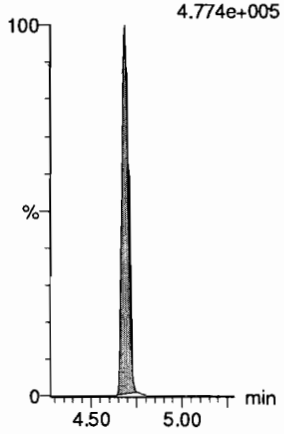


8:2 FTS

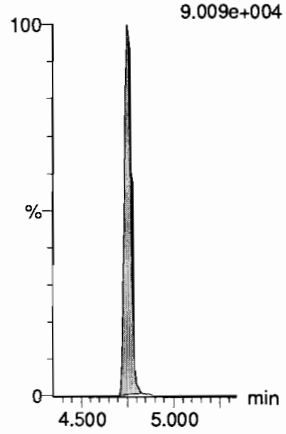




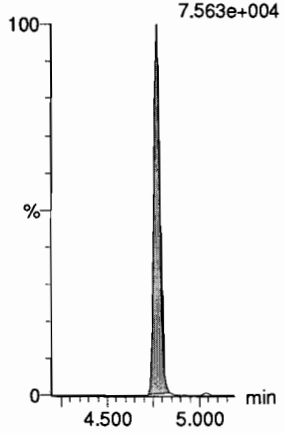
13C5-PFNA



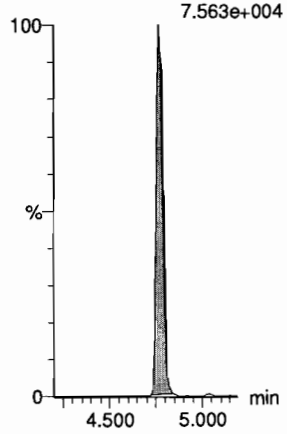
13C8-PFOSA



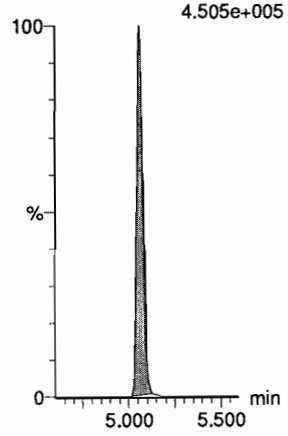
13C8-PFOS



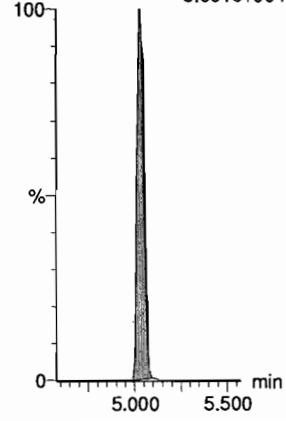
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

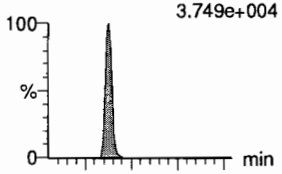


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

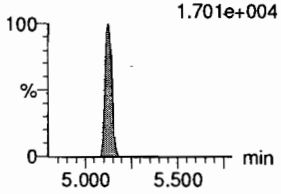
Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

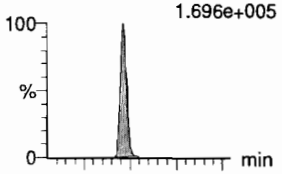
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
3.749e+004



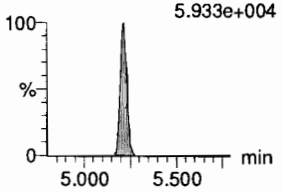
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.701e+004



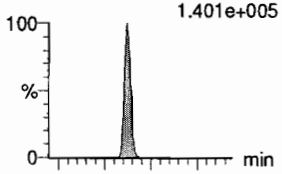
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.696e+005



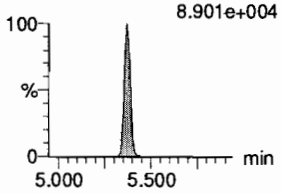
F56:MRM of 2 channels,ES-
570. > 512
5.933e+004



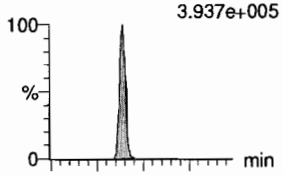
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.401e+005



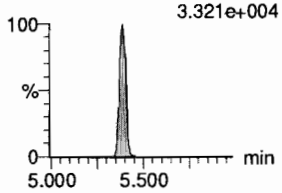
F59:MRM of 2 channels,ES-
584.1 > 526
8.901e+004



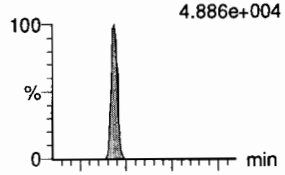
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
3.937e+005



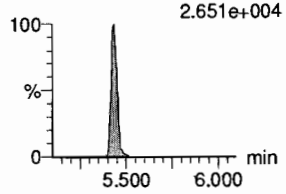
F54:MRM of 2 channels,ES-
563.0 > 269
3.321e+004



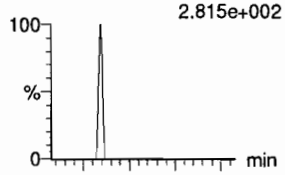
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
4.886e+004



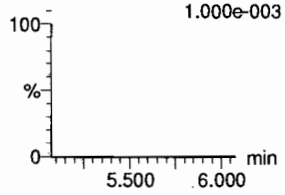
F61:MRM of 2 channels,ES-
598.8 > 98.9
2.651e+004



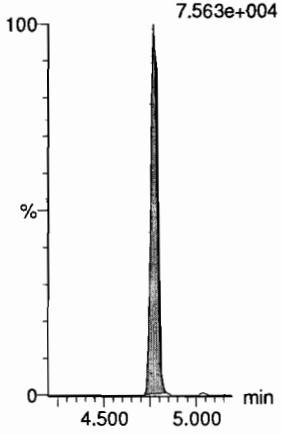
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
2.815e+002



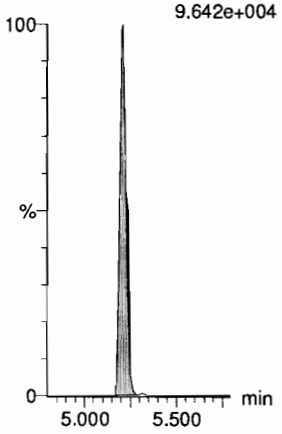
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.000e-003



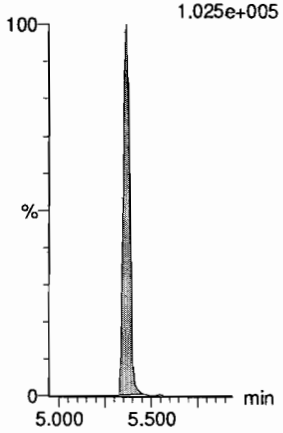
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.563e+004



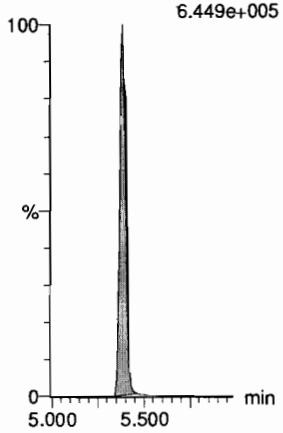
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
9.642e+004



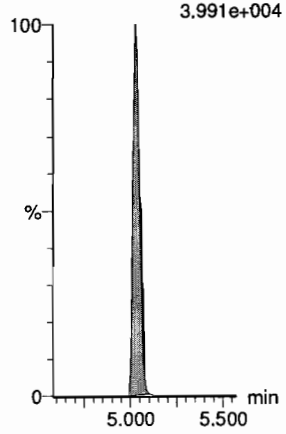
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.025e+005



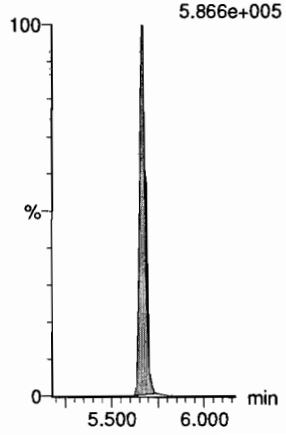
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.449e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.991e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.866e+005

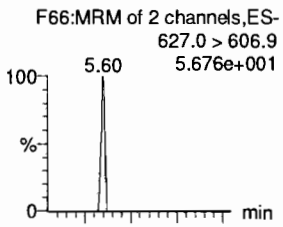


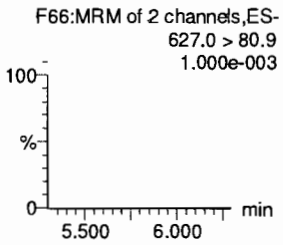
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

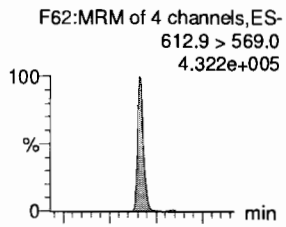
Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

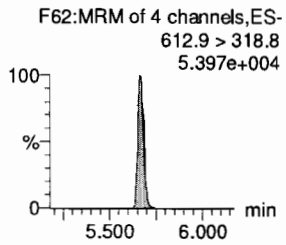
10:2 FTS



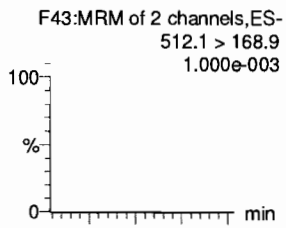


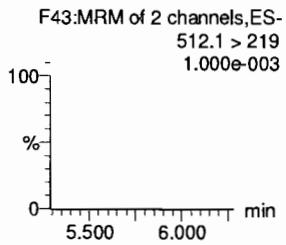
PFDoA



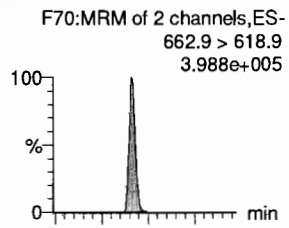


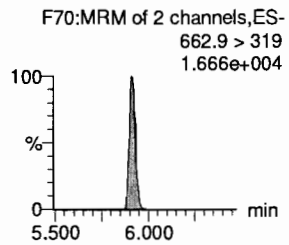
N-MeFOSA



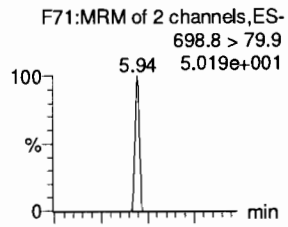


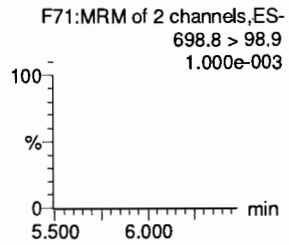
PFTrDA



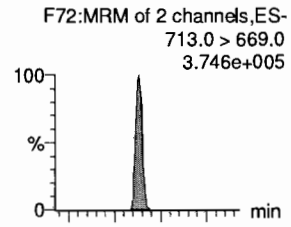


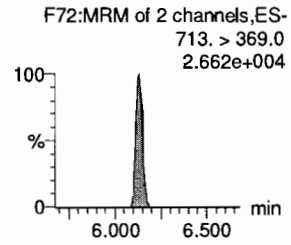
PFDoS



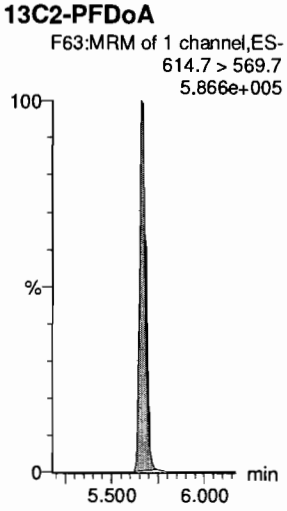


PFTeDA

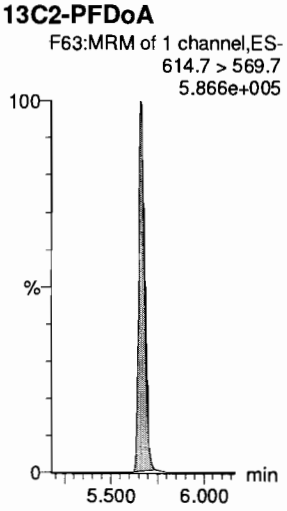




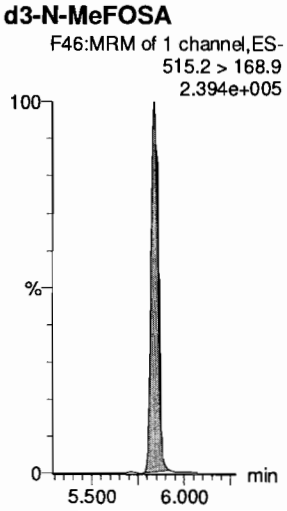
13C2-PFDoA



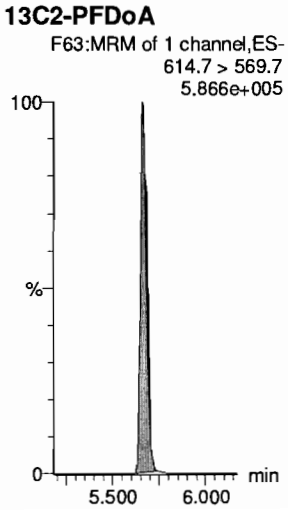
13C2-PFDoA



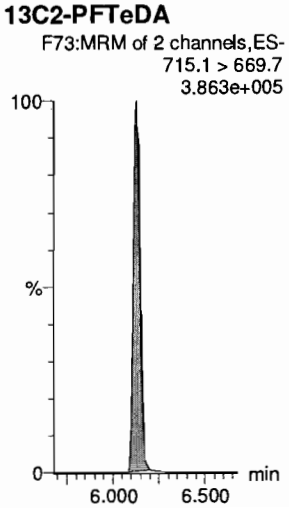
d3-N-MeFOSA



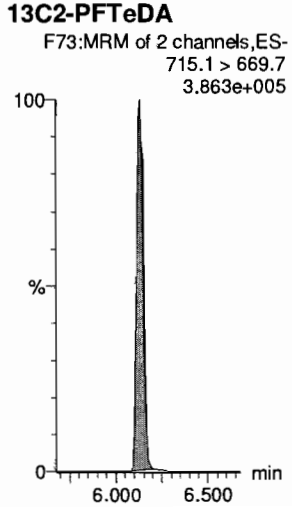
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

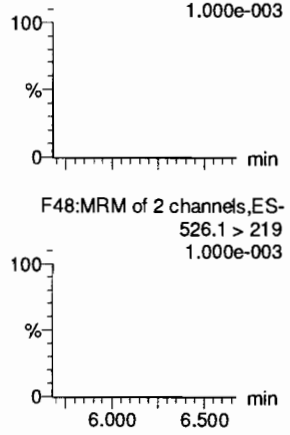


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

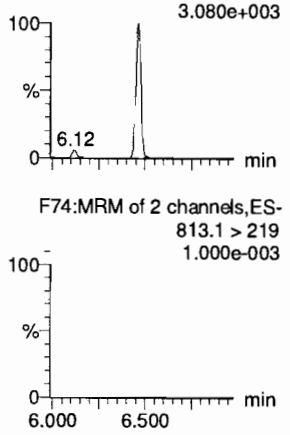
Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

N-EtFOSA



PFHxDA



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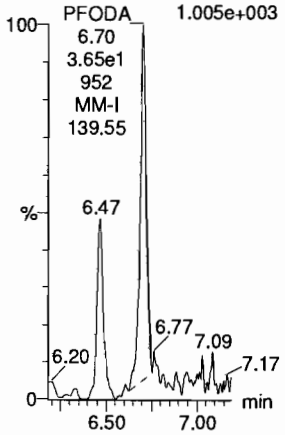
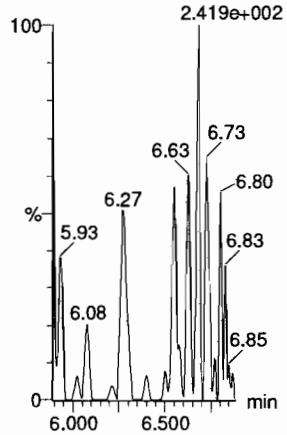
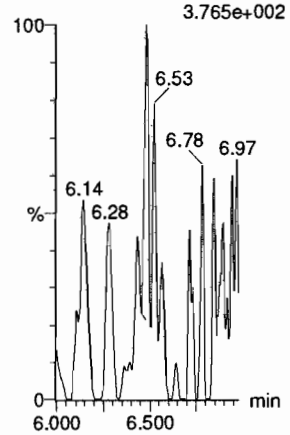


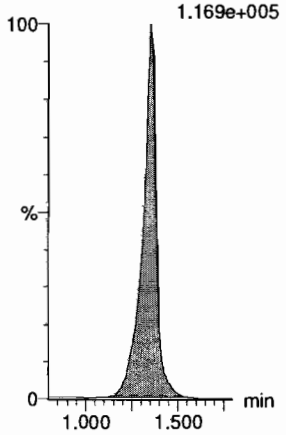
N-MeFOSE



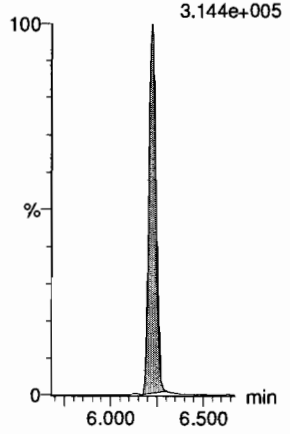
N-EtFOSE



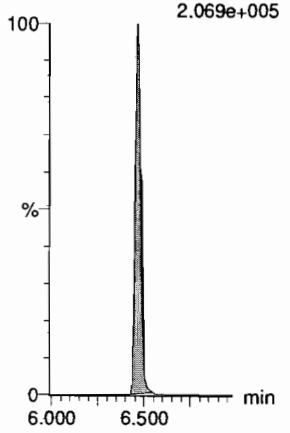
13C4-PFBA



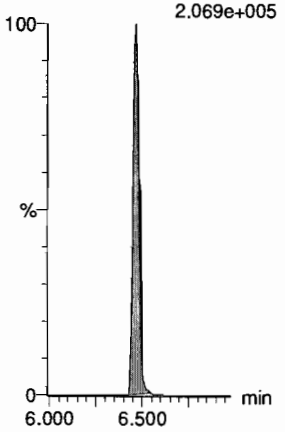
d5-N-ETFOSA



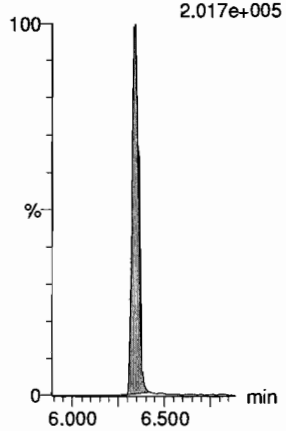
13C2-PFHxDA



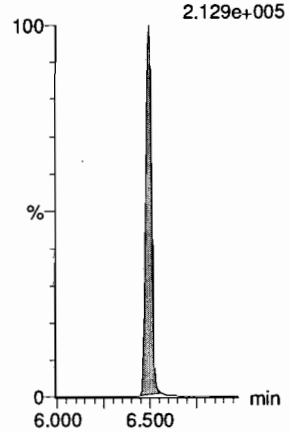
13C2-PFHxDA



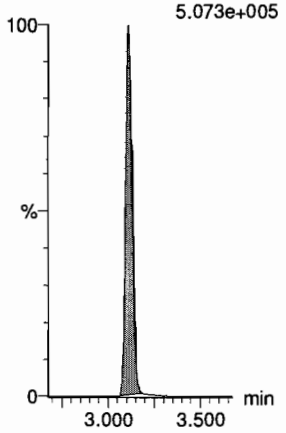
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

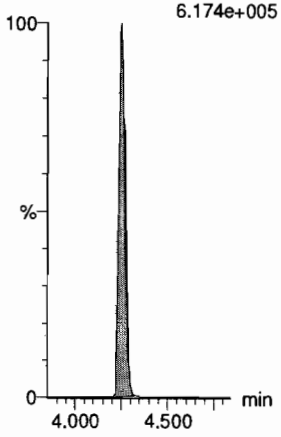


Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-ICV.qld

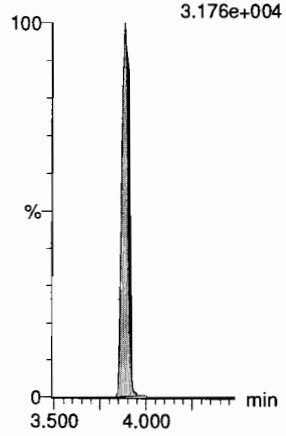
Last Altered: Tuesday, July 02, 2019 10:41:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:41:56 Pacific Daylight Time

Name: 190701M1_14, Date: 01-Jul-2019, Time: 17:59:45, ID: ICV190701M1-1 PFC ICV 19F2422, Description: PFC ICV 19F2422

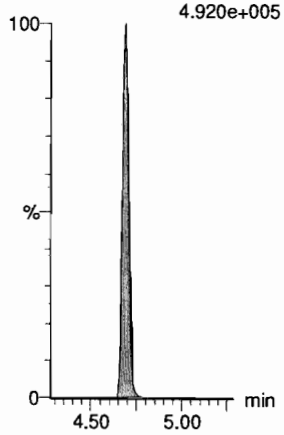
13C8-PFOA



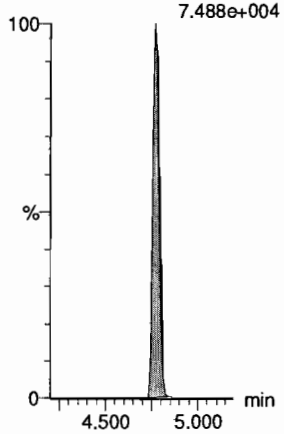
18O2-PFHxS



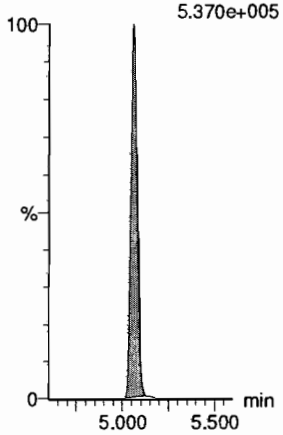
13C9-PFNA



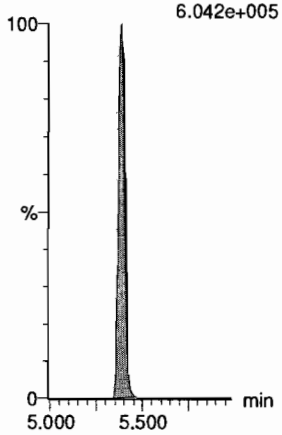
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		7702.428	1.00					NO		
2	2	PFPrS	248.9 > 79.9		1333.576	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		10479.193	1.00					NO		
4	4	PFPeA	263.1 > 218.9		10479.193	1.00					NO		
5	5	PFBS	299.0 > 79.7		1333.576	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		2253.187	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	7702.428	10182.947	1.00	1.36	9.455	12.3	98.3	NO		
8	49	13C3-PFBS	302.0 > 98.8	1333.576	1280.681	1.00	2.62	13.016	12.2	97.6	NO		
9	48	13C3-PFPeA	266.0 > 221.8	10479.193	19495.572	1.00	2.34	6.719	12.8	102.5	NO		
10	48	13C3-PFPeA	266.0 > 221.8	10479.193	19495.572	1.00	2.34	6.719	12.8	102.5	NO		
11	49	13C3-PFBS	302.0 > 98.8	1333.576	1280.681	1.00	2.62	13.016	12.2	97.6	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2253.187	1280.681	1.00	3.02	21.992	12.5	100.1	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0		7696.778	1.00					NO		
15	8	PFPeS	349.1>80.1		1333.576	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1427.933	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		10479.646	1.00					NO		
18	11	PFHpA	363.0 > 318.9		10479.646	1.00					NO		
19	12	ADONA	376.8 > 250.9		10479.646	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	7696.778	19495.572	1.00	3.11	4.935	4.9	97.9	NO		
21	49	13C3-PFBS	302.0 > 98.8	1333.576	1280.681	1.00	2.62	13.016	12.2	97.6	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1427.933	19495.572	1.00	3.33	0.916	4.7	93.9	NO		
23	53	13C4-PFHpA	367.2 > 321.8	10479.646	19495.572	1.00	3.73	6.719	12.6	100.5	NO		
24	53	13C4-PFHpA	367.2 > 321.8	10479.646	19495.572	1.00	3.73	6.719	12.6	100.5	NO		
25	53	13C4-PFHpA	367.2 > 321.8	10479.646	19495.572	1.00	3.73	6.719	12.6	100.5	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6		2626.181	1.00					NO		
28	15	6:2 FTS	427.0 > 406.9		1698.386	1.00					NO		
29	16	L-PFOA	412.8 > 368.9		17841.178	1.00					NO		
30	18	PFecHS	460.8 > 381.0		17841.178	1.00					NO		
31	19	PFHpS	449.0 > 80.0		2871.100	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		17778.480	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	2626.181	1280.681	1.00	3.88	25.633	11.8	94.5	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1698.386	3026.948	1.00	4.20	7.014	11.6	92.9	NO		
35	58	13C2-PFOA	414.9 > 369.7	17841.178	24535.299	1.00	4.25	9.090	12.2	97.7	NO		
36	58	13C2-PFOA	414.9 > 369.7	17841.178	24535.299	1.00	4.25	9.090	12.2	97.7	NO		

CGH 7/2/2019

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2871.100	3026.948	1.00	4.77	11.856	11.9	95.0	NO		
38	56	13C5-PFNA	468.2 > 422.9	17778.480	18611.383	1.00	4.69	11.941	11.8	94.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8		17778.480	1.00					NO		
41	22	PFOSA	497.9 > 77.9		1923.927	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		2871.100	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		2871.100	1.00					NO		
44	26	PFDA	513 > 468.8		15969.261	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		1730.920	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	17778.480	18611.383	1.00	4.69	11.941	11.8	94.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1923.927	19673.090	1.00	4.75	1.222	7.8	62.6	NO		
48	59	13C8-PFOS	507.0 > 79.9	2871.100	3026.948	1.00	4.77	11.856	11.9	95.0	NO		
49	59	13C8-PFOS	507.0 > 79.9	2871.100	3026.948	1.00	4.77	11.856	11.9	95.0	NO		
50	60	13C2-PFDA	515.1 > 469.9	15969.261	20062.938	1.00	5.06	9.949	11.9	95.2	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1730.920	3026.948	1.00	5.03	7.148	12.0	95.7	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		2871.100	1.00					NO		
54	29	L-MeFOSAA	570 > 419		3332.659	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		3184.205	1.00					NO		
56	33	PFUdA	563.0 > 518.9		19756.455	1.00					NO		
57	34	PFDS	598.8 > 79.9		1730.920	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		10389.164	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	2871.100	3026.948	1.00	4.77	11.856	11.9	95.0	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3332.659	19673.090	1.00	5.21	2.118	13.0	104.0	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	3184.205	19673.090	1.00	5.37	2.023	11.3	90.2	NO		
62	63	13C2-PFUdA	565 > 519.8	19756.455	19673.090	1.00	5.38	12.553	11.9	95.4	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1730.920	3026.948	1.00	5.03	7.148	12.0	95.7	NO		
64	65	13C2-PFDoA	614.7 > 569.7	10389.164	20062.938	1.00	5.67	6.473	5.9	47.3	YES		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1730.920	1.00					NO		
67	37	PFDoA	612.9 > 569.0		10389.164	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9		10.165	1.00					NO		
69	39	PFTrDA	662.9 > 618.9		10389.164	1.00					NO		
70	40	PFDoS	698.8 > 79.9		1754.964	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		1754.964	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	10389.164	20062.938	1.00	5.67	6.473	5.9	47.3	YES		

CGH 7/2/2019

Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	10389.164	20062.938	1.00	5.67	6.473	5.9	47.3	YES		
74	66	d3-N-MeFOSA	515.2 > 168.9	10.165	19673.090	1.00	5.84	0.006	0.2	0.1	YES		
75	65	13C2-PFDoA	614.7 > 569.7	10389.164	20062.938	1.00	5.67	6.473	5.9	47.3	YES		
76	67	13C2-PFTeDA	715.1 > 669.7	1754.964	19673.090	1.00	6.13	1.115	1.7	13.4	YES		
77	67	13C2-PFTeDA	715.1 > 669.7	1754.964	19673.090	1.00	6.13	1.115	1.7	13.4	YES		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		20.618	1.00					NO		
80	43	PFHxDA	813.1 > 768.6		1140.623	1.00					NO		
81	44	PFODA	913.1 > 868.8		1140.623	1.00					NO		
82	45	N-MeFOSE	616.1 > 58.9		764.479	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		799.052	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	10182.947	10182.947	1.00	1.36	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	20.618	19673.090	1.00	6.23	0.013	0.3	0.2	YES		
86	69	13C2-PFHxDA	815 > 769.7	1140.623	19673.090	1.00	6.47	0.725	0.9	17.2	YES		
87	69	13C2-PFHxDA	815 > 769.7	1140.623	19673.090	1.00	6.47	0.725	0.9	17.2	YES		
88	70	d7-N-MeFOSE	623.1 > 58.9	764.479	19673.090	1.00	6.34	0.486	16.9	11.3	YES		
89	71	d9-N-EtFOSE	639.2 > 58.8	799.052	19673.090	1.00	6.49	0.508	17.7	11.8	YES		
90	73	13C5-PFHxA	318.0 > 272.9	19495.572	19495.572	1.00	3.11	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	24535.299	24535.299	1.00	4.25	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1280.681	1280.681	1.00	3.88	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	18611.383	18611.383	1.00	4.69	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	3026.948	3026.948	1.00	4.77	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	20062.938	20062.938	1.00	5.06	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	19673.090	19673.090	1.00	5.38	12.500	12.5	100.0	NO		

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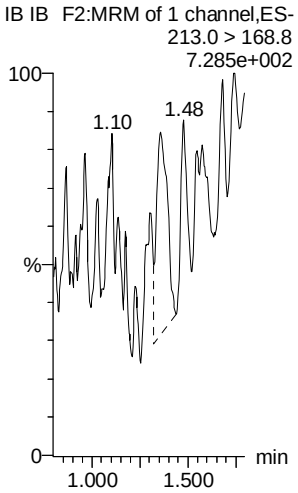
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

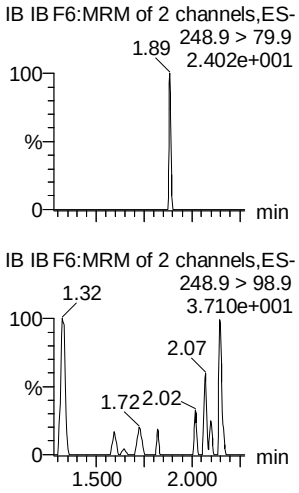
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070119.mdb 02 Jul 2019 08:31:23
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-01-19.cdb 02 Jul 2019 10:20:51

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

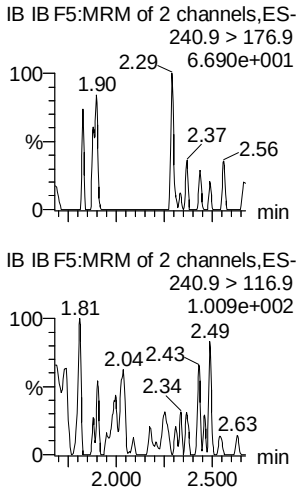
PFBA



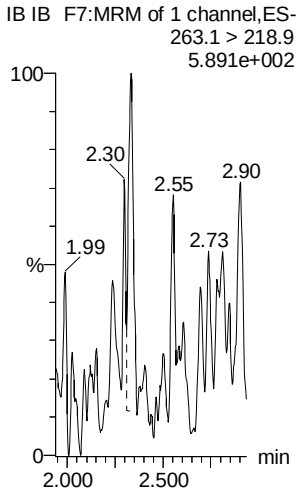
PFPrS



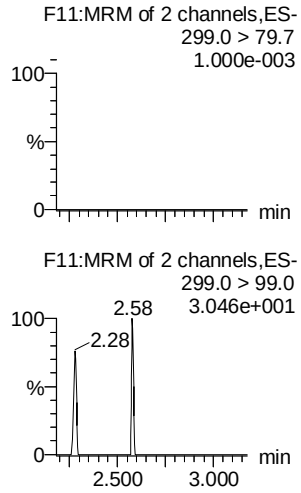
3:3 FTCA



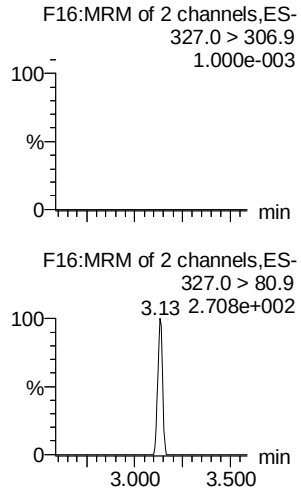
PFPeA



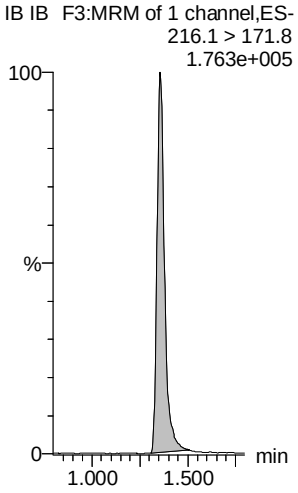
PFBS



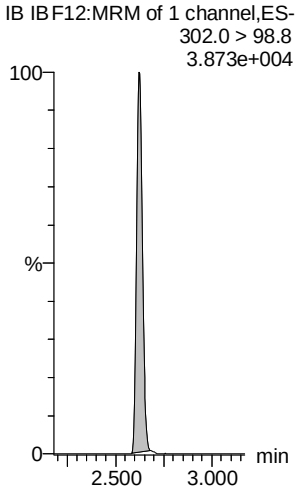
4:2 FTS



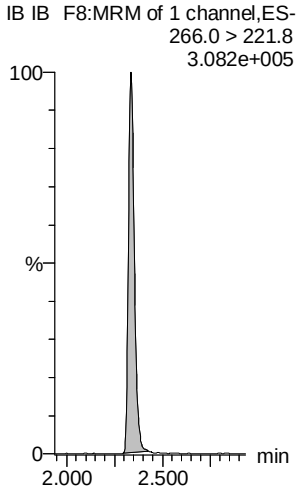
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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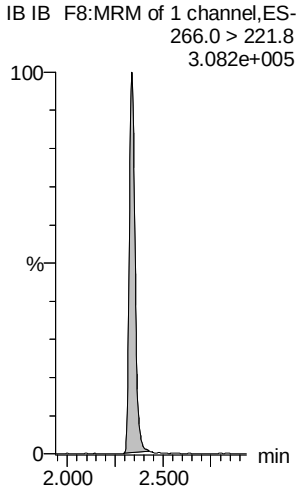

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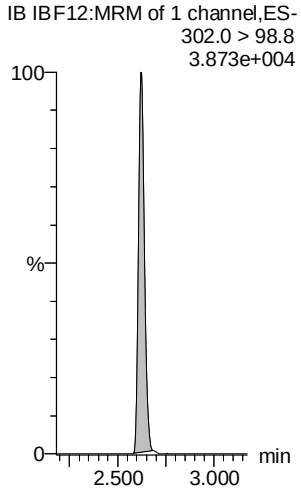
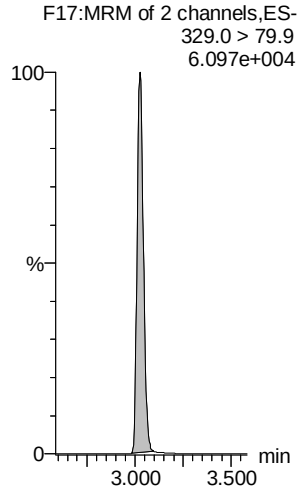


13C2-4:2 FTS



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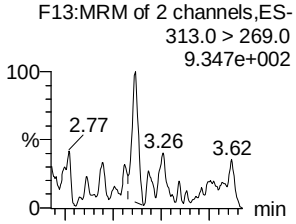
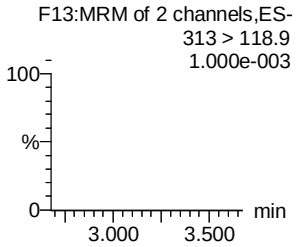
Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

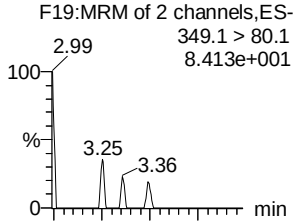
Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

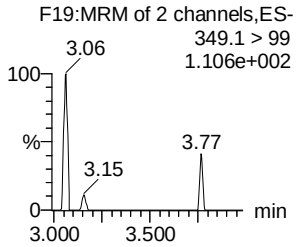
PFHxA



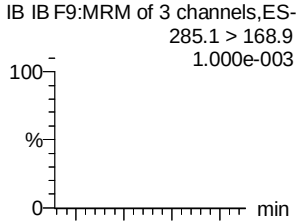


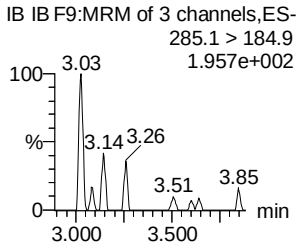
PFPeS



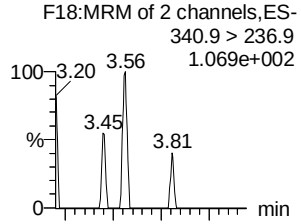


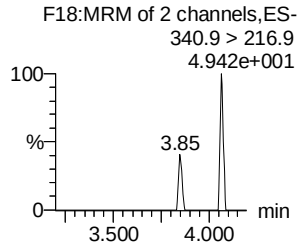
HFPO-DA





5:3 FTCA





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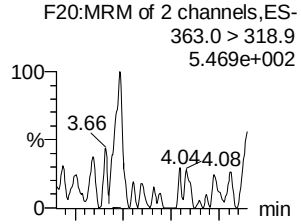

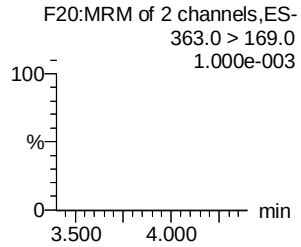

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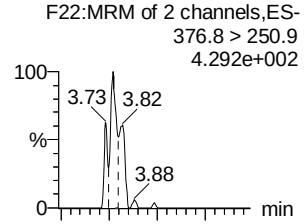

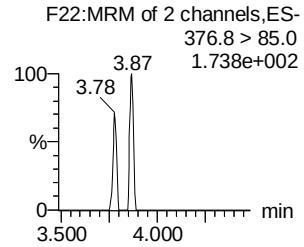

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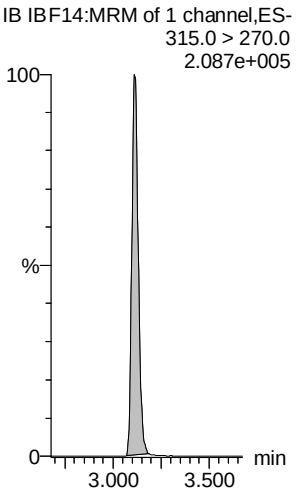
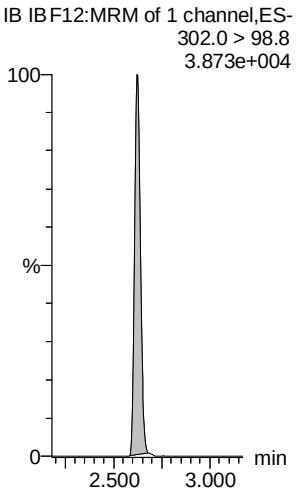
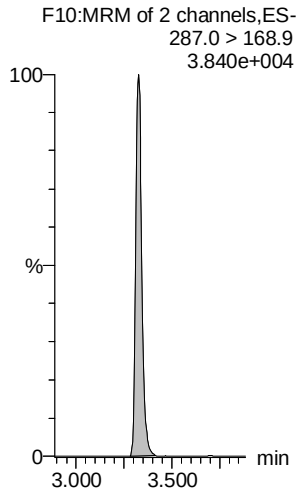


13C3-PFBS



13C3-HFPO-DA



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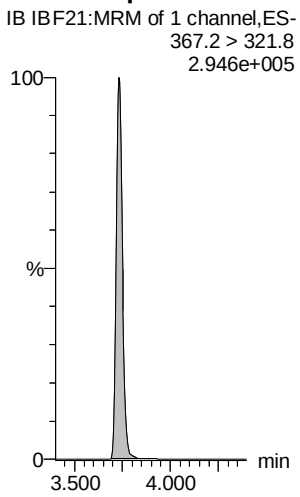

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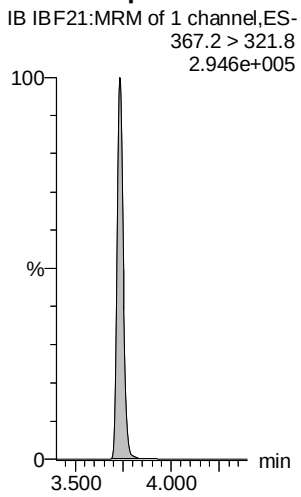

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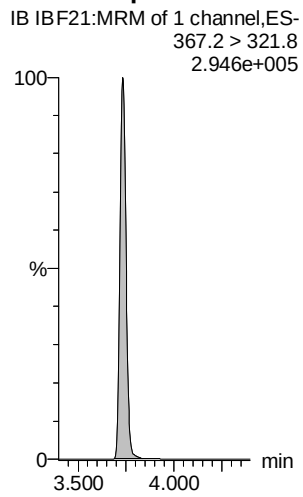
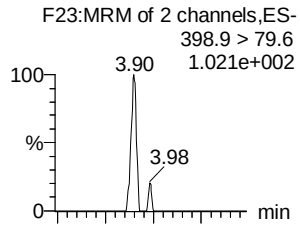


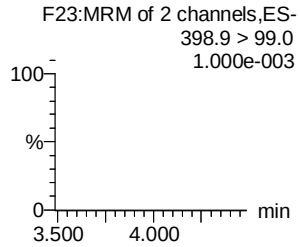
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

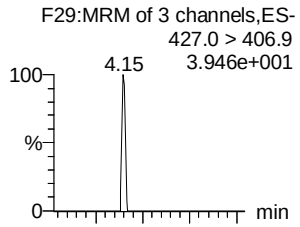
Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

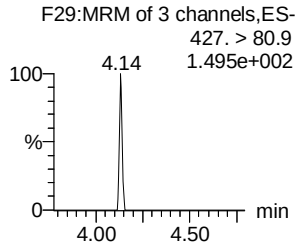
L-PFHxS





6:2 FTS





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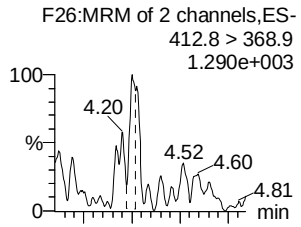

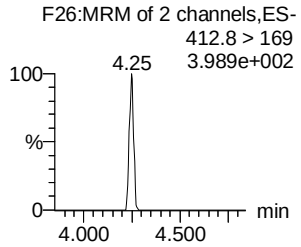

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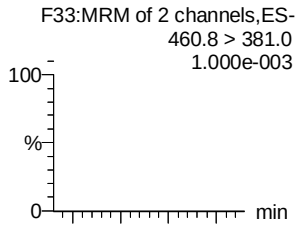

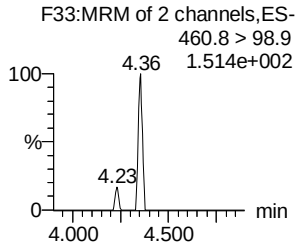

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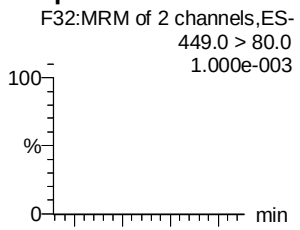
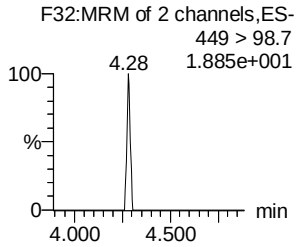
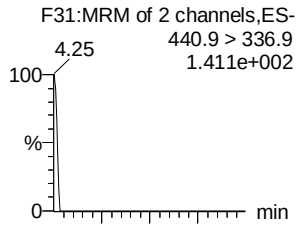
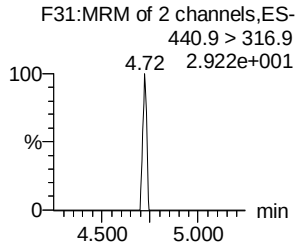


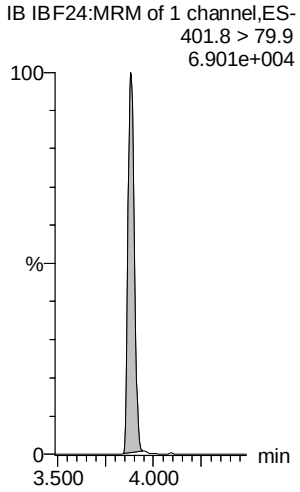


7:3 FTCA

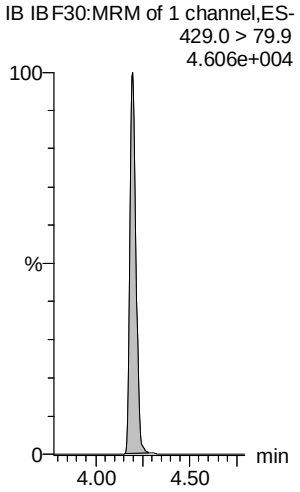




13C3-PFHxS



13C2-6:2 FTS



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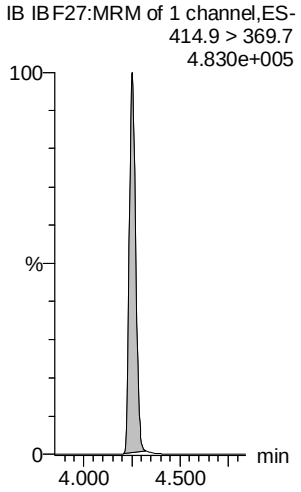

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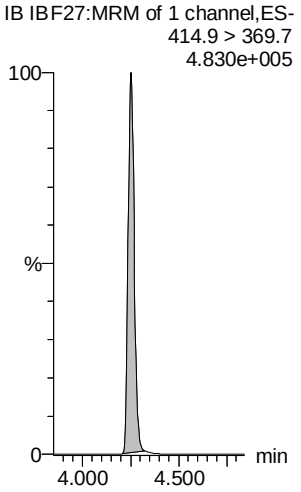
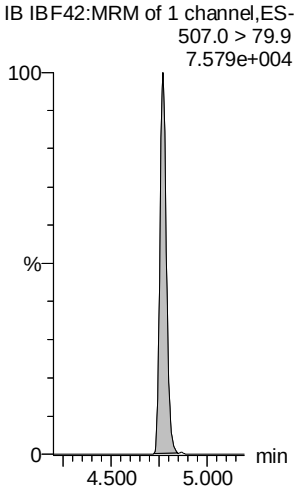
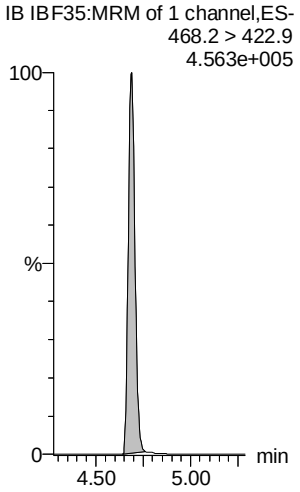


13C8-PFOS



13C5-PFNA

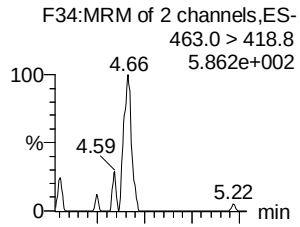


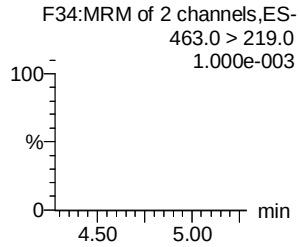
Dataset: F:\Projects\PFAS.PRO\Results\190701M1\190701M1-IB.qld

Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

PFNA





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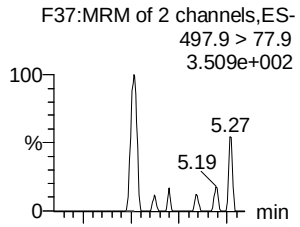
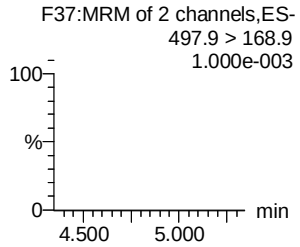
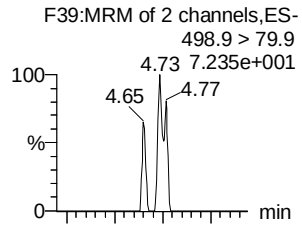
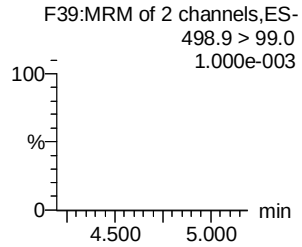


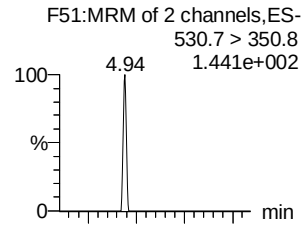


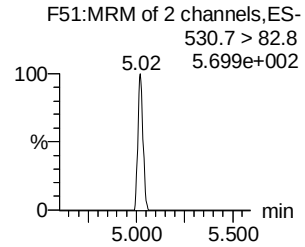
L-PFOS





9Cl-PF30NS





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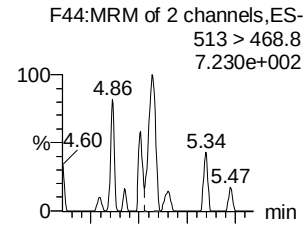
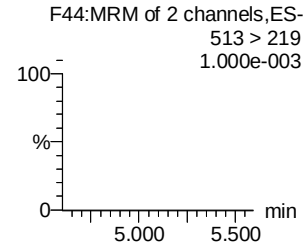
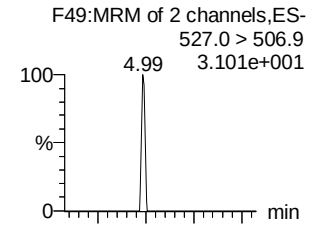
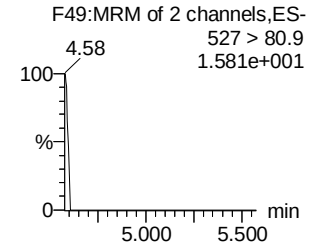


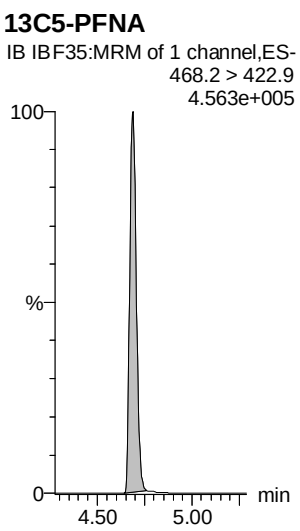


8:2 FTS

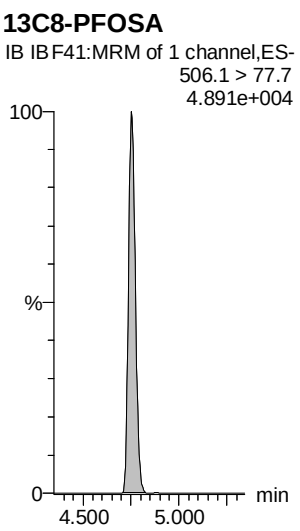




13C5-PFNA



13C8-PFOSA



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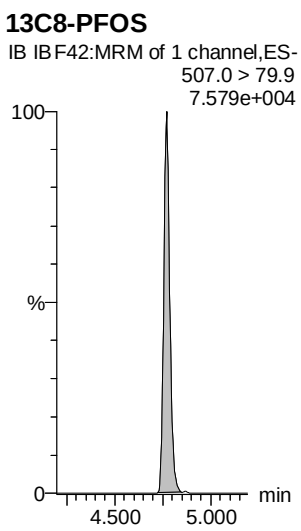

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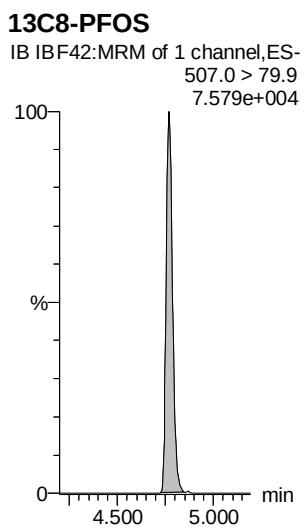
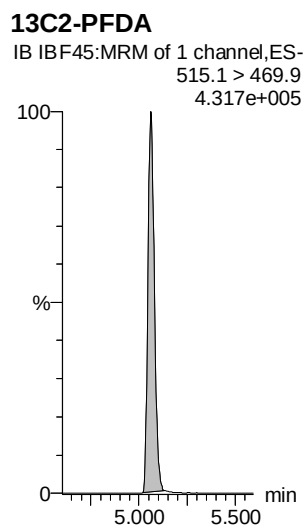
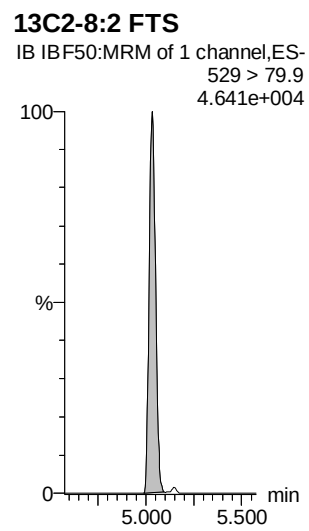


13C2-PFDA



13C2-8:2 FTS



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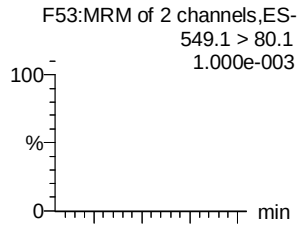
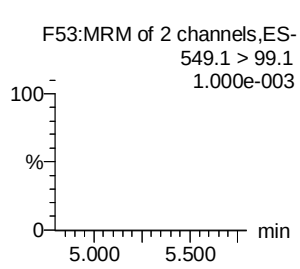
Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

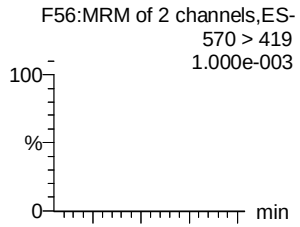
Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

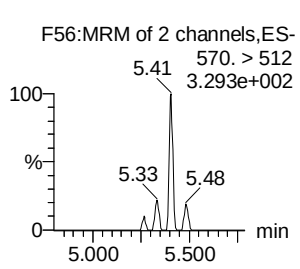
PFNS





L-MeFOSAA





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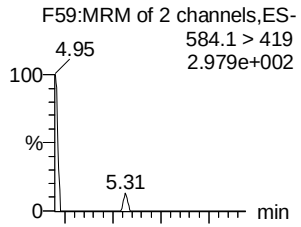

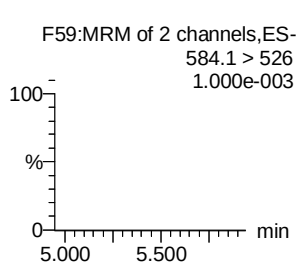

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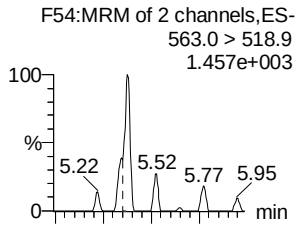

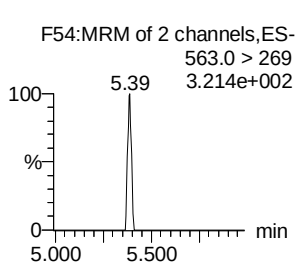

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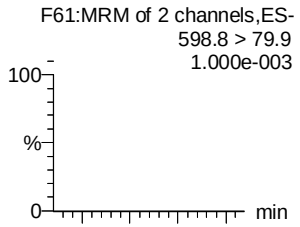

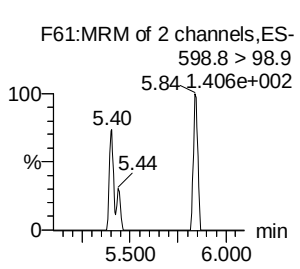

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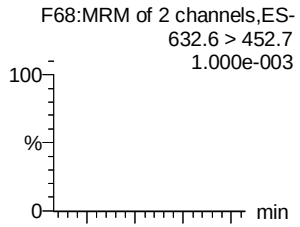

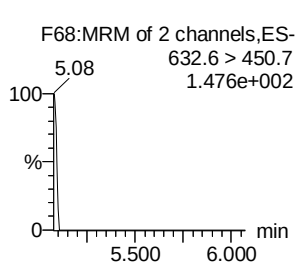

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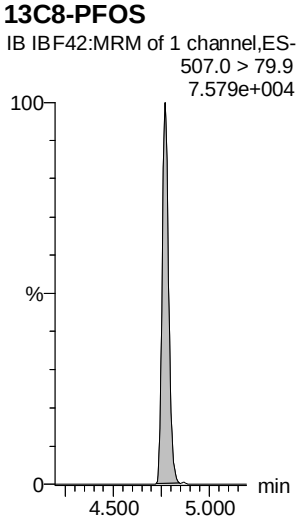
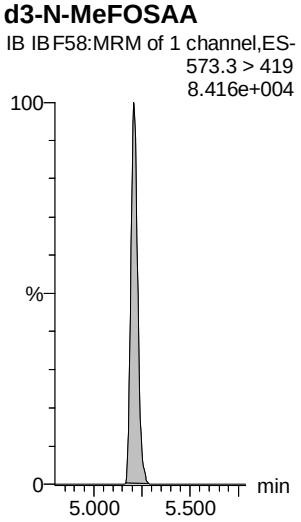


d3-N-MeFOSAA



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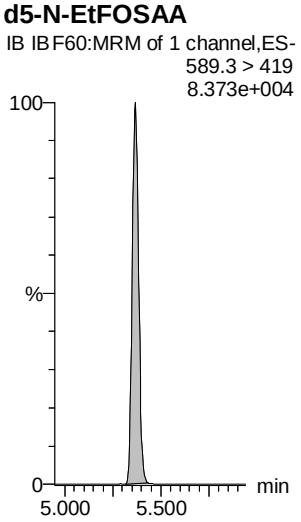

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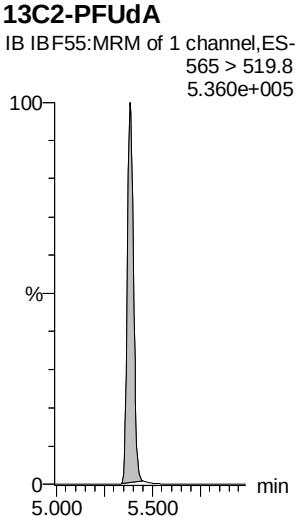
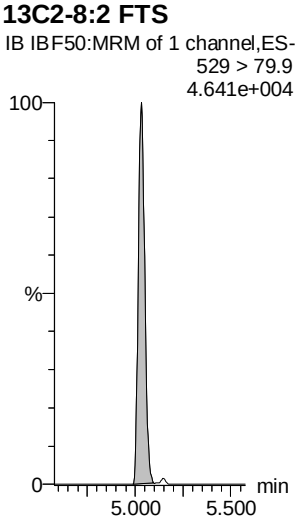


13C2-8:2 FTS



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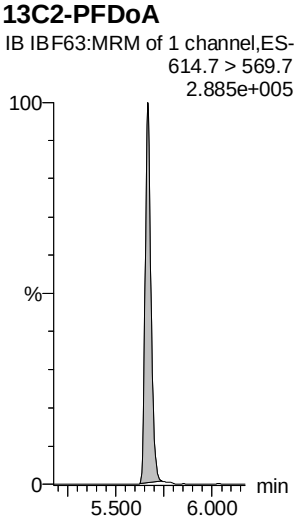

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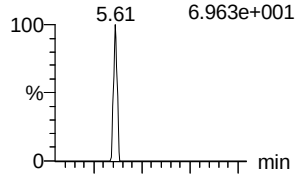
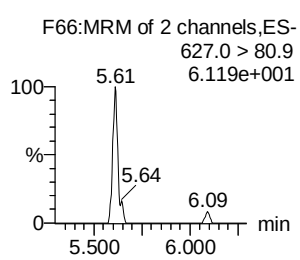
Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

10:2 FTS





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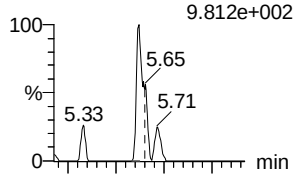

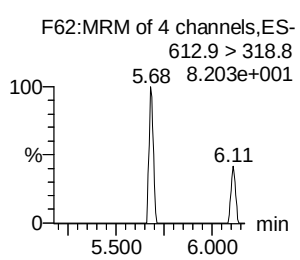

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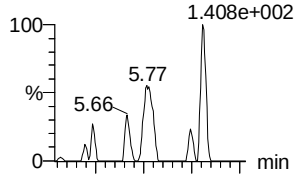

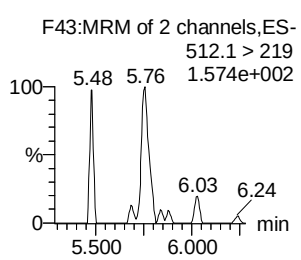

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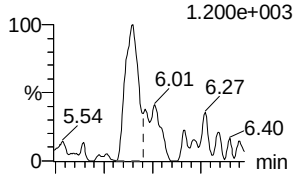

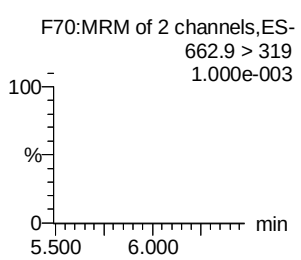

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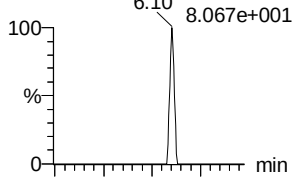

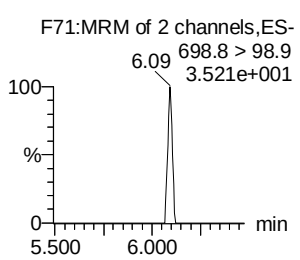

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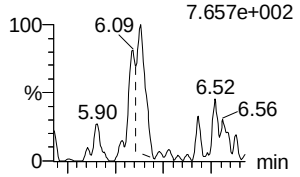

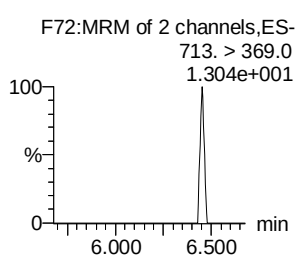

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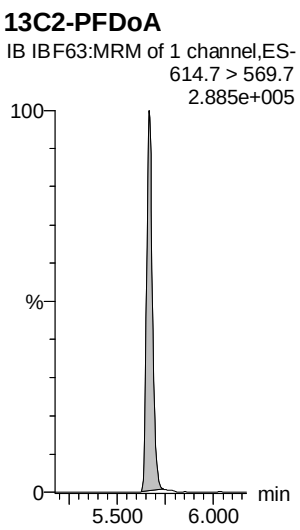

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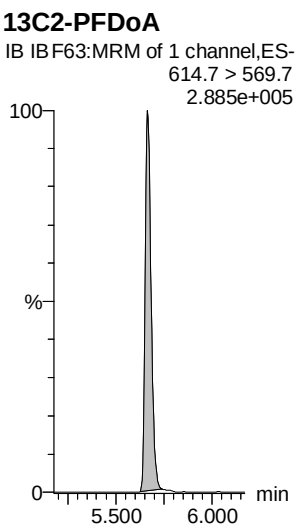
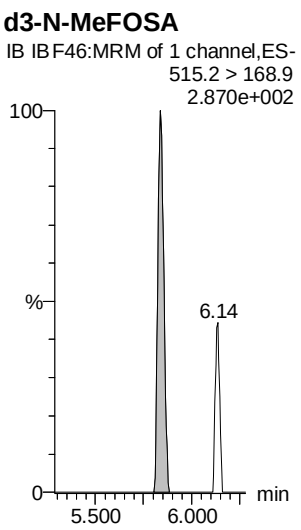


d3-N-MeFOSA



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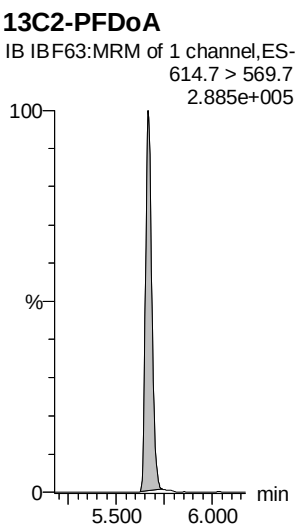

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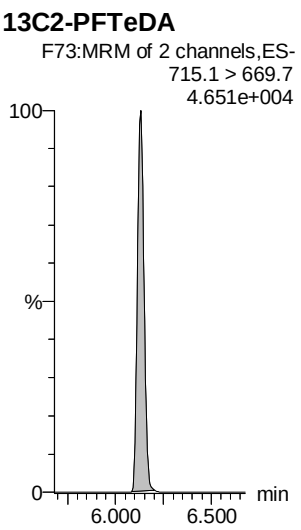

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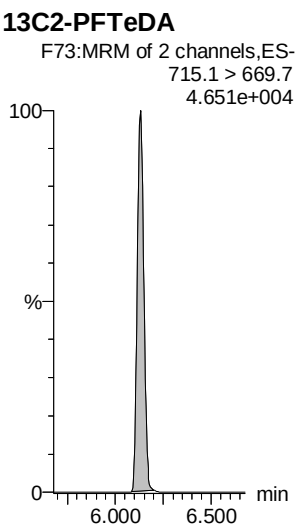

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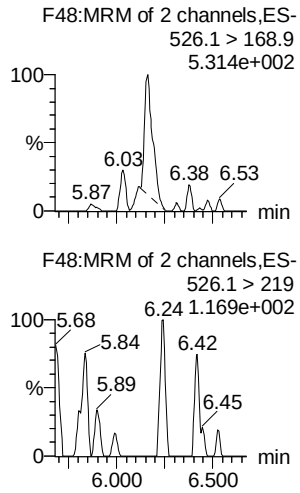
Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

N-EtFOSA



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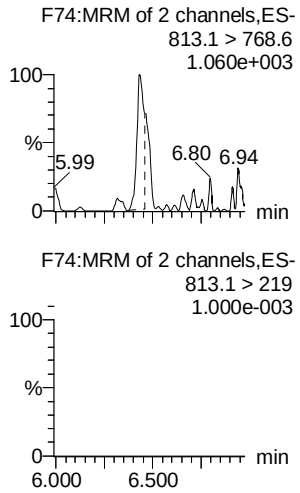

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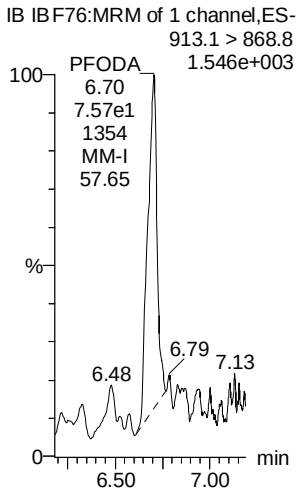
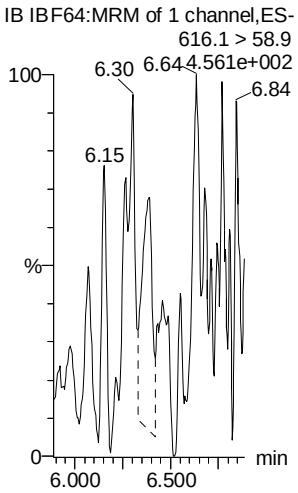


N-MeFOSE



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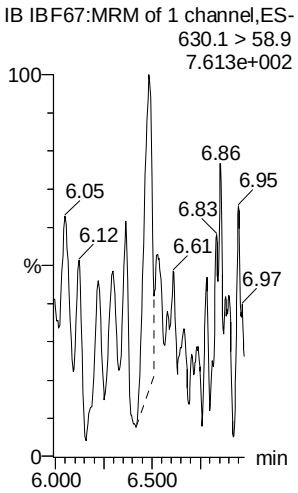

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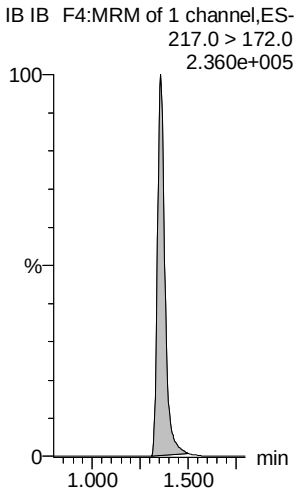
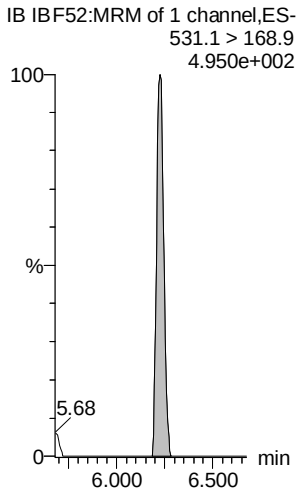


d5-N-ETFOSA



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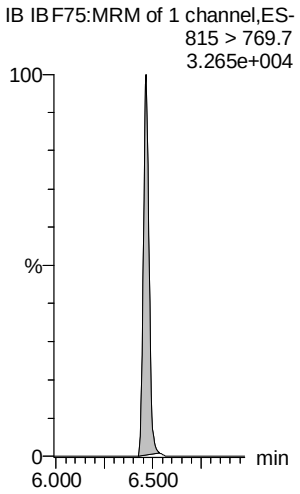

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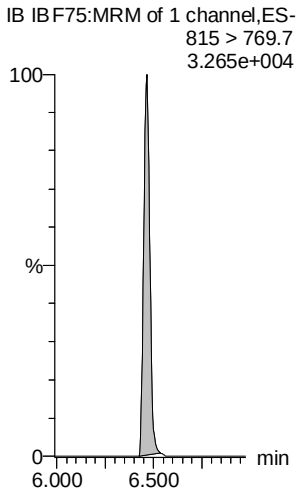
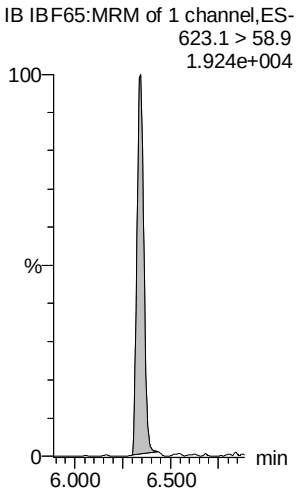


d7-N-MeFOSE



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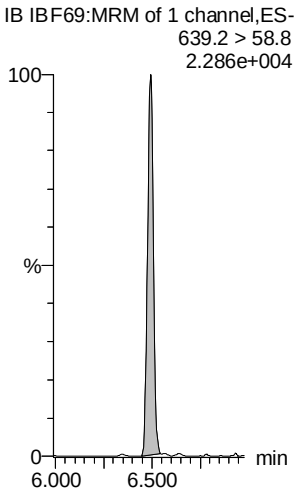

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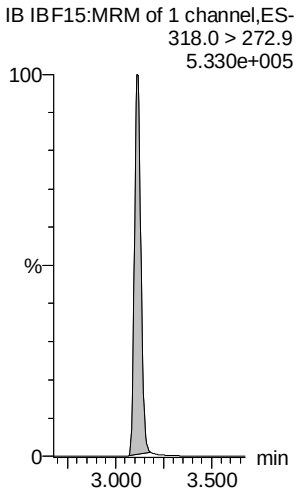

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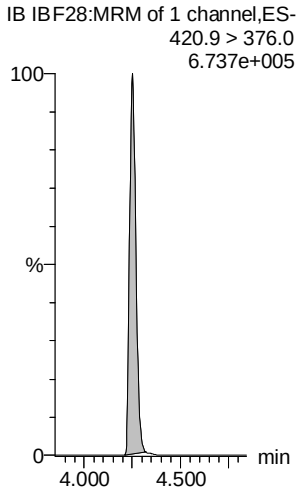
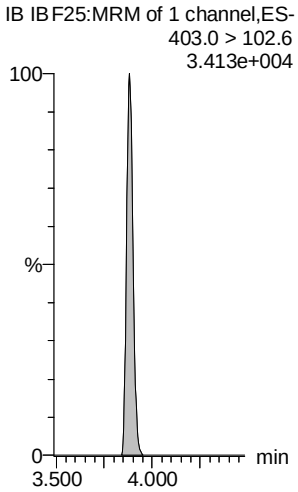
Last Altered: Tuesday, July 02, 2019 10:51:30 Pacific Daylight Time
Printed: Tuesday, July 02, 2019 10:51:48 Pacific Daylight Time

Name: 190701M1_13, Date: 01-Jul-2019, Time: 17:49:13, ID: IB, Description: IB

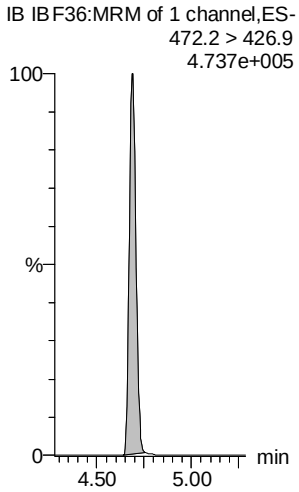
13C8-PFOA



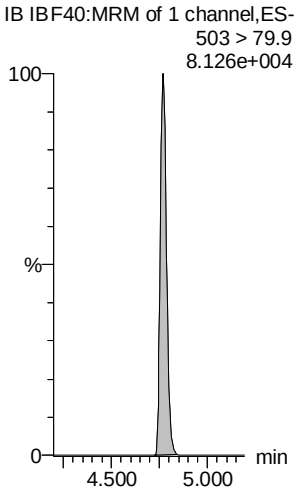
18O2-PFHxS



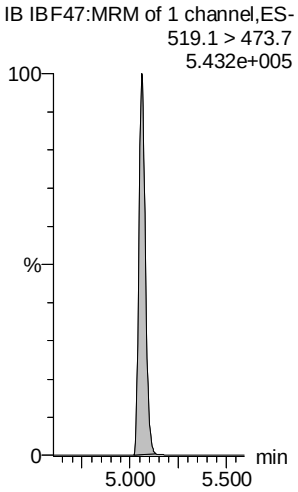
13C9-PFNA



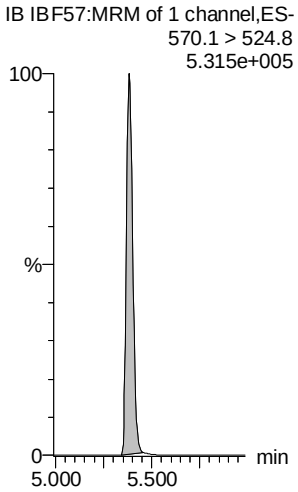
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:11:11 Pacific Daylight Time

high pt
5:3FTCA = 50
all other compounds = 100

low pt
PFHpS = 0.5
PFDS ↓

scanned
tP 07/11/19

7/11/19

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

7:3FTCA & 11Cl-PF3OUdS not used.

am 7/11/19

Compound name: PFBA
Correlation coefficient: r = 0.999710, r^2 = 0.999420
Calibration curve: 1.42744 * x + -0.0673711
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	190710M2_6	Standard	0.250	1.22	55.051	1930.395	0.356	0.3	18.8	NO	0.999	NO	MM
2	2	190710M2_7	Standard	0.500	1.21	97.891	2093.751	0.584	0.5	-8.7	NO	0.999	NO	MM
3	3	190710M2_8	Standard	1.000	1.21	198.526	1877.004	1.322	1.0	-2.7	NO	0.999	NO	MM
4	4	190710M2_9	Standard	2.000	1.21	444.612	1948.465	2.852	2.0	2.3	NO	0.999	NO	MM
5	5	190710M2_10	Standard	5.000	1.21	1384.449	2587.624	6.688	4.7	-5.4	NO	0.999	NO	MM
6	6	190710M2_11	Standard	10.000	1.21	2122.117	1944.651	13.641	9.6	-4.0	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	1.22	17596.623	3149.437	69.840	49.0	-2.1	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	1.21	20709.215	1784.566	145.058	101.7	1.7	NO	0.999	NO	bb

Compound name: PFPrS
Coefficient of Determination: R^2 = 0.997891
Calibration curve: 0.000772076 * x^2 + 1.04403 * x + 0.0148423
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	190710M2_6	Standard	0.250	1.57	8.922	545.502	0.204	0.2	-27.4	NO	0.998	NO	bb
2	2	190710M2_7	Standard	0.500	1.57	25.938	500.786	0.647	0.6	21.1	NO	0.998	NO	bb
3	3	190710M2_8	Standard	1.000	1.57	43.402	517.896	1.048	1.0	-1.2	NO	0.998	NO	MM
4	4	190710M2_9	Standard	2.000	1.57	98.335	589.041	2.087	2.0	-0.9	NO	0.998	NO	MM
5	5	190710M2_10	Standard	5.000	1.57	301.372	676.534	5.568	5.3	6.0	NO	0.998	NO	bb
6	6	190710M2_11	Standard	10.000	1.57	488.523	516.663	11.819	11.2	12.1	NO	0.998	NO	bb
7	7	190710M2_12	Standard	50.000	1.57	3726.911	909.570	51.218	47.4	-5.2	NO	0.998	NO	bb
8	8	190710M2_13	Standard	100.000	1.57	4578.077	504.378	113.458	101.1	1.1	NO	0.998	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:29:54 Pacific Daylight Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.997073
Calibration curve: -1.28403e-005 * x^2 + 0.0420476 * x + -0.00551054
Response type: Internal Std (Ref 48), 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	190710M2_6	Standard	0.250	2.06	1.490	3451.527	0.005	0.3	3.8	NO	0.997	NO	MM
2	2	190710M2_7	Standard	0.500	2.03	5.305	4278.600	0.015	0.5	-0.1	NO	0.997	NO	MM
3	3	190710M2_8	Standard	1.000	2.05	7.390	3455.927	0.027	0.8	-23.3	NO	0.997	NO	bb
4	4	190710M2_9	Standard	2.000	2.05	16.319	3752.667	0.054	1.4	-28.8	NO	0.997	NO	MM
5	5	190710M2_10	Standard	5.000	2.05	76.161	4918.636	0.194	4.7	-5.2	NO	0.997	NO	MM
6	6	190710M2_11	Standard	10.000	2.04	127.957	3981.248	0.402	9.7	-2.9	NO	0.997	NO	MM
7	7	190710M2_12	Standard	50.000	2.05	1056.409	6077.235	2.173	52.7	5.3	NO	0.997	NO	db
8	8	190710M2_13	Standard	100.000	2.04	1111.191	3455.963	4.019	98.7	-1.3	NO	0.997	NO	MM

Compound name: PFPeA
Correlation coefficient: r = 0.998647, r^2 = 0.997296
Calibration curve: 0.957887 * x + -0.0507044
Response type: Internal Std (Ref 48), 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	190710M2_6	Standard	0.250	2.19	60.373	3451.527	0.219	0.3	12.5	NO	0.997	NO	bb
2	2	190710M2_7	Standard	0.500	2.20	143.024	4278.600	0.418	0.5	-2.2	NO	0.997	NO	MM
3	3	190710M2_8	Standard	1.000	2.19	247.637	3455.927	0.896	1.0	-1.2	NO	0.997	NO	MM
4	4	190710M2_9	Standard	2.000	2.19	519.623	3752.667	1.731	1.9	-7.0	NO	0.997	NO	MM
5	5	190710M2_10	Standard	5.000	2.20	1963.789	4918.636	4.991	5.3	5.3	NO	0.997	NO	bb
6	6	190710M2_11	Standard	10.000	2.20	2908.583	3981.248	9.132	9.6	-4.1	NO	0.997	NO	bb
7	7	190710M2_12	Standard	50.000	2.20	21625.723	6077.235	44.481	46.5	-7.0	NO	0.997	NO	bb
8	8	190710M2_13	Standard	100.000	2.20	27473.760	3455.963	99.371	103.8	3.8	NO	0.997	NO	MM

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:29:54 Pacific Daylight Time

Compound name: PFBS
Correlation coefficient: r = 0.999402, r^2 = 0.998804
Calibration curve: 2.32197 * x + -0.263256
Response type: Internal Std (Ref 49), 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	190710M2_6	Standard	0.250	2.47	11.926	545.502	0.273	0.2	-7.6	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	2.49	41.057	500.786	1.025	0.6	10.9	NO	0.999	NO	MM
3	3	190710M2_8	Standard	1.000	2.49	81.716	517.896	1.972	1.0	-3.7	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	2.49	202.334	589.041	4.294	2.0	-1.9	NO	0.999	NO	MM
5	5	190710M2_10	Standard	5.000	2.49	599.924	676.534	11.085	4.9	-2.3	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	2.49	1018.812	516.663	24.649	10.7	7.3	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	2.49	8051.513	909.570	110.650	47.8	-4.5	NO	0.999	NO	MM
8	8	190710M2_13	Standard	100.000	2.49	9513.766	504.378	235.780	101.7	1.7	NO	0.999	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999259
Calibration curve: 0.000507604 * x^2 + 2.44029 * x + -0.0250945
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190710M2_6	Standard	0.250	2.91	44.323	1218.422	0.455	0.2	-21.4	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	2.90	116.573	1263.342	1.153	0.5	-3.4	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	2.90	268.414	1209.812	2.773	1.1	14.6	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	2.90	504.618	1216.382	5.186	2.1	6.7	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	2.90	1429.432	1338.061	13.354	5.5	9.5	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	2.91	2241.920	1216.987	23.027	9.4	-5.7	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	2.90	16650.355	1698.185	122.560	49.7	-0.6	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	2.90	19554.461	979.676	249.502	100.2	0.2	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:29:54 Pacific Daylight Time

Compound name: PFHxA
Correlation coefficient: r = 0.999958, r^2 = 0.999917
Calibration curve: 1.1618 * x + 0.000973487
Response type: Internal Std (Ref 52), 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	190710M2_6	Standard	0.250	2.98	190.647	3008.368	0.317	0.3	8.8	NO	1.000	NO	bb
2	2	190710M2_7	Standard	0.500	2.99	337.259	3012.537	0.560	0.5	-3.8	NO	1.000	NO	bb
3	3	190710M2_8	Standard	1.000	2.99	683.336	3100.750	1.102	0.9	-5.2	NO	1.000	NO	bb
4	4	190710M2_9	Standard	2.000	2.99	1378.962	2883.050	2.391	2.1	2.9	NO	1.000	NO	bb
5	5	190710M2_10	Standard	5.000	2.99	4209.333	3670.589	5.734	4.9	-1.3	NO	1.000	NO	bb
6	6	190710M2_11	Standard	10.000	2.99	6548.668	2838.096	11.537	9.9	-0.7	NO	1.000	NO	bb
7	7	190710M2_12	Standard	50.000	2.99	53855.410	4670.029	57.661	49.6	-0.7	NO	1.000	NO	bb
8	8	190710M2_13	Standard	100.000	2.99	63327.426	2711.879	116.759	100.5	0.5	NO	1.000	NO	bb

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.998874
Calibration curve: 0.000269775 * x^2 + 2.12841 * x + 0.0156908
Response type: Internal Std (Ref 49), 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	190710M2_6	Standard	0.250	3.19	22.487	545.502	0.515	0.2	-6.1	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	3.19	32.419	500.786	0.809	0.4	-25.4	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	3.20	103.496	517.896	2.498	1.2	16.6	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	3.19	216.941	589.041	4.604	2.2	7.8	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	3.19	601.364	676.534	11.111	5.2	4.2	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	3.19	931.931	516.663	22.547	10.6	5.7	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	3.19	7518.340	909.570	103.323	48.2	-3.5	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	3.19	8767.941	504.378	217.296	100.8	0.8	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:29:54 Pacific Daylight Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.998150
Calibration curve: 0.000712906 * x^2 + 0.547378 * x + -0.00436396
Response type: Internal Std (Ref 50), 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 190710M2_6	Standard	0.250	3.21	23.157	1155.989	0.100	0.2	-23.6	NO	0.998	NO	bb
2	2 190710M2_7	Standard	0.500	3.20	72.494	1192.405	0.304	0.6	12.6	NO	0.998	NO	bb
3	3 190710M2_8	Standard	1.000	3.20	137.769	1184.265	0.582	1.1	6.9	NO	0.998	NO	bb
4	4 190710M2_9	Standard	2.000	3.20	237.149	1280.574	0.926	1.7	-15.2	NO	0.998	NO	bb
5	5 190710M2_10	Standard	5.000	3.20	830.339	1293.869	3.209	5.8	16.5	NO	0.998	NO	bb
6	6 190710M2_11	Standard	10.000	3.20	1336.519	1137.478	5.875	10.6	5.9	NO	0.998	NO	bb
7	7 190710M2_12	Standard	50.000	3.20	9810.055	1756.626	27.923	48.0	-4.0	NO	0.998	NO	bb
8	8 190710M2_13	Standard	100.000	3.20	12361.706	990.189	62.421	100.8	0.8	NO	0.998	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.995477
Calibration curve: 0.000863776 * x^2 + 0.248802 * x + -0.0186935
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 190710M2_6	Standard	0.250	3.54	15.177	3685.756	0.051	0.3	12.7	NO	0.995	NO	bb
2	2 190710M2_7	Standard	0.500	3.53	27.390	3854.176	0.089	0.4	-13.7	NO	0.995	NO	bb
3	3 190710M2_8	Standard	1.000	3.54	66.792	3764.723	0.222	1.0	-3.7	NO	0.995	NO	bb
4	4 190710M2_9	Standard	2.000	3.54	98.907	3733.310	0.331	1.4	-30.0	~~YES~~ NO (A)	0.995	NO	bb
5	5 190710M2_10	Standard	5.000	3.54	405.085	4336.953	1.168	4.7	-6.2	NO	0.995	NO	bb
6	6 190710M2_11	Standard	10.000	3.54	791.510	3472.715	2.849	11.1	11.0	NO	0.995	NO	bb
7	7 190710M2_12	Standard	50.000	3.54	6523.466	5609.557	14.536	49.9	-0.3	NO	0.995	NO	bb
8	8 190710M2_13	Standard	100.000	3.54	6688.903	3411.495	24.509	77.6	-22.4	NO	0.995	NO	bbX

(A) CRITERIA IS ±30%
7/11/19

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
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Compound name: PFHpA
Correlation coefficient: r = 0.999078, r^2 = 0.998158
Calibration curve: 1.2318 * x + -0.044697
Response type: Internal Std (Ref 53), 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	190710M2_6	Standard	0.250	3.62	67.776	3685.756	0.230	0.2	-10.8	NO	0.998	NO	bb
2	2	190710M2_7	Standard	0.500	3.61	158.246	3854.176	0.513	0.5	-9.4	NO	0.998	NO	bb
3	3	190710M2_8	Standard	1.000	3.61	374.010	3764.723	1.242	1.0	4.4	NO	0.998	NO	bb
4	4	190710M2_9	Standard	2.000	3.61	764.547	3733.310	2.560	2.1	5.7	NO	0.998	NO	bb
5	5	190710M2_10	Standard	5.000	3.61	2275.237	4336.953	6.558	5.4	7.2	NO	0.998	NO	bb
6	6	190710M2_11	Standard	10.000	3.61	3432.809	3472.715	12.356	10.1	0.7	NO	0.998	NO	bb
7	7	190710M2_12	Standard	50.000	3.61	29128.148	5609.557	64.907	52.7	5.5	NO	0.998	NO	bb
8	8	190710M2_13	Standard	100.000	3.61	32516.168	3411.495	119.142	96.8	-3.2	NO	0.998	NO	bb

Compound name: ADONA
Correlation coefficient: r = 0.999468, r^2 = 0.998936
Calibration curve: 4.33675 * x + -0.0191729
Response type: Internal Std (Ref 53), 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	190710M2_6	Standard	0.250	3.72	364.378	3685.756	1.236	0.3	15.7	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	3.72	558.907	3854.176	1.813	0.4	-15.5	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	3.72	1242.688	3764.723	4.126	1.0	-4.4	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	3.72	2533.513	3733.310	8.483	2.0	-2.0	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	3.72	7966.099	4336.953	22.960	5.3	6.0	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	3.72	11814.175	3472.715	42.525	9.8	-1.9	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	3.72	101338.813	5609.557	225.817	52.1	4.2	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	3.72	115912.508	3411.495	424.713	97.9	-2.1	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999253
Calibration curve: 0.000954922 * x^2 + 0.833847 * x + -0.0703303
Response type: Internal Std (Ref 54), 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	190710M2_6	Standard	0.250	3.77	15.820	1304.722	0.152	0.3	6.4	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	3.76	26.272	1441.949	0.228	0.4	-28.5	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	3.75	70.632	1290.789	0.684	0.9	-9.6	NO	0.999	NO	MM
4	4	190710M2_9	Standard	2.000	3.77	177.127	1321.664	1.675	2.1	4.4	NO	0.999	NO	MM
5	5	190710M2_10	Standard	5.000	3.77	494.610	1652.108	3.742	4.5	-9.0	NO	0.999	NO	MM
6	6	190710M2_11	Standard	10.000	3.76	868.476	1279.918	8.482	10.1	1.4	NO	0.999	NO	MM
7	7	190710M2_12	Standard	50.000	3.76	7617.017	2127.934	44.744	50.8	1.6	NO	0.999	NO	MM
8	8	190710M2_13	Standard	100.000	3.76	9131.280	1233.913	92.503	99.6	-0.4	NO	0.999	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999098
Calibration curve: -0.00219189 * x^2 + 2.96391 * x + -0.232571
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190710M2_6	Standard	0.250	4.08	45.440	919.066	0.618	0.3	14.8	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	4.07	74.459	992.943	0.937	0.4	-21.0	NO	0.999	NO	MM
3	3	190710M2_8	Standard	1.000	4.08	168.857	961.569	2.195	0.8	-18.0	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	4.07	394.793	971.636	5.079	1.8	-10.3	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	4.08	1310.712	1089.051	15.044	5.2	3.5	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	4.08	2127.561	927.023	28.688	9.8	-1.7	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	4.07	16187.466	1394.910	145.058	50.9	1.9	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	4.08	17673.369	809.234	272.995	99.5	-0.5	NO	0.999	NO	bb

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Compound name: L-PFOA
Correlation coefficient: r = 0.999875, r^2 = 0.999749
Calibration curve: 1.84829 * x + 0.038532
Response type: Internal Std (Ref 58), 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 190710M2_6	Standard	0.250	4.13	341.491	7718.956	0.553	0.3	11.3	NO	1.000	NO	bb
2	2 190710M2_7	Standard	0.500	4.13	527.657	7963.359	0.828	0.4	-14.5	NO	1.000	NO	bb
3	3 190710M2_8	Standard	1.000	4.13	1188.006	7400.191	2.007	1.1	6.5	NO	1.000	NO	bb
4	4 190710M2_9	Standard	2.000	4.13	2263.133	7808.747	3.623	1.9	-3.0	NO	1.000	NO	bb
5	5 190710M2_10	Standard	5.000	4.13	7076.688	9244.864	9.568	5.2	3.1	NO	1.000	NO	bb
6	6 190710M2_11	Standard	10.000	4.13	10718.578	7521.740	17.813	9.6	-3.8	NO	1.000	NO	bb
7	7 190710M2_12	Standard	50.000	4.13	84902.875	11432.653	92.829	50.2	0.4	NO	1.000	NO	bb
8	8 190710M2_13	Standard	100.000	4.13	96793.156	6540.568	184.986	100.1	0.1	NO	1.000	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999465
Calibration curve: 0.000151504 * x^2 + 0.280359 * x + -0.022501
Response type: Internal Std (Ref 58), 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 190710M2_6	Standard	0.250	4.14	27.214	7718.956	0.044	0.2	-5.0	NO	0.999	NO	bb
2	2 190710M2_7	Standard	0.500	4.16	66.812	7963.359	0.105	0.5	-9.2	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	4.16	192.885	7400.191	0.326	1.2	24.2	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	4.15	322.429	7808.747	0.516	1.9	-4.0	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	4.15	952.309	9244.864	1.288	4.7	-6.8	NO	0.999	NO	bb
6	6 190710M2_11	Standard	10.000	4.15	1686.971	7521.740	2.803	10.0	0.3	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	4.15	13248.463	11432.653	14.485	50.4	0.8	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	4.15	15423.572	6540.568	29.477	99.8	-0.2	NO	0.999	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999024
Calibration curve: 0.00125826 * x^2 + 0.86234 * x + -0.0187748
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 190710M2_6	Standard	0.250	4.26	10.447	1347.552	0.097	0.1	-46.4	YES	0.999	NO	bbX
2	2 190710M2_7	Standard	0.500	4.25	61.205	1416.736	0.540	0.6	29.5	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	4.25	88.460	1422.413	0.777	0.9	-7.8	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	4.25	160.360	1341.699	1.494	1.7	-12.5	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	4.25	492.234	1597.348	3.852	4.5	-10.8	NO	0.999	NO	bb
6	6 190710M2_11	Standard	10.000	4.25	915.017	1315.408	8.695	10.0	-0.4	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	4.25	7844.108	2063.788	47.510	51.3	2.6	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	4.25	8916.717	1135.065	98.196	99.5	-0.5	NO	0.999	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.995389
Calibration curve: 5.99689e-005 * x^2 + 0.135121 * x + -0.0173495
Response type: Internal Std (Ref 56), 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 190710M2_6	Standard	0.250			7600.508				NO	0.995	NO	
2	2 190710M2_7	Standard	0.500	4.56	46.620	7970.221	0.073	0.7	33.9	YES	0.995	NO	bb
3	3 190710M2_8	Standard	1.000	4.56	46.549	7932.063	0.073	0.7	-32.9	YES	0.995	NO	bb
4	4 190710M2_9	Standard	2.000	4.55	137.996	7851.595	0.220	1.8	-12.4	NO	0.995	NO	bb
5	5 190710M2_10	Standard	5.000	4.56	461.092	9320.955	0.618	4.7	-6.1	NO	0.995	NO	bb
6	6 190710M2_11	Standard	10.000	4.56	696.622	7587.184	1.148	8.6	-14.1	NO	0.995	NO	bb
7	7 190710M2_12	Standard	50.000	4.56	7057.876	11887.996	7.421	53.8	7.5	NO	0.995	NO	bb
8	8 190710M2_13	Standard	100.000	4.56	7559.312	6822.277	13.850	98.3	-1.7	NO	0.995	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: PFNA
Correlation coefficient: r = 0.999712, r^2 = 0.999423
Calibration curve: 1.09616 * x + 0.0302511
Response type: Internal Std (Ref 56), 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 190710M2_6	Standard	0.250	4.57	209.476	7600.508	0.345	0.3	14.7	NO	0.999	NO	bb
2	2 190710M2_7	Standard	0.500	4.57	370.645	7970.221	0.581	0.5	0.5	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	4.58	684.983	7932.063	1.079	1.0	-4.3	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	4.57	1332.024	7851.595	2.121	1.9	-4.7	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	4.57	4077.807	9320.955	5.469	5.0	-0.8	NO	0.999	NO	bd
6	6 190710M2_11	Standard	10.000	4.57	6336.875	7587.184	10.440	9.5	-5.0	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	4.57	50993.352	11887.996	53.619	48.9	-2.2	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	4.57	60890.855	6822.277	111.566	101.8	1.8	NO	0.999	NO	bb

Compound name: PFOSA
Correlation coefficient: r = 0.999643, r^2 = 0.999286
Calibration curve: 1.27955 * x + -0.0326972
Response type: Internal Std (Ref 57), 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 190710M2_6	Standard	0.250	4.63	31.020	1618.611	0.240	0.2	-14.9	NO	0.999	NO	bb
2	2 190710M2_7	Standard	0.500	4.64	81.781	1627.413	0.628	0.5	3.3	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	4.64	172.320	1531.073	1.407	1.1	12.5	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	4.64	316.272	1466.991	2.695	2.1	6.6	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	4.63	904.992	1856.207	6.094	4.8	-4.2	NO	0.999	NO	bb
6	6 190710M2_11	Standard	10.000	4.63	1429.461	1427.893	12.514	9.8	-1.9	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	4.63	11812.409	2379.869	62.043	48.5	-3.0	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	4.63	13928.197	1338.825	130.041	101.7	1.7	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: L-PFOS
Correlation coefficient: r = 0.997967, r^2 = 0.995937
Calibration curve: 1.26946 * x + -0.175183
Response type: Internal Std (Ref 59), 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 190710M2_6	Standard	0.250	4.67	11.018	1347.552	0.102	0.2	-12.6	NO	0.996	NO	bb
2	2 190710M2_7	Standard	0.500	4.66	46.686	1416.736	0.412	0.5	-7.5	NO	0.996	NO	MM
3	3 190710M2_8	Standard	1.000	4.66	145.239	1422.413	1.276	1.1	14.3	NO	0.996	NO	MM
4	4 190710M2_9	Standard	2.000	4.66	192.269	1341.699	1.791	1.5	-22.5	NO	0.996	NO	MM
5	5 190710M2_10	Standard	5.000	4.66	690.094	1597.348	5.400	4.4	-12.2	NO	0.996	NO	MM
6	6 190710M2_11	Standard	10.000	4.66	1089.682	1315.408	10.355	8.3	-17.1	NO	0.996	NO	MM
7	7 190710M2_12	Standard	50.000	4.66	10372.741	2063.788	62.826	49.6	-0.7	NO	0.996	NO	MM
8	8 190710M2_13	Standard	100.000	4.66	11864.368	1135.065	130.657	103.1	3.1	NO	0.996	NO	MM

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999653
Calibration curve: 0.0017864 * x^2 + 3.15352 * x + -0.22686
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 190710M2_6	Standard	0.250	4.88	57.131	1347.552	0.530	0.2	-4.0	NO	1.000	NO	bb
2	2 190710M2_7	Standard	0.500	4.88	176.989	1416.736	1.562	0.6	13.4	NO	1.000	NO	bb
3	3 190710M2_8	Standard	1.000	4.88	273.179	1422.413	2.401	0.8	-16.7	NO	1.000	NO	bb
4	4 190710M2_9	Standard	2.000	4.88	666.084	1341.699	6.206	2.0	1.9	NO	1.000	NO	bb
5	5 190710M2_10	Standard	5.000	4.88	2112.807	1597.348	16.534	5.3	6.0	NO	1.000	NO	bb
6	6 190710M2_11	Standard	10.000	4.88	3319.091	1315.408	31.541	10.0	0.2	NO	1.000	NO	bb
7	7 190710M2_12	Standard	50.000	4.88	26494.578	2063.788	160.473	49.6	-0.9	NO	1.000	NO	bb
8	8 190710M2_13	Standard	100.000	4.88	30298.004	1135.065	333.659	100.2	0.2	NO	1.000	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: PFDA
Correlation coefficient: r = 0.998522, r^2 = 0.997046
Calibration curve: 1.67351 * x + -0.11586
Response type: Internal Std (Ref 60), 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	190710M2_6	Standard	0.250	4.95	210.010	6483.450	0.405	0.3	24.5	NO	0.997	NO	bb
2	2	190710M2_7	Standard	0.500	4.95	377.184	6513.090	0.724	0.5	0.4	NO	0.997	NO	bb
3	3	190710M2_8	Standard	1.000	4.95	701.882	6815.267	1.287	0.8	-16.2	NO	0.997	NO	bb
4	4	190710M2_9	Standard	2.000	4.95	1730.184	6311.901	3.426	2.1	5.8	NO	0.997	NO	bb
5	5	190710M2_10	Standard	5.000	4.95	4940.079	7586.322	8.140	4.9	-1.3	NO	0.997	NO	bb
6	6	190710M2_11	Standard	10.000	4.95	7248.603	6184.109	14.652	8.8	-11.8	NO	0.997	NO	bb
7	7	190710M2_12	Standard	50.000	4.95	62152.000	9816.599	79.141	47.4	-5.3	NO	0.997	NO	bb
8	8	190710M2_13	Standard	100.000	4.95	73095.445	5260.100	173.703	103.9	3.9	NO	0.997	NO	bb

Compound name: 8:2 FTS
Correlation coefficient: r = 0.997198, r^2 = 0.994405
Calibration curve: 2.24647 * x + 0.0322693
Response type: Internal Std (Ref 61), 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	190710M2_6	Standard	0.250	4.92	35.266	888.285	0.496	0.2	-17.4	NO	0.994	NO	bb
2	2	190710M2_7	Standard	0.500	4.93	78.589	921.949	1.066	0.5	-8.0	NO	0.994	NO	bb
3	3	190710M2_8	Standard	1.000	4.93	136.249	954.638	1.784	0.8	-22.0	NO	0.994	NO	bb
4	4	190710M2_9	Standard	2.000	4.92	386.257	900.043	5.364	2.4	18.7	NO	0.994	NO	bb
5	5	190710M2_10	Standard	5.000	4.92	1103.913	944.165	14.615	6.5	29.8	NO	0.994	NO	bb
6	6	190710M2_11	Standard	10.000	4.92	1688.582	901.200	23.421	10.4	4.1	NO	0.994	NO	bb
7	7	190710M2_12	Standard	50.000	4.92	11984.012	1269.481	118.001	52.5	5.0	NO	0.994	NO	bb
8	8	190710M2_13	Standard	100.000	4.92	13640.808	794.537	214.603	95.5	-4.5	NO	0.994	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998948
Calibration curve: 0.0012104 * x^2 + 0.869148 * x + -0.063694
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	190710M2_6	Standard	0.250	5.01	19.637	1347.552	0.182	0.3	13.1	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	5.01	42.411	1416.736	0.374	0.5	0.7	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	5.02	66.216	1422.413	0.582	0.7	-25.8	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	5.02	145.714	1341.699	1.358	1.6	-18.4	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	5.02	557.274	1597.348	4.361	5.1	1.1	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	5.01	902.201	1315.408	8.573	9.8	-2.0	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	5.01	7868.190	2063.788	47.656	51.2	2.5	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	5.02	8931.655	1135.065	98.361	99.5	-0.5	NO	0.999	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.998887
Calibration curve: 0.003255 * x^2 + 2.95538 * x + -0.018678
Response type: Internal Std (Ref 62), 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	190710M2_6	Standard	0.250	5.10	110.489	1483.081	0.931	0.3	28.5	NO	0.999	NO	MM
2	2	190710M2_7	Standard	0.500	5.10	127.066	1539.354	1.032	0.4	-28.9	NO	0.999	NO	MM
3	3	190710M2_8	Standard	1.000	5.11	397.646	1534.459	3.239	1.1	10.1	NO	0.999	NO	MM
4	4	190710M2_9	Standard	2.000	5.11	672.372	1568.547	5.358	1.8	-9.2	NO	0.999	NO	MM
5	5	190710M2_10	Standard	5.000	5.10	2246.927	1786.803	15.719	5.3	5.9	NO	0.999	NO	MM
6	6	190710M2_11	Standard	10.000	5.10	3245.832	1481.031	27.395	9.2	-8.2	NO	0.999	NO	MM
7	7	190710M2_12	Standard	50.000	5.11	29639.494	2321.898	159.565	51.1	2.2	NO	0.999	NO	MM
8	8	190710M2_13	Standard	100.000	5.10	35897.949	1374.590	326.442	99.5	-0.5	NO	0.999	NO	MM

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Compound name: L-EtFOSAA
Coefficient of Determination: R^2 = 0.999414
Calibration curve: 0.000968179 * x^2 + 1.99529 * x + -0.24728
Response type: Internal Std (Ref 64), 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	190710M2_6	Standard	0.250	5.26	52.427	1930.980	0.339	0.3	17.6	NO	0.999	NO	MM
2	2	190710M2_7	Standard	0.500	5.26	66.737	1750.672	0.477	0.4	-27.5	NO	0.999	NO	MM
3	3	190710M2_8	Standard	1.000	5.27	275.709	1820.030	1.894	1.1	7.2	NO	0.999	NO	MM
4	4	190710M2_9	Standard	2.000	5.27	487.290	1715.865	3.550	1.9	-4.9	NO	0.999	NO	MM
5	5	190710M2_10	Standard	5.000	5.27	1730.527	2099.478	10.303	5.3	5.5	NO	0.999	NO	MM
6	6	190710M2_11	Standard	10.000	5.27	2630.015	1603.905	20.497	10.3	3.4	NO	0.999	NO	MM
7	7	190710M2_12	Standard	50.000	5.26	20822.275	2599.831	100.114	49.1	-1.7	NO	0.999	NO	MM
8	8	190710M2_13	Standard	100.000	5.27	24331.580	1449.809	209.783	100.4	0.4	NO	0.999	NO	MM

Compound name: PFUdA
Correlation coefficient: r = 0.999664, r^2 = 0.999328
Calibration curve: 0.930582 * x + 0.0128571
Response type: Internal Std (Ref 63), 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	190710M2_6	Standard	0.250	5.27	209.962	10308.564	0.255	0.3	3.9	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	5.27	365.858	9874.773	0.463	0.5	-3.2	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	5.28	844.203	10153.241	1.039	1.1	10.3	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	5.28	1478.163	10535.049	1.754	1.9	-6.5	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	5.27	4474.803	12195.073	4.587	4.9	-1.7	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	5.28	7063.031	9619.693	9.178	9.8	-1.5	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	5.28	56901.484	15781.931	45.069	48.4	-3.2	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	5.28	66131.688	8720.392	94.795	101.9	1.9	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: PFDS
Correlation coefficient: r = 0.997649, r^2 = 0.995303
Calibration curve: 2.06378 * x + -0.389745
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	190710M2_6	Standard	0.250	5.33	35.202	888.285	0.495	0.4	71.6	YES	0.995	NO	bbX
2	2	190710M2_7	Standard	0.500	5.34	48.052	921.949	0.652	0.5	0.9	NO	0.995	NO	bb
3	3	190710M2_8	Standard	1.000	5.33	136.112	954.638	1.782	1.1	5.2	NO	0.995	NO	bb
4	4	190710M2_9	Standard	2.000	5.33	210.343	900.043	2.921	1.6	-19.8	NO	0.995	NO	bb
5	5	190710M2_10	Standard	5.000	5.33	913.603	944.165	12.095	6.0	21.0	NO	0.995	NO	bb
6	6	190710M2_11	Standard	10.000	5.33	1294.616	901.200	17.957	8.9	-11.1	NO	0.995	NO	bb
7	7	190710M2_12	Standard	50.000	5.33	11140.859	1269.481	109.699	53.3	6.7	NO	0.995	NO	bb
8	8	190710M2_13	Standard	100.000	5.33	12707.069	794.537	199.913	97.1	-2.9	NO	0.995	NO	bb

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.990993
Calibration curve: 5.10585e-005 * x^2 + 0.0636606 * x + 0.00127315
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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	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190710M2_6	Standard	0.250	5.50	15.036	11849.361	0.016	0.2	-8.4	NO	0.991	NO	bb
2	2	190710M2_7	Standard	0.500	5.50	51.761	11696.822	0.055	0.8	69.7	YES	0.991	NO	bb
3	3	190710M2_8	Standard	1.000	5.50	30.014	12098.984	0.031	0.5	-53.3	YES	0.991	NO	bb
4	4	190710M2_9	Standard	2.000	5.50	135.930	12100.947	0.140	2.2	9.1	NO	0.991	NO	bb
5	5	190710M2_10	Standard	5.000	5.49	368.903	14176.774	0.325	5.1	1.4	NO	0.991	NO	bb
6	6	190710M2_11	Standard	10.000	5.49	437.921	11395.914	0.480	7.5	-25.2	NO	0.991	NO	bb
7	7	190710M2_12	Standard	50.000	5.50	5206.060	18080.182	3.599	54.2	8.3	NO	0.991	NO	bb
8	8	190710M2_13	Standard	100.000	5.50	5656.417	10474.394	6.750	98.3	-1.7	NO	0.991	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998698
Calibration curve: -0.00397372 * x^2 + 2.69789 * x + -0.0745551
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 190710M2_6	Standard	0.250	5.55	45.291	888.285	0.637	0.3	5.6	NO	0.999	NO	bb
2	2 190710M2_7	Standard	0.500	5.55	89.307	921.949	1.211	0.5	-4.6	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	5.55	176.181	954.638	2.307	0.9	-11.6	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	5.55	404.641	900.043	5.620	2.1	5.9	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	5.55	1131.636	944.165	14.982	5.6	12.5	NO	0.999	NO	bb
6	6 190710M2_11	Standard	10.000	5.55	1754.811	901.200	24.340	9.2	-8.3	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	5.55	12763.050	1269.481	125.672	50.3	0.7	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	5.55	14601.342	794.537	229.715	99.9	-0.1	NO	0.999	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999847
Calibration curve: -0.000390936 * x^2 + 0.961264 * x + -0.0303905
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 190710M2_6	Standard	0.250	5.57	227.053	11849.361	0.240	0.3	12.3	NO	1.000	NO	bb
2	2 190710M2_7	Standard	0.500	5.56	412.587	11696.822	0.441	0.5	-1.9	NO	1.000	NO	bb
3	3 190710M2_8	Standard	1.000	5.57	843.887	12098.984	0.872	0.9	-6.1	NO	1.000	NO	bb
4	4 190710M2_9	Standard	2.000	5.56	1814.495	12100.947	1.874	2.0	-0.8	NO	1.000	NO	bb
5	5 190710M2_10	Standard	5.000	5.56	5220.757	14176.774	4.603	4.8	-3.4	NO	1.000	NO	bb
6	6 190710M2_11	Standard	10.000	5.56	8611.083	11395.914	9.445	9.9	-1.0	NO	1.000	NO	bb
7	7 190710M2_12	Standard	50.000	5.57	68919.000	18080.182	47.648	50.6	1.3	NO	1.000	NO	bb
8	8 190710M2_13	Standard	100.000	5.56	77015.367	10474.394	91.909	99.7	-0.3	NO	1.000	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999075
Calibration curve: -0.000216151 * x^2 + 1.29923 * x + -0.534727
Response type: Internal Std (Ref 66), 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 190710M2_6	Standard	1.250	5.70	21.123	3054.399	1.037	1.2	-3.2	NO	0.999	NO	bb
2	2 190710M2_7	Standard	2.500	5.71	60.346	3277.438	2.762	2.5	1.5	NO	0.999	NO	bb
3	3 190710M2_8	Standard	5.000	5.71	101.673	3115.206	4.896	4.2	-16.3	NO	0.999	NO	bb
4	4 190710M2_9	Standard	10.000	5.71	208.321	3084.938	10.129	8.2	-17.8	NO	0.999	NO	bb
5	5 190710M2_10	Standard	25.000	5.70	794.928	3716.070	32.087	25.2	0.9	NO	0.999	NO	bb
6	6 190710M2_11	Standard	50.000	5.70	1250.184	2913.632	64.362	50.4	0.7	NO	0.999	NO	bb
7	7 190710M2_12	Standard	250.000	5.70	10117.369	4802.480	316.005	254.4	1.8	NO	0.999	NO	bb
8	8 190710M2_13	Standard	500.000	5.71	11808.107	2989.823	592.415	497.6	-0.5	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999791
Calibration curve: -0.000400083 * x^2 + 1.06843 * x + -0.0442094
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 190710M2_6	Standard	0.250	5.81	212.303	11849.361	0.224	0.3	0.4	NO	1.000	NO	bb
2	2 190710M2_7	Standard	0.500	5.81	404.091	11696.822	0.432	0.4	-10.9	NO	1.000	NO	bb
3	3 190710M2_8	Standard	1.000	5.81	1110.509	12098.984	1.147	1.1	11.6	NO	1.000	NO	bb
4	4 190710M2_9	Standard	2.000	5.81	1960.829	12100.947	2.025	1.9	-3.1	NO	1.000	NO	bb
5	5 190710M2_10	Standard	5.000	5.81	6228.645	14176.774	5.492	5.2	3.8	NO	1.000	NO	bb
6	6 190710M2_11	Standard	10.000	5.81	9489.233	11395.914	10.409	9.8	-1.8	NO	1.000	NO	bb
7	7 190710M2_12	Standard	50.000	5.82	75692.906	18080.182	52.331	50.0	-0.1	NO	1.000	NO	bb
8	8 190710M2_13	Standard	100.000	5.81	86166.516	10474.394	102.830	100.0	0.0	NO	1.000	NO	bb

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.998596
Calibration curve: -6.19262e-005 * x^2 + 0.244112 * x + -0.0199214
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 190710M2_6	Standard	0.250	5.85	20.075	5988.523	0.042	0.3	1.3	NO	0.999	NO	bb
2	2 190710M2_7	Standard	0.500	5.83	42.984	6370.549	0.084	0.4	-14.6	NO	0.999	NO	bb
3	3 190710M2_8	Standard	1.000	5.84	130.564	6280.262	0.260	1.1	14.6	NO	0.999	NO	bb
4	4 190710M2_9	Standard	2.000	5.84	196.343	6033.232	0.407	1.7	-12.6	NO	0.999	NO	bb
5	5 190710M2_10	Standard	5.000	5.84	763.588	6836.236	1.396	5.8	16.2	NO	0.999	NO	bb
6	6 190710M2_11	Standard	10.000	5.84	1055.269	5715.887	2.308	9.6	-4.4	NO	0.999	NO	bb
7	7 190710M2_12	Standard	50.000	5.84	8982.088	9409.312	11.932	49.6	-0.8	NO	0.999	NO	bb
8	8 190710M2_13	Standard	100.000	5.84	10102.171	5300.635	23.823	100.2	0.2	NO	0.999	NO	bb

Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999560
Calibration curve: 0.000924303 * x^2 + 1.48528 * x + 0.0369753
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 190710M2_6	Standard	0.250	6.03	187.955	5988.523	0.392	0.2	-4.3	NO	1.000	NO	bb
2	2 190710M2_7	Standard	0.500	6.04	432.303	6370.549	0.848	0.5	9.2	NO	1.000	NO	bb
3	3 190710M2_8	Standard	1.000	6.04	641.228	6280.262	1.276	0.8	-16.6	NO	1.000	NO	bb
4	4 190710M2_9	Standard	2.000	6.03	1538.406	6033.232	3.187	2.1	5.9	NO	1.000	NO	bb
5	5 190710M2_10	Standard	5.000	6.04	4416.243	6836.236	8.075	5.4	7.9	NO	1.000	NO	bb
6	6 190710M2_11	Standard	10.000	6.04	6755.284	5715.887	14.773	9.9	-1.4	NO	1.000	NO	bb
7	7 190710M2_12	Standard	50.000	6.04	57140.523	9409.312	75.910	49.6	-0.9	NO	1.000	NO	bb
8	8 190710M2_13	Standard	100.000	6.04	67063.367	5300.635	158.149	100.2	0.2	NO	1.000	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999705
Calibration curve: 4.67147e-005 * x^2 + 0.924219 * x + -0.422102
Response type: Internal Std (Ref 68), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

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	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190710M2_6	Standard	1.250	6.12	23.128	4439.246	0.781	1.3	4.2	NO	1.000	NO	bb
2	2	190710M2_7	Standard	2.500	6.13	55.711	4462.217	1.873	2.5	-0.7	NO	1.000	NO	bb
3	3	190710M2_8	Standard	5.000	6.13	128.995	4330.604	4.468	5.3	5.8	NO	1.000	NO	bb
4	4	190710M2_9	Standard	10.000	6.12	224.014	4383.917	7.665	8.7	-12.5	NO	1.000	NO	bb
5	5	190710M2_10	Standard	25.000	6.13	838.738	5295.154	23.760	26.1	4.5	NO	1.000	NO	bb
6	6	190710M2_11	Standard	50.000	6.13	1279.052	4247.957	45.165	49.2	-1.6	NO	1.000	NO	bb
7	7	190710M2_12	Standard	250.000	6.13	10501.848	6715.452	234.575	251.1	0.4	NO	1.000	NO	bb
8	8	190710M2_13	Standard	500.000	6.13	12798.550	4059.624	472.897	499.5	-0.1	NO	1.000	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999745
Calibration curve: -0.000493807 * x^2 + 0.756486 * x + 0.0537783
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	190710M2_6	Standard	0.250	6.39	181.705	3440.496	0.264	0.3	11.2	NO	1.000	NO	bb
2	2	190710M2_7	Standard	0.500	6.39	311.225	3551.527	0.438	0.5	1.7	NO	1.000	NO	bb
3	3	190710M2_8	Standard	1.000	6.39	547.227	3591.524	0.762	0.9	-6.3	NO	1.000	NO	bb
4	4	190710M2_9	Standard	2.000	6.39	1046.898	3403.188	1.538	2.0	-1.8	NO	1.000	NO	bb
5	5	190710M2_10	Standard	5.000	6.39	2985.637	4071.111	3.667	4.8	-4.2	NO	1.000	NO	bb
6	6	190710M2_11	Standard	10.000	6.39	4843.048	3262.578	7.422	9.8	-2.0	NO	1.000	NO	bb
7	7	190710M2_12	Standard	50.000	6.39	40627.480	5446.172	37.299	50.9	1.9	NO	1.000	NO	bb
8	8	190710M2_13	Standard	100.000	6.39	43788.574	3107.337	70.460	99.5	-0.5	NO	1.000	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.999748, r^2 = 0.999496
Calibration curve: 0.835341 * x + 0.00579687
Response type: Internal Std (Ref 69), 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	190710M2_6	Standard	0.250	6.63	144.032	3440.496	0.209	0.2	-2.5	NO	0.999	NO	bb
2	2	190710M2_7	Standard	0.500	6.63	312.756	3551.527	0.440	0.5	4.0	NO	0.999	NO	bb
3	3	190710M2_8	Standard	1.000	6.63	594.852	3591.524	0.828	1.0	-1.6	NO	0.999	NO	bb
4	4	190710M2_9	Standard	2.000	6.63	1122.281	3403.188	1.649	2.0	-1.7	NO	0.999	NO	bb
5	5	190710M2_10	Standard	5.000	6.63	3537.889	4071.111	4.345	5.2	3.9	NO	0.999	NO	bb
6	6	190710M2_11	Standard	10.000	6.63	5598.238	3262.578	8.579	10.3	2.6	NO	0.999	NO	bb
7	7	190710M2_12	Standard	50.000	6.63	44035.457	5446.172	40.428	48.4	-3.2	NO	0.999	NO	bb
8	8	190710M2_13	Standard	100.000	6.63	52533.277	3107.337	84.531	101.2	1.2	NO	0.999	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999631, r^2 = 0.999263
Calibration curve: 1.11841 * x + 0.165536
Response type: Internal Std (Ref 70), 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	190710M2_6	Standard	1.250	6.31	37.031	4007.611	1.386	1.1	-12.7	NO	0.999	NO	bb
2	2	190710M2_7	Standard	2.500	6.30	85.698	3785.716	3.396	2.9	15.5	NO	0.999	NO	bb
3	3	190710M2_8	Standard	5.000	6.31	167.209	3922.123	6.395	5.6	11.4	NO	0.999	NO	bb
4	4	190710M2_9	Standard	10.000	6.30	259.229	3727.673	10.431	9.2	-8.2	NO	0.999	NO	bb
5	5	190710M2_10	Standard	25.000	6.31	836.294	4820.834	26.021	23.1	-7.5	NO	0.999	NO	bb
6	6	190710M2_11	Standard	50.000	6.31	1404.172	3765.545	55.935	49.9	-0.3	NO	0.999	NO	bb
7	7	190710M2_12	Standard	250.000	6.30	11978.623	6250.164	287.479	256.9	2.8	NO	0.999	NO	bb
8	8	190710M2_13	Standard	500.000	6.30	14010.419	3793.865	553.937	495.1	-1.0	NO	0.999	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999930, r^2 = 0.999860
Calibration curve: 1.41132 * x + -0.260677
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	190710M2_6	Standard	1.250	6.46	37.607	3845.157	1.467	1.2	-2.1	NO	1.000	NO	bb
2	2	190710M2_7	Standard	2.500	6.46	83.843	3839.792	3.275	2.5	0.2	NO	1.000	NO	bb
3	3	190710M2_8	Standard	5.000	6.46	173.873	3944.296	6.612	4.9	-2.6	NO	1.000	NO	bb
4	4	190710M2_9	Standard	10.000	6.46	371.200	3790.164	14.691	10.6	5.9	NO	1.000	NO	bb
5	5	190710M2_10	Standard	25.000	6.46	1033.909	4610.654	33.637	24.0	-3.9	NO	1.000	NO	bb
6	6	190710M2_11	Standard	50.000	6.46	1783.965	3714.178	72.047	51.2	2.5	NO	1.000	NO	bd
7	7	190710M2_12	Standard	250.000	6.46	14491.547	6151.757	353.351	250.6	0.2	NO	1.000	NO	bb
8	8	190710M2_13	Standard	500.000	6.46	17047.996	3634.249	703.639	498.8	-0.2	NO	1.000	NO	bb

Compound name: 13C3-PFBA
Response Factor: 0.650021
RRF SD: 0.0190623, Relative SD: 2.93256
Response type: Internal Std (Ref 72), 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	190710M2_6	Standard	12.500	1.21	1930.395	2921.156	8.260	12.7	1.7	NO		NO	MM
2	2	190710M2_7	Standard	12.500	1.21	2093.751	3200.857	8.177	12.6	0.6	NO		NO	bb
3	3	190710M2_8	Standard	12.500	1.21	1877.004	3042.829	7.711	11.9	-5.1	NO		NO	bb
4	4	190710M2_9	Standard	12.500	1.21	1948.465	3054.028	7.975	12.3	-1.8	NO		NO	bb
5	5	190710M2_10	Standard	12.500	1.21	2587.624	3825.142	8.456	13.0	4.1	NO		NO	bb
6	6	190710M2_11	Standard	12.500	1.21	1944.651	2935.893	8.280	12.7	1.9	NO		NO	bb
7	7	190710M2_12	Standard	12.500	1.22	3149.437	4789.874	8.219	12.6	1.2	NO		NO	bb
8	8	190710M2_13	Standard	12.500	1.21	1784.566	2814.827	7.925	12.2	-2.5	NO		NO	bb

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Compound name: 13C3-PFPeA
Response Factor: 0.407627
RRF SD: 0.0308474, Relative SD: 7.56756
Response type: Internal Std (Ref 73), 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 190710M2_6	Standard	12.500	2.19	3451.527	9214.552	4.682	11.5	-8.1	NO		NO	bb
2	2 190710M2_7	Standard	12.500	2.19	4278.600	9744.537	5.488	13.5	7.7	NO		NO	MM
3	3 190710M2_8	Standard	12.500	2.20	3455.927	9533.288	4.531	11.1	-11.1	NO		NO	bb
4	4 190710M2_9	Standard	12.500	2.20	3752.667	9794.559	4.789	11.7	-6.0	NO		NO	MM
5	5 190710M2_10	Standard	12.500	2.20	4918.636	11219.285	5.480	13.4	7.6	NO		NO	bb
6	6 190710M2_11	Standard	12.500	2.20	3981.248	9088.471	5.476	13.4	7.5	NO		NO	db
7	7 190710M2_12	Standard	12.500	2.20	6077.235	14844.347	5.117	12.6	0.4	NO		NO	db
8	8 190710M2_13	Standard	12.500	2.20	3455.963	8310.527	5.198	12.8	2.0	NO		NO	MM

Compound name: 13C3-PFBS
Response Factor: 1.03514
RRF SD: 0.0705751, Relative SD: 6.81793
Response type: Internal Std (Ref 74), 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 190710M2_6	Standard	12.500	2.49	545.502	506.480	13.463	13.0	4.0	NO		NO	MM
2	2 190710M2_7	Standard	12.500	2.49	500.786	530.060	11.810	11.4	-8.7	NO		NO	bb
3	3 190710M2_8	Standard	12.500	2.49	517.896	516.799	12.527	12.1	-3.2	NO		NO	MM
4	4 190710M2_9	Standard	12.500	2.49	589.041	567.821	12.967	12.5	0.2	NO		NO	MM
5	5 190710M2_10	Standard	12.500	2.49	676.534	643.362	13.145	12.7	1.6	NO		NO	bb
6	6 190710M2_11	Standard	12.500	2.49	516.663	448.826	14.389	13.9	11.2	NO		NO	bb
7	7 190710M2_12	Standard	12.500	2.49	909.570	964.996	11.782	11.4	-8.9	NO		NO	MM
8	8 190710M2_13	Standard	12.500	2.49	504.378	469.394	13.432	13.0	3.8	NO		NO	bb

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Compound name: 13C3-HFPO-DA
Response Factor: 0.306485
RRF SD: 0.0121995, Relative SD: 3.98045
Response type: Internal Std (Ref 73), 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 190710M2_6	Standard	5.000	3.20	1155.989	9214.552	1.568	5.1	2.3	NO		NO	bb
2	2 190710M2_7	Standard	5.000	3.20	1192.405	9744.537	1.530	5.0	-0.2	NO		NO	bb
3	3 190710M2_8	Standard	5.000	3.20	1184.265	9533.288	1.553	5.1	1.3	NO		NO	bb
4	4 190710M2_9	Standard	5.000	3.20	1280.574	9794.559	1.634	5.3	6.6	NO		NO	bb
5	5 190710M2_10	Standard	5.000	3.20	1293.869	11219.285	1.442	4.7	-5.9	NO		NO	bb
6	6 190710M2_11	Standard	5.000	3.20	1137.478	9088.471	1.564	5.1	2.1	NO		NO	bb
7	7 190710M2_12	Standard	5.000	3.20	1756.626	14844.347	1.479	4.8	-3.5	NO		NO	bb
8	8 190710M2_13	Standard	5.000	3.20	990.189	8310.527	1.489	4.9	-2.8	NO		NO	bb

Compound name: 13C2-4:2 FTS
Response Factor: 2.2388
RRF SD: 0.285284, Relative SD: 12.7427
Response type: Internal Std (Ref 74), 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 190710M2_6	Standard	12.500	2.90	1218.422	506.480	30.071	13.4	7.5	NO		NO	bb
2	2 190710M2_7	Standard	12.500	2.90	1263.342	530.060	29.792	13.3	6.5	NO		NO	bb
3	3 190710M2_8	Standard	12.500	2.90	1209.812	516.799	29.262	13.1	4.6	NO		NO	bb
4	4 190710M2_9	Standard	12.500	2.90	1216.382	567.821	26.777	12.0	-4.3	NO		NO	bb
5	5 190710M2_10	Standard	12.500	2.90	1338.061	643.362	25.997	11.6	-7.1	NO		NO	bb
6	6 190710M2_11	Standard	12.500	2.90	1216.987	448.826	33.894	15.1	21.1	NO		NO	bb
7	7 190710M2_12	Standard	12.500	2.90	1698.185	964.996	21.997	9.8	-21.4	NO		NO	bb
8	8 190710M2_13	Standard	12.500	2.90	979.676	469.394	26.089	11.7	-6.8	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.792375
RRF SD: 0.0291369, Relative SD: 3.67716
Response type: Internal Std (Ref 73), 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 190710M2_6	Standard	5.000	2.99	3008.368	9214.552	4.081	5.2	3.0	NO		NO	bb
2	2 190710M2_7	Standard	5.000	2.99	3012.537	9744.537	3.864	4.9	-2.5	NO		NO	bb
3	3 190710M2_8	Standard	5.000	2.99	3100.750	9533.288	4.066	5.1	2.6	NO		NO	bb
4	4 190710M2_9	Standard	5.000	2.99	2883.050	9794.559	3.679	4.6	-7.1	NO		NO	bb
5	5 190710M2_10	Standard	5.000	2.99	3670.589	11219.285	4.090	5.2	3.2	NO		NO	bb
6	6 190710M2_11	Standard	5.000	2.99	2838.096	9088.471	3.903	4.9	-1.5	NO		NO	bb
7	7 190710M2_12	Standard	5.000	2.99	4670.029	14844.347	3.932	5.0	-0.7	NO		NO	bb
8	8 190710M2_13	Standard	5.000	2.99	2711.879	8310.527	4.079	5.1	3.0	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.39108
RRF SD: 0.0111122, Relative SD: 2.84141
Response type: Internal Std (Ref 73), 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 190710M2_6	Standard	12.500	3.61	3685.756	9214.552	5.000	12.8	2.3	NO		NO	bb
2	2 190710M2_7	Standard	12.500	3.61	3854.176	9744.537	4.944	12.6	1.1	NO		NO	bb
3	3 190710M2_8	Standard	12.500	3.61	3764.723	9533.288	4.936	12.6	1.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	3.61	3733.310	9794.559	4.765	12.2	-2.5	NO		NO	bb
5	5 190710M2_10	Standard	12.500	3.61	4336.953	11219.285	4.832	12.4	-1.2	NO		NO	bb
6	6 190710M2_11	Standard	12.500	3.61	3472.715	9088.471	4.776	12.2	-2.3	NO		NO	bb
7	7 190710M2_12	Standard	12.500	3.61	5609.557	14844.347	4.724	12.1	-3.4	NO		NO	bd
8	8 190710M2_13	Standard	12.500	3.61	3411.495	8310.527	5.131	13.1	5.0	NO		NO	bb

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Compound name: 13C3-PFHxS
Response Factor: 2.5469
RRF SD: 0.206434, Relative SD: 8.10532
Response type: Internal Std (Ref 74), 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 190710M2_6	Standard	12.500	3.76	1304.722	506.480	32.201	12.6	1.1	NO		NO	bb
2	2 190710M2_7	Standard	12.500	3.76	1441.949	530.060	34.004	13.4	6.8	NO		NO	bb
3	3 190710M2_8	Standard	12.500	3.77	1290.789	516.799	31.221	12.3	-1.9	NO		NO	bb
4	4 190710M2_9	Standard	12.500	3.76	1321.664	567.821	29.095	11.4	-8.6	NO		NO	bb
5	5 190710M2_10	Standard	12.500	3.76	1652.108	643.362	32.099	12.6	0.8	NO		NO	bb
6	6 190710M2_11	Standard	12.500	3.76	1279.918	448.826	35.646	14.0	12.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	3.76	2127.934	964.996	27.564	10.8	-13.4	NO		NO	bb
8	8 190710M2_13	Standard	12.500	3.77	1233.913	469.394	32.859	12.9	3.2	NO		NO	bb

Compound name: 13C2-6:2 FTS
Response Factor: 0.736156
RRF SD: 0.0571117, Relative SD: 7.7581
Response type: Internal Std (Ref 77), 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 190710M2_6	Standard	12.500	4.07	919.066	1327.903	8.651	11.8	-6.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.07	992.943	1384.299	8.966	12.2	-2.6	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.08	961.569	1176.867	10.213	13.9	11.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.07	971.636	1368.032	8.878	12.1	-3.5	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.07	1089.051	1460.771	9.319	12.7	1.3	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.07	927.023	1148.475	10.090	13.7	9.6	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.08	1394.910	2155.362	8.090	11.0	-12.1	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.07	809.234	1075.188	9.408	12.8	2.2	NO		NO	bb

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Compound name: 13C5-PFNA
Response Factor: 0.982718
RRF SD: 0.042308, Relative SD: 4.30521
Response type: Internal Std (Ref 76), 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	190710M2_6	Standard	12.500	4.57	7600.508	7993.476	11.885	12.1	-3.2	NO		NO	bb
2	2	190710M2_7	Standard	12.500	4.57	7970.221	7664.316	12.999	13.2	5.8	NO		NO	bb
3	3	190710M2_8	Standard	12.500	4.57	7932.063	8436.873	11.752	12.0	-4.3	NO		NO	bb
4	4	190710M2_9	Standard	12.500	4.57	7851.595	8295.519	11.831	12.0	-3.7	NO		NO	bb
5	5	190710M2_10	Standard	12.500	4.57	9320.955	9350.003	12.461	12.7	1.4	NO		NO	bb
6	6	190710M2_11	Standard	12.500	4.57	7587.184	7605.623	12.470	12.7	1.5	NO		NO	bb
7	7	190710M2_12	Standard	12.500	4.57	11887.996	12539.574	11.850	12.1	-3.5	NO		NO	bb
8	8	190710M2_13	Standard	12.500	4.57	6822.277	6548.345	13.023	13.3	6.0	NO		NO	bb

Compound name: 13C8-PFOSA
Response Factor: 0.130277
RRF SD: 0.00591568, Relative SD: 4.54086
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	12.500	4.63	1618.611	11912.648	1.698	13.0	4.3	NO		NO	bb
2	2	190710M2_7	Standard	12.500	4.63	1627.413	12146.531	1.675	12.9	2.8	NO		NO	bb
3	3	190710M2_8	Standard	12.500	4.64	1531.073	11943.670	1.602	12.3	-1.6	NO		NO	bb
4	4	190710M2_9	Standard	12.500	4.63	1466.991	11915.969	1.539	11.8	-5.5	NO		NO	bb
5	5	190710M2_10	Standard	12.500	4.63	1856.207	14305.879	1.622	12.4	-0.4	NO		NO	bb
6	6	190710M2_11	Standard	12.500	4.63	1427.893	11831.388	1.509	11.6	-7.4	NO		NO	bb
7	7	190710M2_12	Standard	12.500	4.63	2379.869	17696.068	1.681	12.9	3.2	NO		NO	bb
8	8	190710M2_13	Standard	12.500	4.64	1338.825	9834.856	1.702	13.1	4.5	NO		NO	bb

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Compound name: 13C2-PFOA
Response Factor: 0.564255
RRF SD: 0.0209217, Relative SD: 3.70784
Response type: Internal Std (Ref 75), 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 190710M2_6	Standard	12.500	4.13	7718.956	13388.436	7.207	12.8	2.2	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.13	7963.359	14093.044	7.063	12.5	0.1	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.13	7400.191	13963.202	6.625	11.7	-6.1	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.13	7808.747	14249.977	6.850	12.1	-2.9	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.13	9244.864	16413.971	7.040	12.5	-0.2	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.13	7521.740	12992.551	7.237	12.8	2.6	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.13	11432.653	20632.490	6.926	12.3	-1.8	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.13	6540.568	10933.404	7.478	13.3	6.0	NO		NO	bb

Compound name: 13C8-PFOS
Response Factor: 1.05996
RRF SD: 0.0850923, Relative SD: 8.02788
Response type: Internal Std (Ref 77), 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 190710M2_6	Standard	12.500	4.66	1347.552	1327.903	12.685	12.0	-4.3	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.66	1416.736	1384.299	12.793	12.1	-3.4	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.66	1422.413	1176.867	15.108	14.3	14.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.66	1341.699	1368.032	12.259	11.6	-7.5	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.66	1597.348	1460.771	13.669	12.9	3.2	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.66	1315.408	1148.475	14.317	13.5	8.1	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.66	2063.788	2155.362	11.969	11.3	-9.7	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.66	1135.065	1075.188	13.196	12.4	-0.4	NO		NO	bb

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Compound name: 13C2-PFDA
Response Factor: 0.662196
RRF SD: 0.016931, Relative SD: 2.55679
Response type: Internal Std (Ref 78), 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 190710M2_6	Standard	12.500	4.95	6483.450	9534.204	8.500	12.8	2.7	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.95	6513.090	9602.725	8.478	12.8	2.4	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.95	6815.267	10121.342	8.417	12.7	1.7	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.95	6311.901	9866.013	7.997	12.1	-3.4	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.95	7586.322	11475.027	8.264	12.5	-0.2	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.95	6184.109	9251.279	8.356	12.6	0.9	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.95	9816.599	14828.290	8.275	12.5	-0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.95	5260.100	8289.135	7.932	12.0	-4.2	NO		NO	bb

Compound name: 13C2-8:2 FTS
Response Factor: 0.695378
RRF SD: 0.0755684, Relative SD: 10.8672
Response type: Internal Std (Ref 77), 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 190710M2_6	Standard	12.500	4.92	888.285	1327.903	8.362	12.0	-3.8	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.92	921.949	1384.299	8.325	12.0	-4.2	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.92	954.638	1176.867	10.140	14.6	16.7	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.92	900.043	1368.032	8.224	11.8	-5.4	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.92	944.165	1460.771	8.079	11.6	-7.1	NO		NO	MM
6	6 190710M2_11	Standard	12.500	4.92	901.200	1148.475	9.809	14.1	12.8	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.92	1269.481	2155.362	7.362	10.6	-15.3	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.92	794.537	1075.188	9.237	13.3	6.3	NO		NO	bb

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Compound name: d3-N-MeFOSAA
Response Factor: 0.129049
RRF SD: 0.00513885, Relative SD: 3.98209
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	12.500	5.10	1483.081	11912.648	1.556	12.1	-3.5	NO		NO	bb
2	2	190710M2_7	Standard	12.500	5.10	1539.354	12146.531	1.584	12.3	-1.8	NO		NO	bb
3	3	190710M2_8	Standard	12.500	5.10	1534.459	11943.670	1.606	12.4	-0.4	NO		NO	bb
4	4	190710M2_9	Standard	12.500	5.10	1568.547	11915.969	1.645	12.8	2.0	NO		NO	bb
5	5	190710M2_10	Standard	12.500	5.10	1786.803	14305.879	1.561	12.1	-3.2	NO		NO	bb
6	6	190710M2_11	Standard	12.500	5.10	1481.031	11831.388	1.565	12.1	-3.0	NO		NO	bb
7	7	190710M2_12	Standard	12.500	5.10	2321.898	17696.068	1.640	12.7	1.7	NO		NO	bb
8	8	190710M2_13	Standard	12.500	5.10	1374.590	9834.856	1.747	13.5	8.3	NO		NO	bb

Compound name: 13C2-PFUdA
Response Factor: 0.857069
RRF SD: 0.0312507, Relative SD: 3.64622
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	12.500	5.28	10308.564	11912.648	10.817	12.6	1.0	NO		NO	bb
2	2	190710M2_7	Standard	12.500	5.28	9874.773	12146.531	10.162	11.9	-5.1	NO		NO	bb
3	3	190710M2_8	Standard	12.500	5.28	10153.241	11943.670	10.626	12.4	-0.8	NO		NO	bb
4	4	190710M2_9	Standard	12.500	5.28	10535.049	11915.969	11.051	12.9	3.2	NO		NO	bb
5	5	190710M2_10	Standard	12.500	5.27	12195.073	14305.879	10.656	12.4	-0.5	NO		NO	bb
6	6	190710M2_11	Standard	12.500	5.28	9619.693	11831.388	10.163	11.9	-5.1	NO		NO	bb
7	7	190710M2_12	Standard	12.500	5.28	15781.931	17696.068	11.148	13.0	4.1	NO		NO	bb
8	8	190710M2_13	Standard	12.500	5.27	8720.392	9834.856	11.084	12.9	3.5	NO		NO	bb

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Compound name: d5-N-EtFOSAA
Response Factor: 0.147407
RRF SD: 0.00759524, Relative SD: 5.15256
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	12.500	5.26	1930.980	11912.648	2.026	13.7	10.0	NO		NO	bb
2	2	190710M2_7	Standard	12.500	5.26	1750.672	12146.531	1.802	12.2	-2.2	NO		NO	bd
3	3	190710M2_8	Standard	12.500	5.26	1820.030	11943.670	1.905	12.9	3.4	NO		NO	bb
4	4	190710M2_9	Standard	12.500	5.26	1715.865	11915.969	1.800	12.2	-2.3	NO		NO	bb
5	5	190710M2_10	Standard	12.500	5.26	2099.478	14305.879	1.834	12.4	-0.4	NO		NO	bb
6	6	190710M2_11	Standard	12.500	5.26	1603.905	11831.388	1.695	11.5	-8.0	NO		NO	bb
7	7	190710M2_12	Standard	12.500	5.26	2599.831	17696.068	1.836	12.5	-0.3	NO		NO	bb
8	8	190710M2_13	Standard	12.500	5.26	1449.809	9834.856	1.843	12.5	0.0	NO		NO	bb

Compound name: 13C2-PFDoA
Response Factor: 1.22913
RRF SD: 0.0199595, Relative SD: 1.62388
Response type: Internal Std (Ref 78), 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	190710M2_6	Standard	12.500	5.56	11849.361	9534.204	15.535	12.6	1.1	NO		NO	bb
2	2	190710M2_7	Standard	12.500	5.56	11696.822	9602.725	15.226	12.4	-0.9	NO		NO	bb
3	3	190710M2_8	Standard	12.500	5.56	12098.984	10121.342	14.942	12.2	-2.7	NO		NO	bb
4	4	190710M2_9	Standard	12.500	5.56	12100.947	9866.013	15.332	12.5	-0.2	NO		NO	bb
5	5	190710M2_10	Standard	12.500	5.56	14176.774	11475.027	15.443	12.6	0.5	NO		NO	bb
6	6	190710M2_11	Standard	12.500	5.56	11395.914	9251.279	15.398	12.5	0.2	NO		NO	bb
7	7	190710M2_12	Standard	12.500	5.57	18080.182	14828.290	15.241	12.4	-0.8	NO		NO	bb
8	8	190710M2_13	Standard	12.500	5.56	10474.394	8289.135	15.795	12.9	2.8	NO		NO	bb

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Compound name: d3-N-MeFOSA
Response Factor: 0.0221599
RRF SD: 0.00143849, Relative SD: 6.4914
Response type: Internal Std (Ref 79), 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 190710M2_6	Standard	150.000	5.73	3054.399	11912.648	3.205	144.6	-3.6	NO		NO	bd
2	2 190710M2_7	Standard	150.000	5.73	3277.438	12146.531	3.373	152.2	1.5	NO		NO	bb
3	3 190710M2_8	Standard	150.000	5.74	3115.206	11943.670	3.260	147.1	-1.9	NO		NO	bb
4	4 190710M2_9	Standard	150.000	5.73	3084.938	11915.969	3.236	146.0	-2.6	NO		NO	bb
5	5 190710M2_10	Standard	150.000	5.73	3716.070	14305.879	3.247	146.5	-2.3	NO		NO	bb
6	6 190710M2_11	Standard	150.000	5.73	2913.632	11831.388	3.078	138.9	-7.4	NO		NO	bb
7	7 190710M2_12	Standard	150.000	5.73	4802.480	17696.068	3.392	153.1	2.1	NO		NO	bb
8	8 190710M2_13	Standard	150.000	5.73	2989.823	9834.856	3.800	171.5	14.3	NO		NO	bb

Compound name: 13C2-PFTeDA
Response Factor: 0.511371
RRF SD: 0.0226087, Relative SD: 4.42119
Response type: Internal Std (Ref 79), 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 190710M2_6	Standard	12.500	6.04	5988.523	11912.648	6.284	12.3	-1.7	NO		NO	bb
2	2 190710M2_7	Standard	12.500	6.04	6370.549	12146.531	6.556	12.8	2.6	NO		NO	bb
3	3 190710M2_8	Standard	12.500	6.04	6280.262	11943.670	6.573	12.9	2.8	NO		NO	bb
4	4 190710M2_9	Standard	12.500	6.04	6033.232	11915.969	6.329	12.4	-1.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	6.03	6836.236	14305.879	5.973	11.7	-6.6	NO		NO	bb
6	6 190710M2_11	Standard	12.500	6.04	5715.887	11831.388	6.039	11.8	-5.5	NO		NO	bb
7	7 190710M2_12	Standard	12.500	6.04	9409.312	17696.068	6.646	13.0	4.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	6.04	5300.635	9834.856	6.737	13.2	5.4	NO		NO	bb

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Compound name: d5-N-ETFOSA
Response Factor: 0.0311662
RRF SD: 0.00140362, Relative SD: 4.50369
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	150.000	6.15	4439.246	11912.648	4.658	149.5	-0.4	NO		NO	bb
2	2	190710M2_7	Standard	150.000	6.15	4462.217	12146.531	4.592	147.3	-1.8	NO		NO	bb
3	3	190710M2_8	Standard	150.000	6.15	4330.604	11943.670	4.532	145.4	-3.1	NO		NO	bb
4	4	190710M2_9	Standard	150.000	6.15	4383.917	11915.969	4.599	147.6	-1.6	NO		NO	bb
5	5	190710M2_10	Standard	150.000	6.15	5295.154	14305.879	4.627	148.5	-1.0	NO		NO	bb
6	6	190710M2_11	Standard	150.000	6.15	4247.957	11831.388	4.488	144.0	-4.0	NO		NO	bb
7	7	190710M2_12	Standard	150.000	6.15	6715.452	17696.068	4.744	152.2	1.5	NO		NO	bb
8	8	190710M2_13	Standard	150.000	6.15	4059.624	9834.856	5.160	165.6	10.4	NO		NO	bb

Compound name: 13C2-PFHxDA
Response Factor: 0.734859
RRF SD: 0.033246, Relative SD: 4.52414
Response type: Internal Std (Ref 79), 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	190710M2_6	Standard	5.000	6.39	3440.496	11912.648	3.610	4.9	-1.7	NO		NO	bb
2	2	190710M2_7	Standard	5.000	6.39	3551.527	12146.531	3.655	5.0	-0.5	NO		NO	bb
3	3	190710M2_8	Standard	5.000	6.39	3591.524	11943.670	3.759	5.1	2.3	NO		NO	bb
4	4	190710M2_9	Standard	5.000	6.39	3403.188	11915.969	3.570	4.9	-2.8	NO		NO	bb
5	5	190710M2_10	Standard	5.000	6.39	4071.111	14305.879	3.557	4.8	-3.2	NO		NO	bb
6	6	190710M2_11	Standard	5.000	6.39	3262.578	11831.388	3.447	4.7	-6.2	NO		NO	bb
7	7	190710M2_12	Standard	5.000	6.39	5446.172	17696.068	3.847	5.2	4.7	NO		NO	bb
8	8	190710M2_13	Standard	5.000	6.39	3107.337	9834.856	3.949	5.4	7.5	NO		NO	bb

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Compound name: d7-N-MeFOSE
Response Factor: 0.0279532
RRF SD: 0.00205848, Relative SD: 7.36404
Response type: Internal Std (Ref 79), 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 190710M2_6	Standard	150.000	6.30	4007.611	11912.648	4.205	150.4	0.3	NO		NO	bb
2	2 190710M2_7	Standard	150.000	6.30	3785.716	12146.531	3.896	139.4	-7.1	NO		NO	bb
3	3 190710M2_8	Standard	150.000	6.30	3922.123	11943.670	4.105	146.8	-2.1	NO		NO	bb
4	4 190710M2_9	Standard	150.000	6.30	3727.673	11915.969	3.910	139.9	-6.7	NO		NO	bb
5	5 190710M2_10	Standard	150.000	6.30	4820.834	14305.879	4.212	150.7	0.5	NO		NO	bb
6	6 190710M2_11	Standard	150.000	6.30	3765.545	11831.388	3.978	142.3	-5.1	NO		NO	bb
7	7 190710M2_12	Standard	150.000	6.30	6250.164	17696.068	4.415	157.9	5.3	NO		NO	bb
8	8 190710M2_13	Standard	150.000	6.30	3793.865	9834.856	4.822	172.5	15.0	NO		NO	bb

Compound name: d9-N-EtFOSE
Response Factor: 0.0275062
RRF SD: 0.00159928, Relative SD: 5.81424
Response type: Internal Std (Ref 79), 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 190710M2_6	Standard	150.000	6.45	3845.157	11912.648	4.035	146.7	-2.2	NO		NO	bb
2	2 190710M2_7	Standard	150.000	6.45	3839.792	12146.531	3.952	143.7	-4.2	NO		NO	bb
3	3 190710M2_8	Standard	150.000	6.45	3944.296	11943.670	4.128	150.1	0.1	NO		NO	bb
4	4 190710M2_9	Standard	150.000	6.45	3790.164	11915.969	3.976	144.5	-3.6	NO		NO	bb
5	5 190710M2_10	Standard	150.000	6.45	4610.654	14305.879	4.029	146.5	-2.4	NO		NO	bb
6	6 190710M2_11	Standard	150.000	6.45	3714.178	11831.388	3.924	142.7	-4.9	NO		NO	bb
7	7 190710M2_12	Standard	150.000	6.45	6151.757	17696.068	4.345	158.0	5.3	NO		NO	bb
8	8 190710M2_13	Standard	150.000	6.45	3634.249	9834.856	4.619	167.9	12.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:30:27 Pacific Daylight Time

Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 72), 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 190710M2_6	Standard	12.500	1.21	2921.156	2921.156	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	1.21	3200.857	3200.857	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	1.21	3042.829	3042.829	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	1.21	3054.028	3054.028	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	1.21	3825.142	3825.142	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	1.21	2935.893	2935.893	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	1.21	4789.874	4789.874	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	1.21	2814.827	2814.827	12.500	12.5	0.0	NO		NO	db

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 73), 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 190710M2_6	Standard	12.500	2.99	9214.552	9214.552	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	2.99	9744.537	9744.537	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	2.99	9533.288	9533.288	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	2.99	9794.559	9794.559	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	2.99	11219.285	11219.285	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	2.99	9088.471	9088.471	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	2.99	14844.347	14844.347	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	2.99	8310.527	8310.527	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
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Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 74), 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	190710M2_6	Standard	12.500	3.76	506.480	506.480	12.500	12.5	0.0	NO		NO	bb
2	2	190710M2_7	Standard	12.500	3.76	530.060	530.060	12.500	12.5	0.0	NO		NO	bb
3	3	190710M2_8	Standard	12.500	3.76	516.799	516.799	12.500	12.5	0.0	NO		NO	bb
4	4	190710M2_9	Standard	12.500	3.76	567.821	567.821	12.500	12.5	0.0	NO		NO	bb
5	5	190710M2_10	Standard	12.500	3.76	643.362	643.362	12.500	12.5	0.0	NO		NO	bb
6	6	190710M2_11	Standard	12.500	3.76	448.826	448.826	12.500	12.5	0.0	NO		NO	bb
7	7	190710M2_12	Standard	12.500	3.76	964.996	964.996	12.500	12.5	0.0	NO		NO	bb
8	8	190710M2_13	Standard	12.500	3.76	469.394	469.394	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 75), 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	190710M2_6	Standard	12.500	4.13	13388.436	13388.436	12.500	12.5	0.0	NO		NO	bb
2	2	190710M2_7	Standard	12.500	4.13	14093.044	14093.044	12.500	12.5	0.0	NO		NO	bb
3	3	190710M2_8	Standard	12.500	4.13	13963.202	13963.202	12.500	12.5	0.0	NO		NO	bb
4	4	190710M2_9	Standard	12.500	4.13	14249.977	14249.977	12.500	12.5	0.0	NO		NO	bb
5	5	190710M2_10	Standard	12.500	4.13	16413.971	16413.971	12.500	12.5	0.0	NO		NO	bb
6	6	190710M2_11	Standard	12.500	4.13	12992.551	12992.551	12.500	12.5	0.0	NO		NO	bb
7	7	190710M2_12	Standard	12.500	4.13	20632.490	20632.490	12.500	12.5	0.0	NO		NO	bb
8	8	190710M2_13	Standard	12.500	4.13	10933.404	10933.404	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:30:27 Pacific Daylight Time

Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 76), 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 190710M2_6	Standard	12.500	4.57	7993.476	7993.476	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.57	7664.316	7664.316	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.57	8436.873	8436.873	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.57	8295.519	8295.519	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.57	9350.003	9350.003	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.57	7605.623	7605.623	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.57	12539.574	12539.574	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.57	6548.345	6548.345	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 77), 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 190710M2_6	Standard	12.500	4.66	1327.903	1327.903	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.66	1384.299	1384.299	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.66	1176.867	1176.867	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.66	1368.032	1368.032	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.66	1460.771	1460.771	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.66	1148.475	1148.475	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.66	2155.362	2155.362	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.66	1075.188	1075.188	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:30:27 Pacific Daylight Time

Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 78), 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 190710M2_6	Standard	12.500	4.95	9534.204	9534.204	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	4.95	9602.725	9602.725	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	4.95	10121.342	10121.342	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	4.95	9866.013	9866.013	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	4.95	11475.027	11475.027	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	4.95	9251.279	9251.279	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	4.95	14828.290	14828.290	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	4.95	8289.135	8289.135	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 79), 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 190710M2_6	Standard	12.500	5.27	11912.648	11912.648	12.500	12.5	0.0	NO		NO	bb
2	2 190710M2_7	Standard	12.500	5.27	12146.531	12146.531	12.500	12.5	0.0	NO		NO	bb
3	3 190710M2_8	Standard	12.500	5.28	11943.670	11943.670	12.500	12.5	0.0	NO		NO	bb
4	4 190710M2_9	Standard	12.500	5.28	11915.969	11915.969	12.500	12.5	0.0	NO		NO	bb
5	5 190710M2_10	Standard	12.500	5.27	14305.879	14305.879	12.500	12.5	0.0	NO		NO	bb
6	6 190710M2_11	Standard	12.500	5.28	11831.388	11831.388	12.500	12.5	0.0	NO		NO	bb
7	7 190710M2_12	Standard	12.500	5.28	17696.068	17696.068	12.500	12.5	0.0	NO		NO	bb
8	8 190710M2_13	Standard	12.500	5.27	9834.856	9834.856	12.500	12.5	0.0	NO		NO	bb

Quantify Compound Summary Report **MassLynx MassLynx V4.1 SCN945 SCN960**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 11, 2019 10:43:20 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:43:33 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_070719_ICV.mdb 08 Jul 2019 08:37:29
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Compound name: PFBA

(A) Not used. am 7/11/19

	#	Name	ID	Acq.Date	Acq.Time
1	1	190710M2_5	IPA	10-Jul-19	13:33:09
2	2	190710M2_6	ST190710M2-1 PFC CS-2 19G0801	10-Jul-19	13:43:47
3	3	190710M2_7	ST190710M2-2 PFC CS-1 19G0802	10-Jul-19	13:54:21
4	4	190710M2_8	ST190710M2-3 PFC CS0 19G0803	10-Jul-19	14:04:59
5	5	190710M2_9	ST190710M2-4 PFC CS1 19G0804	10-Jul-19	14:15:32
6	6	190710M2_10	ST190710M2-5 PFC CS2 19G0805	10-Jul-19	14:26:10
7	7	190710M2_11	ST190710M2-6 PFC CS3 19G0806	10-Jul-19	14:36:42
8	8	190710M2_12	ST190710M2-7 PFC CS4 19G0807	10-Jul-19	14:47:21
9	9	190710M2_13	ST190710M2-8 PFC CS5 19G0808	10-Jul-19	14:57:59
10	10	190710M2_14	(A) ST190710M2-9 PFC CS6 19G0809	10-Jul-19	15:08:31
11	11	190710M2_15	ST190710M2-10 PFC CS7 19G0810	10-Jul-19	15:19:10
12	12	190710M2_16	IB	10-Jul-19	15:29:49
13	13	190710M2_17	ST190710M2-1 PFC ICV 19G0811	10-Jul-19	15:40:21
14	14	190710M2_18	IPA		

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:59:12 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9994	NO	
2	2	PFPrS	49	0.9979	NO	
3	3	3:3 FTCA	48	0.9971	NO	
4	4	PFPeA	48	0.9973	NO	
5	5	PFBS	49	0.9988	NO	
6	6	4:2 FTS	51	0.9993	NO	
7	7	PFHxA	52	0.9999	NO	
8	8	PFPeS	49	0.9989	NO	
9	9	HFPO-DA	50	0.9981	NO	
10	10	5:3 FTCA	53	0.9955	NO	
11	11	PFHpA	53	0.9982	NO	
12	12	ADONA	53	0.9989	NO	
13	13	L-PFHxS	54	0.9993	NO	
14	15	6:2 FTS	55	0.9991	NO	
15	16	L-PFOA	58	0.9997	NO	
16	18	PFecHS	58	0.9995	NO	
17	19	PFHpS	59	0.9990	NO	
18	20	7:3 FTCA	56	0.9954	NO	
19	21	PFNA	56	0.9994	NO	
20	22	PFOSA	57	0.9993	NO	
21	23	L-PFOS	59	0.9959	NO	
22	25	9Cl-PF30NS	59	0.9997	NO	
23	26	PFDA	60	0.9970	NO	
24	27	8:2 FTS	61	0.9944	NO	
25	28	PFNS	59	0.9989	NO	
26	29	L-MeFOSAA	62	0.9989	NO	

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:33:50 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	64	0.9994	NO	
2	33	PFUdA	63	0.9993	NO	
3	34	PFDS	61	0.9953	NO	
4	35	11Cl-PF30UdS	65	0.9910	NO	
5	36	10:2 FTS	61	0.9987	NO	
6	37	PFDoA	65	0.9998	NO	
7	38	N-MeFOSA	66	0.9991	NO	
8	39	PFTrDA	65	0.9998	NO	
9	40	PFDoS	67	0.9986	NO	
10	41	PFTeDA	67	0.9996	NO	
11	42	N-EtFOSA	68	0.9997	NO	
12	43	PFHxDA	69	0.9997	NO	
13	44	PFODA	69	0.9995	NO	
14	45	N-MeFOSE	70	0.9993	NO	
15	46	N-EtFOSE	71	0.9999	NO	
16	47	13C3-PFBA	72		NO	2.933
17	48	13C3-PFPeA	73		NO	7.568
18	49	13C3-PFBS	74		NO	6.818
19	50	13C3-HFPO-DA	73		NO	3.980
20	51	13C2-4:2 FTS	74		NO	12.743
21	52	13C2-PFHxA	73		NO	3.677
22	53	13C4-PFHpA	73		NO	2.841
23	54	13C3-PFHxS	74		NO	8.105
24	55	13C2-6:2 FTS	77		NO	7.758
25	56	13C5-PFNA	76		NO	4.305
26	57	13C8-PFOSA	79		NO	4.541
27	58	13C2-PFOA	75		NO	3.708
28	59	13C8-PFOS	77		NO	8.028
29	60	13C2-PFDA	78		NO	2.557
30	61	13C2-8:2 FTS	77		NO	10.867
31	62	d3-N-MeFOSAA	79		NO	3.982
32	63	13C2-PFUdA	79		NO	3.646

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:33:50 Pacific Daylight Time

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	d5-N-EtFOSAA	79		NO	5.153
34	65	13C2-PFDoA	78		NO	1.624
35	66	d3-N-MeFOSA	79		NO	6.491
36	67	13C2-PFTeDA	79		NO	4.421
37	68	d5-N-ETFOSA	79		NO	4.504
38	69	13C2-PFHxDA	79		NO	4.524
39	70	d7-N-MeFOSE	79		NO	7.364
40	71	d9-N-EtFOSE	79		NO	5.814
41	72	13C4-PFBA	72		NO	0.000
42	73	13C5-PFHxA	73		NO	0.000
43	74	18O2-PFHxS	74		NO	0.000
44	75	13C8-PFOA	75		NO	0.000
45	76	13C9-PFNA	76		NO	0.000
46	77	13C4-PFOS	77		NO	0.000
47	78	13C6-PFDA	78		NO	0.000
48	79	13C7-PFUdA	79		NO	0.000

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:35:12 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.21	1.21			
2	PFPrS	1.57	1.57	2.705	2.705	NO
3	3:3 FTCA	2.06	2.04	2.165	2.165	NO
4	PFPeA	2.20	2.20			
5	PFBS	2.49	2.49	3.037	3.037	NO
6	4:2 FTS	2.90	2.91	1.792	1.792	NO
7	PFHxA	2.99	2.99	15.832	15.832	NO
8	PFPeS	3.19	3.19	1.560	1.560	NO
9	HFPO-DA	3.20	3.20	2.415	2.415	NO
10	5:3 FTCA	3.53	3.54	1.572	1.572	NO
11	PFHpA	3.61	3.61	5.429	5.429	NO
12	ADONA	3.72	3.72	3.002	3.002	NO
13	L-PFHxS	3.76	3.76	2.036	2.036	NO
14	6:2 FTS	4.07	4.08	2.148	2.148	NO
15	L-PFOA	4.13	4.13	3.683	3.683	NO
16	PFecHS	4.15	4.15	0.908	0.908	NO
17	PFHpS	4.25	4.25	1.746	1.746	NO
18	7:3 FTCA	4.57	4.56	1.658	1.658	NO
19	PFNA	4.57	4.57	2.983	2.983	NO
20	PFOSA	4.63	4.63	41.487	41.487	NO
21	L-PFOS	4.66	4.66	2.058	2.058	NO
22	9Cl-PF30NS	4.88	4.88	24.430	24.430	NO
23	PFDA	4.95	4.95	4.278	4.278	NO
24	8:2 FTS	4.92	4.92	1.509	1.509	NO
25	PFNS	5.01	5.01	1.715	1.715	NO
26	L-MeFOSAA	5.10	5.10	2.376	2.376	NO

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:35:32 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.26	5.27	1.336	1.336	NO
2	PFUdA	5.28	5.28	6.095	6.095	NO
3	PFDS	5.33	5.33	1.629	1.629	NO
4	11Cl-PF30UdS	5.49	5.49	4.658	4.658	NO
5	10:2 FTS	5.55	5.55	1.474	1.474	NO
6	PFDoA	5.56	5.56	7.462	7.462	NO
7	N-MeFOSA	5.70	5.70	1.760	1.760	NO
8	PFTrDA	5.81	5.81	14.360	14.360	NO
9	PFDoS	5.84	5.84	1.916	1.916	NO
10	PFTeDA	6.04	6.04	14.838	14.838	NO
11	N-EtFOSA	6.13	6.13	1.854	1.854	NO
12	PFHxDA	6.39	6.39	17.070	17.070	NO
13	PFODA	6.63	6.63			
14	N-MeFOSE	6.31	6.31			
15	N-EtFOSE	6.46	6.46			

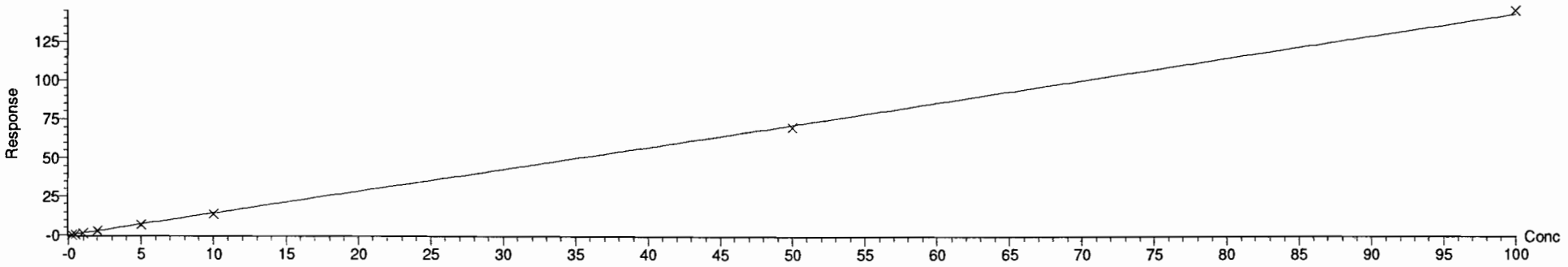
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

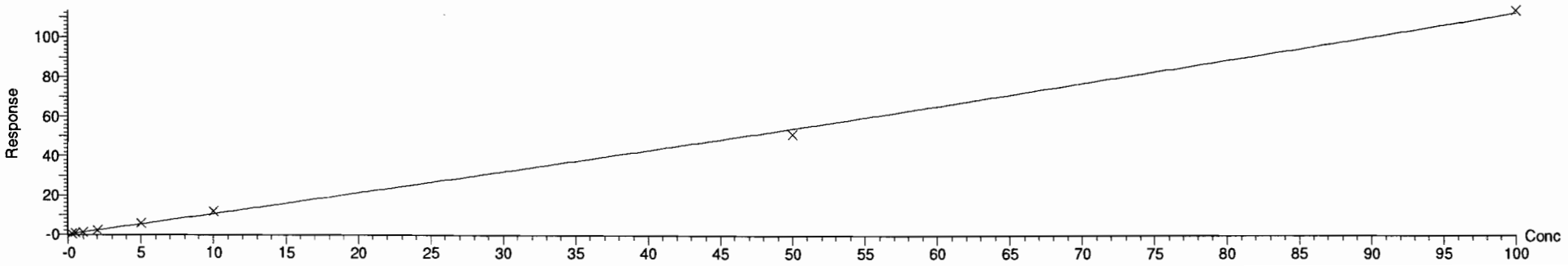
Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:09:57 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFBA
Correlation coefficient: r = 0.999710, r^2 = 0.999420
Calibration curve: 1.42744 * x + -0.0673711
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



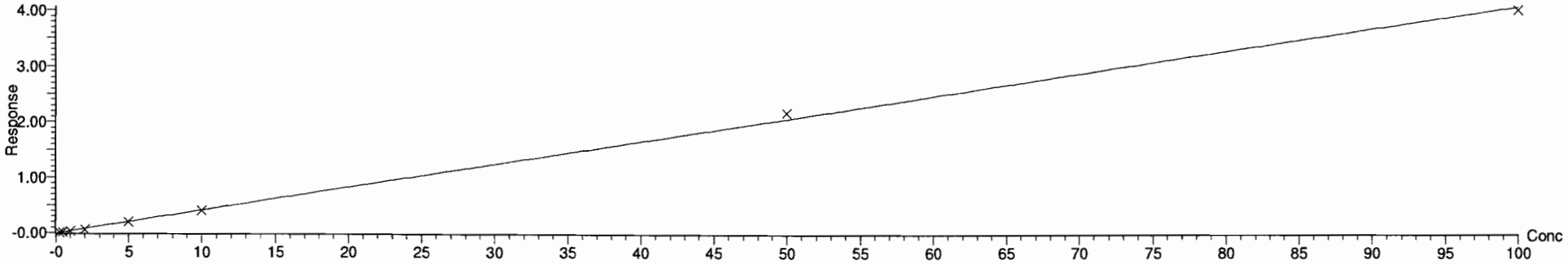
Compound name: PFPrS
Coefficient of Determination: R^2 = 0.997891
Calibration curve: 0.000772076 * x^2 + 1.04403 * x + 0.0148423
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



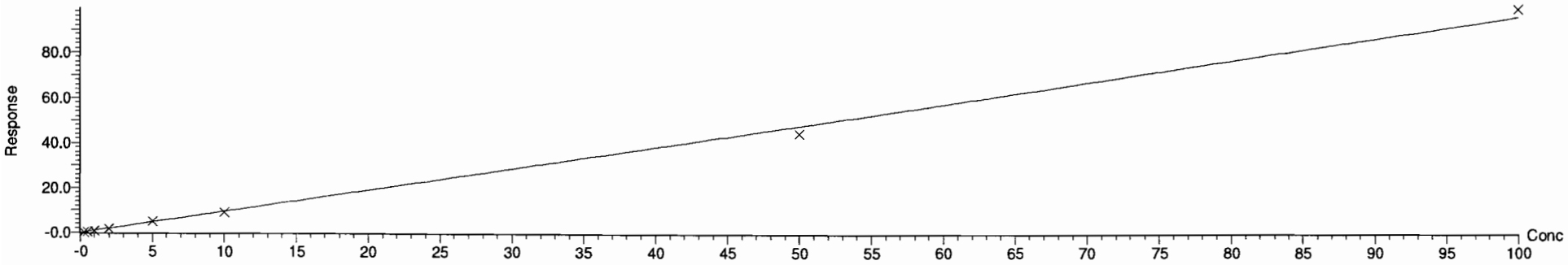
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.997073
Calibration curve: -1.28403e-005 * x^2 + 0.0420476 * x + -0.00551054
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



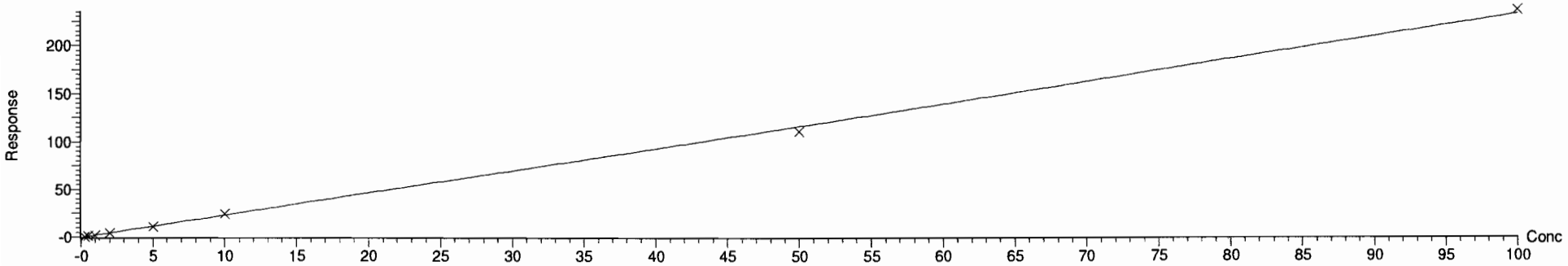
Compound name: PFPeA
Correlation coefficient: r = 0.998647, r^2 = 0.997296
Calibration curve: 0.957887 * x + -0.0507044
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



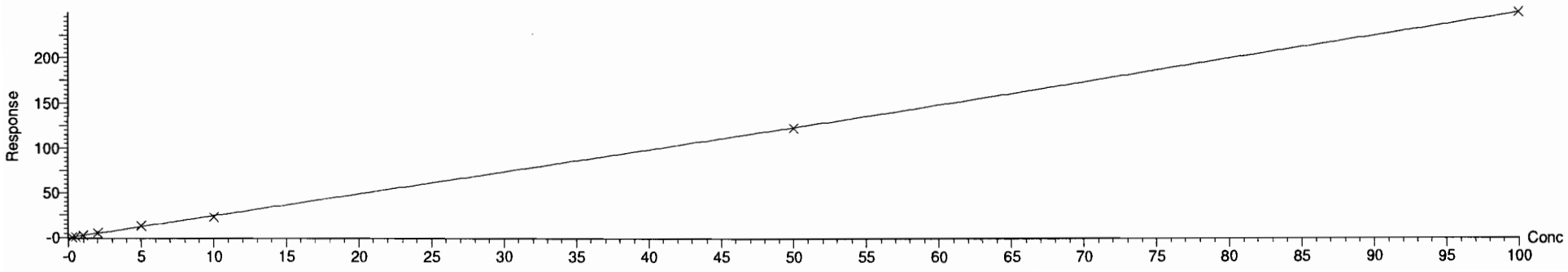
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: PFBS
Correlation coefficient: r = 0.999402, r^2 = 0.998804
Calibration curve: 2.32197 * x + -0.263256
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



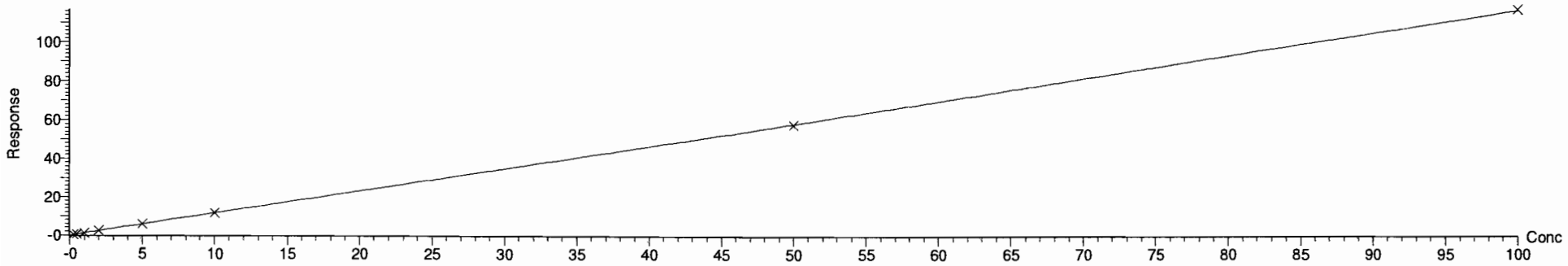
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999259
Calibration curve: 0.000507604 * x^2 + 2.44029 * x + -0.0250945
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



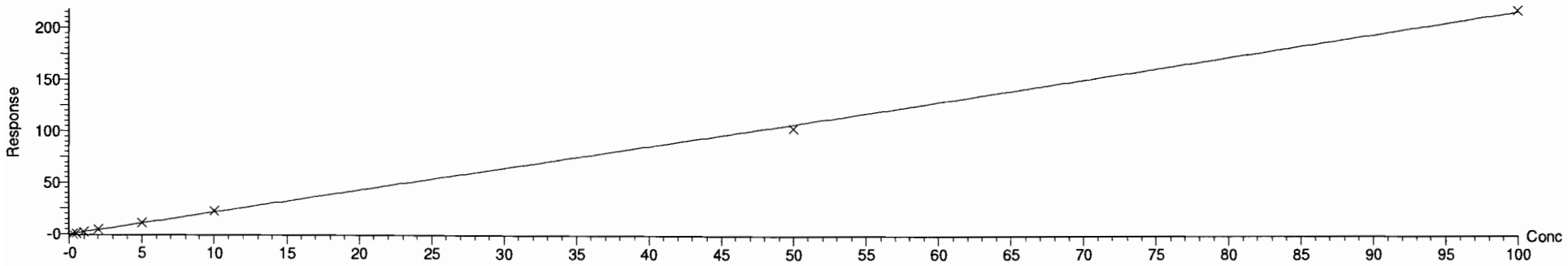
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: PFHxA
Correlation coefficient: r = 0.999958, r^2 = 0.999917
Calibration curve: 1.1618 * x + 0.000973487
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



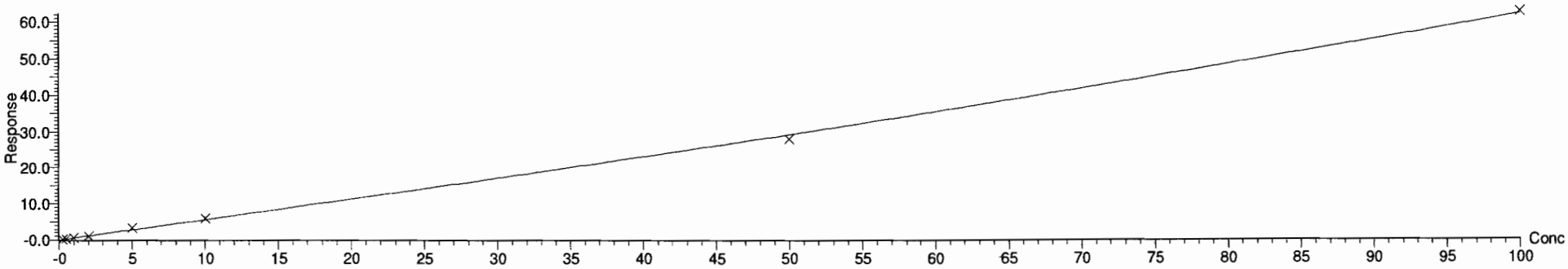
Compound name: PFPeS
Coefficient of Determination: R^2 = 0.998874
Calibration curve: 0.000269775 * x^2 + 2.12841 * x + 0.0156908
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



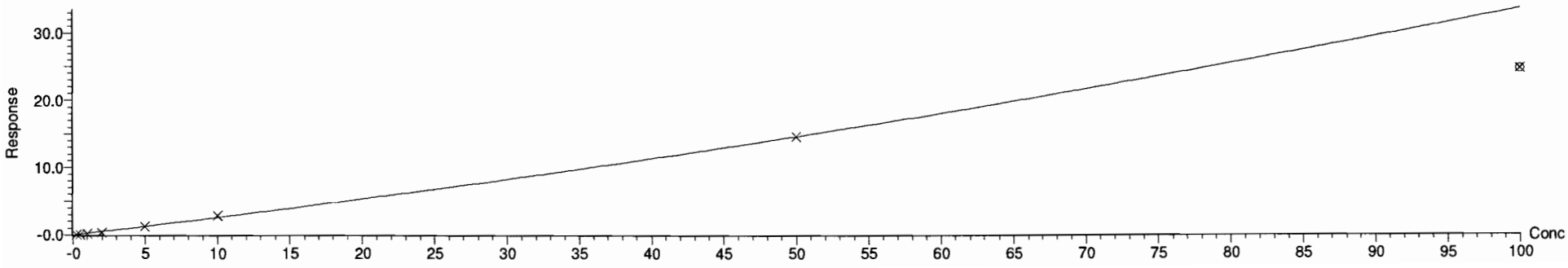
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.998150
Calibration curve: 0.000712906 * x^2 + 0.547378 * x + -0.00436396
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



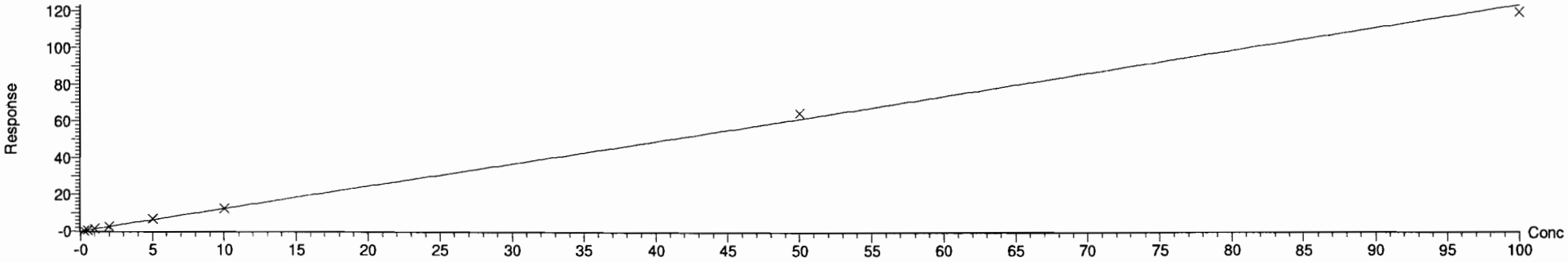
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.995477
Calibration curve: 0.000863776 * x^2 + 0.248802 * x + -0.0186935
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



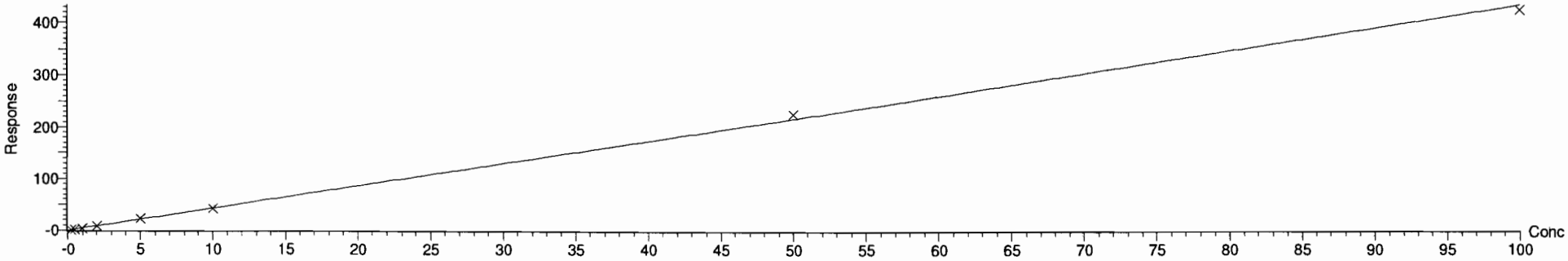
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: PFHpA
Correlation coefficient: r = 0.999078, r^2 = 0.998158
Calibration curve: 1.2318 * x + -0.044697
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



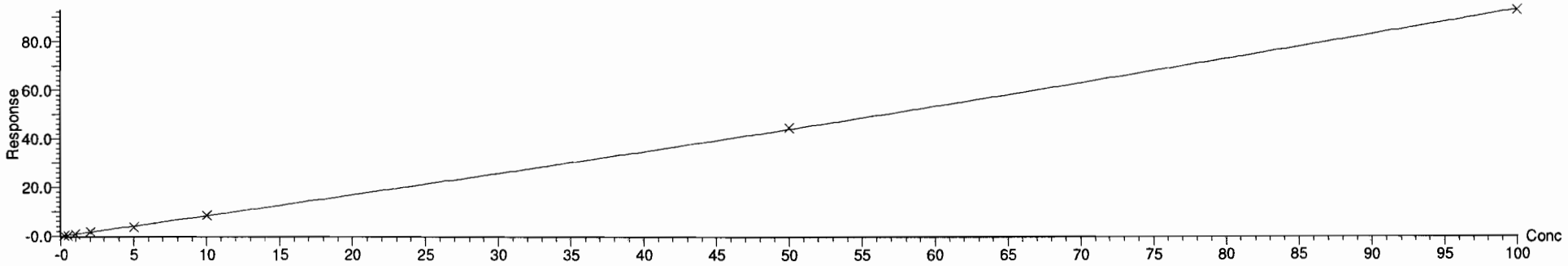
Compound name: ADONA
Correlation coefficient: r = 0.999468, r^2 = 0.998936
Calibration curve: 4.33675 * x + -0.0191729
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



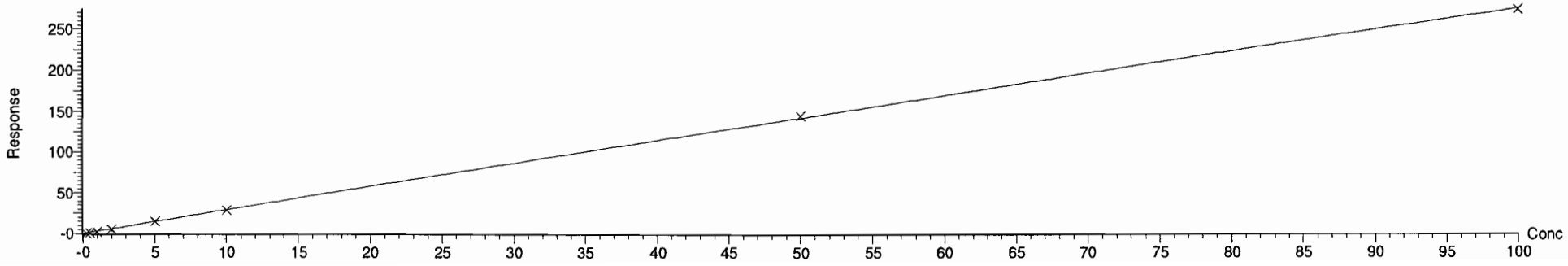
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999253
Calibration curve: 0.000954922 * x^2 + 0.833847 * x + -0.0703303
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



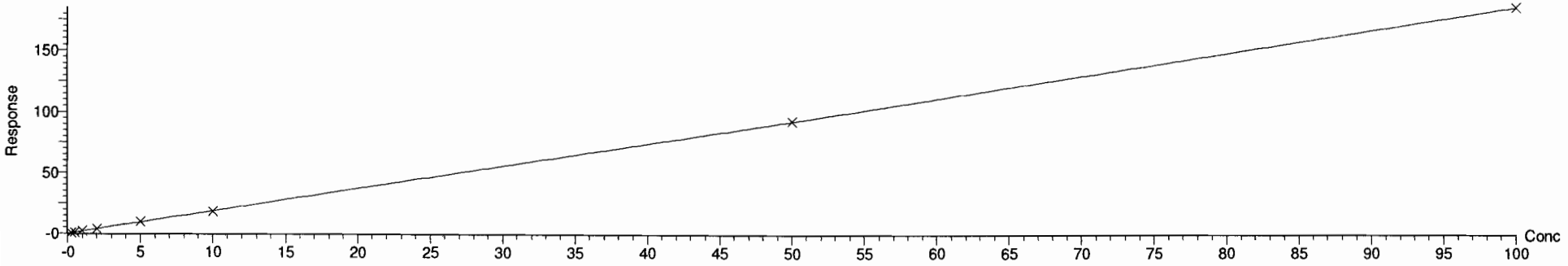
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.999098
Calibration curve: -0.00219189 * x^2 + 2.96391 * x + -0.232571
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



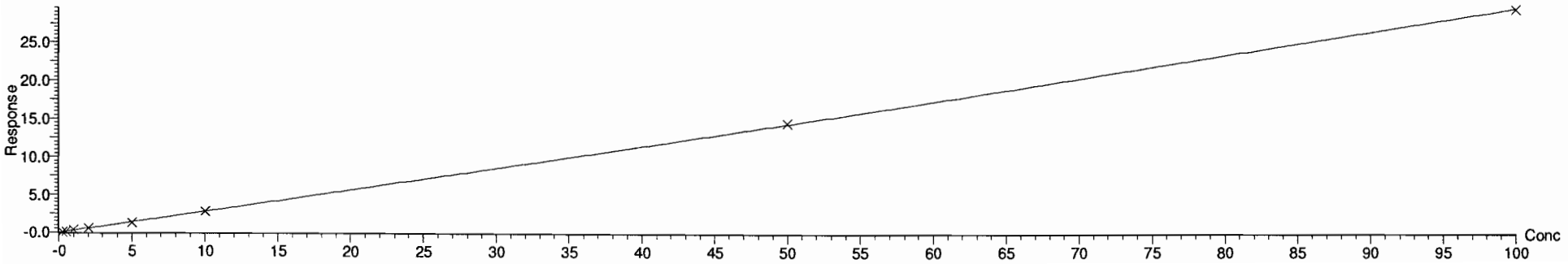
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: L-PFOA
Correlation coefficient: r = 0.999875, r^2 = 0.999749
Calibration curve: 1.84829 * x + 0.038532
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999465
Calibration curve: 0.000151504 * x^2 + 0.280359 * x + -0.022501
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



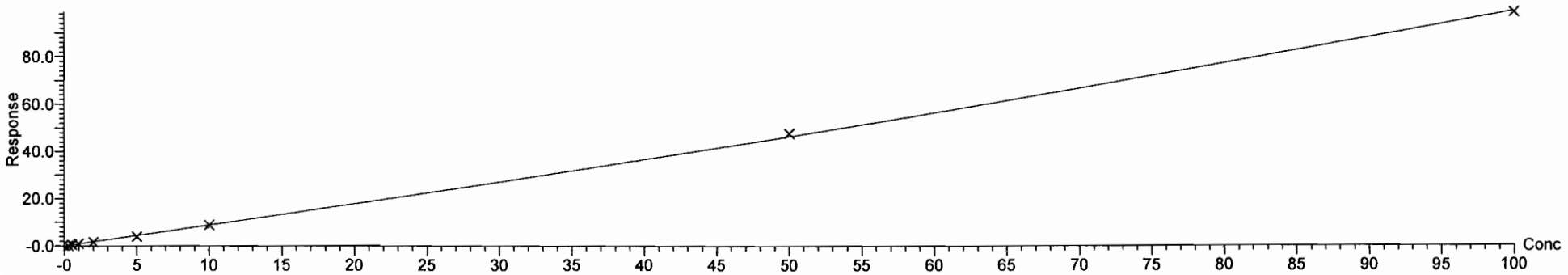
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

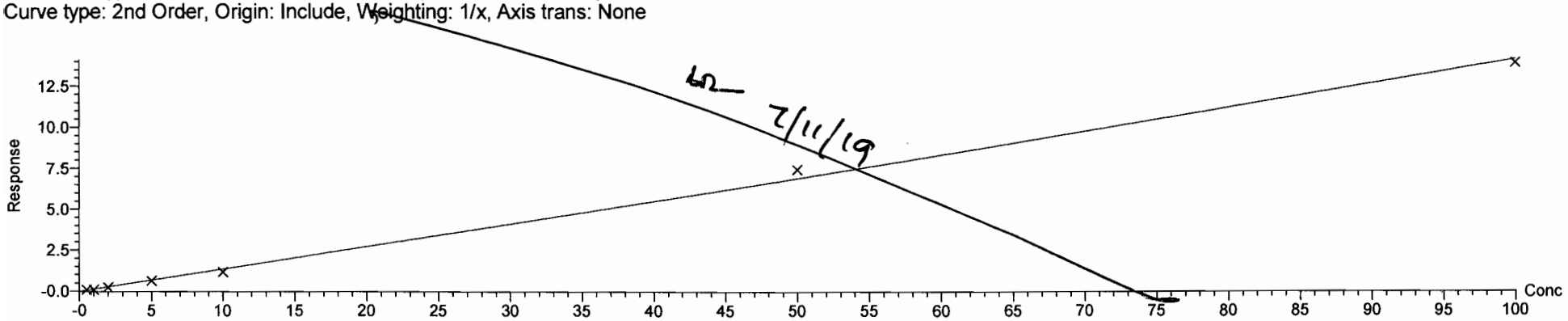
Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:57:45 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999024
Calibration curve: 0.00125826 * x^2 + 0.86234 * x + -0.0187748
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



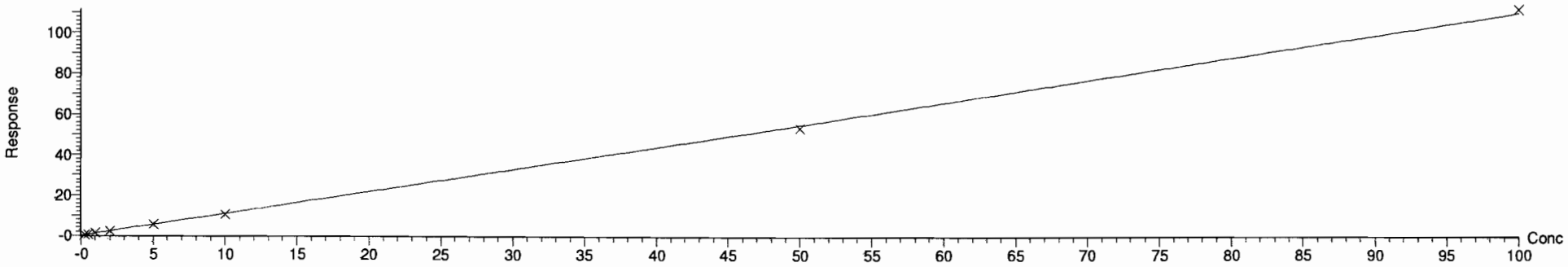
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.995389
Calibration curve: 5.99689e-005 * x^2 + 0.135121 * x + -0.0173495
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



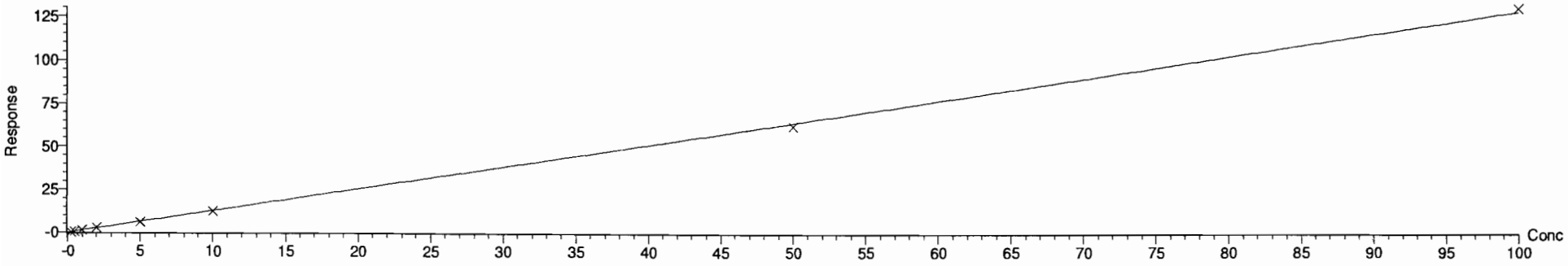
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.999712, r^2 = 0.999423
Calibration curve: 1.09616 * x + 0.0302511
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



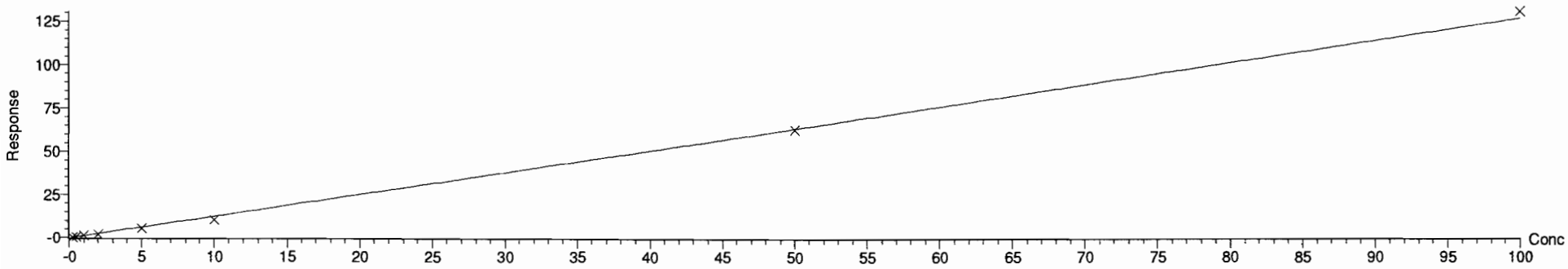
Compound name: PFOSA
Correlation coefficient: r = 0.999643, r^2 = 0.999286
Calibration curve: 1.27955 * x + -0.0326972
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



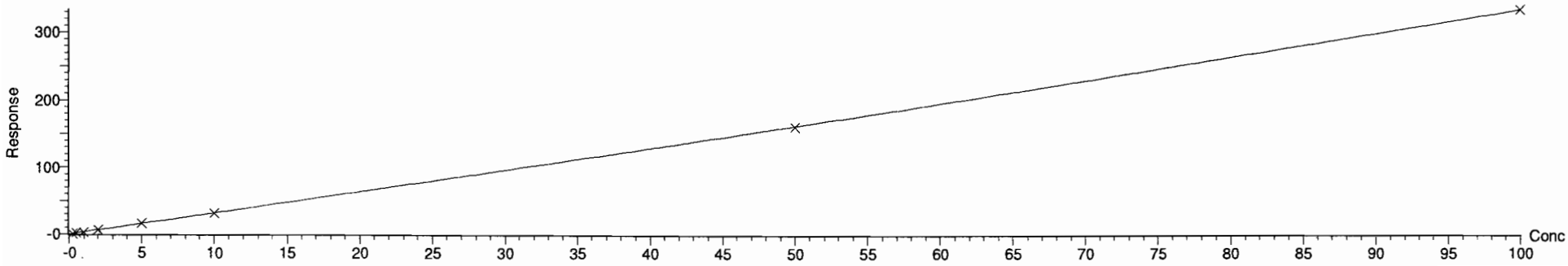
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: L-PFOS
Correlation coefficient: r = 0.997967, r^2 = 0.995937
Calibration curve: 1.26946 * x + -0.175183
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



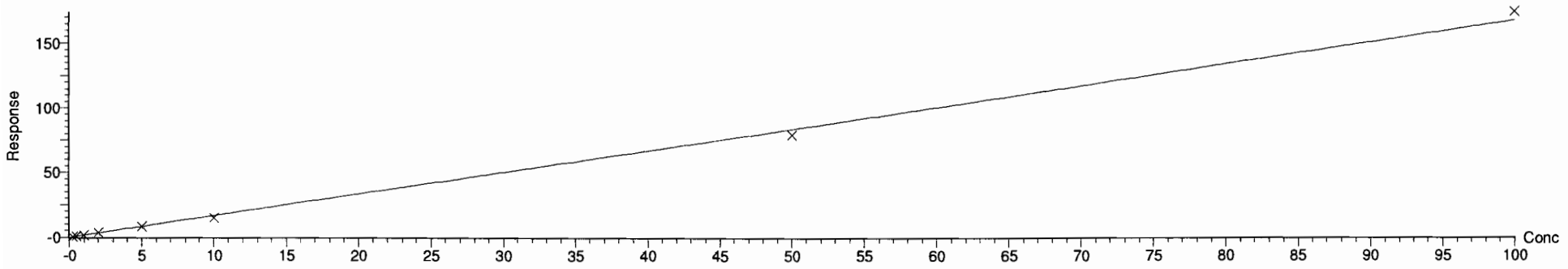
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999653
Calibration curve: 0.0017864 * x^2 + 3.15352 * x + -0.22686
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



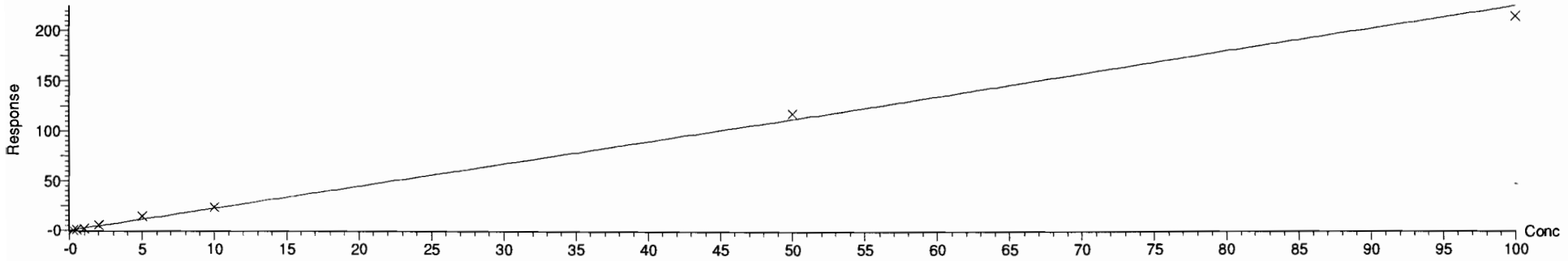
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:36:58 Pacific Daylight Time

Compound name: PFDA
Correlation coefficient: r = 0.998522, r^2 = 0.997046
Calibration curve: 1.67351 * x + -0.11586
Response type: Internal Std (Ref 60), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: 8:2 FTS
Correlation coefficient: r = 0.997198, r^2 = 0.994405
Calibration curve: 2.24647 * x + 0.0322693
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



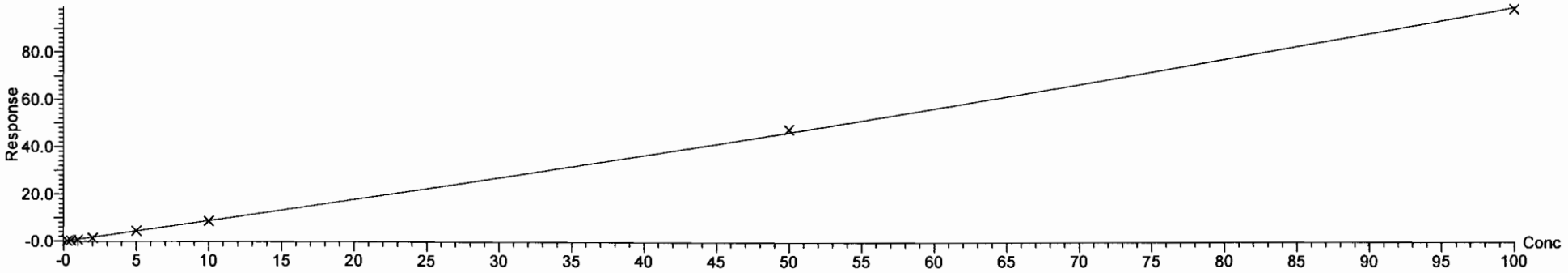
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

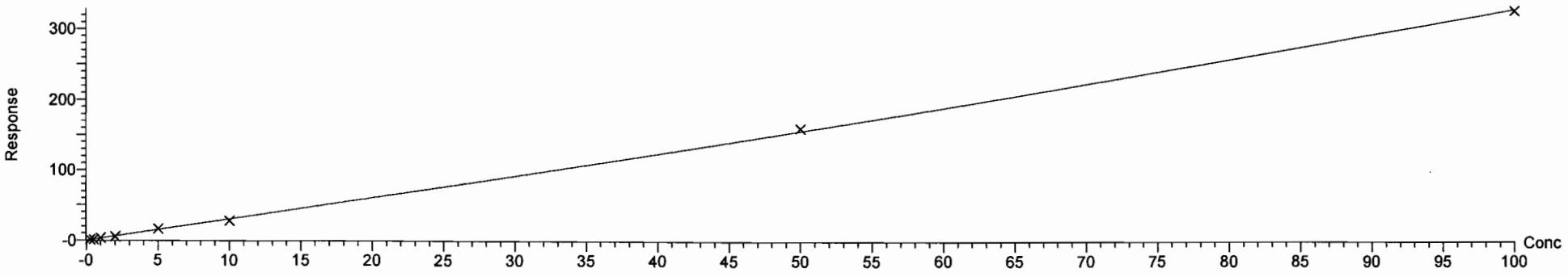
Last Altered: Thursday, July 11, 2019 10:56:26 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:05:39 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998948
Calibration curve: 0.0012104 * x^2 + 0.869148 * x + -0.063694
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.998887
Calibration curve: 0.003255 * x^2 + 2.95538 * x + -0.018678
Response type: Internal Std (Ref 62), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



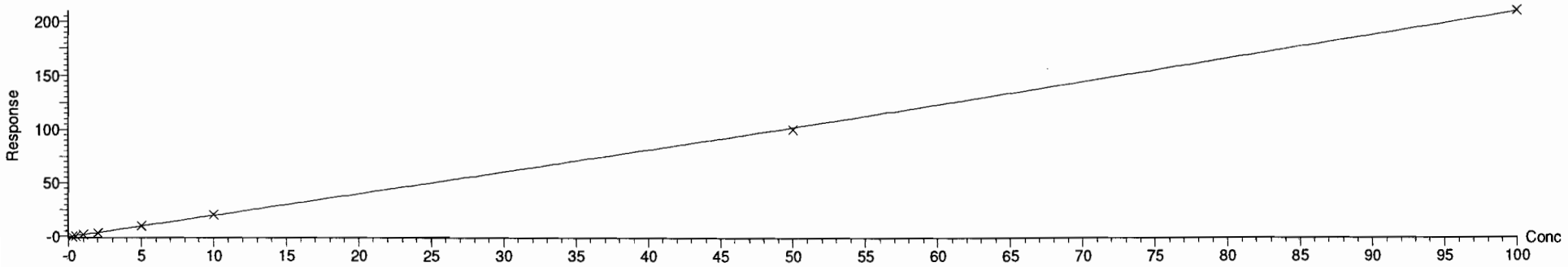
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

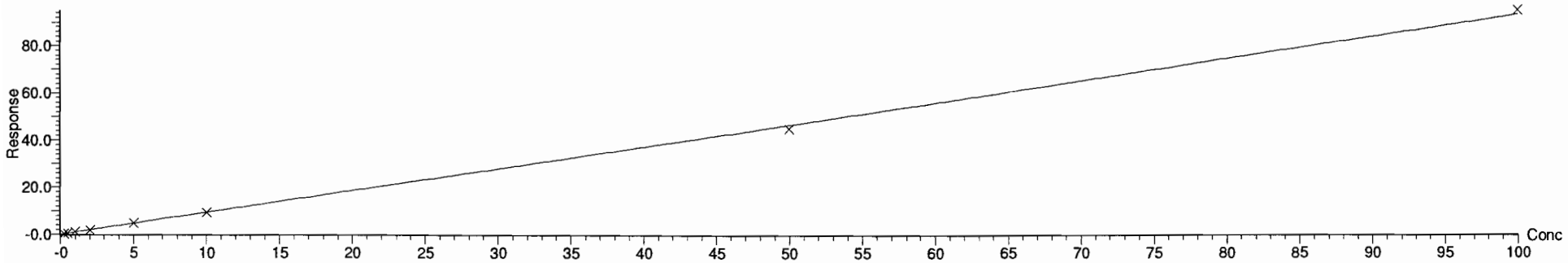
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Compound name: L-EtFOSAA
Coefficient of Determination: R^2 = 0.999414
Calibration curve: 0.000968179 * x^2 + 1.99529 * x + -0.24728
Response type: Internal Std (Ref 64), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



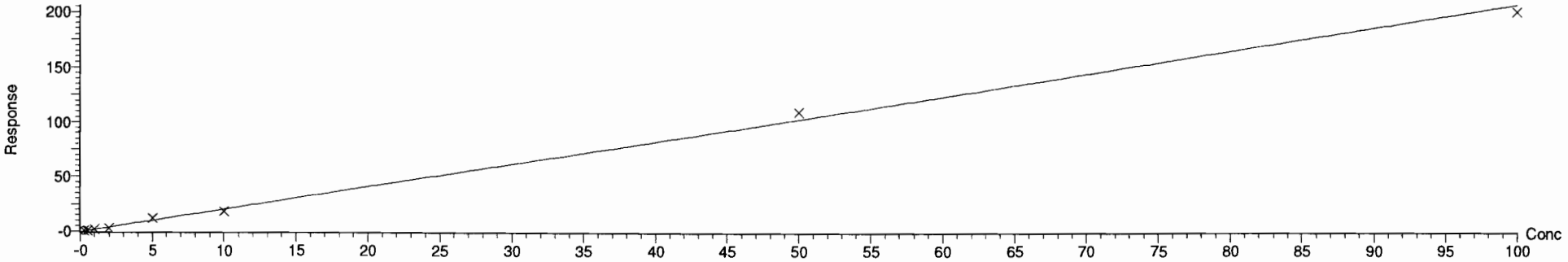
Compound name: PFUdA
Correlation coefficient: r = 0.999664, r^2 = 0.999328
Calibration curve: 0.930582 * x + 0.0128571
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



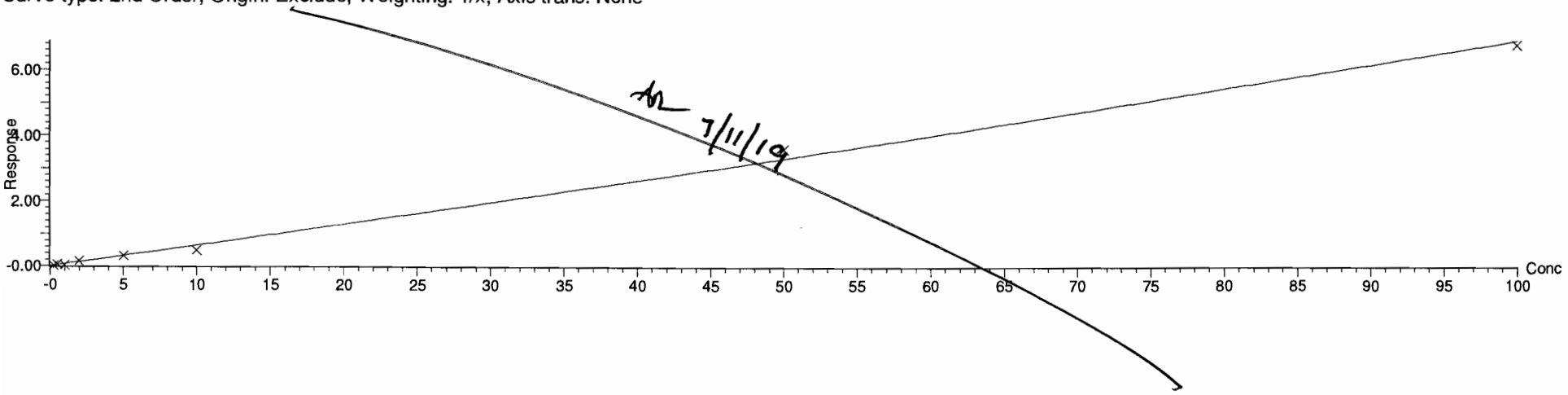
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: PFDS
Correlation coefficient: r = 0.997649, r^2 = 0.995303
Calibration curve: 2.06378 * x + -0.389745
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



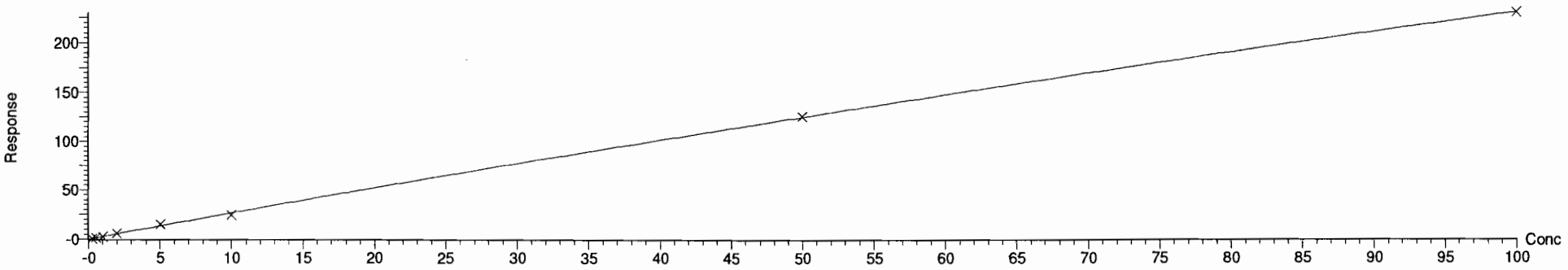
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.990993
Calibration curve: 5.10585e-005 * x^2 + 0.0636606 * x + 0.00127315
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



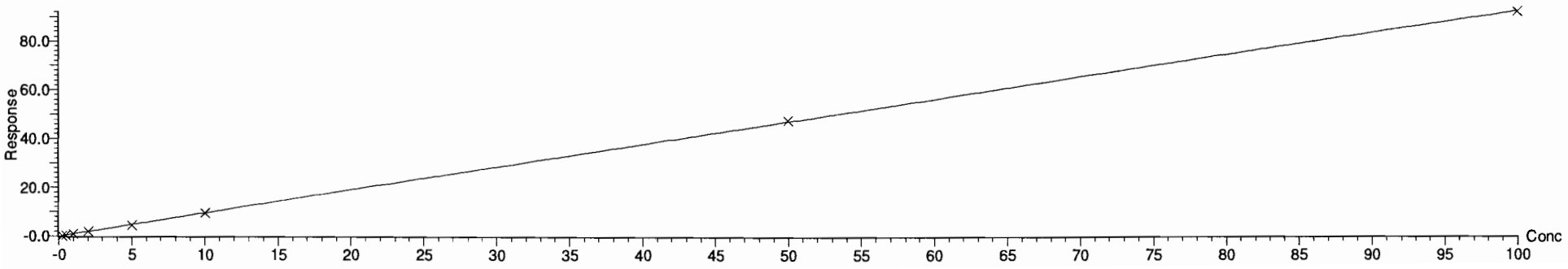
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.998698
Calibration curve: -0.00397372 * x^2 + 2.69789 * x + -0.0745551
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



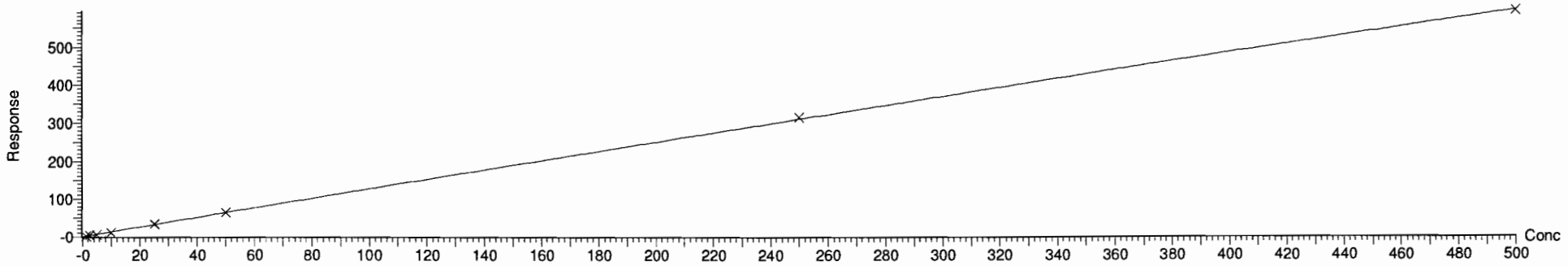
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999847
Calibration curve: -0.000390936 * x^2 + 0.961264 * x + -0.0303905
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



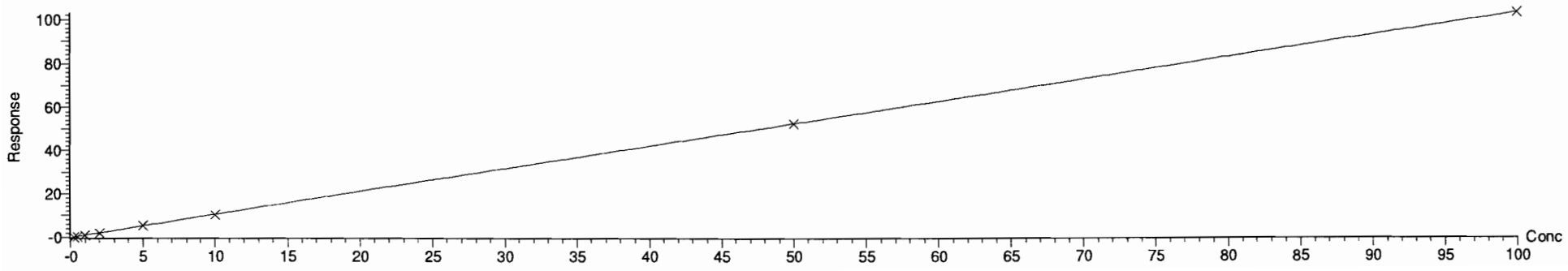
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999075
Calibration curve: -0.000216151 * x^2 + 1.29923 * x + -0.534727
Response type: Internal Std (Ref 66), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



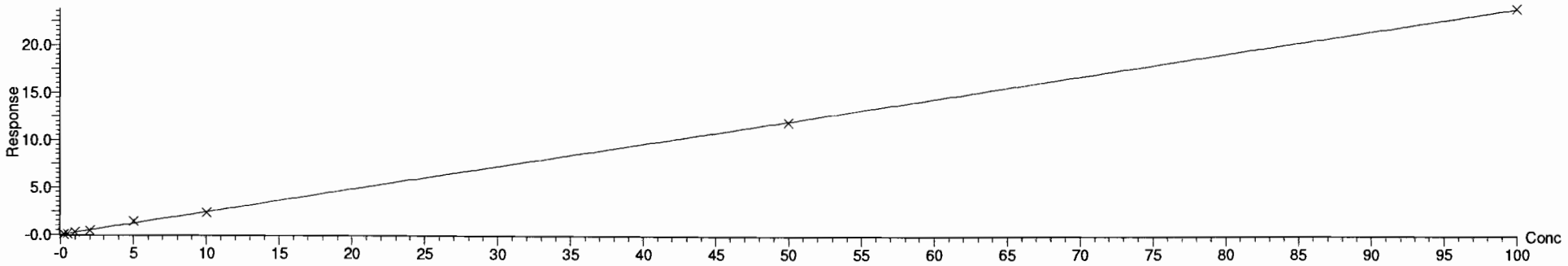
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.999791
Calibration curve: -0.000400083 * x^2 + 1.06843 * x + -0.0442094
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



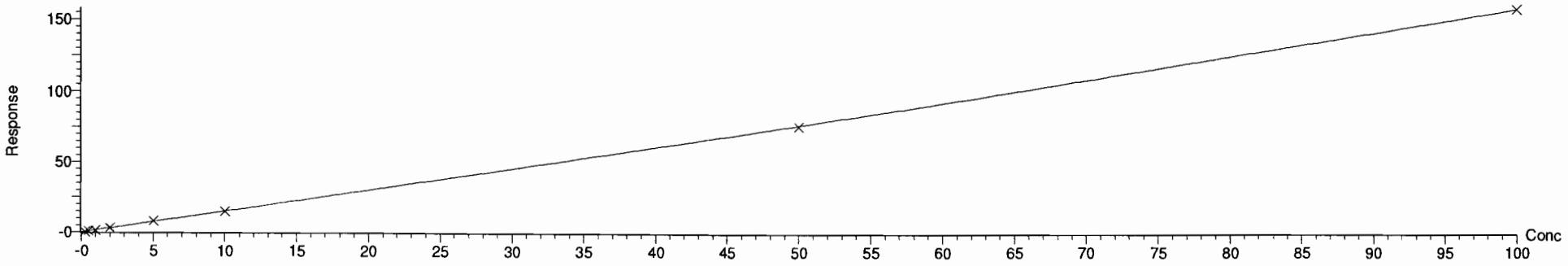
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.998596
Calibration curve: -6.19262e-005 * x^2 + 0.244112 * x + -0.0199214
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



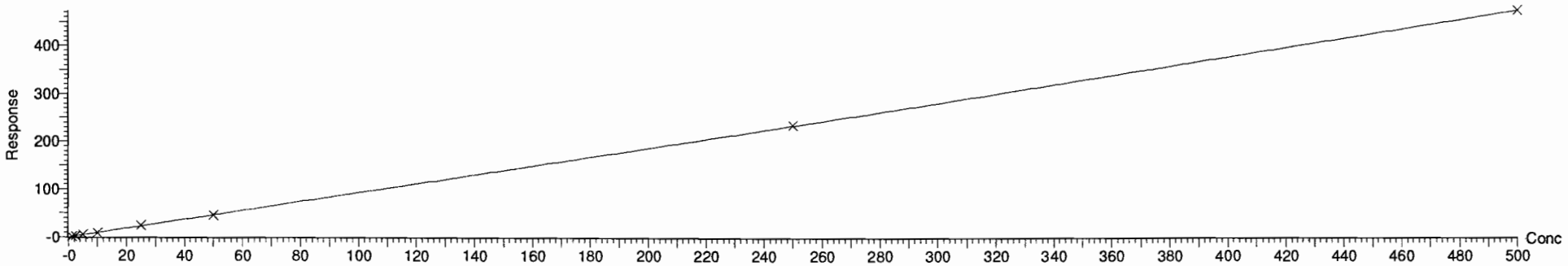
Compound name: PFTeDA
Coefficient of Determination: R^2 = 0.999560
Calibration curve: 0.000924303 * x^2 + 1.48528 * x + 0.0369753
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



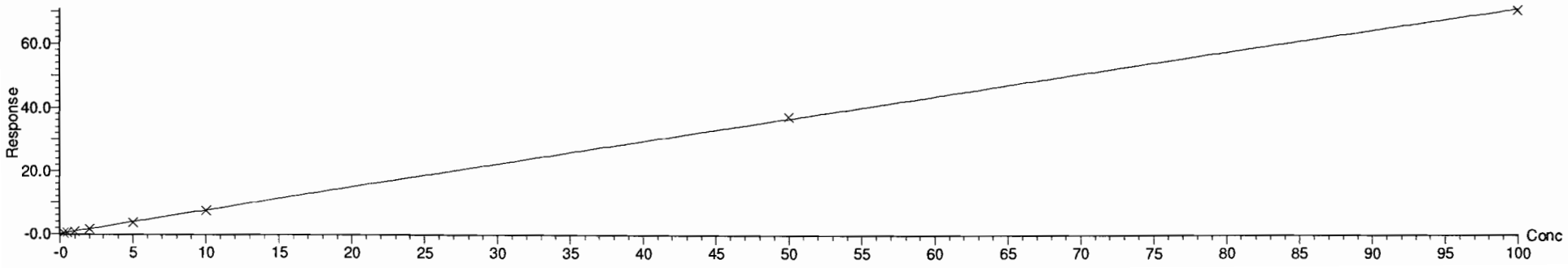
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999705
Calibration curve: 4.67147e-005 * x^2 + 0.924219 * x + -0.422102
Response type: Internal Std (Ref 68), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



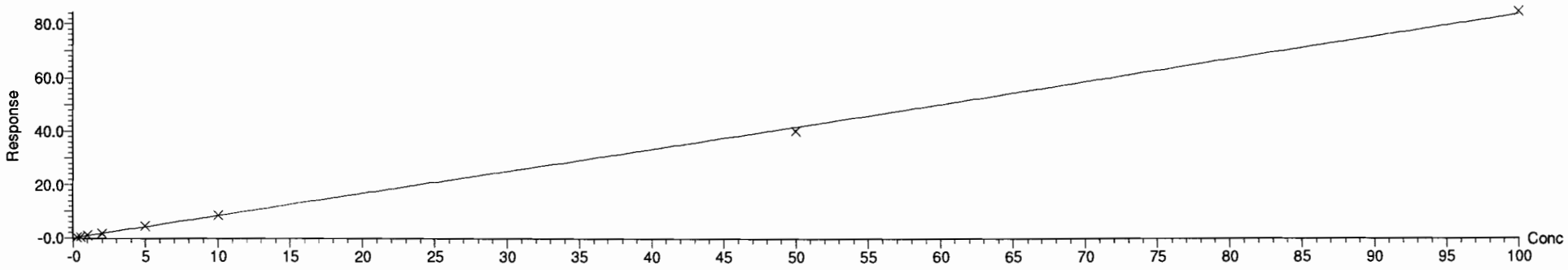
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999745
Calibration curve: -0.000493807 * x^2 + 0.756486 * x + 0.0537783
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



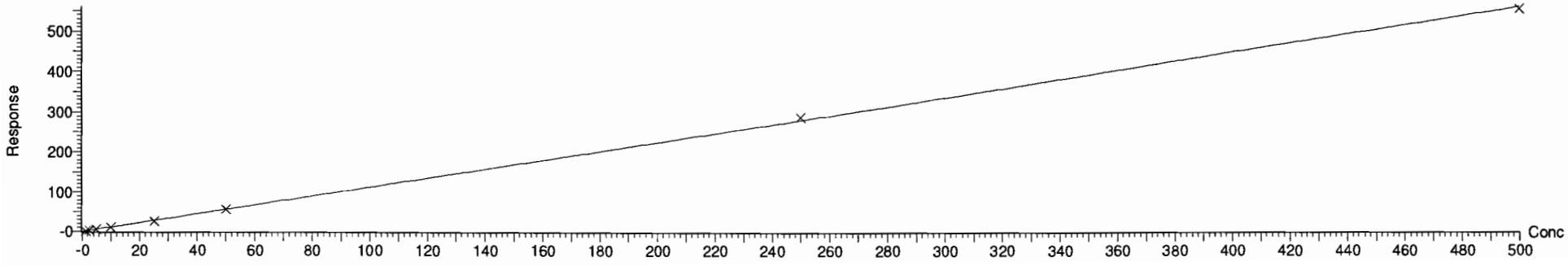
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: PFODA
Correlation coefficient: r = 0.999748, r^2 = 0.999496
Calibration curve: 0.835341 * x + 0.00579687
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



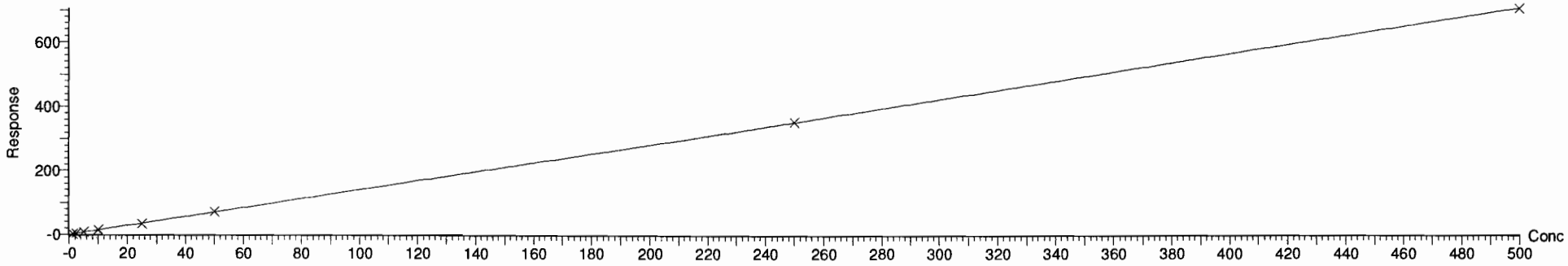
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999631, r^2 = 0.999263
Calibration curve: 1.11841 * x + 0.165536
Response type: Internal Std (Ref 70), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:37:15 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999930, r^2 = 0.999860
Calibration curve: 1.41132 * x + -0.260677
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



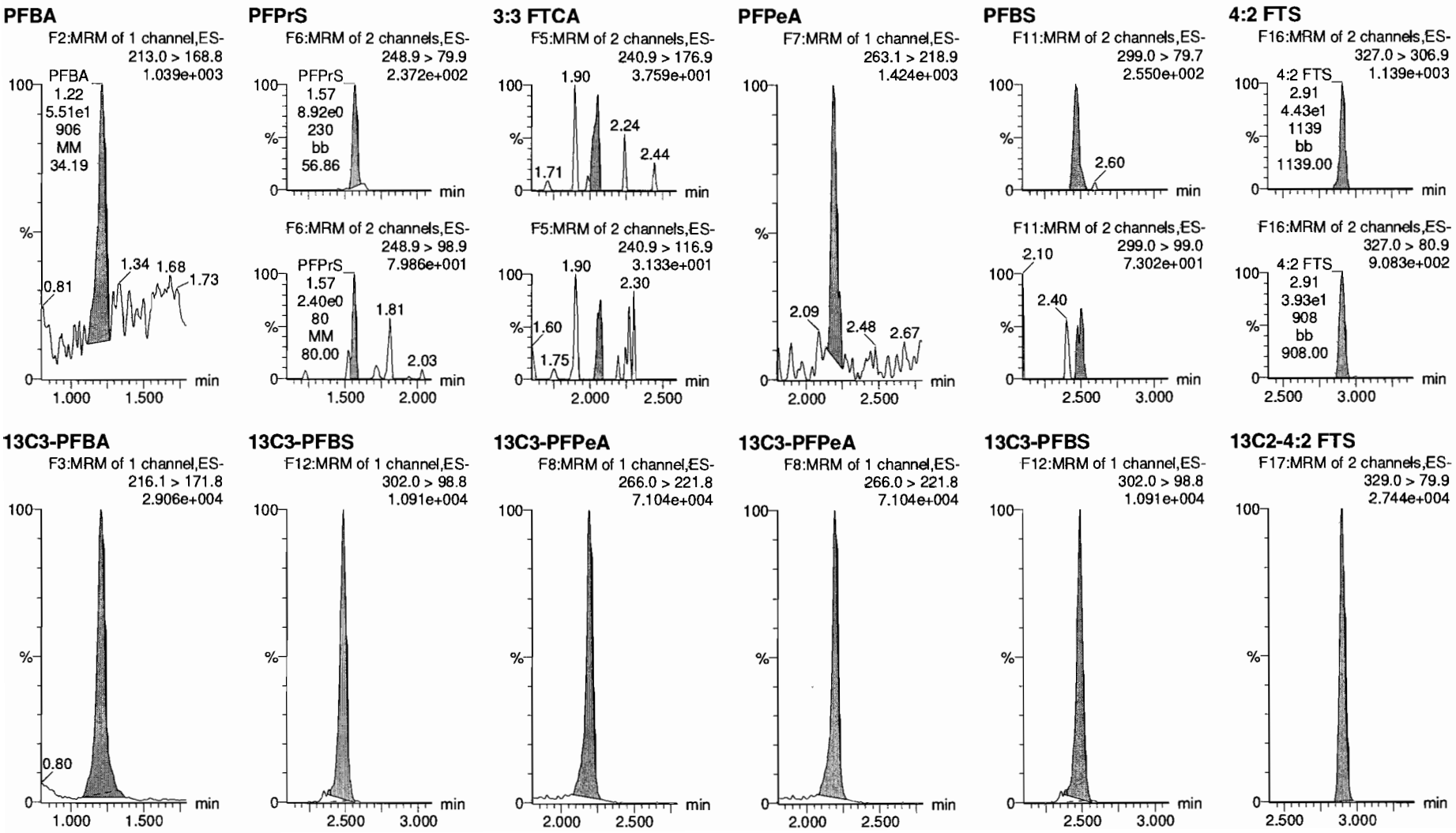
Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:22:28

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

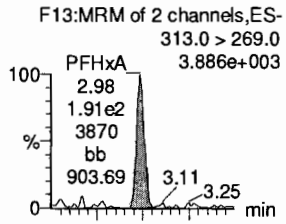


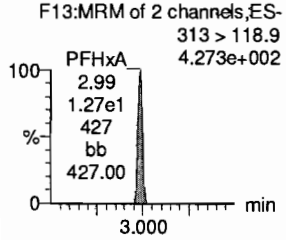
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

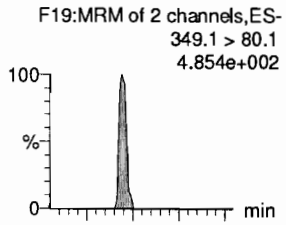
Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

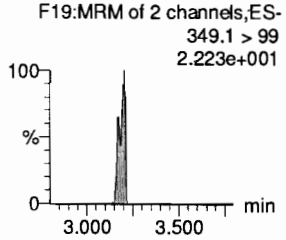
PFHxA



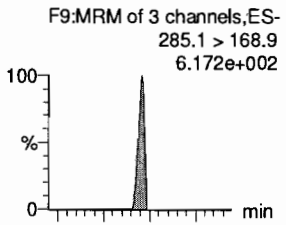


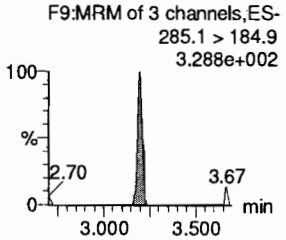
PFPeS



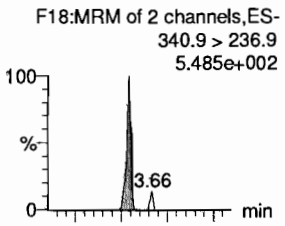


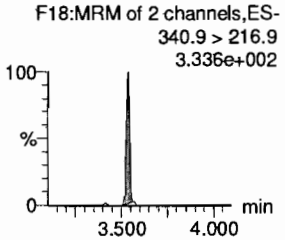
HFPO-DA



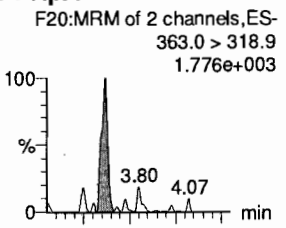


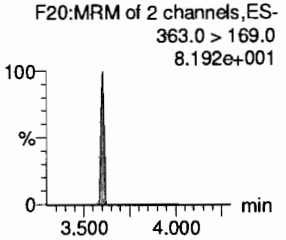
5:3 FTCA



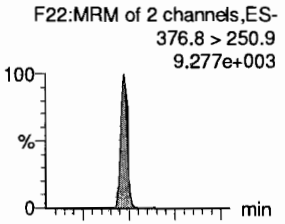


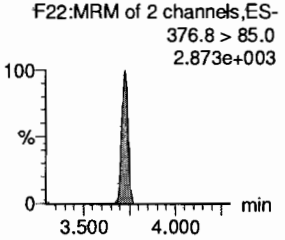
PFHpA



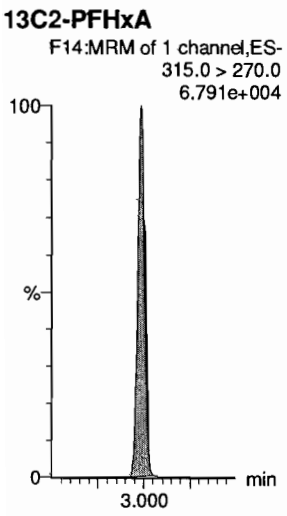


ADONA

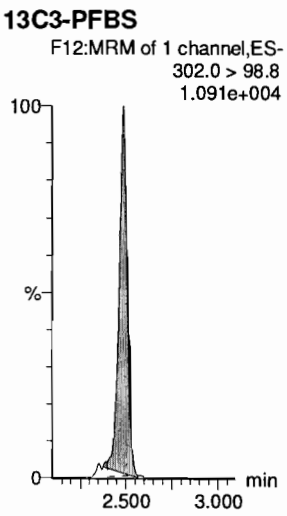




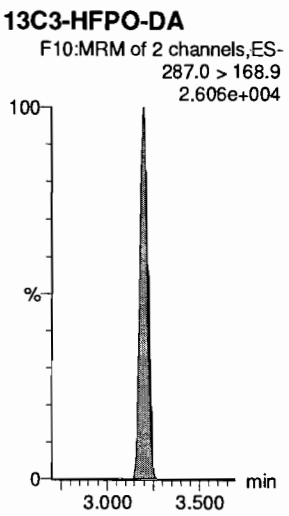
13C2-PFHxA



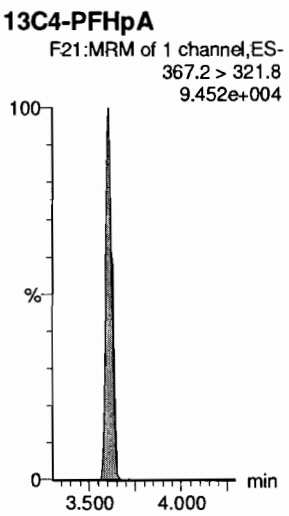
13C3-PFBS



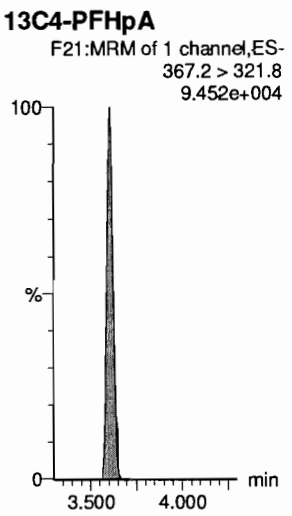
13C3-HFPO-DA



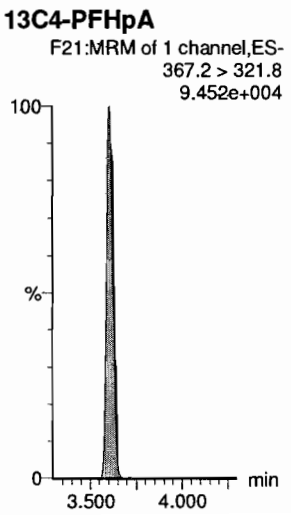
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

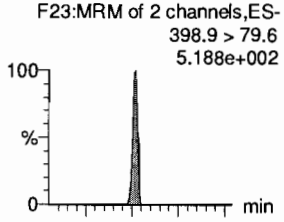


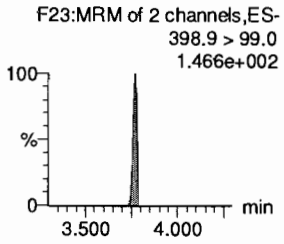
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

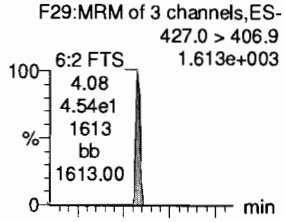
Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

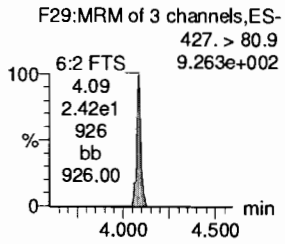
L-PFHxS





6:2 FTS





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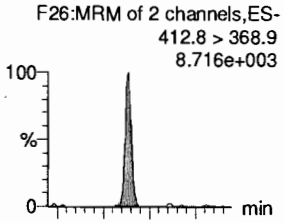

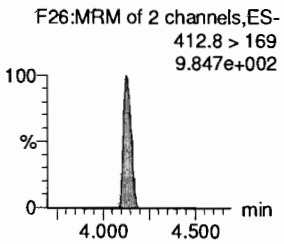

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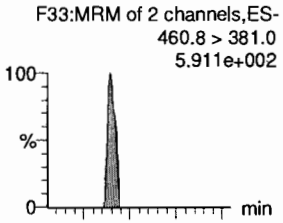

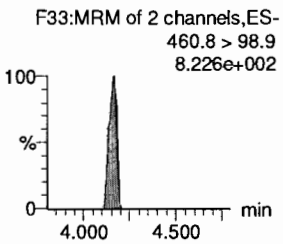

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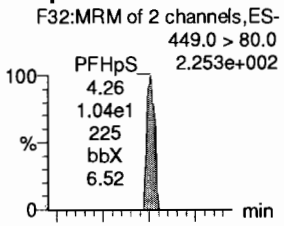
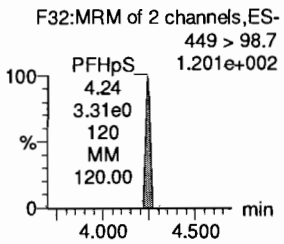
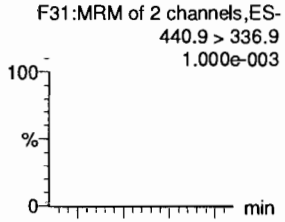
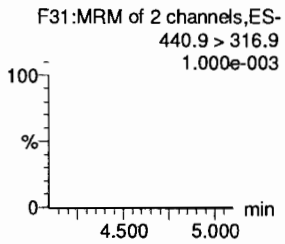


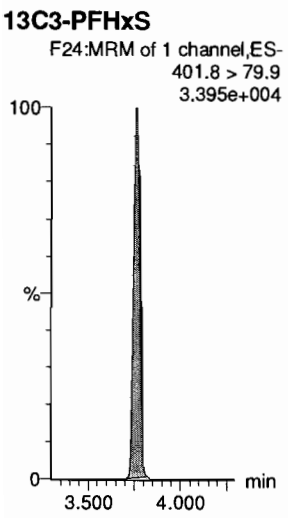


7:3 FTCA

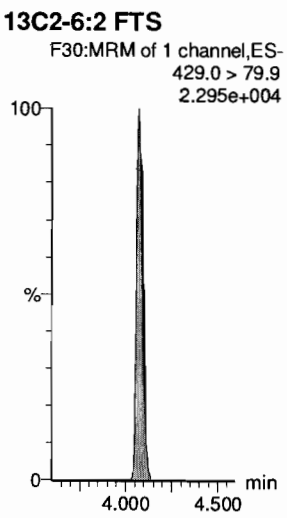




13C3-PFHxS



13C2-6:2 FTS



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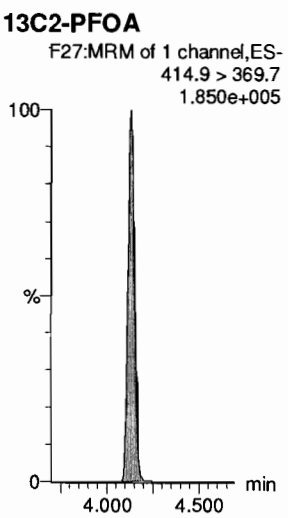

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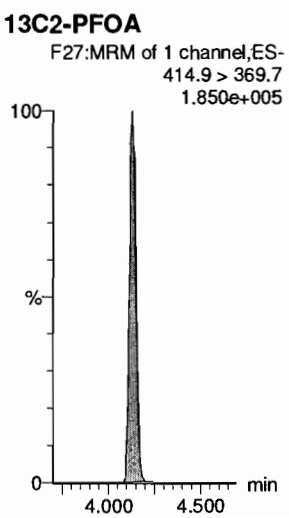
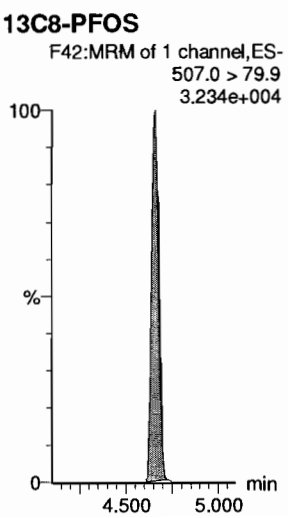
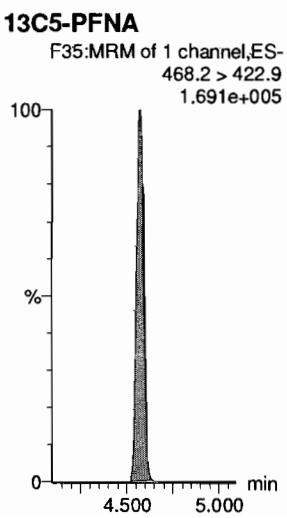


13C8-PFOS



13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

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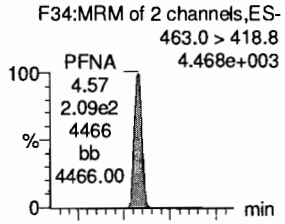

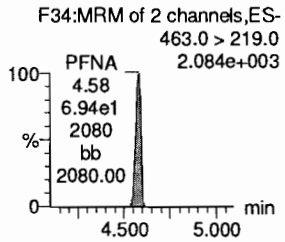

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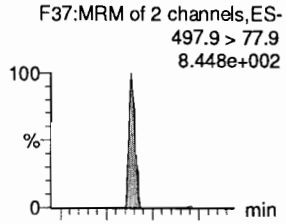
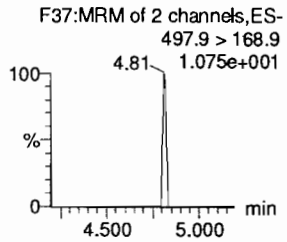
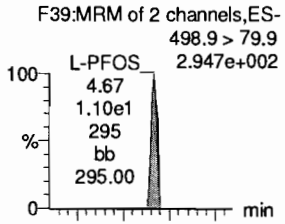
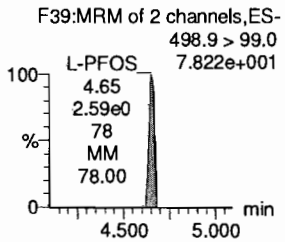




L-PFOS





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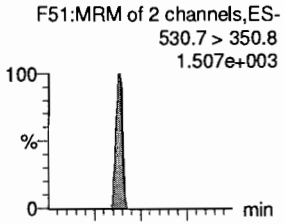

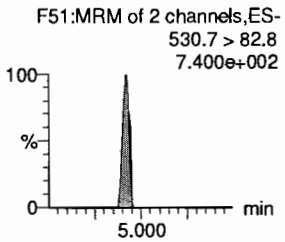

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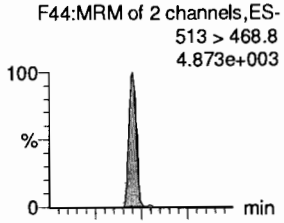

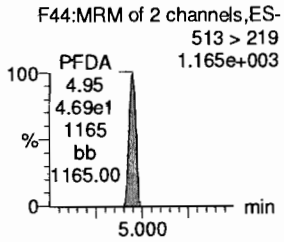

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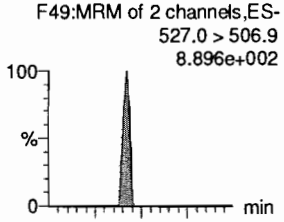

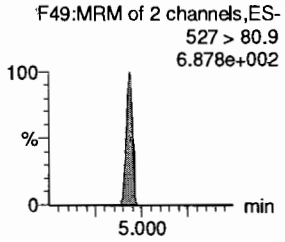

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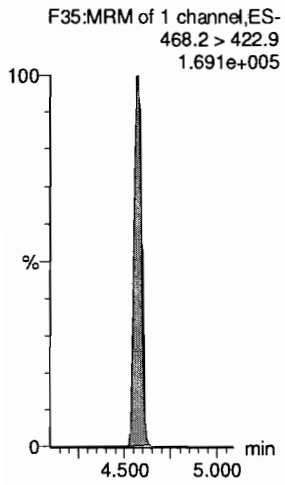

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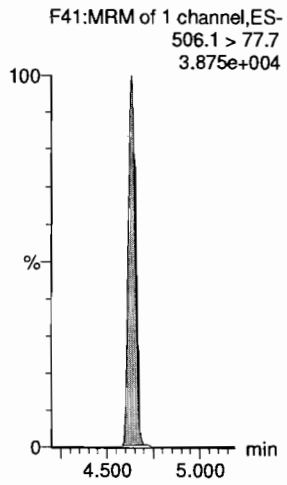
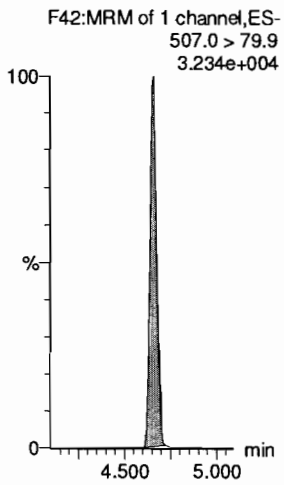


13C8-PFOS



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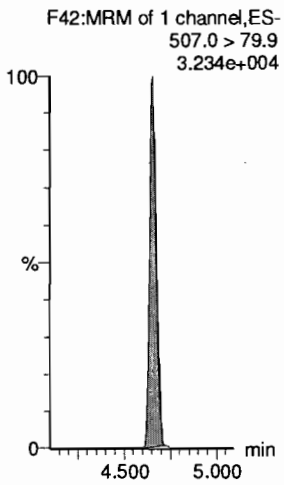
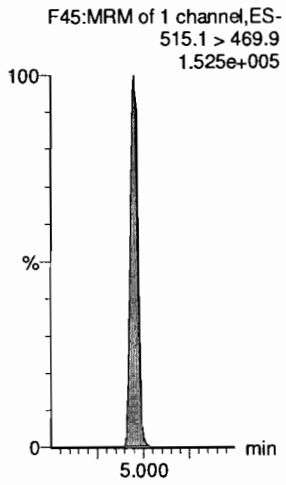
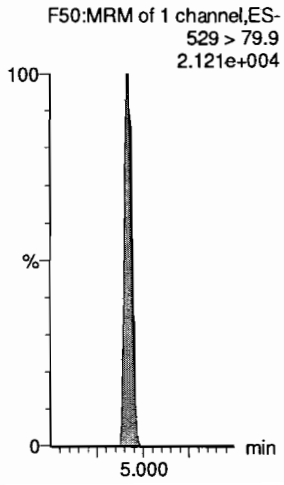


13C2-PFDA



13C2-8:2 FTS



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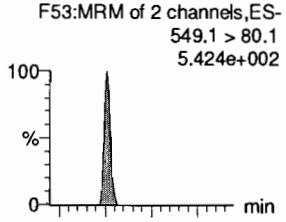
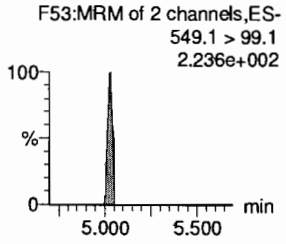
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

PFNS





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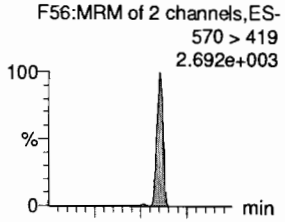
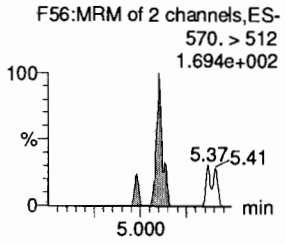
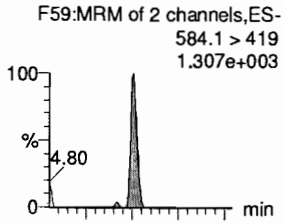
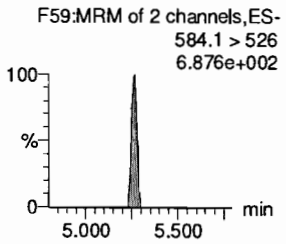


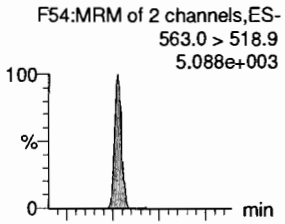


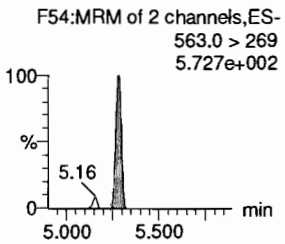
L-EtFOSAA





PFUdA





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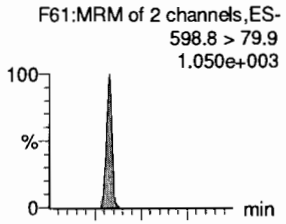
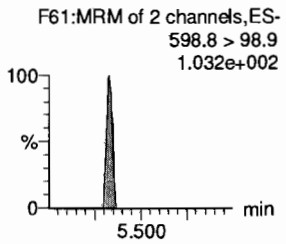
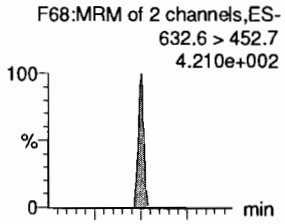
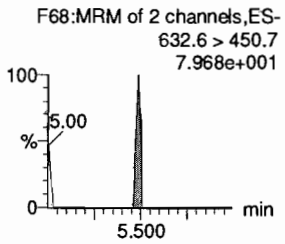


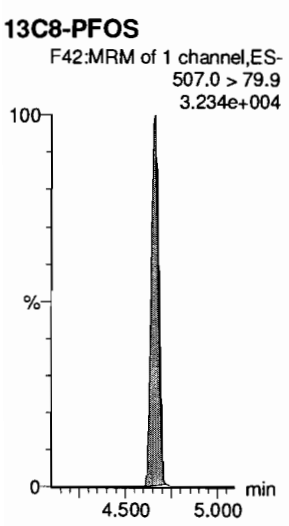


11Cl-PF30UdS

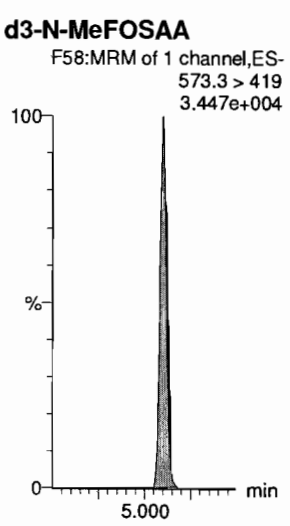




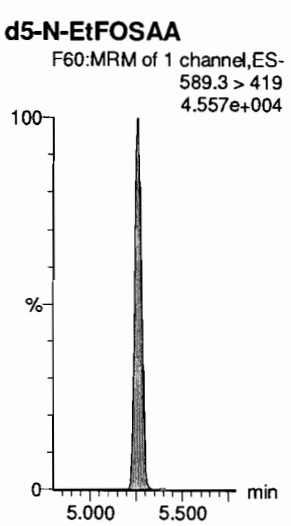
13C8-PFOS



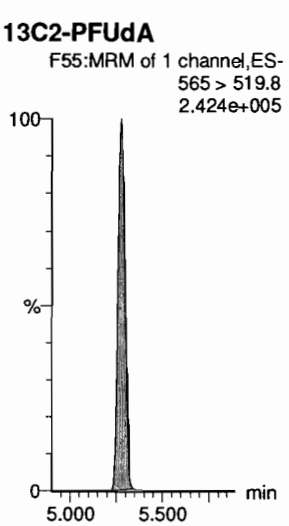
d3-N-MeFOSAA



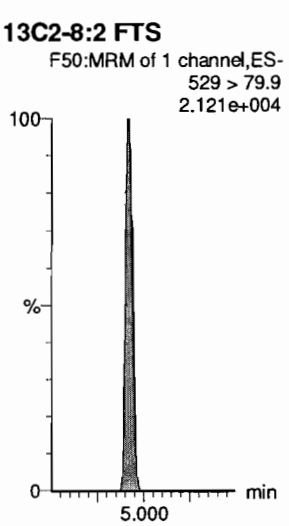
d5-N-EtFOSAA



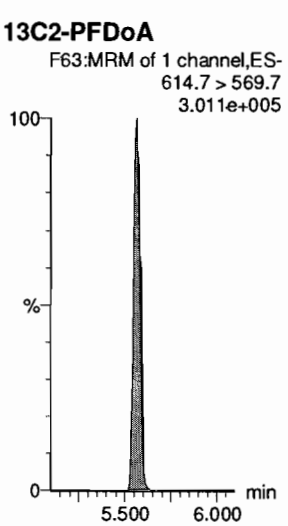
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

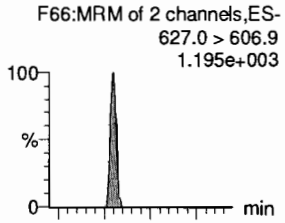


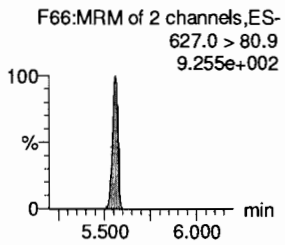
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

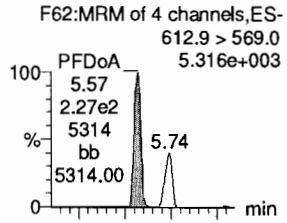
Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

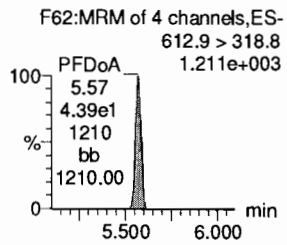
10:2 FTS





PFDoA





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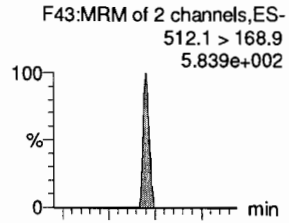

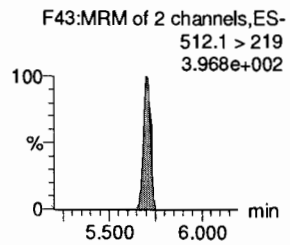

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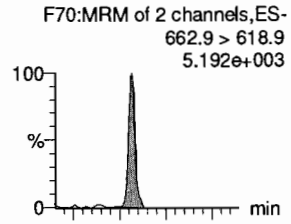
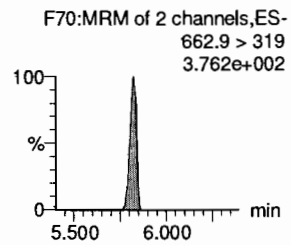
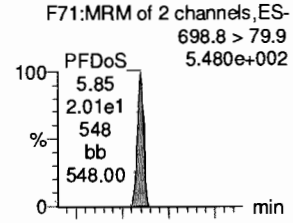
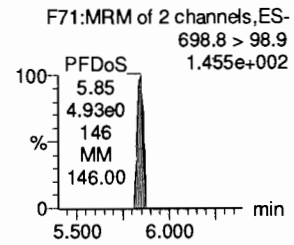


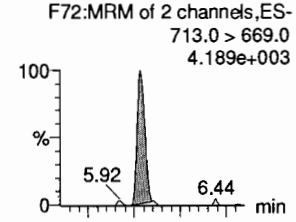


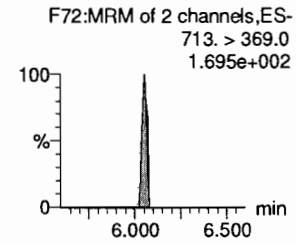
PFDoS



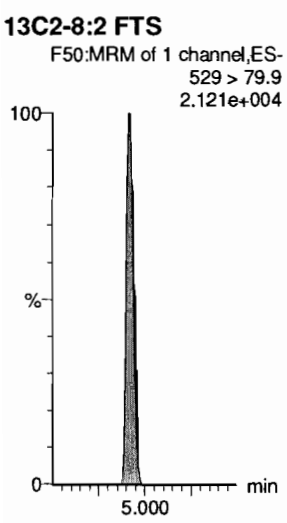


PFTeDA

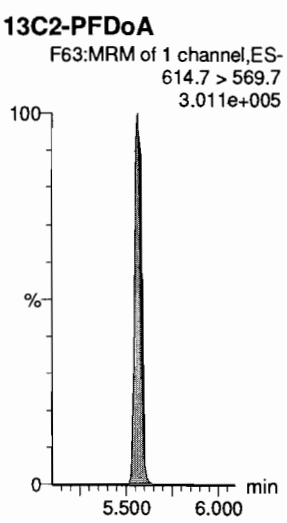




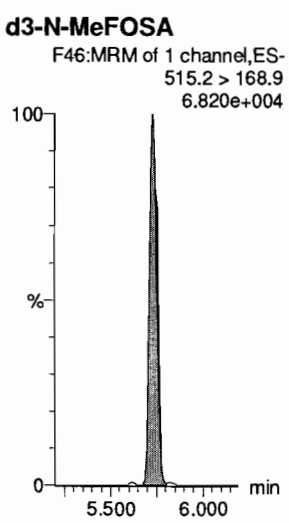
13C2-8:2 FTS



13C2-PFDoA



d3-N-MeFOSA



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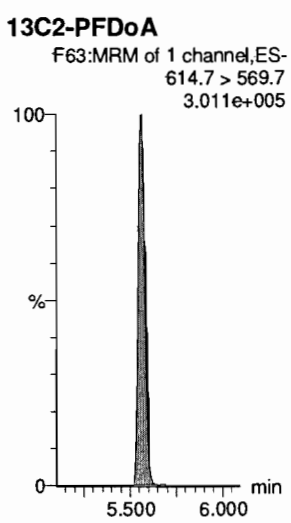

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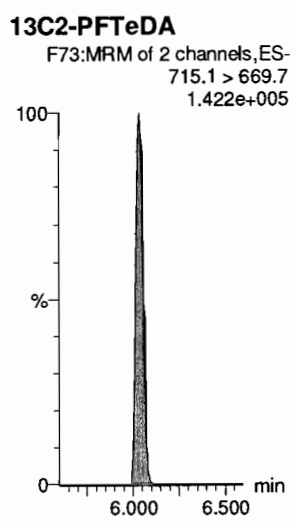

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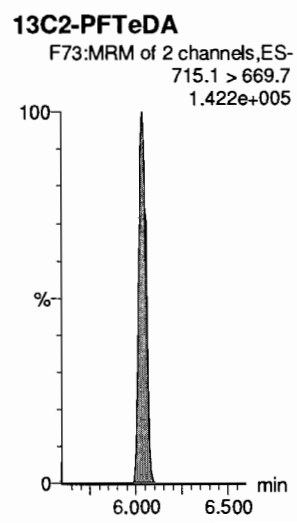
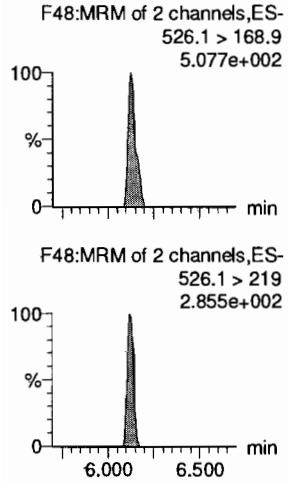


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

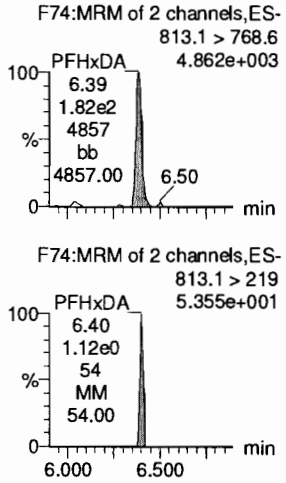
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

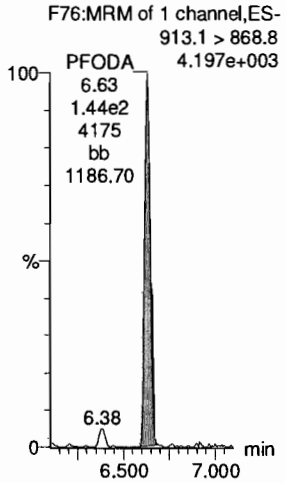
N-EtFOSA



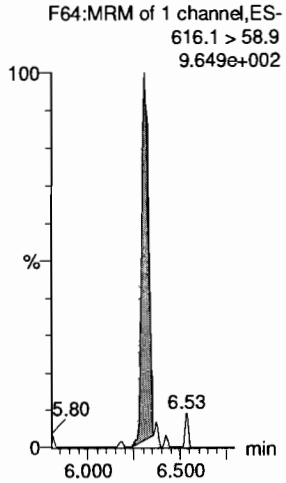
PFHxDA



PFODA



N-MeFOSE



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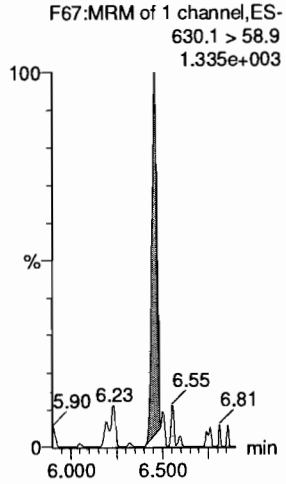
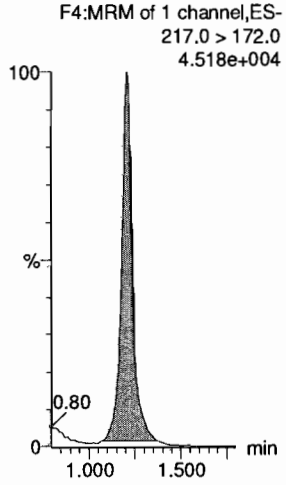
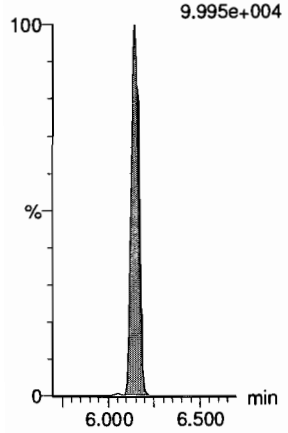


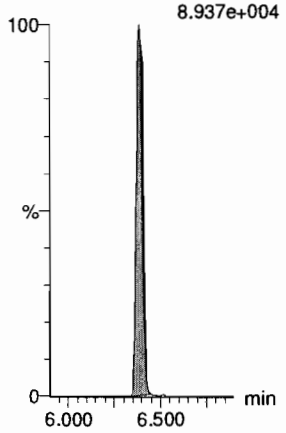
13C4-PFBA



d5-N-ETFOSA



13C2-PFHxDA



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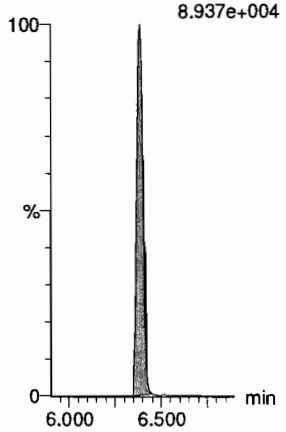
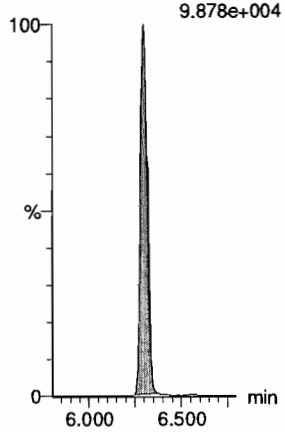
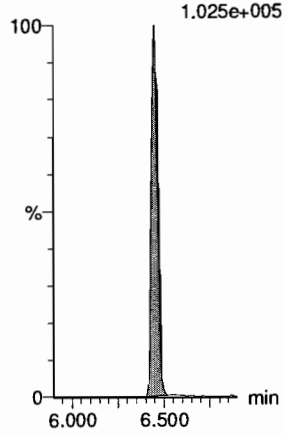


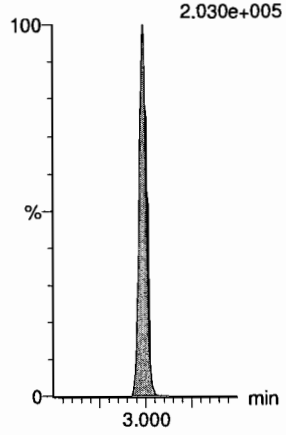
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

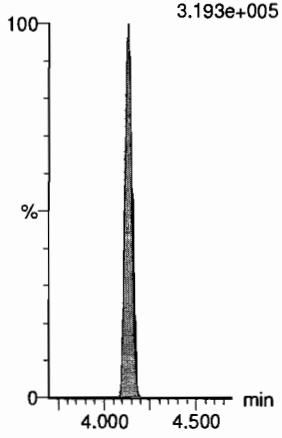


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

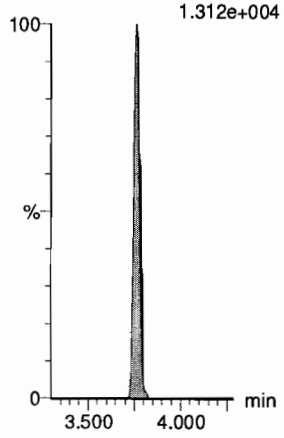
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_6, Date: 10-Jul-2019, Time: 13:43:47, ID: ST190710M2-1 PFC CS-2 19G0801, Description: PFC CS-2 19G0801

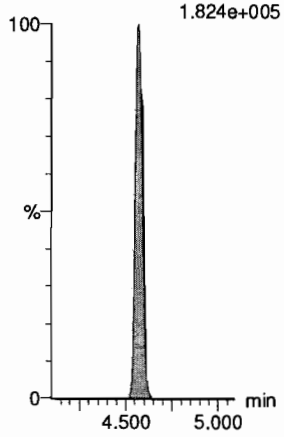
13C8-PFOA



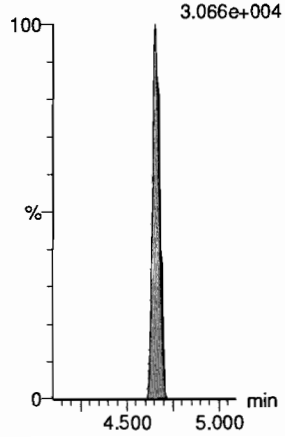
18O2-PFHxS



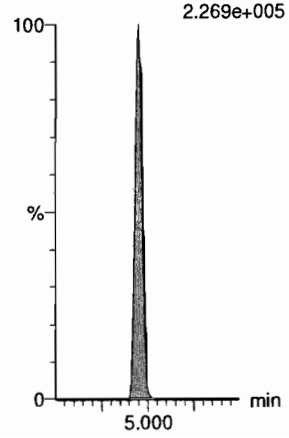
13C9-PFNA



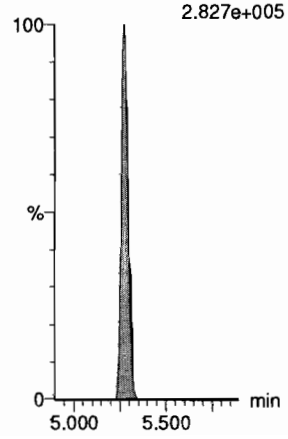
13C4-PFOS



13C6-PFDA



13C7-PFUdA

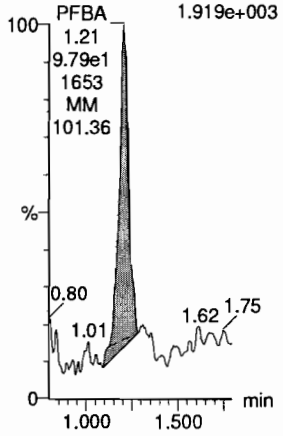


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

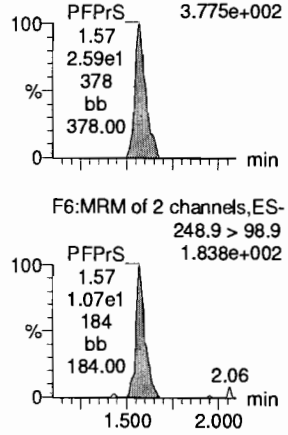
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

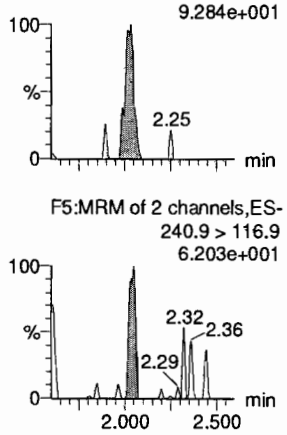
PFBA



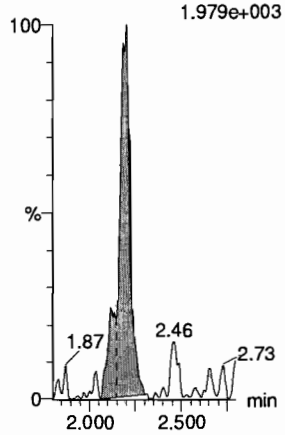
PFPrS



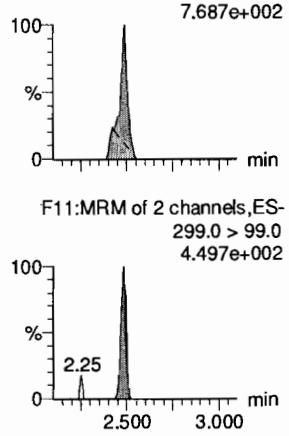
3:3 FTCA



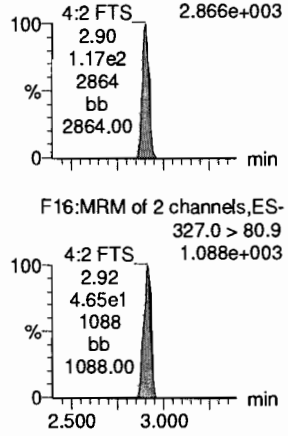
PFPeA



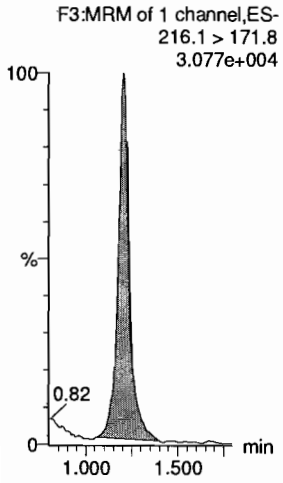
PFBS



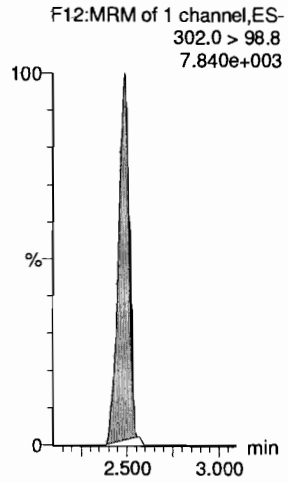
4:2 FTS



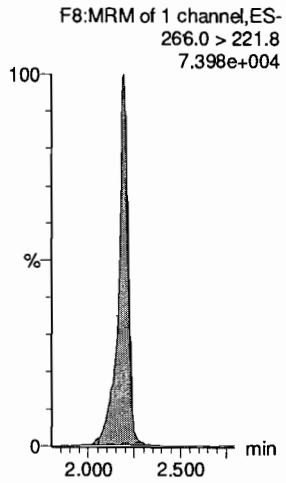
13C3-PFBA



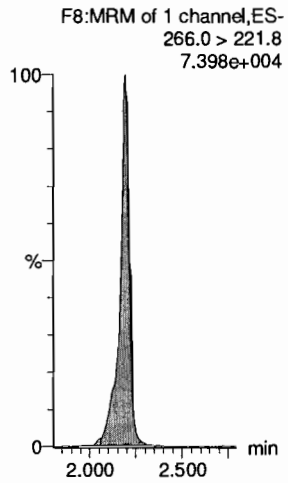
13C3-PFBS



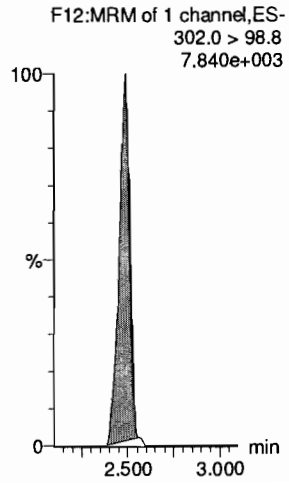
13C3-PFPeA



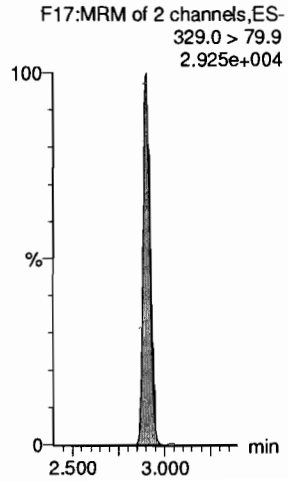
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

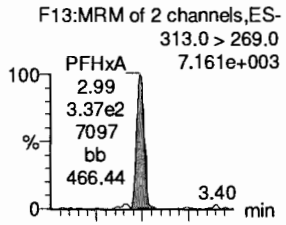


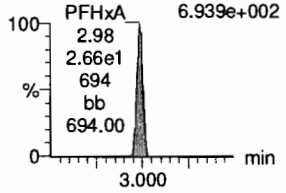
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

PFHxA





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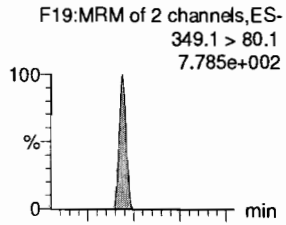
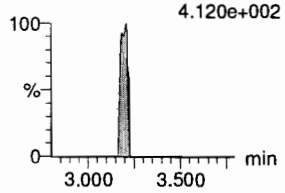
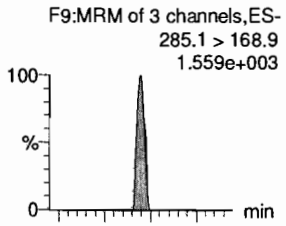
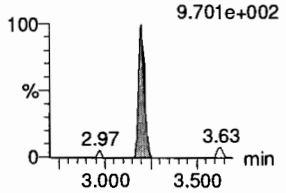


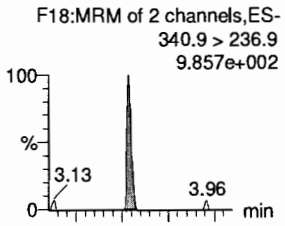


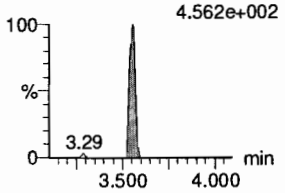
HFPO-DA





5:3 FTCA





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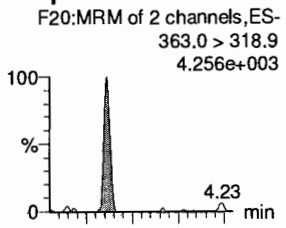

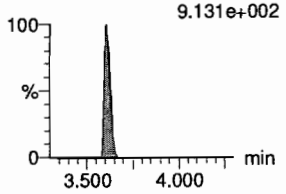

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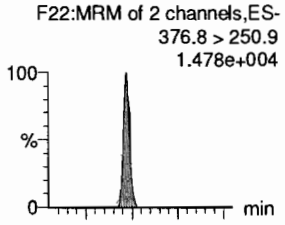
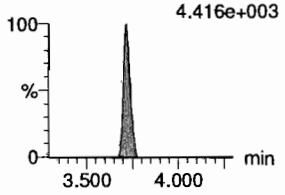
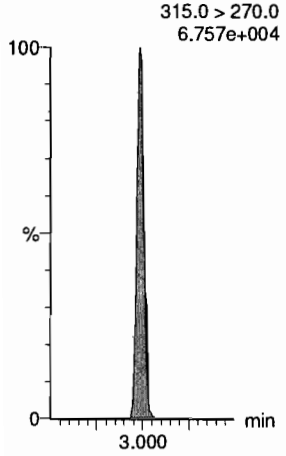
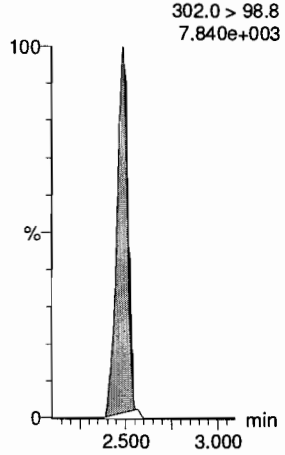




13C2-PFHxA



13C3-PFBS



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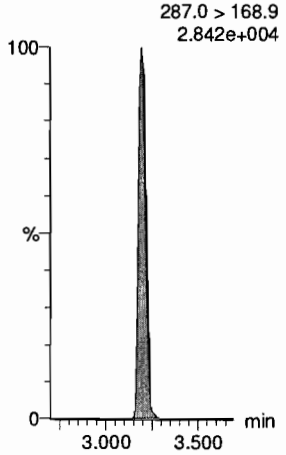
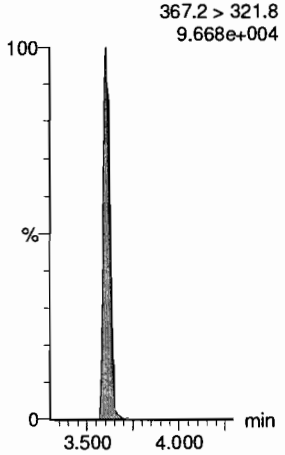


13C4-PFHpA



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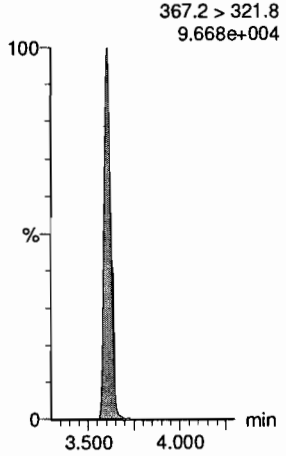

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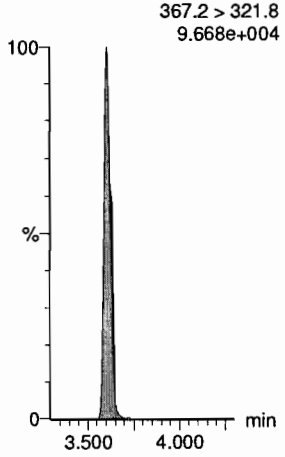
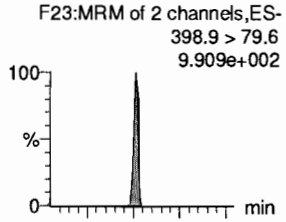


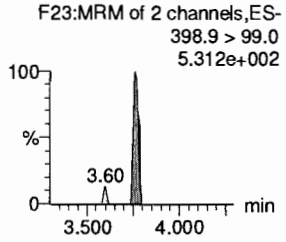
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

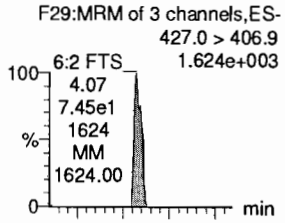
Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

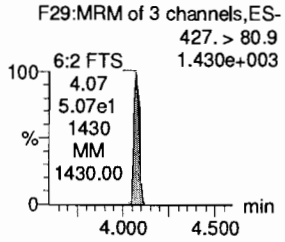
L-PFHxS



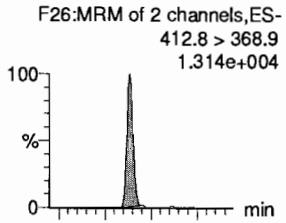


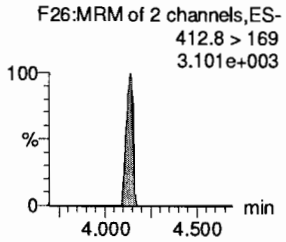
6:2 FTS





L-PFOA





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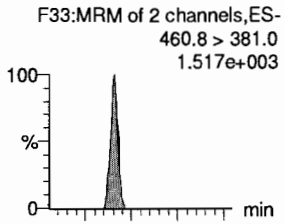

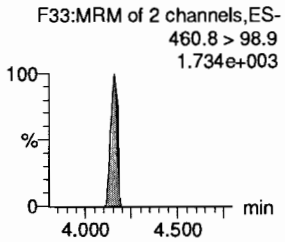

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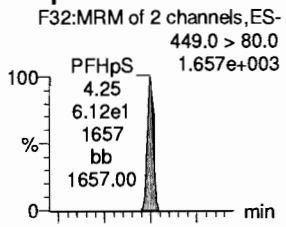
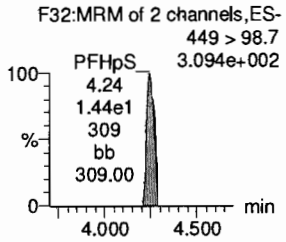
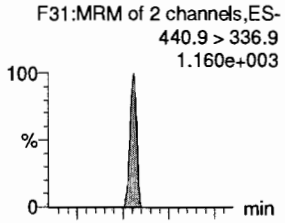
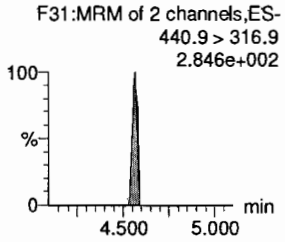


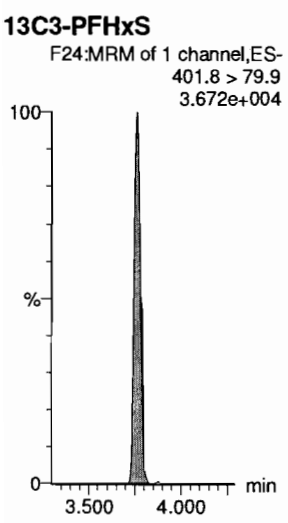


7:3 FTCA

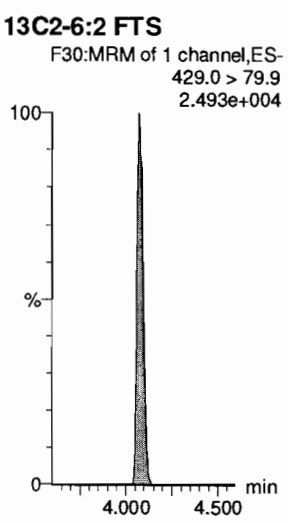




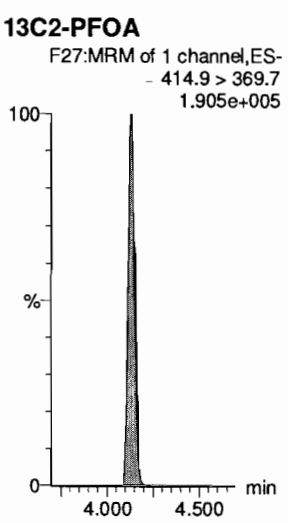
13C3-PFHxS



13C2-6:2 FTS



13C2-PFOA



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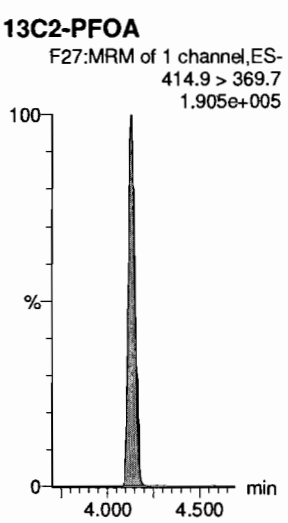
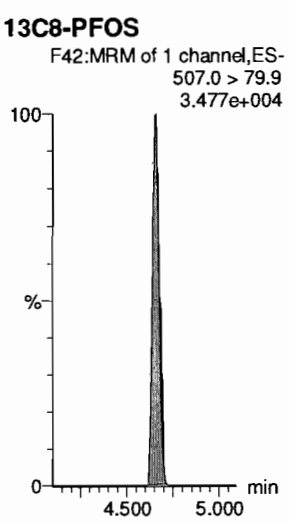
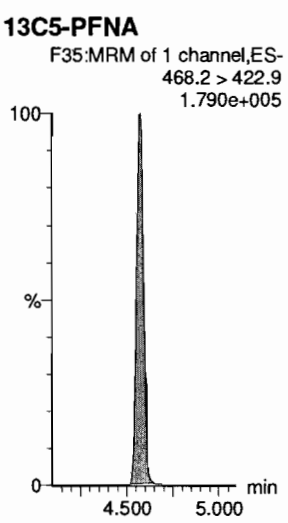


13C8-PFOS



13C5-PFNA



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Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

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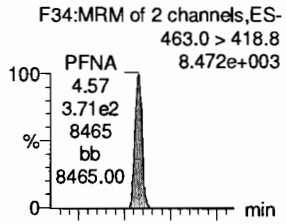

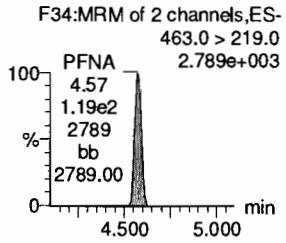

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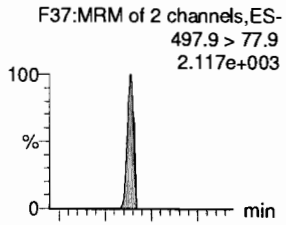
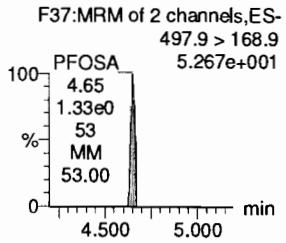
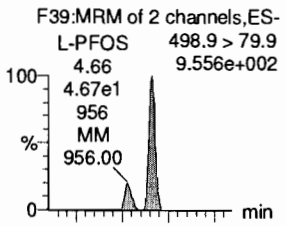
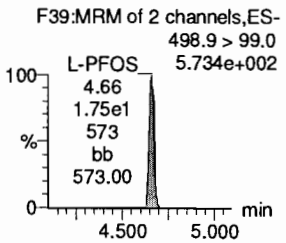


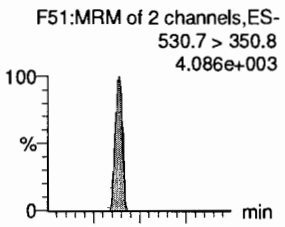


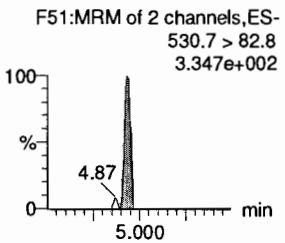
L-PFOS





9Cl-PF30NS





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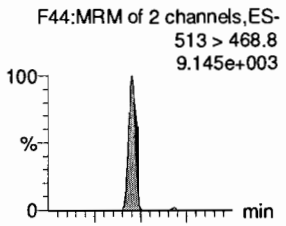
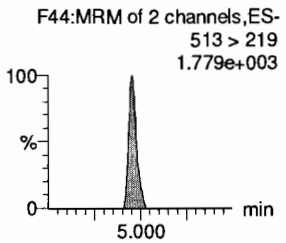
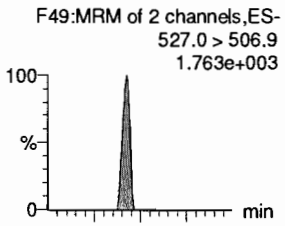
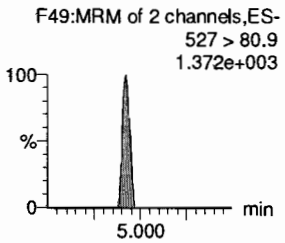


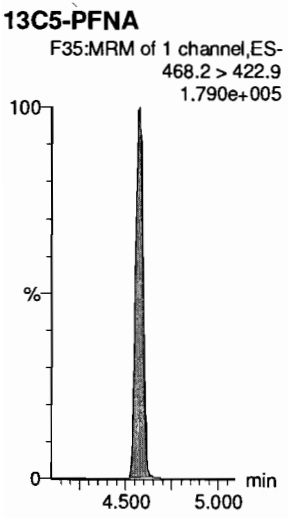


8:2 FTS

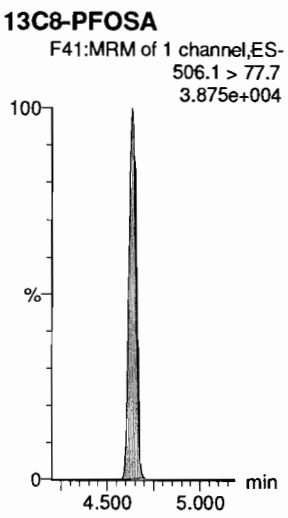




13C5-PFNA



13C8-PFOSA



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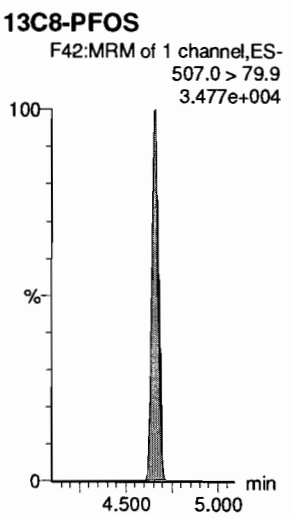
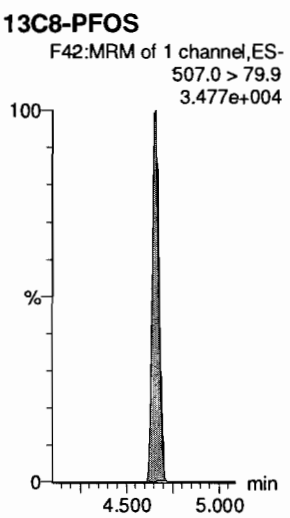
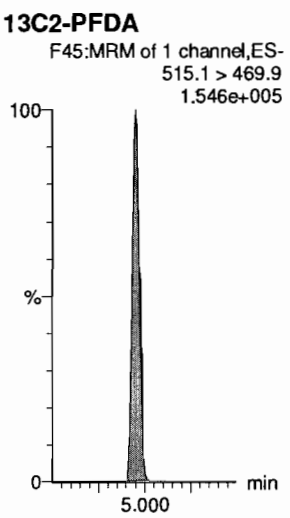


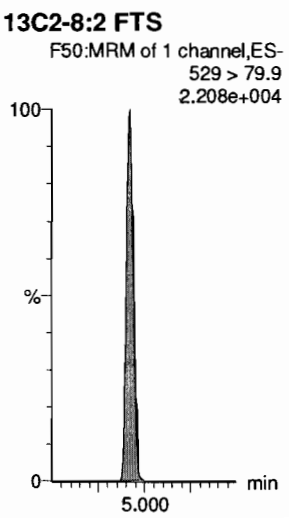
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



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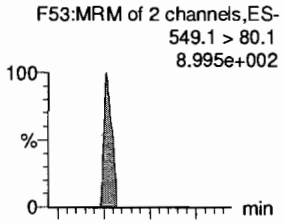
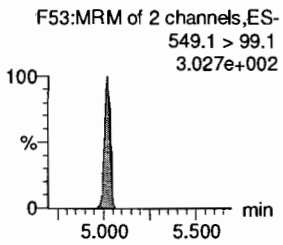
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

PFNS





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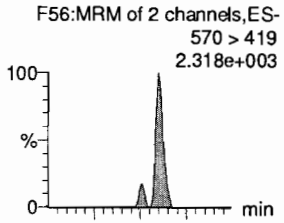

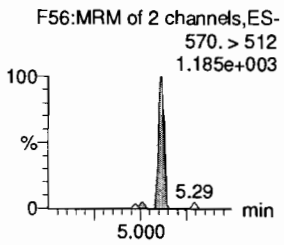

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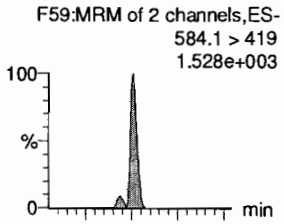

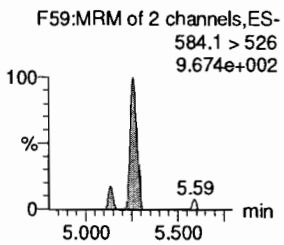

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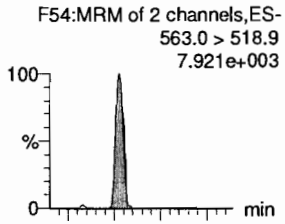

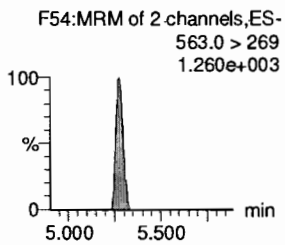

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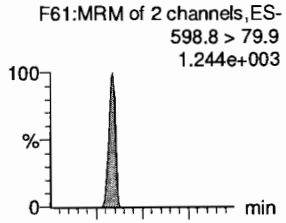
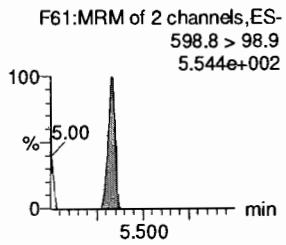
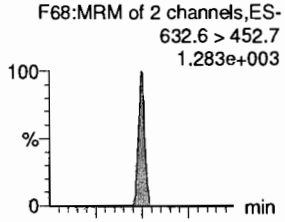
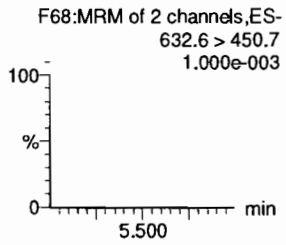


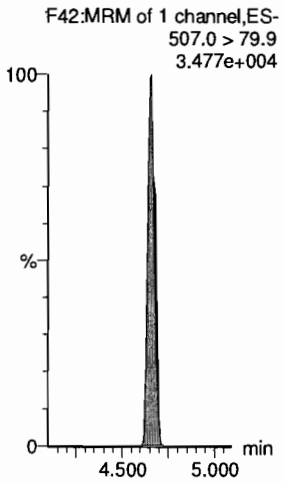


11Cl-PF30UdS

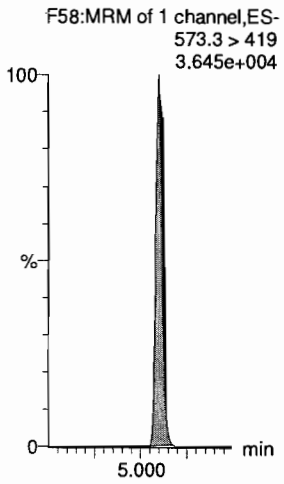




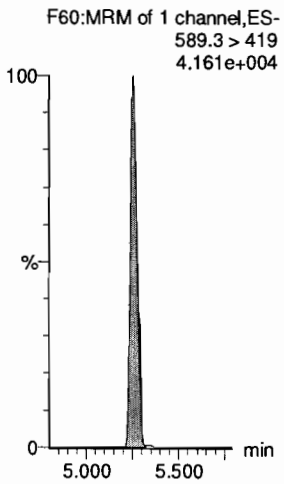
13C8-PFOS



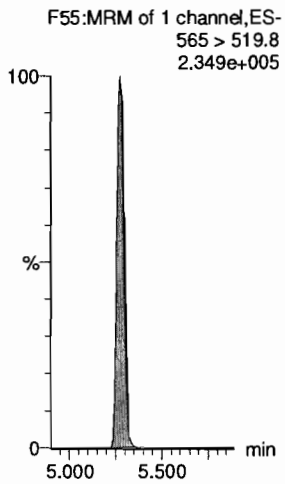
d3-N-MeFOSAA



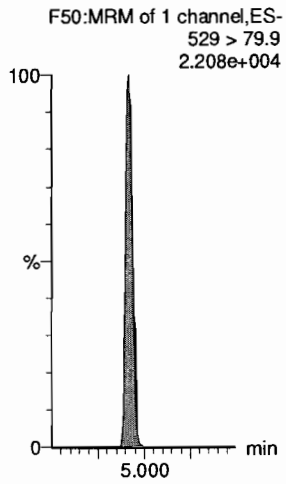
d5-N-EtFOSAA



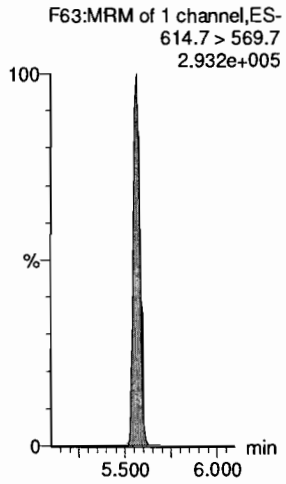
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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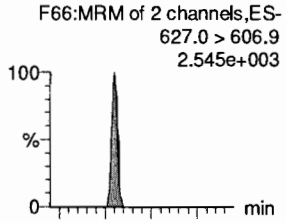
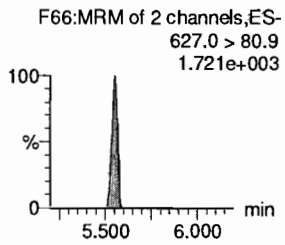
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

10:2 FTS





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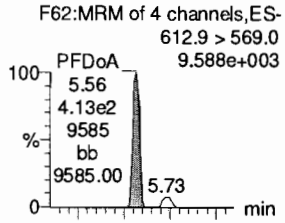
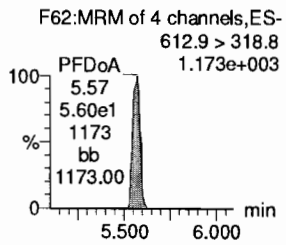
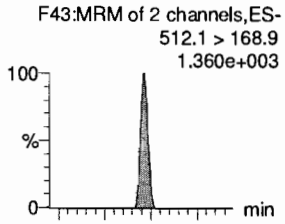
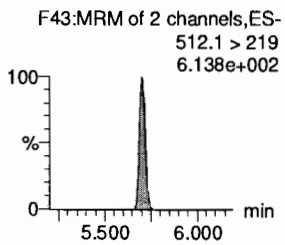




N-MeFOSA





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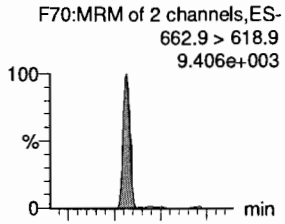
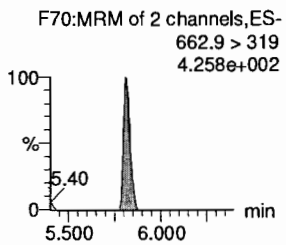
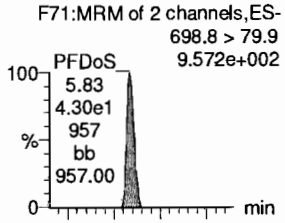
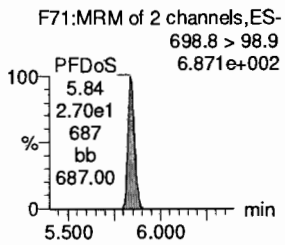




PFDoS





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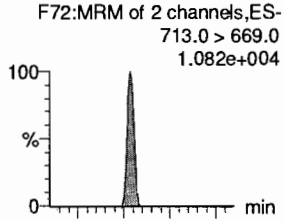
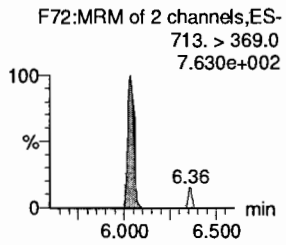
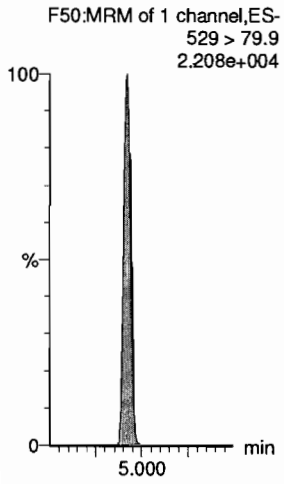




13C2-8:2 FTS



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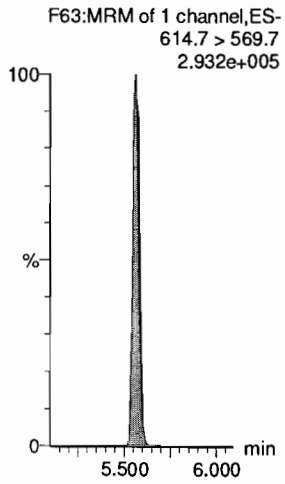
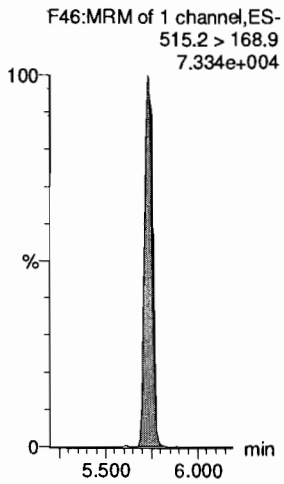


d3-N-MeFOSA



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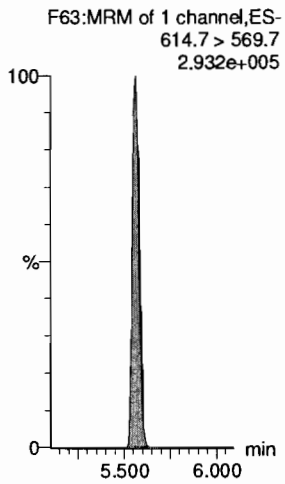
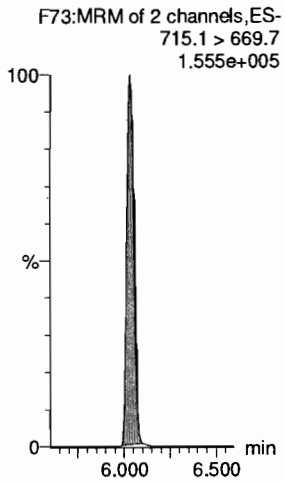


13C2-PFTeDA



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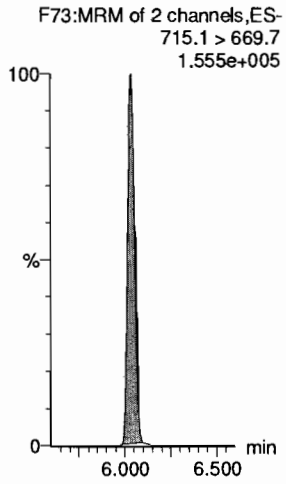

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

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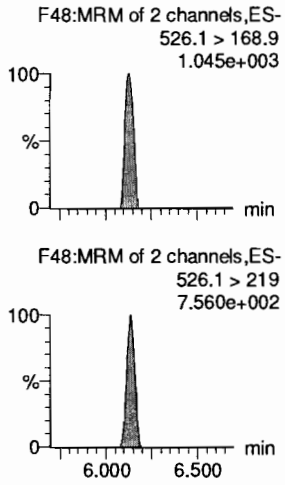

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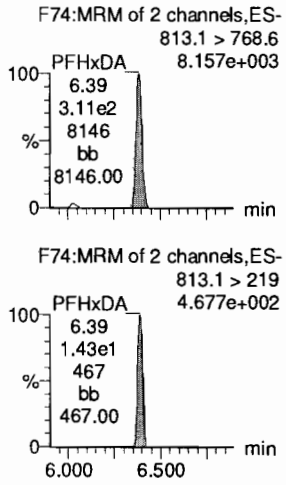

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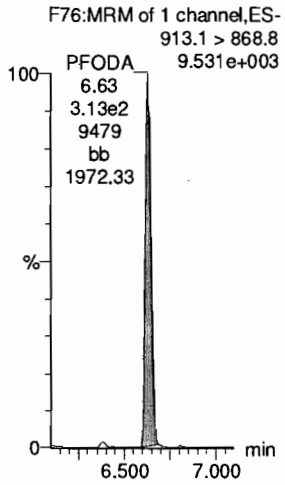
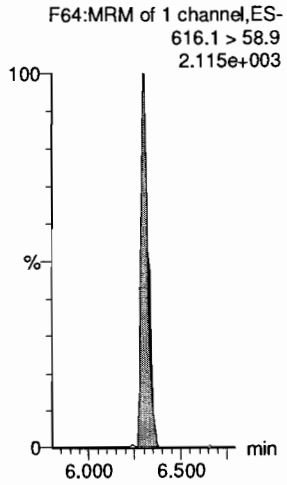
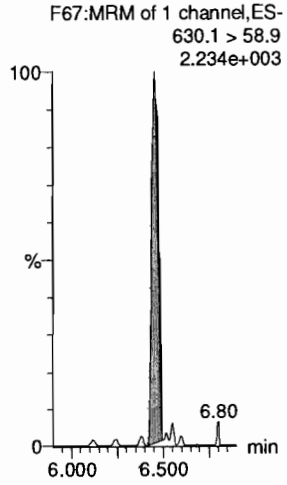


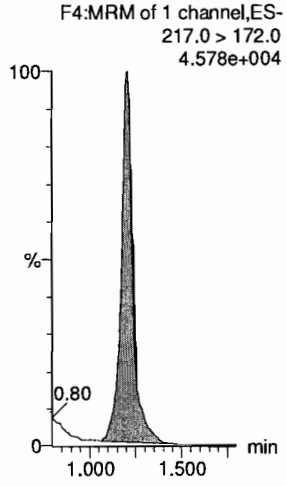
N-MeFOSE



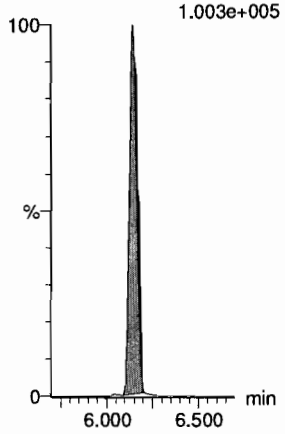
N-EtFOSE



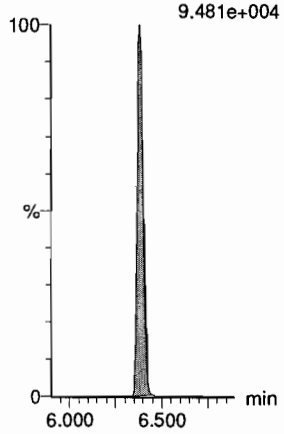
13C4-PFBA



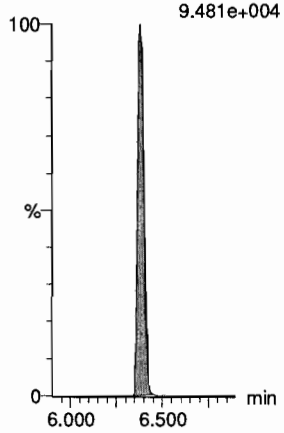
d5-N-ETFOSA



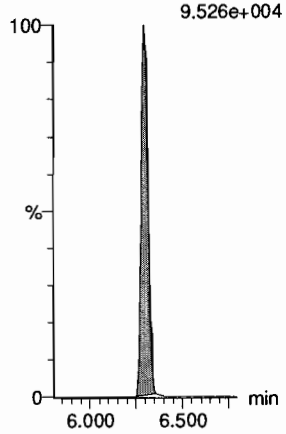
13C2-PFHxDA



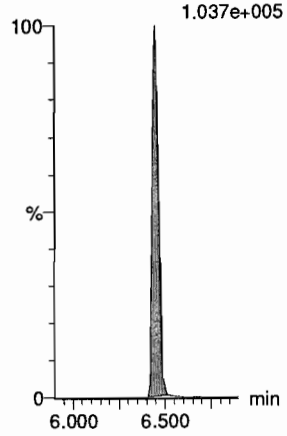
13C2-PFHxDA



d7-N-MeFOSE



d9-N-EtFOSE



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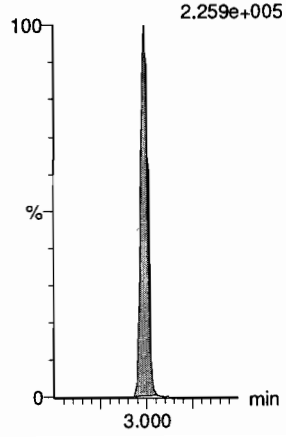
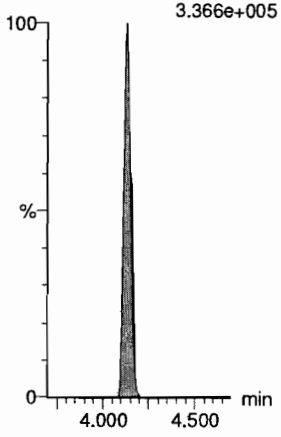


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

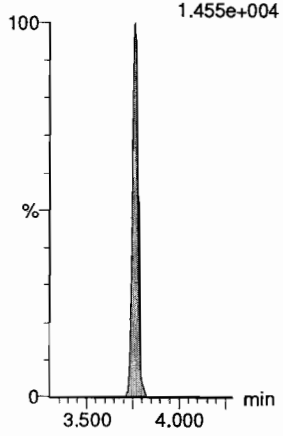
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_7, Date: 10-Jul-2019, Time: 13:54:21, ID: ST190710M2-2 PFC CS-1 19G0802, Description: PFC CS-1 19G0802

13C8-PFOA



18O2-PFHxS



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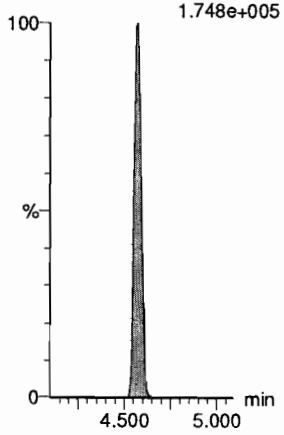
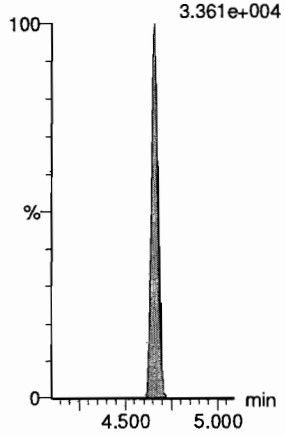


13C4-PFOS



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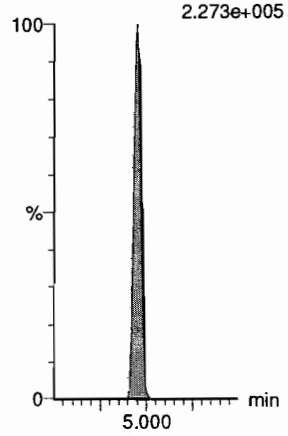
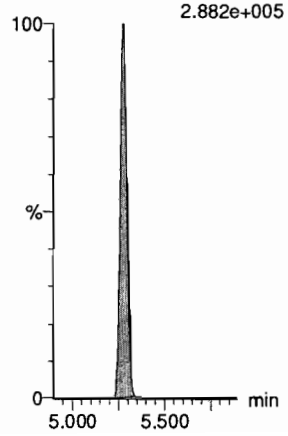


13C7-PFUdA

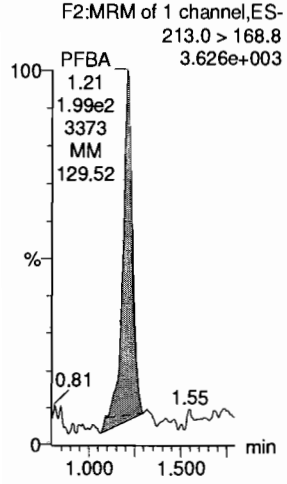


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

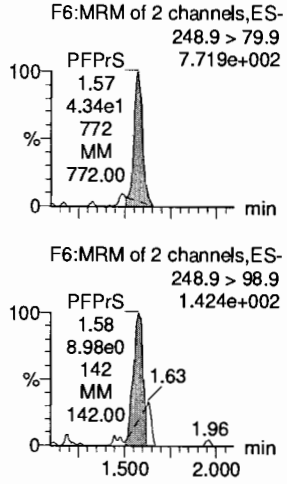
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

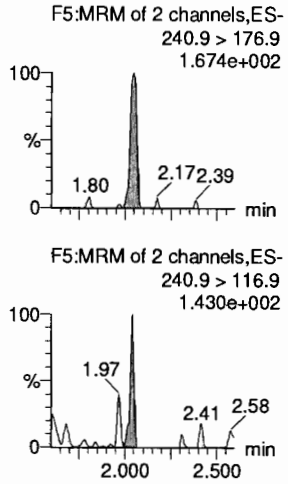
PFBA



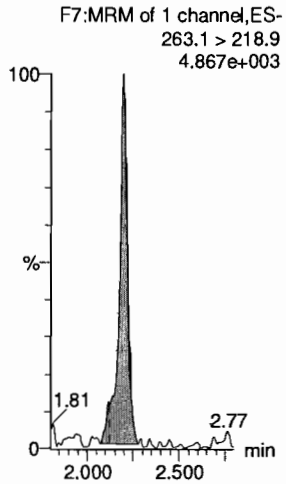
PFPrS



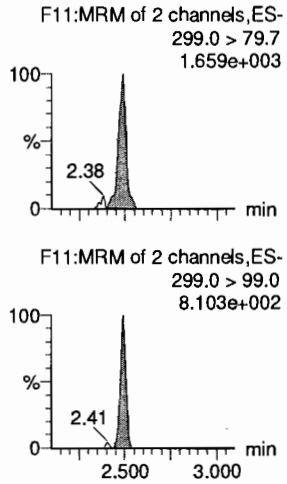
3:3 FTCA



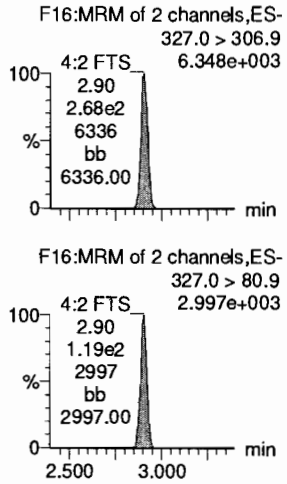
PFPeA



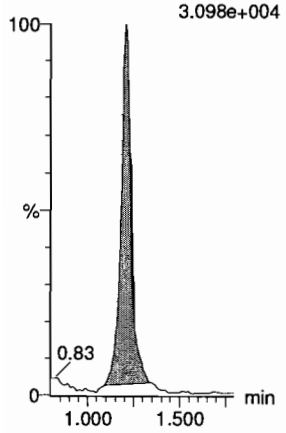
PFBS



4:2 FTS



13C3-PFBA



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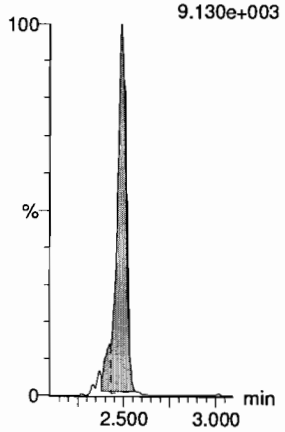

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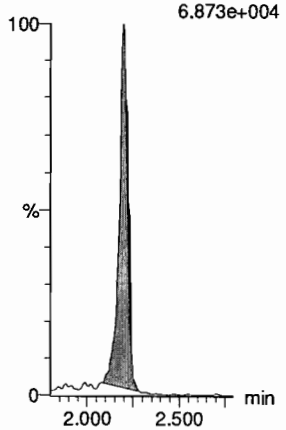

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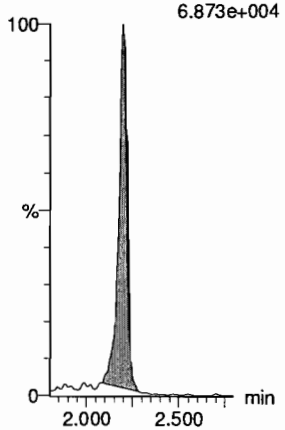

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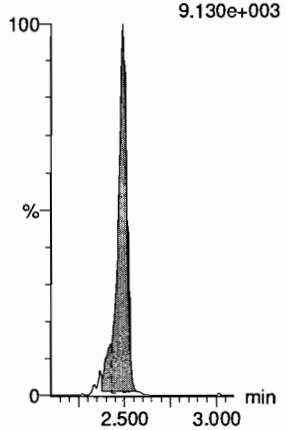
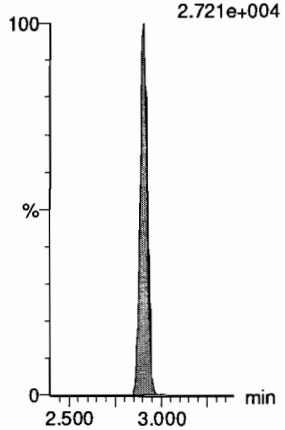


13C2-4:2 FTS

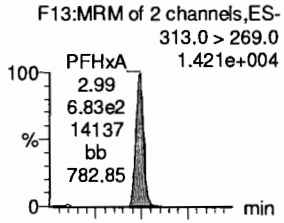


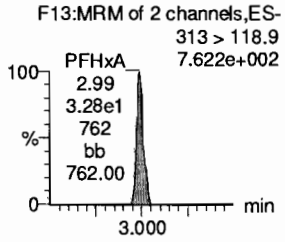
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

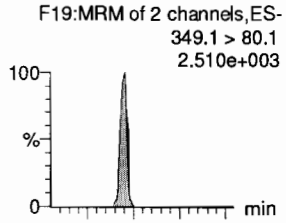
Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

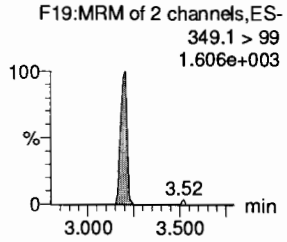
PFHxA



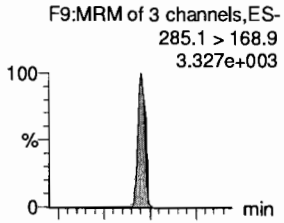


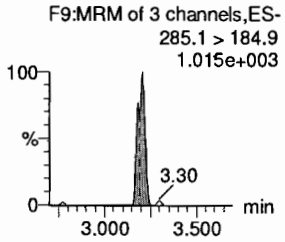
PFPeS



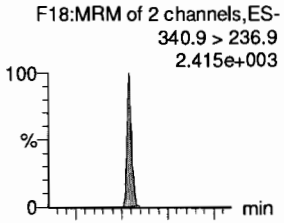


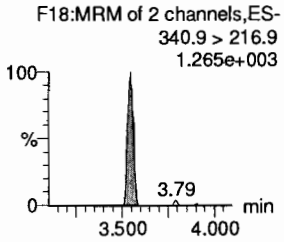
HFPO-DA



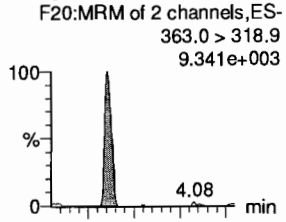


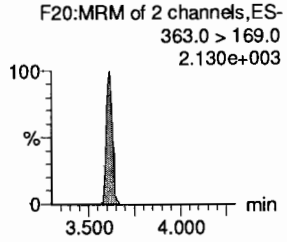
5:3 FTCA



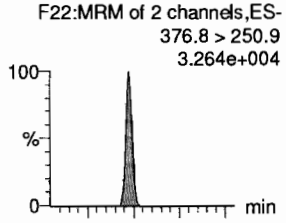


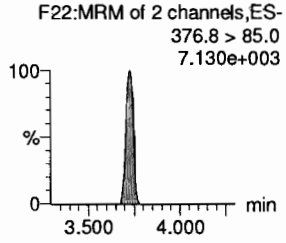
PFHpA



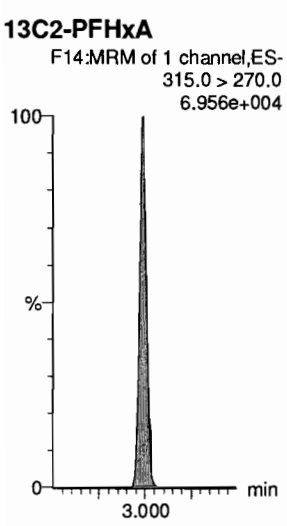


ADONA

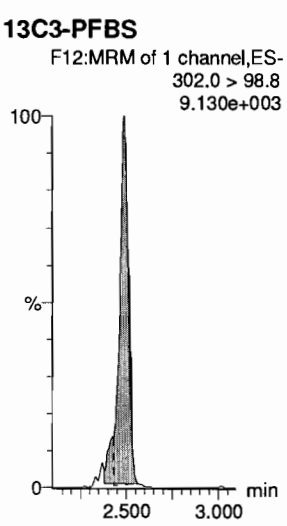




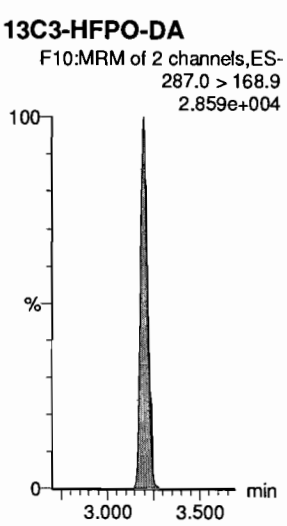
13C2-PFHxA



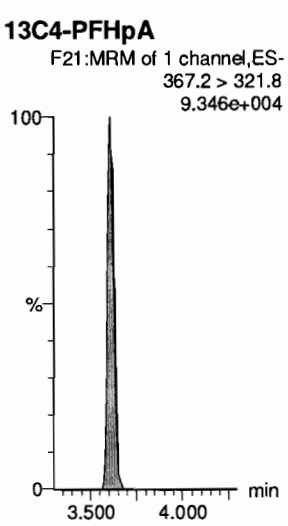
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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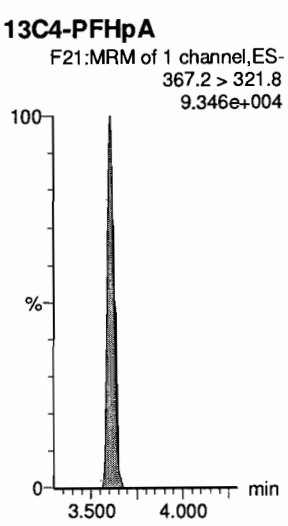

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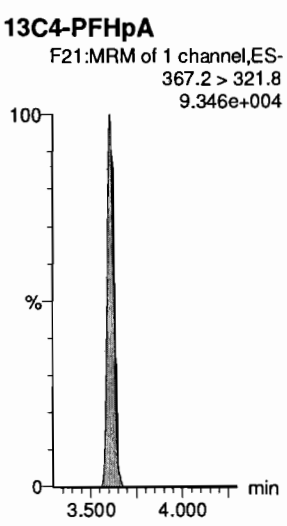
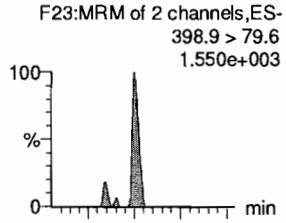


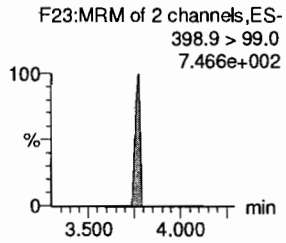
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

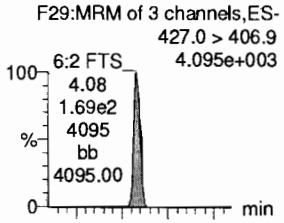
Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

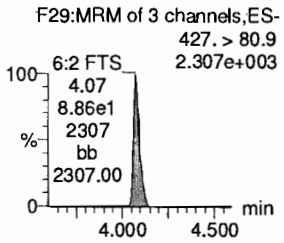
L-PFHxS



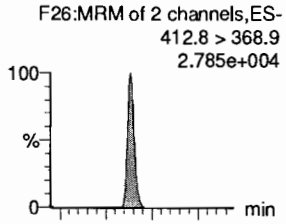


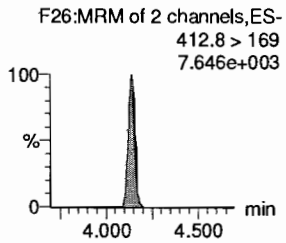
6:2 FTS



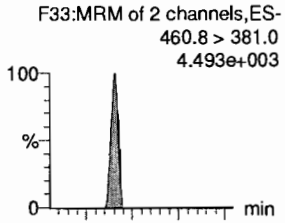


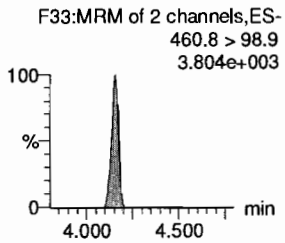
L-PFOA



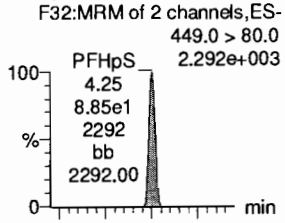


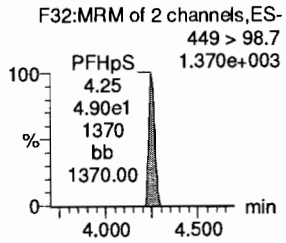
PFEChS



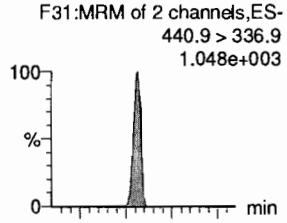


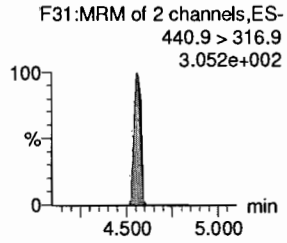
PFHpS



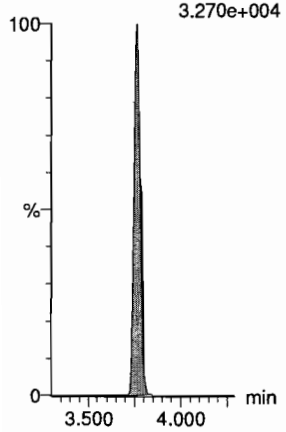


7:3 FTCA

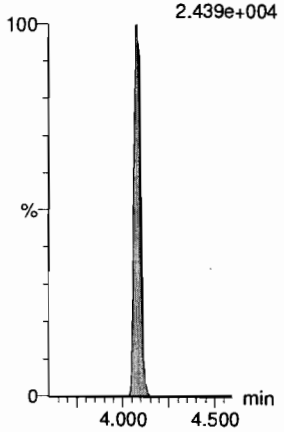




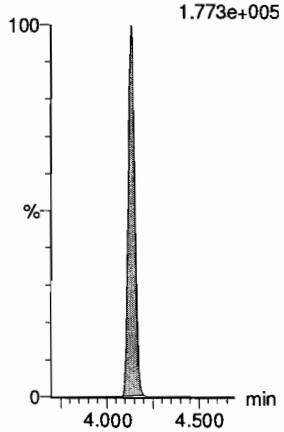
13C3-PFHxS



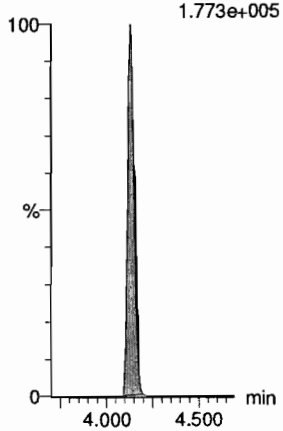
13C2-6:2 FTS



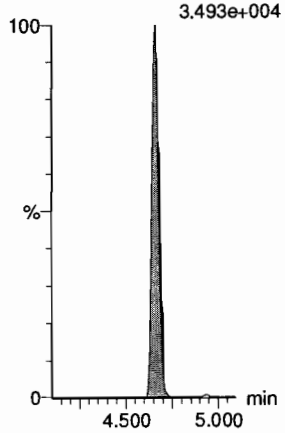
13C2-PFOA



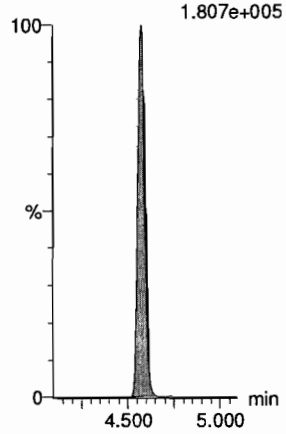
13C2-PFOA



13C8-PFOS



13C5-PFNA

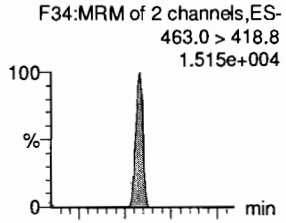


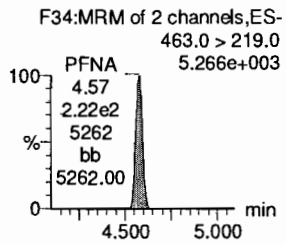
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

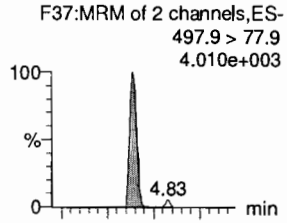
Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

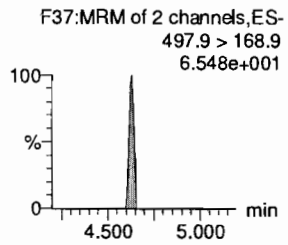
PFNA



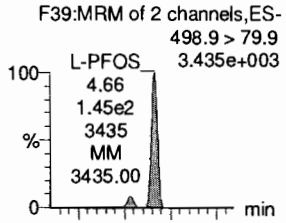


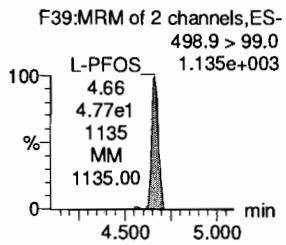
PFOSA



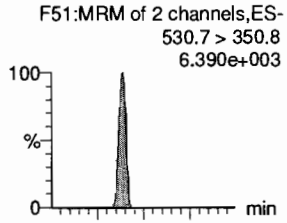


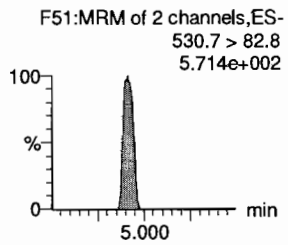
L-PFOS



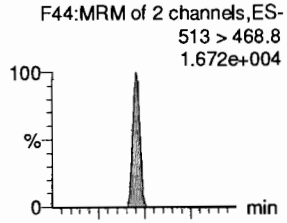


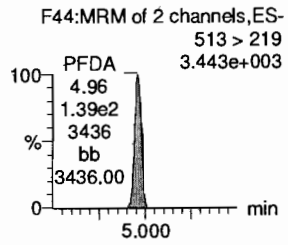
9Cl-PF30NS



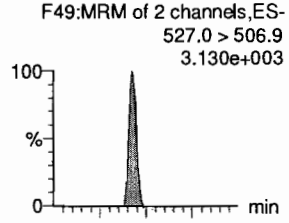


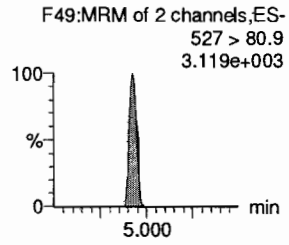
PFDA



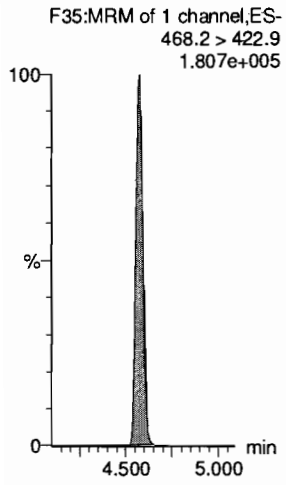


8:2 FTS

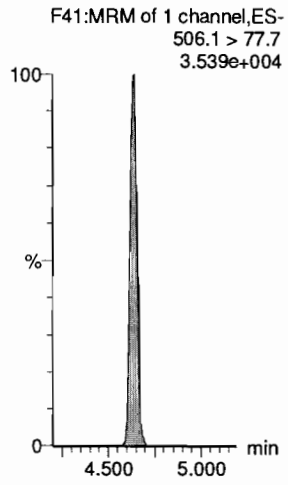




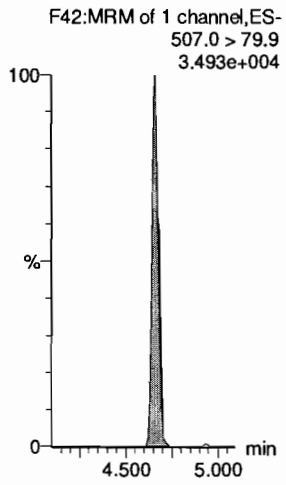
13C5-PFNA



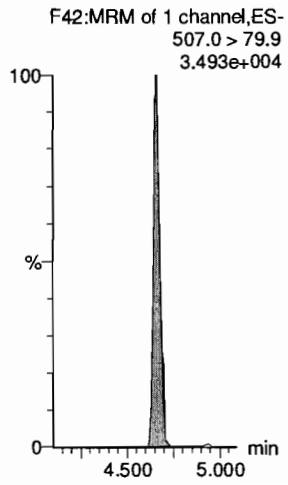
13C8-PFOSA



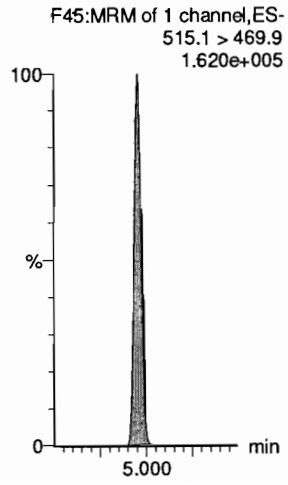
13C8-PFOS



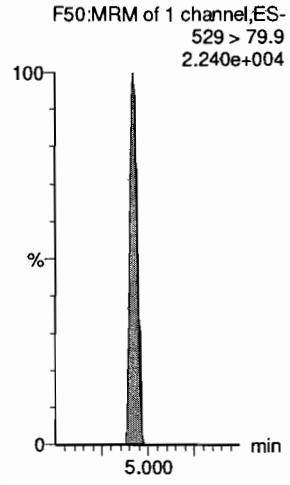
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

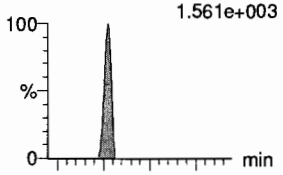


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

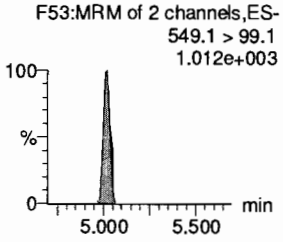
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

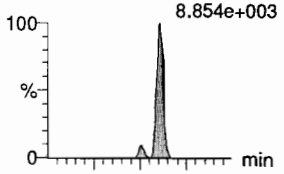
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
1.561e+003



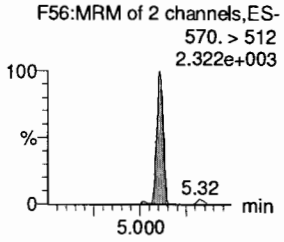
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.012e+003



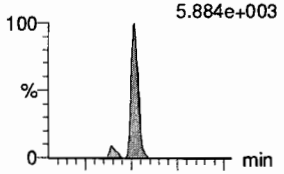
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
8.854e+003



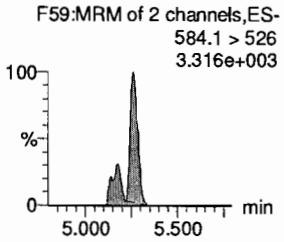
F56:MRM of 2 channels,ES-
570. > 512
2.322e+003



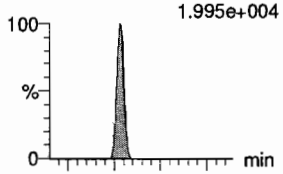
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
5.884e+003



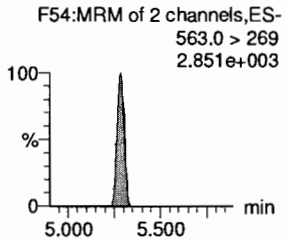
F59:MRM of 2 channels,ES-
584.1 > 526
3.316e+003



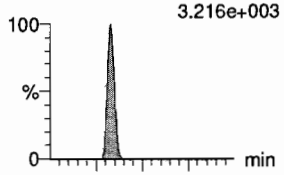
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.995e+004



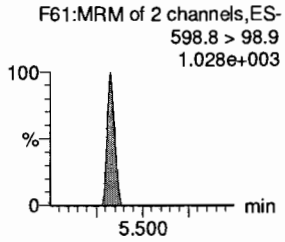
F54:MRM of 2 channels,ES-
563.0 > 269
2.851e+003



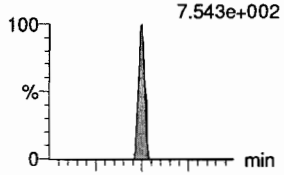
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
3.216e+003



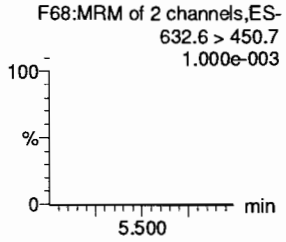
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.028e+003



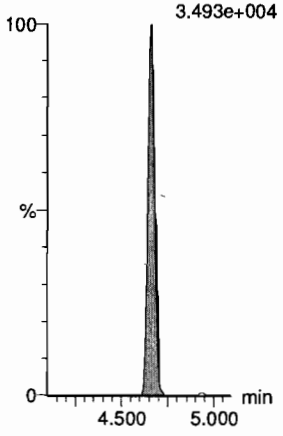
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
7.543e+002



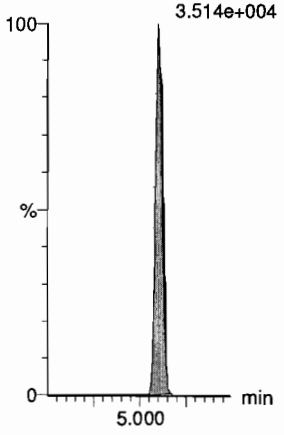
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.000e-003



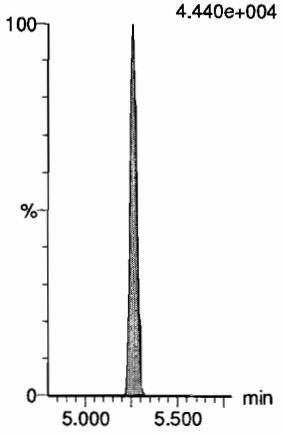
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
3.493e+004



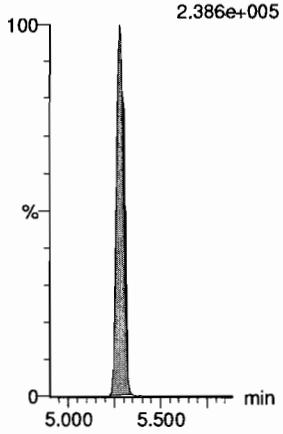
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
3.514e+004



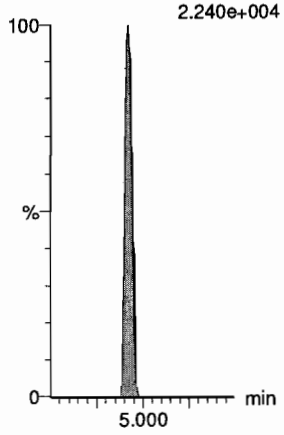
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
4.440e+004



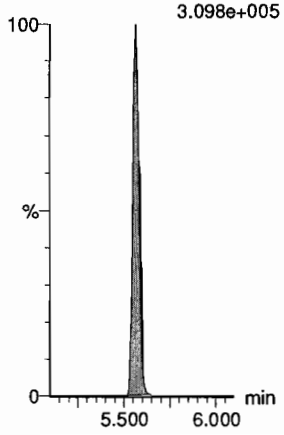
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
2.386e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.240e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005

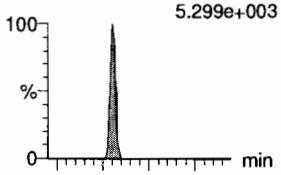


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

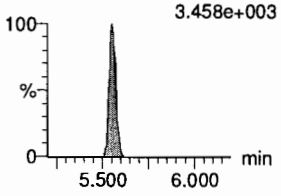
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

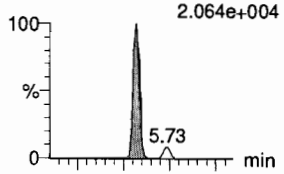
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
5.299e+003



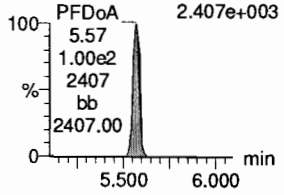
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.458e+003



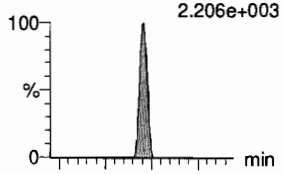
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.064e+004



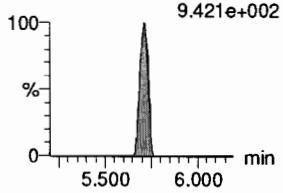
F62:MRM of 4 channels,ES-
612.9 > 318.8
2.407e+003



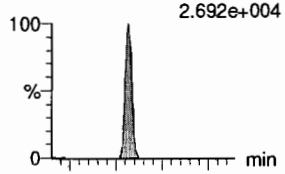
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
2.206e+003



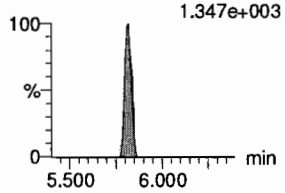
F43:MRM of 2 channels,ES-
512.1 > 219
9.421e+002



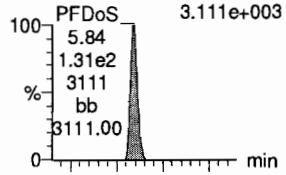
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.692e+004



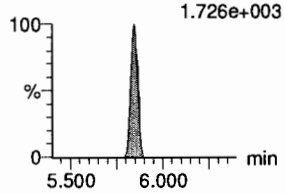
F70:MRM of 2 channels,ES-
662.9 > 319
1.347e+003



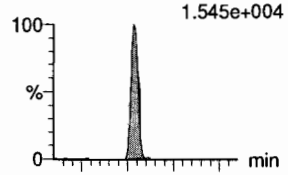
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
3.111e+003



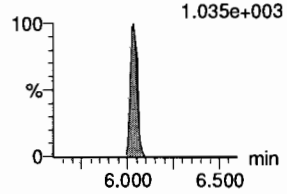
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.726e+003



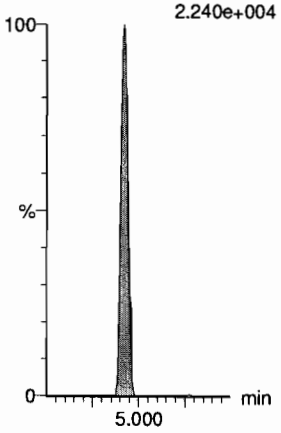
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.545e+004



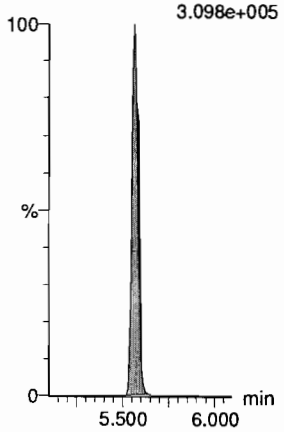
F72:MRM of 2 channels,ES-
713. > 369.0
1.035e+003



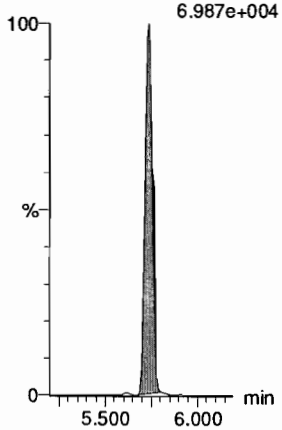
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.240e+004



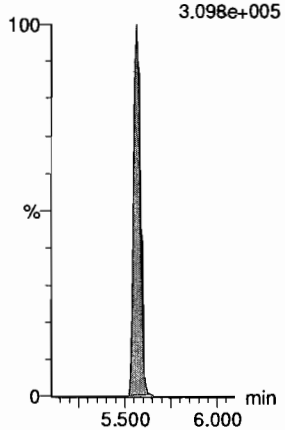
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005



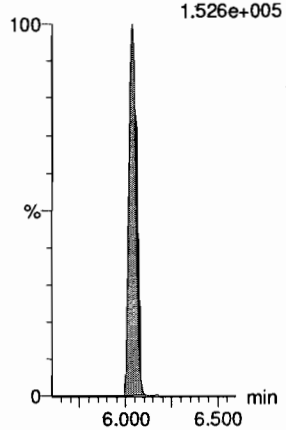
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
6.987e+004



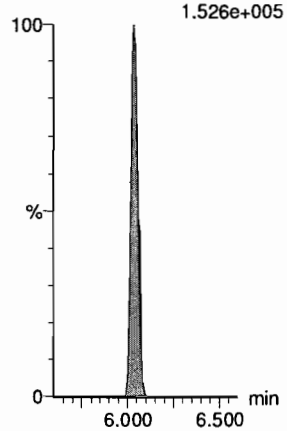
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
3.098e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.526e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.526e+005

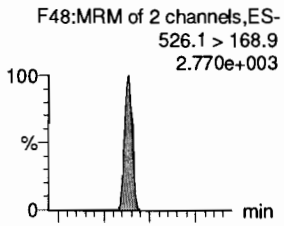


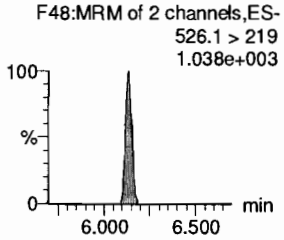
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

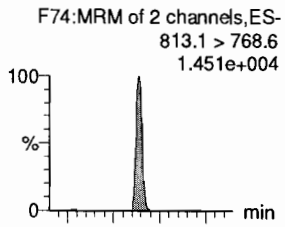
Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

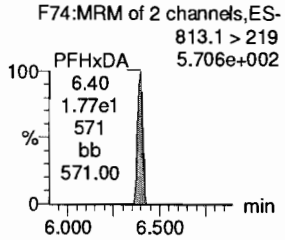
N-EtFOSA



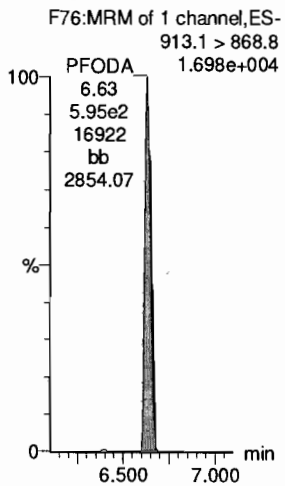


PFHxDA

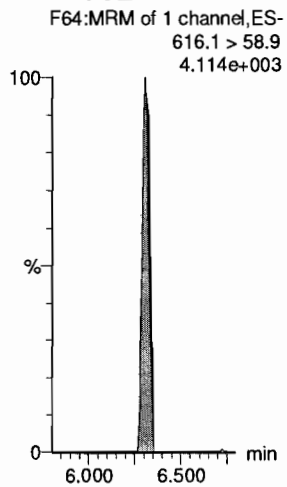




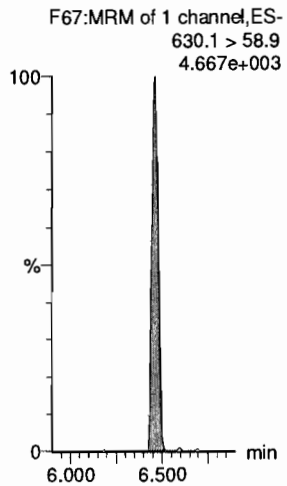
PFODA



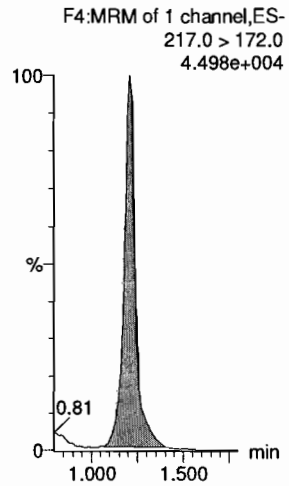
N-MeFOSE



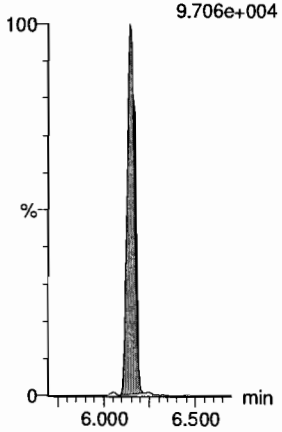
N-EtFOSE



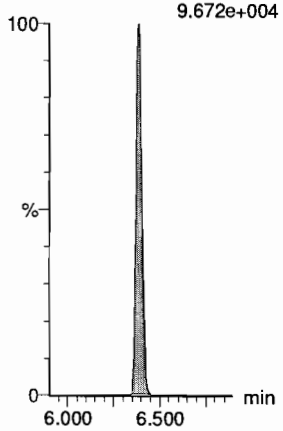
13C4-PFBA



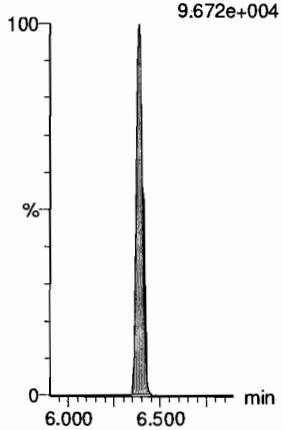
d5-N-ETFOSA



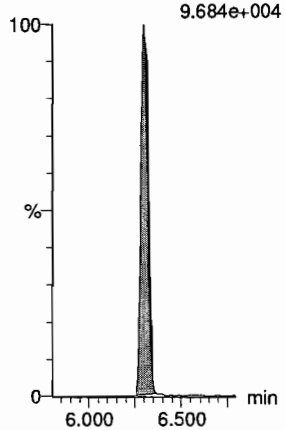
13C2-PFHxDA



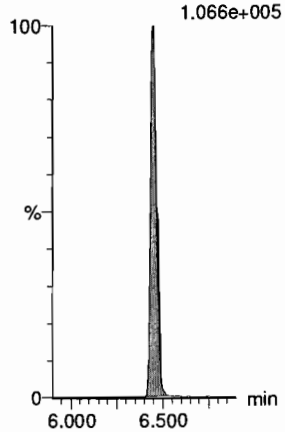
13C2-PFHxDA



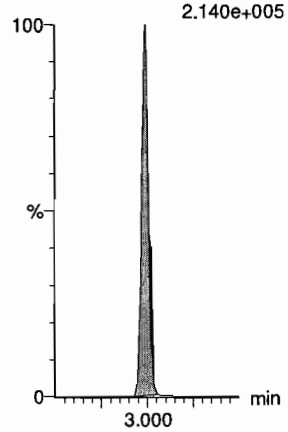
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

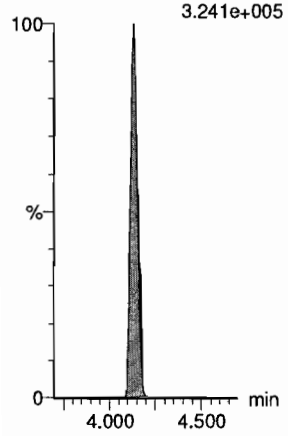


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

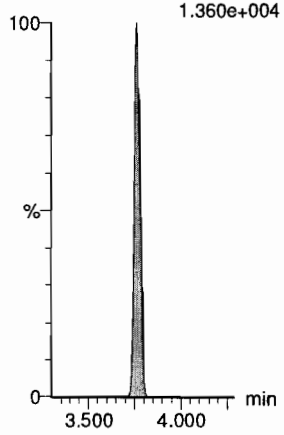
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_8, Date: 10-Jul-2019, Time: 14:04:59, ID: ST190710M2-3 PFC CS0 19G0803, Description: PFC CS0 19G0803

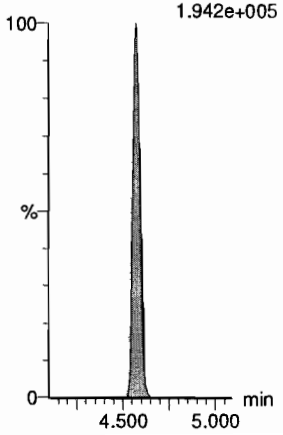
13C8-PFOA



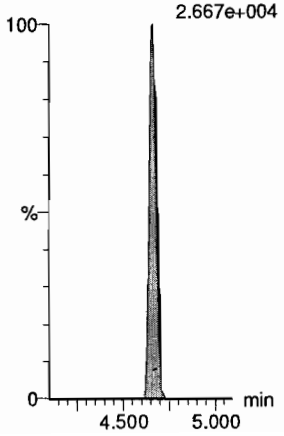
18O2-PFHxS



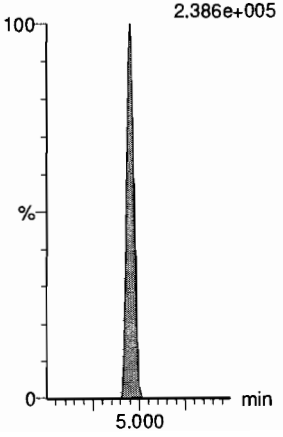
13C9-PFNA



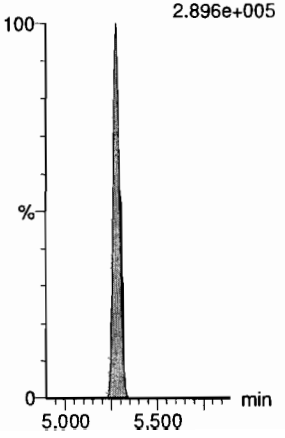
13C4-PFOS



13C6-PFDA



13C7-PFUdA

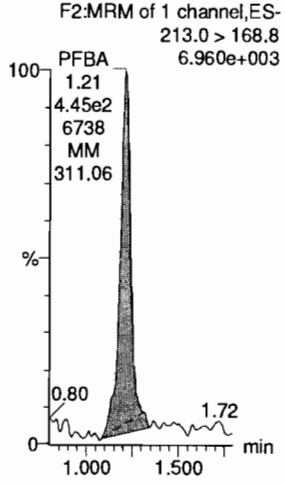


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

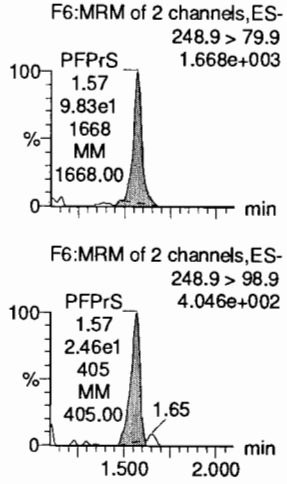
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

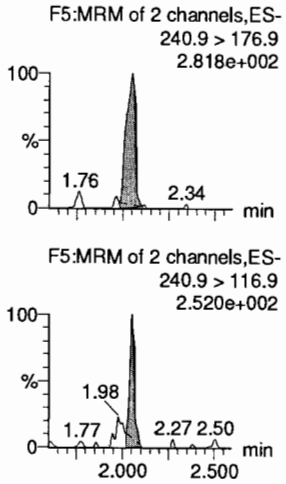
PFBA



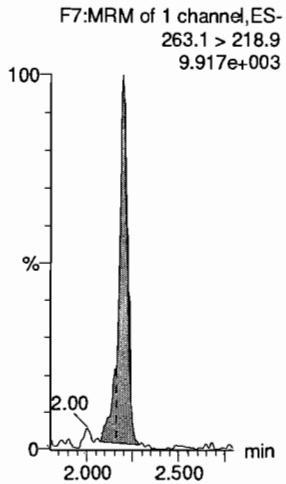
PFPrS



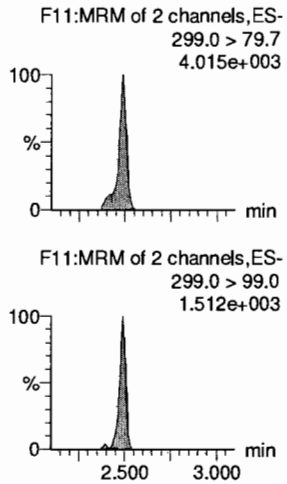
3:3 FTCA



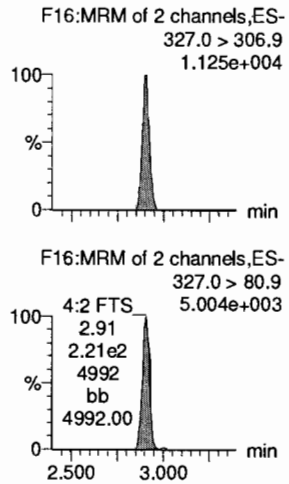
PFPeA



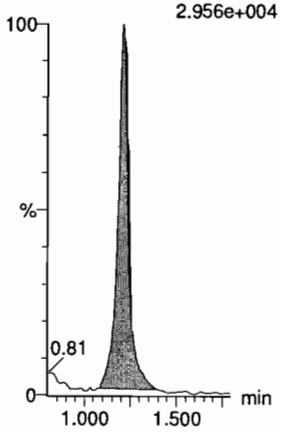
PFBS



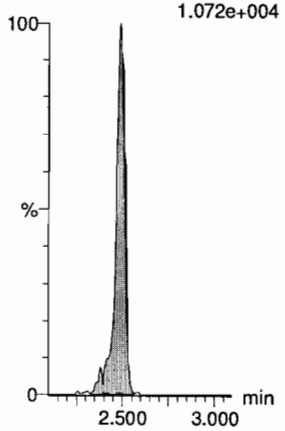
4:2 FTS



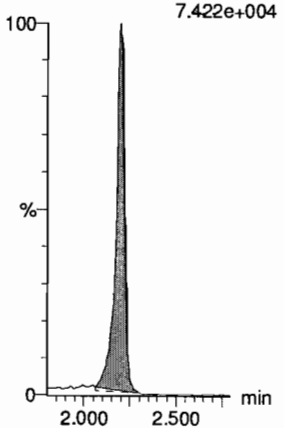
13C3-PFBA



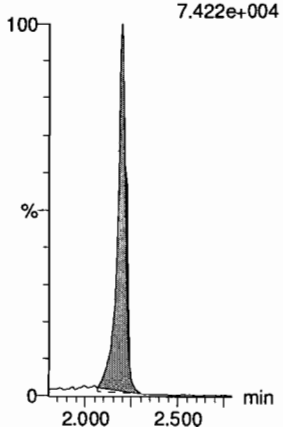
13C3-PFBS



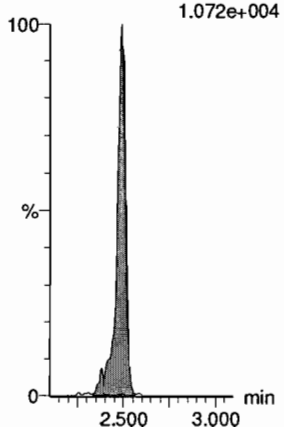
13C3-PFPeA



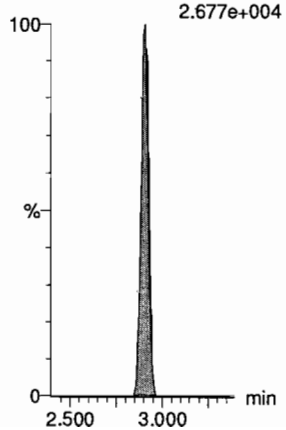
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

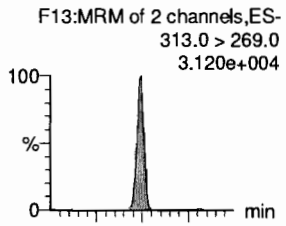


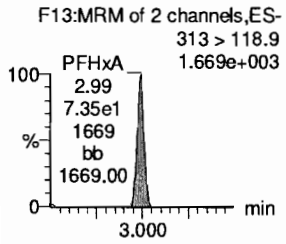
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

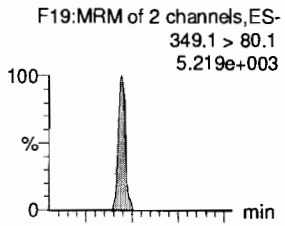
Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

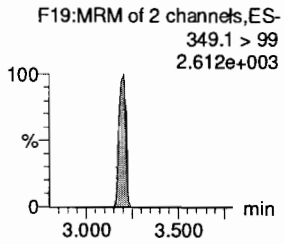
PFHxA



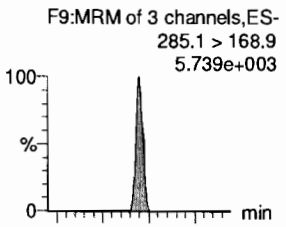


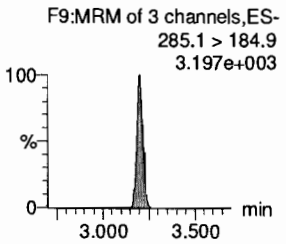
PFPeS



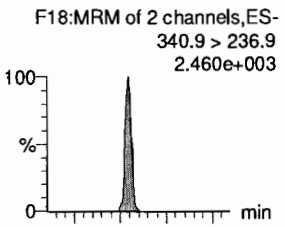


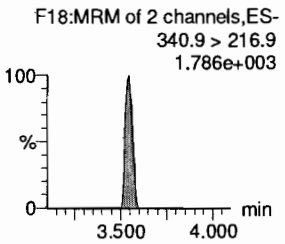
HFPO-DA



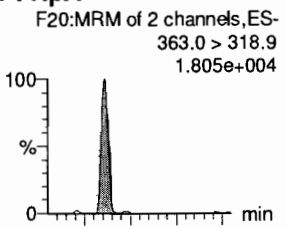


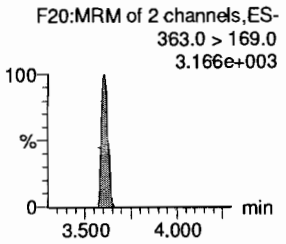
5:3 FTCA



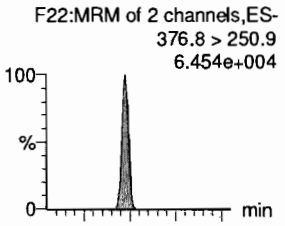


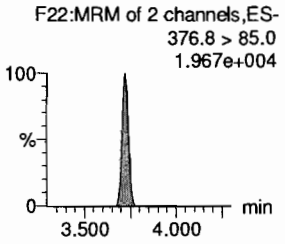
PFHpA



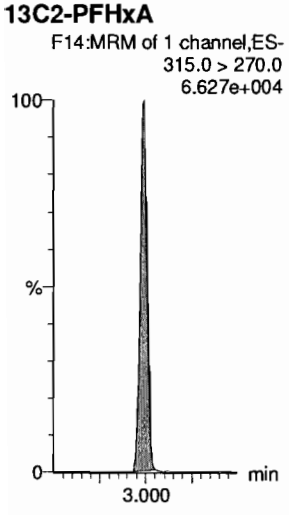


ADONA

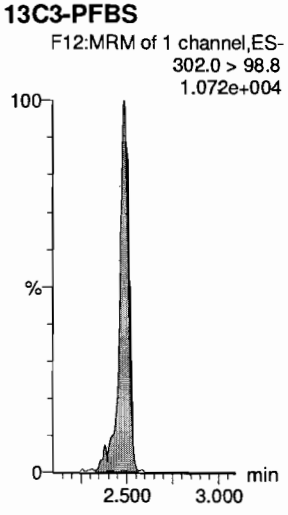




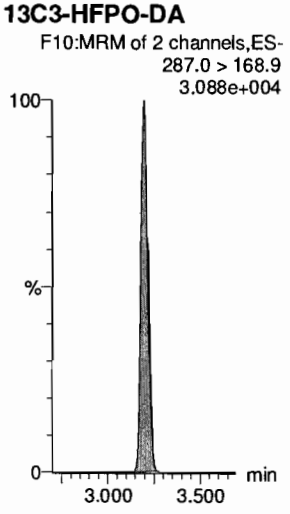
13C2-PFHxA



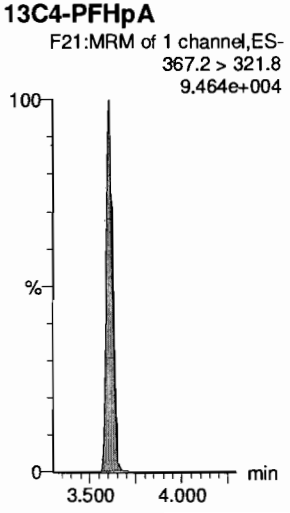
13C3-PFBS



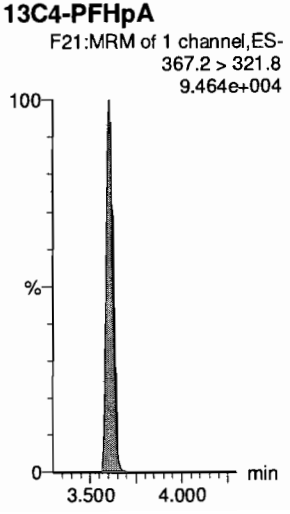
13C3-HFPO-DA



13C4-PFHpA



13C4-PFHpA



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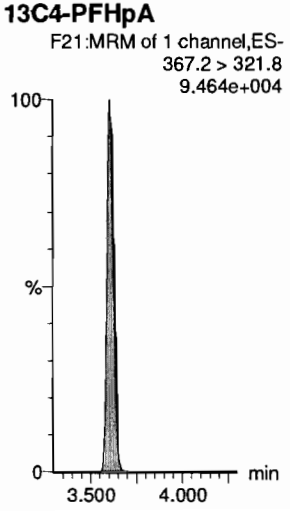
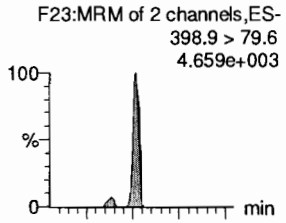


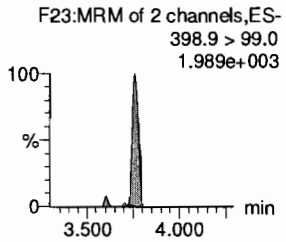
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

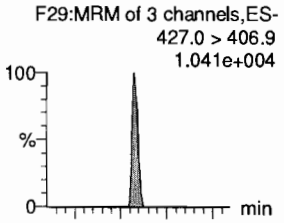
Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

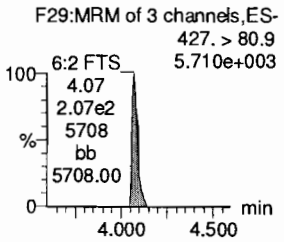
L-PFHxS



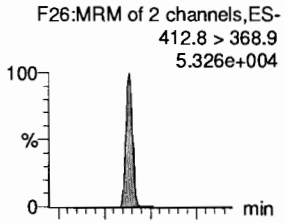


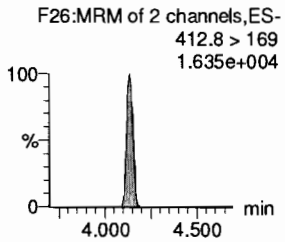
6:2 FTS





L-PFOA





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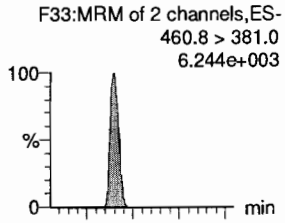

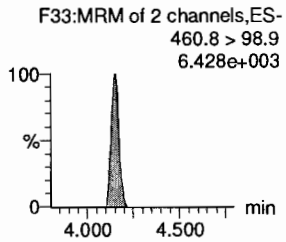

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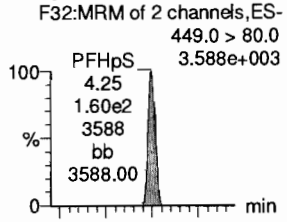
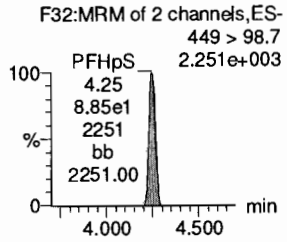
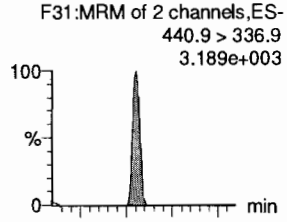
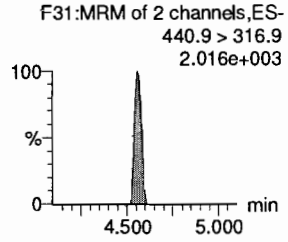


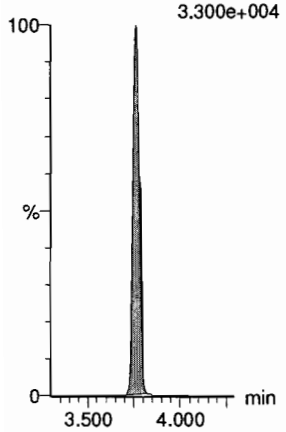


7:3 FTCA

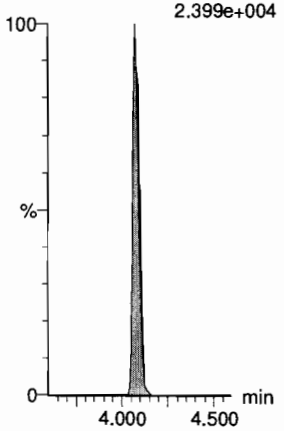




13C3-PFHxS



13C2-6:2 FTS



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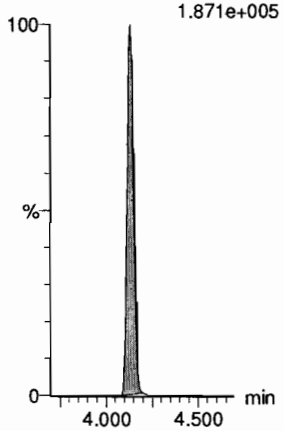

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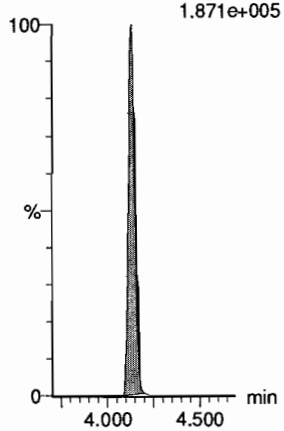
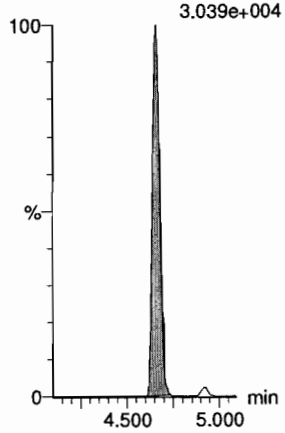
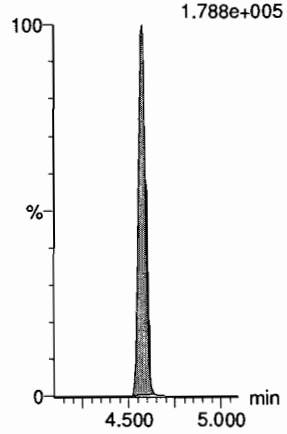


13C8-PFOS



13C5-PFNA



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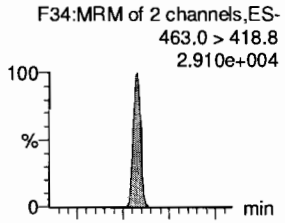
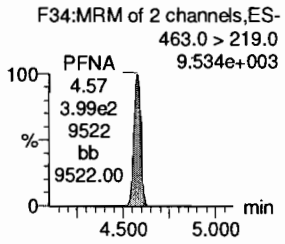
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

PFNA





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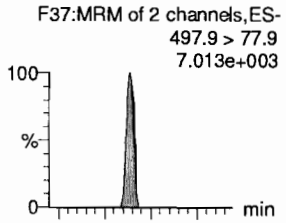
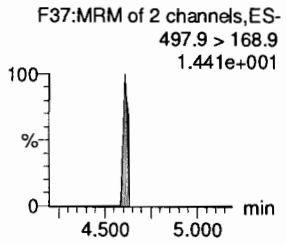
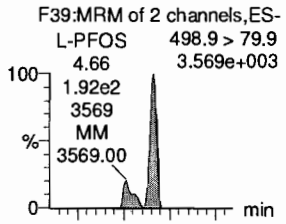
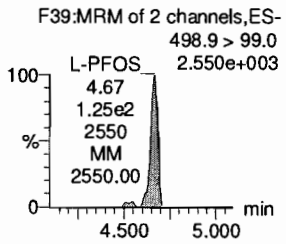


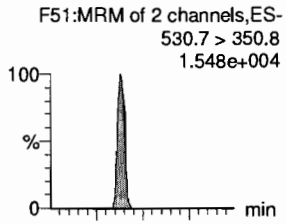


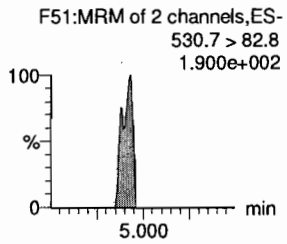
L-PFOS





9Cl-PF30NS





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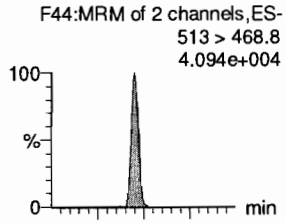

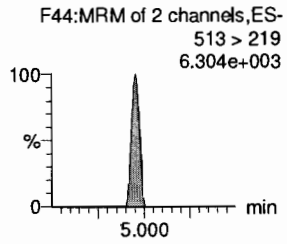

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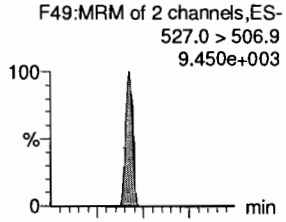

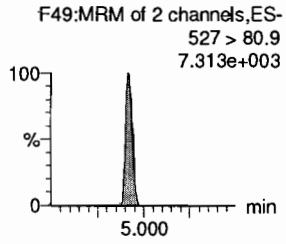

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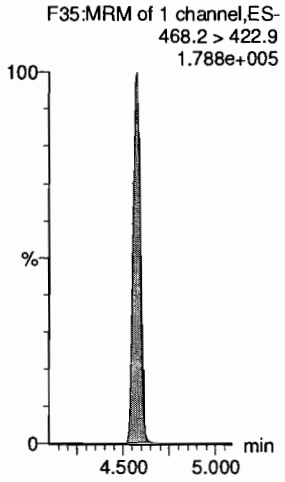
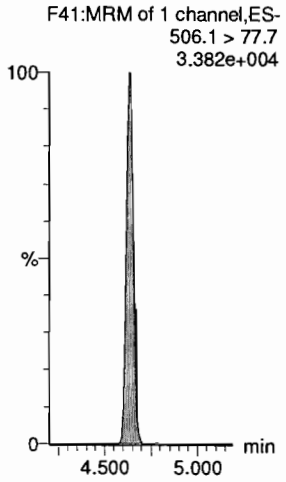
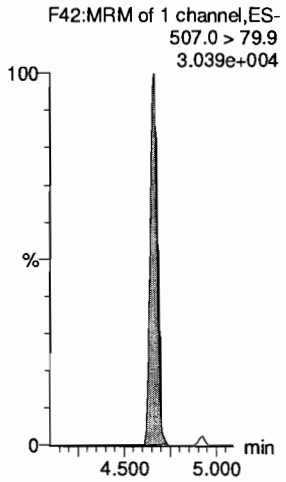


13C8-PFOSA



13C8-PFOS



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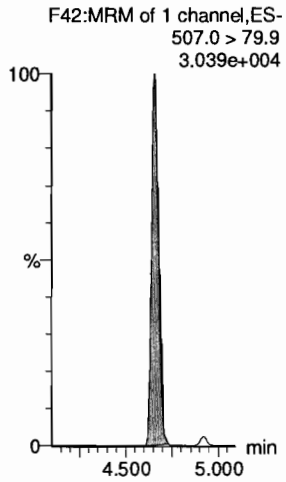
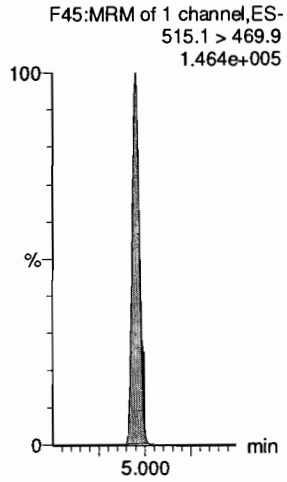
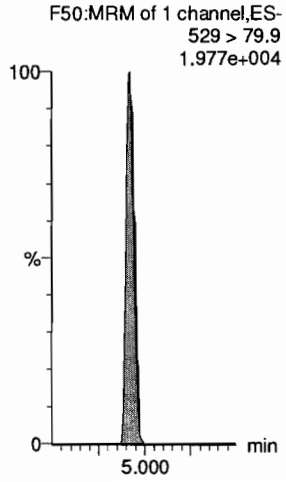


13C2-PFDA



13C2-8:2 FTS



Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

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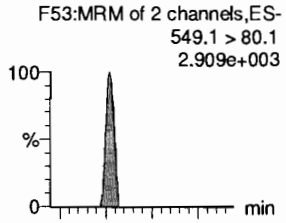
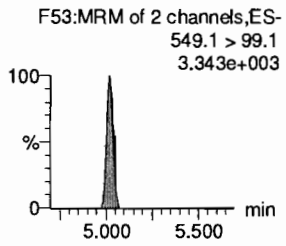
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

PFNS





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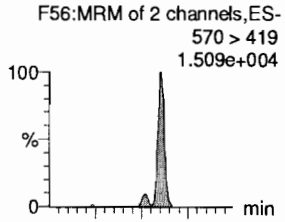
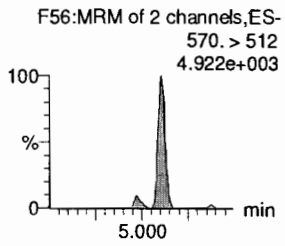
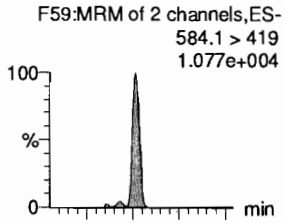
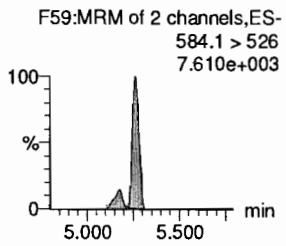


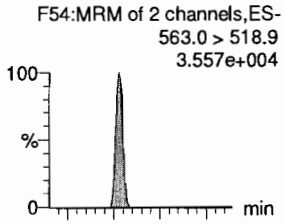


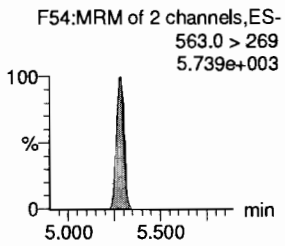
L-EtFOSAA





PFUdA





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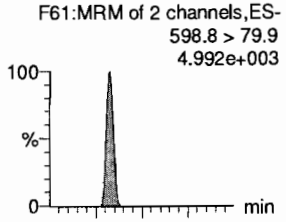
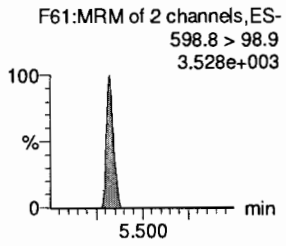
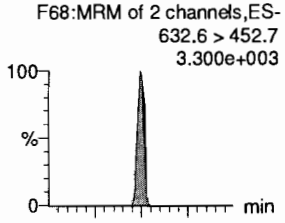
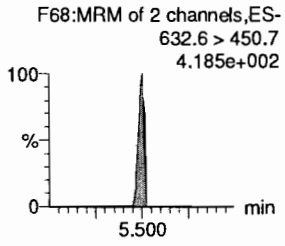


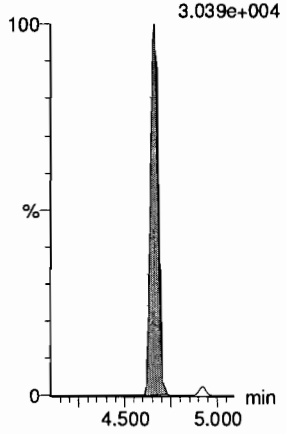


11Cl-PF30UdS

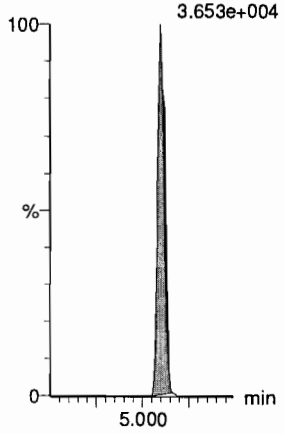




13C8-PFOS



d3-N-MeFOSAA



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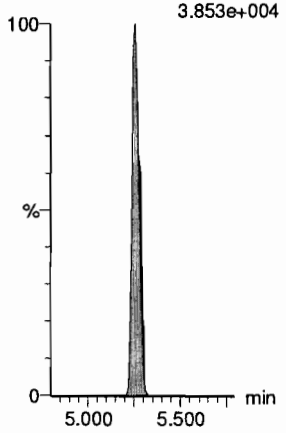
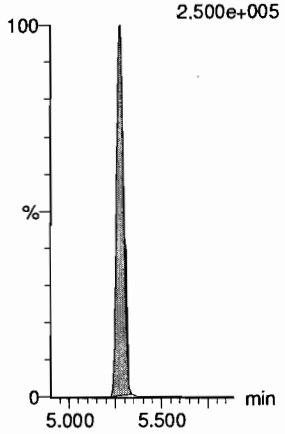
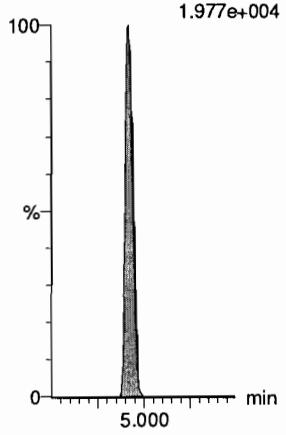


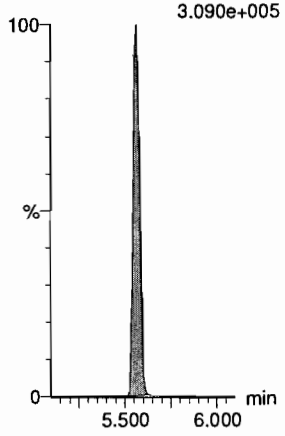
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

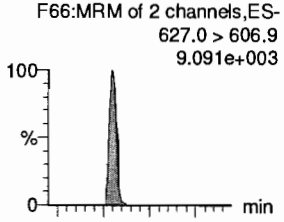


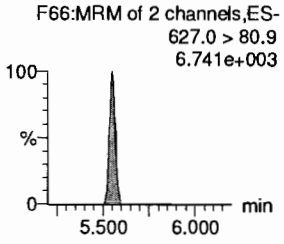
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

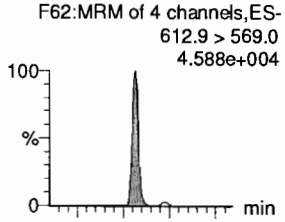
Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

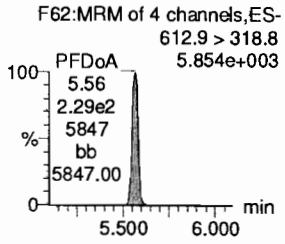
10:2 FTS





PFDoA





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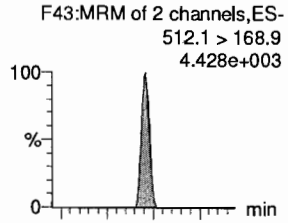
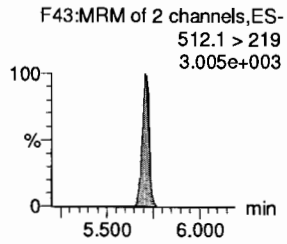
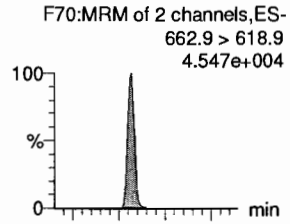
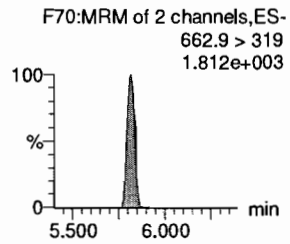


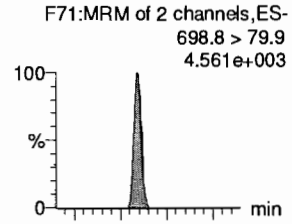


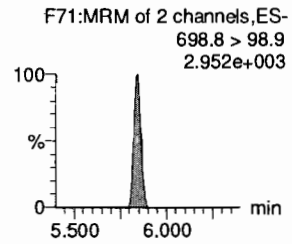
PFTrDA



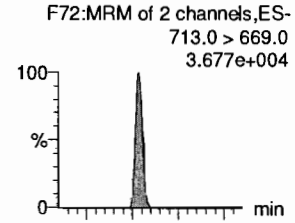


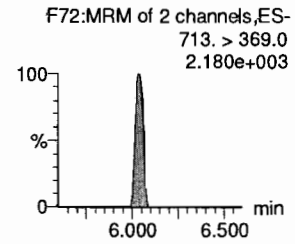
PFDoS



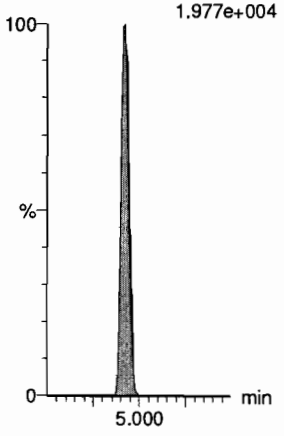


PFTeDA

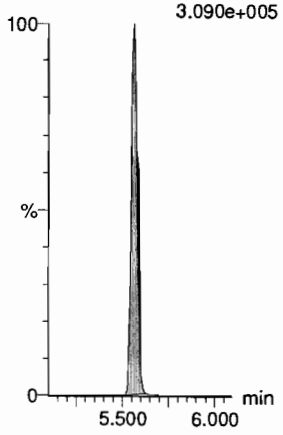




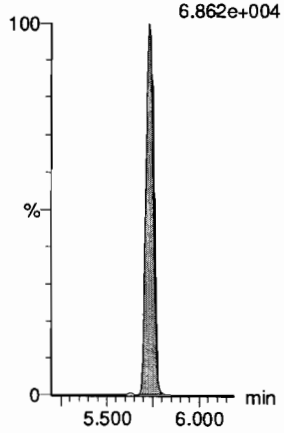
13C2-8:2 FTS



13C2-PFDoA



d3-N-MeFOSA



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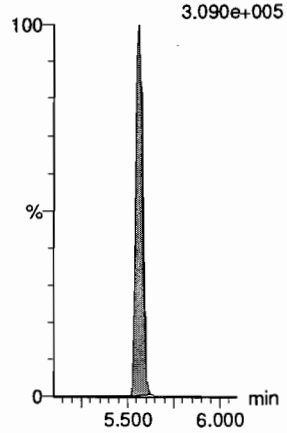

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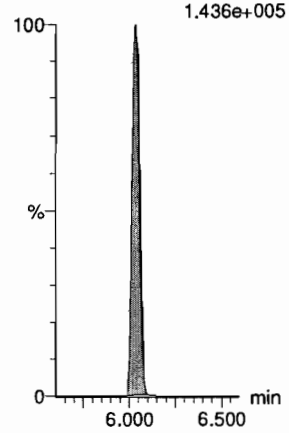
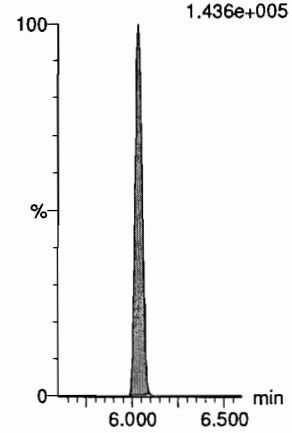


13C2-PFTeDA

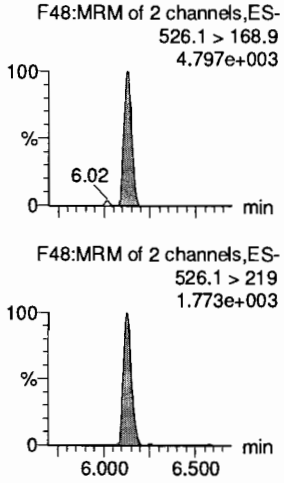


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

N-EtFOSA



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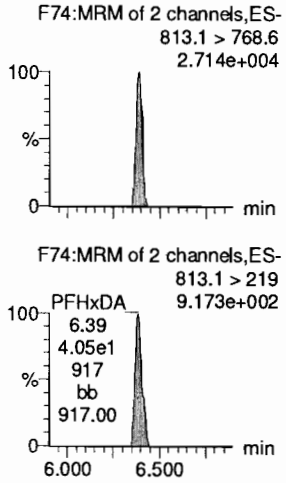

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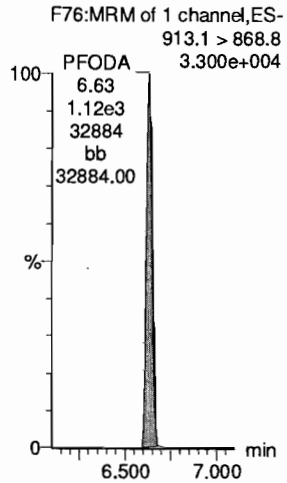
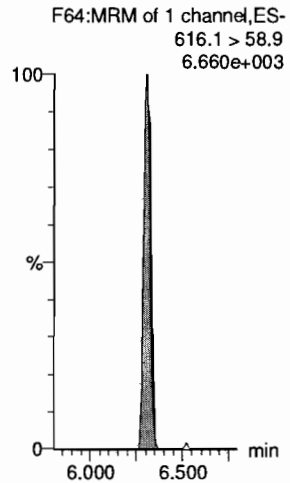


N-MeFOSE



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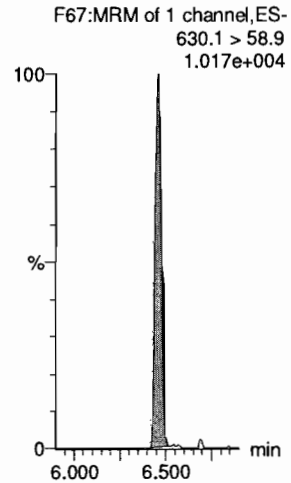
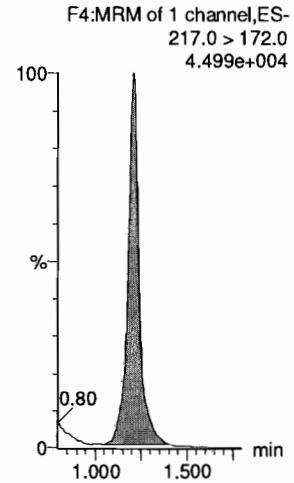
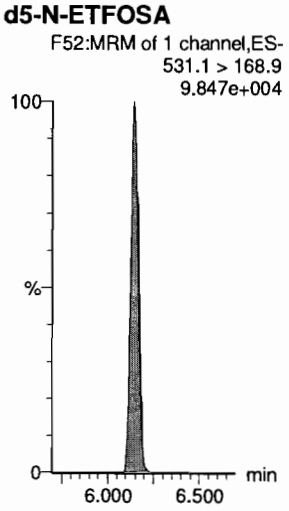


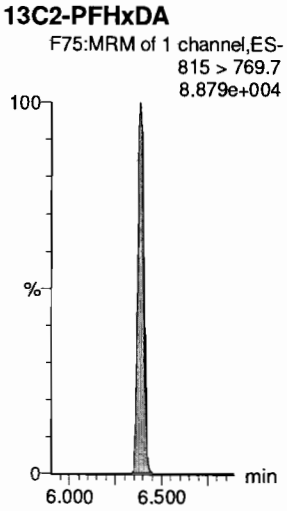
13C4-PFBA



d5-N-ETFOSA



13C2-PFHxDA



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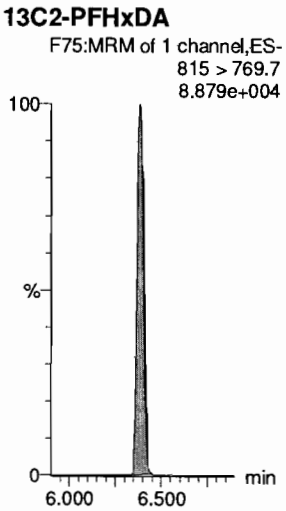
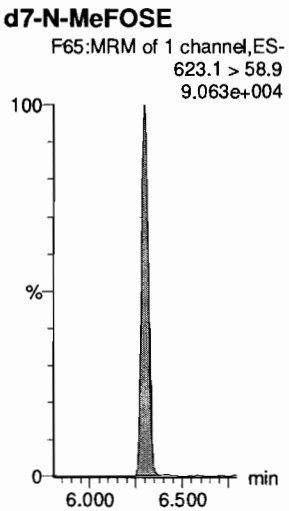
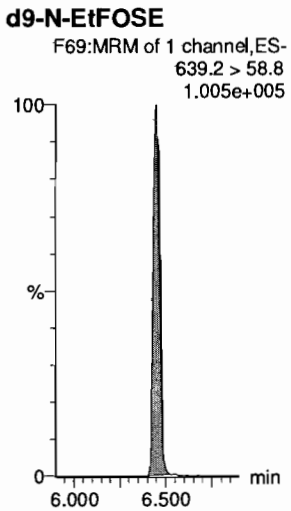


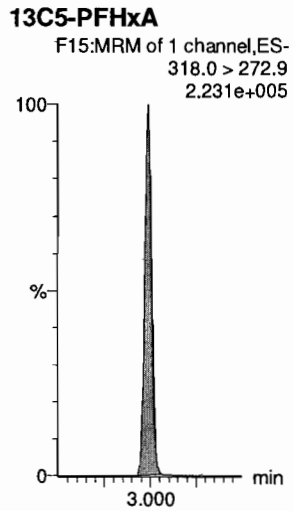
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

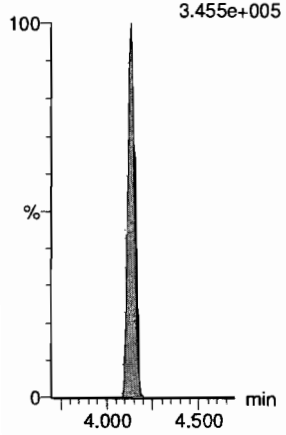


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

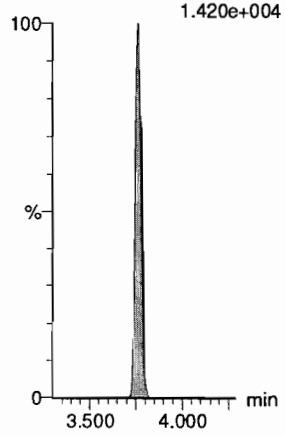
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_9, Date: 10-Jul-2019, Time: 14:15:32, ID: ST190710M2-4 PFC CS1 19G0804, Description: PFC CS1 19G0804

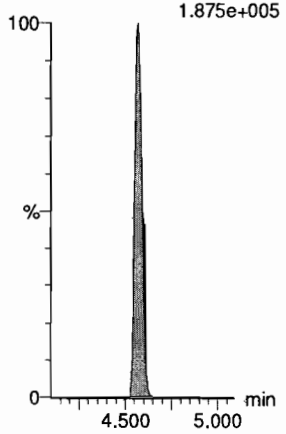
13C8-PFOA



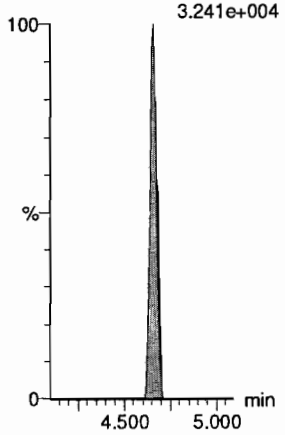
18O2-PFHxS



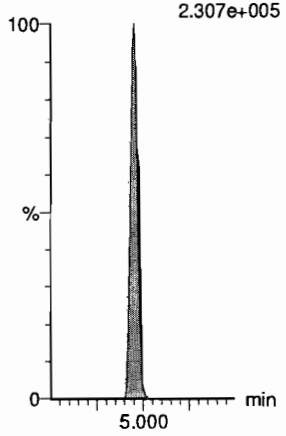
13C9-PFNA



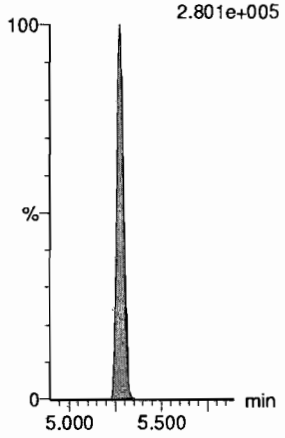
13C4-PFOS



13C6-PFDA



13C7-PFUdA

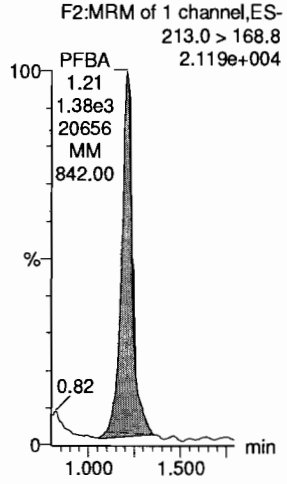


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

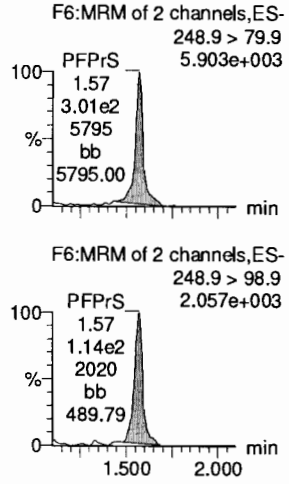
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

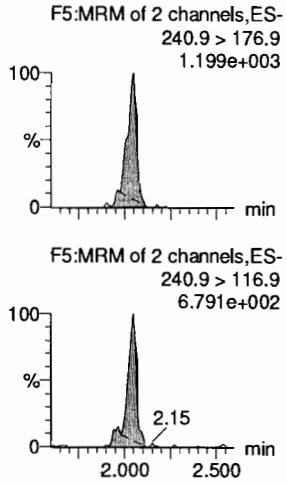
PFBA



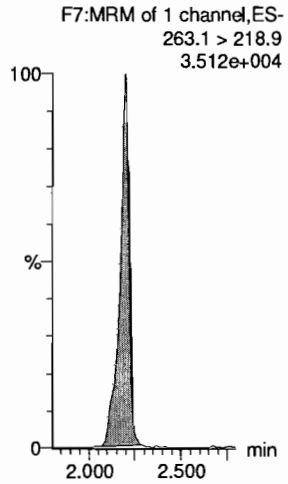
PFPrS



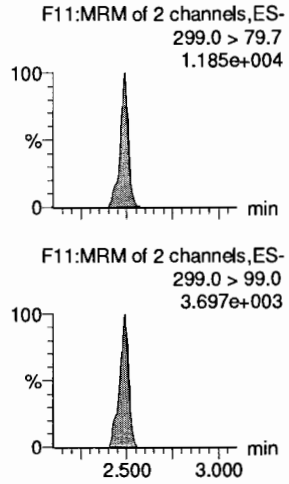
3:3 FTCA



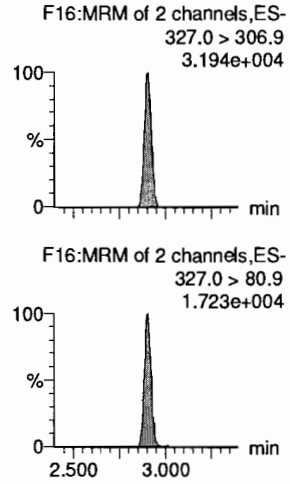
PFPeA



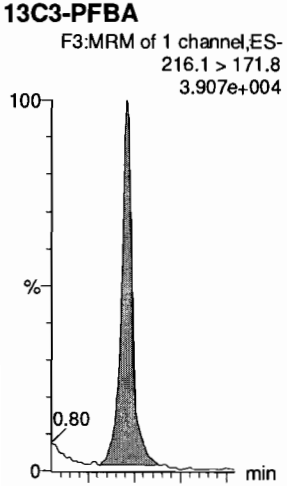
PFBS



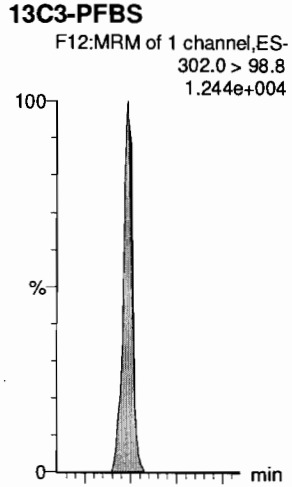
4:2 FTS



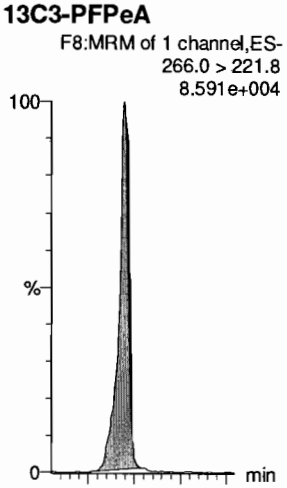
13C3-PFBA



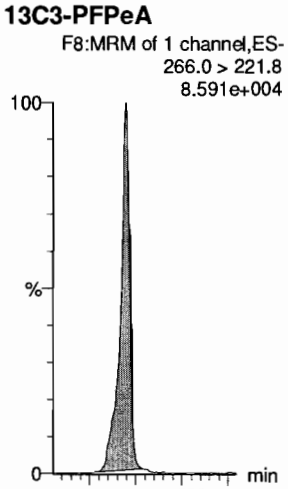
13C3-PFBS



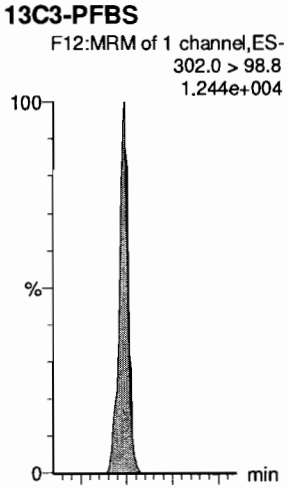
13C3-PFPeA



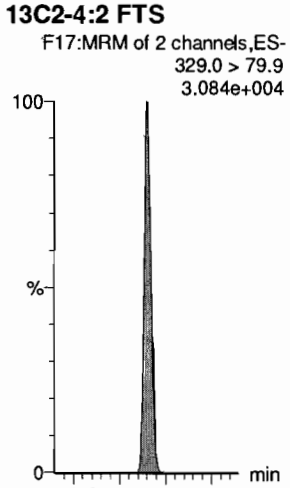
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

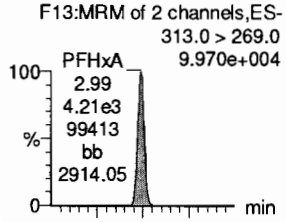


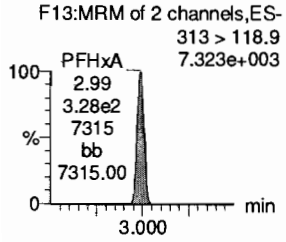
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

PFHxA





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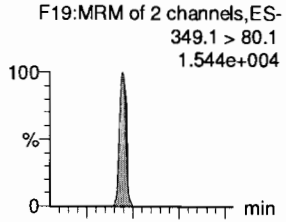
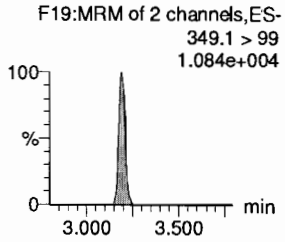
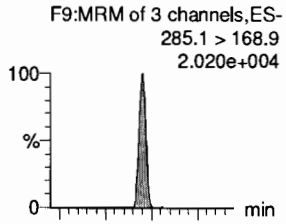
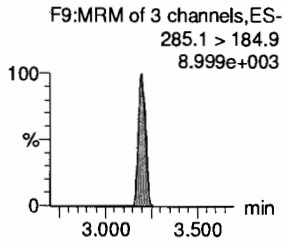


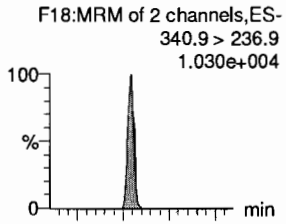


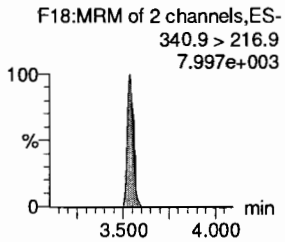
HFPO-DA





5:3 FTCA





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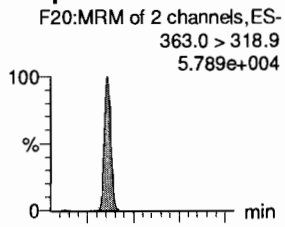

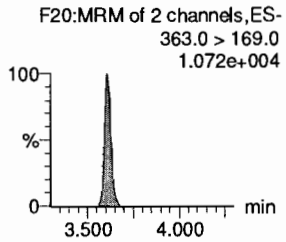

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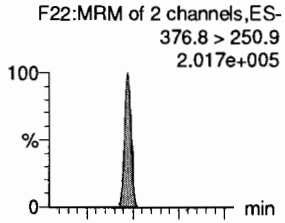
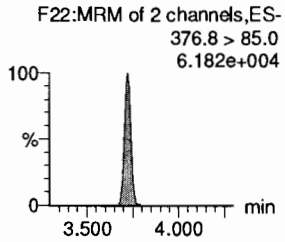
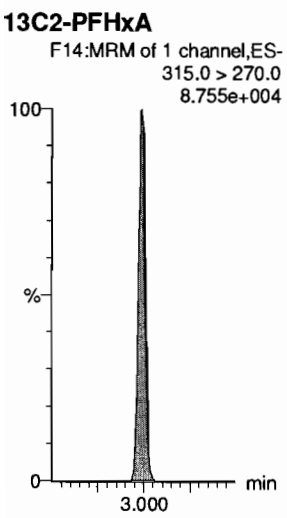
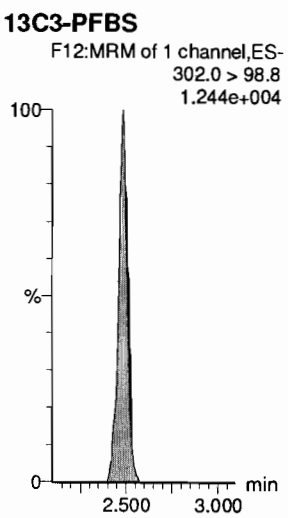




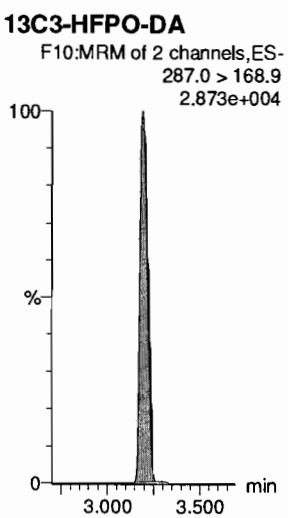
13C2-PFHxA



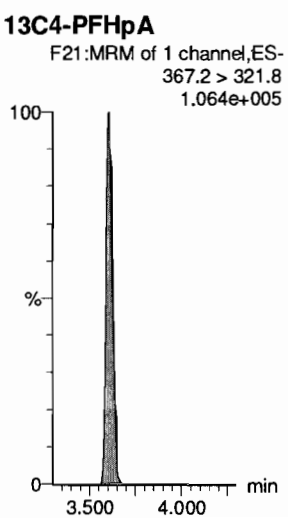
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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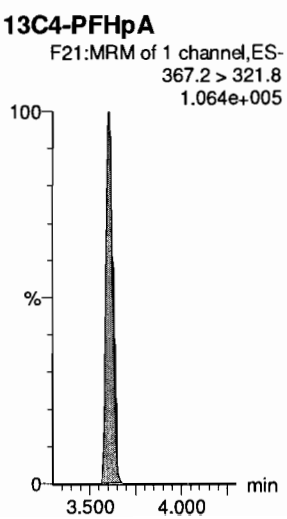

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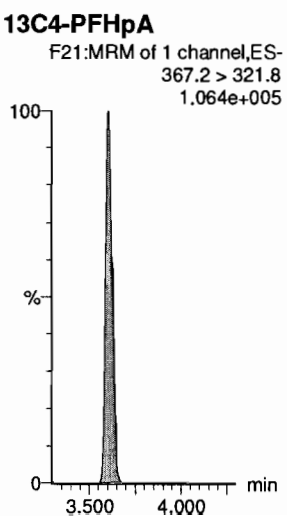
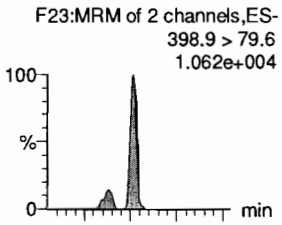


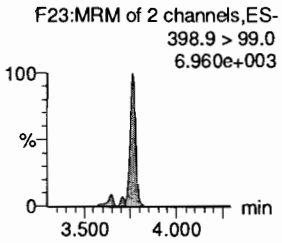
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

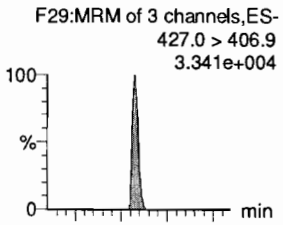
Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

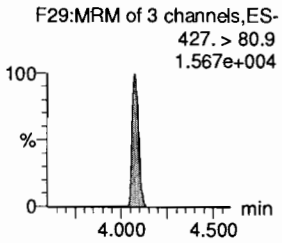
L-PFHxS





6:2 FTS





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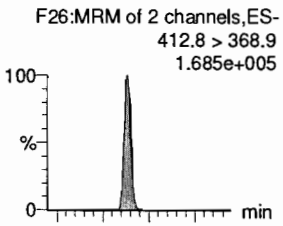

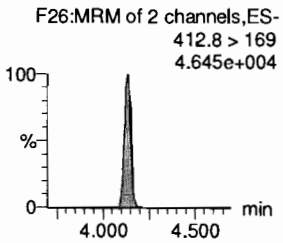

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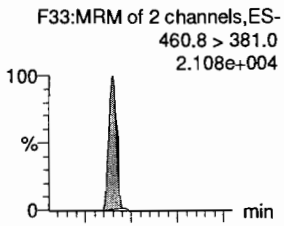

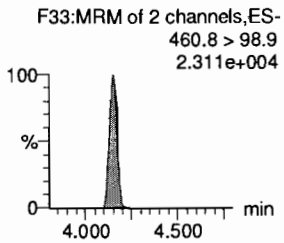

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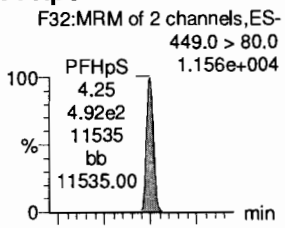
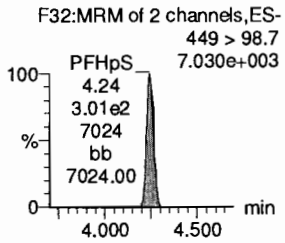
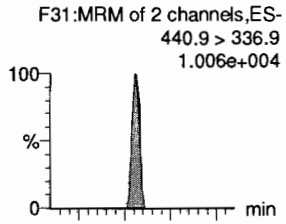
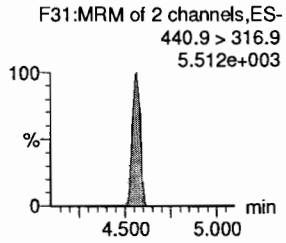


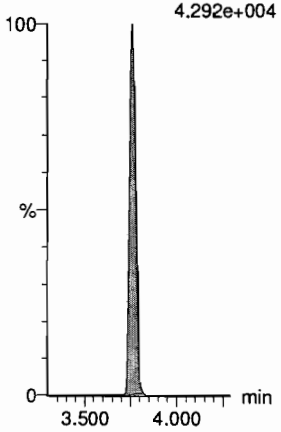


7:3 FTCA

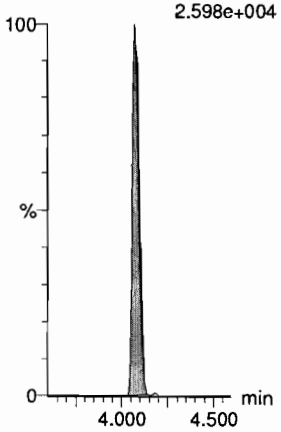




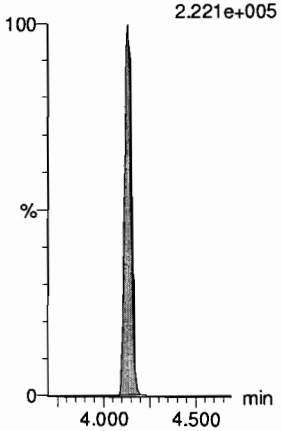
13C3-PFHxS



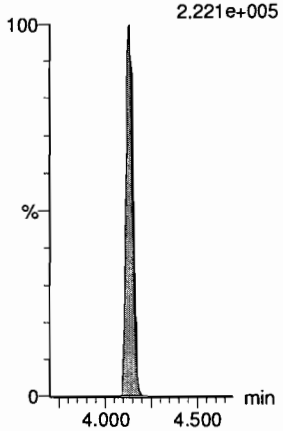
13C2-6:2 FTS



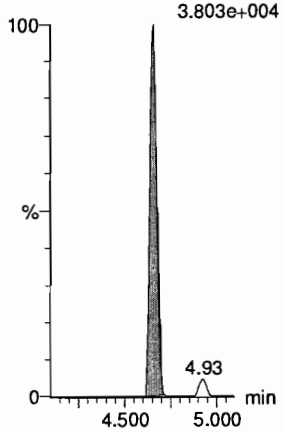
13C2-PFOA



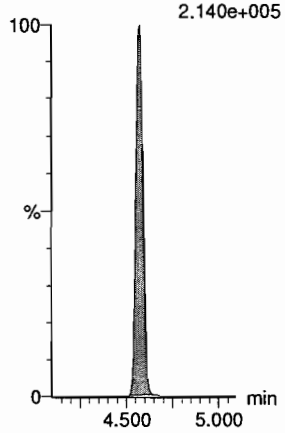
13C2-PFOA



13C8-PFOS



13C5-PFNA



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Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

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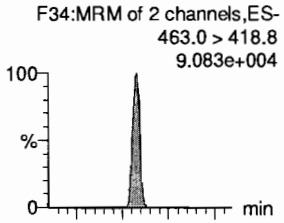

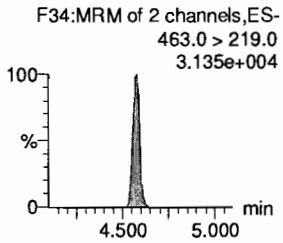

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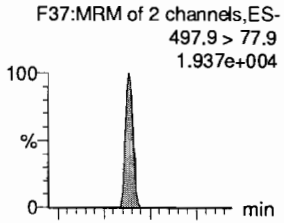
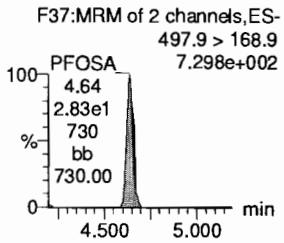
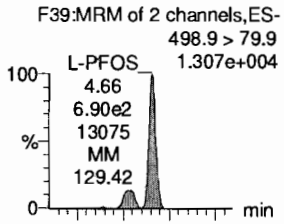
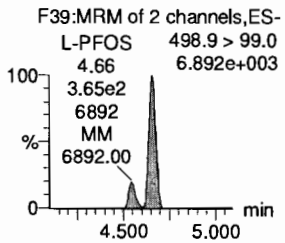


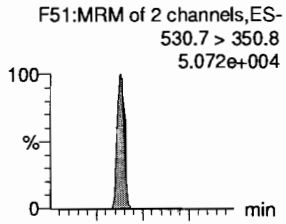


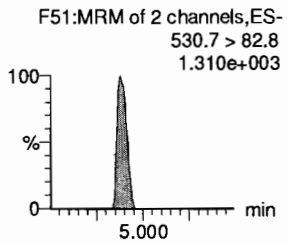
L-PFOS





9Cl-PF30NS





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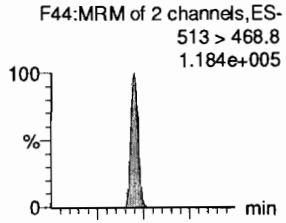
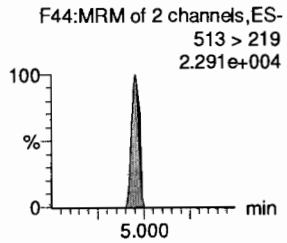
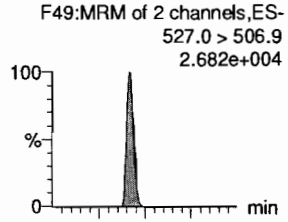
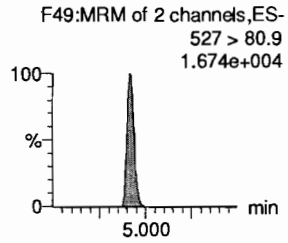




8:2 FTS





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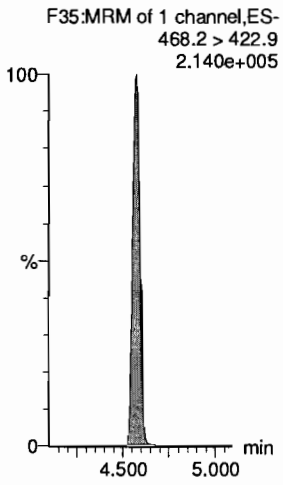
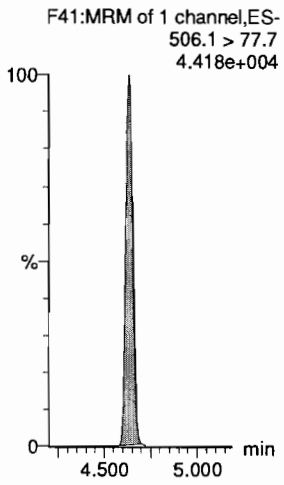


13C8-PFOSA



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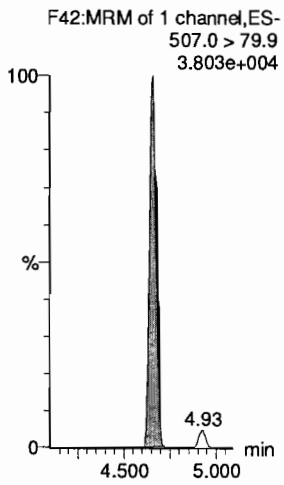

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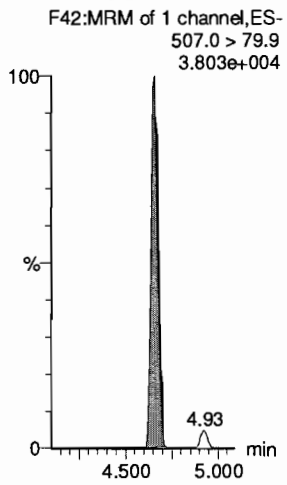

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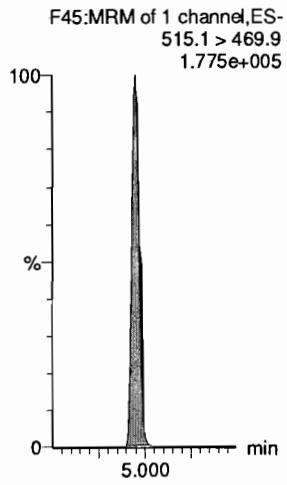
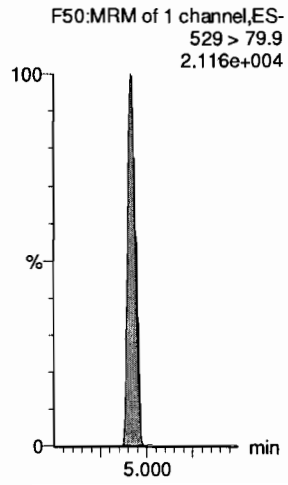


13C2-8:2 FTS



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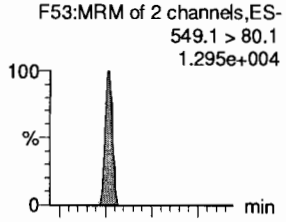
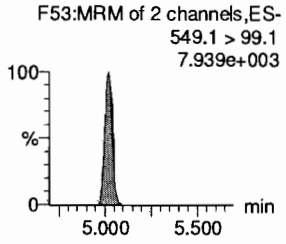
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

PFNS





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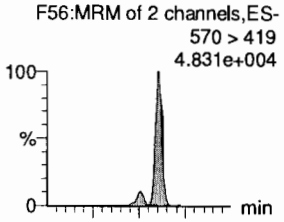

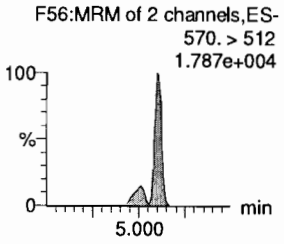

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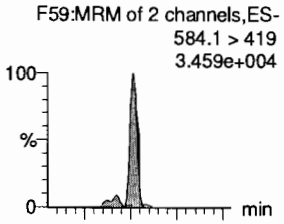

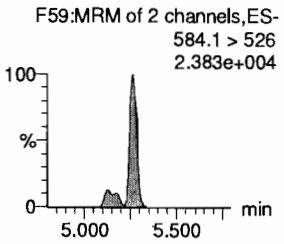

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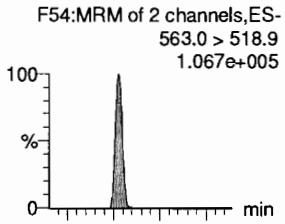

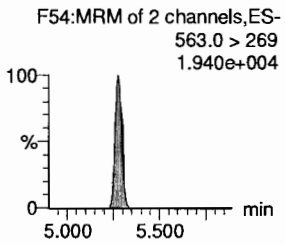

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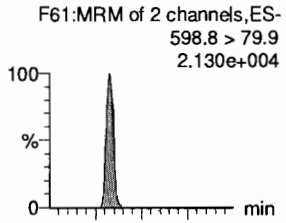

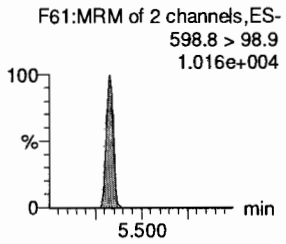

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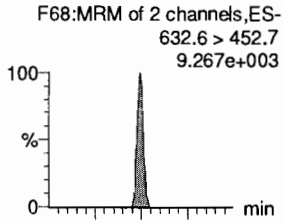
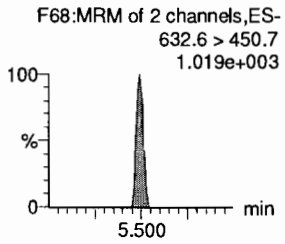
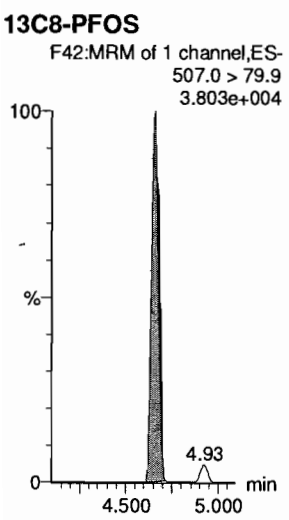




13C8-PFOS



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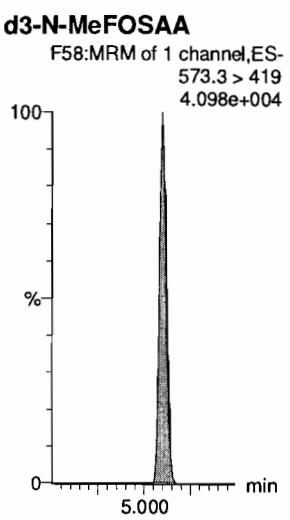

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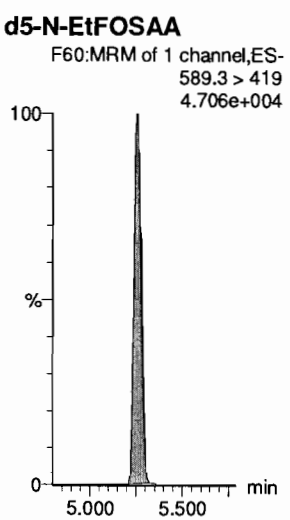

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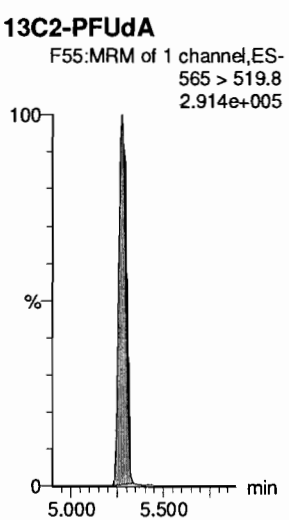
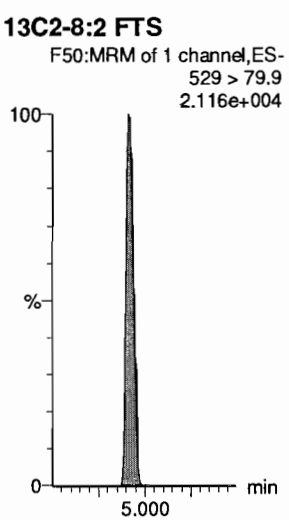
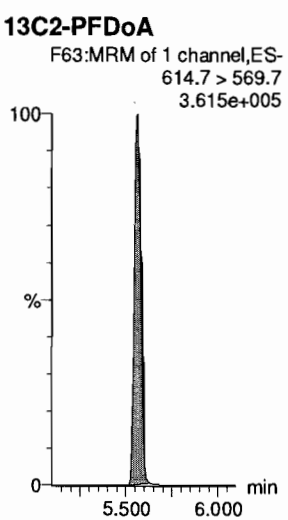


13C2-8:2 FTS



13C2-PFDoA



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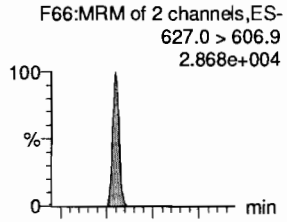
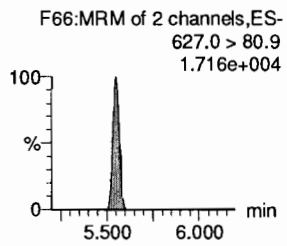
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

10:2 FTS





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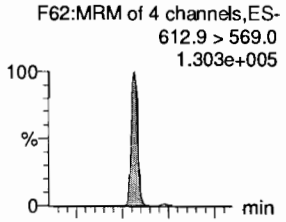

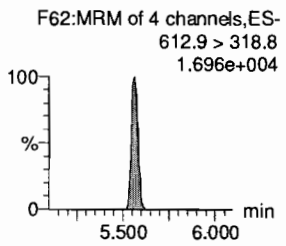

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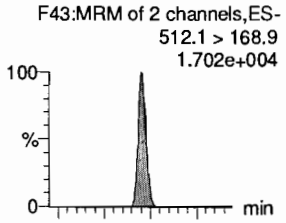

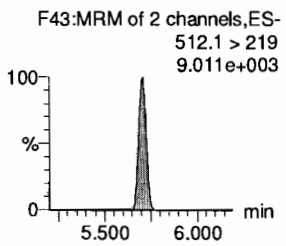

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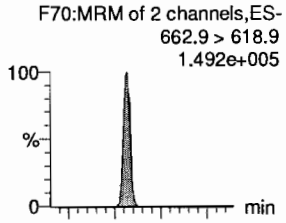

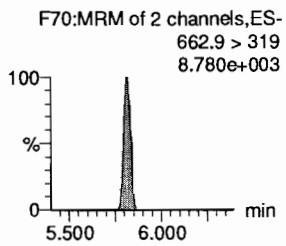

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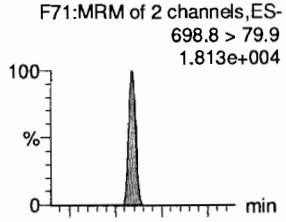

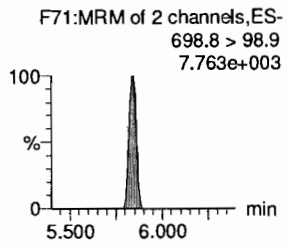

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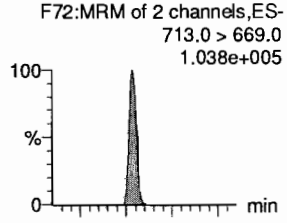
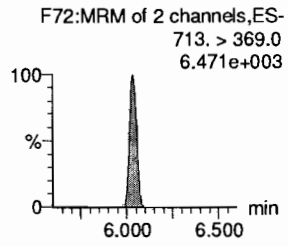
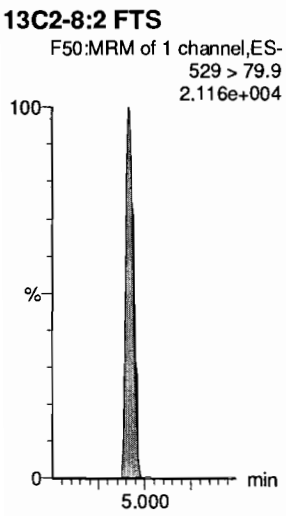




13C2-8:2 FTS



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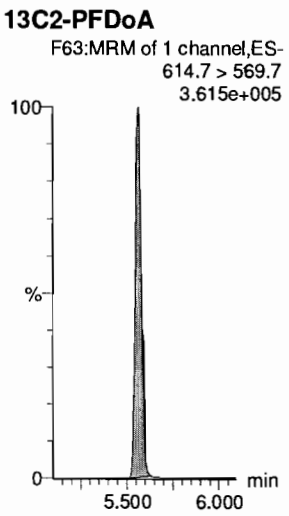

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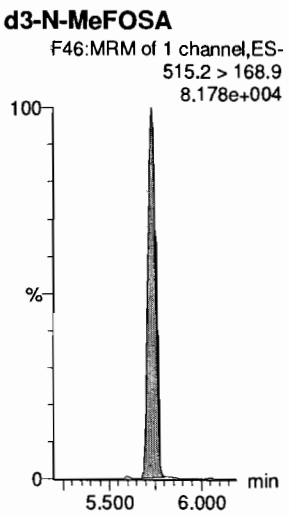

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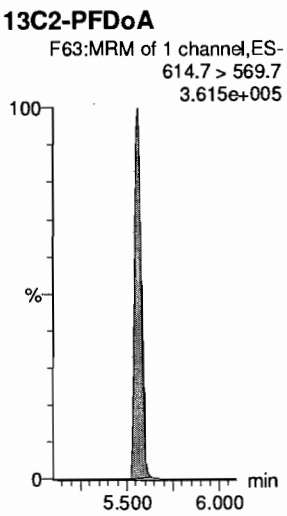

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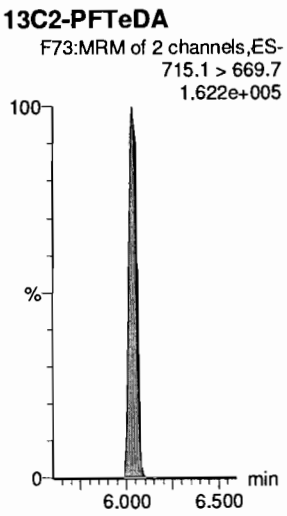

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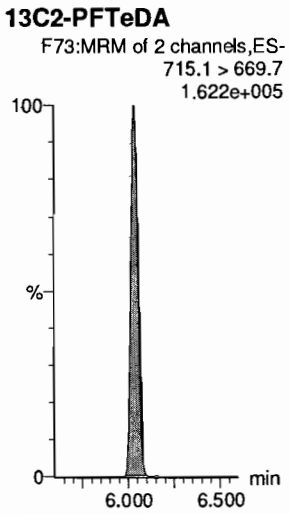

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Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

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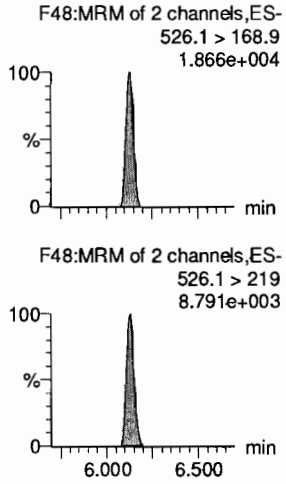

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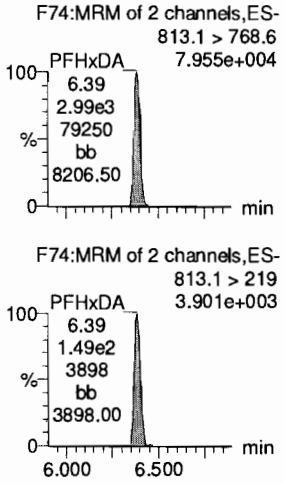

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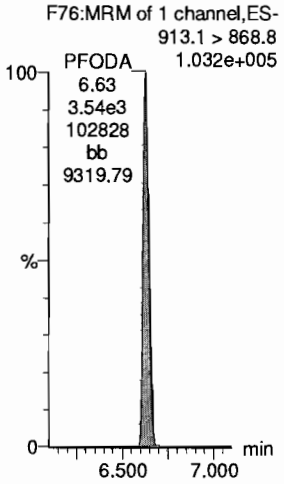
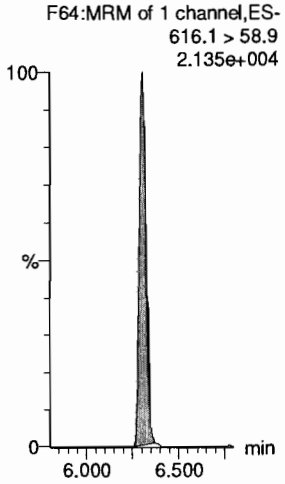


N-MeFOSE



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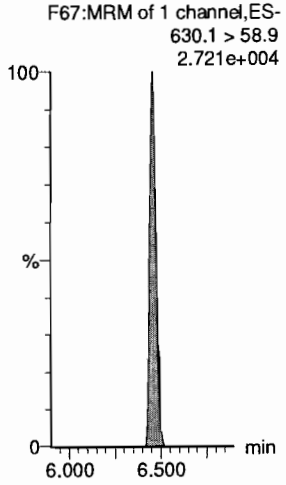

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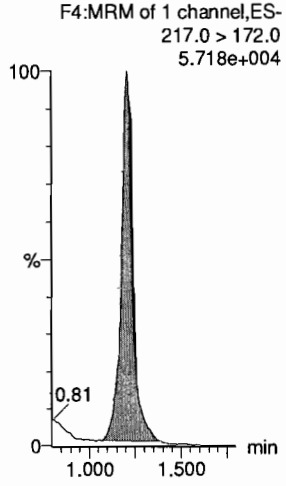

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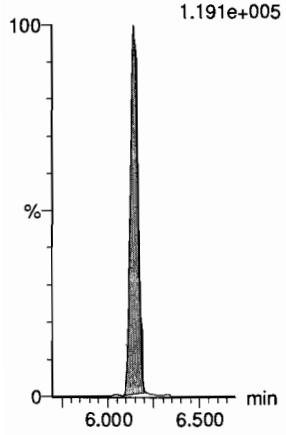
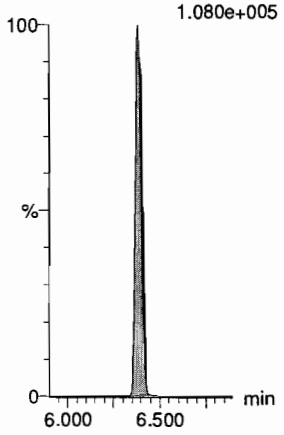


13C2-PFHxDA



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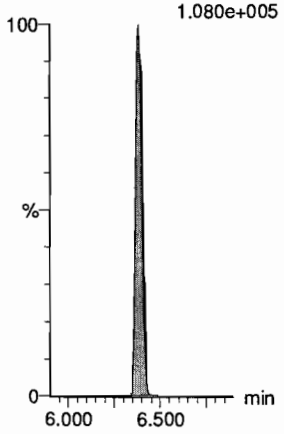
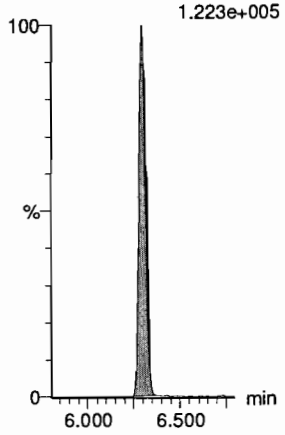


d7-N-MeFOSE



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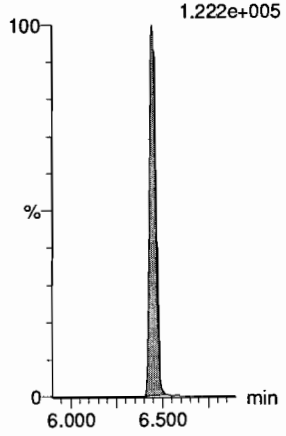

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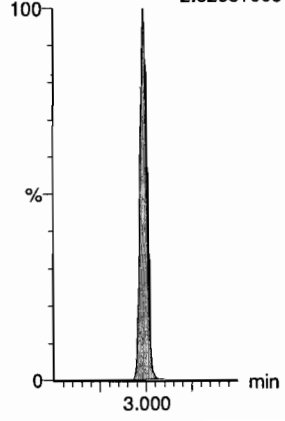

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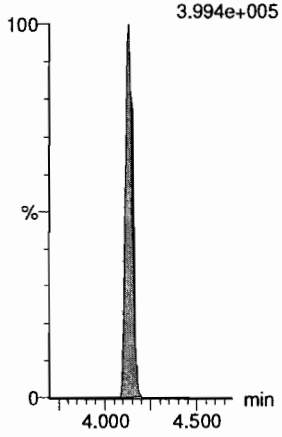
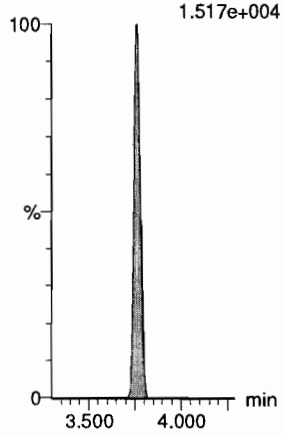
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_10, Date: 10-Jul-2019, Time: 14:26:10, ID: ST190710M2-5 PFC CS2 19G0805, Description: PFC CS2 19G0805

13C8-PFOA



18O2-PFHxS



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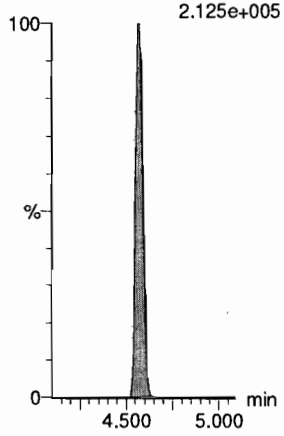

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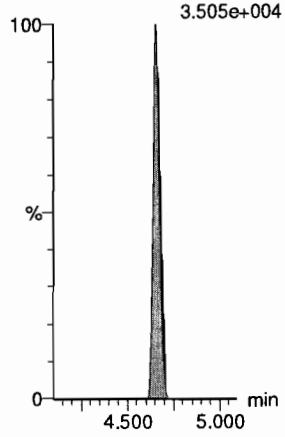

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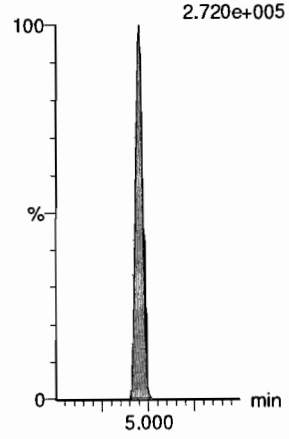
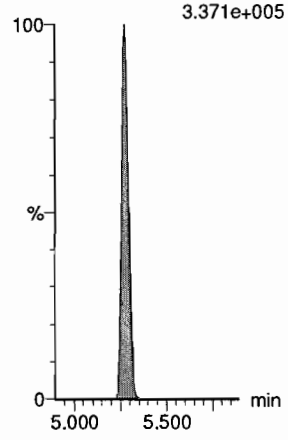


13C7-PFUdA

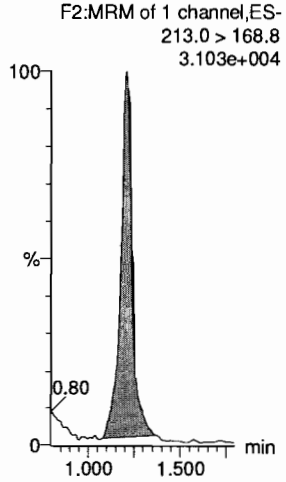


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

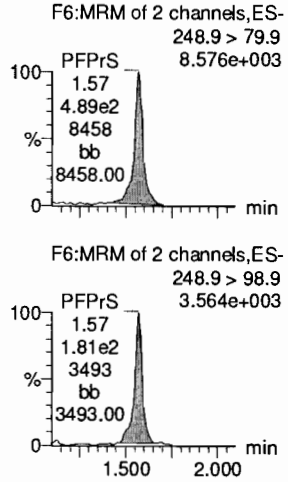
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

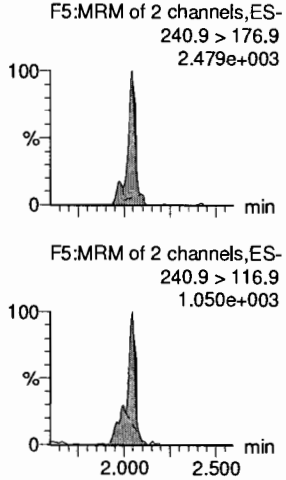
PFBA



PFPrS



3:3 FTCA



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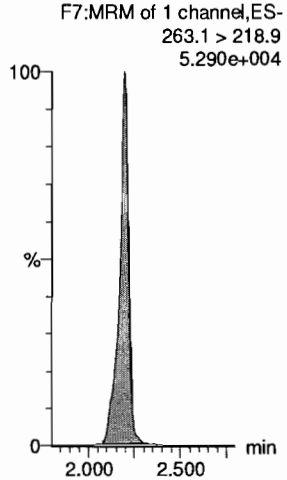
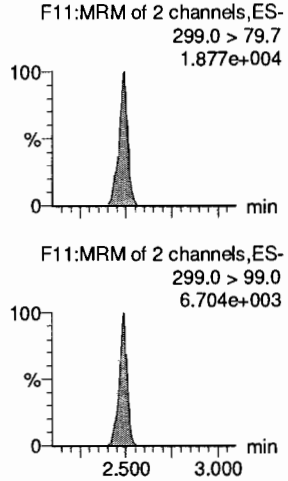
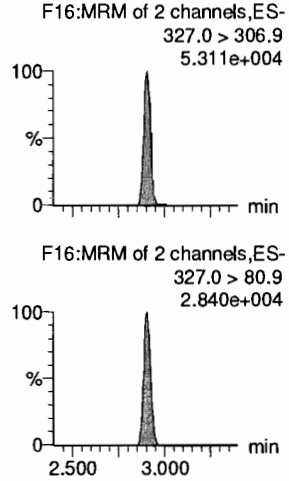


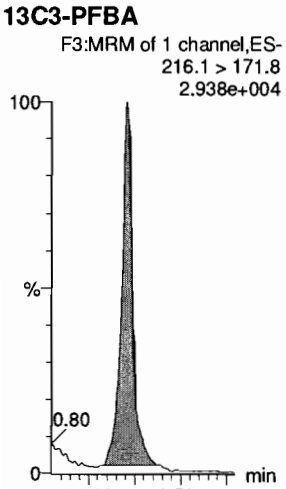
PFBS



4:2 FTS



13C3-PFBA



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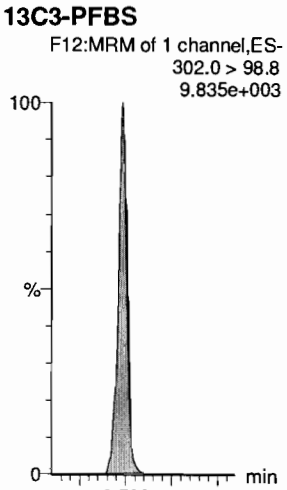
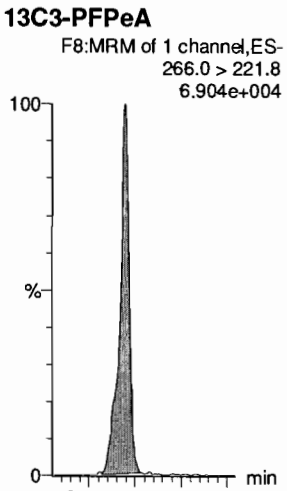


13C3-PFPeA



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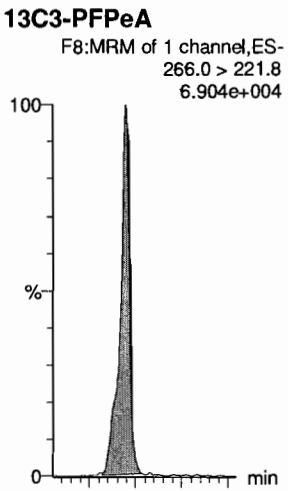

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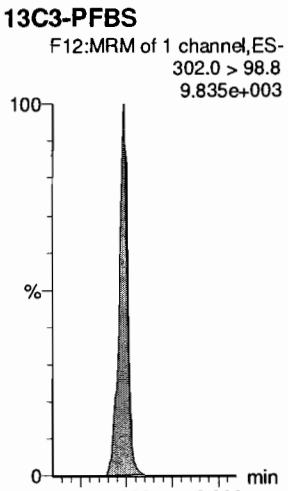
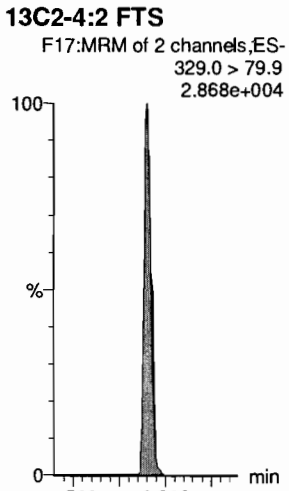


13C2-4:2 FTS

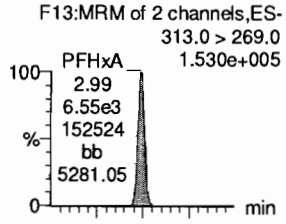


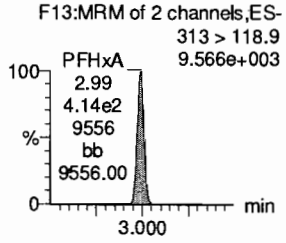
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

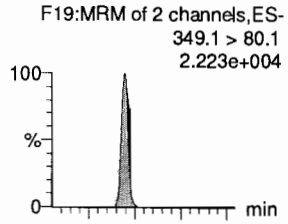
Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

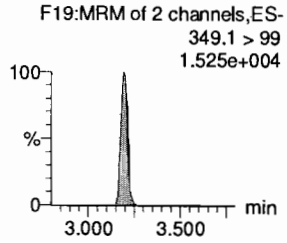
PFHxA



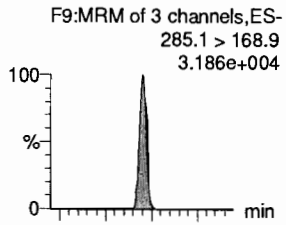


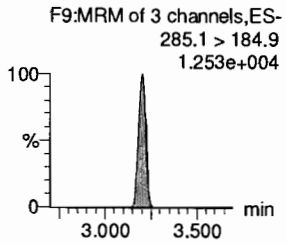
PFPeS



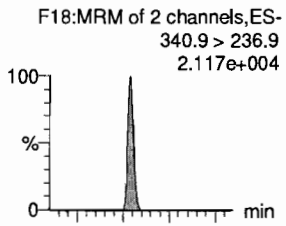


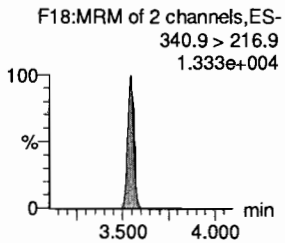
HFPO-DA





5:3 FTCA





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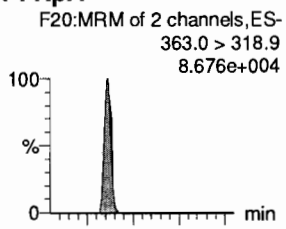
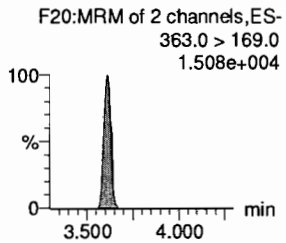
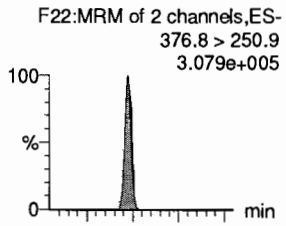
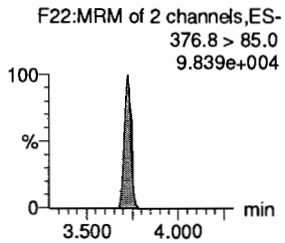


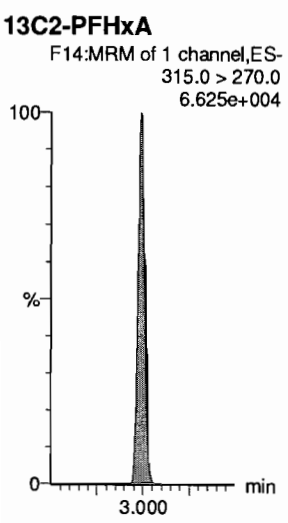


ADONA

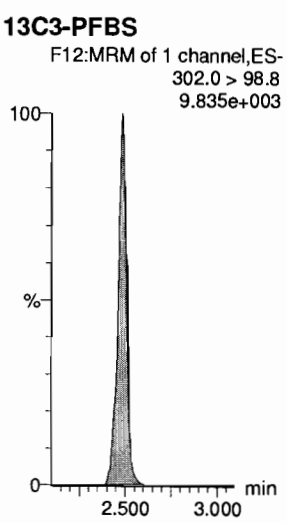




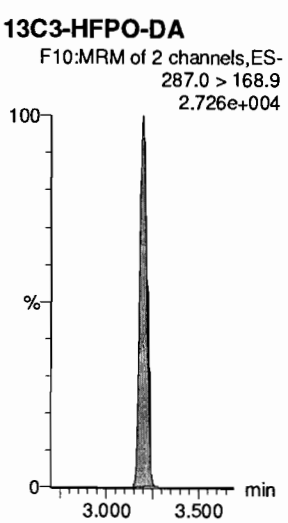
13C2-PFHxA



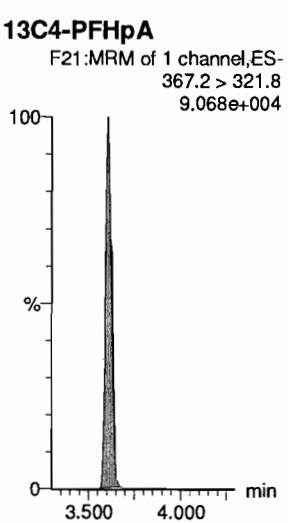
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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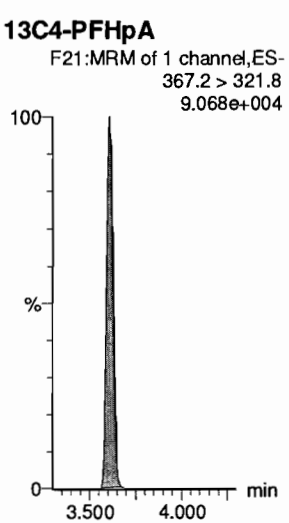
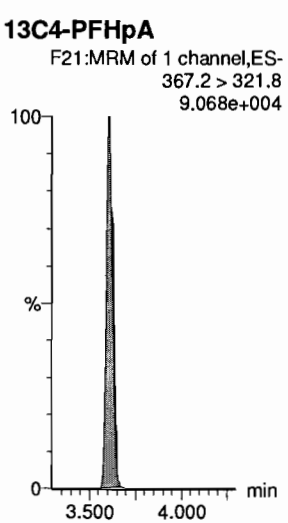


13C4-PFHpA

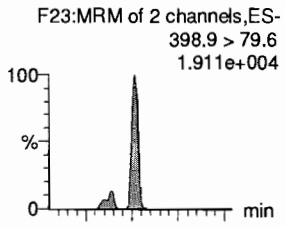


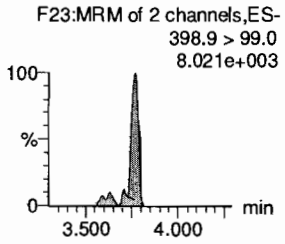
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

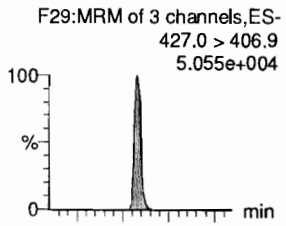
Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

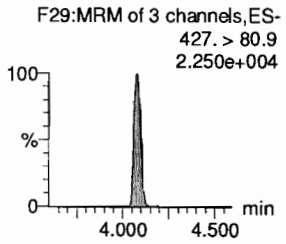
L-PFHxS



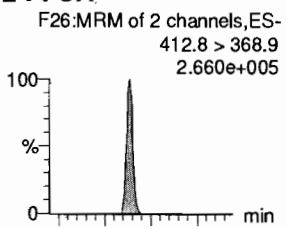


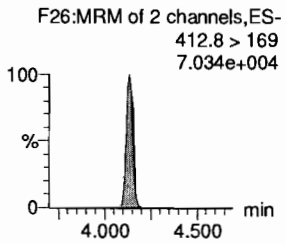
6:2 FTS



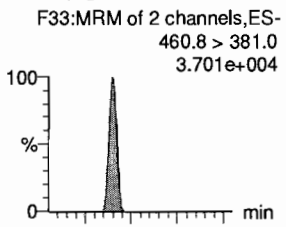


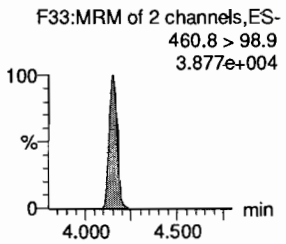
L-PFOA



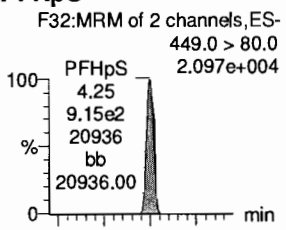


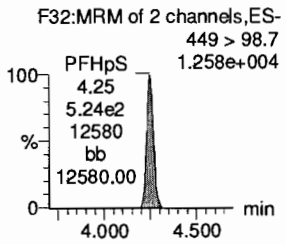
PFEChS



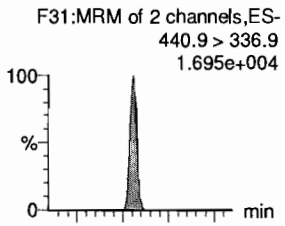


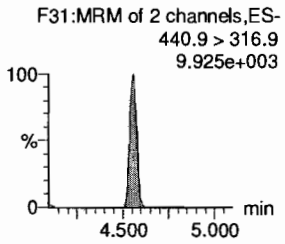
PFHpS



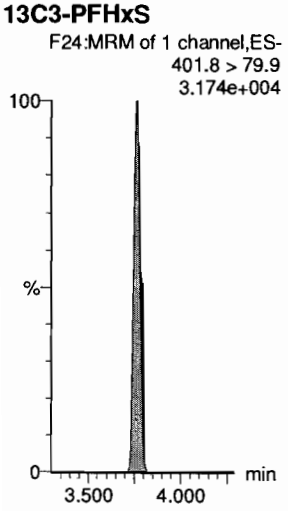


7:3 FTCA

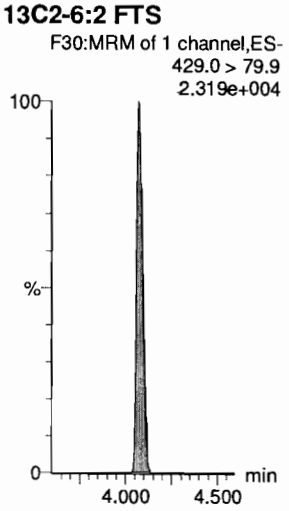




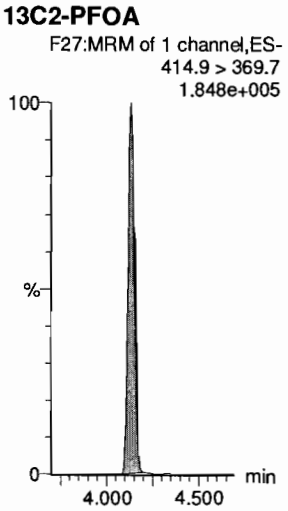
13C3-PFHxS



13C2-6:2 FTS



13C2-PFOA



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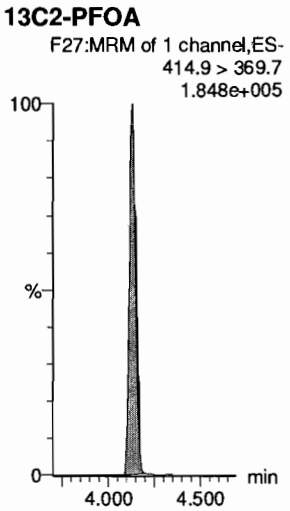
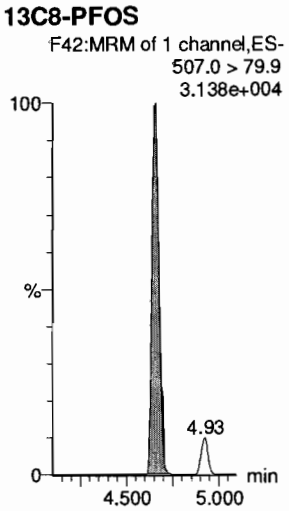
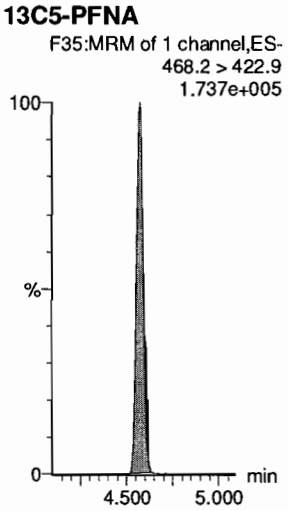


13C8-PFOS



13C5-PFNA

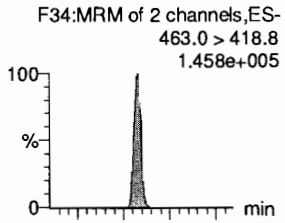


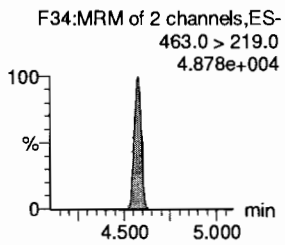
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

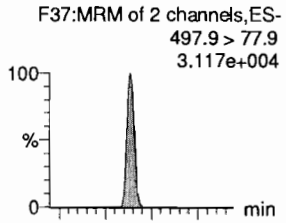
Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

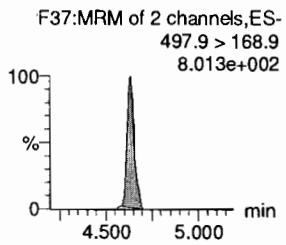
PFNA



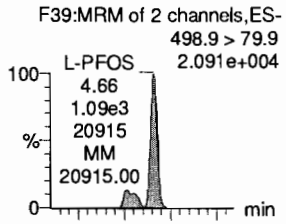


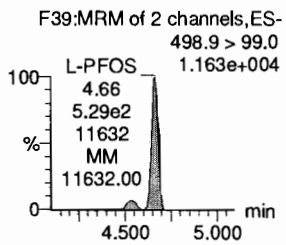
PFOSA



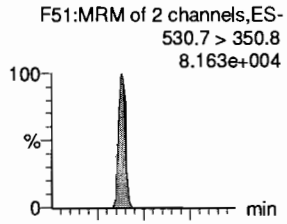


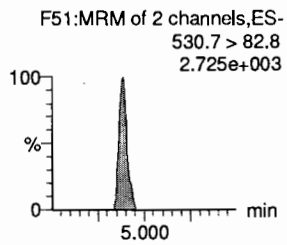
L-PFOS



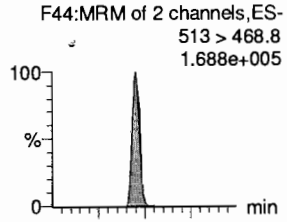


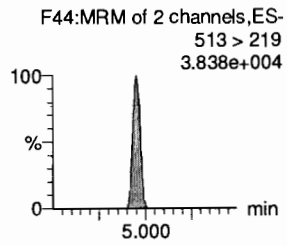
9Cl-PF30NS



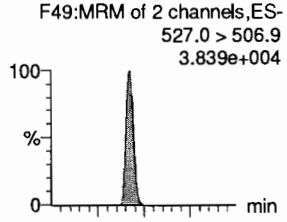


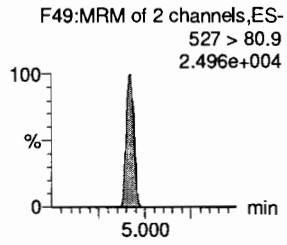
PFDA



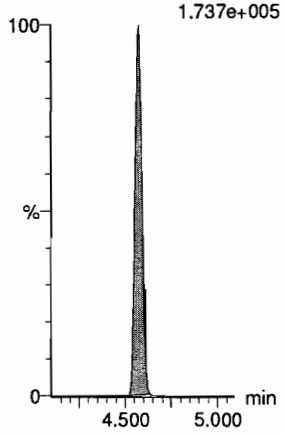


8:2 FTS

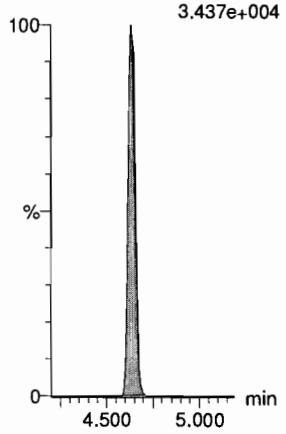




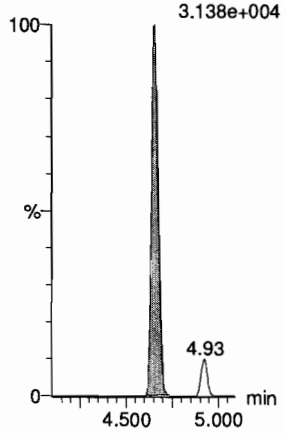
13C5-PFNA



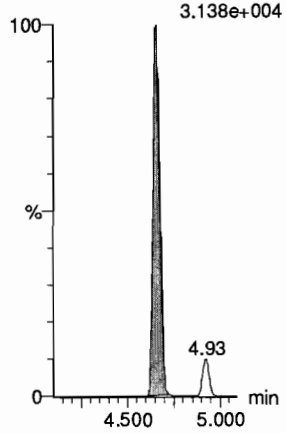
13C8-PFOSA



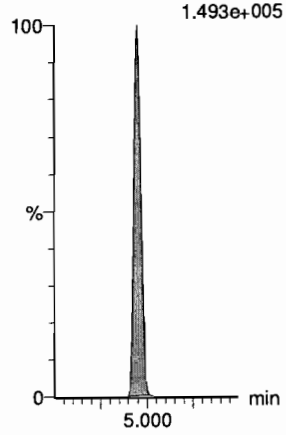
13C8-PFOS



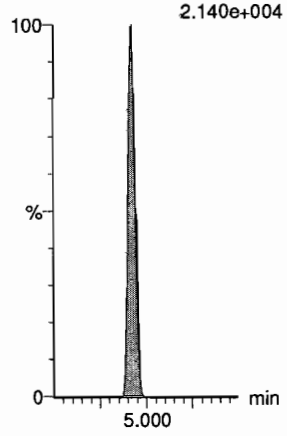
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

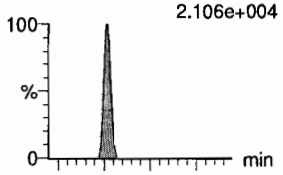


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

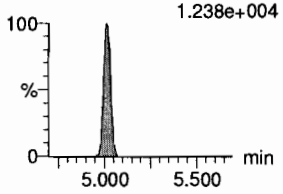
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

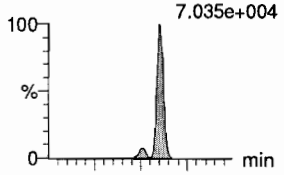
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
2.106e+004



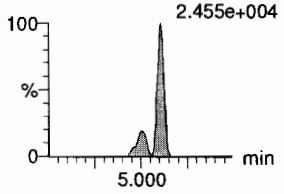
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.238e+004



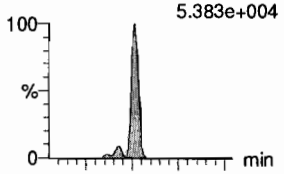
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
7.035e+004



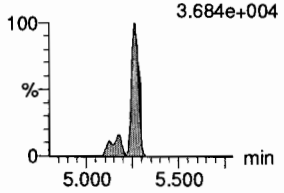
F56:MRM of 2 channels,ES-
570. > 512
2.455e+004



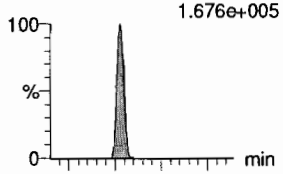
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
5.383e+004



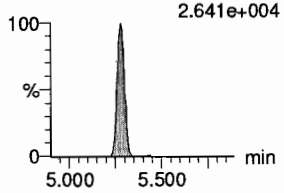
F59:MRM of 2 channels,ES-
584.1 > 526
3.684e+004



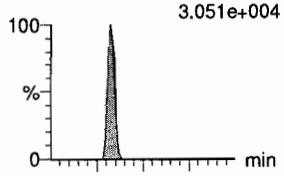
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.676e+005



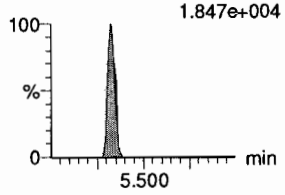
F54:MRM of 2 channels,ES-
563.0 > 269
2.641e+004



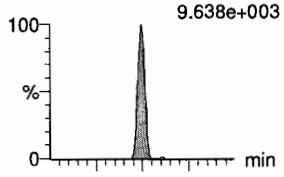
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
3.051e+004



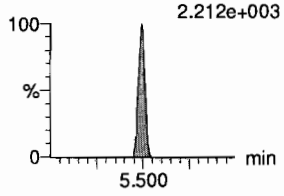
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.847e+004



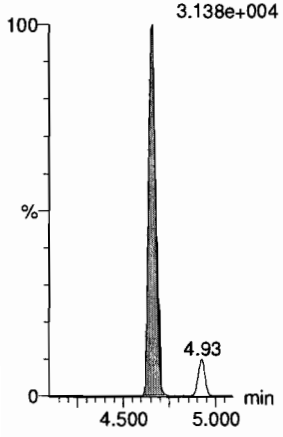
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
9.638e+003



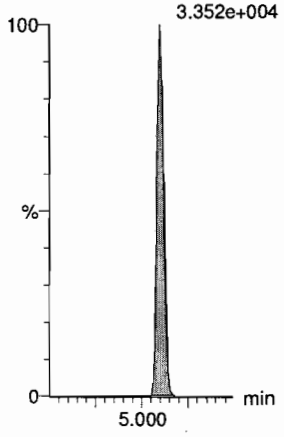
F68:MRM of 2 channels,ES-
632.6 > 450.7
2.212e+003



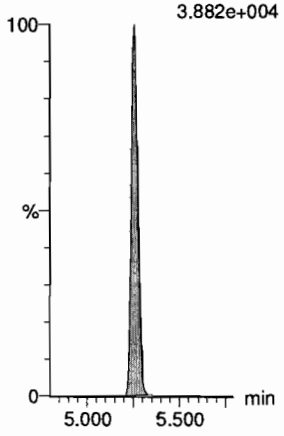
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
3.138e+004



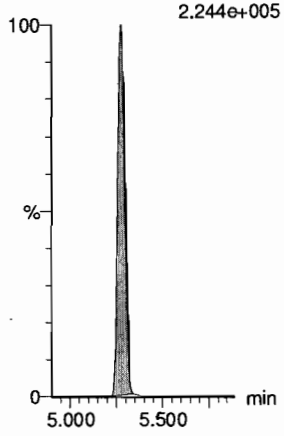
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
3.352e+004



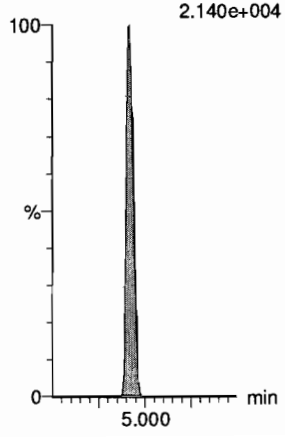
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
3.882e+004



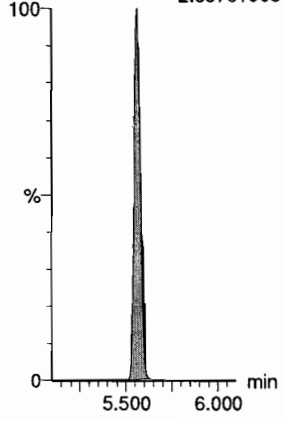
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
2.244e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.140e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
2.887e+005

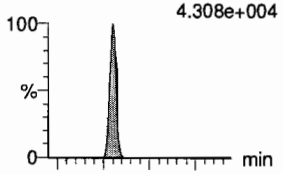


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

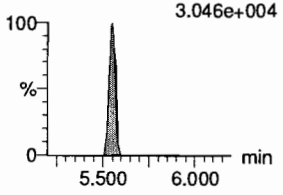
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

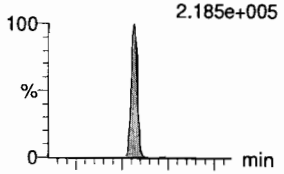
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
4.308e+004



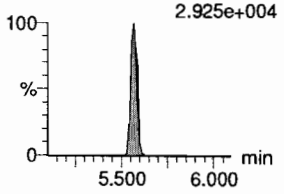
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.046e+004



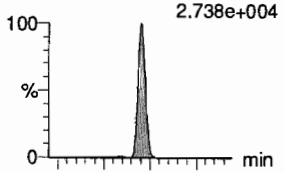
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.185e+005



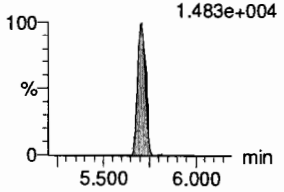
F62:MRM of 4 channels,ES-
612.9 > 318.8
2.925e+004



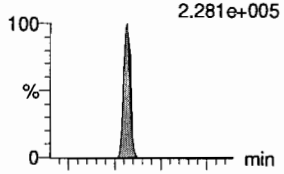
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
2.738e+004



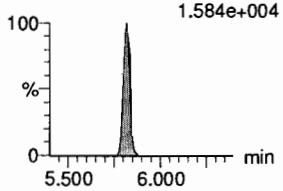
F43:MRM of 2 channels,ES-
512.1 > 219
1.483e+004



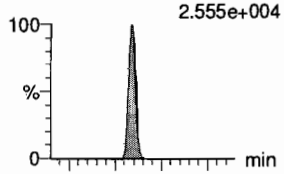
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.281e+005



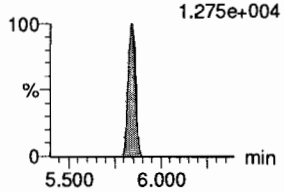
F70:MRM of 2 channels,ES-
662.9 > 319
1.584e+004



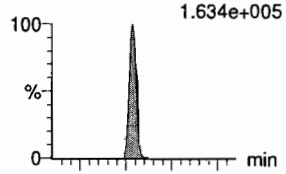
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
2.555e+004



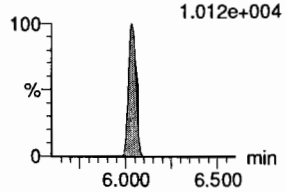
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.275e+004



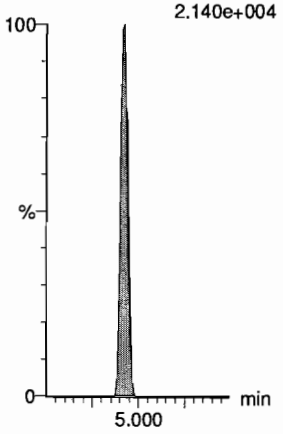
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.634e+005



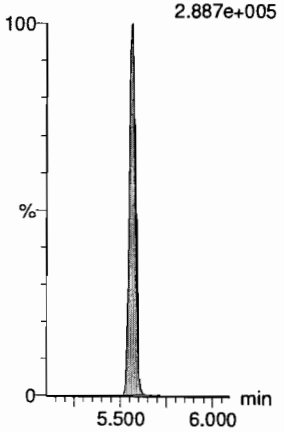
F72:MRM of 2 channels,ES-
713. > 369.0
1.012e+004



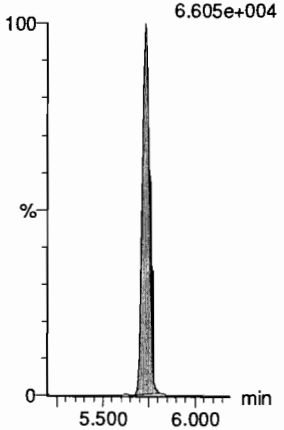
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.140e+004



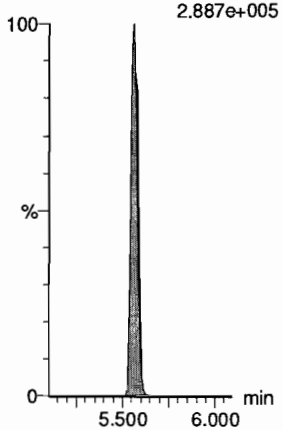
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
2.887e+005



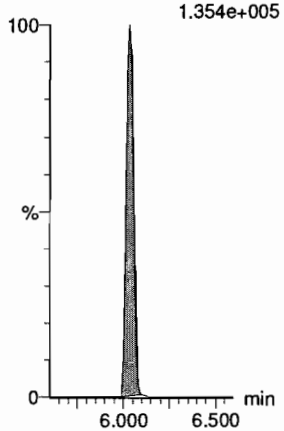
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
6.605e+004



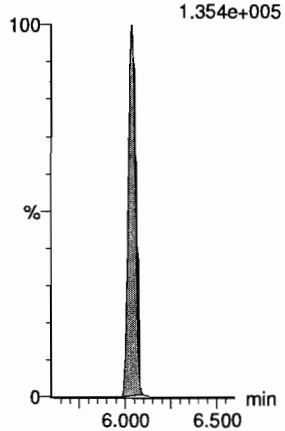
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
2.887e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.354e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
1.354e+005

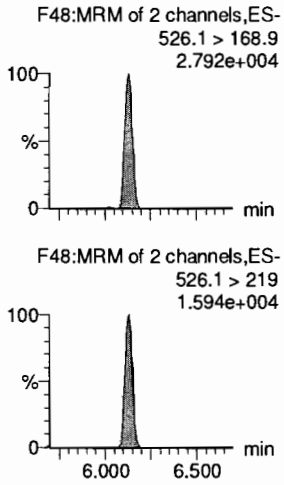


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

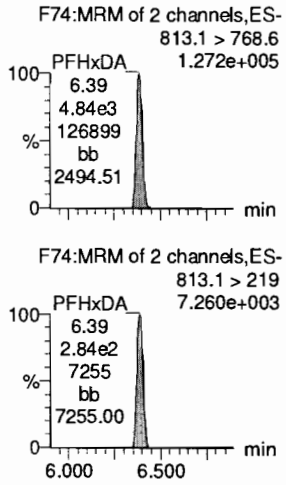
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

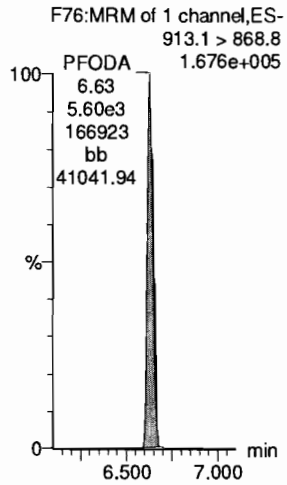
N-EtFOSA



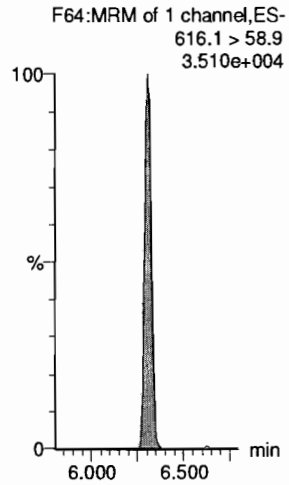
PFHxDA



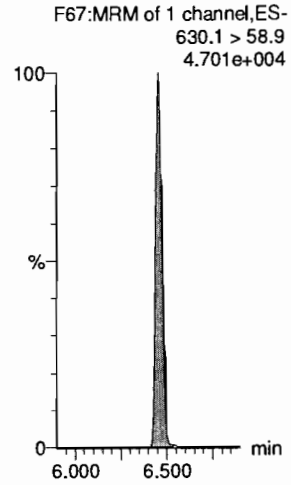
PFODA



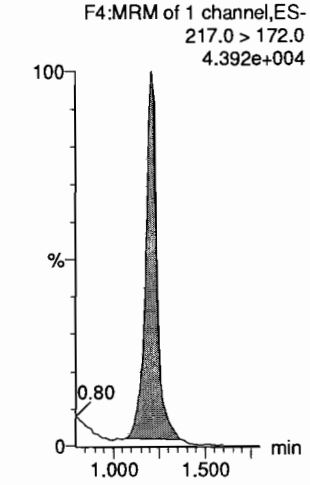
N-MeFOSE



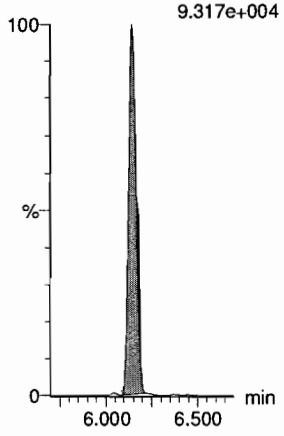
N-EtFOSE



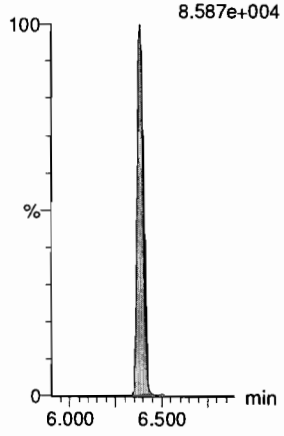
13C4-PFBA



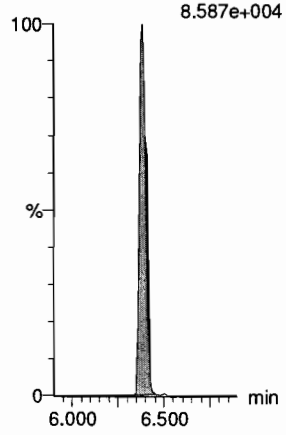
d5-N-ETFOSA



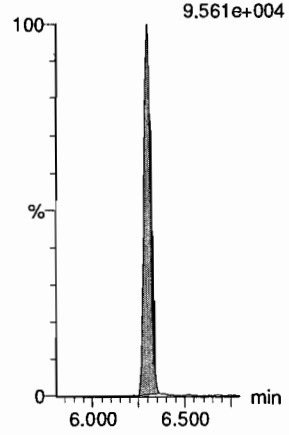
13C2-PFHxDA



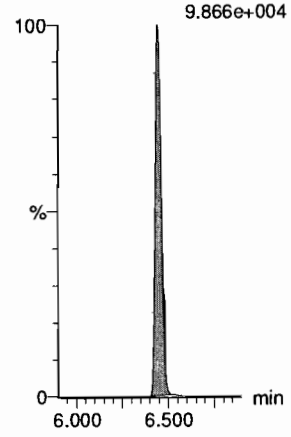
13C2-PFHxDA



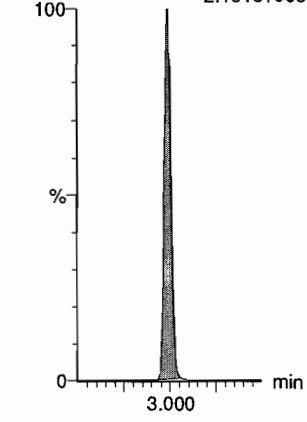
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

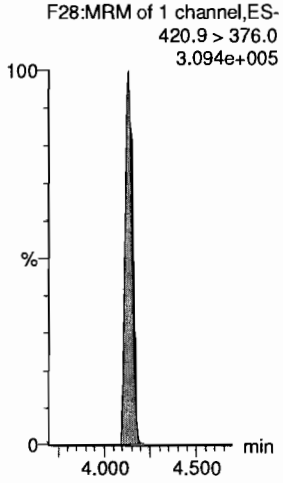


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

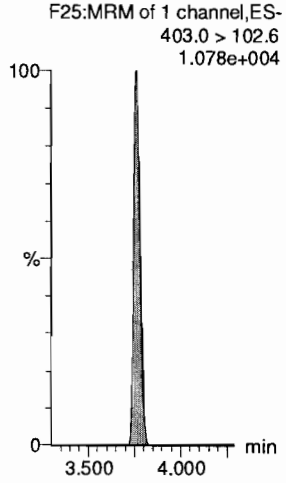
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_11, Date: 10-Jul-2019, Time: 14:36:42, ID: ST190710M2-6 PFC CS3 19G0806, Description: PFC CS3 19G0806

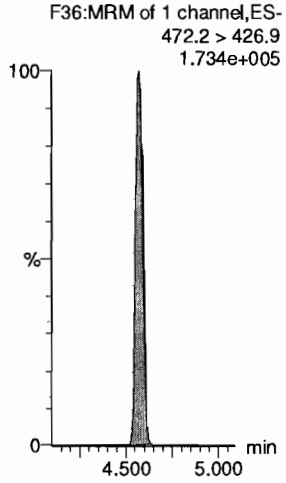
13C8-PFOA



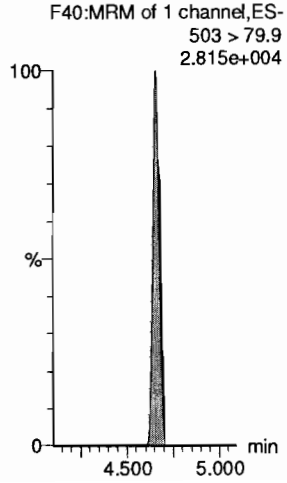
18O2-PFHxS



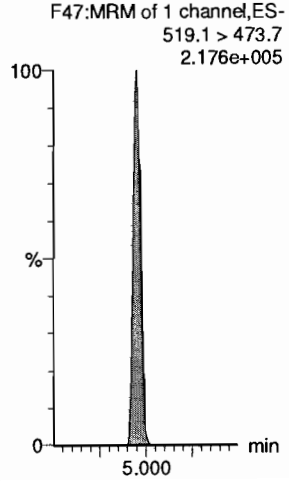
13C9-PFNA



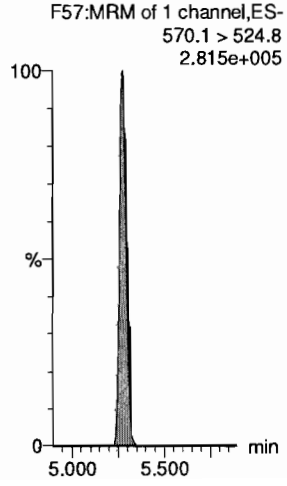
13C4-PFOS



13C6-PFDA



13C7-PFUdA

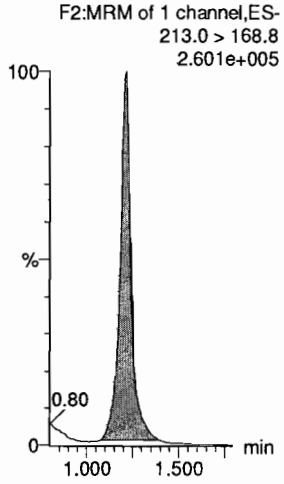


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

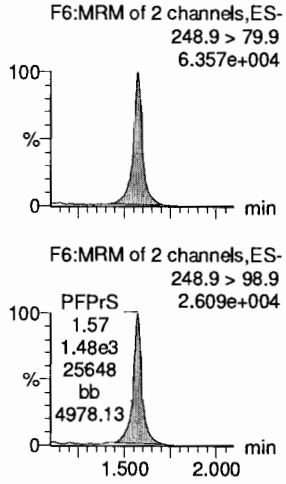
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

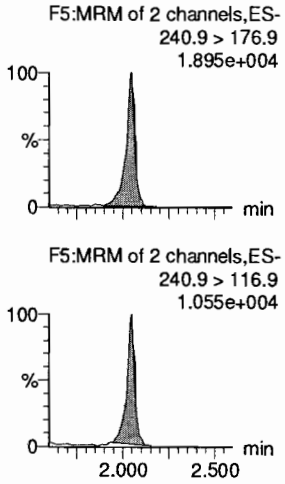
PFBA



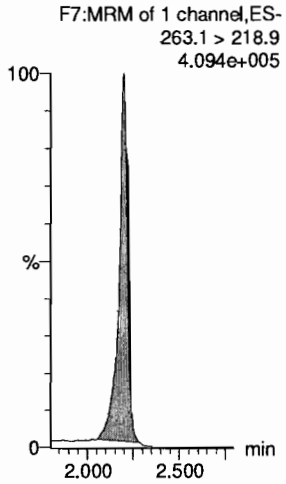
PFPrS



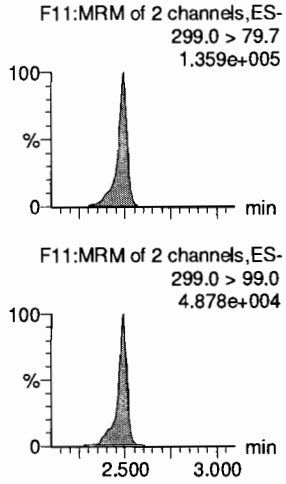
3:3 FTCA



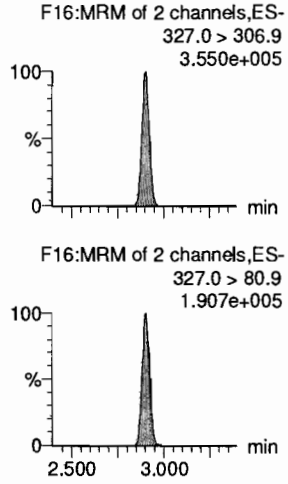
PFPeA



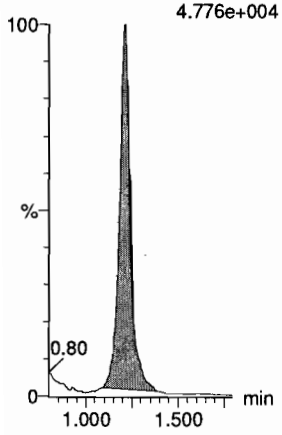
PFBS



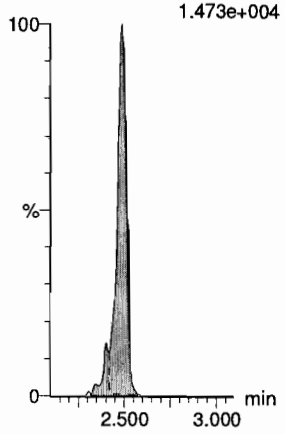
4:2 FTS



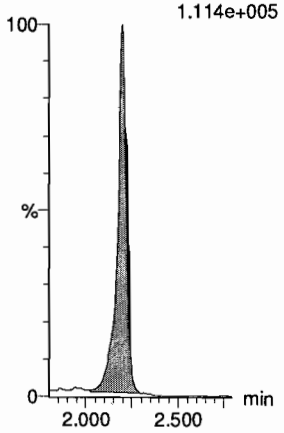
13C3-PFBA



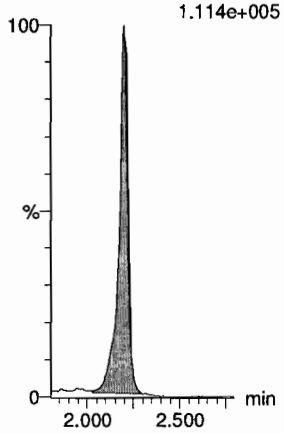
13C3-PFBS



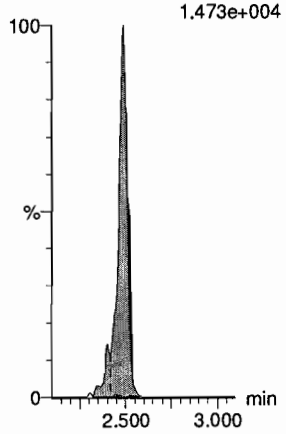
13C3-PFPeA



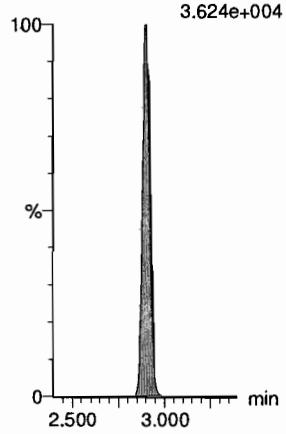
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

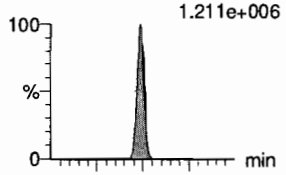


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

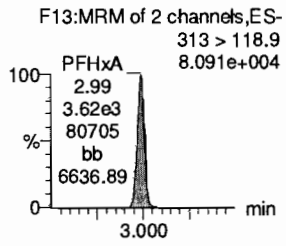
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

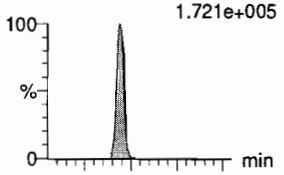
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.211e+006



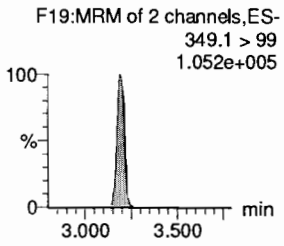
F13:MRM of 2 channels,ES-
313 > 118.9
8.091e+004



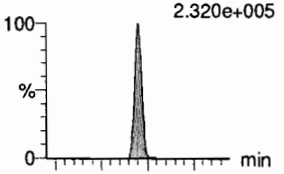
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
1.721e+005



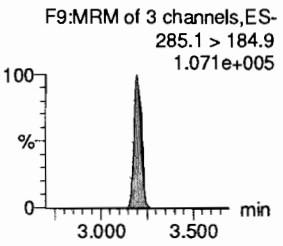
F19:MRM of 2 channels,ES-
349.1 > 99
1.052e+005



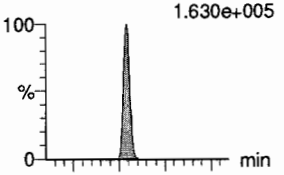
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
2.320e+005



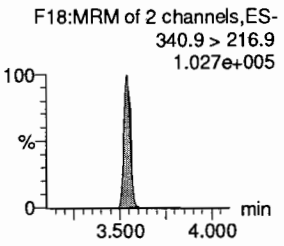
F9:MRM of 3 channels,ES-
285.1 > 184.9
1.071e+005



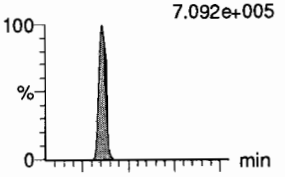
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
1.630e+005



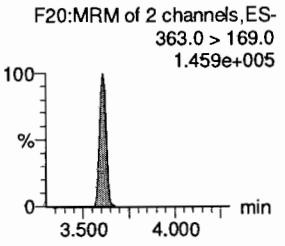
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.027e+005



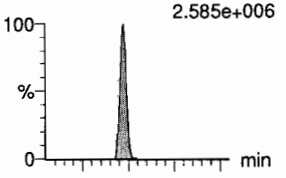
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
7.092e+005



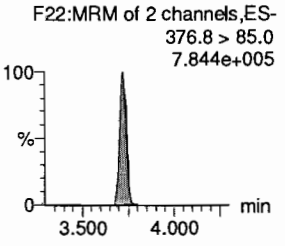
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.459e+005



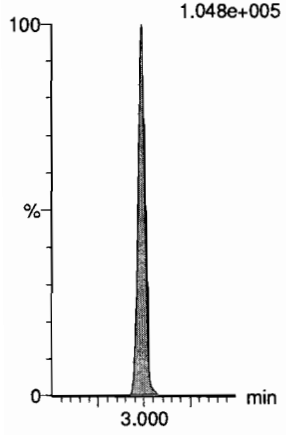
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
2.585e+006



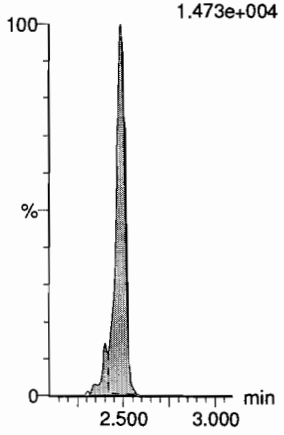
F22:MRM of 2 channels,ES-
376.8 > 85.0
7.844e+005



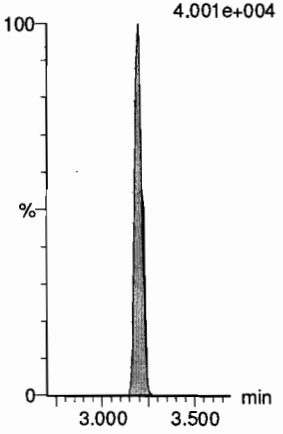
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.048e+005



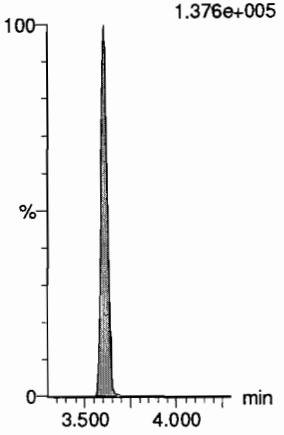
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.473e+004



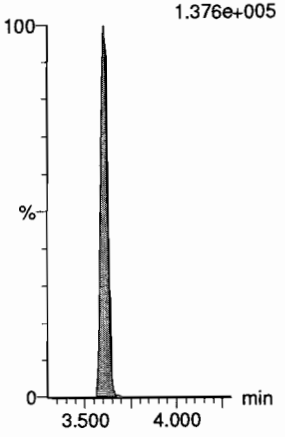
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
4.001e+004



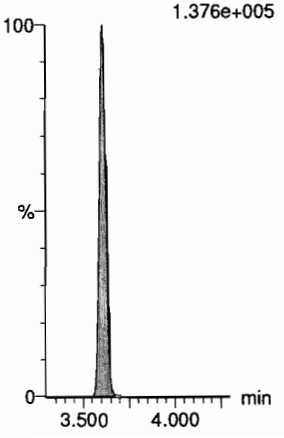
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.376e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.376e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.376e+005

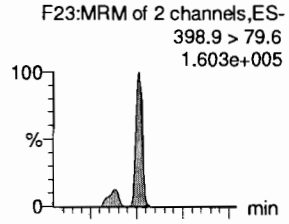


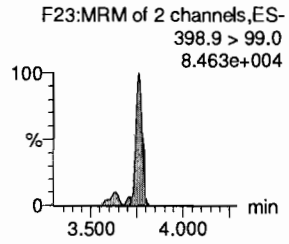
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

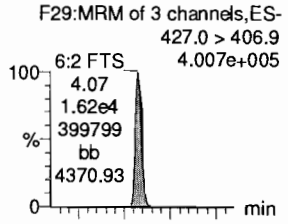
Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

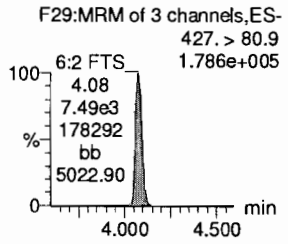
L-PFHxS



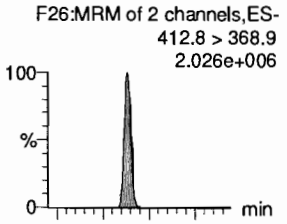


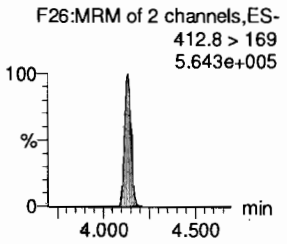
6:2 FTS



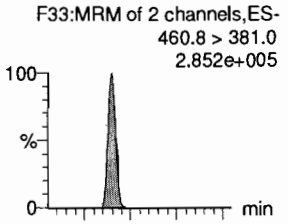


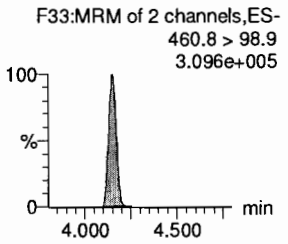
L-PFOA



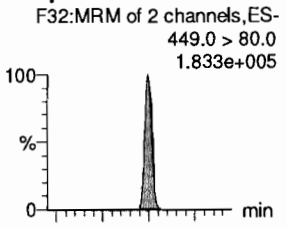


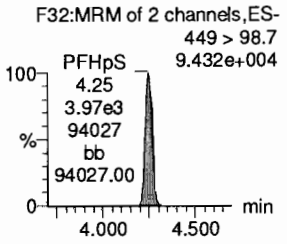
PFEChS



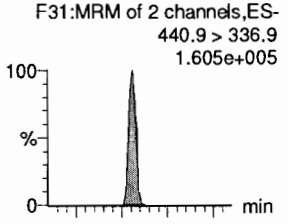


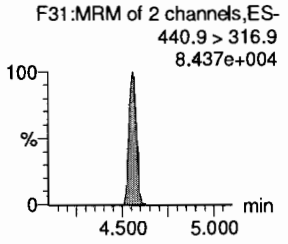
PFHpS



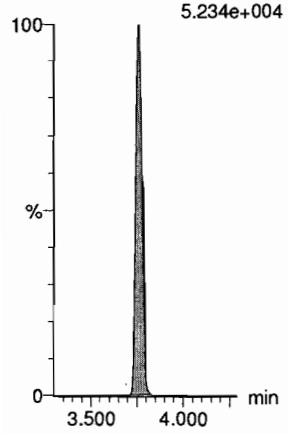


7:3 FTCA

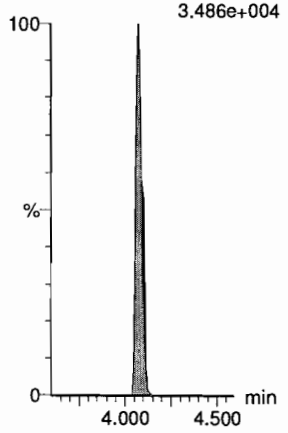




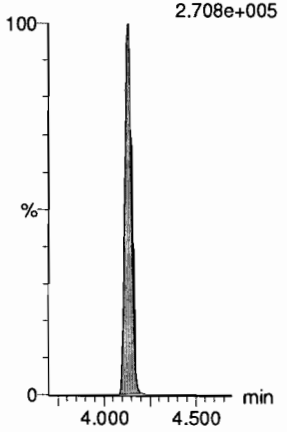
13C3-PFHxS



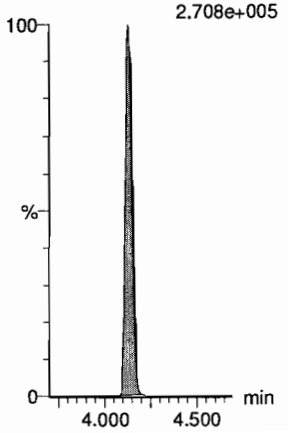
13C2-6:2 FTS



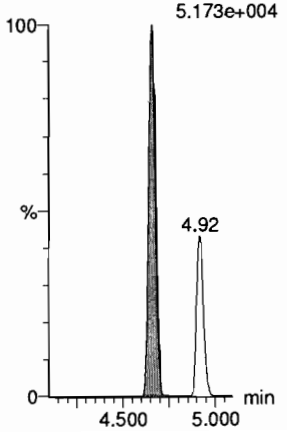
13C2-PFOA



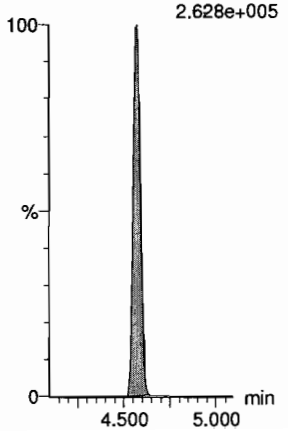
13C2-PFOA



13C8-PFOS



13C5-PFNA

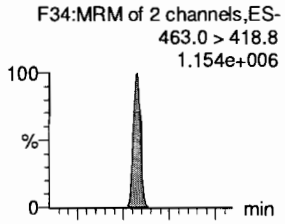


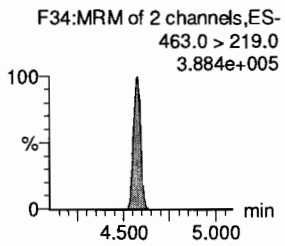
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

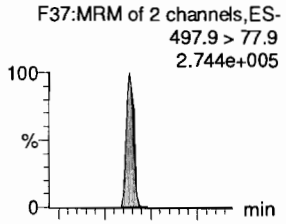
Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

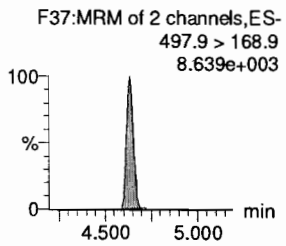
PFNA



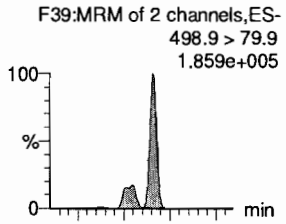


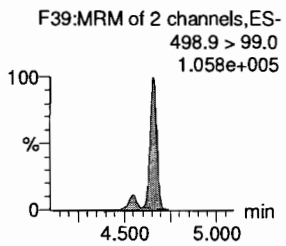
PFOSA



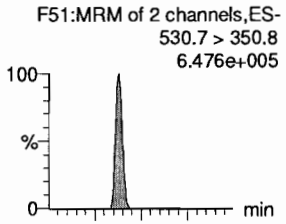


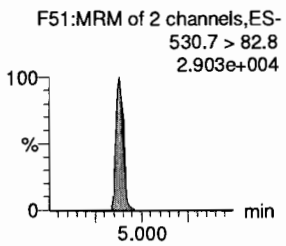
L-PFOS



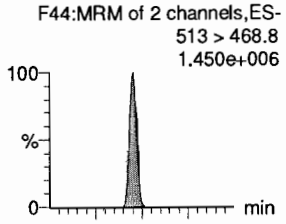


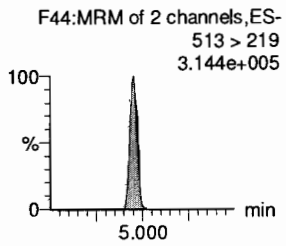
9Cl-PF30NS



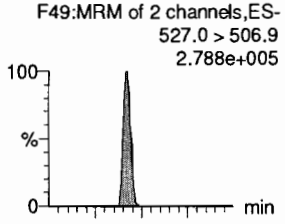


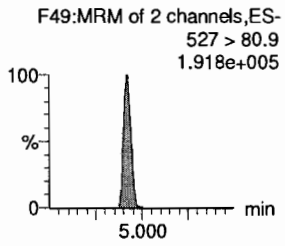
PFDA



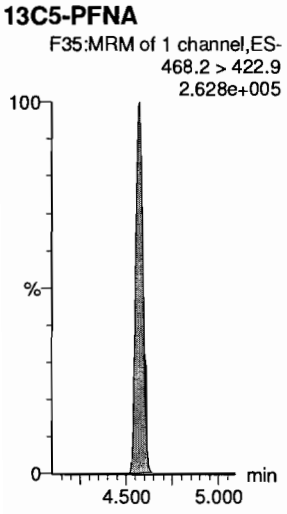


8:2 FTS

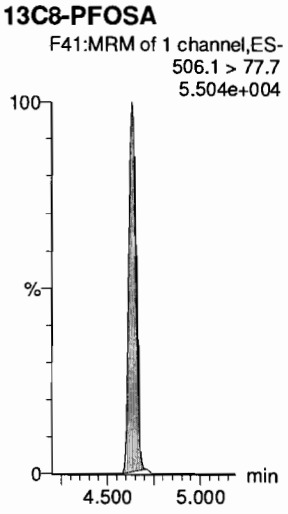




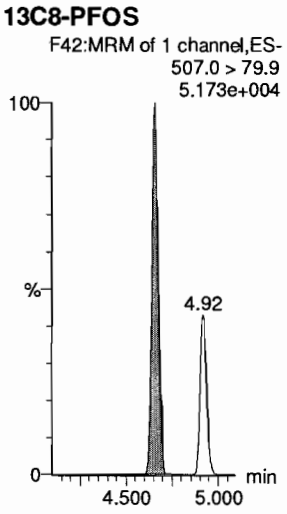
13C5-PFNA



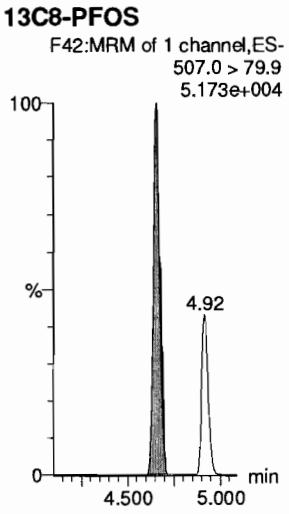
13C8-PFOSA



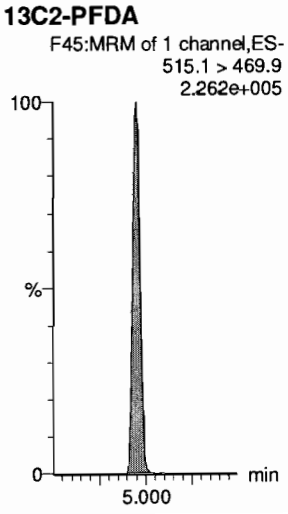
13C8-PFOS



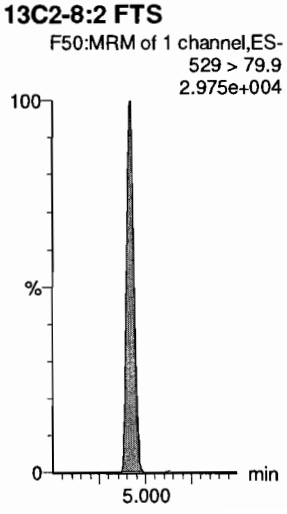
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

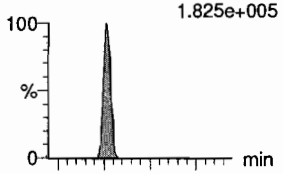


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

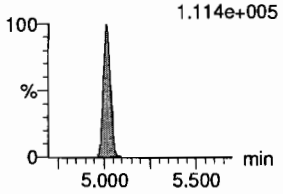
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

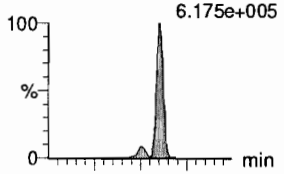
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
1.825e+005



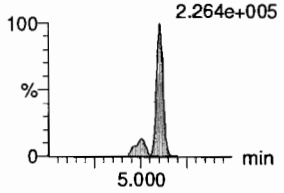
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.114e+005



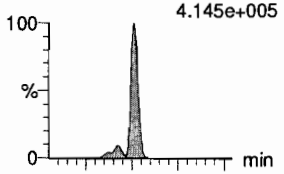
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
6.175e+005



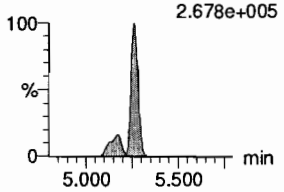
F56:MRM of 2 channels,ES-
570. > 512
2.264e+005



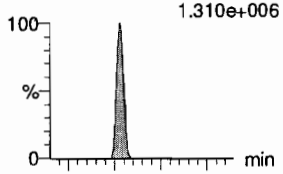
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
4.145e+005



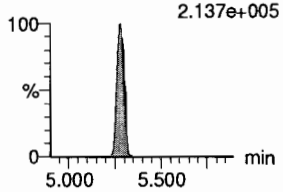
F59:MRM of 2 channels,ES-
584.1 > 526
2.678e+005



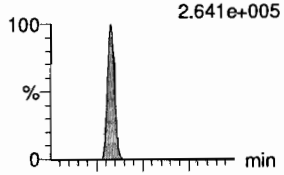
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.310e+006



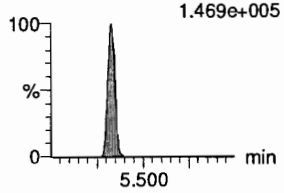
F54:MRM of 2 channels,ES-
563.0 > 269
2.137e+005



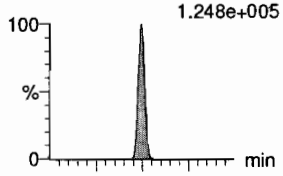
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
2.641e+005



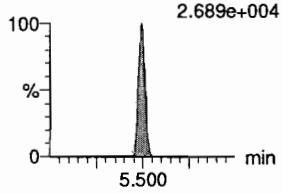
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.469e+005



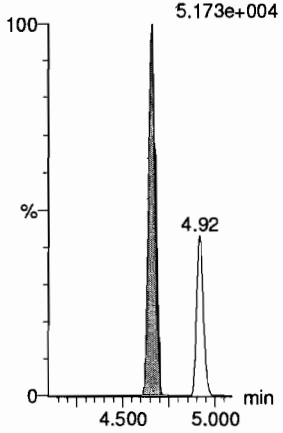
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.248e+005



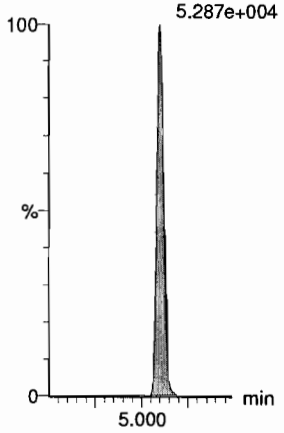
F68:MRM of 2 channels,ES-
632.6 > 450.7
2.689e+004



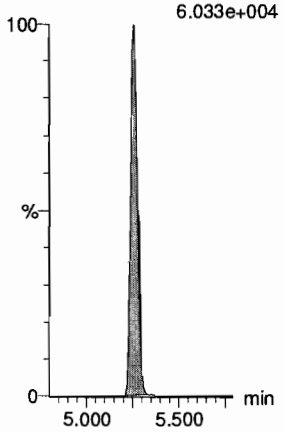
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
5.173e+004



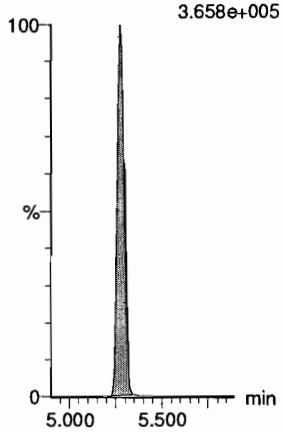
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
5.287e+004



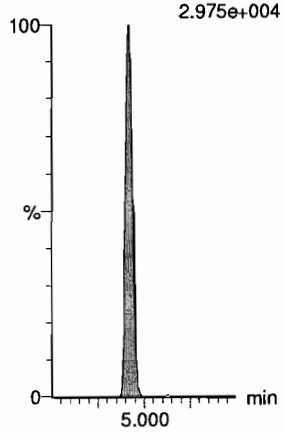
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
6.033e+004



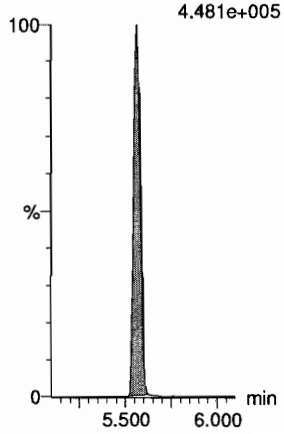
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
3.658e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
2.975e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
4.481e+005

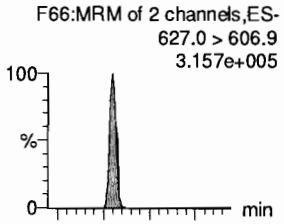


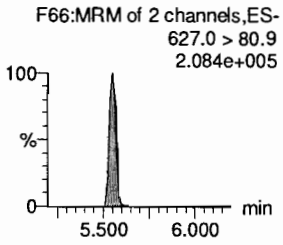
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

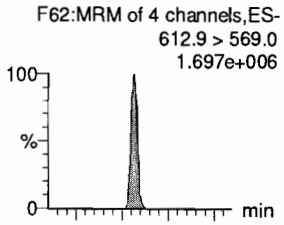
Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

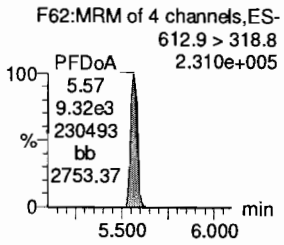
10:2 FTS



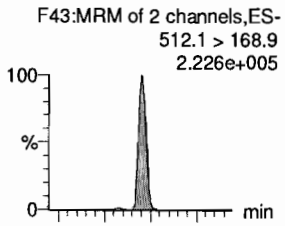


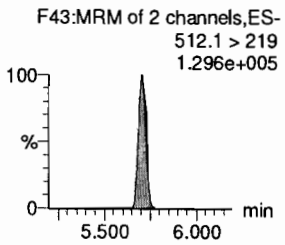
PFDoA



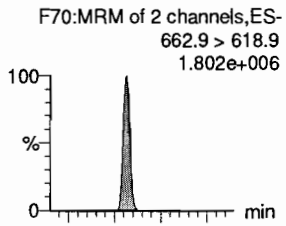


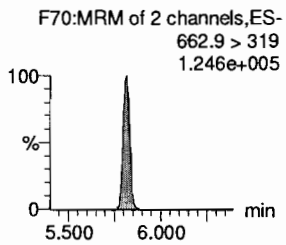
N-MeFOSA



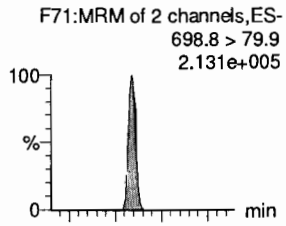


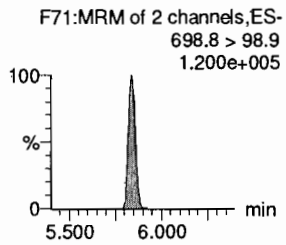
PFTrDA



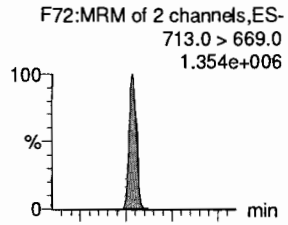


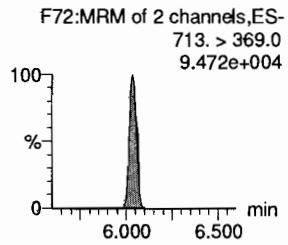
PFDoS



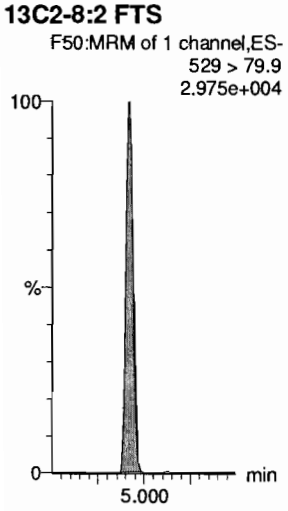


PFTeDA

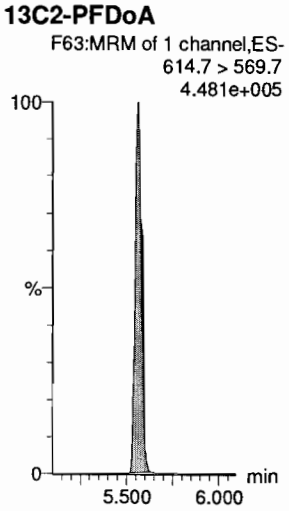




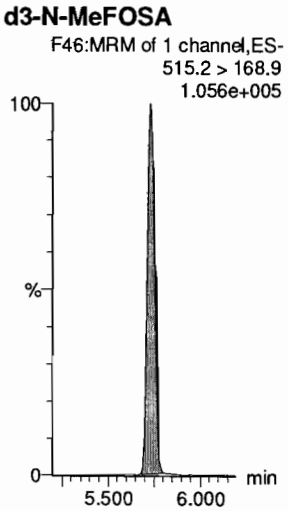
13C2-8:2 FTS



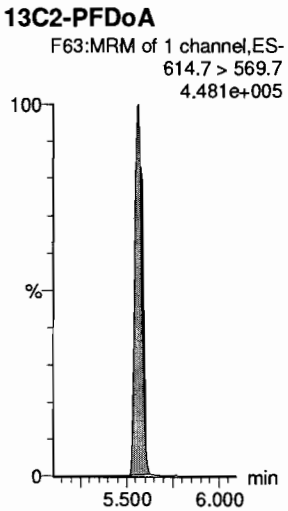
13C2-PFDoA



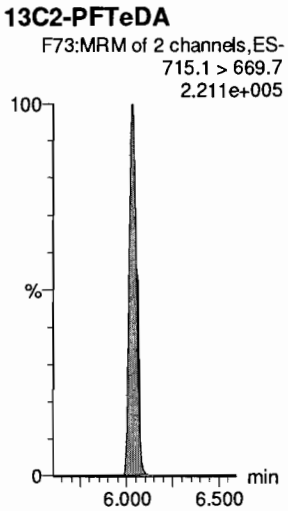
d3-N-MeFOSA



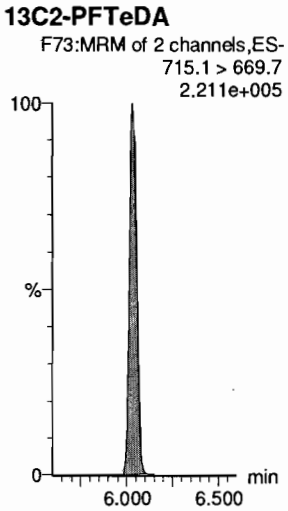
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

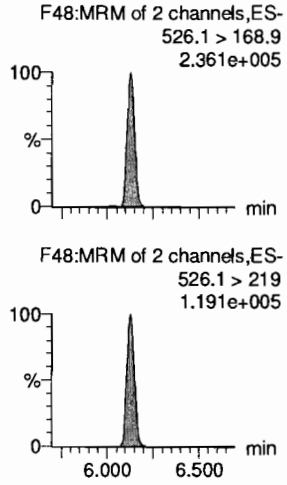


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

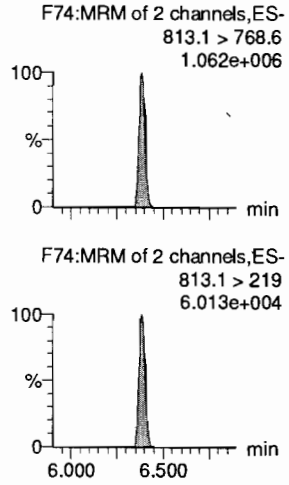
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

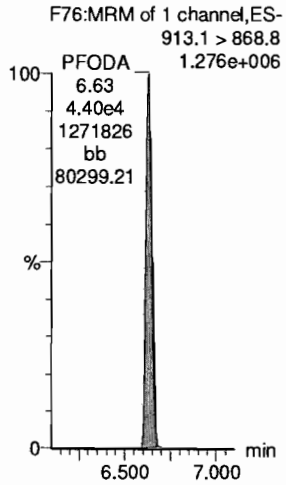
N-EtFOSA



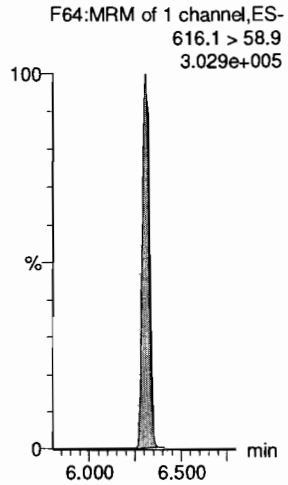
PFHxDA



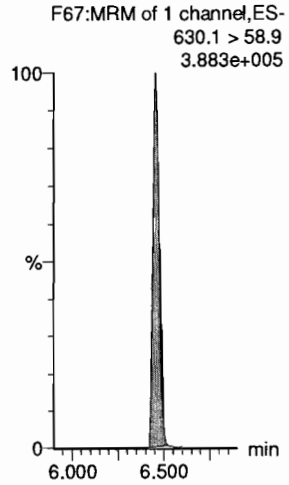
PFODA



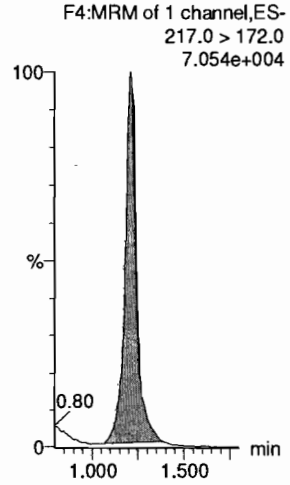
N-MeFOSE



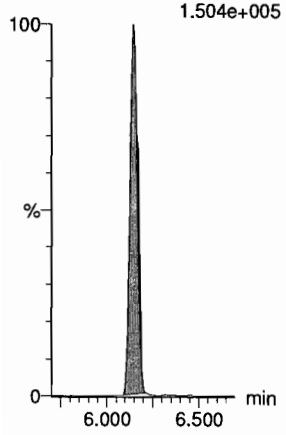
N-EtFOSE



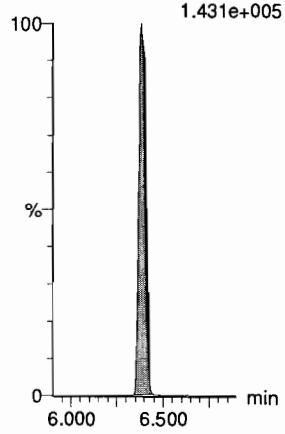
13C4-PFBA



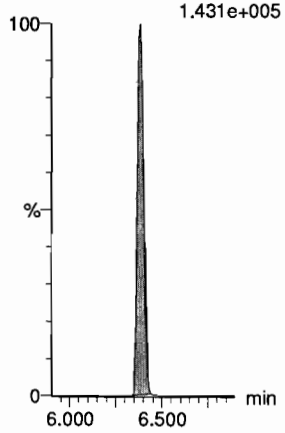
d5-N-ETFOSA



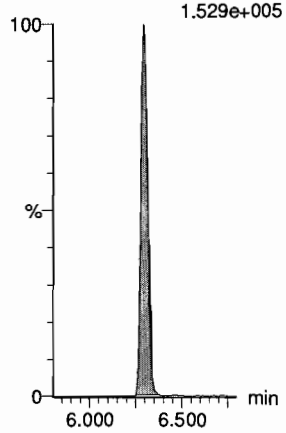
13C2-PFHxDA



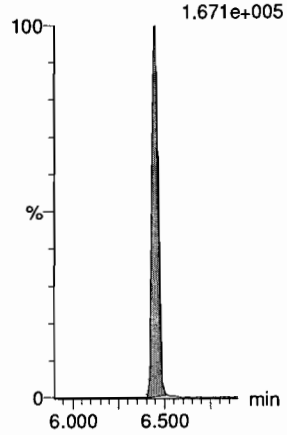
13C2-PFHxDA



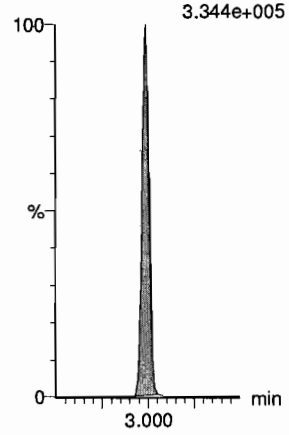
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

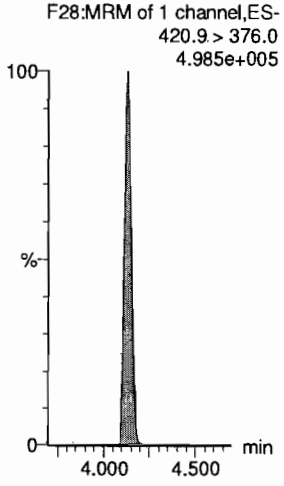


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

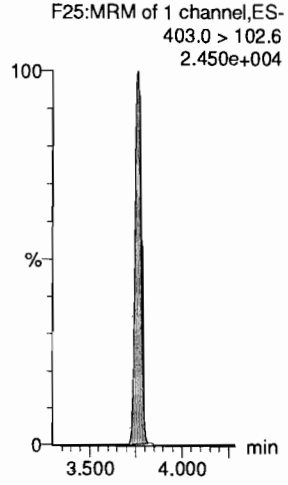
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_12, Date: 10-Jul-2019, Time: 14:47:21, ID: ST190710M2-7 PFC CS4 19G0807, Description: PFC CS4 19G0807

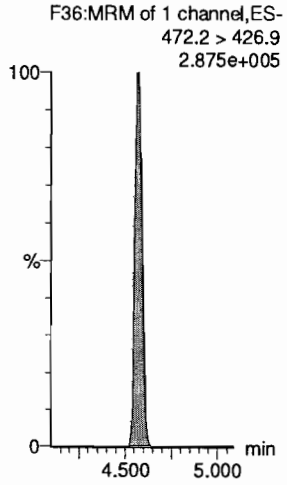
13C8-PFOA



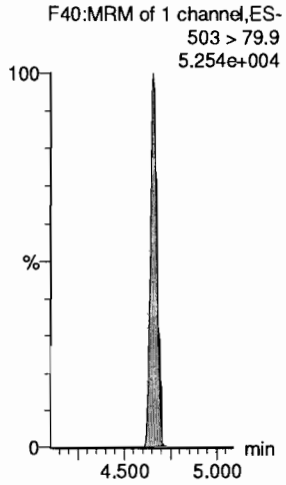
18O2-PFHxS



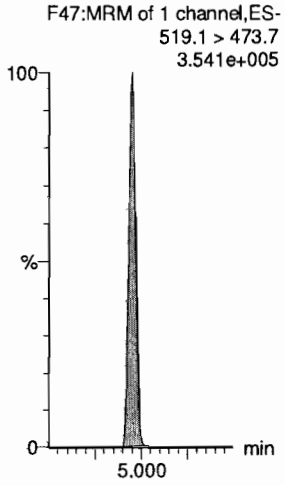
13C9-PFNA



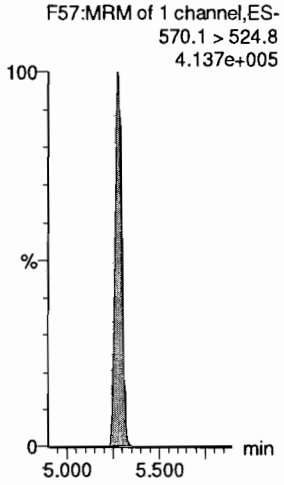
13C4-PFOS



13C6-PFDA



13C7-PFUdA

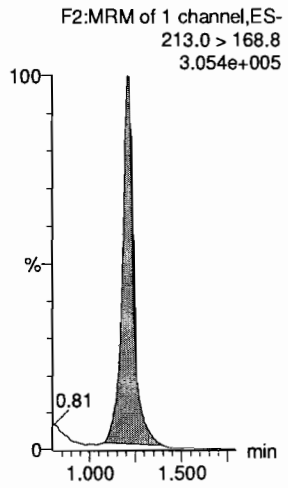


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

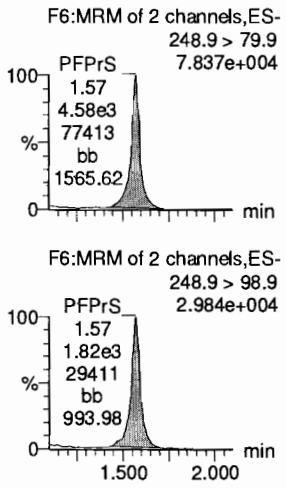
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

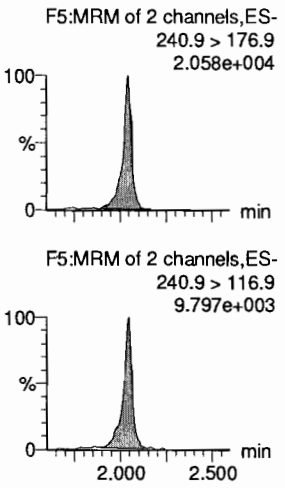
PFBA



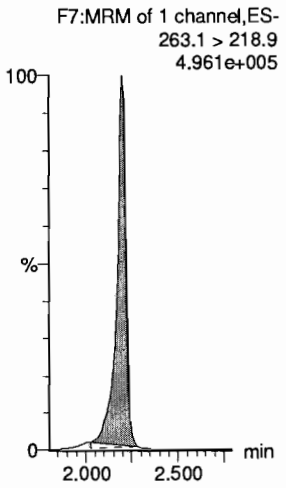
PFPrS



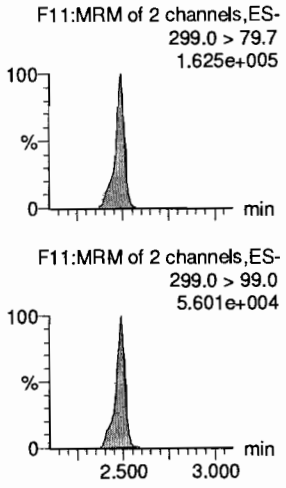
3:3 FTCA



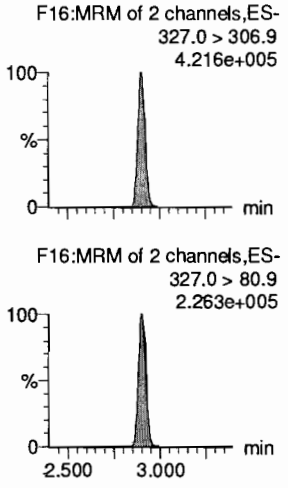
PFPeA



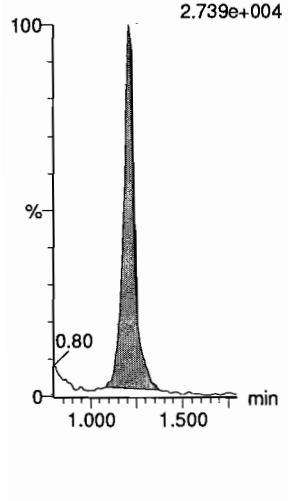
PFBS



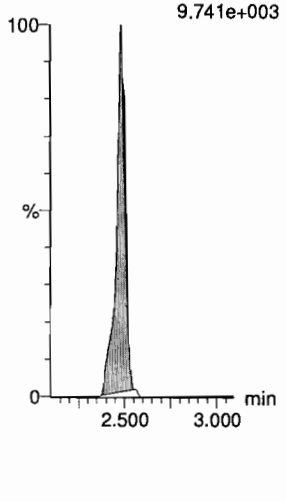
4:2 FTS



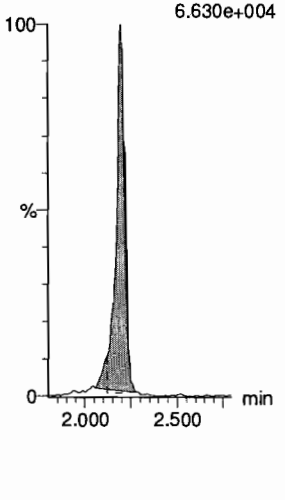
13C3-PFBA



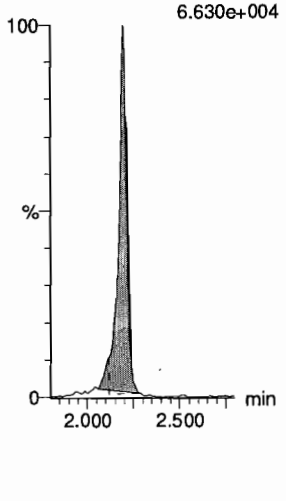
13C3-PFBS



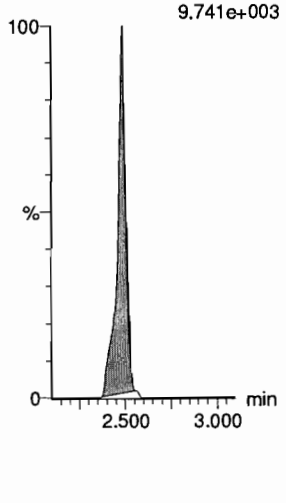
13C3-PFPeA



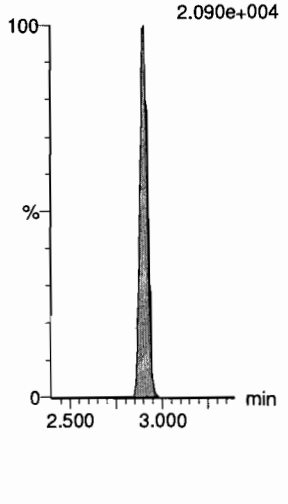
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

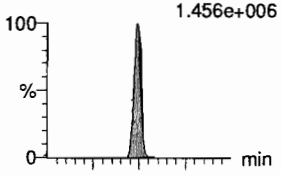


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

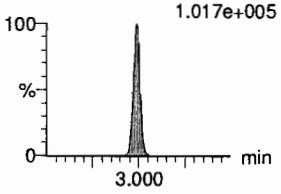
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

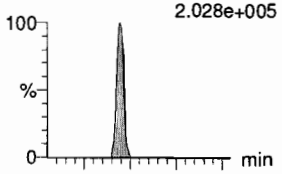
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.456e+006



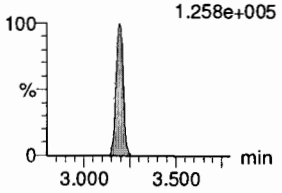
F13:MRM of 2 channels,ES-
313 > 118.9
1.017e+005



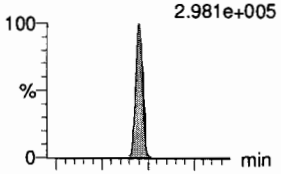
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
2.028e+005



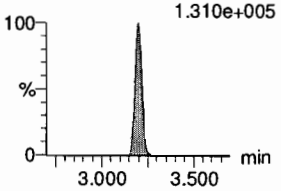
F19:MRM of 2 channels,ES-
349.1 > 99
1.258e+005



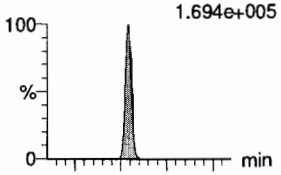
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
2.981e+005



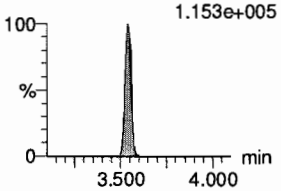
F9:MRM of 3 channels,ES-
285.1 > 184.9
1.310e+005



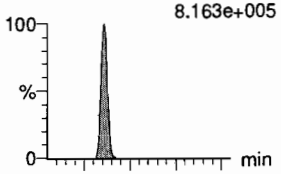
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
1.694e+005



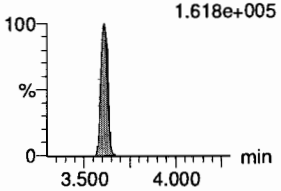
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.153e+005



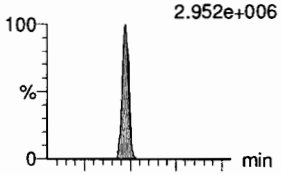
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
8.163e+005



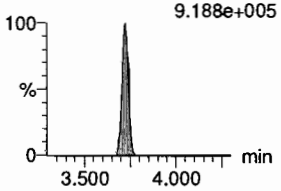
F20:MRM of 2 channels,ES-
363.0 > 169.0
1.618e+005



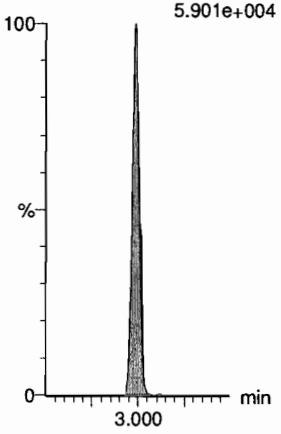
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
2.952e+006



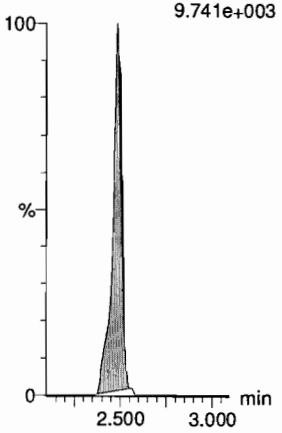
F22:MRM of 2 channels,ES-
376.8 > 85.0
9.188e+005



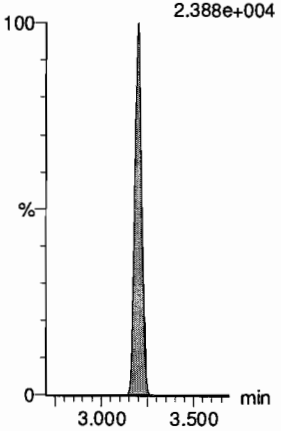
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
5.901e+004



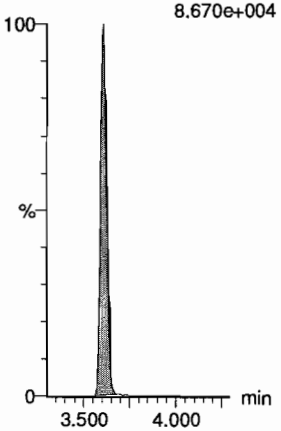
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
9.741e+003



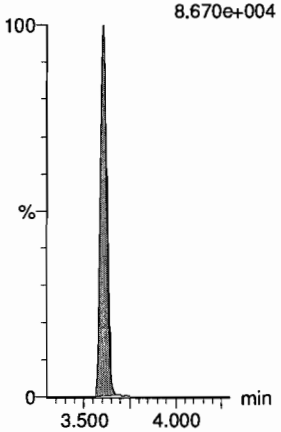
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
2.388e+004



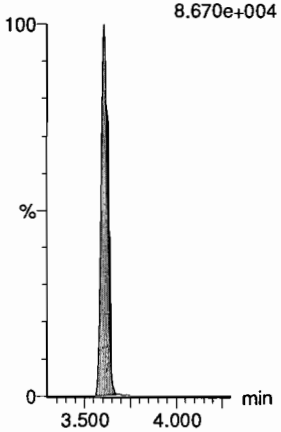
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
8.670e+004



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
8.670e+004



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
8.670e+004

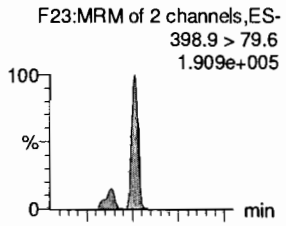


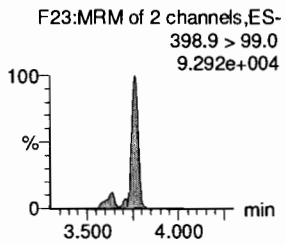
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

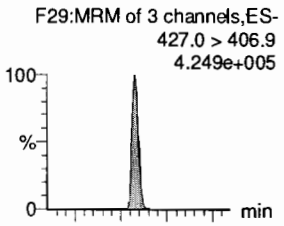
Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

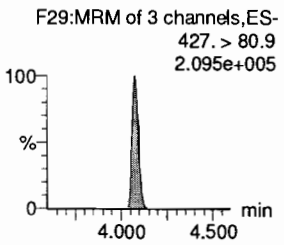
L-PFHxS



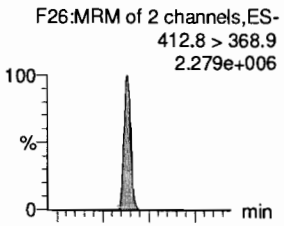


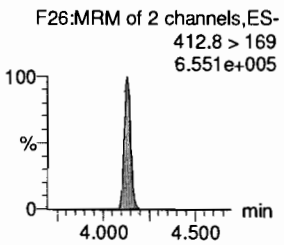
6:2 FTS



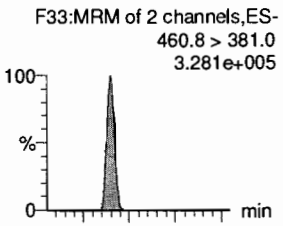


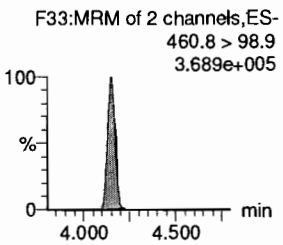
L-PFOA



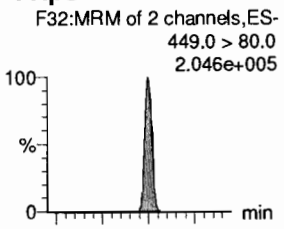


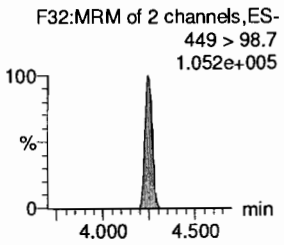
PFEChS



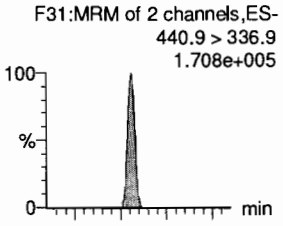


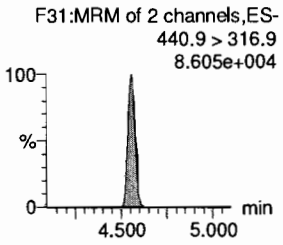
PFHpS



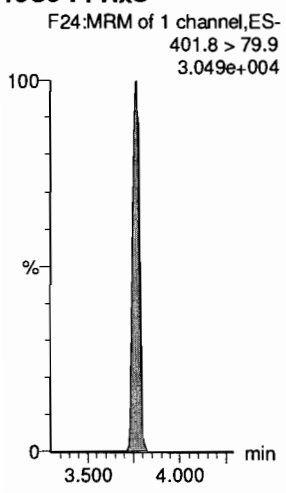


7:3 FTCA

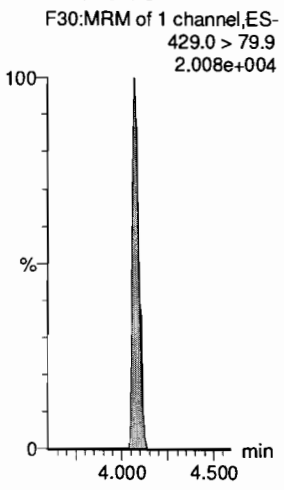




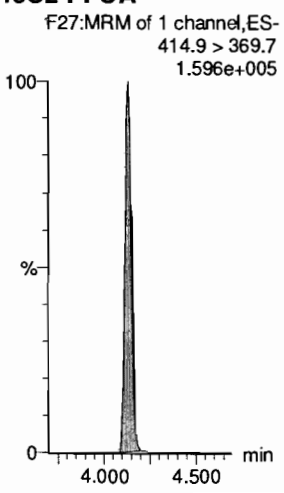
13C3-PFHxS



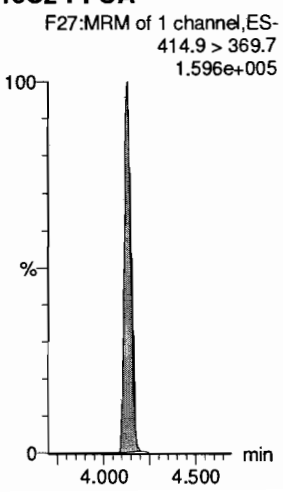
13C2-6:2 FTS



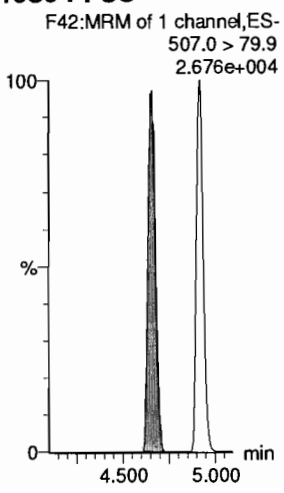
13C2-PFOA



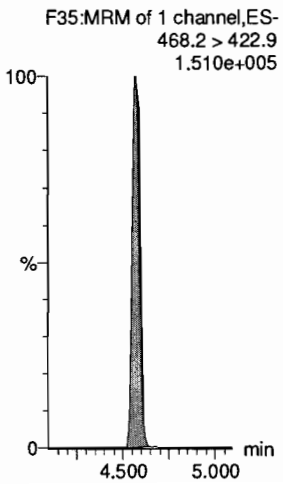
13C2-PFOA



13C8-PFOS



13C5-PFNA

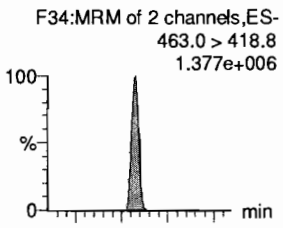


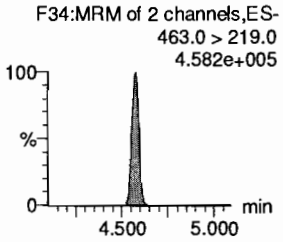
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

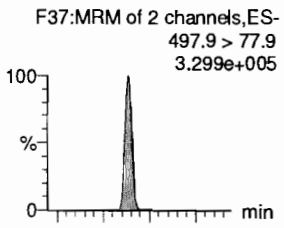
Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

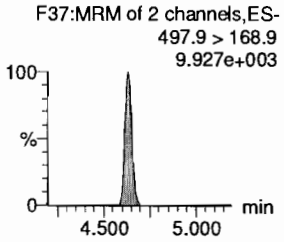
PFNA



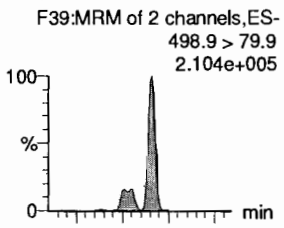


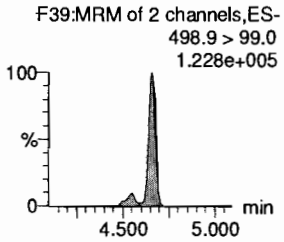
PFOSA



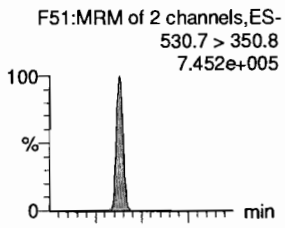


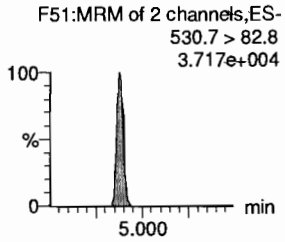
L-PFOS



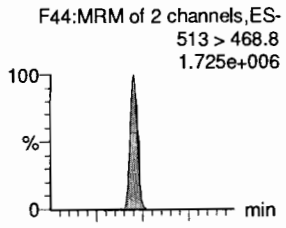


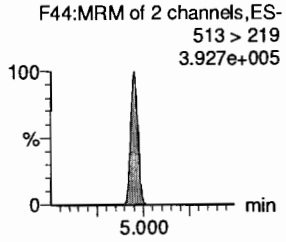
9Cl-PF30NS



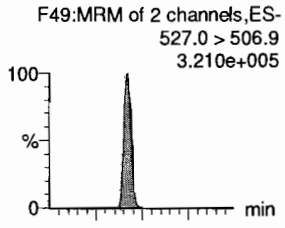


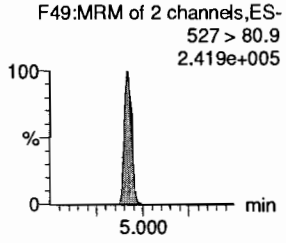
PFDA



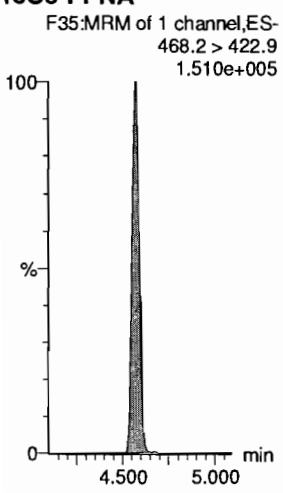


8:2 FTS

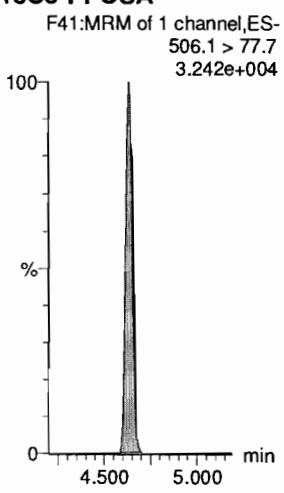




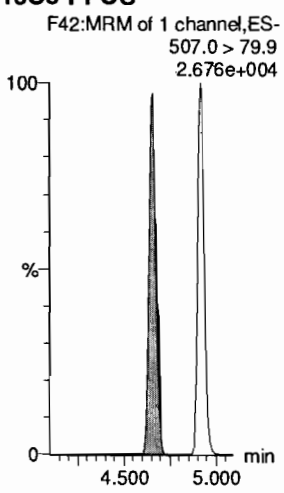
13C5-PFNA



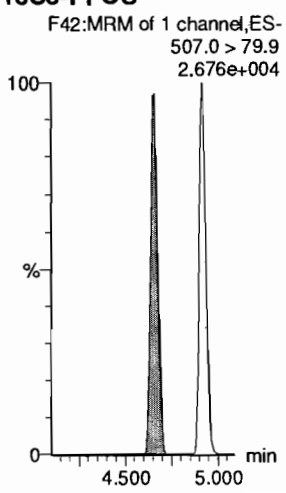
13C8-PFOSA



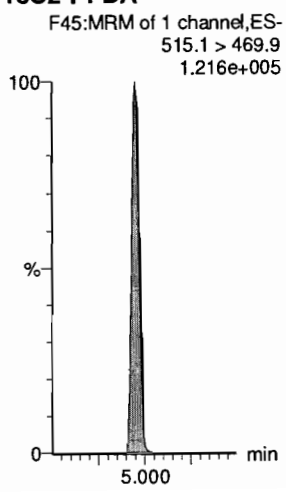
13C8-PFOS



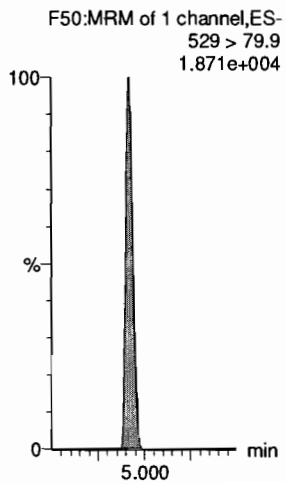
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

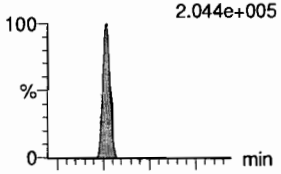


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

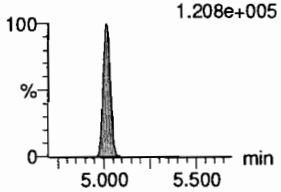
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

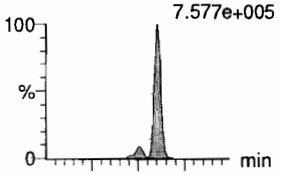
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
2.044e+005



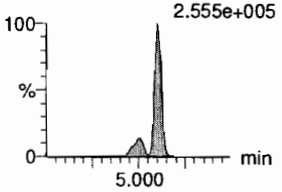
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.208e+005



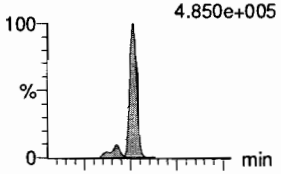
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
7.577e+005



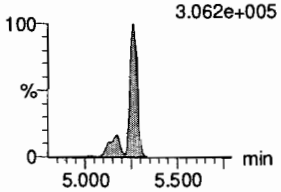
F56:MRM of 2 channels,ES-
570. > 512
2.555e+005



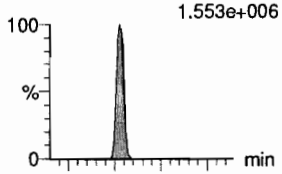
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
4.850e+005



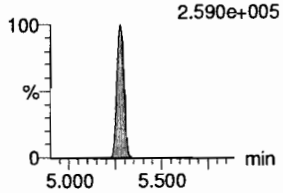
F59:MRM of 2 channels,ES-
584.1 > 526
3.062e+005



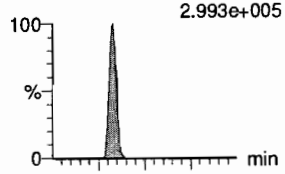
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.553e+006



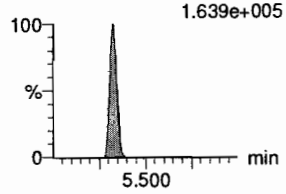
F54:MRM of 2 channels,ES-
563.0 > 269
2.590e+005



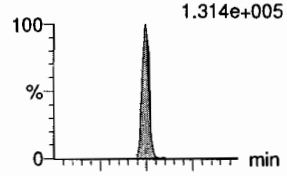
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
2.993e+005



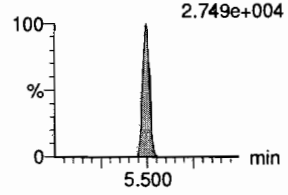
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.639e+005



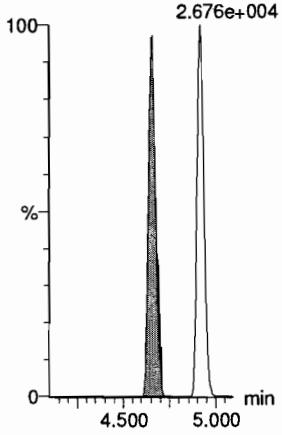
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.314e+005



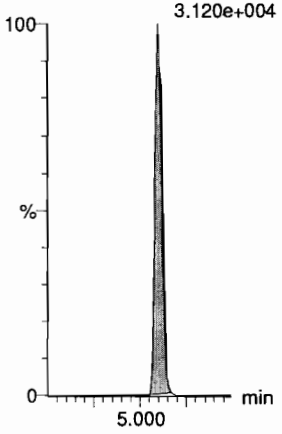
F68:MRM of 2 channels,ES-
632.6 > 450.7
2.749e+004



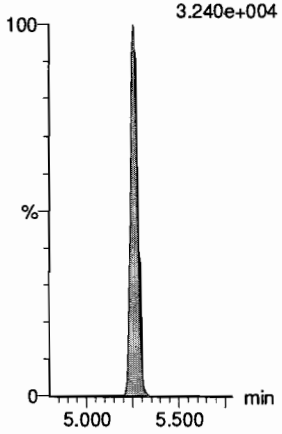
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
2.676e+004



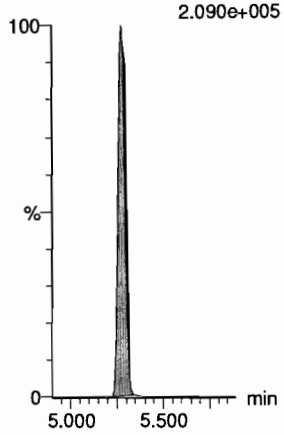
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
3.120e+004



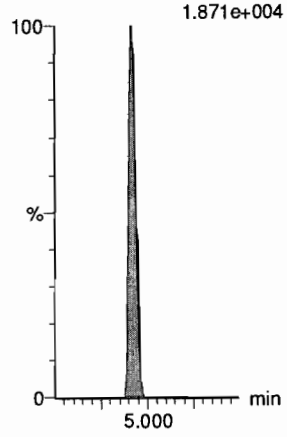
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
3.240e+004



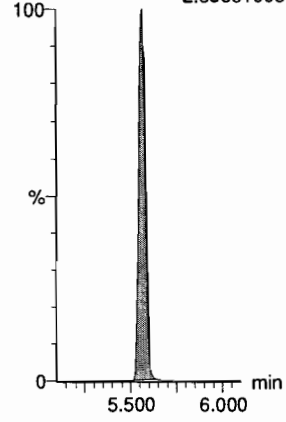
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
2.090e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
1.871e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
2.636e+005

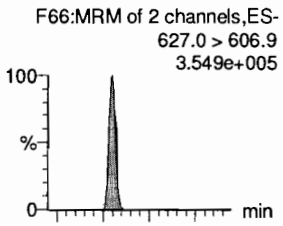


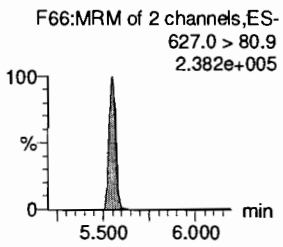
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

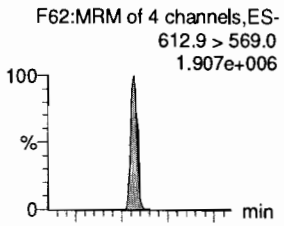
Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

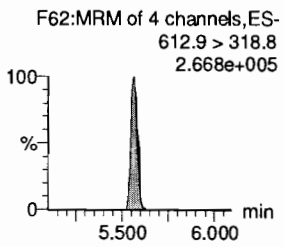
10:2 FTS



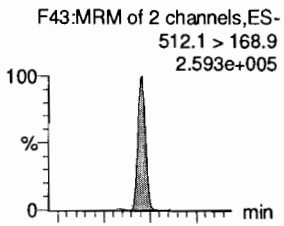


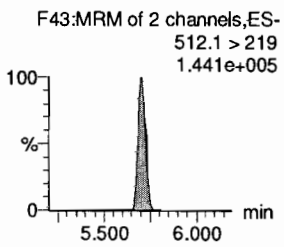
PFDoA



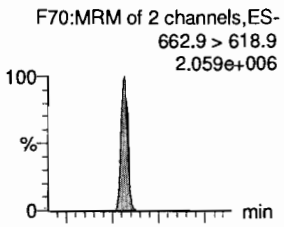


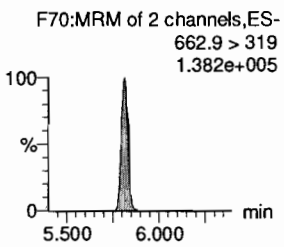
N-MeFOSA



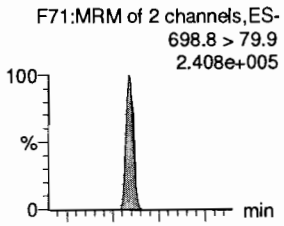


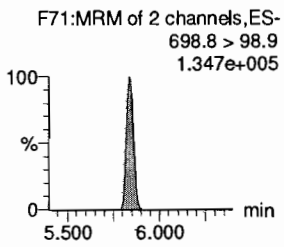
PFTrDA



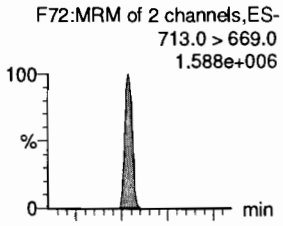


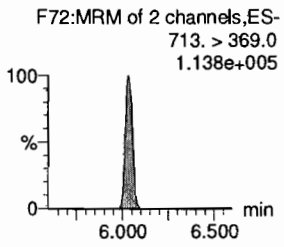
PFDoS



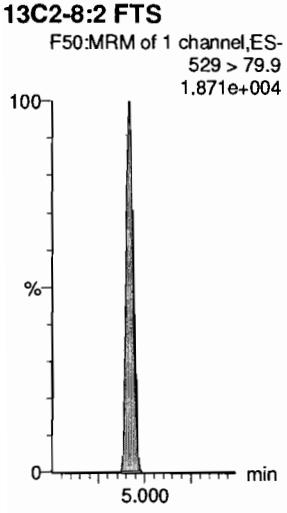


PFTeDA

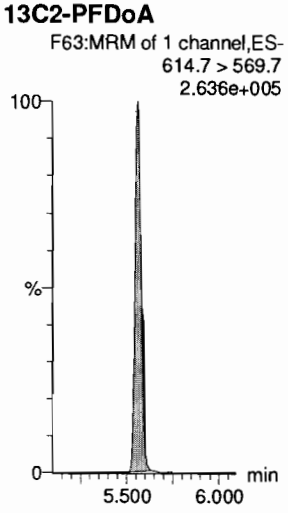




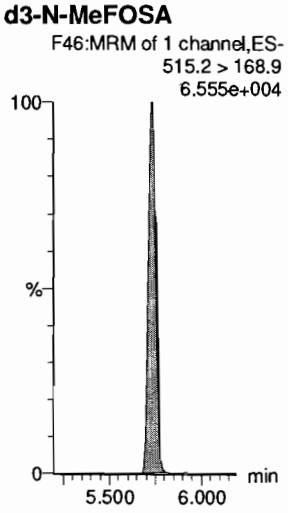
13C2-8:2 FTS



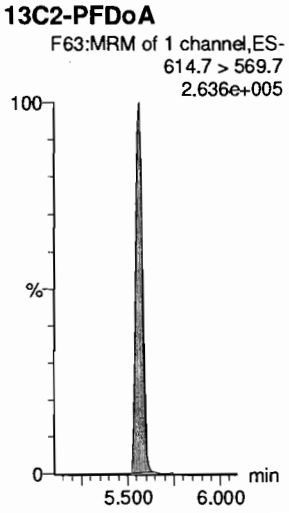
13C2-PFDoA



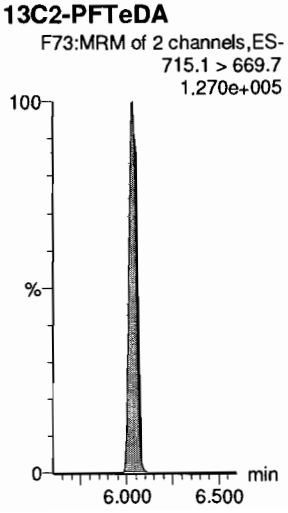
d3-N-MeFOSA



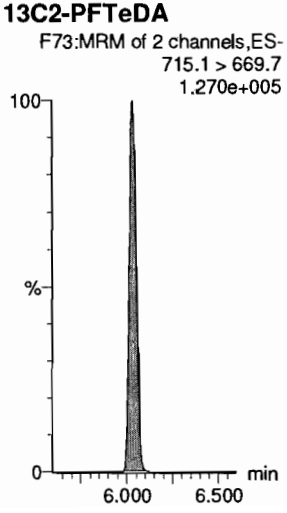
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

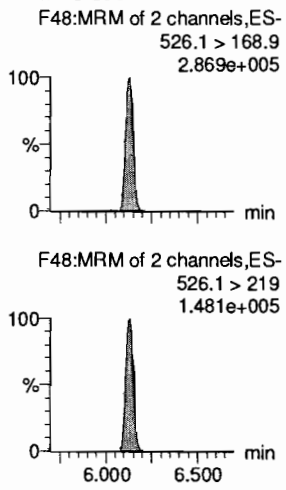


Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

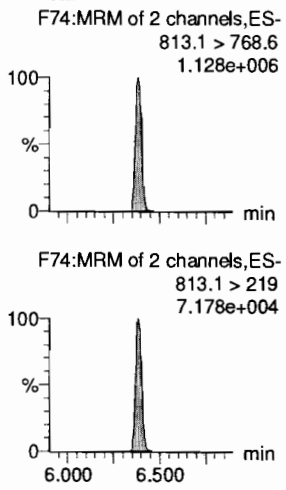
Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
Printed: Thursday, July 11, 2019 10:25:24 Pacific Daylight Time

Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

N-EtFOSA



PFHxDA



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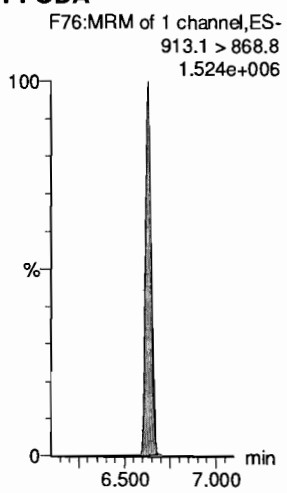
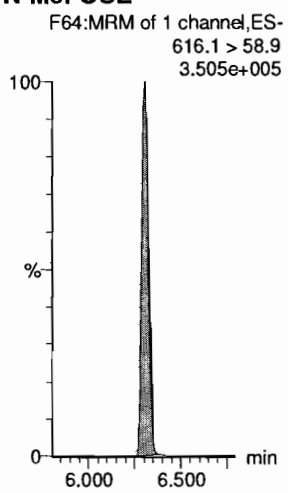
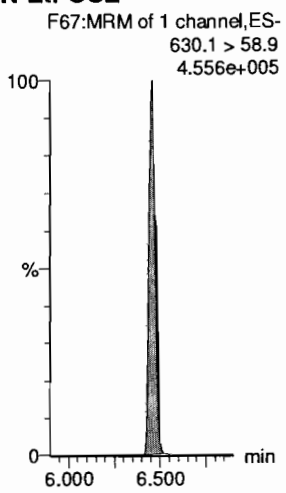


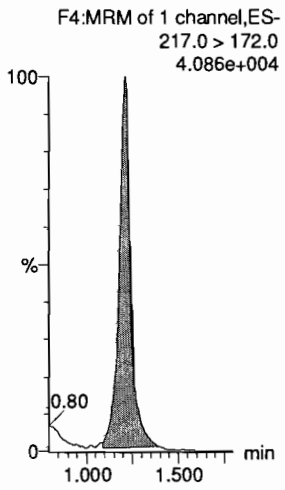
N-MeFOSE



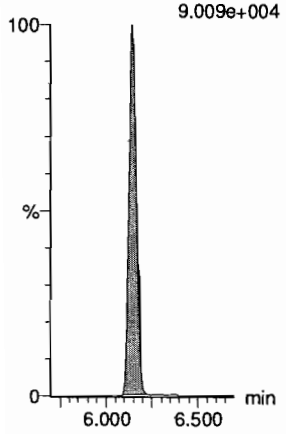
N-EtFOSE



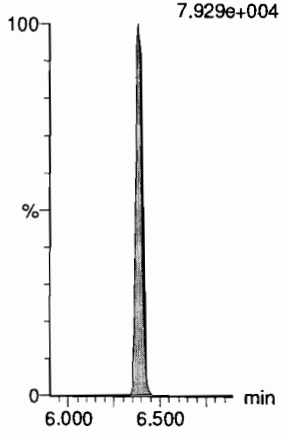
13C4-PFBA



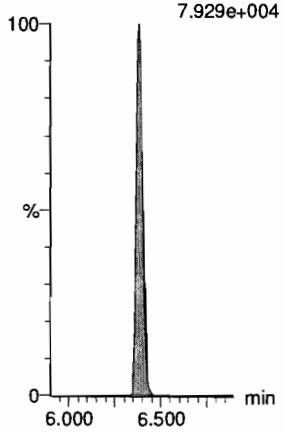
d5-N-ETFOSA



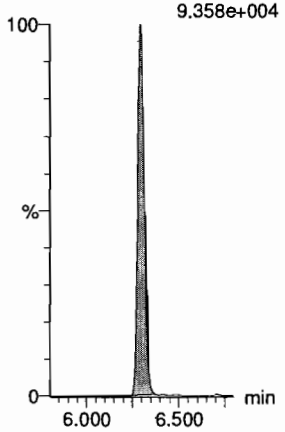
13C2-PFHxDA



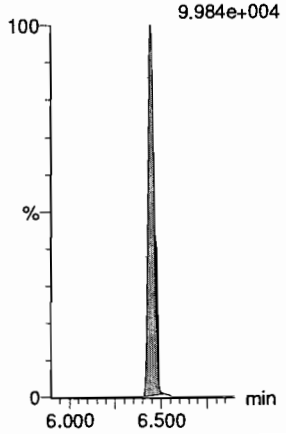
13C2-PFHxDA



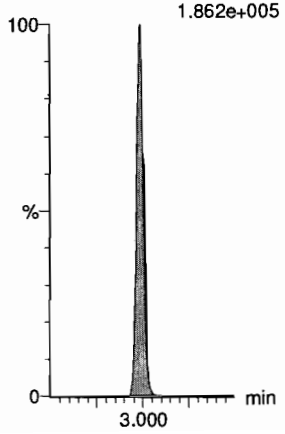
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-CRV.qld

Last Altered: Thursday, July 11, 2019 10:22:28 Pacific Daylight Time
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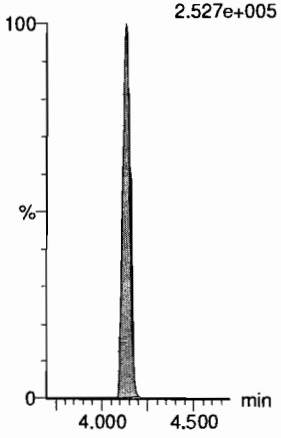
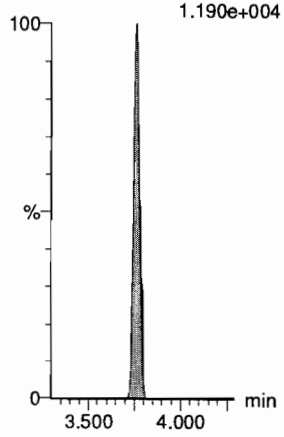
Name: 190710M2_13, Date: 10-Jul-2019, Time: 14:57:59, ID: ST190710M2-8 PFC CS5 19G0808, Description: PFC CS5 19G0808

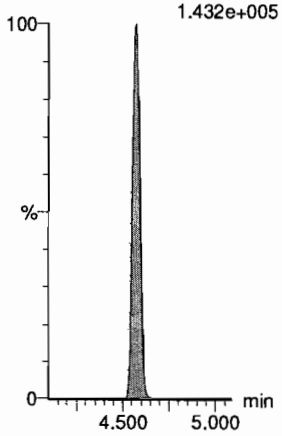
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
2.527e+005



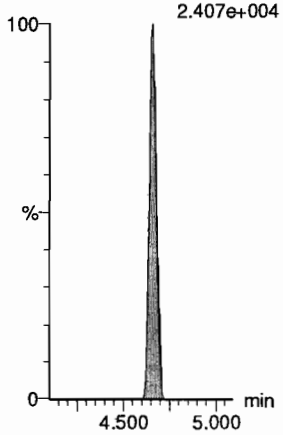
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
1.190e+004



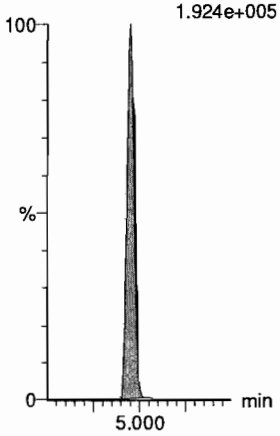
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
1.432e+005



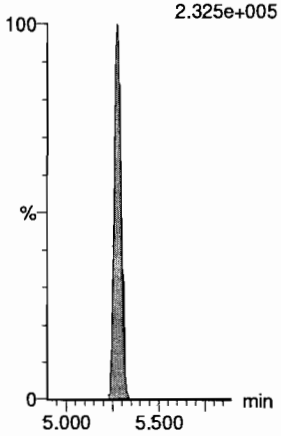
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
2.407e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
1.924e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
2.325e+005



Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

Last Altered: Thursday, July 11, 2019 11:22:53 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

(6) Not in ICV. am 7/11/19

JK2 7/11/19

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	1668.462	1979.732	1.00	1.22	10.535	7.4	74.3	NO		
2	2	PFPrS	248.9 > 79.9		594.434	1.00				(A)	NO		
3	3	3:3 FTCA	240.9 > 176.9		3999.152	1.00					NO		
4	4	PFPeA	263.1 > 218.9	2299.475	3999.152	1.00	2.20	7.187	7.6	75.6	NO		
5	5	PFBS	299.0 > 79.7	684.593	594.434	1.00	2.49	14.396	6.3	71.4	NO	3.133	NO
6	6	4:2 FTS	327.0 > 306.9	1799.142	1153.121	1.00	2.90	19.503	8.0	85.4	NO	1.947	NO
7	47	13C3-PFBA	216.1 > 171.8	1979.732	3078.759	1.00	1.21	8.038	12.4	98.9	NO		
8	49	13C3-PFBS	302.0 > 98.8	594.434	609.822	1.00	2.49	12.185	11.8	94.2	NO		
9	48	13C3-PFPeA	266.0 > 221.8	3999.152	9996.682	1.00	2.20	5.001	12.3	98.1	NO		
10	48	13C3-PFPeA	266.0 > 221.8	3999.152	9996.682	1.00	2.20	5.001	12.3	98.1	NO		
11	49	13C3-PFBS	302.0 > 98.8	594.434	609.822	1.00	2.49	12.185	11.8	94.2	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1153.121	609.822	1.00	2.90	23.636	10.6	84.5	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	5535.548	3122.938	1.00	2.99	8.863	7.6	76.3	NO	13.636	NO
15	8	PFPeS	349.1>80.1	722.210	594.434	1.00	3.19	15.187	7.1	71.2	NO	1.614	NO
16	9	HFPO-DA	285.1 > 168.9		1267.019	1.00				(B)	NO		
17	10	5:3 FTCA	340.9 > 236.9		3749.774	1.00					NO		
18	11	PFHpA	363.0 > 318.9	2999.219	3749.774	1.00	3.61	9.998	8.2	81.5	NO	5.748	NO
19	12	ADONA	376.8 > 250.9		3749.774	1.00				(4)	NO		
20	52	13C2-PFHxA	315.0 > 270.0	3122.938	9996.682	1.00	2.99	3.905	4.9	98.6	NO		
21	49	13C3-PFBS	302.0 > 98.8	594.434	609.822	1.00	2.49	12.185	11.8	94.2	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1267.019	9996.682	1.00	3.20	1.584	5.2	103.4	NO		
23	53	13C4-PFHpA	367.2 > 321.8	3749.774	9996.682	1.00	3.61	4.689	12.0	95.9	NO		
24	53	13C4-PFHpA	367.2 > 321.8	3749.774	9996.682	1.00	3.61	4.689	12.0	95.9	NO		
25	53	13C4-PFHpA	367.2 > 321.8	3749.774	9996.682	1.00	3.61	4.689	12.0	95.9	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	659.497	1329.815	1.00	3.76	6.199	7.5	81.7	NO	2.007	NO
28	15	6:2 FTS	427.0 > 406.9	1711.603	977.757	1.00	4.07	21.882	7.5	78.8	NO	2.088	NO
29	16	L-PFOA	412.8 > 368.9	8889.458	8278.422	1.00	4.13	13.423	7.2	72.4	NO	3.467	NO
30	18	PFecHS	460.8 > 381.0		8278.422	1.00				(6)	NO		
31	19	PFHpS	449.0 > 80.0	767.485	1319.405	1.00	4.25	7.271	8.4	87.7	NO	1.838	NO
32	20	7:3 FTCA	440.9 > 336.9		8161.165	1.00				(A)	NO		
33	54	13C3-PFHxS	401.8 > 79.9	1329.815	609.822	1.00	3.76	27.258	10.7	85.6	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	977.757	1316.567	1.00	4.07	9.283	12.6	100.9	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

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Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
35	58	13C2-PFOA	414.9 > 369.7	8278.422	13940.201	1.00	4.13	7.423	13.2	105.2	NO		
36	58	13C2-PFOA	414.9 > 369.7	8278.422	13940.201	1.00	4.13	7.423	13.2	105.2	NO		
37	59	13C8-PFOS	507.0 > 79.9	1319.405	1316.567	1.00	4.66	12.527	11.8	94.5	NO		
38	56	13C5-PFNA	468.2 > 422.9	8161.165	8020.511	1.00	4.57	12.719	12.9	103.5	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	5668.871	8161.165	1.00	4.57	8.683	7.9	78.9	NO	2.991	NO
41	22	PFOSA	497.9 > 77.9	1183.944	1490.120	1.00	4.64	9.932	7.8	77.9	NO	47.923	YES
42	23	L-PFOS	498.9 > 79.9	1021.768	1319.405	1.00	4.66	9.680	7.8	84.0	NO	2.362	NO
43	25	9Cl-PF30NS	530.7 > 350.8		1319.405	1.00				(B)	NO		
44	26	PFDA	513 > 468.8	6402.301	6480.793	1.00	4.95	12.349	7.4	74.5	NO	4.349	NO
45	27	8:2 FTS	527.0 > 506.9	1172.854	885.406	1.00	4.92	16.558	7.4	76.6	NO	1.361	NO
46	56	13C5-PFNA	468.2 > 422.9	8161.165	8020.511	1.00	4.57	12.719	12.9	103.5	NO		
47	57	13C8-PFOSA	506.1 > 77.7	1490.120	12096.798	1.00	4.63	1.540	11.8	94.6	NO		
48	59	13C8-PFOS	507.0 > 79.9	1319.405	1316.567	1.00	4.66	12.527	11.8	94.5	NO		
49	59	13C8-PFOS	507.0 > 79.9	1319.405	1316.567	1.00	4.66	12.527	11.8	94.5	NO		
50	60	13C2-PFDA	515.1 > 469.9	6480.793	10100.407	1.00	4.95	8.020	12.1	96.9	NO		
51	61	13C2-8:2 FTS	529 > 79.9	885.406	1316.567	1.00	4.92	8.406	12.1	96.7	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	768.594	1319.405	1.00	5.01	7.282	8.4	83.5	NO	1.839	NO
54	29	L-MeFOSAA	570 > 419	3409.469	1586.602	1.00	5.10	26.861	9.0	90.1	NO	3.233	NO
55	31	L-EtFOSAA	584.1 > 419	2583.433	1652.211	1.00	5.26	19.545	9.9	98.7	NO	1.462	NO
56	33	PFUdA	563.0 > 518.9	5771.112	10913.939	1.00	5.28	6.610	7.1	70.9	NO	5.946	NO
57	34	PFDS	598.8 > 79.9	966.503	885.406	1.00	5.32	13.645	6.8	70.5	NO	1.813	NO
58	35	11Cl-PF30UdS	632.6 > 452.7		12242.979	1.00				(B)	NO		
59	59	13C8-PFOS	507.0 > 79.9	1319.405	1316.567	1.00	4.66	12.527	11.8	94.5	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1586.602	12096.798	1.00	5.10	1.639	12.7	101.6	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1652.211	12096.798	1.00	5.26	1.707	11.6	92.7	NO		
62	63	13C2-PFUdA	565 > 519.8	10913.939	12096.798	1.00	5.28	11.278	13.2	105.3	NO		
63	61	13C2-8:2 FTS	529 > 79.9	885.406	1316.567	1.00	4.92	8.406	12.1	96.7	NO		
64	65	13C2-PFDoA	614.7 > 569.7	12242.979	10100.407	1.00	5.56	15.152	12.3	98.6	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		885.406	1.00				(B)	NO		
67	37	PFDoA	612.9 > 569.0	6942.080	12242.979	1.00	5.56	7.088	7.4	74.3	NO	6.841	NO
68	38	N-MeFOSA	512.1 > 168.9		2961.543	1.00				(B)	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

Last Altered: Thursday, July 11, 2019 11:22:53 Pacific Daylight Time
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Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
69	39	PFTrDA	662.9 > 618.9	7759.583	12242.979	1.00	5.82	7.922	7.5	74.8	NO	13.911	NO
70	40	PFDoS	698.8 > 79.9		6413.826	1.00					NO		
71	41	PFTeDA	713.0 > 669.0	5451.753	6413.826	1.00	6.03	10.625	7.1	71.0	NO	14.504	NO
72	65	13C2-PFDoA	614.7 > 569.7	12242.979	10100.407	1.00	5.56	15.152	12.3	98.6	NO		
73	65	13C2-PFDoA	614.7 > 569.7	12242.979	10100.407	1.00	5.56	15.152	12.3	98.6	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	2961.543	12096.798	1.00	5.73	3.060	138.1	92.1	NO		
75	65	13C2-PFDoA	614.7 > 569.7	12242.979	10100.407	1.00	5.56	15.152	12.3	98.6	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	6413.826	12096.798	1.00	6.03	6.628	13.0	103.7	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	6413.826	12096.798	1.00	6.03	6.628	13.0	103.7	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		4532.070	1.00					NO		
80	43	PFHxDA	813.1 > 768.6		3496.733	1.00					NO		
81	44	PFODA	913.1 > 868.8		3496.733	1.00					NO		
82	45	N-MeFOSE	616.1 > 58.9		4091.928	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		3846.295	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	3078.759	3078.759	1.00	1.21	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	4532.070	12096.798	1.00	6.15	4.683	150.3	100.2	NO		
86	69	13C2-PFHxDA	815 > 769.7	3496.733	12096.798	1.00	6.39	3.613	4.9	98.3	NO		
87	69	13C2-PFHxDA	815 > 769.7	3496.733	12096.798	1.00	6.39	3.613	4.9	98.3	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	4091.928	12096.798	1.00	6.30	4.228	151.3	100.8	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	3846.295	12096.798	1.00	6.45	3.974	144.5	96.3	NO		
90	73	13C5-PFHxA	318.0 > 272.9	9996.682	9996.682	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	13940.201	13940.201	1.00	4.13	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	609.822	609.822	1.00	3.76	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8020.511	8020.511	1.00	4.57	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1316.567	1316.567	1.00	4.66	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	10100.407	10100.407	1.00	4.95	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	12096.798	12096.798	1.00	5.28	12.500	12.5	100.0	NO		

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Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

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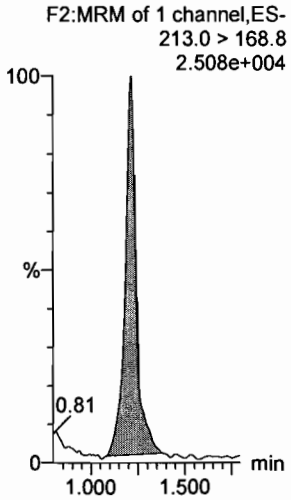
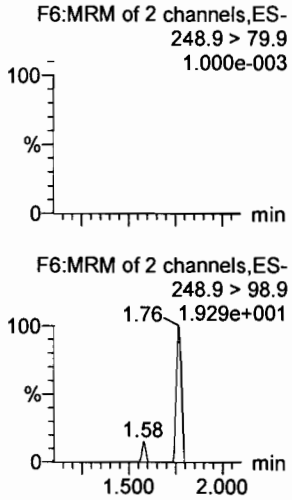
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019_ICV.mdb 11 Jul 2019 11:19:41
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

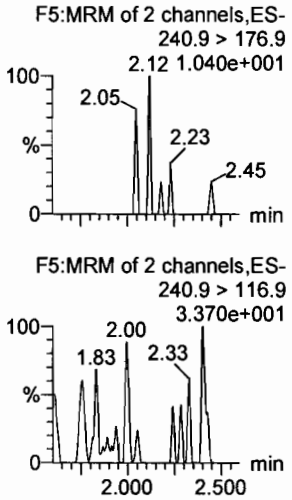
PFBA



PFPrS



3:3 FTCA



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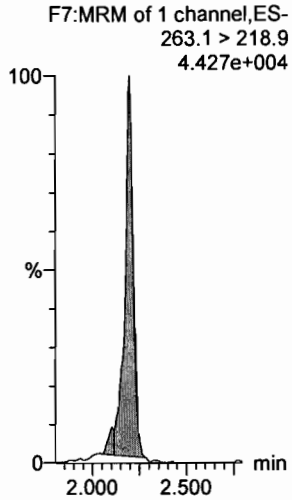
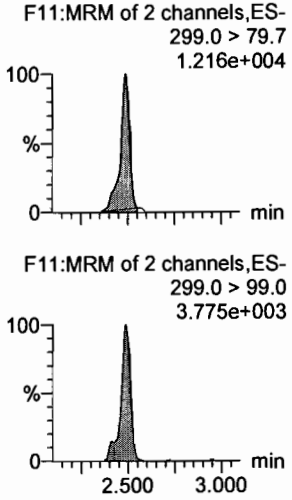
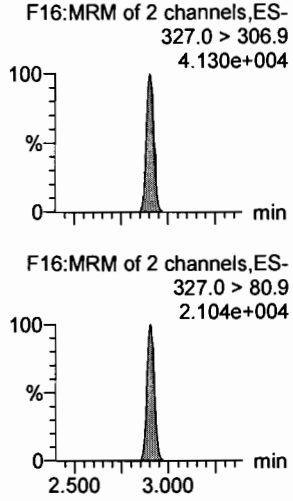


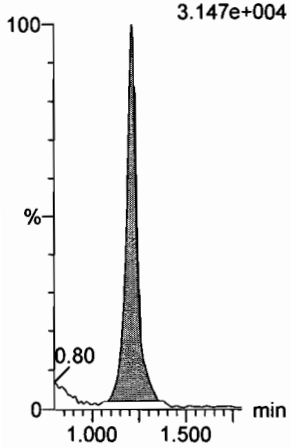
PFBS



4:2 FTS



13C3-PFBA



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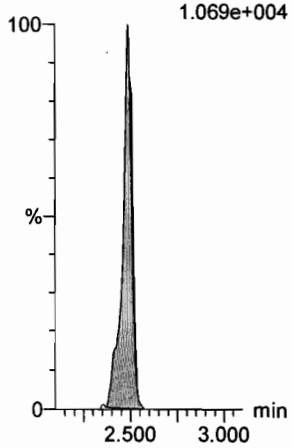

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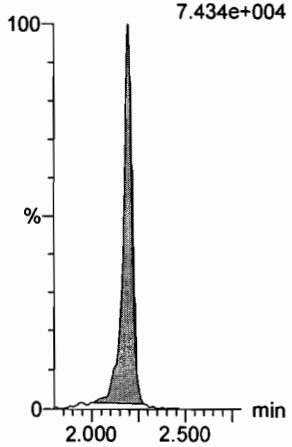

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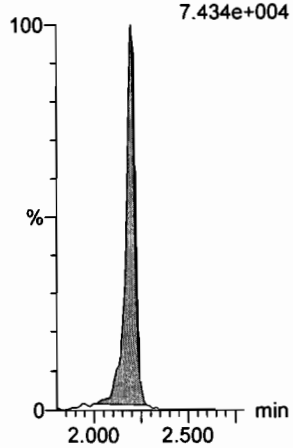

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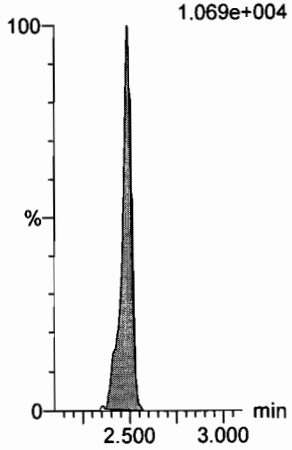
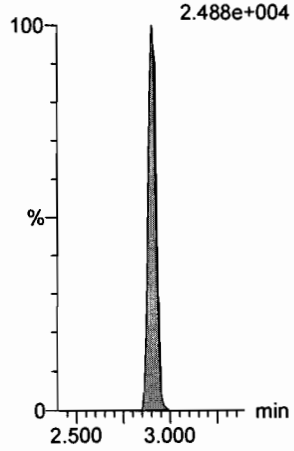


13C2-4:2 FTS



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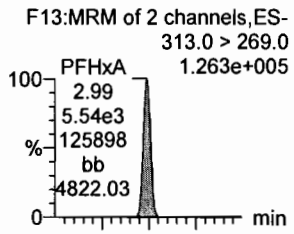
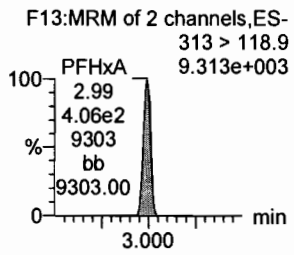
Last Altered: Thursday, July 11, 2019 11:22:53 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

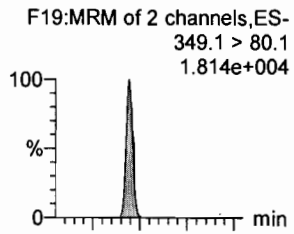
Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

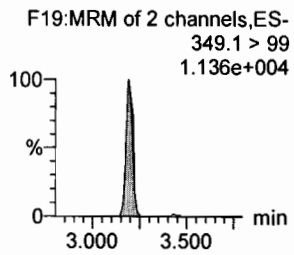
PFHxA



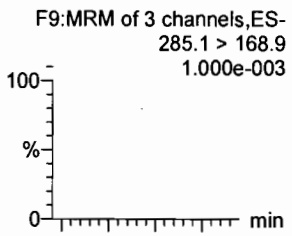


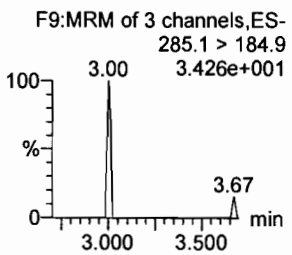
PFPeS



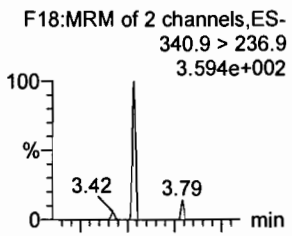


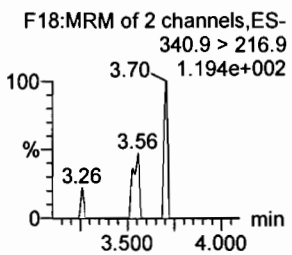
HFPO-DA





5:3 FTCA





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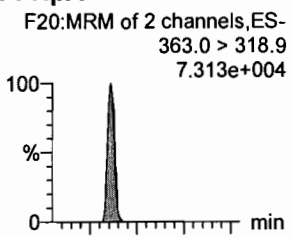

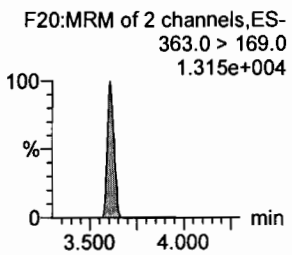

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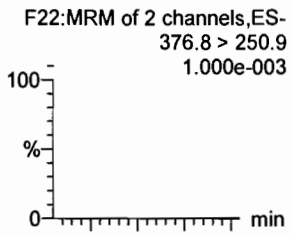

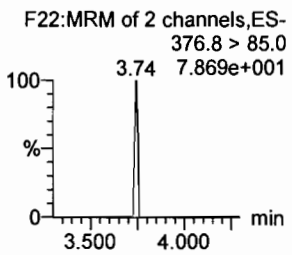

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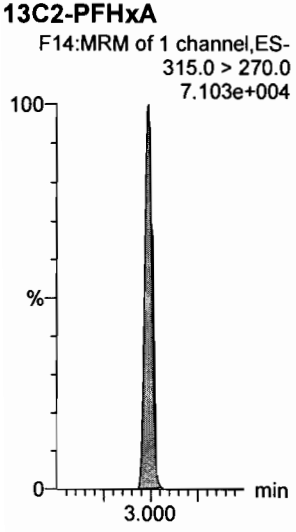
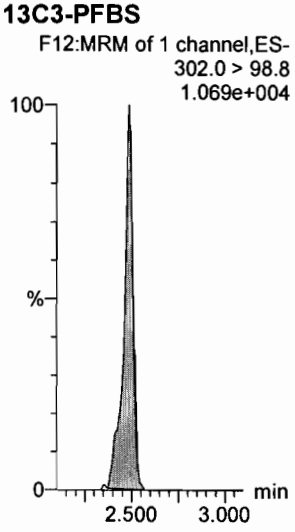


13C3-PFBS



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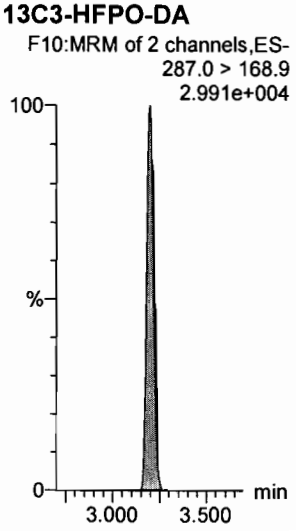
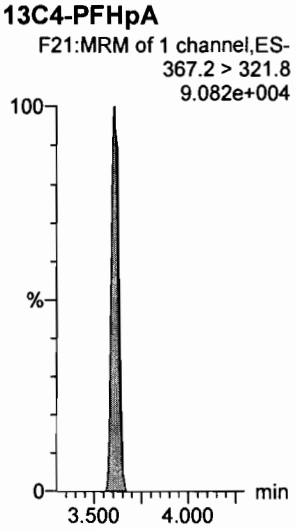


13C4-PFHpA



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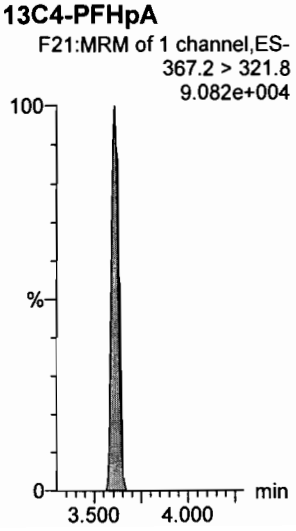

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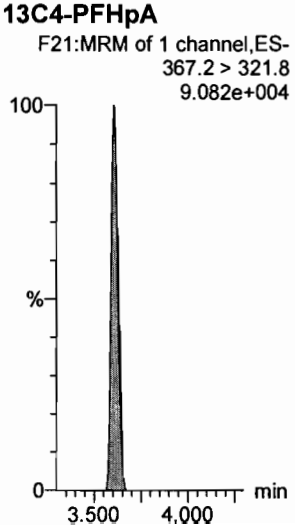

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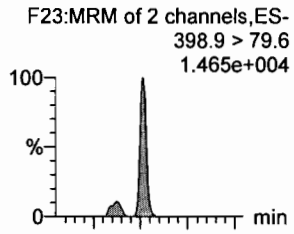
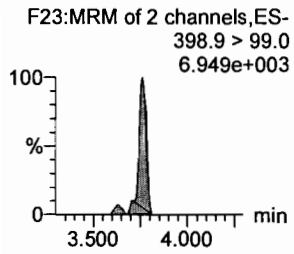
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

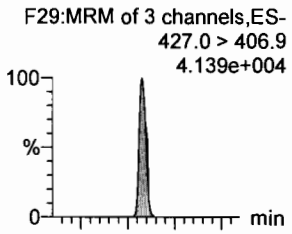
Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

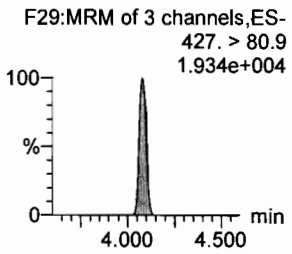
L-PFHxS



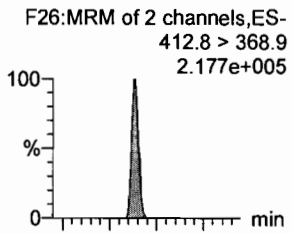


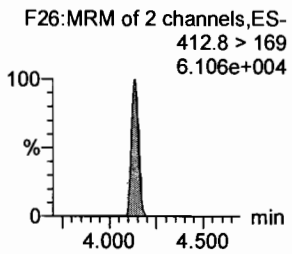
6:2 FTS





L-PFOA





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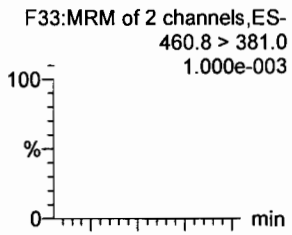

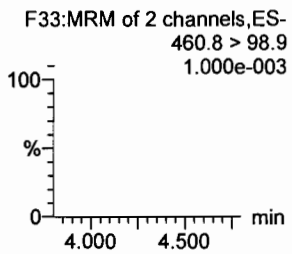

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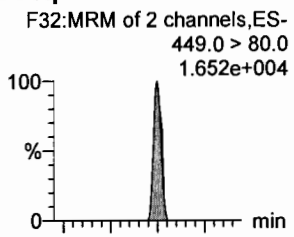
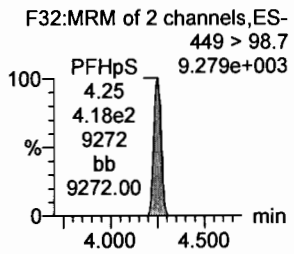
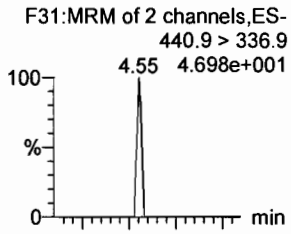
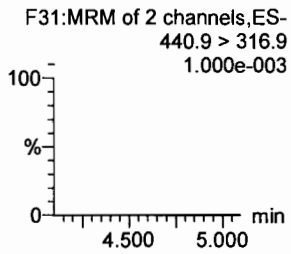


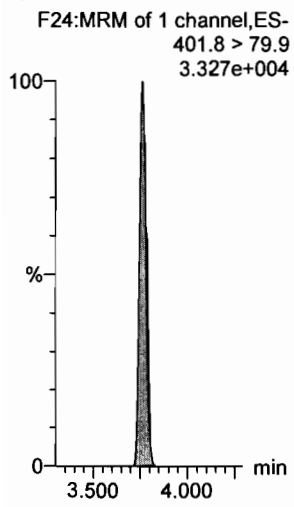


7:3 FTCA

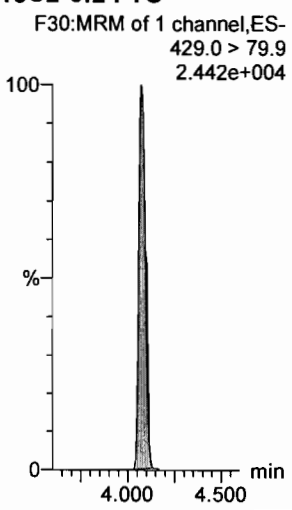




13C3-PFHxS



13C2-6:2 FTS



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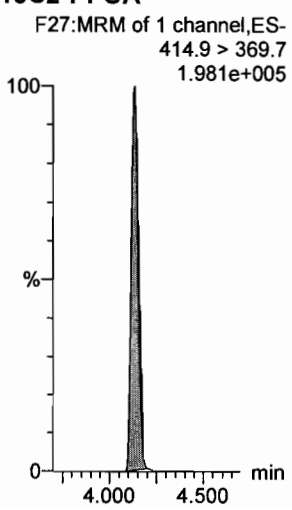

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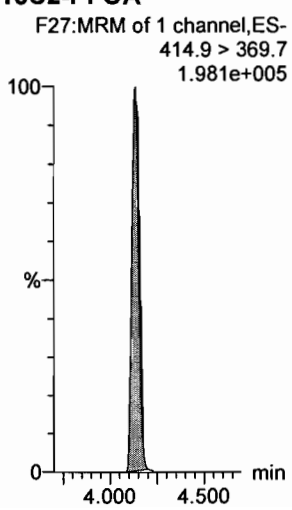

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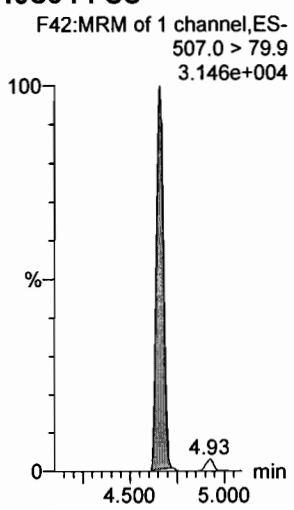

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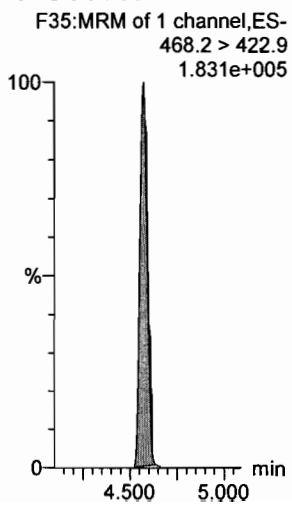

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

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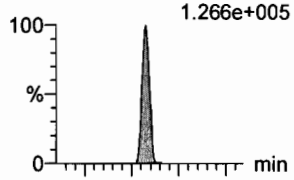
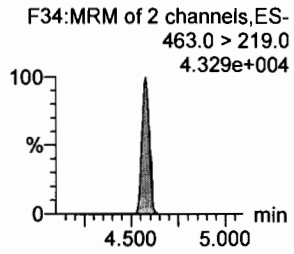
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

PFNA





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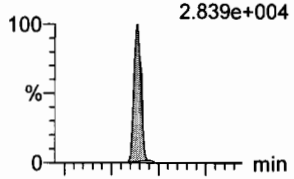
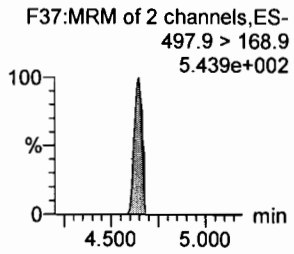
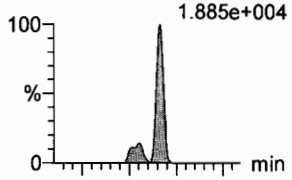
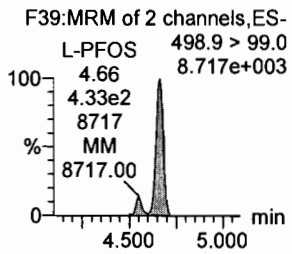




L-PFOS





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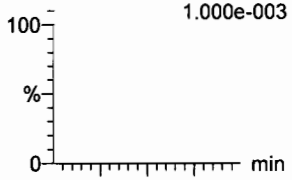

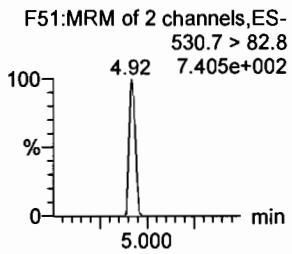

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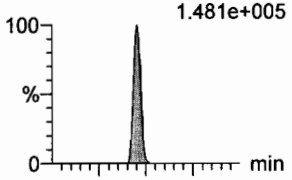
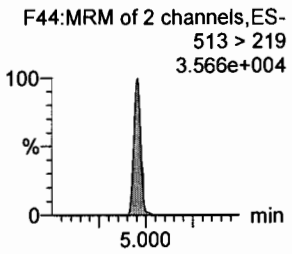
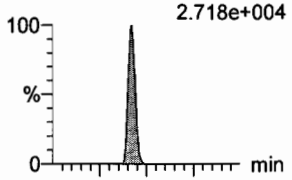
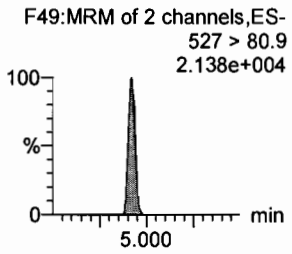


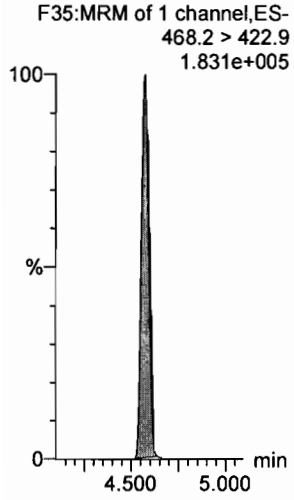


8:2 FTS

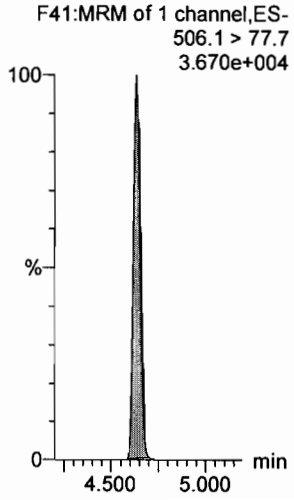




13C5-PFNA



13C8-PFOSA



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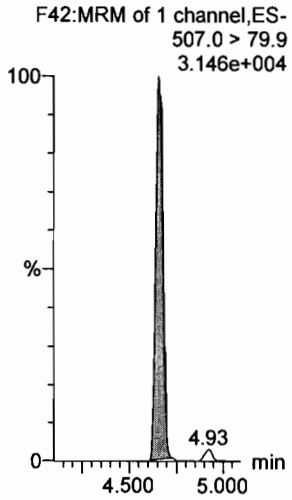

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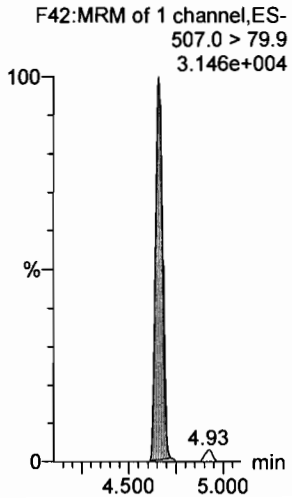

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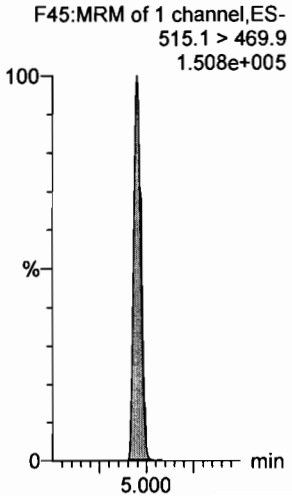

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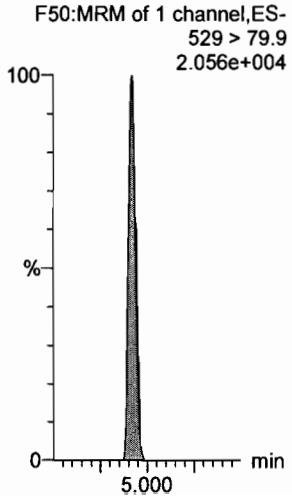
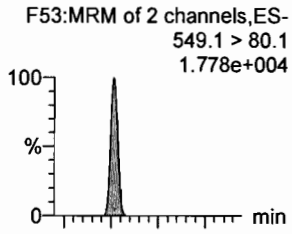


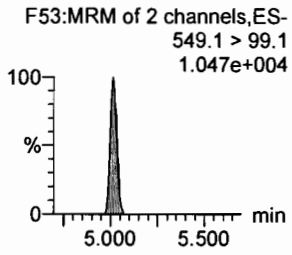
Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

Last Altered: Thursday, July 11, 2019 11:22:53 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

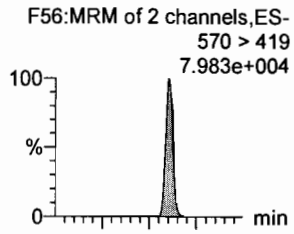
Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

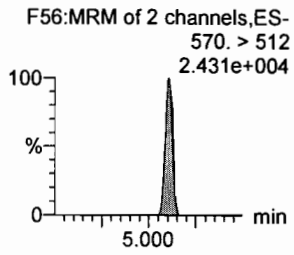
PFNS





L-MeFOSAA





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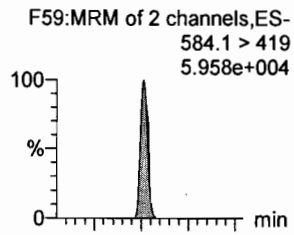

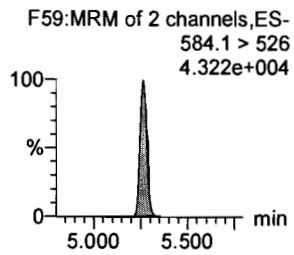

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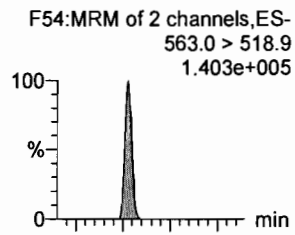

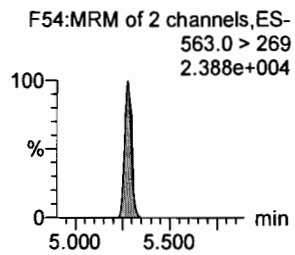

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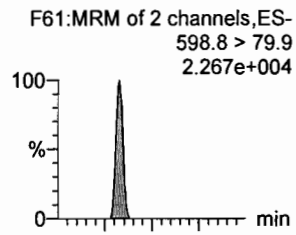

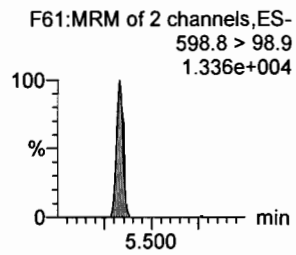

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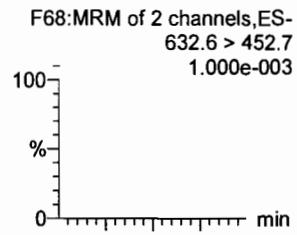
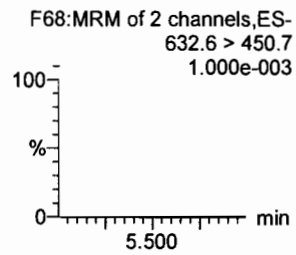
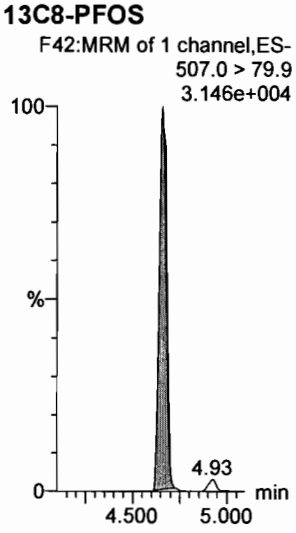
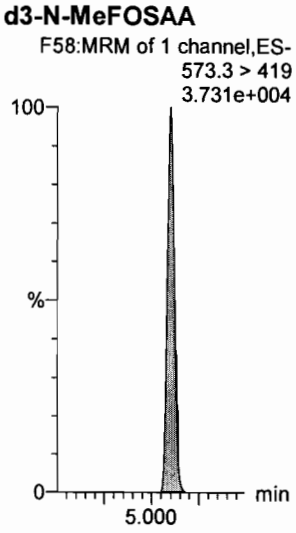




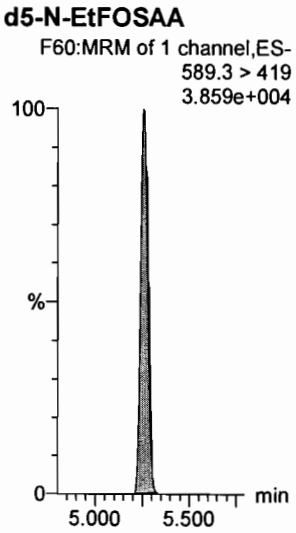
13C8-PFOS



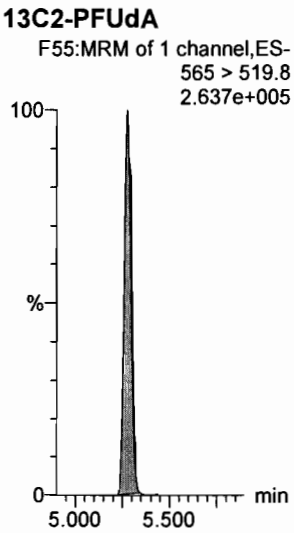
d3-N-MeFOSAA



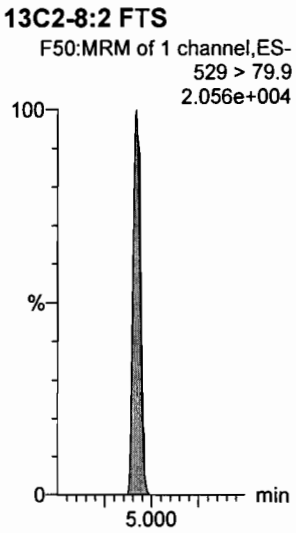
d5-N-EtFOSAA



13C2-PFUdA



13C2-8:2 FTS



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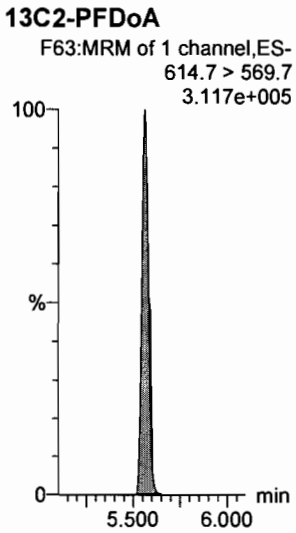

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

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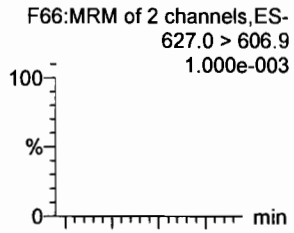
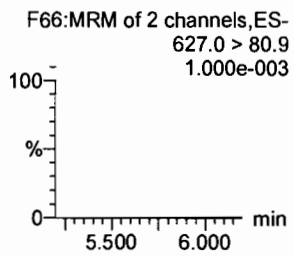
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

10:2 FTS





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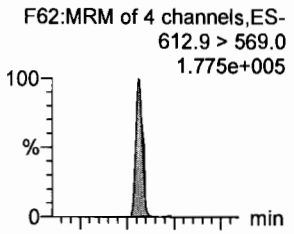
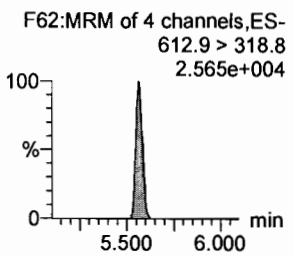
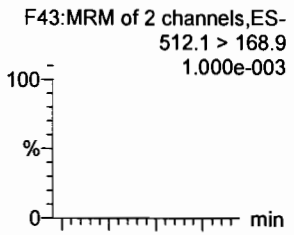
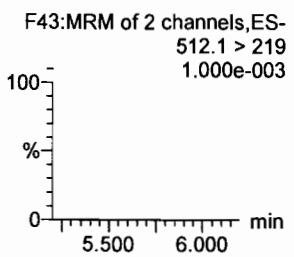




N-MeFOSA





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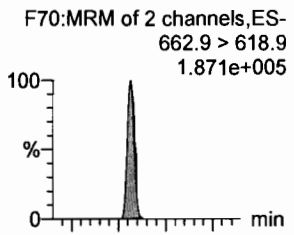

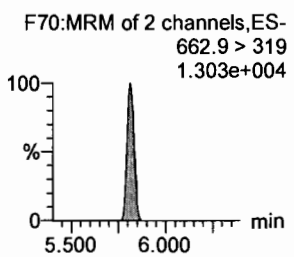

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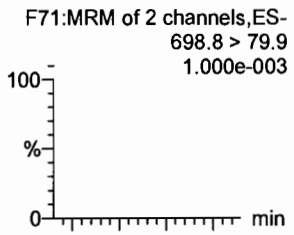
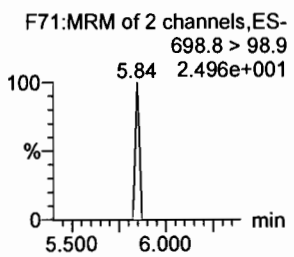
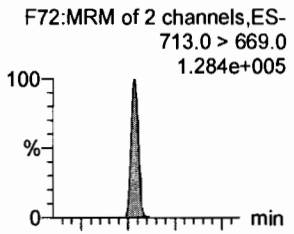
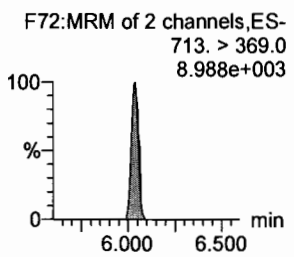


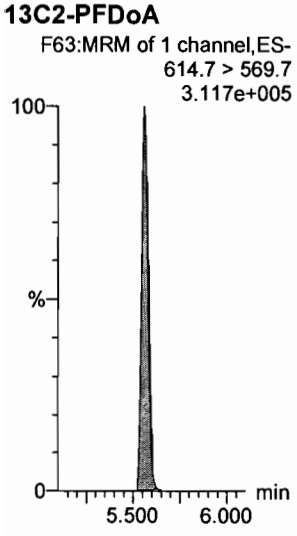


PFTeDA





13C2-PFDoA



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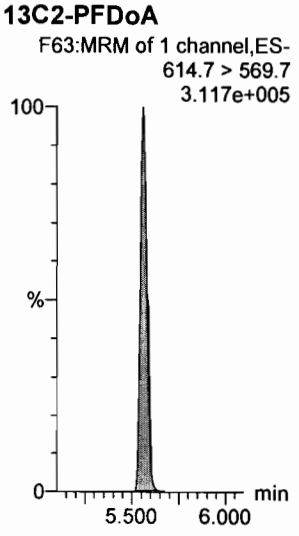
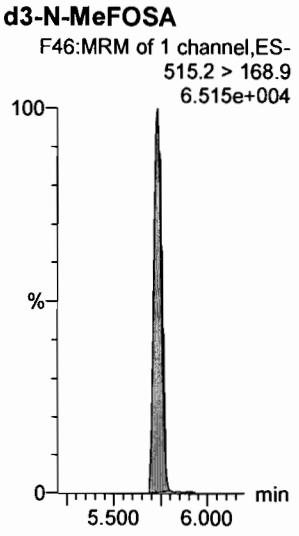


d3-N-MeFOSA



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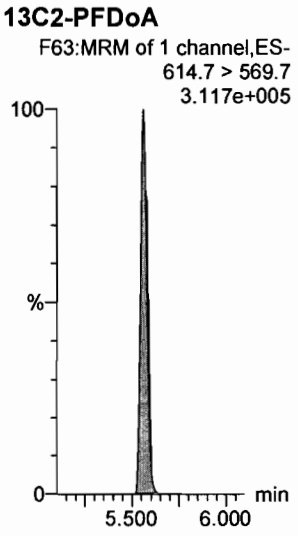

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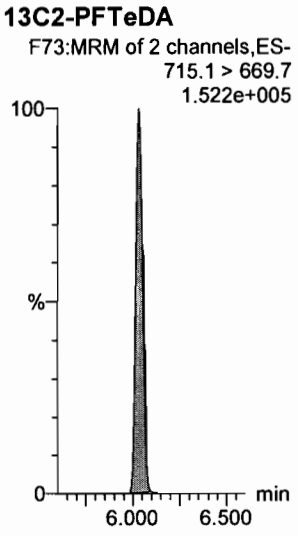

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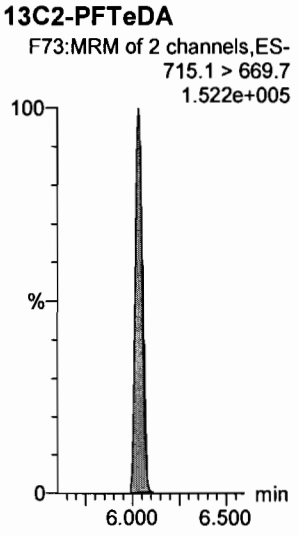

Dataset: F:\Projects\PFAS.PRO\Results\190710M2\190710M2-ICV.qld

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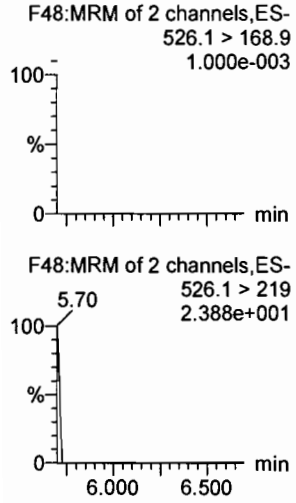
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

N-EtFOSA



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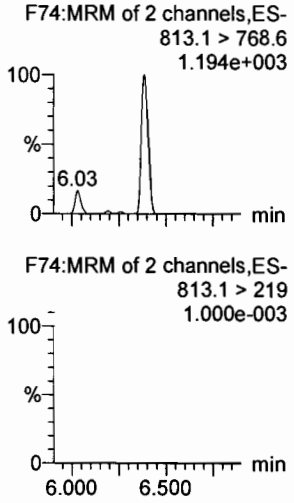

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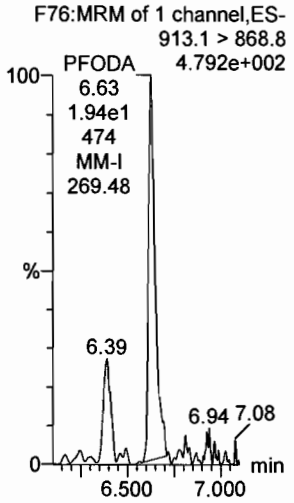
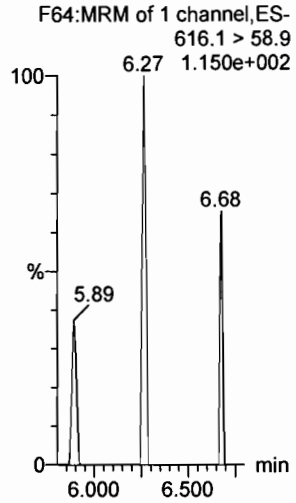


N-MeFOSE



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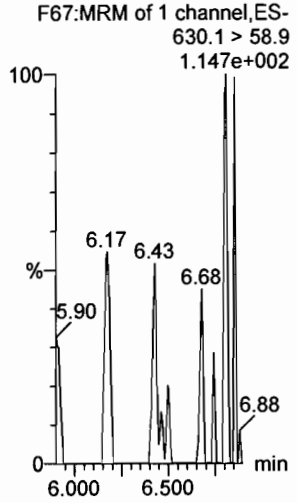
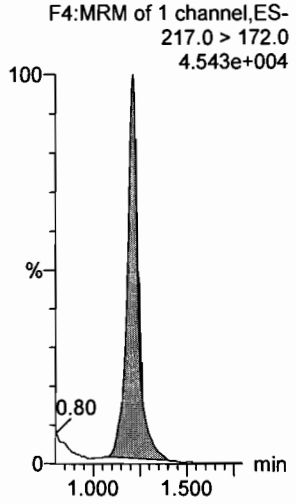
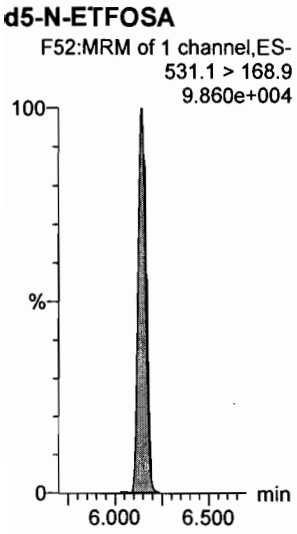


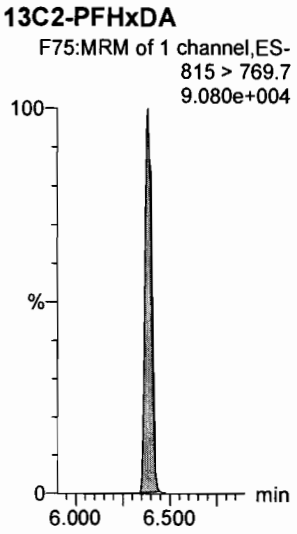
13C4-PFBA



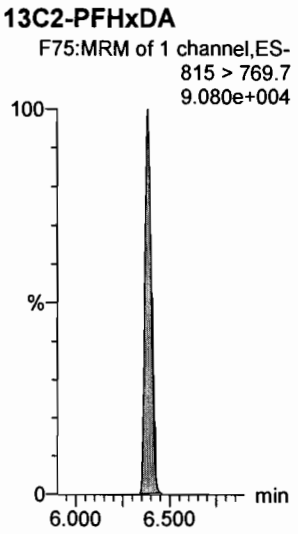
d5-N-ETFOSA



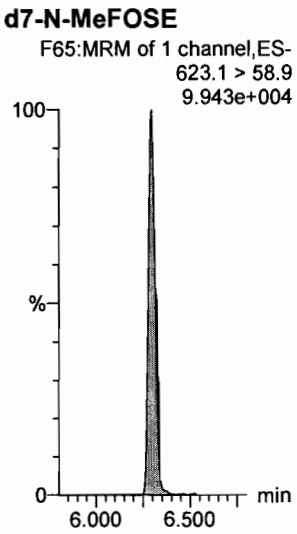
13C2-PFHxDA



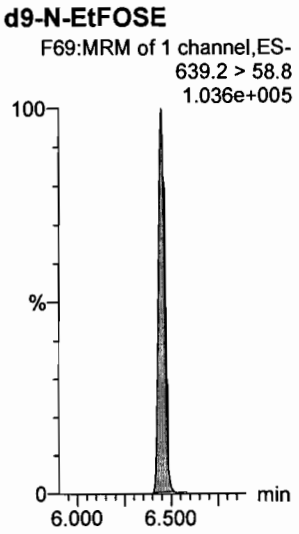
13C2-PFHxDA



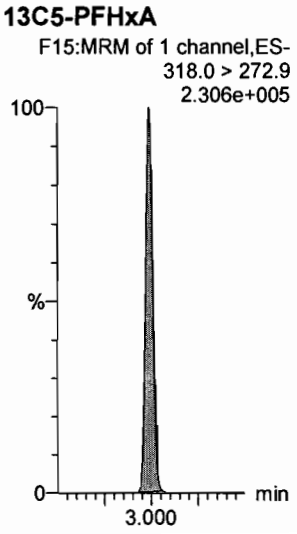
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



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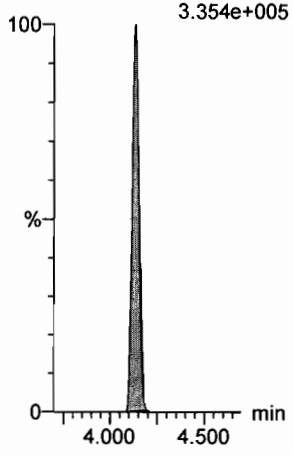
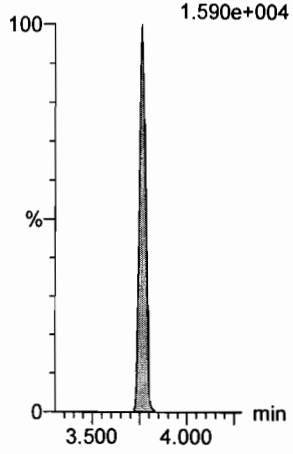
Last Altered: Thursday, July 11, 2019 11:22:53 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:22:57 Pacific Daylight Time

Name: 190710M2_17, Date: 10-Jul-2019, Time: 15:40:21, ID: ST190710M2-1 PFC ICV 19G0811, Description: PFC ICV 19G0811

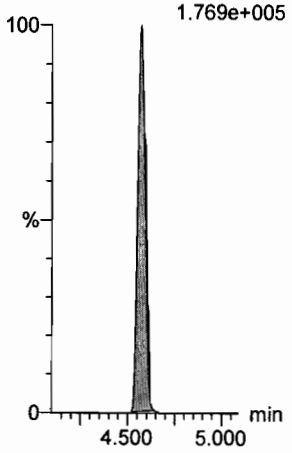
13C8-PFOA



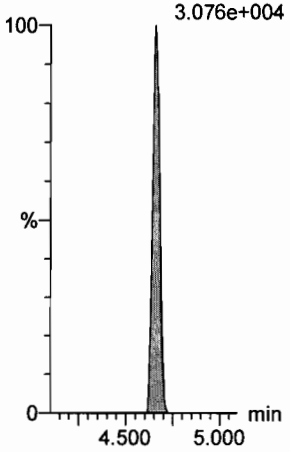
18O2-PFHxS



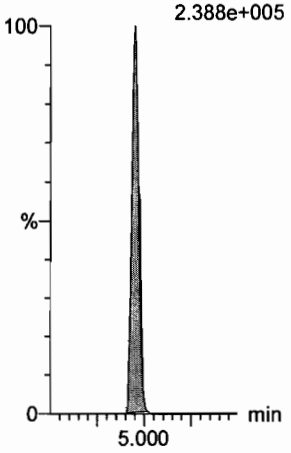
13C9-PFNA



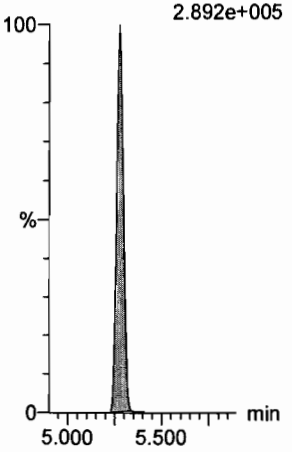
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		3665.172	1.00					NO		
2	2	PFPrS	248.9 > 79.9		564.050	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		4395.620	1.00					NO		
4	4	PFPeA	263.1 > 218.9		4395.620	1.00					NO		
5	5	PFBS	299.0 > 79.7		564.050	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		1123.940	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	3665.172	5748.722	1.00	1.21	7.970	12.3	98.1	NO		
8	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
9	48	13C3-PFPeA	266.0 > 221.8	4395.620	9796.685	1.00	2.20	5.609	13.8	110.1	NO		
10	48	13C3-PFPeA	266.0 > 221.8	4395.620	9796.685	1.00	2.20	5.609	13.8	110.1	NO		
11	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	1123.940	553.194	1.00	2.91	25.397	11.3	90.8	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	7.800	3103.105	1.00	2.86	0.013	0.0		NO		
15	8	PFPeS	349.1>80.1		564.050	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1212.091	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		3834.397	1.00					NO		
18	11	PFHpA	363.0 > 318.9		3834.397	1.00					NO		
19	12	ADONA	376.8 > 250.9		3834.397	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	3103.105	9796.685	1.00	2.99	3.959	5.0	99.9	NO		
21	49	13C3-PFBS	302.0 > 98.8	564.050	553.194	1.00	2.49	12.745	12.3	98.5	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1212.091	9796.685	1.00	3.20	1.547	5.0	100.9	NO		
23	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
24	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
25	53	13C4-PFHpA	367.2 > 321.8	3834.397	9796.685	1.00	3.61	4.892	12.5	100.1	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6		1448.751	1.00					NO		
28	15	6:2 FTS	427.0 > 406.9		1044.706	1.00					NO		
29	16	L-PFOA	412.8 > 368.9	37.351	8031.595	1.00	4.14	0.058	0.0		NO	4.911	NO
30	18	PFecHS	460.8 > 381.0		8031.595	1.00					NO		
31	19	PFHpS	449.0 > 80.0		1410.610	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		7616.705	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	1448.751	553.194	1.00	3.76	32.736	12.9	102.8	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1044.706	1293.104	1.00	4.08	10.099	13.7	109.7	NO		
35	58	13C2-PFOA	414.9 > 369.7	8031.595	13655.097	1.00	4.13	7.352	13.0	104.2	NO		
36	58	13C2-PFOA	414.9 > 369.7	8031.595	13655.097	1.00	4.13	7.352	13.0	104.2	NO		

EGM 7/11/2019

Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
38	56	13C5-PFNA	468.2 > 422.9	7616.705	8145.557	1.00	4.57	11.688	11.9	95.2	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	8.783	7616.705	1.00	4.56	0.014			NO		
41	22	PFOSA	497.9 > 77.9		549.882	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		1410.610	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		1410.610	1.00					NO		
44	26	PFDA	513 > 468.8		6263.837	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		946.606	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	7616.705	8145.557	1.00	4.57	11.688	11.9	95.2	NO		
47	57	13C8-PFOSA	506.1 > 77.7	549.882	8175.738	1.00	4.63	0.841	6.5	51.6	NO		
48	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
49	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
50	60	13C2-PFDA	515.1 > 469.9	6263.837	9421.503	1.00	4.95	8.311	12.6	100.4	NO		
51	61	13C2-8:2 FTS	529 > 79.9	946.606	1293.104	1.00	4.92	9.151	13.2	105.3	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		1410.610	1.00					NO		
54	29	L-MeFOSAA	570 > 419		1235.898	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		1426.384	1.00					NO		
56	33	PFUdA	563.0 > 518.9	16.167	7494.523	1.00	5.27	0.027	0.0		NO		
57	34	PFDS	598.8 > 79.9		946.606	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		3698.353	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	1410.610	1293.104	1.00	4.66	13.636	12.9	102.9	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	1235.898	8175.738	1.00	5.10	1.890	14.6	117.1	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	1426.384	8175.738	1.00	5.26	2.181	14.8	118.4	NO		
62	63	13C2-PFUdA	565 > 519.8	7494.523	8175.738	1.00	5.28	11.458	13.4	107.0	NO		
63	61	13C2-8:2 FTS	529 > 79.9	946.606	1293.104	1.00	4.92	9.151	13.2	105.3	NO		
64	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		946.606	1.00					NO		
67	37	PFDoA	612.9 > 569.0		3698.353	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9			1.00					NO		
69	39	PFTrDA	662.9 > 618.9	6.069	3698.353	1.00	5.89	0.021	0.1		NO		
70	40	PFDoS	698.8 > 79.9		362.476	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		362.476	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		

LGM 7/11/2019

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
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Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
74	66	d3-N-MeFOSA	515.2 > 168.9		8175.738	1.00					NO		
75	65	13C2-PFDoA	614.7 > 569.7	3698.353	9421.503	1.00	5.56	4.907	4.0	31.9	YES		
76	67	13C2-PFTeDA	715.1 > 669.7	362.476	8175.738	1.00	6.04	0.554	1.1	8.7	YES		
77	67	13C2-PFTeDA	715.1 > 669.7	362.476	8175.738	1.00	6.04	0.554	1.1	8.7	YES		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9			1.00					NO		
80	43	PFHxDA	813.1 > 768.6	12.580	384.845	1.00	6.40	0.163	0.1		NO		
81	44	PFODA	913.1 > 868.8	20.252	384.845	1.00	6.63	0.263	0.3		NO		
82	45	N-MeFOSE	616.1 > 58.9		287.485	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9	9.122	214.581	1.00	6.56	6.377	4.7		NO		
84	72	13C4-PFBA	217.0 > 172.0	5748.722	5748.722	1.00	1.21	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9		8175.738	1.00					NO		
86	69	13C2-PFHxDA	815 > 769.7	384.845	8175.738	1.00	6.39	0.588	0.8	16.0	YES		
87	69	13C2-PFHxDA	815 > 769.7	384.845	8175.738	1.00	6.39	0.588	0.8	16.0	YES		
88	70	d7-N-MeFOSE	623.1 > 58.9	287.485	8175.738	1.00	6.30	0.440	15.7	10.5	YES		
89	71	d9-N-EtFOSE	639.2 > 58.8	214.581	8175.738	1.00	6.45	0.328	11.9	8.0	YES		
90	73	13C5-PFHxA	318.0 > 272.9	9796.685	9796.685	1.00	2.99	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	13655.097	13655.097	1.00	4.13	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	553.194	553.194	1.00	3.76	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	8145.557	8145.557	1.00	4.57	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	1293.104	1293.104	1.00	4.66	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	9421.503	9421.503	1.00	4.95	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	8175.738	8175.738	1.00	5.27	12.500	12.5	100.0	NO		

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Dataset: Untitled

Last Altered: Thursday, July 11, 2019 11:00:15 Pacific Daylight Time
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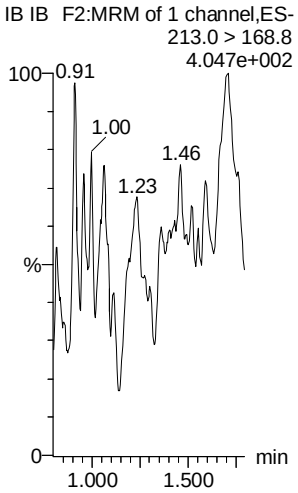
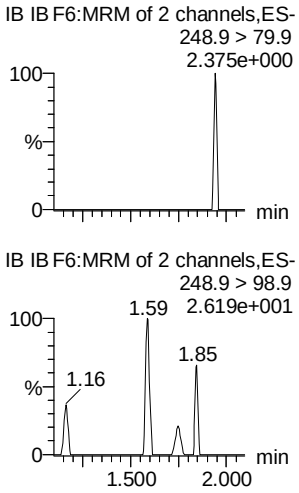
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071019.mdb 11 Jul 2019 10:07:19
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-10-19.cdb 11 Jul 2019 10:56:26

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

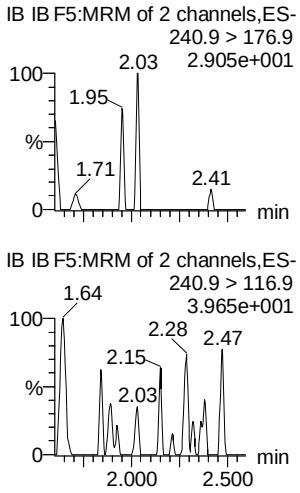
PFBA



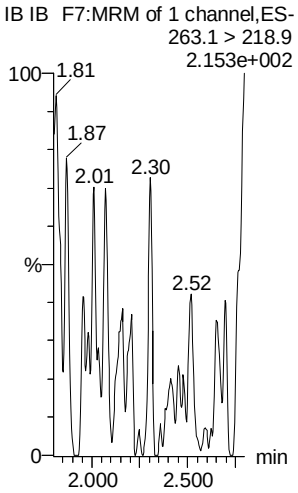
PFPrS



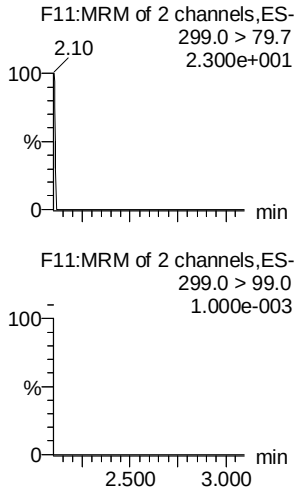
3:3 FTCA



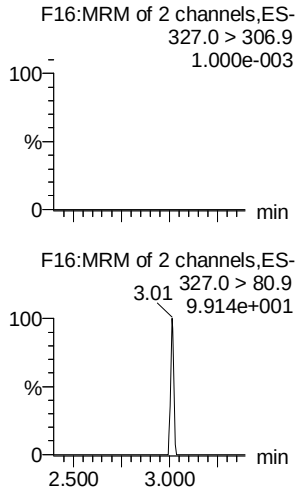
PFPeA



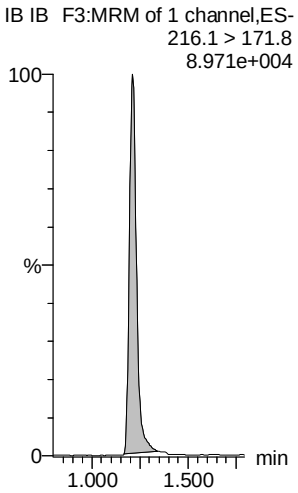
PFBS



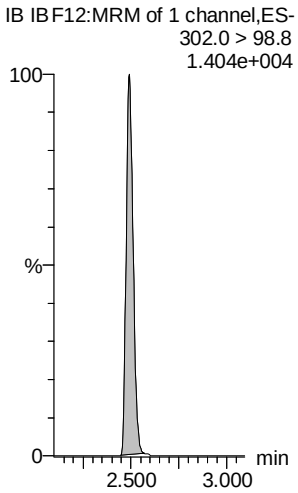
4:2 FTS



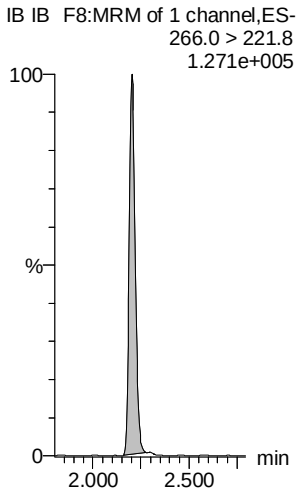
13C3-PFBA



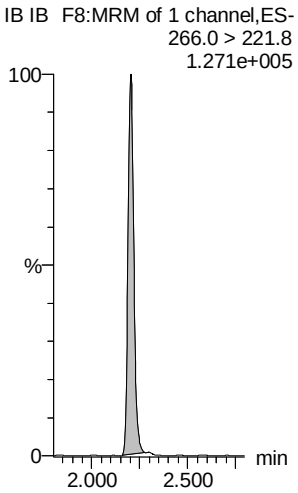
13C3-PFBS



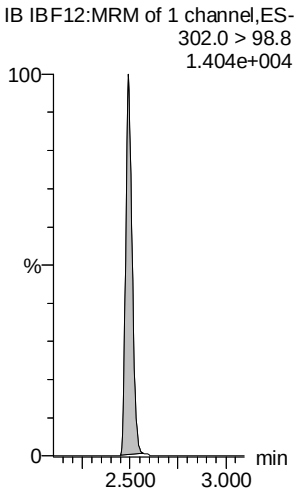
13C3-PFPeA



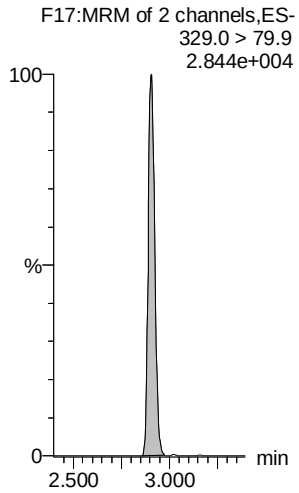
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS



Vista Analytical Laboratory

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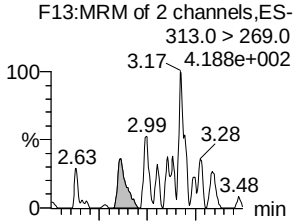
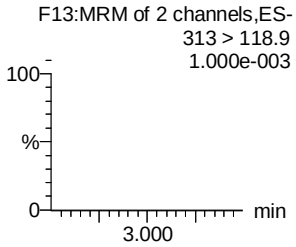
Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

PFHxA





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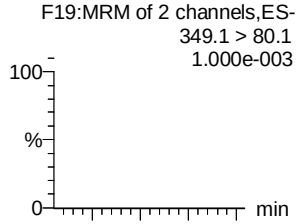
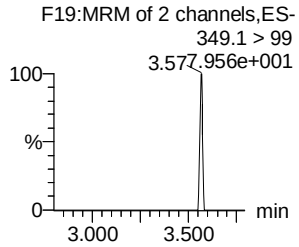
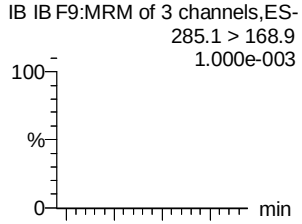
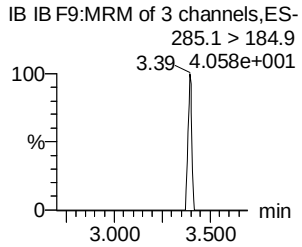




HFPO-DA





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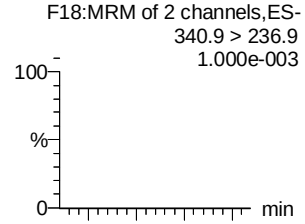

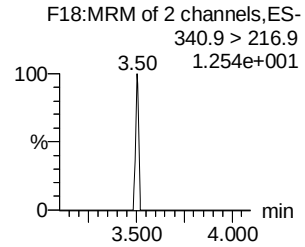

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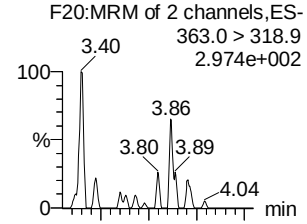

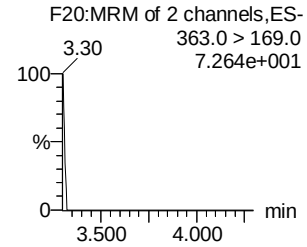

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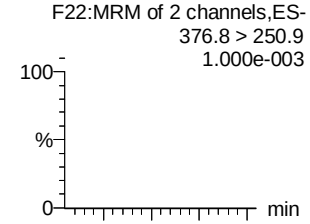

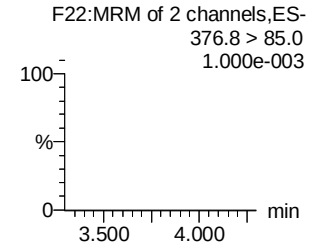

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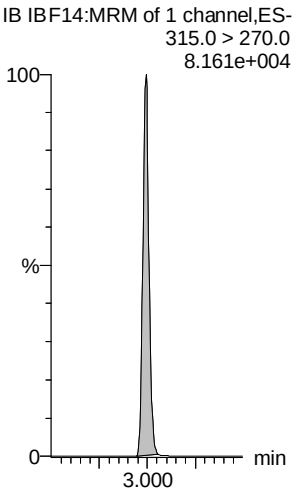

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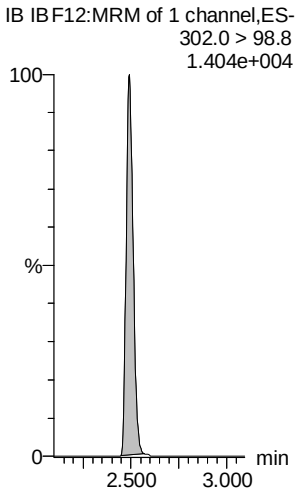

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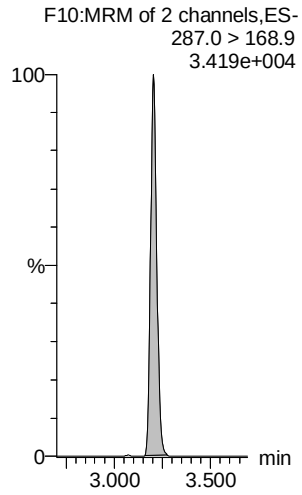

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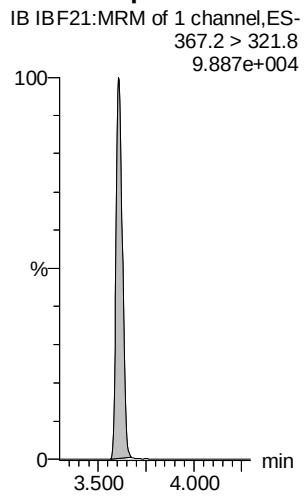

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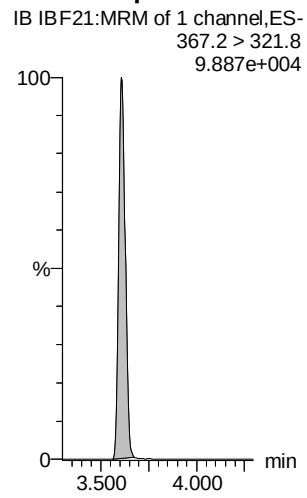

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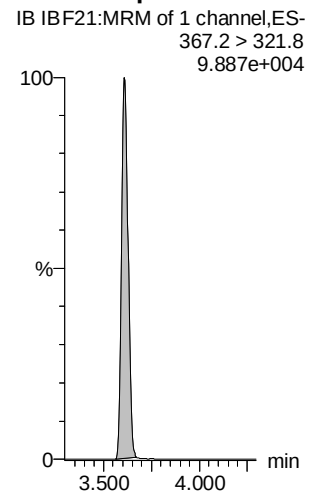

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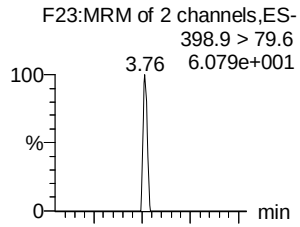
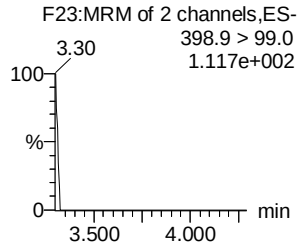
Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

L-PFHxS





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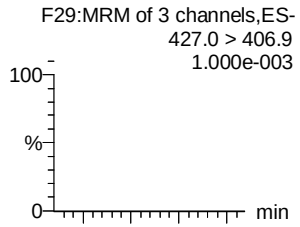

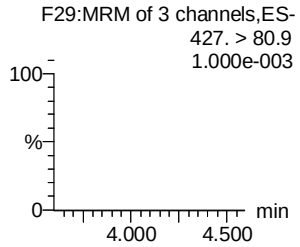

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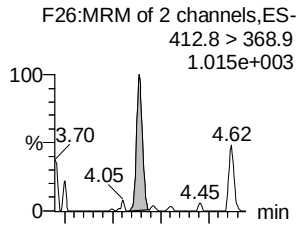

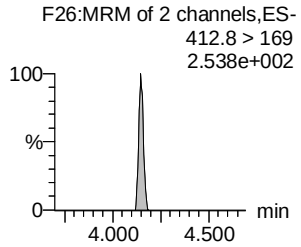

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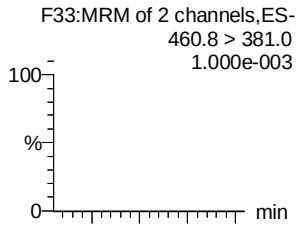

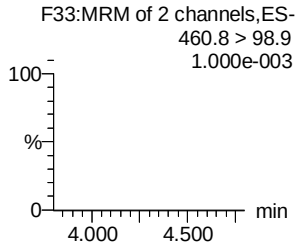

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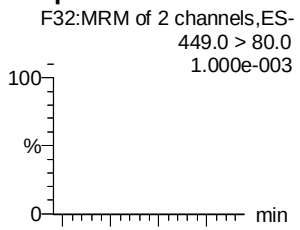

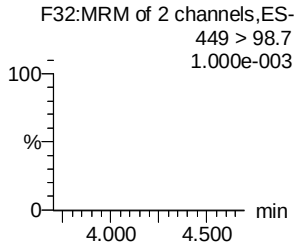

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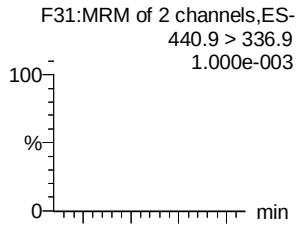

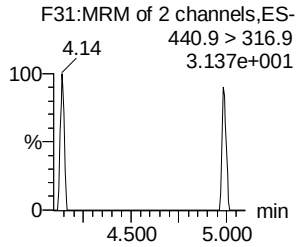

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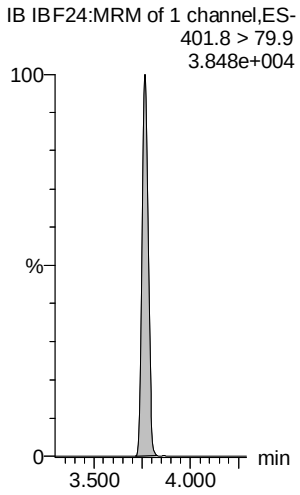
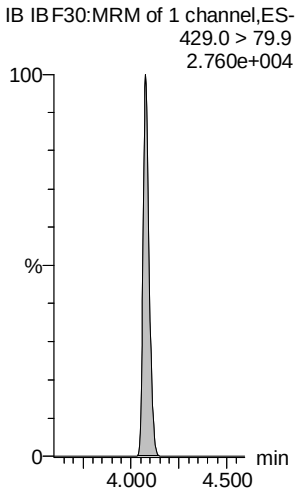


13C2-6:2 FTS



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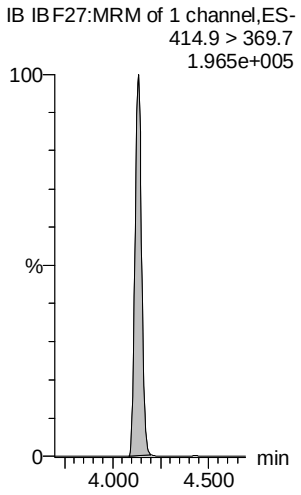

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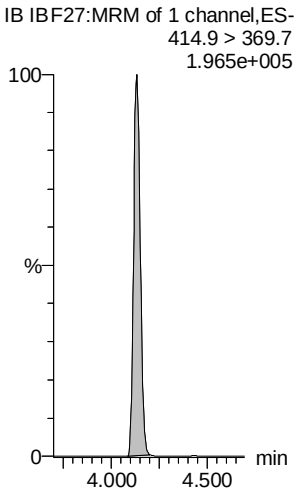
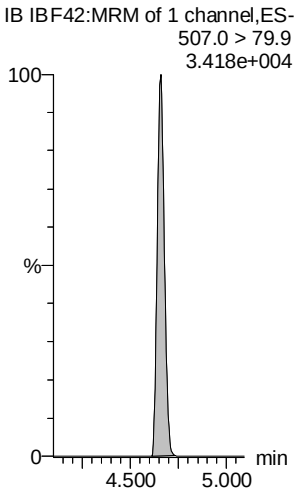


13C8-PFOS



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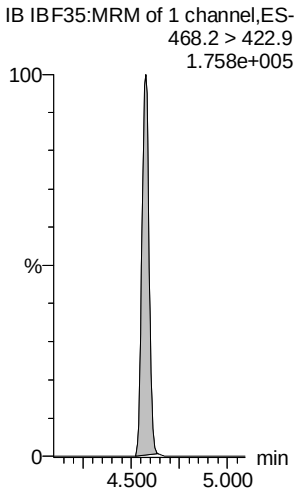

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Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

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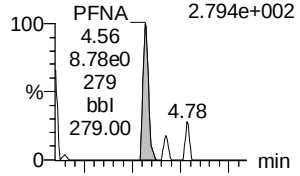

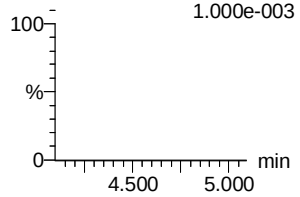

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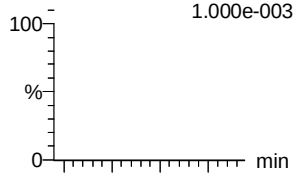
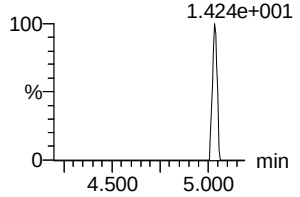
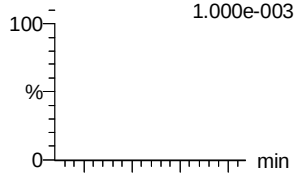
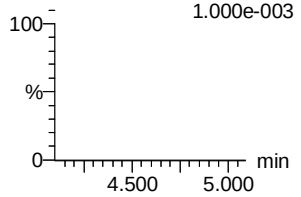




L-PFOS





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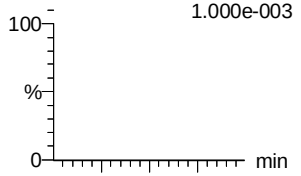

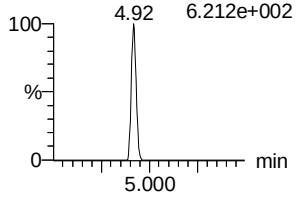

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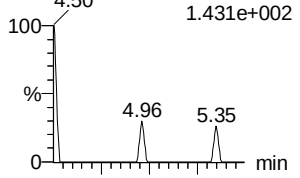

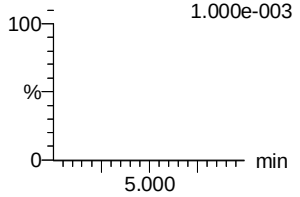

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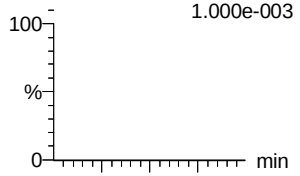

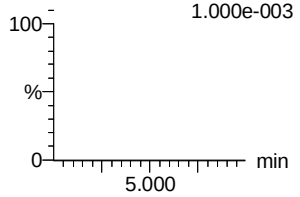

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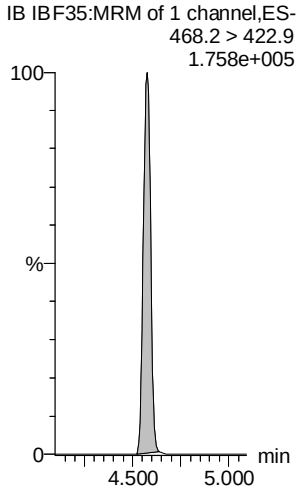

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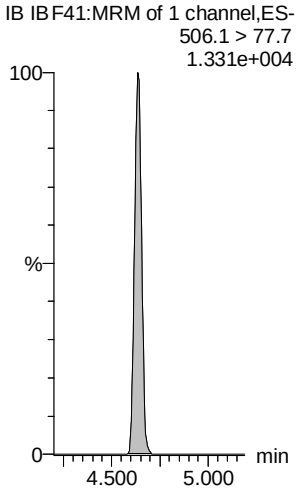

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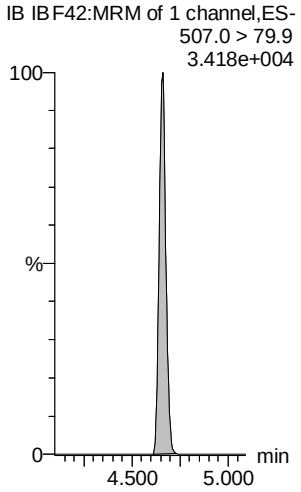

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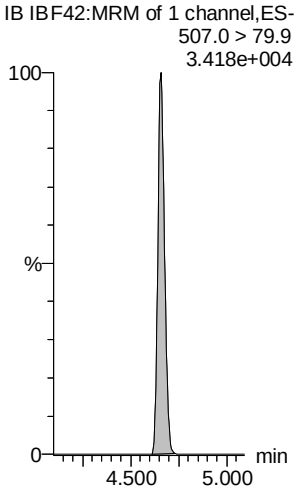
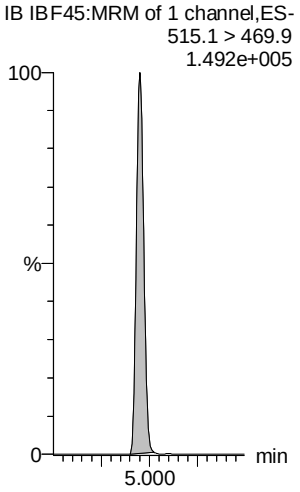
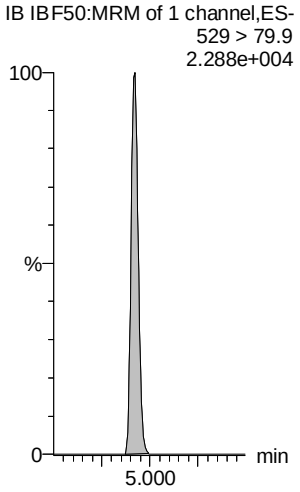


13C2-PFDA



13C2-8:2 FTS



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Printed: Thursday, July 11, 2019 11:00:25 Pacific Daylight Time

Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

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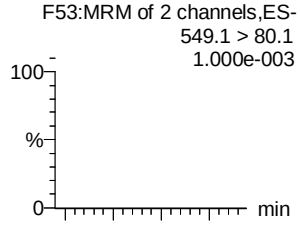

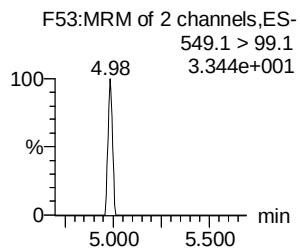

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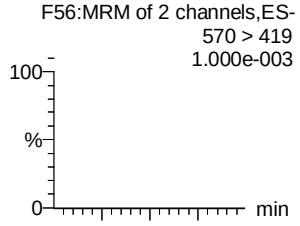

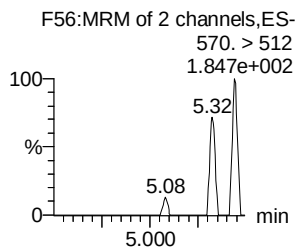

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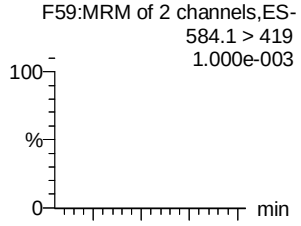

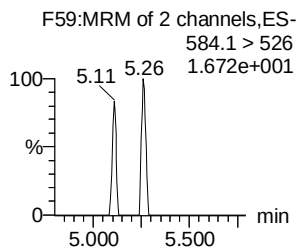

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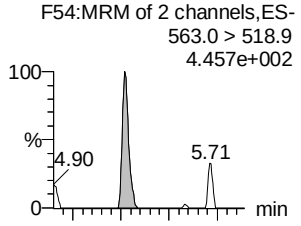

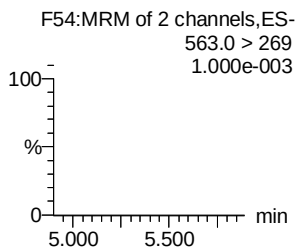

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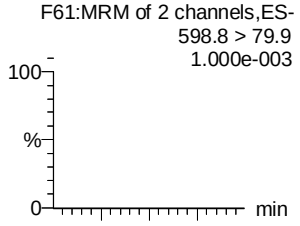

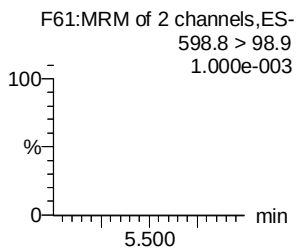

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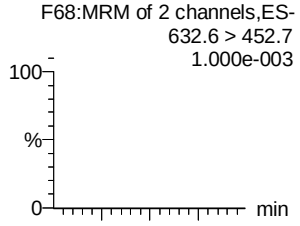

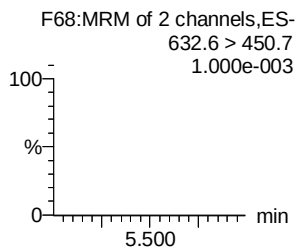

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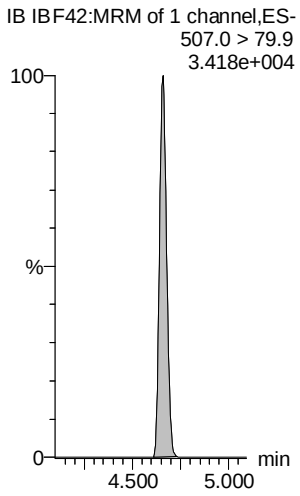

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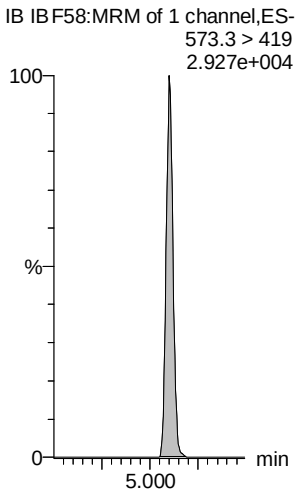

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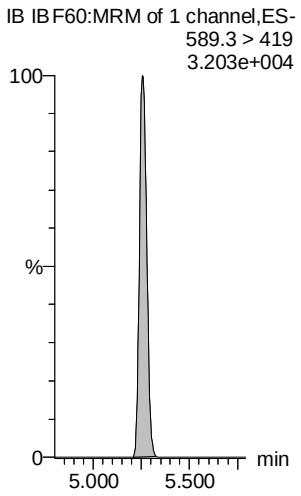

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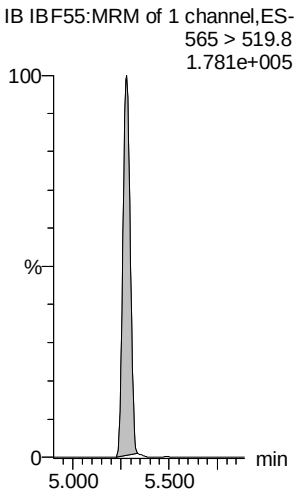
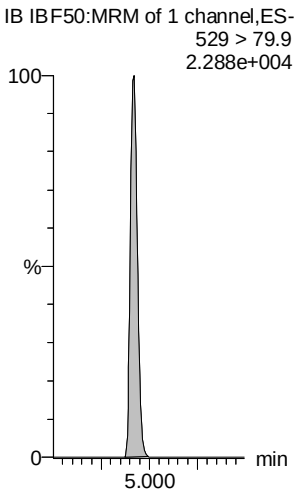


13C2-8:2 FTS



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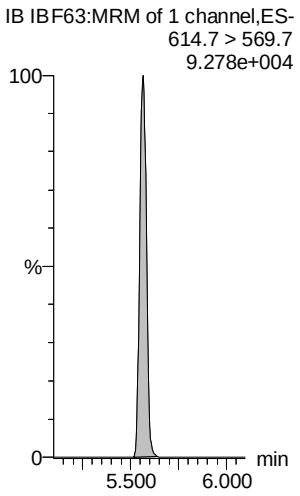

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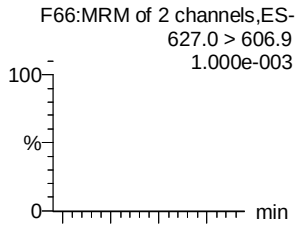
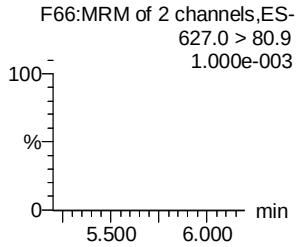
10:2 FTS





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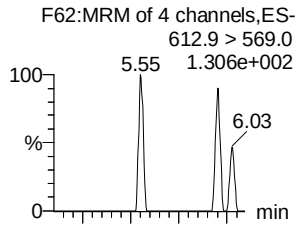

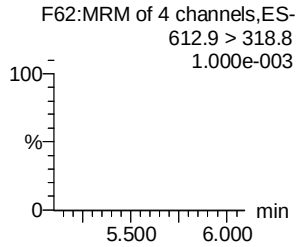

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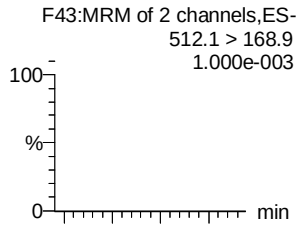

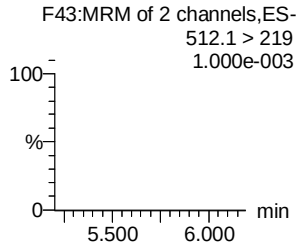

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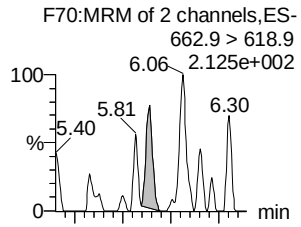

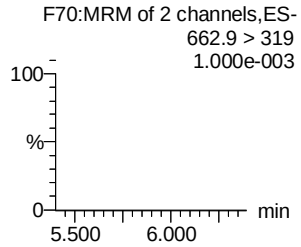

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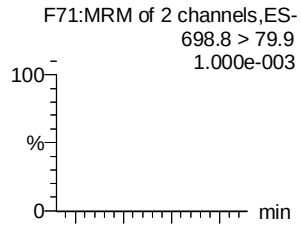

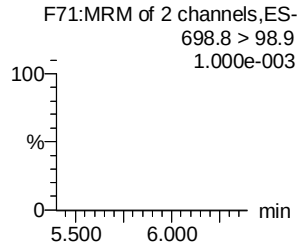

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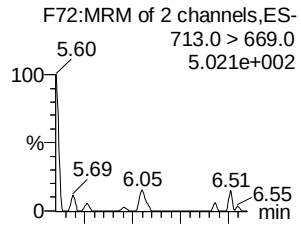

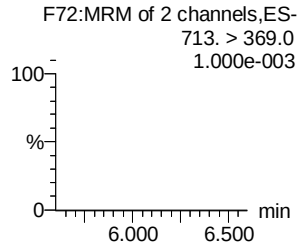

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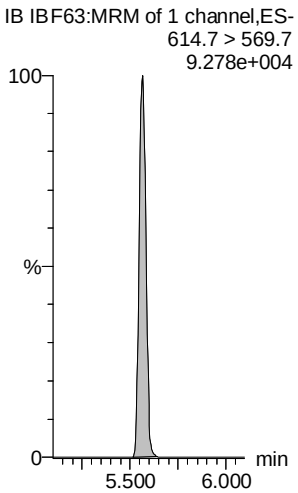

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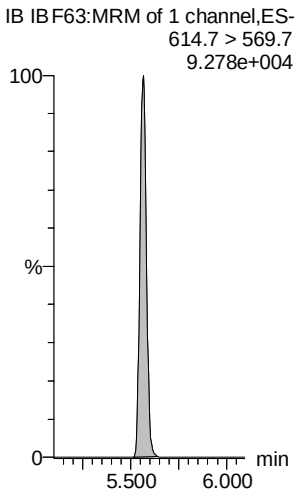
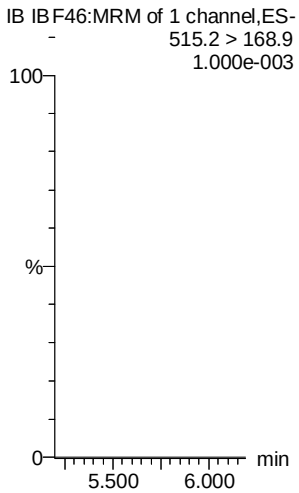


d3-N-MeFOSA



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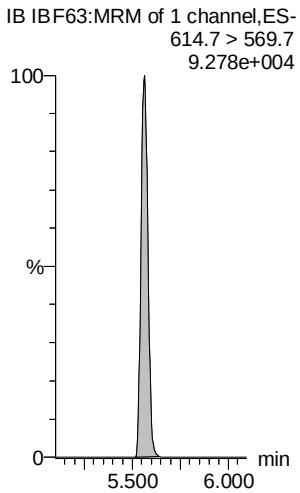

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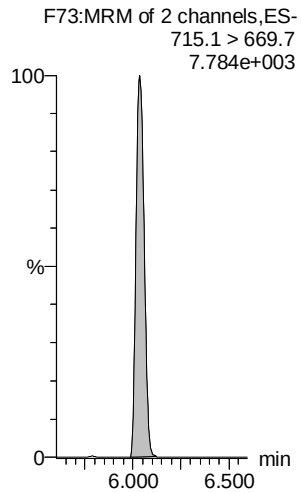

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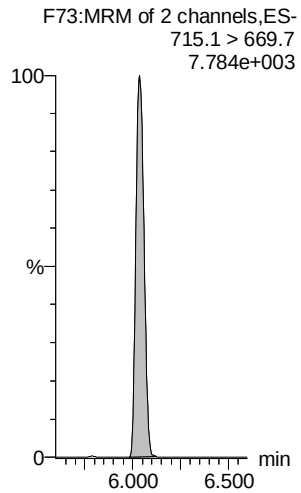

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Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

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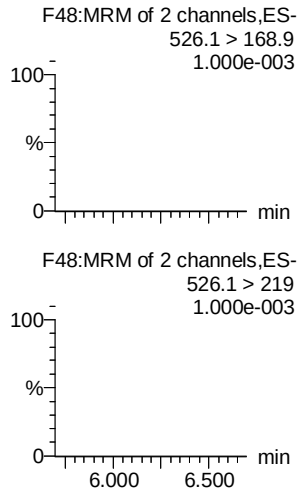

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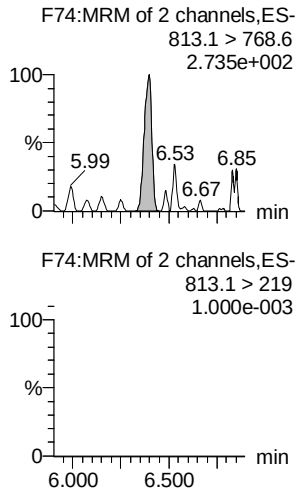

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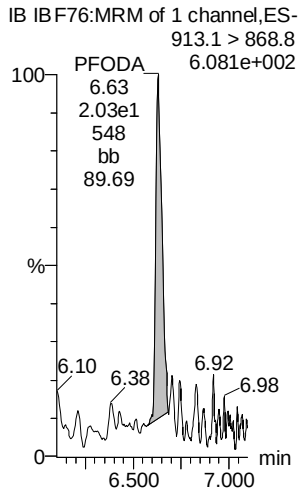

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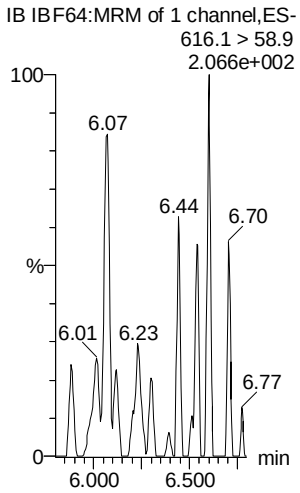

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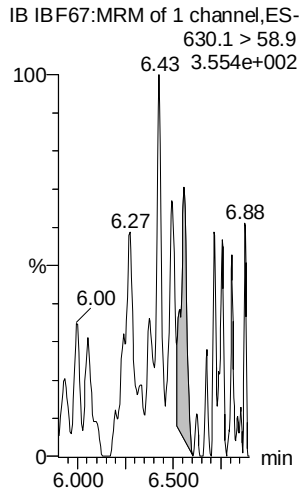

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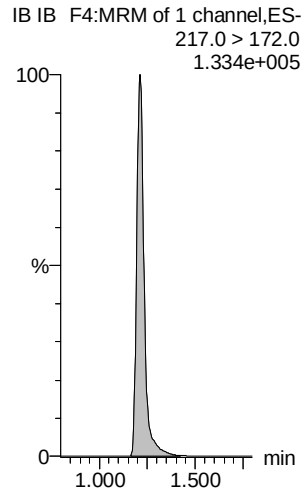
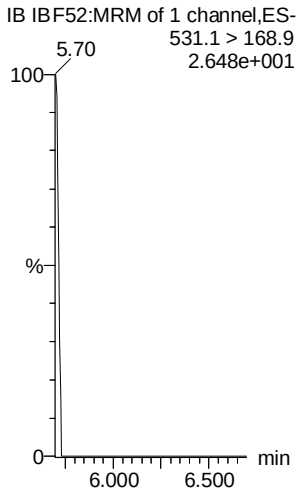


d5-N-ETFOSA



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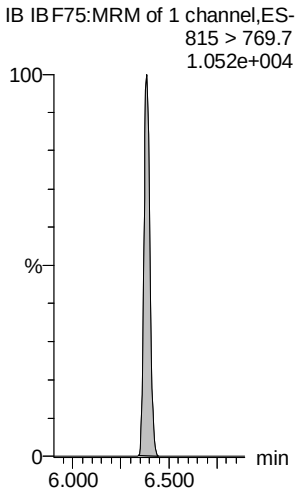

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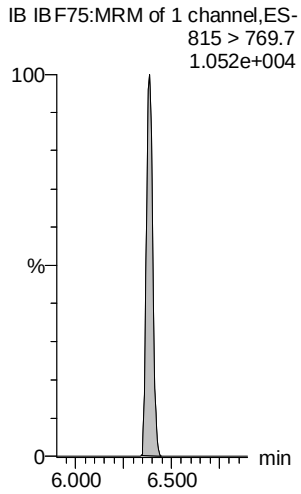

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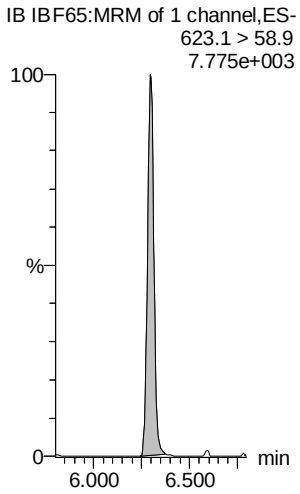

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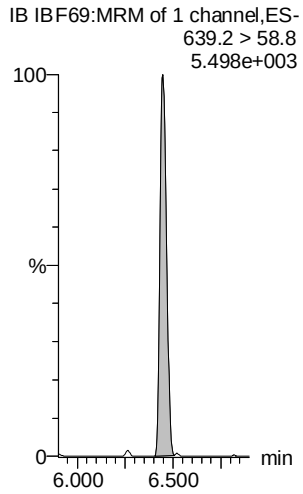

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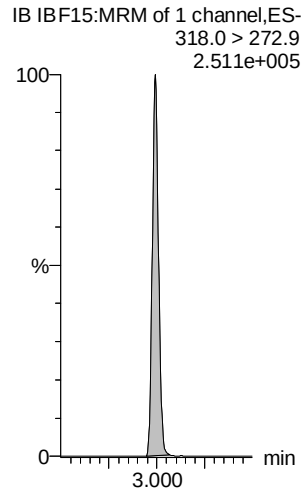

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Name: 190710M2_16, Date: 10-Jul-2019, Time: 15:29:49, ID: IB, Description: IB

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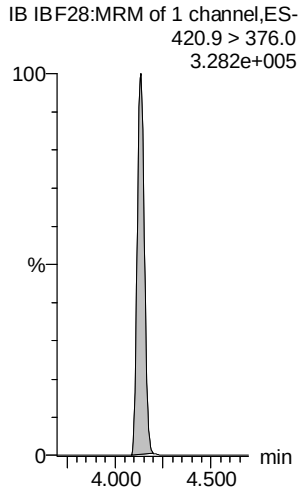

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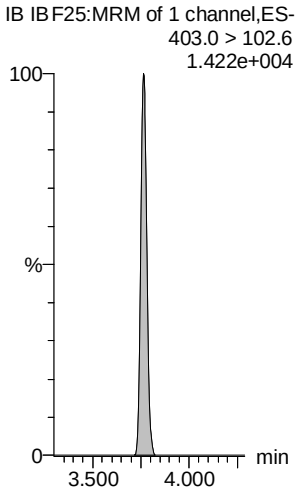

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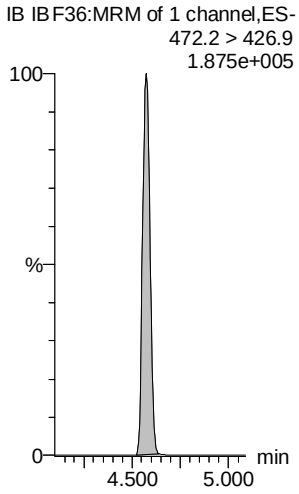
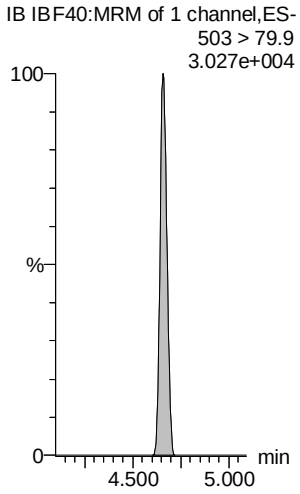
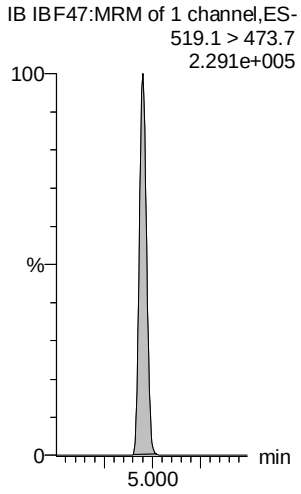


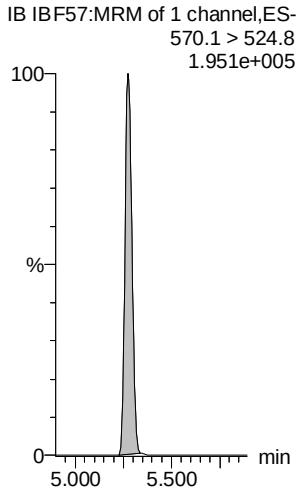
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Low PE
PFHpS = 0.5
7:3 FTCA
PFDS

high PE
3:3 FTCA = 100
5:3 FTCA
7:3 FTCA
PFDS

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

vlm 7/17/19

Compound name: PFBA
Correlation coefficient: r = 0.999915, r^2 = 0.999831
Calibration curve: 1.42867 * x + -0.1474
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	190716M2_4	Standard	0.250	1.21	113.870	5250.216	0.271	0.3	17.2	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	1.21	210.332	5328.377	0.493	0.4	-10.3	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	1.21	502.126	5269.876	1.191	0.9	-6.3	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	1.21	1434.329	6359.378	2.819	2.1	3.8	NO	1.000	NO	MM
5	5	190716M2_8	Standard	5.000	1.21	3068.895	5618.954	6.827	4.9	-2.4	NO	1.000	NO	MM
6	6	190716M2_9	Standard	10.000	1.21	6339.876	5776.047	13.720	9.7	-2.9	NO	1.000	NO	MM
7	7	190716M2_10	Standard	50.000	1.21	31194.816	5541.743	70.363	49.4	-1.3	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	1.21	62478.699	5309.916	147.080	103.1	3.1	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	1.21	159939.031	5651.507	353.753	247.7	-0.9	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	1.21	302121.781	5284.814	714.599	500.3	0.1	NO	1.000	NO	bb

Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999480
Calibration curve: 0.000936354 * x^2 + 1.33594 * x + -0.111459
Response type: Internal Std (Ref 49), 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	190716M2_4	Standard	0.250	1.57	25.530	1217.658	0.262	0.3	11.8	NO	0.999	NO	MM
2	2	190716M2_5	Standard	0.500	1.58	58.720	1327.414	0.553	0.5	-0.6	NO	0.999	NO	MM
3	3	190716M2_6	Standard	1.000	1.58	127.322	1293.647	1.230	1.0	0.4	NO	0.999	NO	MM
4	4	190716M2_7	Standard	2.000	1.59	335.025	1526.480	2.743	2.1	6.7	NO	0.999	NO	MM
5	5	190716M2_8	Standard	5.000	1.58	560.541	1284.593	5.454	4.2	-16.9	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	1.58	1359.267	1266.196	13.419	10.1	0.6	NO	0.999	NO	MM
7	7	190716M2_10	Standard	50.000	1.58	7199.763	1302.259	69.108	50.1	0.1	NO	0.999	NO	MM
8	8	190716M2_11	Standard	100.000	1.59	13130.788	1204.164	136.306	95.7	-4.3	NO	0.999	NO	MM
9	9	190716M2_12	Standard	250.000	1.58	36295.230	1121.964	404.372	256.6	2.6	NO	0.999	NO	MM
10	10	190716M2_13	Standard	500.000	1.58	70278.086	979.060	897.265	497.9	-0.4	NO	0.999	NO	MM

Cal 7/17/19

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.998534
Calibration curve: 3.62139e-005 * x^2 + 0.0392869 * x + -0.00205845
Response type: Internal Std (Ref 48), 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	190716M2_4	Standard	0.250	2.04	6.411	8139.766	0.010	0.3	21.2	NO	0.999	NO	MM
2	2	190716M2_5	Standard	0.500	2.05	10.025	8487.657	0.015	0.4	-14.4	NO	0.999	NO	MM
3	3	190716M2_6	Standard	1.000	2.05	24.466	8540.586	0.036	1.0	-3.7	NO	0.999	NO	MM
4	4	190716M2_7	Standard	2.000	2.05	50.481	9794.767	0.064	1.7	-15.5	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	2.05	135.095	9157.241	0.184	4.7	-5.5	NO	0.999	NO	MM
6	6	190716M2_9	Standard	10.000	2.05	258.426	8772.721	0.368	9.3	-6.6	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	2.05	1443.406	8395.805	2.149	52.2	4.5	NO	0.999	NO	bd
8	8	190716M2_11	Standard	100.000	2.05	2854.457	8407.112	4.244	99.0	-1.0	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	2.05	1451.441	7824.807	2.319	56.2	-77.5	YES	0.999	NO	bbX
10	10	190716M2_13	Standard	500.000	2.05	3001.529	7333.563	5.116	117.5	-76.5	YES	0.999	NO	bbX

Compound name: PFPeA
Correlation coefficient: r = 0.999924, r^2 = 0.999849
Calibration curve: 0.927355 * x + -0.0458768
Response type: Internal Std (Ref 48), 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	190716M2_4	Standard	0.250	2.21	146.151	8139.766	0.224	0.3	16.6	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	2.20	266.102	8487.657	0.392	0.5	-5.6	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	2.20	555.780	8540.586	0.813	0.9	-7.3	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	2.20	1359.364	9794.767	1.735	1.9	-4.0	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	2.20	3330.216	9157.241	4.546	5.0	-1.0	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	2.20	6411.053	8772.721	9.135	9.9	-1.0	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	2.21	31799.201	8395.805	47.344	51.1	2.2	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	2.21	61938.539	8407.112	92.092	99.4	-0.6	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	2.21	147313.219	7824.807	235.330	253.8	1.5	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	2.21	269837.844	7333.563	459.936	496.0	-0.8	NO	1.000	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFBS
Correlation coefficient: r = 0.999884, r^2 = 0.999768
Calibration curve: 2.30677 * x + -0.110938
Response type: Internal Std (Ref 49), 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	190716M2_4	Standard	0.250	2.51	53.706	1217.658	0.551	0.3	14.8	NO	1.000	NO	MM
2	2	190716M2_5	Standard	0.500	2.50	94.244	1327.414	0.887	0.4	-13.4	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	2.50	224.782	1293.647	2.172	1.0	-1.0	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	2.51	518.466	1526.480	4.246	1.9	-5.6	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	2.50	1209.659	1284.593	11.771	5.2	3.0	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	2.50	2447.862	1266.196	24.166	10.5	5.2	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	2.51	11413.048	1302.259	109.550	47.5	-4.9	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	2.51	22519.568	1204.164	233.768	101.4	1.4	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	2.51	52136.813	1121.964	580.865	251.9	0.7	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	2.50	90094.094	979.060	1150.263	498.7	-0.3	NO	1.000	NO	bb

Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999794
Calibration curve: -0.000545681 * x^2 + 2.76987 * x + -0.195009
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190716M2_4	Standard	0.250	2.92	111.29€	2368.101	0.587	0.3	13.0	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	2.92	235.648	2443.970	1.205	0.5	1.1	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	2.92	472.763	2565.531	2.303	0.9	-9.8	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	2.92	1108.258	2780.059	4.983	1.9	-6.5	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	2.93	2757.442	2645.359	13.030	4.8	-4.4	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	2.92	5291.029	2301.054	28.742	10.5	4.7	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	2.93	24347.969	2186.161	139.216	50.8	1.7	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	2.92	45234.418	2051.804	275.577	101.6	1.6	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	2.93	92767.586	1792.288	646.991	245.5	-1.8	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	2.93	152790.219	1524.474	1252.811	502.0	0.4	NO	1.000	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFHxA
Correlation coefficient: r = 0.999727, r^2 = 0.999453
Calibration curve: 1.15387 * x + 0.0286354
Response type: Internal Std (Ref 52), 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	190716M2_4	Standard	0.250	3.00	370.779	5765.931	0.322	0.3	1.5	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	3.01	722.401	5965.168	0.606	0.5	-0.0	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	3.01	1308.068	6058.156	1.080	0.9	-8.9	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	3.01	3252.531	6807.611	2.389	2.0	2.3	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	3.01	7726.405	6168.879	6.262	5.4	8.0	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	3.01	14791.380	6334.795	11.675	10.1	0.9	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	3.01	73005.836	5817.504	62.747	54.4	8.7	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	3.01	135841.672	6021.483	112.798	97.7	-2.3	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	3.01	316067.594	5463.366	289.261	250.7	0.3	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	3.01	561253.438	4895.237	573.265	496.8	-0.6	NO	0.999	NO	bb

Compound name: PFPeS
Correlation coefficient: r = 0.996302, r^2 = 0.992617
Calibration curve: 1.4909 * x + 0.128111
Response type: Internal Std (Ref 49), 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	190716M2_4	Standard	0.250	3.22	43.983	1217.658	0.452	0.2	-13.2	NO	0.993	NO	bb
2	2	190716M2_5	Standard	0.500	3.22	69.996	1327.414	0.659	0.4	-28.8	NO	0.993	NO	bb
3	3	190716M2_6	Standard	1.000	3.22	184.341	1293.647	1.781	1.1	10.9	NO	0.993	NO	bb
4	4	190716M2_7	Standard	2.000	3.21	361.291	1526.480	2.959	1.9	-5.1	NO	0.993	NO	bb
5	5	190716M2_8	Standard	5.000	3.21	925.592	1284.593	9.007	6.0	19.1	NO	0.993	NO	bb
6	6	190716M2_9	Standard	10.000	3.21	1916.953	1266.196	18.924	12.6	26.1	NO	0.993	NO	bb
7	7	190716M2_10	Standard	50.000	3.22	8920.266	1302.259	85.623	57.3	14.7	NO	0.993	NO	bb
8	8	190716M2_11	Standard	100.000	3.22	16279.562	1204.164	168.992	113.3	13.3	NO	0.993	NO	bb
9	9	190716M2_12	Standard	250.000	3.22	34964.133	1121.964	389.542	261.2	4.5	NO	0.993	NO	bb
10	10	190716M2_13	Standard	500.000	3.21	54287.621	979.060	693.109	464.8	-7.0	NO	0.993	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999471
Calibration curve: -0.000121204 * x^2 + 0.594869 * x + -0.0711014
Response type: Internal Std (Ref 50), 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 190716M2_4	Standard	0.250	3.22	33.518	1929.668	0.087	0.3	6.2	NO	0.999	NO	bb
2	2 190716M2_5	Standard	0.500	3.22	76.760	1917.258	0.200	0.5	-8.8	NO	0.999	NO	bb
3	3 190716M2_6	Standard	1.000	3.23	154.725	1494.483	0.518	1.0	-1.0	NO	0.999	NO	bb
4	4 190716M2_7	Standard	2.000	3.21	466.903	2014.792	1.159	2.1	3.4	NO	0.999	NO	bb
5	5 190716M2_8	Standard	5.000	3.22	1020.991	1771.227	2.882	5.0	-0.6	NO	0.999	NO	bb
6	6 190716M2_9	Standard	10.000	3.22	2062.129	1679.165	6.140	10.5	4.6	NO	0.999	NO	bb
7	7 190716M2_10	Standard	50.000	3.22	9261.311	1618.492	28.611	48.7	-2.6	NO	0.999	NO	bb
8	8 190716M2_11	Standard	100.000	3.22	20349.457	1815.201	56.053	96.2	-3.8	NO	0.999	NO	bb
9	9 190716M2_12	Standard	250.000	3.22	45065.574	1550.355	145.340	258.0	3.2	NO	0.999	NO	bb
10	10 190716M2_13	Standard	500.000	3.22	66352.586	1249.913	265.429	496.6	-0.7	NO	0.999	NO	bb

Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999734
Calibration curve: 0.000207996 * x^2 + 0.276598 * x + -0.0109196
Response type: Internal Std (Ref 53), 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 190716M2_4	Standard	0.250	3.56	33.477	6842.853	0.061	0.3	4.2	NO	1.000	NO	bb
2	2 190716M2_5	Standard	0.500	3.56	85.131	7195.404	0.148	0.6	14.8	NO	1.000	NO	bb
3	3 190716M2_6	Standard	1.000	3.56	136.787	7305.836	0.234	0.9	-11.5	NO	1.000	NO	bb
4	4 190716M2_7	Standard	2.000	3.56	315.322	7894.354	0.499	1.8	-7.9	NO	1.000	NO	bb
5	5 190716M2_8	Standard	5.000	3.56	815.437	7305.663	1.395	5.1	1.3	NO	1.000	NO	bb
6	6 190716M2_9	Standard	10.000	3.56	1517.254	6951.189	2.728	9.8	-1.7	NO	1.000	NO	bb
7	7 190716M2_10	Standard	50.000	3.56	7973.366	6877.049	14.493	50.5	1.0	NO	1.000	NO	bb
8	8 190716M2_11	Standard	100.000	3.56	15824.968	6670.025	29.657	99.8	-0.2	NO	1.000	NO	bb
9	9 190716M2_12	Standard	250.000	3.56	8025.000	6330.190	15.847	55.1	-78.0	YES	1.000	NO	bbX
10	10 190716M2_13	Standard	500.000	3.56	16743.803	5173.783	40.453	133.0	-73.4	YES	1.000	NO	bbX

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFHpA
Correlation coefficient: r = 0.999308, r^2 = 0.998617
Calibration curve: 1.26078 * x + -0.0726981
Response type: Internal Std (Ref 53), 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 190716M2_4	Standard	0.250	3.63	133.624	6842.853	0.244	0.3	0.5	NO	0.999	NO	bb
2	2 190716M2_5	Standard	0.500	3.63	261.975	7195.404	0.455	0.4	-16.3	NO	0.999	NO	bb
3	3 190716M2_6	Standard	1.000	3.63	781.015	7305.836	1.336	1.1	11.8	NO	0.999	NO	bb
4	4 190716M2_7	Standard	2.000	3.63	1573.847	7894.354	2.492	2.0	1.7	NO	0.999	NO	bb
5	5 190716M2_8	Standard	5.000	3.63	3701.843	7305.663	6.334	5.1	1.6	NO	0.999	NO	bb
6	6 190716M2_9	Standard	10.000	3.63	7138.199	6951.189	12.836	10.2	2.4	NO	0.999	NO	bb
7	7 190716M2_10	Standard	50.000	3.63	35673.547	6877.049	64.842	51.5	3.0	NO	0.999	NO	bb
8	8 190716M2_11	Standard	100.000	3.63	65918.953	6670.025	123.536	98.0	-2.0	NO	0.999	NO	bb
9	9 190716M2_12	Standard	250.000	3.63	150807.797	6330.190	297.795	236.3	-5.5	NO	0.999	NO	bb
10	10 190716M2_13	Standard	500.000	3.63	268104.406	5173.783	647.748	513.8	2.8	NO	0.999	NO	bb

Compound name: ADONA
Correlation coefficient: r = 0.999036, r^2 = 0.998072
Calibration curve: 4.7382 * x + -0.341799
Response type: Internal Std (Ref 53), 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 190716M2_4	Standard	0.250	3.74	524.837	6842.853	0.959	0.3	9.8	NO	0.998	NO	bb
2	2 190716M2_5	Standard	0.500	3.74	1296.194	7195.404	2.252	0.5	9.5	NO	0.998	NO	bb
3	3 190716M2_6	Standard	1.000	3.74	2367.074	7305.836	4.050	0.9	-7.3	NO	0.998	NO	bb
4	4 190716M2_7	Standard	2.000	3.74	5616.569	7894.354	8.893	1.9	-2.5	NO	0.998	NO	bb
5	5 190716M2_8	Standard	5.000	3.74	13437.762	7305.663	22.992	4.9	-1.5	NO	0.998	NO	bb
6	6 190716M2_9	Standard	10.000	3.74	26406.229	6951.189	47.485	10.1	0.9	NO	0.998	NO	bb
7	7 190716M2_10	Standard	50.000	3.75	126103.922	6877.049	229.212	48.4	-3.1	NO	0.998	NO	bb
8	8 190716M2_11	Standard	100.000	3.74	242222.172	6670.025	453.938	95.9	-4.1	NO	0.998	NO	bb
9	9 190716M2_12	Standard	250.000	3.74	566675.000	6330.190	1118.993	236.2	-5.5	NO	0.998	NO	bb
10	10 190716M2_13	Standard	500.000	3.74	1018627.063	5173.783	2461.031	519.5	3.9	NO	0.998	NO	bb

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Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999740
Calibration curve: 9.02755e-006 * x^2 + 0.999005 * x + -0.0664012
Response type: Internal Std (Ref 54), 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	190716M2_4	Standard	0.250	3.80	35.455	2649.227	0.167	0.2	-6.4	NO	1.000	NO	MM
2	2	190716M2_5	Standard	0.500	3.78	127.470	2871.006	0.555	0.6	24.4	NO	1.000	NO	MM
3	3	190716M2_6	Standard	1.000	3.78	162.564	2758.509	0.737	0.8	-19.6	NO	1.000	NO	MM
4	4	190716M2_7	Standard	2.000	3.79	425.082	3125.209	1.700	1.8	-11.6	NO	1.000	NO	MM
5	5	190716M2_8	Standard	5.000	3.78	984.052	2889.846	4.257	4.3	-13.5	NO	1.000	NO	MM
6	6	190716M2_9	Standard	10.000	3.78	2122.411	2715.657	9.769	9.8	-1.6	NO	1.000	NO	MM
7	7	190716M2_10	Standard	50.000	3.79	10632.028	2617.288	50.778	50.9	1.7	NO	1.000	NO	MM
8	8	190716M2_11	Standard	100.000	3.79	20771.945	2614.037	99.329	99.4	-0.6	NO	1.000	NO	MM
9	9	190716M2_12	Standard	250.000	3.79	48045.816	2384.082	251.909	251.7	0.7	NO	1.000	NO	MM
10	10	190716M2_13	Standard	500.000	3.79	85225.945	2126.796	500.906	499.2	-0.2	NO	1.000	NO	MM

Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998452
Calibration curve: -0.00124606 * x^2 + 2.92798 * x + -0.170137
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190716M2_4	Standard	0.250	4.10	83.871	1800.087	0.582	0.3	2.8	NO	0.998	NO	bb
2	2	190716M2_5	Standard	0.500	4.10	222.036	1940.428	1.430	0.5	9.3	NO	0.998	NO	bb
3	3	190716M2_6	Standard	1.000	4.10	355.396	1826.766	2.432	0.9	-11.1	NO	0.998	NO	bb
4	4	190716M2_7	Standard	2.000	4.10	936.891	2286.677	5.121	1.8	-9.6	NO	0.998	NO	bb
5	5	190716M2_8	Standard	5.000	4.10	1975.245	1886.190	13.090	4.5	-9.2	NO	0.998	NO	bb
6	6	190716M2_9	Standard	10.000	4.10	4386.374	1994.234	27.494	9.5	-5.1	NO	0.998	NO	bb
7	7	190716M2_10	Standard	50.000	4.10	19656.436	1671.656	146.983	51.4	2.8	NO	0.998	NO	bb
8	8	190716M2_11	Standard	100.000	4.10	34764.398	1662.847	261.332	93.0	-7.0	NO	0.998	NO	bb
9	9	190716M2_12	Standard	250.000	4.10	76087.906	1390.181	684.155	263.2	5.3	NO	0.998	NO	bb
10	10	190716M2_13	Standard	500.000	4.10	128998.742	1413.688	1140.622	493.1	-1.4	NO	0.998	NO	bb

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Compound name: L-PFOA
Correlation coefficient: r = 0.999751, r^2 = 0.999501
Calibration curve: 1.99432 * x + 0.0417568
Response type: Internal Std (Ref 58), 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	190716M2_4	Standard	0.250	4.16	594.689	13572.244	0.548	0.3	1.5	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	4.16	1159.956	13363.243	1.085	0.5	4.6	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	4.16	2412.120	13968.624	2.159	1.1	6.1	NO	1.000	NO	bd
4	4	190716M2_7	Standard	2.000	4.16	4998.096	16562.174	3.772	1.9	-6.5	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	4.16	11547.909	14916.217	9.677	4.8	-3.4	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	4.16	22739.014	14115.170	20.137	10.1	0.8	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	4.16	108650.742	13502.623	100.583	50.4	0.8	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	4.16	209437.000	13587.397	192.676	96.6	-3.4	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	4.16	451793.969	11605.829	486.602	244.0	-2.4	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	4.16	746880.000	9193.851	1015.461	509.2	1.8	NO	1.000	NO	bb

Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999769
Calibration curve: 0.000141483 * x^2 + 0.320797 * x + -0.0109297
Response type: Internal Std (Ref 58), 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	190716M2_4	Standard	0.250	4.17	75.318	13572.244	0.069	0.3	0.1	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	4.17	189.492	13363.243	0.177	0.6	17.3	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	4.18	305.372	13968.624	0.273	0.9	-11.4	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	4.18	743.971	16562.174	0.561	1.8	-10.9	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	4.18	1822.587	14916.217	1.527	4.8	-4.3	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	4.18	3888.969	14115.170	3.444	10.7	7.2	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	4.18	18491.213	13502.623	17.118	52.2	4.4	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	4.18	35542.625	13587.397	32.698	97.7	-2.3	NO	1.000	NO	bd
9	9	190716M2_12	Standard	250.000	4.18	82448.891	11605.829	88.801	249.4	-0.2	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	4.18	144125.063	9193.851	195.953	500.4	0.1	NO	1.000	NO	bb

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Compound name: PFHpS
Correlation coefficient: r = 0.999872, r^2 = 0.999744
Calibration curve: 0.853266 * x + -0.0542537
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	190716M2_4	Standard	0.250	4.28	56.636	2560.069	0.277	0.4	55.1	YES	1.000	NO	bbX
2	2	190716M2_5	Standard	0.500	4.28	83.200	2862.337	0.363	0.5	-2.1	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	4.27	171.643	2829.545	0.758	1.0	-4.8	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	4.27	449.241	2923.945	1.921	2.3	15.7	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	4.27	818.738	2852.252	3.588	4.3	-14.6	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	4.27	1880.769	2702.612	8.699	10.3	2.6	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	4.28	9283.452	2632.202	44.086	51.7	3.5	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	4.28	17681.711	2589.537	85.352	100.1	0.1	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	4.27	41813.230	2451.613	213.192	249.9	-0.0	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	4.27	70917.422	2084.448	425.277	498.5	-0.3	NO	1.000	NO	bb

Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 0.000108039 * x^2 + 0.154298 * x + -0.0292777
Response type: Internal Std (Ref 56), 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	190716M2_4	Standard	0.250	4.59	37.368	14513.344	0.032	0.4	59.3	YES	0.998	NO	bbX
2	2	190716M2_5	Standard	0.500	4.58	28.237	14260.563	0.025	0.4	-30.0	NO	0.998	NO	bb
3	3	190716M2_6	Standard	1.000	4.58	151.957	14590.250	0.130	1.0	3.3	NO	0.998	NO	bb
4	4	190716M2_7	Standard	2.000	4.58	449.291	16625.025	0.338	2.4	18.8	NO	0.998	NO	bb
5	5	190716M2_8	Standard	5.000	4.58	930.851	15205.557	0.765	5.1	2.6	NO	0.998	NO	bb
6	6	190716M2_9	Standard	10.000	4.58	2021.163	15199.802	1.662	10.9	8.8	NO	0.998	NO	bb
7	7	190716M2_10	Standard	50.000	4.59	9118.843	15014.631	7.592	47.8	-4.4	NO	0.998	NO	bb
8	8	190716M2_11	Standard	100.000	4.58	17925.949	13460.237	16.647	100.9	0.9	NO	0.998	NO	bb
9	9	190716M2_12	Standard	250.000	4.58	9002.139	12977.360	8.671	54.3	-78.3	YES	0.998	NO	bbX
10	10	190716M2_13	Standard	500.000	4.58	17679.793	11037.246	20.023	119.9	-76.0	YES	0.998	NO	bbX

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Compound name: PFNA
Correlation coefficient: r = 0.999689, r^2 = 0.999379
Calibration curve: 1.03842 * x + -0.0124949
Response type: Internal Std (Ref 56), 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	190716M2_4	Standard	0.250	4.60	274.779	14513.344	0.237	0.2	-4.0	NO	0.999	NO	bd
2	2	190716M2_5	Standard	0.500	4.60	581.618	14260.563	0.510	0.5	0.6	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	4.60	1149.821	14590.250	0.985	1.0	-3.9	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	4.60	2847.761	16625.025	2.141	2.1	3.7	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	4.60	6513.489	15205.557	5.355	5.2	3.4	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	4.60	12534.601	15199.802	10.308	9.9	-0.6	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	4.60	61275.680	15014.631	51.013	49.1	-1.7	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	4.60	117497.953	13460.237	109.116	105.1	5.1	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	4.60	260937.109	12977.360	251.339	242.1	-3.2	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	4.60	461728.094	11037.246	522.920	503.6	0.7	NO	0.999	NO	bb

Compound name: PFOSA
Correlation coefficient: r = 0.999048, r^2 = 0.998097
Calibration curve: 1.153 * x + 0.0481302
Response type: Internal Std (Ref 57), 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	190716M2_4	Standard	0.250	4.67	86.241	3350.814	0.322	0.2	-5.1	NO	0.998	NO	bb
2	2	190716M2_5	Standard	0.500	4.66	188.535	3368.172	0.700	0.6	13.0	NO	0.998	NO	bb
3	3	190716M2_6	Standard	1.000	4.66	322.093	3504.571	1.149	1.0	-4.5	NO	0.998	NO	bb
4	4	190716M2_7	Standard	2.000	4.67	687.243	3948.422	2.176	1.8	-7.7	NO	0.998	NO	bb
5	5	190716M2_8	Standard	5.000	4.66	1526.402	3568.868	5.346	4.6	-8.1	NO	0.998	NO	bb
6	6	190716M2_9	Standard	10.000	4.66	3278.593	3613.479	11.342	9.8	-2.1	NO	0.998	NO	bb
7	7	190716M2_10	Standard	50.000	4.67	16312.180	3317.596	61.461	53.3	6.5	NO	0.998	NO	bb
8	8	190716M2_11	Standard	100.000	4.66	30930.469	3037.439	127.288	110.4	10.4	NO	0.998	NO	bb
9	9	190716M2_12	Standard	250.000	4.66	71286.563	3079.736	289.337	250.9	0.4	NO	0.998	NO	bb
10	10	190716M2_13	Standard	500.000	4.66	128965.836	2875.215	560.679	486.2	-2.8	NO	0.998	NO	bb

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Compound name: L-PFOS
Correlation coefficient: r = 0.999643, r^2 = 0.999286
Calibration curve: 1.28716 * x + -0.149993
Response type: Internal Std (Ref 59), 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	190716M2_4	Standard	0.250	4.70	21.740	2560.069	0.106	0.2	-20.4	NO	0.999	NO	MM
2	2	190716M2_5	Standard	0.500	4.69	98.988	2862.337	0.432	0.5	-9.5	NO	0.999	NO	MM
3	3	190716M2_6	Standard	1.000	4.69	234.436	2829.545	1.036	0.9	-7.9	NO	0.999	NO	MM
4	4	190716M2_7	Standard	2.000	4.69	555.761	2923.945	2.376	2.0	-1.9	NO	0.999	NO	MM
5	5	190716M2_8	Standard	5.000	4.69	1359.738	2852.252	5.959	4.7	-5.1	NO	0.999	NO	MM
6	6	190716M2_9	Standard	10.000	4.69	2753.635	2702.612	12.736	10.0	0.1	NO	0.999	NO	MM
7	7	190716M2_10	Standard	50.000	4.69	13652.945	2632.202	64.836	50.5	1.0	NO	0.999	NO	MM
8	8	190716M2_11	Standard	100.000	4.69	26256.494	2589.537	126.743	98.6	-1.4	NO	0.999	NO	MM
9	9	190716M2_12	Standard	250.000	4.69	60818.348	2451.613	310.094	241.0	-3.6	NO	0.999	NO	MM
10	10	190716M2_13	Standard	500.000	4.69	109517.898	2084.448	656.756	510.4	2.1	NO	0.999	NO	MM

Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999676
Calibration curve: 0.000159787 * x^2 + 3.49516 * x + -0.283829
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	190716M2_4	Standard	0.250	4.91	153.258	2560.069	0.748	0.3	18.1	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	4.91	308.816	2862.337	1.349	0.5	-6.6	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	4.91	584.611	2829.545	2.583	0.8	-18.0	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	4.91	1631.622	2923.945	6.975	2.1	3.8	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	4.91	3785.395	2852.252	16.590	4.8	-3.5	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	4.91	7676.711	2702.612	35.506	10.2	2.4	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	4.91	38496.941	2632.202	182.817	52.3	4.5	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	4.91	73362.320	2589.537	354.129	100.9	0.9	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	4.91	169483.188	2451.613	864.141	244.6	-2.2	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	4.91	299402.625	2084.448	1795.455	502.2	0.4	NO	1.000	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
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Compound name: PFDA
Correlation coefficient: r = 0.999671, r^2 = 0.999342
Calibration curve: 1.49139 * x + 0.0347273
Response type: Internal Std (Ref 60), 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	190716M2_4	Standard	0.250	4.98	329.767	11766.295	0.350	0.2	-15.4	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	4.98	870.585	13015.248	0.836	0.5	7.5	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	4.98	1491.594	12690.468	1.469	1.0	-3.8	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	4.98	3422.476	14279.605	2.996	2.0	-0.7	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	4.98	7769.942	12898.133	7.530	5.0	0.5	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	4.98	15893.101	12777.451	15.548	10.4	4.0	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	4.98	74911.578	11978.967	78.170	52.4	4.8	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	4.98	142984.328	11595.807	154.134	103.3	3.3	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	4.98	323903.781	10645.857	380.317	255.0	2.0	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	4.98	560203.000	9602.938	729.208	488.9	-2.2	NO	0.999	NO	bb

Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999325
Calibration curve: -0.000958593 * x^2 + 2.47964 * x + -0.143688
Response type: Internal Std (Ref 61), 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	190716M2_4	Standard	0.250	4.95	59.831	1874.440	0.399	0.2	-12.5	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	4.95	150.977	1941.452	0.972	0.5	-10.0	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	4.95	305.681	2006.244	1.905	0.8	-17.4	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	4.95	827.650	2158.142	4.794	2.0	-0.4	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	4.95	2148.152	1785.584	15.038	6.1	22.7	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	4.95	3587.832	1965.913	22.813	9.3	-7.1	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	4.95	17650.756	1800.880	122.515	50.5	0.9	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	4.95	31499.047	1623.002	242.599	101.9	1.9	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	4.95	65872.641	1496.847	550.095	245.1	-1.9	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	4.95	105229.313	1310.212	1003.934	502.6	0.5	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFNS
Correlation coefficient: r = 0.999644, r^2 = 0.999287
Calibration curve: 0.809985 * x + -0.0612442
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	190716M2_4	Standard	0.250	5.04	23.942	2560.069	0.117	0.2	-12.0	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	5.05	69.244	2862.337	0.302	0.4	-10.2	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	5.04	164.254	2829.545	0.726	1.0	-2.9	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	5.05	377.288	2923.945	1.613	2.1	3.3	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	5.05	936.759	2852.252	4.105	5.1	2.9	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	5.05	1919.171	2702.612	8.876	11.0	10.3	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	5.05	9035.668	2632.202	42.909	53.1	6.1	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	5.05	17361.830	2589.537	83.808	103.5	3.5	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	5.05	40037.840	2451.613	204.140	252.1	0.8	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	5.05	66196.125	2084.448	396.964	490.2	-2.0	NO	0.999	NO	bb

Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999601
Calibration curve: 0.000237887 * x^2 + 2.97436 * x + -0.227255
Response type: Internal Std (Ref 62), 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	190716M2_4	Standard	0.250	5.14	114.111	2752.921	0.518	0.3	0.2	NO	1.000	NO	MM
2	2	190716M2_5	Standard	0.500	5.14	344.610	3317.640	1.298	0.5	2.6	NO	1.000	NO	MM
3	3	190716M2_6	Standard	1.000	5.13	680.721	3109.208	2.737	1.0	-0.4	NO	1.000	NO	MM
4	4	190716M2_7	Standard	2.000	5.13	1540.008	3422.082	5.625	2.0	-1.6	NO	1.000	NO	MM
5	5	190716M2_8	Standard	5.000	5.13	4001.700	3397.729	14.722	5.0	0.5	NO	1.000	NO	MM
6	6	190716M2_9	Standard	10.000	5.14	7356.463	3170.235	29.006	9.8	-1.8	NO	1.000	NO	MM
7	7	190716M2_10	Standard	50.000	5.14	36964.152	3185.552	145.046	48.7	-2.7	NO	1.000	NO	MM
8	8	190716M2_11	Standard	100.000	5.14	71972.836	2864.724	314.048	104.8	4.8	NO	1.000	NO	MM
9	9	190716M2_12	Standard	250.000	5.14	163148.953	2743.262	743.408	245.2	-1.9	NO	1.000	NO	MM
10	10	190716M2_13	Standard	500.000	5.14	280910.125	2263.416	1551.362	501.5	0.3	NO	1.000	NO	MM

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999611, r^2 = 0.999222
Calibration curve: 1.58212 * x + -0.12102
Response type: Internal Std (Ref 64), 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	190716M2_4	Standard	0.250	5.30	100.113	4382.477	0.286	0.3	2.8	NO	0.999	NO	MM
2	2	190716M2_5	Standard	0.500	5.30	233.723	4672.816	0.625	0.5	-5.7	NO	0.999	NO	MM
3	3	190716M2_6	Standard	1.000	5.30	447.498	4749.938	1.178	0.8	-17.9	NO	0.999	NO	MM
4	4	190716M2_7	Standard	2.000	5.30	1146.387	5235.998	2.737	1.8	-9.7	NO	0.999	NO	MM
5	5	190716M2_8	Standard	5.000	5.30	2726.194	4677.258	7.286	4.7	-6.4	NO	0.999	NO	MM
6	6	190716M2_9	Standard	10.000	5.30	5697.081	4507.100	15.800	10.1	0.6	NO	0.999	NO	MM
7	7	190716M2_10	Standard	50.000	5.30	27119.498	4108.569	82.509	52.2	4.5	NO	0.999	NO	MM
8	8	190716M2_11	Standard	100.000	5.30	51538.180	4089.635	157.527	99.6	-0.4	NO	0.999	NO	MM
9	9	190716M2_12	Standard	250.000	5.30	110792.938	3383.189	409.351	258.8	3.5	NO	0.999	NO	MM
10	10	190716M2_13	Standard	500.000	5.30	182114.672	2937.076	775.068	490.0	-2.0	NO	0.999	NO	MM

Compound name: PFUdA
Correlation coefficient: r = 0.999845, r^2 = 0.999691
Calibration curve: 0.890447 * x + 0.0369886
Response type: Internal Std (Ref 63), 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	190716M2_4	Standard	0.250	5.31	348.114	19391.289	0.224	0.2	-15.8	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	5.31	776.417	20610.738	0.471	0.5	-2.5	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	5.31	1630.996	20375.676	1.001	1.1	8.2	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	5.31	3385.574	23458.041	1.804	2.0	-0.8	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	5.31	7757.311	21196.357	4.575	5.1	1.9	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	5.31	15653.796	20632.117	9.484	10.6	6.1	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	5.31	73954.508	20106.721	45.976	51.6	3.2	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	5.31	139548.141	19772.203	88.222	99.0	-1.0	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	5.31	313362.219	17261.473	226.923	254.8	1.9	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	5.31	528523.563	15022.118	439.788	493.9	-1.2	NO	1.000	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFDS
Coefficient of Determination: R^2 = 0.999905
Calibration curve: 0.00300667 * x^2 + 1.83523 * x
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: Null, Axis trans: None

	#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1	190716M2_4	Standard	0.250	5.36	47.960	1874.440	0.320	0.2	-30.3	YES	1.000	NO	bbX
2	2	190716M2_5	Standard	0.500	5.36	116.647	1941.452	0.751	0.4	-18.2	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	5.36	279.544	2006.244	1.742	0.9	-5.2	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	5.36	607.358	2158.142	3.518	1.9	-4.5	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	5.36	1561.544	1785.584	10.932	5.9	18.0	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	5.36	3039.760	1965.913	19.328	10.4	3.6	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	5.37	14224.968	1800.880	98.736	49.7	-0.5	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	5.36	27748.760	1623.002	213.715	100.1	0.1	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	5.36	61731.820	1496.847	515.515	209.2	-16.3	NO	1.000	NO	bbX
10	10	190716M2_13	Standard	500.000	5.36	109672.938	1310.212	1046.328	359.0	-28.2	NO	1.000	NO	bbX

Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.999725
Calibration curve: -9.8975e-006 * x^2 + 0.0601237 * x + -0.0105611
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	190716M2_4	Standard	0.250	5.54	6.481	23077.104	0.004	0.2	-6.4	NO	1.000	NO	db
2	2	190716M2_5	Standard	0.500	5.53	35.698	23241.320	0.019	0.5	-1.0	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	5.52	85.886	23476.844	0.046	0.9	-6.4	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	5.53	271.982	27474.750	0.124	2.2	11.7	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	5.53	596.794	24369.986	0.306	5.3	5.4	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	5.53	1037.699	22803.961	0.569	9.7	-3.5	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	5.53	5680.299	24371.867	2.913	49.0	-1.9	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	5.53	11201.158	22996.840	6.088	103.2	3.2	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	5.53	25873.496	22777.449	14.199	246.3	-1.5	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	5.53	47783.430	21604.184	27.647	501.4	0.3	NO	1.000	NO	bb

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.999477
Calibration curve: -0.00117687 * x^2 + 2.46159 * x + 0.0884414
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	190716M2_4	Standard	0.250	5.58	84.171	1874.440	0.561	0.2	-23.2	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	5.58	205.749	1941.452	1.325	0.5	0.5	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	5.58	405.641	2006.244	2.527	1.0	-0.9	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	5.58	910.819	2158.142	5.275	2.1	5.5	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	5.58	1969.635	1785.584	13.788	5.6	11.6	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	5.58	4064.778	1965.913	25.845	10.5	5.2	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	5.59	17667.330	1800.880	122.630	51.0	2.1	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	5.58	30913.566	1623.002	238.089	101.6	1.6	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	5.58	63026.793	1496.847	526.330	241.7	-3.3	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	5.58	98891.445	1310.212	943.468	505.3	1.1	NO	0.999	NO	bb

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999836
Calibration curve: -0.000479463 * x^2 + 0.967819 * x + 0.00978606
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	190716M2_4	Standard	0.250	5.60	445.690	23077.104	0.241	0.2	-4.3	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	5.60	931.296	23241.320	0.501	0.5	1.5	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	5.60	1812.786	23476.844	0.965	1.0	-1.2	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	5.60	4133.091	27474.750	1.880	1.9	-3.3	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	5.60	9390.638	24369.986	4.817	5.0	-0.4	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	5.60	19063.174	22803.961	10.449	10.8	8.5	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	5.60	91129.391	24371.867	46.739	49.5	-1.0	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	5.60	170791.625	22996.840	92.834	101.0	1.0	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	5.60	382845.406	22777.449	210.101	247.4	-1.0	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	5.60	630609.375	21604.184	364.865	501.7	0.3	NO	1.000	NO	bb

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Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999231
Calibration curve: -9.80896e-005 * x^2 + 1.09978 * x + -0.278582
Response type: Internal Std (Ref 66), 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	190716M2_4	Standard	1.250	5.75	39.108	7475.726	0.785	1.0	-22.6	NO	0.999	NO	bb
2	2	190716M2_5	Standard	2.500	5.76	105.661	8074.101	1.963	2.0	-18.5	NO	0.999	NO	bb
3	3	190716M2_6	Standard	5.000	5.76	302.495	7997.124	5.674	5.4	8.3	NO	0.999	NO	bb
4	4	190716M2_7	Standard	10.000	5.75	651.980	8941.918	10.937	10.2	2.1	NO	0.999	NO	bb
5	5	190716M2_8	Standard	25.000	5.75	1555.336	8183.855	28.507	26.2	4.9	NO	0.999	NO	bb
6	6	190716M2_9	Standard	50.000	5.75	3093.317	8144.981	56.967	52.3	4.6	NO	0.999	NO	bb
7	7	190716M2_10	Standard	250.000	5.76	14428.993	8135.270	266.045	247.6	-0.9	NO	0.999	NO	bb
8	8	190716M2_11	Standard	500.000	5.75	28075.475	7676.667	548.587	523.5	4.7	NO	0.999	NO	bb
9	9	190716M2_12	Standard	1250.000	5.75	62401.227	7927.308	1180.752	1202.9	-3.8	NO	0.999	NO	bb
10	10	190716M2_13	Standard	2500.000	5.75	107522.320	7495.267	2151.804	2525.9	1.0	NO	0.999	NO	bb

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998928
Calibration curve: -0.000522055 * x^2 + 1.01699 * x + 0.0837362
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	190716M2_4	Standard	0.250	5.85	574.189	23077.104	0.311	0.2	-10.6	NO	0.999	NO	bb
2	2	190716M2_5	Standard	0.500	5.85	987.235	23241.320	0.531	0.4	-12.0	NO	0.999	NO	bb
3	3	190716M2_6	Standard	1.000	5.85	2173.712	23476.844	1.157	1.1	5.6	NO	0.999	NO	bb
4	4	190716M2_7	Standard	2.000	5.85	4519.814	27474.750	2.056	1.9	-2.9	NO	0.999	NO	bb
5	5	190716M2_8	Standard	5.000	5.85	10306.606	24369.986	5.287	5.1	2.6	NO	0.999	NO	bb
6	6	190716M2_9	Standard	10.000	5.85	21377.408	22803.961	11.718	11.5	15.1	NO	0.999	NO	bb
7	7	190716M2_10	Standard	50.000	5.85	100379.914	24371.867	51.483	51.9	3.9	NO	0.999	NO	bb
8	8	190716M2_11	Standard	100.000	5.85	180390.531	22996.840	98.052	101.6	1.6	NO	0.999	NO	bb
9	9	190716M2_12	Standard	250.000	5.85	387998.500	22777.449	212.929	238.5	-4.6	NO	0.999	NO	bb
10	10	190716M2_13	Standard	500.000	5.85	660117.188	21604.184	381.938	507.9	1.6	NO	0.999	NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999652
Calibration curve: -7.05884e-005 * x^2 + 0.276171 * x + -0.010428
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	190716M2_4	Standard	0.250	5.87	57.371	10497.242	0.068	0.3	14.1	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	5.87	91.196	11020.220	0.103	0.4	-17.5	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	5.87	246.349	10610.182	0.290	1.1	8.9	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	5.88	532.823	12677.837	0.525	1.9	-3.0	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	5.87	1212.557	11271.638	1.345	4.9	-1.7	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	5.88	2369.109	10596.440	2.795	10.2	1.8	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	5.88	11533.369	10772.325	13.383	49.1	-1.8	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	5.88	21338.314	10195.131	26.162	97.2	-2.8	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	5.88	49829.371	9409.979	66.192	256.5	2.6	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	5.88	86895.000	9065.700	119.813	497.0	-0.6	NO	1.000	NO	bb

Compound name: PFTeDA
Correlation coefficient: r = 0.998844, r^2 = 0.997689
Calibration curve: 1.76508 * x + 0.0801765
Response type: Internal Std (Ref 67), 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	190716M2_4	Standard	0.250	6.07	360.402	10497.242	0.429	0.2	-20.9	NO	0.998	NO	bb
2	2	190716M2_5	Standard	0.500	6.07	820.039	11020.220	0.930	0.5	-3.7	NO	0.998	NO	bb
3	3	190716M2_6	Standard	1.000	6.07	1588.859	10610.182	1.872	1.0	1.5	NO	0.998	NO	bb
4	4	190716M2_7	Standard	2.000	6.07	3573.230	12677.837	3.523	2.0	-2.5	NO	0.998	NO	bb
5	5	190716M2_8	Standard	5.000	6.07	8487.400	11271.638	9.412	5.3	5.7	NO	0.998	NO	bb
6	6	190716M2_9	Standard	10.000	6.07	16592.592	10596.440	19.573	11.0	10.4	NO	0.998	NO	bb
7	7	190716M2_10	Standard	50.000	6.07	78283.719	10772.325	90.839	51.4	2.8	NO	0.998	NO	bb
8	8	190716M2_11	Standard	100.000	6.07	152011.016	10195.131	186.377	105.5	5.5	NO	0.998	NO	bb
9	9	190716M2_12	Standard	250.000	6.07	349785.094	9409.979	464.646	263.2	5.3	NO	0.998	NO	bb
10	10	190716M2_13	Standard	500.000	6.07	612742.188	9065.700	844.863	478.6	-4.3	NO	0.998	NO	db

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Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999912
Calibration curve: -4.13621e-005 * x^2 + 0.947973 * x + -0.406479
Response type: Internal Std (Ref 68), 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	190716M2_4	Standard	1.250	6.18	56.733	9225.188	0.922	1.4	12.2	NO	1.000	NO	bb
2	2	190716M2_5	Standard	2.500	6.19	118.887	10081.924	1.769	2.3	-8.2	NO	1.000	NO	bb
3	3	190716M2_6	Standard	5.000	6.19	284.805	9985.410	4.278	4.9	-1.1	NO	1.000	NO	bb
4	4	190716M2_7	Standard	10.000	6.18	643.698	11029.992	8.754	9.7	-3.3	NO	1.000	NO	bb
5	5	190716M2_8	Standard	25.000	6.19	1577.497	10302.103	22.969	24.7	-1.3	NO	1.000	NO	bb
6	6	190716M2_9	Standard	50.000	6.18	3110.637	9660.796	48.298	51.5	3.0	NO	1.000	NO	bb
7	7	190716M2_10	Standard	250.000	6.19	14688.143	9655.712	228.178	243.7	-2.5	NO	1.000	NO	bb
8	8	190716M2_11	Standard	500.000	6.18	28370.465	9060.403	469.689	507.1	1.4	NO	1.000	NO	bb
9	9	190716M2_12	Standard	1250.000	6.19	62755.035	8413.997	1118.761	1248.6	-0.1	NO	1.000	NO	bb
10	10	190716M2_13	Standard	2500.000	6.19	104844.641	7450.346	2110.868	2499.8	-0.0	NO	1.000	NO	bb

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999779
Calibration curve: -0.00028338 * x^2 + 0.639324 * x + 0.0135475
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	190716M2_4	Standard	0.250	6.42	273.625	7072.392	0.193	0.3	12.6	NO	1.000	NO	bb
2	2	190716M2_5	Standard	0.500	6.42	452.497	6672.632	0.339	0.5	1.9	NO	1.000	NO	bb
3	3	190716M2_6	Standard	1.000	6.42	958.504	7229.321	0.663	1.0	1.6	NO	1.000	NO	bb
4	4	190716M2_7	Standard	2.000	6.42	1999.464	8161.924	1.225	1.9	-5.2	NO	1.000	NO	bb
5	5	190716M2_8	Standard	5.000	6.42	4387.629	7361.861	2.980	4.6	-7.0	NO	1.000	NO	bb
6	6	190716M2_9	Standard	10.000	6.42	8981.172	7229.127	6.212	9.7	-2.6	NO	1.000	NO	bb
7	7	190716M2_10	Standard	50.000	6.43	44296.273	7210.365	30.717	49.1	-1.8	NO	1.000	NO	bb
8	8	190716M2_11	Standard	100.000	6.42	81356.516	6717.620	60.555	99.0	-1.0	NO	1.000	NO	bb
9	9	190716M2_12	Standard	250.000	6.42	185595.266	6406.448	144.850	255.5	2.2	NO	1.000	NO	bb
10	10	190716M2_13	Standard	500.000	6.42	319761.813	6456.068	247.644	496.7	-0.7	NO	1.000	NO	bb

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Compound name: PFODA
Correlation coefficient: r = 0.996365, r^2 = 0.992744
Calibration curve: 0.742459 * x + 0.0633986
Response type: Internal Std (Ref 69), 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	190716M2_4	Standard	0.250	6.67	285.180	7072.392	0.202	0.2	-25.5	NO	0.993	NO	bb
2	2	190716M2_5	Standard	0.500	6.67	615.434	6672.632	0.461	0.5	7.1	NO	0.993	NO	bb
3	3	190716M2_6	Standard	1.000	6.67	1195.321	7229.321	0.827	1.0	2.8	NO	0.993	NO	bb
4	4	190716M2_7	Standard	2.000	6.67	2629.301	8161.924	1.611	2.1	4.2	NO	0.993	NO	bb
5	5	190716M2_8	Standard	5.000	6.67	6158.378	7361.861	4.183	5.5	11.0	NO	0.993	NO	MM
6	6	190716M2_9	Standard	10.000	6.67	12046.513	7229.127	8.332	11.1	11.4	NO	0.993	NO	bb
7	7	190716M2_10	Standard	50.000	6.67	59506.012	7210.365	41.264	55.5	11.0	NO	0.993	NO	bb
8	8	190716M2_11	Standard	100.000	6.67	112315.727	6717.620	83.598	112.5	12.5	NO	0.993	NO	bb
9	9	190716M2_12	Standard	250.000	6.67	255332.469	6406.448	199.278	268.3	7.3	NO	0.993	NO	bb
10	10	190716M2_13	Standard	500.000	6.67	442904.125	6456.068	343.014	461.9	-7.6	NO	0.993	NO	bb

Compound name: N-MeFOSE
Correlation coefficient: r = 0.999685, r^2 = 0.999371
Calibration curve: 1.08739 * x + -0.181625
Response type: Internal Std (Ref 70), 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	190716M2_4	Standard	1.250	6.37	67.320	7791.255	1.296	1.4	8.7	NO	0.999	NO	bb
2	2	190716M2_5	Standard	2.500	6.37	128.840	8446.939	2.288	2.3	-9.2	NO	0.999	NO	bb
3	3	190716M2_6	Standard	5.000	6.37	313.097	8864.888	5.298	5.0	0.8	NO	0.999	NO	bb
4	4	190716M2_7	Standard	10.000	6.37	647.759	9626.937	10.093	9.4	-5.5	NO	0.999	NO	bb
5	5	190716M2_8	Standard	25.000	6.37	1558.482	8664.948	26.979	25.0	-0.1	NO	0.999	NO	bb
6	6	190716M2_9	Standard	50.000	6.37	3136.165	8884.275	52.950	48.9	-2.3	NO	0.999	NO	bb
7	7	190716M2_10	Standard	250.000	6.37	15723.265	8180.129	288.319	265.3	6.1	NO	0.999	NO	bb
8	8	190716M2_11	Standard	500.000	6.37	30725.904	8408.601	548.116	504.2	0.8	NO	0.999	NO	bb
9	9	190716M2_12	Standard	1250.000	6.37	78350.203	8433.074	1393.624	1281.8	2.5	NO	0.999	NO	bb
10	10	190716M2_13	Standard	2500.000	6.37	152805.125	8602.599	2664.400	2450.4	-2.0	NO	0.999	NO	bb

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Compound name: N-EtFOSE
Correlation coefficient: r = 0.999860, r^2 = 0.999720
Calibration curve: 1.34418 * x + -0.390824
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	190716M2_4	Standard	1.250	6.52	73.363	8260.143	1.332	1.3	2.5	NO	1.000	NO	bb
2	2	190716M2_5	Standard	2.500	6.52	172.722	8651.297	2.995	2.5	0.7	NO	1.000	NO	bb
3	3	190716M2_6	Standard	5.000	6.52	325.441	9013.724	5.416	4.3	-13.6	NO	1.000	NO	bb
4	4	190716M2_7	Standard	10.000	6.52	922.205	9637.981	14.353	11.0	9.7	NO	1.000	NO	bb
5	5	190716M2_8	Standard	25.000	6.52	2001.651	9121.854	32.915	24.8	-0.9	NO	1.000	NO	bb
6	6	190716M2_9	Standard	50.000	6.52	4059.282	8819.154	69.042	51.7	3.3	NO	1.000	NO	bb
7	7	190716M2_10	Standard	250.000	6.52	19235.451	8949.539	322.398	240.1	-3.9	NO	1.000	NO	bb
8	8	190716M2_11	Standard	500.000	6.52	39017.164	8613.880	679.435	505.8	1.2	NO	1.000	NO	bb
9	9	190716M2_12	Standard	1250.000	6.52	96615.672	8474.301	1710.153	1272.6	1.8	NO	1.000	NO	bb
10	10	190716M2_13	Standard	2500.000	6.52	189765.344	8540.626	3332.871	2479.8	-0.8	NO	1.000	NO	bb

Compound name: 13C3-PFBA
Response Factor: 0.671527
RRF SD: 0.0157567, Relative SD: 2.3464
Response type: Internal Std (Ref 72), 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	190716M2_4	Standard	12.500	1.21	5250.216	7881.823	8.326	12.4	-0.8	NO		NO	bb
2	2	190716M2_5	Standard	12.500	1.21	5328.377	7949.934	8.378	12.5	-0.2	NO		NO	bb
3	3	190716M2_6	Standard	12.500	1.21	5269.876	8142.781	8.090	12.0	-3.6	NO		NO	bb
4	4	190716M2_7	Standard	12.500	1.21	6359.378	9233.128	8.609	12.8	2.6	NO		NO	bb
5	5	190716M2_8	Standard	12.500	1.21	5618.954	8279.655	8.483	12.6	1.1	NO		NO	bb
6	6	190716M2_9	Standard	12.500	1.21	5776.047	8847.535	8.161	12.2	-2.8	NO		NO	MM
7	7	190716M2_10	Standard	12.500	1.21	5541.743	8359.938	8.286	12.3	-1.3	NO		NO	MM
8	8	190716M2_11	Standard	12.500	1.21	5309.916	7976.345	8.321	12.4	-0.9	NO		NO	MM
9	9	190716M2_12	Standard	12.500	1.21	5651.507	8143.944	8.674	12.9	3.3	NO		NO	MM
10	10	190716M2_13	Standard	12.500	1.21	5284.814	7670.998	8.612	12.8	2.6	NO		NO	bb

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Compound name: 13C3-PFPeA
Response Factor: 0.453127
RRF SD: 0.0191203, Relative SD: 4.21964
Response type: Internal Std (Ref 73), 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 190716M2_4	Standard	12.500	2.20	8139.766	19577.564	5.197	11.5	-8.2	NO		NO	bb
2	2 190716M2_5	Standard	12.500	2.20	8487.657	18927.377	5.605	12.4	-1.0	NO		NO	bb
3	3 190716M2_6	Standard	12.500	2.20	8540.586	19359.209	5.515	12.2	-2.6	NO		NO	bb
4	4 190716M2_7	Standard	12.500	2.21	9794.767	21305.883	5.747	12.7	1.5	NO		NO	bb
5	5 190716M2_8	Standard	12.500	2.20	9157.241	19771.020	5.790	12.8	2.2	NO		NO	bb
6	6 190716M2_9	Standard	12.500	2.20	8772.721	18933.750	5.792	12.8	2.3	NO		NO	bb
7	7 190716M2_10	Standard	12.500	2.21	8395.805	19115.057	5.490	12.1	-3.1	NO		NO	bb
8	8 190716M2_11	Standard	12.500	2.21	8407.112	18766.617	5.600	12.4	-1.1	NO		NO	bb
9	9 190716M2_12	Standard	12.500	2.21	7824.807	16777.020	5.830	12.9	2.9	NO		NO	bb
10	10 190716M2_13	Standard	12.500	2.21	7333.563	15087.500	6.076	13.4	7.3	NO		NO	bb

Compound name: 13C3-PFBS
Response Factor: 1.03448
RRF SD: 0.0603696, Relative SD: 5.83574
Response type: Internal Std (Ref 74), 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 190716M2_4	Standard	12.500	2.50	1217.658	1114.146	13.661	13.2	5.6	NO		NO	bb
2	2 190716M2_5	Standard	12.500	2.50	1327.414	1306.998	12.695	12.3	-1.8	NO		NO	bb
3	3 190716M2_6	Standard	12.500	2.50	1293.647	1312.777	12.318	11.9	-4.7	NO		NO	bb
4	4 190716M2_7	Standard	12.500	2.50	1526.480	1393.132	13.696	13.2	5.9	NO		NO	bb
5	5 190716M2_8	Standard	12.500	2.50	1284.593	1392.759	11.529	11.1	-10.8	NO		NO	bb
6	6 190716M2_9	Standard	12.500	2.50	1266.196	1265.964	12.502	12.1	-3.3	NO		NO	bb
7	7 190716M2_10	Standard	12.500	2.50	1302.259	1153.314	14.114	13.6	9.2	NO		NO	bb
8	8 190716M2_11	Standard	12.500	2.50	1204.164	1157.976	12.999	12.6	0.5	NO		NO	bb
9	9 190716M2_12	Standard	12.500	2.50	1121.964	1079.388	12.993	12.6	0.5	NO		NO	bb
10	10 190716M2_13	Standard	12.500	2.50	979.060	955.986	12.802	12.4	-1.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: 13C3-HFPO-DA
Response Factor: 0.226637
RRF SD: 0.0188919, Relative SD: 8.33575
Response type: Internal Std (Ref 73), 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 190716M2_4	Standard	5.000	3.22	1929.668	19577.564	1.232	5.4	8.7	NO		NO	bb
2	2 190716M2_5	Standard	5.000	3.21	1917.258	18927.377	1.266	5.6	11.7	NO		NO	bb
3	3 190716M2_6	Standard	5.000	3.21	1494.483	19359.209	0.965	4.3	-14.8	NO		NO	bb
4	4 190716M2_7	Standard	5.000	3.21	2014.792	21305.883	1.182	5.2	4.3	NO		NO	bb
5	5 190716M2_8	Standard	5.000	3.22	1771.227	19771.020	1.120	4.9	-1.2	NO		NO	bb
6	6 190716M2_9	Standard	5.000	3.22	1679.165	18933.750	1.109	4.9	-2.2	NO		NO	bb
7	7 190716M2_10	Standard	5.000	3.22	1618.492	19115.057	1.058	4.7	-6.6	NO		NO	bb
8	8 190716M2_11	Standard	5.000	3.22	1815.201	18766.617	1.209	5.3	6.7	NO		NO	bb
9	9 190716M2_12	Standard	5.000	3.21	1550.355	16777.020	1.155	5.1	1.9	NO		NO	bb
10	10 190716M2_13	Standard	5.000	3.22	1249.913	15087.500	1.036	4.6	-8.6	NO		NO	bb

Compound name: 13C2-4:2 FTS
Response Factor: 1.85848
RRF SD: 0.156492, Relative SD: 8.42046
Response type: Internal Std (Ref 74), 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 190716M2_4	Standard	12.500	2.92	2368.101	1114.146	26.569	14.3	14.4	NO		NO	bb
2	2 190716M2_5	Standard	12.500	2.92	2443.970	1306.998	23.374	12.6	0.6	NO		NO	bb
3	3 190716M2_6	Standard	12.500	2.92	2565.531	1312.777	24.428	13.1	5.2	NO		NO	bb
4	4 190716M2_7	Standard	12.500	2.92	2780.059	1393.132	24.944	13.4	7.4	NO		NO	bb
5	5 190716M2_8	Standard	12.500	2.93	2645.359	1392.759	23.742	12.8	2.2	NO		NO	bb
6	6 190716M2_9	Standard	12.500	2.92	2301.054	1265.964	22.720	12.2	-2.2	NO		NO	bb
7	7 190716M2_10	Standard	12.500	2.93	2186.161	1153.314	23.694	12.7	2.0	NO		NO	bb
8	8 190716M2_11	Standard	12.500	2.92	2051.804	1157.976	22.149	11.9	-4.7	NO		NO	bb
9	9 190716M2_12	Standard	12.500	2.93	1792.288	1079.388	20.756	11.2	-10.7	NO		NO	bb
10	10 190716M2_13	Standard	12.500	2.92	1524.474	955.986	19.933	10.7	-14.2	NO		NO	bb

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Compound name: 13C2-PFHxA
Response Factor: 0.791007
RRF SD: 0.0284732, Relative SD: 3.59962
Response type: Internal Std (Ref 73), 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	190716M2_4	Standard	5.000	3.01	5765.931	19577.564	3.681	4.7	-6.9	NO		NO	bb
2	2	190716M2_5	Standard	5.000	3.01	5965.168	18927.377	3.940	5.0	-0.4	NO		NO	bb
3	3	190716M2_6	Standard	5.000	3.01	6058.156	19359.209	3.912	4.9	-1.1	NO		NO	bb
4	4	190716M2_7	Standard	5.000	3.01	6807.611	21305.883	3.994	5.0	1.0	NO		NO	bb
5	5	190716M2_8	Standard	5.000	3.01	6168.879	19771.020	3.900	4.9	-1.4	NO		NO	bb
6	6	190716M2_9	Standard	5.000	3.01	6334.795	18933.750	4.182	5.3	5.7	NO		NO	bb
7	7	190716M2_10	Standard	5.000	3.01	5817.504	19115.057	3.804	4.8	-3.8	NO		NO	bb
8	8	190716M2_11	Standard	5.000	3.01	6021.483	18766.617	4.011	5.1	1.4	NO		NO	bb
9	9	190716M2_12	Standard	5.000	3.01	5463.366	16777.020	4.071	5.1	2.9	NO		NO	bb
10	10	190716M2_13	Standard	5.000	3.01	4895.237	15087.500	4.056	5.1	2.5	NO		NO	bb

Compound name: 13C4-PFHpA
Response Factor: 0.364966
RRF SD: 0.012633, Relative SD: 3.46143
Response type: Internal Std (Ref 73), 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	190716M2_4	Standard	12.500	3.63	6842.853	19577.564	4.369	12.0	-4.2	NO		NO	bb
2	2	190716M2_5	Standard	12.500	3.63	7195.404	18927.377	4.752	13.0	4.2	NO		NO	bb
3	3	190716M2_6	Standard	12.500	3.63	7305.836	19359.209	4.717	12.9	3.4	NO		NO	bb
4	4	190716M2_7	Standard	12.500	3.63	7894.354	21305.883	4.632	12.7	1.5	NO		NO	bb
5	5	190716M2_8	Standard	12.500	3.63	7305.663	19771.020	4.619	12.7	1.2	NO		NO	bb
6	6	190716M2_9	Standard	12.500	3.63	6951.189	18933.750	4.589	12.6	0.6	NO		NO	bb
7	7	190716M2_10	Standard	12.500	3.63	6877.049	19115.057	4.497	12.3	-1.4	NO		NO	bb
8	8	190716M2_11	Standard	12.500	3.63	6670.025	18766.617	4.443	12.2	-2.6	NO		NO	bb
9	9	190716M2_12	Standard	12.500	3.63	6330.190	16777.020	4.716	12.9	3.4	NO		NO	bb
10	10	190716M2_13	Standard	12.500	3.63	5173.783	15087.500	4.286	11.7	-6.0	NO		NO	bb

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Compound name: 13C3-PFHxS
Response Factor: 2.20993
RRF SD: 0.0880129, Relative SD: 3.98261
Response type: Internal Std (Ref 74), 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 190716M2_4	Standard	12.500	3.78	2649.227	1114.14€	29.723	13.4	7.6	NO		NO	bb
2	2 190716M2_5	Standard	12.500	3.78	2871.006	1306.998	27.458	12.4	-0.6	NO		NO	bb
3	3 190716M2_6	Standard	12.500	3.78	2758.509	1312.777	26.266	11.9	-4.9	NO		NO	bb
4	4 190716M2_7	Standard	12.500	3.78	3125.209	1393.132	28.041	12.7	1.5	NO		NO	bb
5	5 190716M2_8	Standard	12.500	3.78	2889.846	1392.759	25.936	11.7	-6.1	NO		NO	bb
6	6 190716M2_9	Standard	12.500	3.78	2715.657	1265.964	26.814	12.1	-2.9	NO		NO	bb
7	7 190716M2_10	Standard	12.500	3.79	2617.288	1153.314	28.367	12.8	2.7	NO		NO	bb
8	8 190716M2_11	Standard	12.500	3.79	2614.037	1157.976	28.218	12.8	2.1	NO		NO	bb
9	9 190716M2_12	Standard	12.500	3.79	2384.082	1079.388	27.609	12.5	-0.1	NO		NO	bb
10	10 190716M2_13	Standard	12.500	3.78	2126.796	955.986	27.809	12.6	0.7	NO		NO	bb

Compound name: 13C2-6:2 FTS
Response Factor: 0.682382
RRF SD: 0.0604509, Relative SD: 8.8588
Response type: Internal Std (Ref 77), 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 190716M2_4	Standard	12.500	4.10	1800.087	2546.740	8.835	12.9	3.6	NO		NO	bb
2	2 190716M2_5	Standard	12.500	4.10	1940.428	2512.891	9.652	14.1	13.2	NO		NO	bb
3	3 190716M2_6	Standard	12.500	4.10	1826.766	2750.044	8.303	12.2	-2.7	NO		NO	bb
4	4 190716M2_7	Standard	12.500	4.10	2286.677	2978.896	9.595	14.1	12.5	NO		NO	bb
5	5 190716M2_8	Standard	12.500	4.10	1886.190	2734.924	8.621	12.6	1.1	NO		NO	bb
6	6 190716M2_9	Standard	12.500	4.10	1994.234	2902.983	8.587	12.6	0.7	NO		NO	bb
7	7 190716M2_10	Standard	12.500	4.10	1671.656	2586.302	8.079	11.8	-5.3	NO		NO	bb
8	8 190716M2_11	Standard	12.500	4.10	1662.847	2480.703	8.379	12.3	-1.8	NO		NO	bb
9	9 190716M2_12	Standard	12.500	4.10	1390.181	2473.838	7.024	10.3	-17.6	NO		NO	bb
10	10 190716M2_13	Standard	12.500	4.10	1413.688	2149.525	8.221	12.0	-3.6	NO		NO	bb

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Compound name: 13C5-PFNA
Response Factor: 0.997858
RRF SD: 0.0459403, Relative SD: 4.60389
Response type: Internal Std (Ref 76), 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	190716M2_4	Standard	12.500	4.60	14513.344	15534.052	11.679	11.7	-6.4	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.60	14260.563	14548.625	12.253	12.3	-1.8	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.60	14590.250	15524.611	11.748	11.8	-5.8	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.60	16625.025	15787.939	13.163	13.2	5.5	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.60	15205.557	15010.626	12.662	12.7	1.5	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.60	15199.802	15069.935	12.608	12.6	1.1	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.60	15014.631	14098.217	13.313	13.3	6.7	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.60	13460.237	13827.684	12.168	12.2	-2.4	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.60	12977.360	12453.309	13.026	13.1	4.4	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.60	11037.246	11388.683	12.114	12.1	-2.9	NO		NO	bb

Compound name: 13C8-PFOSA
Response Factor: 0.138656
RRF SD: 0.00970524, Relative SD: 6.99951
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	12.500	4.66	3350.814	26243.453	1.596	11.5	-7.9	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.66	3368.172	24727.238	1.703	12.3	-1.8	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.66	3504.571	25934.816	1.689	12.2	-2.5	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.66	3948.422	28505.965	1.731	12.5	-0.1	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.66	3568.868	26046.080	1.713	12.4	-1.2	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.66	3613.479	25295.672	1.786	12.9	3.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.66	3317.596	24737.219	1.676	12.1	-3.3	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.66	3037.439	23855.199	1.592	11.5	-8.2	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.66	3079.736	20862.021	1.845	13.3	6.5	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.66	2875.215	17960.467	2.001	14.4	15.5	NO		NO	bb

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Compound name: 13C2-PFOA
Response Factor: 0.509066
RRF SD: 0.0179028, Relative SD: 3.5168
Response type: Internal Std (Ref 75), 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	190716M2_4	Standard	12.500	4.15	13572.244	28350.359	5.984	11.8	-6.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.16	13363.243	27333.705	6.111	12.0	-4.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.16	13968.624	27652.361	6.314	12.4	-0.8	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.16	16562.174	30949.543	6.689	13.1	5.1	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.16	14916.217	28702.553	6.496	12.8	2.1	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.16	14115.170	28015.330	6.298	12.4	-1.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.16	13502.623	26766.959	6.306	12.4	-0.9	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.16	13587.397	25473.691	6.667	13.1	4.8	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.16	11605.829	22408.676	6.474	12.7	1.7	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.16	9193.851	18260.951	6.293	12.4	-1.1	NO		NO	bb

Compound name: 13C8-PFOS
Response Factor: 1.0151
RRF SD: 0.0558799, Relative SD: 5.50487
Response type: Internal Std (Ref 77), 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	190716M2_4	Standard	12.500	4.69	2560.069	2546.740	12.565	12.4	-1.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.69	2862.337	2512.891	14.238	14.0	12.2	NO		NO	bd
3	3	190716M2_6	Standard	12.500	4.69	2829.545	2750.044	12.861	12.7	1.4	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.69	2923.945	2978.896	12.269	12.1	-3.3	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.69	2852.252	2734.924	13.036	12.8	2.7	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.69	2702.612	2902.983	11.637	11.5	-8.3	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.69	2632.202	2586.302	12.722	12.5	0.3	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.69	2589.537	2480.703	13.048	12.9	2.8	NO		NO	MM
9	9	190716M2_12	Standard	12.500	4.69	2451.613	2473.838	12.388	12.2	-2.4	NO		NO	MM
10	10	190716M2_13	Standard	12.500	4.69	2084.448	2149.525	12.122	11.9	-4.5	NO		NO	MM

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Compound name: 13C2-PFDA
Response Factor: 0.669016
RRF SD: 0.016255, Relative SD: 2.42969
Response type: Internal Std (Ref 78), 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 190716M2_4	Standard	12.500	4.98	11766.295	18568.271	7.921	11.8	-5.3	NO		NO	bb
2	2 190716M2_5	Standard	12.500	4.98	13015.248	18862.154	8.625	12.9	3.1	NO		NO	bb
3	3 190716M2_6	Standard	12.500	4.98	12690.468	18663.980	8.499	12.7	1.6	NO		NO	bb
4	4 190716M2_7	Standard	12.500	4.98	14279.605	21557.105	8.280	12.4	-1.0	NO		NO	bb
5	5 190716M2_8	Standard	12.500	4.98	12898.133	19358.965	8.328	12.4	-0.4	NO		NO	bb
6	6 190716M2_9	Standard	12.500	4.98	12777.451	19113.262	8.356	12.5	-0.1	NO		NO	bb
7	7 190716M2_10	Standard	12.500	4.99	11978.967	18183.154	8.235	12.3	-1.5	NO		NO	bb
8	8 190716M2_11	Standard	12.500	4.98	11595.807	17424.977	8.318	12.4	-0.5	NO		NO	bb
9	9 190716M2_12	Standard	12.500	4.98	10645.857	15503.073	8.584	12.8	2.6	NO		NO	bb
10	10 190716M2_13	Standard	12.500	4.98	9602.938	14155.768	8.480	12.7	1.4	NO		NO	bb

Compound name: 13C2-8:2 FTS
Response Factor: 0.685788
RRF SD: 0.0558376, Relative SD: 8.1421
Response type: Internal Std (Ref 77), 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 190716M2_4	Standard	12.500	4.95	1874.440	2546.740	9.200	13.4	7.3	NO		NO	bb
2	2 190716M2_5	Standard	12.500	4.95	1941.452	2512.891	9.657	14.1	12.7	NO		NO	bb
3	3 190716M2_6	Standard	12.500	4.95	2006.244	2750.044	9.119	13.3	6.4	NO		NO	bb
4	4 190716M2_7	Standard	12.500	4.95	2158.142	2978.896	9.056	13.2	5.6	NO		NO	bb
5	5 190716M2_8	Standard	12.500	4.95	1785.584	2734.924	8.161	11.9	-4.8	NO		NO	bb
6	6 190716M2_9	Standard	12.500	4.95	1965.913	2902.983	8.465	12.3	-1.3	NO		NO	bb
7	7 190716M2_10	Standard	12.500	4.95	1800.880	2586.302	8.704	12.7	1.5	NO		NO	bb
8	8 190716M2_11	Standard	12.500	4.95	1623.002	2480.703	8.178	11.9	-4.6	NO		NO	bb
9	9 190716M2_12	Standard	12.500	4.95	1496.847	2473.838	7.563	11.0	-11.8	NO		NO	bb
10	10 190716M2_13	Standard	12.500	4.95	1310.212	2149.525	7.619	11.1	-11.1	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: d3-N-MeFOSAA
Response Factor: 0.124116
RRF SD: 0.00844867, Relative SD: 6.80707
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	12.500	5.13	2752.921	26243.453	1.311	10.6	-15.5	NO		NO	bb
2	2	190716M2_5	Standard	12.500	5.13	3317.640	24727.238	1.677	13.5	8.1	NO		NO	bb
3	3	190716M2_6	Standard	12.500	5.13	3109.208	25934.816	1.499	12.1	-3.4	NO		NO	bb
4	4	190716M2_7	Standard	12.500	5.13	3422.082	28505.965	1.501	12.1	-3.3	NO		NO	bb
5	5	190716M2_8	Standard	12.500	5.13	3397.729	26046.080	1.631	13.1	5.1	NO		NO	bb
6	6	190716M2_9	Standard	12.500	5.13	3170.235	25295.672	1.567	12.6	1.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	5.13	3185.552	24737.219	1.610	13.0	3.8	NO		NO	bb
8	8	190716M2_11	Standard	12.500	5.13	2864.724	23855.199	1.501	12.1	-3.2	NO		NO	bb
9	9	190716M2_12	Standard	12.500	5.13	2743.262	20862.021	1.644	13.2	5.9	NO		NO	bb
10	10	190716M2_13	Standard	12.500	5.13	2263.416	17960.467	1.575	12.7	1.5	NO		NO	bb

Compound name: 13C2-PFUdA
Response Factor: 0.81159
RRF SD: 0.0293491, Relative SD: 3.61625
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	12.500	5.31	19391.289	26243.453	9.236	11.4	-9.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	5.31	20610.738	24727.238	10.419	12.8	2.7	NO		NO	bb
3	3	190716M2_6	Standard	12.500	5.31	20375.676	25934.816	9.821	12.1	-3.2	NO		NO	bb
4	4	190716M2_7	Standard	12.500	5.31	23458.041	28505.965	10.286	12.7	1.4	NO		NO	bb
5	5	190716M2_8	Standard	12.500	5.31	21196.357	26046.080	10.173	12.5	0.3	NO		NO	bb
6	6	190716M2_9	Standard	12.500	5.31	20632.117	25295.672	10.195	12.6	0.5	NO		NO	bb
7	7	190716M2_10	Standard	12.500	5.31	20106.721	24737.219	10.160	12.5	0.2	NO		NO	bb
8	8	190716M2_11	Standard	12.500	5.31	19772.203	23855.199	10.361	12.8	2.1	NO		NO	bb
9	9	190716M2_12	Standard	12.500	5.31	17261.473	20862.021	10.343	12.7	1.9	NO		NO	bb
10	10	190716M2_13	Standard	12.500	5.31	15022.118	17960.467	10.455	12.9	3.1	NO		NO	bb

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Compound name: d5-N-EtFOSAA
Response Factor: 0.174377
RRF SD: 0.00952546, Relative SD: 5.46255
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	12.500	5.29	4382.477	26243.453	2.087	12.0	-4.2	NO		NO	bb
2	2	190716M2_5	Standard	12.500	5.29	4672.816	24727.238	2.362	13.5	8.4	NO		NO	bb
3	3	190716M2_6	Standard	12.500	5.29	4749.938	25934.816	2.289	13.1	5.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	5.29	5235.998	28505.965	2.296	13.2	5.3	NO		NO	bb
5	5	190716M2_8	Standard	12.500	5.29	4677.258	26046.080	2.245	12.9	3.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	5.29	4507.100	25295.672	2.227	12.8	2.2	NO		NO	bb
7	7	190716M2_10	Standard	12.500	5.30	4108.569	24737.219	2.076	11.9	-4.8	NO		NO	bb
8	8	190716M2_11	Standard	12.500	5.29	4089.635	23855.199	2.143	12.3	-1.7	NO		NO	bb
9	9	190716M2_12	Standard	12.500	5.29	3383.189	20862.021	2.027	11.6	-7.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	5.29	2937.076	17960.467	2.044	11.7	-6.2	NO		NO	bb

Compound name: 13C2-PFDoA
Response Factor: 1.31148
RRF SD: 0.10745, Relative SD: 8.19299
Response type: Internal Std (Ref 78), 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	190716M2_4	Standard	12.500	5.60	23077.104	18568.271	15.535	11.8	-5.2	NO		NO	bb
2	2	190716M2_5	Standard	12.500	5.60	23241.320	18862.154	15.402	11.7	-6.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	5.60	23476.844	18663.980	15.723	12.0	-4.1	NO		NO	bb
4	4	190716M2_7	Standard	12.500	5.60	27474.750	21557.105	15.931	12.1	-2.8	NO		NO	bb
5	5	190716M2_8	Standard	12.500	5.60	24369.986	19358.965	15.736	12.0	-4.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	5.60	22803.961	19113.262	14.914	11.4	-9.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	5.60	24371.867	18183.154	16.754	12.8	2.2	NO		NO	bb
8	8	190716M2_11	Standard	12.500	5.60	22996.840	17424.977	16.497	12.6	0.6	NO		NO	bb
9	9	190716M2_12	Standard	12.500	5.60	22777.449	15503.073	18.365	14.0	12.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	5.60	21604.184	14155.768	19.077	14.5	16.4	NO		NO	bb

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Compound name: d3-N-MeFOSA
Response Factor: 0.0276467
RRF SD: 0.00319854, Relative SD: 11.5693
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	150.000	5.78	7475.726	26243.453	3.561	128.8	-14.1	NO		NO	bb
2	2	190716M2_5	Standard	150.000	5.78	8074.101	24727.238	4.082	147.6	-1.6	NO		NO	bb
3	3	190716M2_6	Standard	150.000	5.78	7997.124	25934.816	3.854	139.4	-7.1	NO		NO	bb
4	4	190716M2_7	Standard	150.000	5.78	8941.918	28505.965	3.921	141.8	-5.4	NO		NO	bb
5	5	190716M2_8	Standard	150.000	5.78	8183.855	26046.080	3.928	142.1	-5.3	NO		NO	bb
6	6	190716M2_9	Standard	150.000	5.78	8144.981	25295.672	4.025	145.6	-2.9	NO		NO	bb
7	7	190716M2_10	Standard	150.000	5.78	8135.270	24737.219	4.111	148.7	-0.9	NO		NO	bb
8	8	190716M2_11	Standard	150.000	5.78	7676.667	23855.199	4.023	145.5	-3.0	NO		NO	bb
9	9	190716M2_12	Standard	150.000	5.78	7927.308	20862.021	4.750	171.8	14.5	NO		NO	bb
10	10	190716M2_13	Standard	150.000	5.78	7495.267	17960.467	5.217	188.7	25.8	NO		NO	bb

Compound name: 13C2-PFTeDA
Response Factor: 0.436984
RRF SD: 0.0288901, Relative SD: 6.61124
Response type: Internal Std (Ref 79), 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	190716M2_4	Standard	12.500	6.07	10497.242	26243.453	5.000	11.4	-8.5	NO		NO	bb
2	2	190716M2_5	Standard	12.500	6.07	11020.220	24727.238	5.571	12.7	2.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	6.07	10610.182	25934.816	5.114	11.7	-6.4	NO		NO	bb
4	4	190716M2_7	Standard	12.500	6.07	12677.837	28505.965	5.559	12.7	1.8	NO		NO	bb
5	5	190716M2_8	Standard	12.500	6.07	11271.638	26046.080	5.409	12.4	-1.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	6.07	10596.440	25295.672	5.236	12.0	-4.1	NO		NO	bb
7	7	190716M2_10	Standard	12.500	6.07	10772.325	24737.219	5.443	12.5	-0.3	NO		NO	bb
8	8	190716M2_11	Standard	12.500	6.07	10195.131	23855.199	5.342	12.2	-2.2	NO		NO	bb
9	9	190716M2_12	Standard	12.500	6.07	9409.979	20862.021	5.638	12.9	3.2	NO		NO	bb
10	10	190716M2_13	Standard	12.500	6.07	9065.700	17960.467	6.309	14.4	15.5	NO		NO	bb

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Compound name: d5-N-ETFOSA
Response Factor: 0.0324744
RRF SD: 0.00147541, Relative SD: 4.5433
Response type: Internal Std (Ref 79), 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 190716M2_4	Standard	150.000	6.20	9225.188	26243.453	4.394	135.3	-9.8	NO		NO	bb
2	2 190716M2_5	Standard	150.000	6.20	10081.924	24727.238	5.097	156.9	4.6	NO		NO	bb
3	3 190716M2_6	Standard	150.000	6.20	9985.410	25934.816	4.813	148.2	-1.2	NO		NO	bb
4	4 190716M2_7	Standard	150.000	6.20	11029.992	28505.965	4.837	148.9	-0.7	NO		NO	bb
5	5 190716M2_8	Standard	150.000	6.20	10302.103	26046.080	4.944	152.2	1.5	NO		NO	bb
6	6 190716M2_9	Standard	150.000	6.20	9660.796	25295.672	4.774	147.0	-2.0	NO		NO	bb
7	7 190716M2_10	Standard	150.000	6.21	9655.712	24737.219	4.879	150.2	0.2	NO		NO	bb
8	8 190716M2_11	Standard	150.000	6.20	9060.403	23855.199	4.748	146.2	-2.5	NO		NO	bb
9	9 190716M2_12	Standard	150.000	6.21	8413.997	20862.021	5.041	155.2	3.5	NO		NO	bb
10	10 190716M2_13	Standard	150.000	6.21	7450.346	17960.467	5.185	159.7	6.4	NO		NO	bb

Compound name: 13C2-PFHxDA
Response Factor: 0.728118
RRF SD: 0.0656822, Relative SD: 9.02082
Response type: Internal Std (Ref 79), 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 190716M2_4	Standard	5.000	6.42	7072.392	26243.453	3.369	4.6	-7.5	NO		NO	bb
2	2 190716M2_5	Standard	5.000	6.42	6672.632	24727.238	3.373	4.6	-7.3	NO		NO	bb
3	3 190716M2_6	Standard	5.000	6.42	7229.321	25934.816	3.484	4.8	-4.3	NO		NO	bb
4	4 190716M2_7	Standard	5.000	6.42	8161.924	28505.965	3.579	4.9	-1.7	NO		NO	bb
5	5 190716M2_8	Standard	5.000	6.42	7361.861	26046.080	3.533	4.9	-3.0	NO		NO	bb
6	6 190716M2_9	Standard	5.000	6.42	7229.127	25295.672	3.572	4.9	-1.9	NO		NO	bb
7	7 190716M2_10	Standard	5.000	6.42	7210.365	24737.219	3.643	5.0	0.1	NO		NO	bb
8	8 190716M2_11	Standard	5.000	6.42	6717.620	23855.199	3.520	4.8	-3.3	NO		NO	bb
9	9 190716M2_12	Standard	5.000	6.42	6406.448	20862.021	3.839	5.3	5.4	NO		NO	bb
10	10 190716M2_13	Standard	5.000	6.42	6456.068	17960.467	4.493	6.2	23.4	NO		NO	bb

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Compound name: d7-N-MeFOSE
Response Factor: 0.0297357
RRF SD: 0.00420351, Relative SD: 14.1362
Response type: Internal Std (Ref 79), 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 190716M2_4	Standard	150.000	6.36	7791.255	26243.453	3.711	124.8	-16.8	NO		NO	bb
2	2 190716M2_5	Standard	150.000	6.36	8446.939	24727.238	4.270	143.6	-4.3	NO		NO	bb
3	3 190716M2_6	Standard	150.000	6.36	8864.888	25934.816	4.273	143.7	-4.2	NO		NO	bb
4	4 190716M2_7	Standard	150.000	6.36	9626.937	28505.965	4.221	142.0	-5.4	NO		NO	bb
5	5 190716M2_8	Standard	150.000	6.36	8664.948	26046.080	4.158	139.8	-6.8	NO		NO	bb
6	6 190716M2_9	Standard	150.000	6.36	8884.275	25295.672	4.390	147.6	-1.6	NO		NO	bb
7	7 190716M2_10	Standard	150.000	6.36	8180.129	24737.219	4.134	139.0	-7.3	NO		NO	bb
8	8 190716M2_11	Standard	150.000	6.36	8408.601	23855.199	4.406	148.2	-1.2	NO		NO	bb
9	9 190716M2_12	Standard	150.000	6.36	8433.074	20862.021	5.053	169.9	13.3	NO		NO	bb
10	10 190716M2_13	Standard	150.000	6.36	8602.599	17960.467	5.987	201.3	34.2	NO		NO	bb

Compound name: d9-N-EtFOSE
Response Factor: 0.0304479
RRF SD: 0.00374799, Relative SD: 12.3095
Response type: Internal Std (Ref 79), 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 190716M2_4	Standard	150.000	6.51	8260.143	26243.453	3.934	129.2	-13.9	NO		NO	bb
2	2 190716M2_5	Standard	150.000	6.51	8651.297	24727.238	4.373	143.6	-4.2	NO		NO	bb
3	3 190716M2_6	Standard	150.000	6.51	9013.724	25934.816	4.344	142.7	-4.9	NO		NO	bb
4	4 190716M2_7	Standard	150.000	6.51	9637.981	28505.965	4.226	138.8	-7.5	NO		NO	bb
5	5 190716M2_8	Standard	150.000	6.51	9121.854	26046.080	4.378	143.8	-4.1	NO		NO	bb
6	6 190716M2_9	Standard	150.000	6.51	8819.154	25295.672	4.358	143.1	-4.6	NO		NO	bb
7	7 190716M2_10	Standard	150.000	6.51	8949.539	24737.219	4.522	148.5	-1.0	NO		NO	bb
8	8 190716M2_11	Standard	150.000	6.51	8613.880	23855.199	4.514	148.2	-1.2	NO		NO	bb
9	9 190716M2_12	Standard	150.000	6.51	8474.301	20862.021	5.078	166.8	11.2	NO		NO	bb
10	10 190716M2_13	Standard	150.000	6.51	8540.626	17960.467	5.944	195.2	30.1	NO		NO	bb

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Compound name: 13C4-PFBA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 72), 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 190716M2_4	Standard	12.500	1.21	7881.823	7881.823	12.500	12.5	0.0	NO		NO	bb
2	2 190716M2_5	Standard	12.500	1.21	7949.934	7949.934	12.500	12.5	0.0	NO		NO	bb
3	3 190716M2_6	Standard	12.500	1.21	8142.781	8142.781	12.500	12.5	0.0	NO		NO	bb
4	4 190716M2_7	Standard	12.500	1.21	9233.128	9233.128	12.500	12.5	0.0	NO		NO	bb
5	5 190716M2_8	Standard	12.500	1.21	8279.655	8279.655	12.500	12.5	0.0	NO		NO	bb
6	6 190716M2_9	Standard	12.500	1.21	8847.535	8847.535	12.500	12.5	0.0	NO		NO	MM
7	7 190716M2_10	Standard	12.500	1.21	8359.938	8359.938	12.500	12.5	0.0	NO		NO	bb
8	8 190716M2_11	Standard	12.500	1.22	7976.345	7976.345	12.500	12.5	0.0	NO		NO	bb
9	9 190716M2_12	Standard	12.500	1.21	8143.944	8143.944	12.500	12.5	0.0	NO		NO	bb
10	10 190716M2_13	Standard	12.500	1.21	7670.998	7670.998	12.500	12.5	0.0	NO		NO	MM

Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 73), 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 190716M2_4	Standard	12.500	3.00	19577.564	19577.564	12.500	12.5	0.0	NO		NO	bb
2	2 190716M2_5	Standard	12.500	3.01	18927.377	18927.377	12.500	12.5	0.0	NO		NO	bb
3	3 190716M2_6	Standard	12.500	3.01	19359.209	19359.209	12.500	12.5	0.0	NO		NO	bb
4	4 190716M2_7	Standard	12.500	3.01	21305.883	21305.883	12.500	12.5	0.0	NO		NO	bb
5	5 190716M2_8	Standard	12.500	3.01	19771.020	19771.020	12.500	12.5	0.0	NO		NO	bb
6	6 190716M2_9	Standard	12.500	3.01	18933.750	18933.750	12.500	12.5	0.0	NO		NO	bb
7	7 190716M2_10	Standard	12.500	3.01	19115.057	19115.057	12.500	12.5	0.0	NO		NO	bb
8	8 190716M2_11	Standard	12.500	3.01	18766.617	18766.617	12.500	12.5	0.0	NO		NO	bb
9	9 190716M2_12	Standard	12.500	3.01	16777.020	16777.020	12.500	12.5	0.0	NO		NO	bb
10	10 190716M2_13	Standard	12.500	3.01	15087.500	15087.500	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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Compound name: 18O2-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 74), 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	190716M2_4	Standard	12.500	3.78	1114.14€	1114.14€	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	3.78	1306.998	1306.998	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	3.78	1312.777	1312.777	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	3.78	1393.132	1393.132	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	3.78	1392.759	1392.759	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	3.78	1265.964	1265.964	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	3.79	1153.314	1153.314	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	3.79	1157.976	1157.976	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	3.79	1079.388	1079.388	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	3.78	955.986	955.986	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 75), 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	190716M2_4	Standard	12.500	4.15	28350.359	28350.359	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.16	27333.705	27333.705	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.16	27652.361	27652.361	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.16	30949.543	30949.543	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.16	28702.553	28702.553	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.16	28015.330	28015.330	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.16	26766.959	26766.959	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.16	25473.691	25473.691	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.16	22408.676	22408.676	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.16	18260.951	18260.951	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 76), 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	190716M2_4	Standard	12.500	4.60	15534.052	15534.052	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.60	14548.625	14548.625	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.60	15524.611	15524.611	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.60	15787.939	15787.939	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.60	15010.626	15010.626	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.60	15069.935	15069.935	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.60	14098.217	14098.217	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.60	13827.684	13827.684	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.60	12453.309	12453.309	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.60	11388.683	11388.683	12.500	12.5	0.0	NO		NO	bb

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 77), 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	190716M2_4	Standard	12.500	4.69	2546.740	2546.740	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.69	2512.891	2512.891	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.69	2750.044	2750.044	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.69	2978.896	2978.896	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.69	2734.924	2734.924	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.69	2902.983	2902.983	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.69	2586.302	2586.302	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.69	2480.703	2480.703	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.69	2473.838	2473.838	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.69	2149.525	2149.525	12.500	12.5	0.0	NO		NO	bb

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
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Compound name: 13C6-PFDA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 78), 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	190716M2_4	Standard	12.500	4.98	18568.271	18568.271	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	4.98	18862.154	18862.154	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	4.98	18663.980	18663.980	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	4.98	21557.105	21557.105	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	4.98	19358.965	19358.965	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	4.98	19113.262	19113.262	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	4.98	18183.154	18183.154	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	4.98	17424.977	17424.977	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	4.98	15503.073	15503.073	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	4.98	14155.768	14155.768	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 79), 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	190716M2_4	Standard	12.500	5.31	26243.453	26243.453	12.500	12.5	0.0	NO		NO	bb
2	2	190716M2_5	Standard	12.500	5.31	24727.238	24727.238	12.500	12.5	0.0	NO		NO	bb
3	3	190716M2_6	Standard	12.500	5.31	25934.816	25934.816	12.500	12.5	0.0	NO		NO	bb
4	4	190716M2_7	Standard	12.500	5.31	28505.965	28505.965	12.500	12.5	0.0	NO		NO	bb
5	5	190716M2_8	Standard	12.500	5.31	26046.080	26046.080	12.500	12.5	0.0	NO		NO	bb
6	6	190716M2_9	Standard	12.500	5.31	25295.672	25295.672	12.500	12.5	0.0	NO		NO	bb
7	7	190716M2_10	Standard	12.500	5.31	24737.219	24737.219	12.500	12.5	0.0	NO		NO	bb
8	8	190716M2_11	Standard	12.500	5.31	23855.199	23855.199	12.500	12.5	0.0	NO		NO	bb
9	9	190716M2_12	Standard	12.500	5.31	20862.021	20862.021	12.500	12.5	0.0	NO		NO	bb
10	10	190716M2_13	Standard	12.500	5.31	17960.467	17960.467	12.500	12.5	0.0	NO		NO	bb

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Dataset: Untitled

Last Altered: Wednesday, July 17, 2019 08:47:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:48:32 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: PFBA

	#	Name	ID	Acq.Date	Acq.Time	
1	1	190716M2_1	IPA	16-Jul-19	16:34:07	
2	2	190716M2_2	IPA	16-Jul-19	16:44:50	
3	3	190716M2_3	IPA	16-Jul-19	16:55:20	
4	4	190716M2_4	ST190716M2-1 PFC CS-2 19G1101	16-Jul-19	17:05:59	
5	5	190716M2_5	ST190716M2-2 PFC CS-1 19G1102	16-Jul-19	17:16:31	
6	6	190716M2_6	ST190716M2-3 PFC CS0 19G1103	16-Jul-19	17:27:02	
7	7	190716M2_7	ST190716M2-4 PFC CS1 19G1104	16-Jul-19	17:37:40	
8	8	190716M2_8	ST190716M2-5 PFC CS2 19G1105	16-Jul-19	17:48:13	
9	9	190716M2_9	ST190716M2-6 PFC CS3 19G1106	16-Jul-19	17:58:51	
10	10	190716M2_10	ST190716M2-7 PFC CS4 19G1107	16-Jul-19	18:09:24	
11	11	190716M2_11	ST190716M2-8 PFC CS5 19G1108	16-Jul-19	18:20:03	
12	12	190716M2_12	ST190716M2-9 PFC CS6 19G1109	16-Jul-19	18:30:36	
13	13	190716M2_13	ST190716M2-10 PFC CS7 19G1110	16-Jul-19	18:41:14	
14	14	190716M2_14	IB	16-Jul-19	18:51:48	
15	15	190716M2_15	ICV190716M2-1 PFC ICV 19G1111	16-Jul-19	19:02:26	ICV190716M2-1 NOT USED
16	16	190716M2_16	ICV190716M2-2 PFC ICV 19F2922	16-Jul-19	19:13:05	
17	17	190716M2_17	IPA	16-Jul-19	19:23:37	

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:35:41 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

	#	Name	IS#	CoD	CoD Flag	%RSD
1	1	PFBA	47	0.9998	NO	
2	2	PFPrS	49	0.9995	NO	
3	3	3:3 FTCA	48	0.9985	NO	
4	4	PFPeA	48	0.9998	NO	
5	5	PFBS	49	0.9998	NO	
6	6	4:2 FTS	51	0.9998	NO	
7	7	PFHxA	52	0.9995	NO	
8	8	PFPeS	49	0.9926	NO	
9	9	HFPO-DA	50	0.9995	NO	
10	10	5:3 FTCA	53	0.9997	NO	
11	11	PFHpA	53	0.9986	NO	
12	12	ADONA	53	0.9981	NO	
13	13	L-PFHxS	54	0.9997	NO	
14	15	6:2 FTS	55	0.9985	NO	
15	16	L-PFOA	58	0.9995	NO	
16	18	PFecHS	58	0.9998	NO	
17	19	PFHpS	59	0.9997	NO	
18	20	7:3 FTCA	56	0.9981	NO	
19	21	PFNA	56	0.9994	NO	
20	22	PFOSA	57	0.9981	NO	
21	23	L-PFOS	59	0.9993	NO	
22	25	9Cl-PF30NS	59	0.9997	NO	
23	26	PFDA	60	0.9993	NO	
24	27	8:2 FTS	61	0.9993	NO	
25	28	PFNS	59	0.9993	NO	
26	29	L-MeFOSAA	62	0.9996	NO	

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
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Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

	#	Name	IS#	CoD	CoD Flag	%RSD
1	31	L-EtFOSAA	64	0.9992	NO	
2	33	PFUdA	63	0.9997	NO	
3	34	PFDS	61	0.9999	NO	
4	35	11Cl-PF30UdS	65	0.9997	NO	
5	36	10:2 FTS	61	0.9995	NO	
6	37	PFDoA	65	0.9998	NO	
7	38	N-MeFOSA	66	0.9992	NO	
8	39	PFTrDA	65	0.9989	NO	
9	40	PFDoS	67	0.9997	NO	
10	41	PFTeDA	67	0.9977	NO	
11	42	N-EtFOSA	68	0.9999	NO	
12	43	PFHxDA	69	0.9998	NO	
13	44	PFODA	69	0.9927	NO	
14	45	N-MeFOSE	70	0.9994	NO	
15	46	N-EtFOSE	71	0.9997	NO	
16	47	13C3-PFBA	72		NO	2.346
17	48	13C3-PFPeA	73		NO	4.220
18	49	13C3-PFBS	74		NO	5.836
19	50	13C3-HFPO-DA	73		NO	8.336
20	51	13C2-4:2 FTS	74		NO	8.420
21	52	13C2-PFHxA	73		NO	3.600
22	53	13C4-PFHpA	73		NO	3.461
23	54	13C3-PFHxS	74		NO	3.983
24	55	13C2-6:2 FTS	77		NO	8.859
25	56	13C5-PFNA	76		NO	4.604
26	57	13C8-PFOSA	79		NO	7.000
27	58	13C2-PFOA	75		NO	3.517
28	59	13C8-PFOS	77		NO	5.505
29	60	13C2-PFDA	78		NO	2.430
30	61	13C2-8:2 FTS	77		NO	8.142
31	62	d3-N-MeFOSAA	79		NO	6.807
32	63	13C2-PFUdA	79		NO	3.616

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:35:54 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

	#	Name	IS#	CoD	CoD Flag	%RSD
33	64	d5-N-EtFOSAA	79		NO	5.463
34	65	13C2-PFDoA	78		NO	8.193
35	66	d3-N-MeFOSA	79		NO	11.569
36	67	13C2-PFTeDA	79		NO	6.611
37	68	d5-N-ETFOSA	79		NO	4.543
38	69	13C2-PFHxDA	79		NO	9.021
39	70	d7-N-MeFOSE	79		NO	14.136
40	71	d9-N-EtFOSE	79		NO	12.310
41	72	13C4-PFBA	72		NO	0.000
42	73	13C5-PFHxA	73		NO	0.000
43	74	18O2-PFHxS	74		NO	0.000
44	75	13C8-PFOA	75		NO	0.000
45	76	13C9-PFNA	76		NO	0.000
46	77	13C4-PFOS	77		NO	0.000
47	78	13C6-PFDA	78		NO	0.000
48	79	13C7-PFUdA	79		NO	0.000

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Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:37:10 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	PFBA	1.21	1.21			
2	PFPrS	1.58	1.58	2.285	2.285	NO
3	3:3 FTCA	2.06	2.05	1.808	1.808	NO
4	PFPeA	2.20	2.20			
5	PFBS	2.50	2.50	3.067	3.067	NO
6	4:2 FTS	2.92	2.92	1.900	1.900	NO
7	PFHxA	3.01	3.01	15.031	15.031	NO
8	PFPeS	3.21	3.21	1.457	1.457	NO
9	HFPO-DA	3.22	3.22	2.172	2.172	NO
10	5:3 FTCA	3.55	3.56	1.452	1.452	NO
11	PFHpA	3.63	3.63	4.545	4.545	NO
12	ADONA	3.74	3.74	3.380	3.380	NO
13	L-PFHxS	3.78	3.78	2.211	2.211	NO
14	6:2 FTS	4.10	4.10	2.138	2.138	NO
15	L-PFOA	4.16	4.16	3.908	3.908	NO
16	PFecHS	4.18	4.18	1.059	1.059	NO
17	PFHpS	4.27	4.27	1.697	1.697	NO
18	7:3 FTCA	4.59	4.58	2.510	2.510	NO
19	PFNA	4.60	4.60	2.745	2.745	NO
20	PFOSA	4.66	4.66	31.248	31.248	NO
21	L-PFOS	4.69	4.69	2.148	2.148	NO
22	9Cl-PF30NS	4.91	4.91	18.468	18.468	NO
23	PFDA	4.98	4.98	4.126	4.126	NO
24	8:2 FTS	4.95	4.95	1.368	1.368	NO
25	PFNS	5.05	5.05	1.748	1.748	NO
26	L-MeFOSAA	5.13	5.14	2.644	2.644	NO

Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:37:25 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

	Name	Pred.RT	RT	Pred. Ratio	Ion Ratio	Ratio out?
1	L-EtFOSAA	5.29	5.30	1.420	1.420	NO
2	PFUdA	5.31	5.31	5.896	5.896	NO
3	PFDS	5.36	5.36	1.764	1.764	NO
4	11Cl-PF30UdS	5.53	5.53	4.277	4.277	NO
5	10:2 FTS	5.58	5.58	1.463	1.463	NO
6	PFDoA	5.60	5.60	7.476	7.476	NO
7	N-MeFOSA	5.75	5.75	1.855	1.855	NO
8	PFTrDA	5.85	5.85	14.266	14.266	NO
9	PFDoS	5.88	5.88	1.897	1.897	NO
10	PFTeDA	6.07	6.07	14.736	14.736	NO
11	N-EtFOSA	6.18	6.18	2.062	2.062	NO
12	PFHxDA	6.42	6.42	9.880	9.880	NO
13	PFODA	6.67	6.67			
14	N-MeFOSE	6.37	6.37			
15	N-EtFOSE	6.52	6.52			

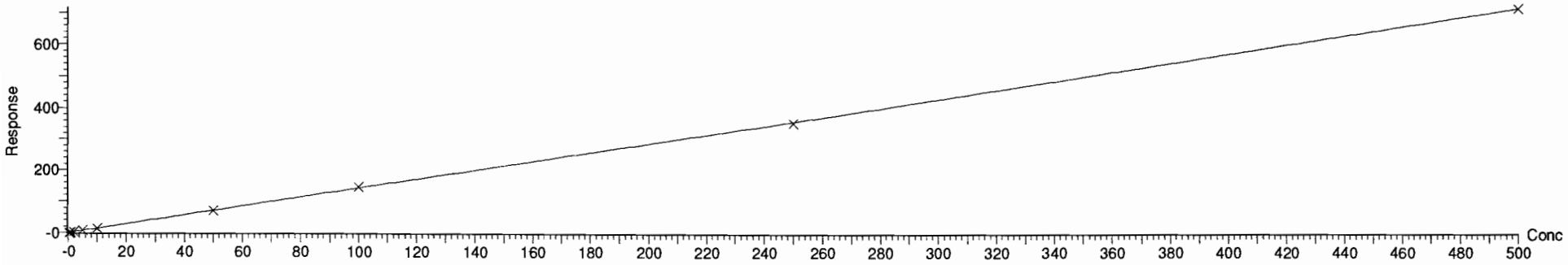
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

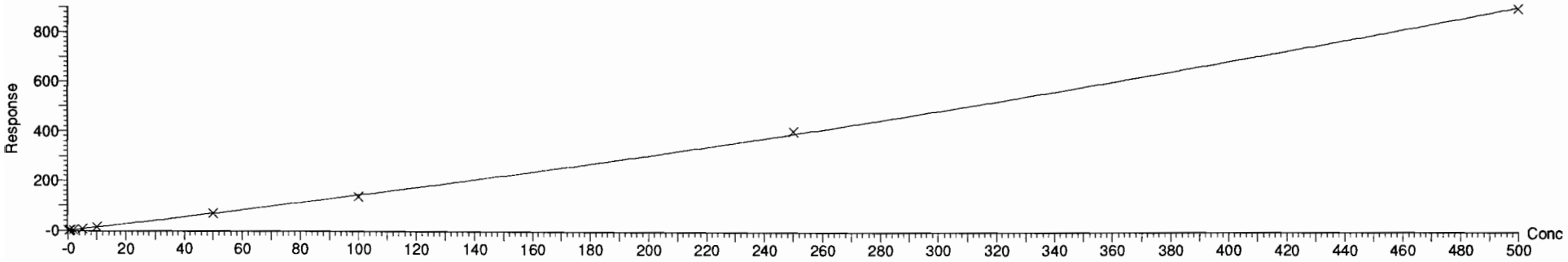
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: PFBA
Correlation coefficient: r = 0.999915, r^2 = 0.999831
Calibration curve: 1.42867 * x + -0.1474
Response type: Internal Std (Ref 47), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



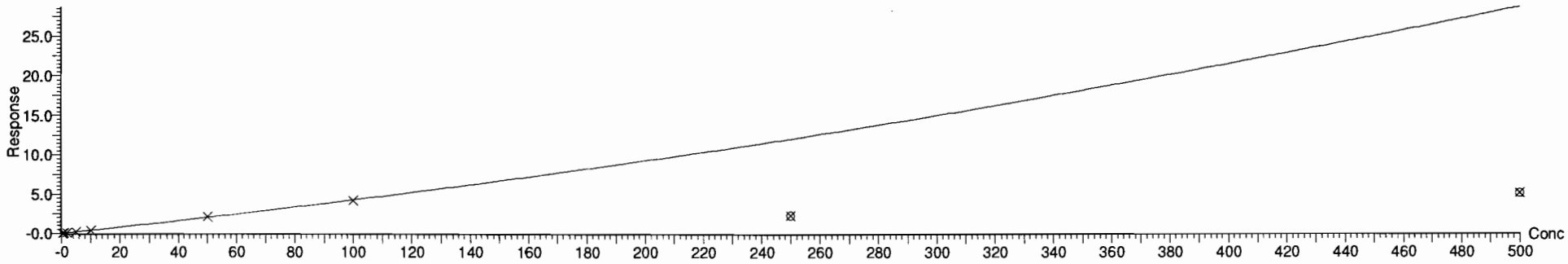
Compound name: PFPrS
Coefficient of Determination: R^2 = 0.999480
Calibration curve: 0.000936354 * x^2 + 1.33594 * x + -0.111459
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



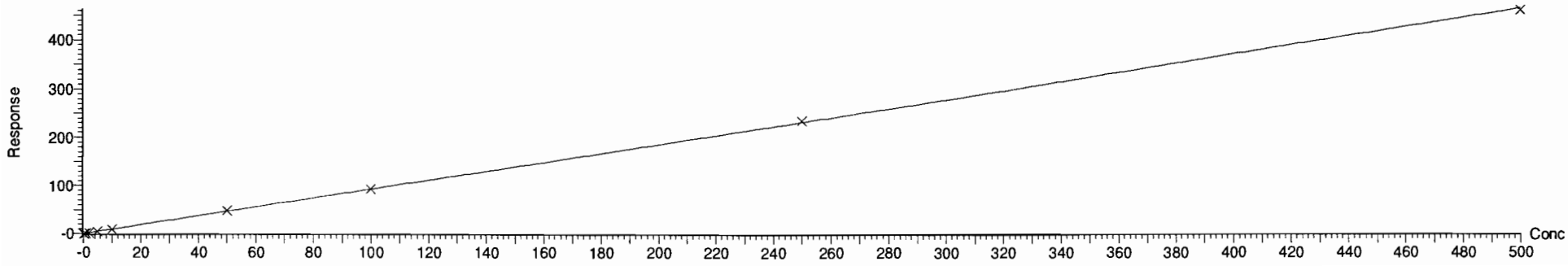
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: 3:3 FTCA
Coefficient of Determination: R^2 = 0.998534
Calibration curve: 3.62139e-005 * x^2 + 0.0392869 * x + -0.00205845
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



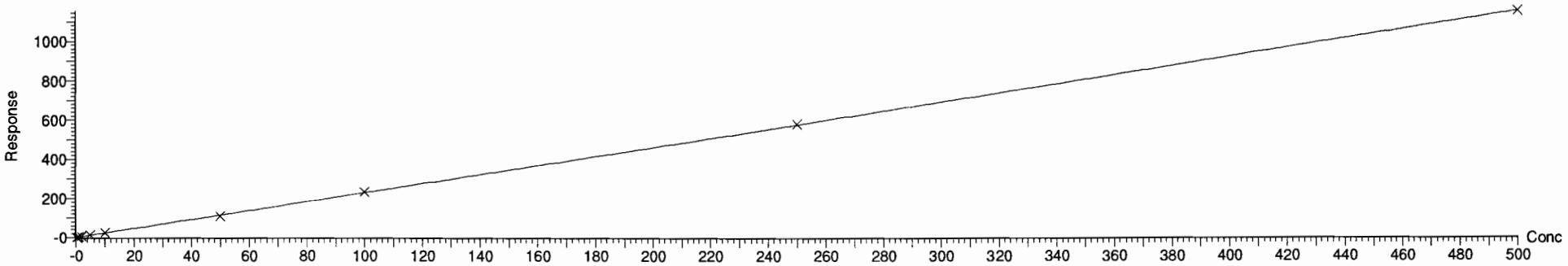
Compound name: PFPeA
Correlation coefficient: r = 0.999924, r^2 = 0.999849
Calibration curve: 0.927355 * x + -0.0458768
Response type: Internal Std (Ref 48), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



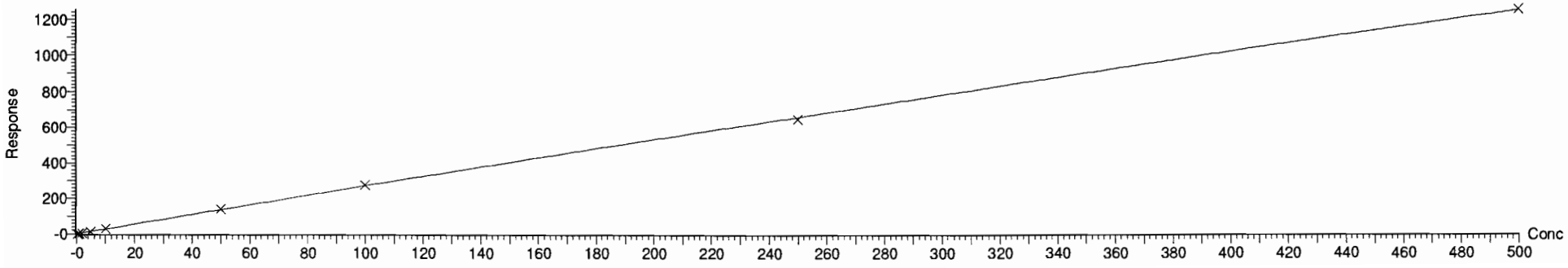
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFBS
Correlation coefficient: r = 0.999884, r^2 = 0.999768
Calibration curve: 2.30677 * x + -0.110938
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



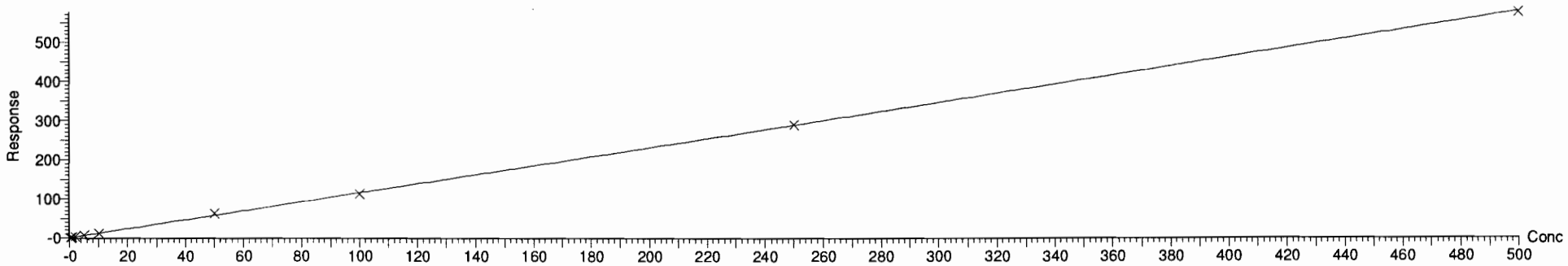
Compound name: 4:2 FTS
Coefficient of Determination: R^2 = 0.999794
Calibration curve: -0.000545681 * x^2 + 2.76987 * x + -0.195009
Response type: Internal Std (Ref 51), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



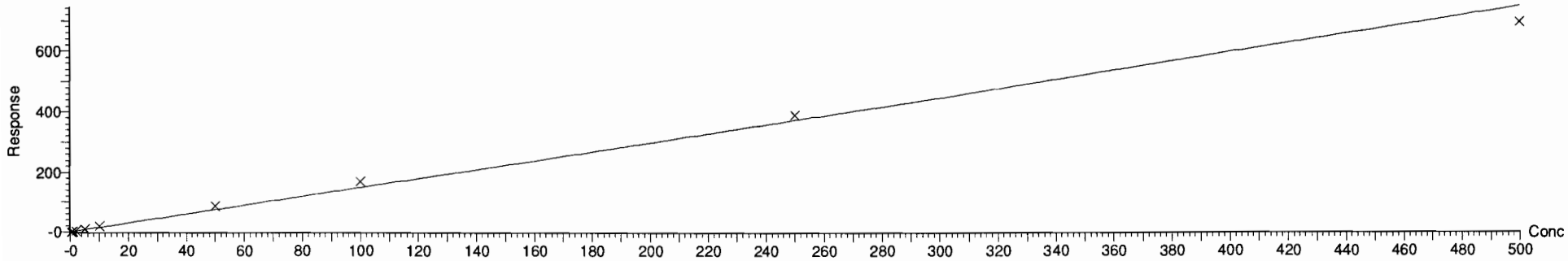
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFHxA
Correlation coefficient: r = 0.999727, r^2 = 0.999453
Calibration curve: 1.15387 * x + 0.0286354
Response type: Internal Std (Ref 52), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



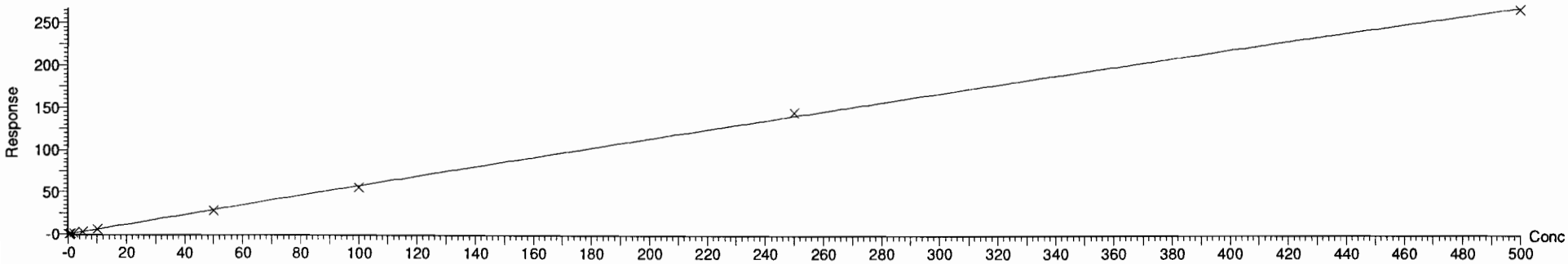
Compound name: PFPeS
Correlation coefficient: r = 0.996302, r^2 = 0.992617
Calibration curve: 1.4909 * x + 0.128111
Response type: Internal Std (Ref 49), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



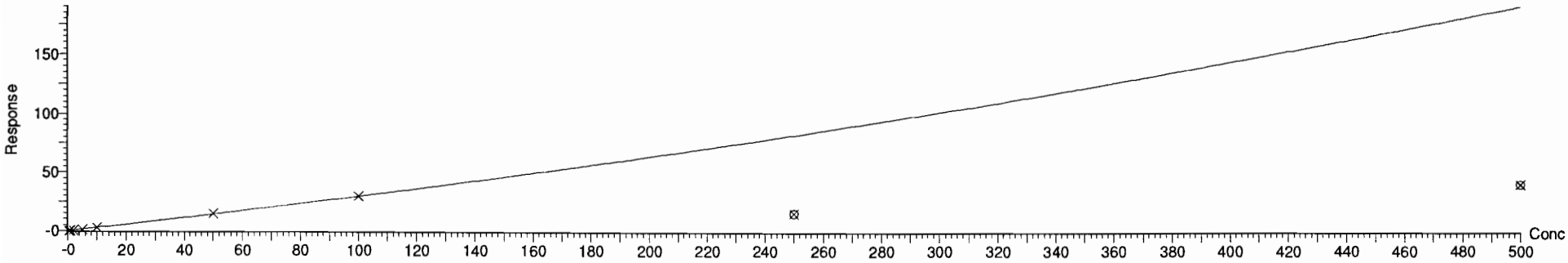
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.999471
Calibration curve: -0.000121204 * x^2 + 0.594869 * x + -0.0711014
Response type: Internal Std (Ref 50), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



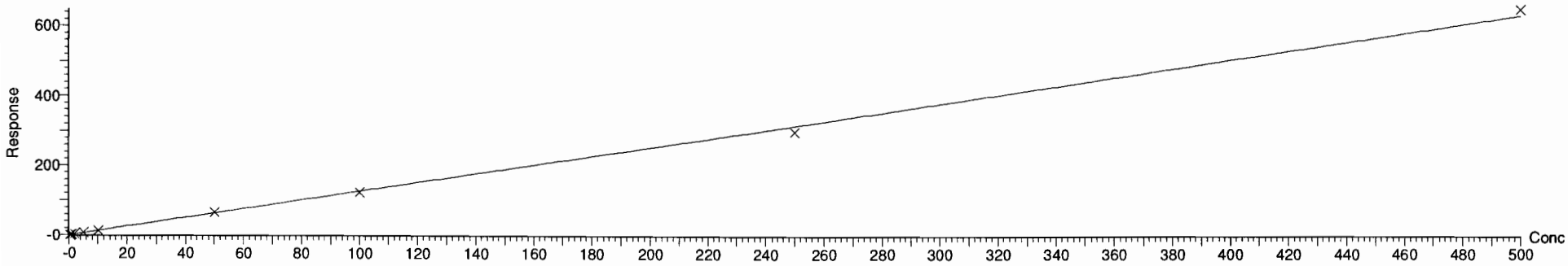
Compound name: 5:3 FTCA
Coefficient of Determination: R^2 = 0.999734
Calibration curve: 0.000207996 * x^2 + 0.276598 * x + -0.0109196
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



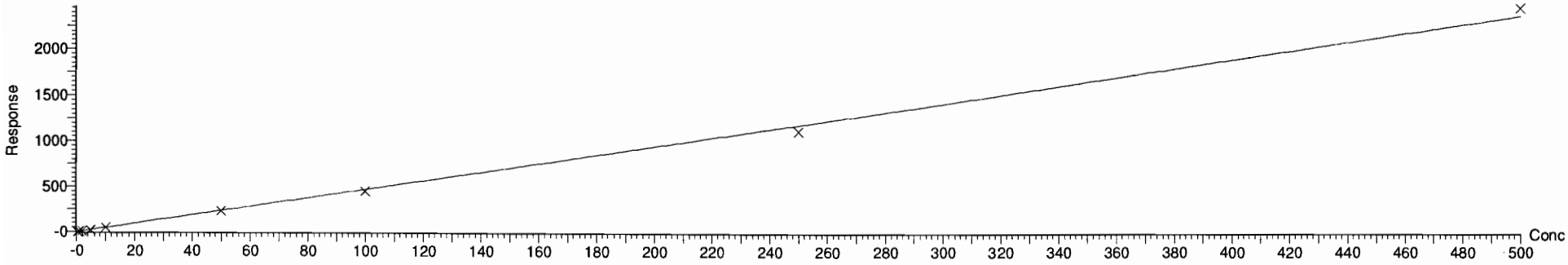
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFHpA
Correlation coefficient: r = 0.999308, r^2 = 0.998617
Calibration curve: 1.26078 * x + -0.0726981
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



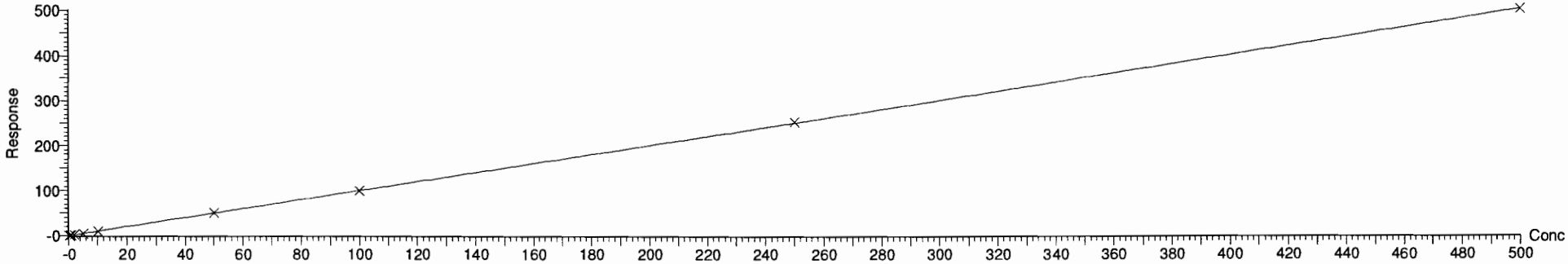
Compound name: ADONA
Correlation coefficient: r = 0.999036, r^2 = 0.998072
Calibration curve: 4.7382 * x + -0.341799
Response type: Internal Std (Ref 53), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



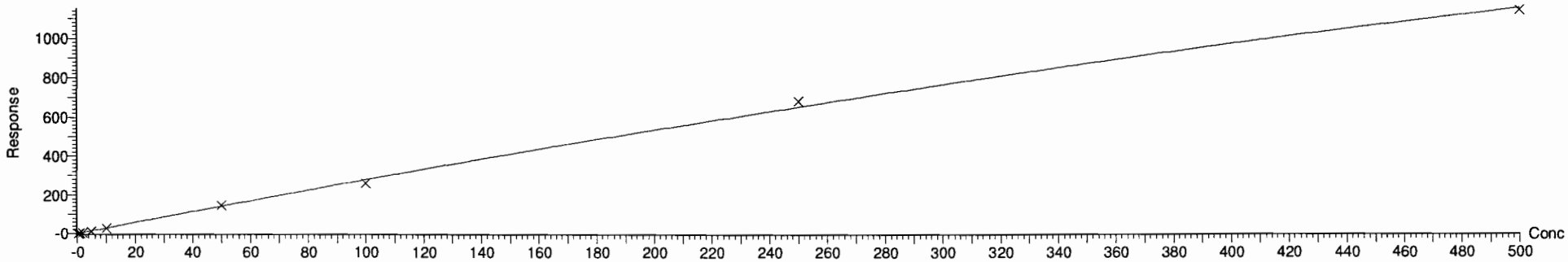
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999740
Calibration curve: 9.02755e-006 * x^2 + 0.999005 * x + -0.0664012
Response type: Internal Std (Ref 54), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



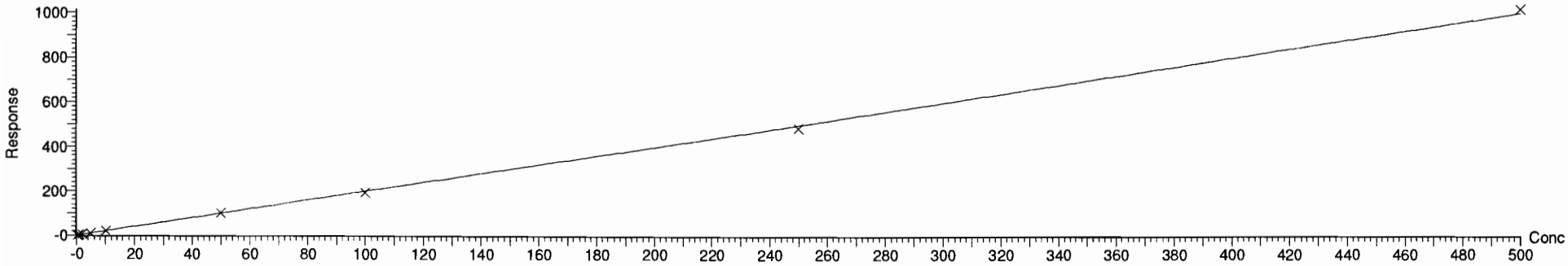
Compound name: 6:2 FTS
Coefficient of Determination: R^2 = 0.998452
Calibration curve: -0.00124606 * x^2 + 2.92798 * x + -0.170137
Response type: Internal Std (Ref 55), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



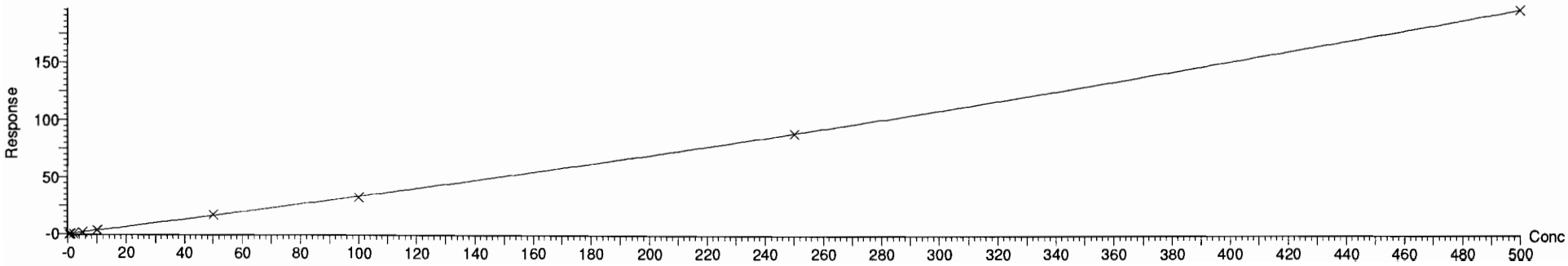
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: L-PFOA
Correlation coefficient: r = 0.999751, r^2 = 0.999501
Calibration curve: 1.99432 * x + 0.0417568
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



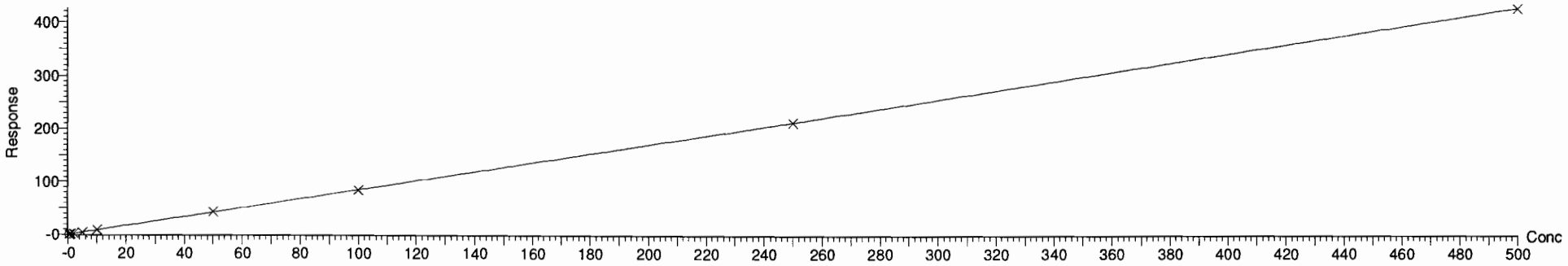
Compound name: PFecHS
Coefficient of Determination: R^2 = 0.999769
Calibration curve: 0.000141483 * x^2 + 0.320797 * x + -0.0109297
Response type: Internal Std (Ref 58), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



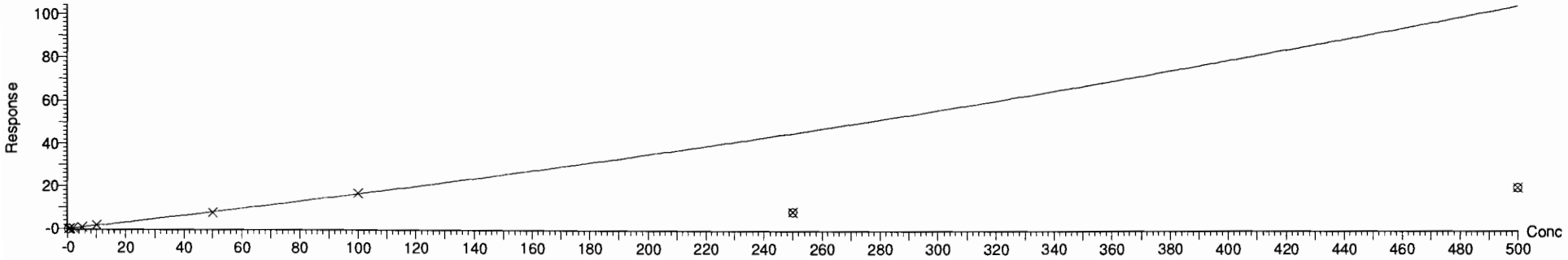
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFHpS
Correlation coefficient: r = 0.999872, r^2 = 0.999744
Calibration curve: 0.853266 * x + -0.0542537
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



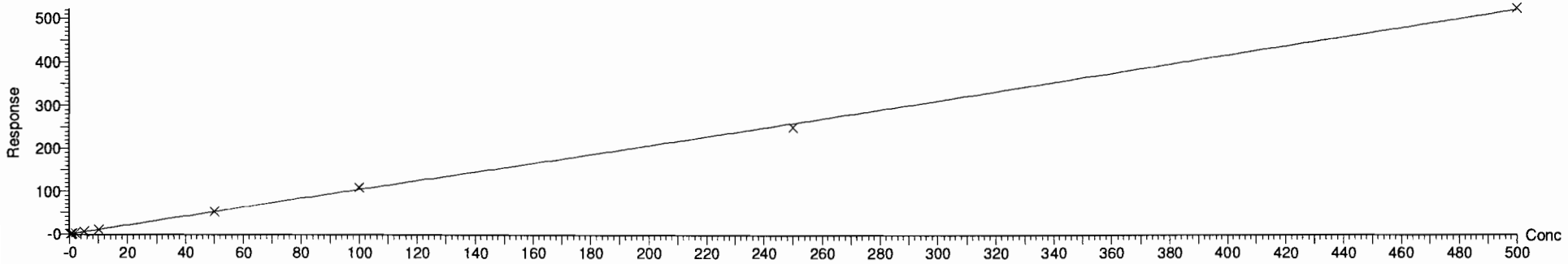
Compound name: 7:3 FTCA
Coefficient of Determination: R^2 = 0.998142
Calibration curve: 0.000108039 * x^2 + 0.154298 * x + -0.0292777
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



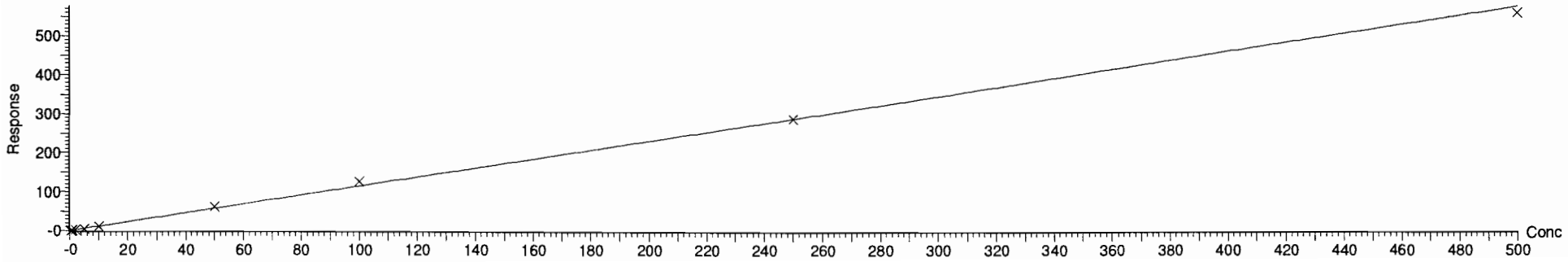
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFNA
Correlation coefficient: r = 0.999689, r^2 = 0.999379
Calibration curve: 1.03842 * x + -0.0124949
Response type: Internal Std (Ref 56), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



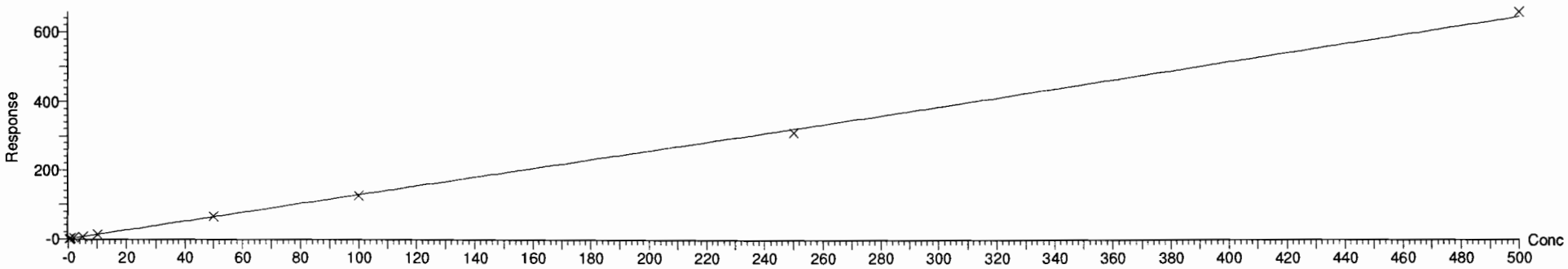
Compound name: PFOSA
Correlation coefficient: r = 0.999048, r^2 = 0.998097
Calibration curve: 1.153 * x + 0.0481302
Response type: Internal Std (Ref 57), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



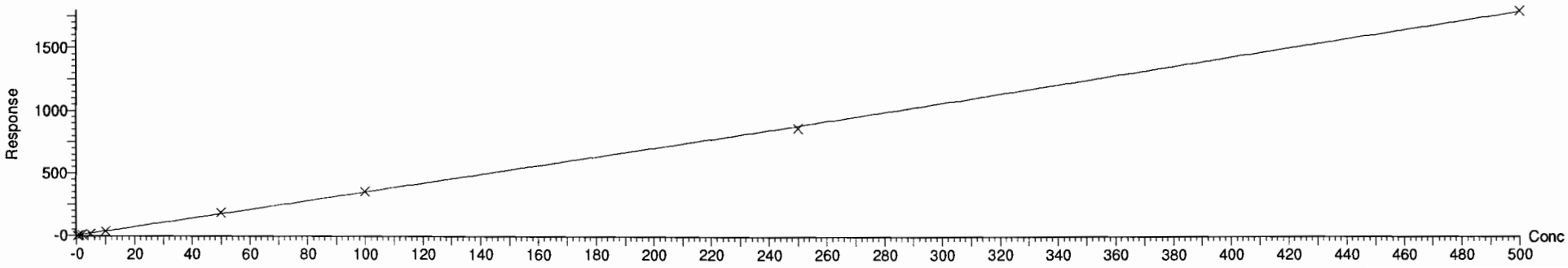
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: L-PFOS
Correlation coefficient: r = 0.999643, r^2 = 0.999286
Calibration curve: 1.28716 * x + -0.149993
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



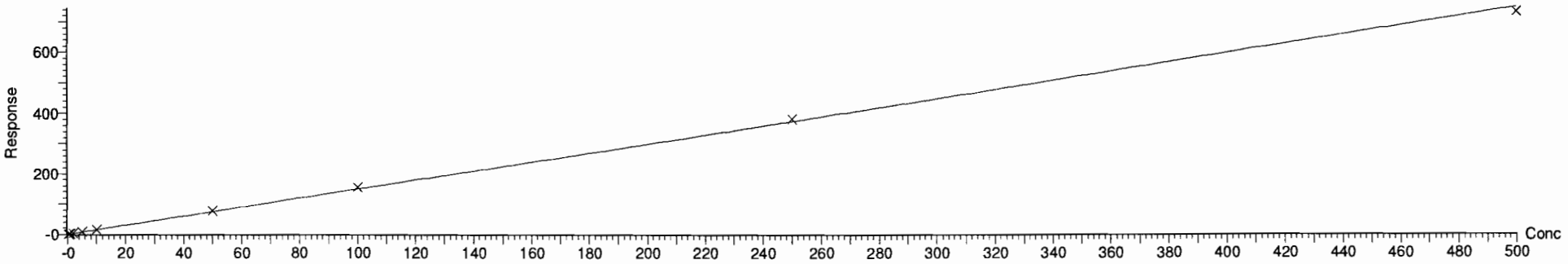
Compound name: 9Cl-PF30NS
Coefficient of Determination: R^2 = 0.999676
Calibration curve: 0.000159787 * x^2 + 3.49516 * x + -0.283829
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



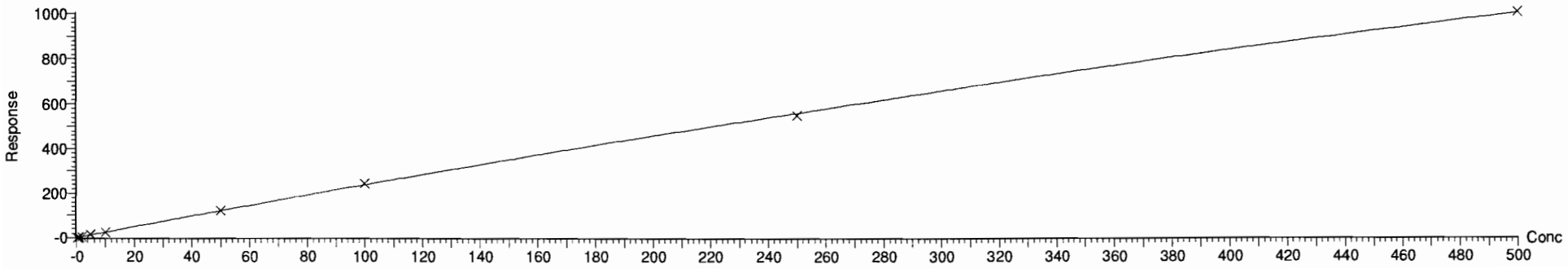
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFDA
Correlation coefficient: r = 0.999671, r^2 = 0.999342
Calibration curve: 1.49139 * x + 0.0347273
Response type: Internal Std (Ref 60), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



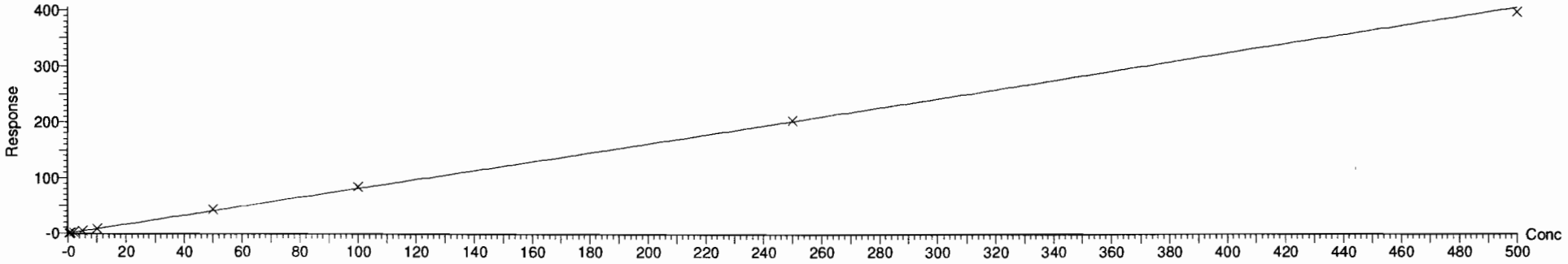
Compound name: 8:2 FTS
Coefficient of Determination: R^2 = 0.999325
Calibration curve: -0.000958593 * x^2 + 2.47964 * x + -0.143688
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



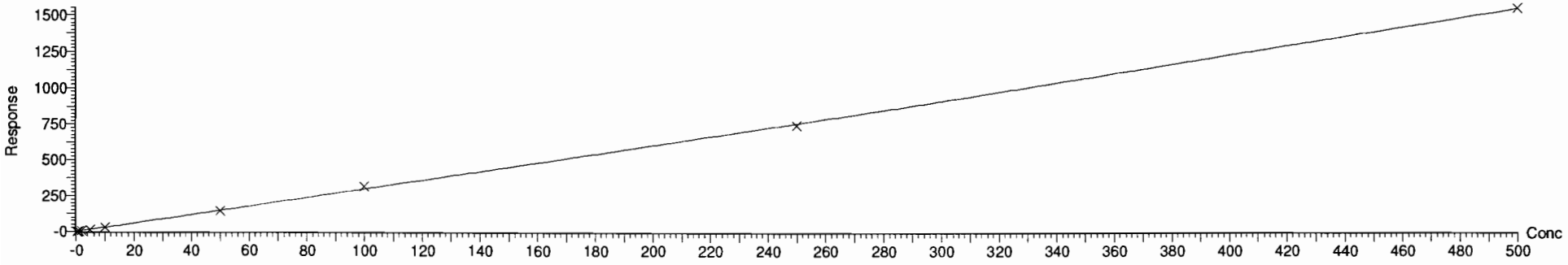
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:11 Pacific Daylight Time

Compound name: PFNS
Correlation coefficient: r = 0.999644, r^2 = 0.999287
Calibration curve: 0.809985 * x + -0.0612442
Response type: Internal Std (Ref 59), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Compound name: L-MeFOSAA
Coefficient of Determination: R^2 = 0.999601
Calibration curve: 0.000237887 * x^2 + 2.97436 * x + -0.227255
Response type: Internal Std (Ref 62), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



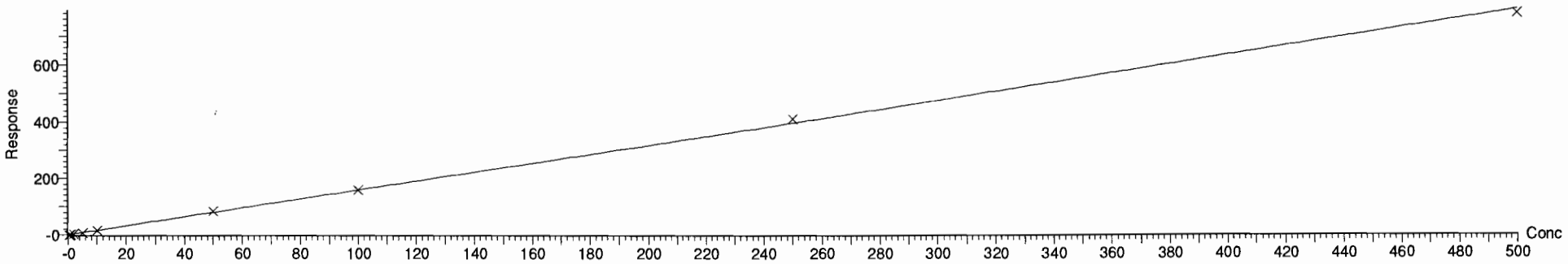
Vista Analytical Laboratory Q1

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

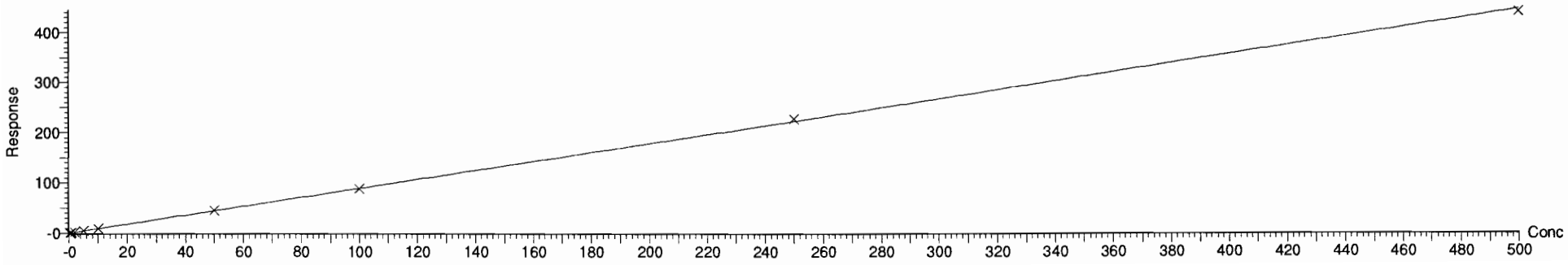
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Compound name: L-EtFOSAA
Correlation coefficient: r = 0.999611, r^2 = 0.999222
Calibration curve: 1.58212 * x + -0.12102
Response type: Internal Std (Ref 64), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



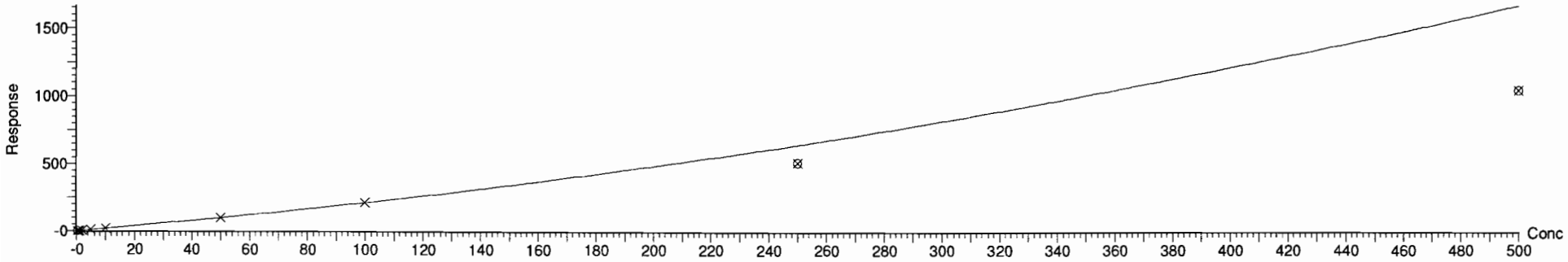
Compound name: PFUdA
Correlation coefficient: r = 0.999845, r^2 = 0.999691
Calibration curve: 0.890447 * x + 0.0369886
Response type: Internal Std (Ref 63), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



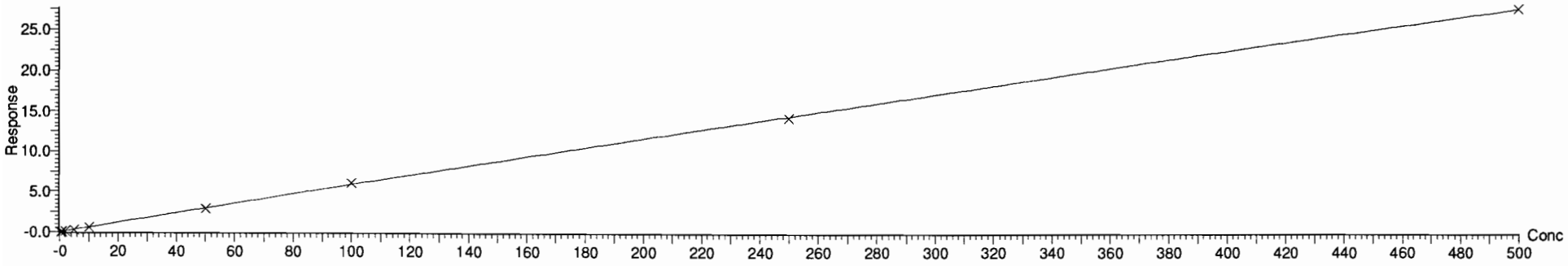
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: PFDS
Coefficient of Determination: R^2 = 0.999905
Calibration curve: 0.00300667 * x^2 + 1.83523 * x
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: Null, Axis trans: None



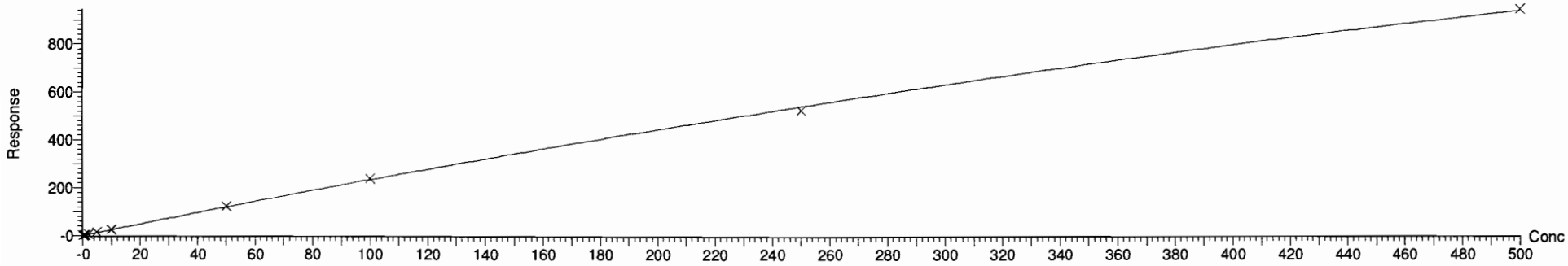
Compound name: 11Cl-PF30UdS
Coefficient of Determination: R^2 = 0.999725
Calibration curve: -9.8975e-006 * x^2 + 0.0601237 * x + -0.0105611
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



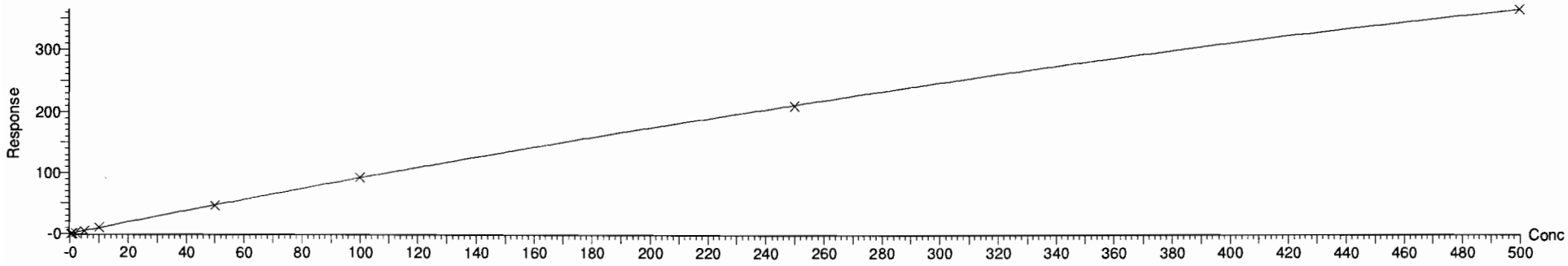
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: 10:2 FTS
Coefficient of Determination: R^2 = 0.999477
Calibration curve: -0.00117687 * x^2 + 2.46159 * x + 0.0884414
Response type: Internal Std (Ref 61), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



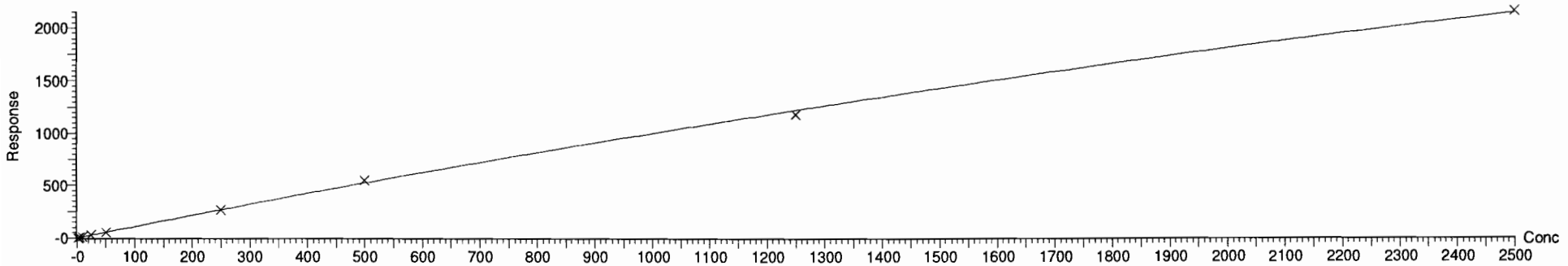
Compound name: PFDoA
Coefficient of Determination: R^2 = 0.999836
Calibration curve: -0.000479463 * x^2 + 0.967819 * x + 0.00978606
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



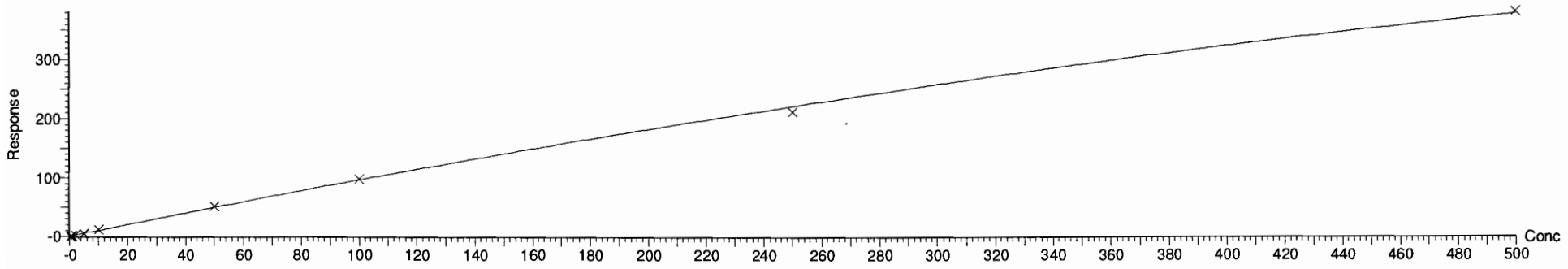
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: N-MeFOSA
Coefficient of Determination: R^2 = 0.999231
Calibration curve: -9.80896e-005 * x^2 + 1.09978 * x + -0.278582
Response type: Internal Std (Ref 66), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



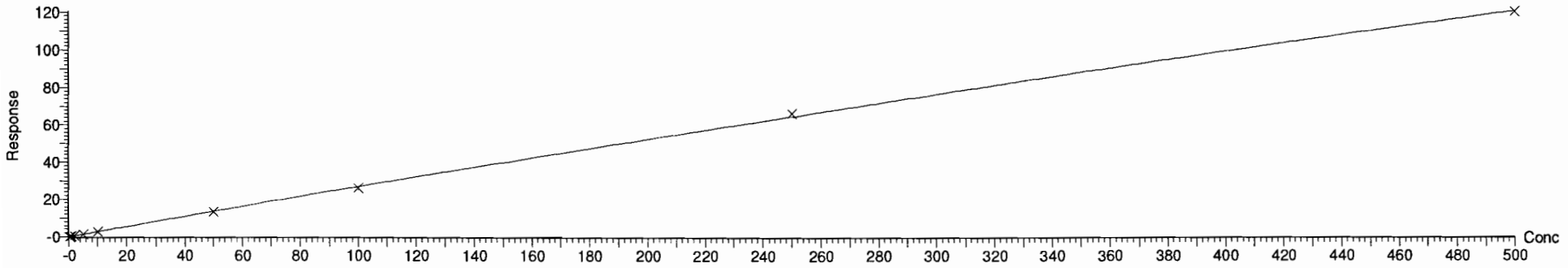
Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998928
Calibration curve: -0.000522055 * x^2 + 1.01699 * x + 0.0837362
Response type: Internal Std (Ref 65), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



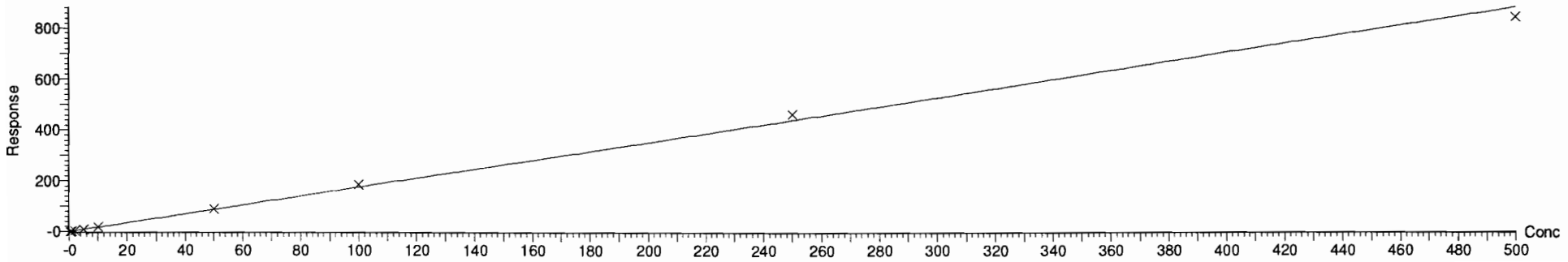
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.999652
Calibration curve: -7.05884e-005 * x^2 + 0.276171 * x + -0.010428
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



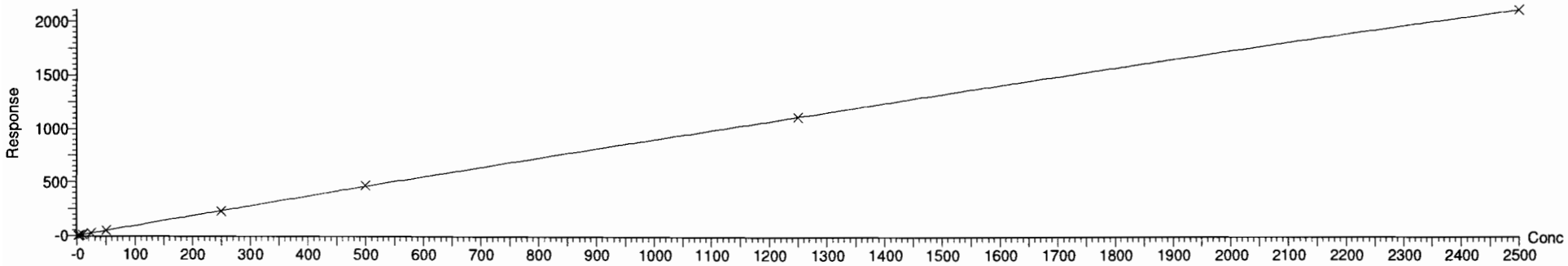
Compound name: PFTeDA
Correlation coefficient: r = 0.998844, r^2 = 0.997689
Calibration curve: 1.76508 * x + 0.0801765
Response type: Internal Std (Ref 67), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



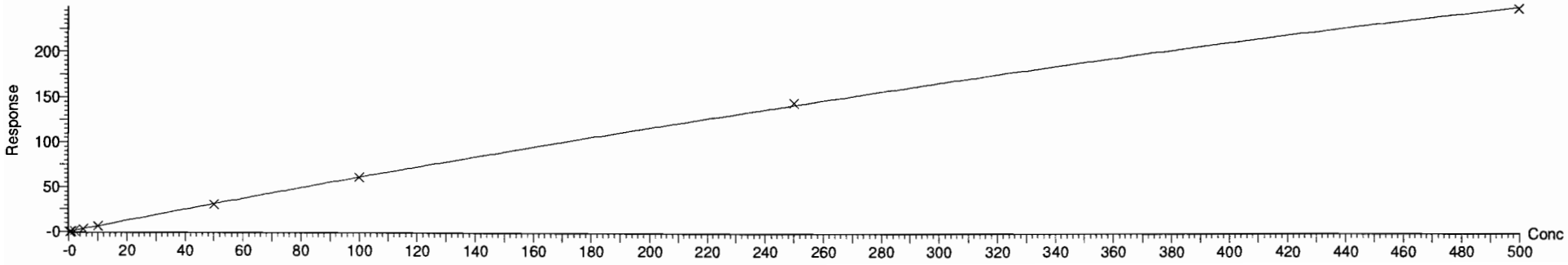
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: N-EtFOSA
Coefficient of Determination: R^2 = 0.999912
Calibration curve: -4.13621e-005 * x^2 + 0.947973 * x + -0.406479
Response type: Internal Std (Ref 68), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



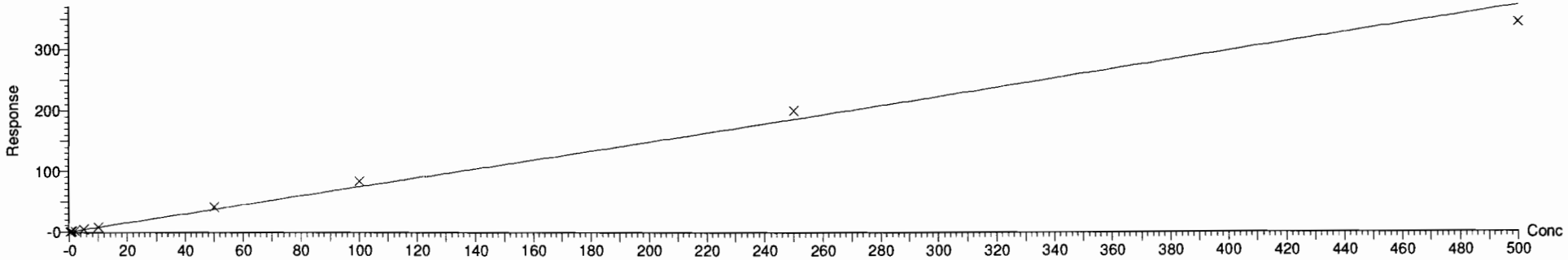
Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999779
Calibration curve: -0.00028338 * x^2 + 0.639324 * x + 0.0135475
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



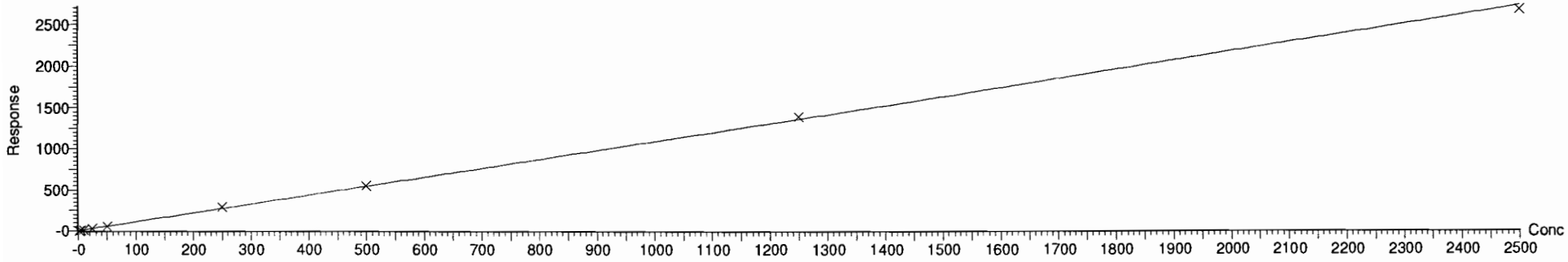
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: PFODA
Correlation coefficient: r = 0.996365, r^2 = 0.992744
Calibration curve: 0.742459 * x + 0.0633986
Response type: Internal Std (Ref 69), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



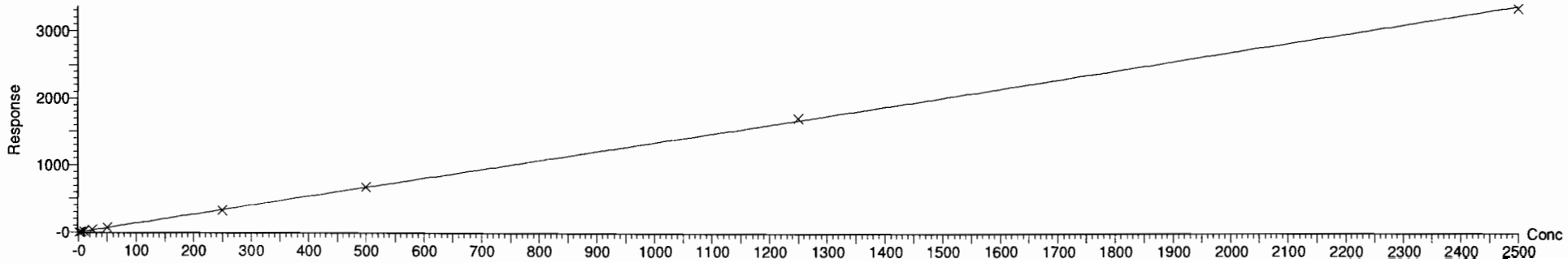
Compound name: N-MeFOSE
Correlation coefficient: r = 0.999685, r^2 = 0.999371
Calibration curve: 1.08739 * x + -0.181625
Response type: Internal Std (Ref 70), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:38:23 Pacific Daylight Time

Compound name: N-EtFOSE
Correlation coefficient: r = 0.999860, r^2 = 0.999720
Calibration curve: 1.34418 * x + -0.390824
Response type: Internal Std (Ref 71), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



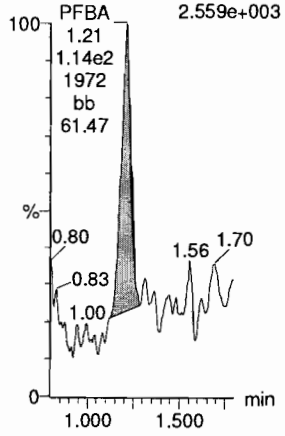
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

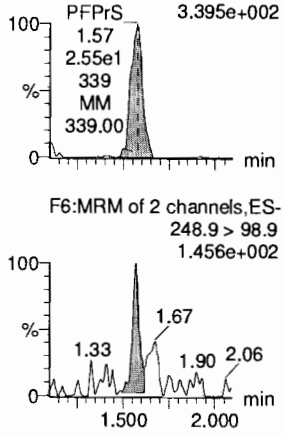
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

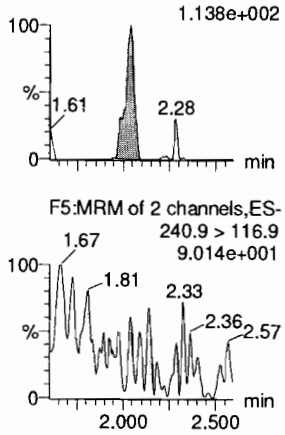
PFBA



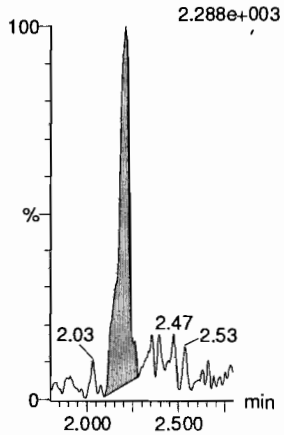
PFPrS



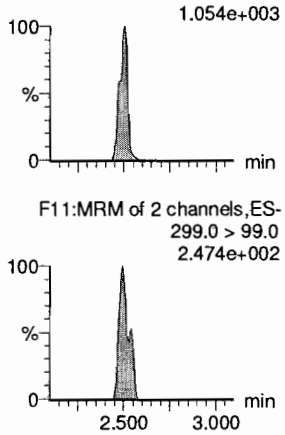
3:3 FTCA



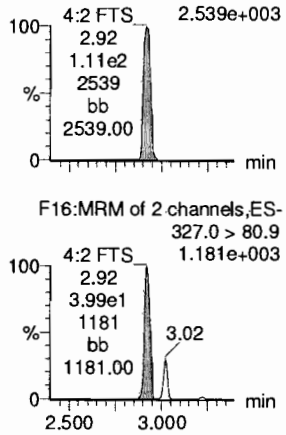
PFPeA



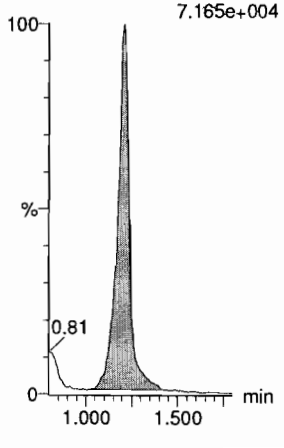
PFBS



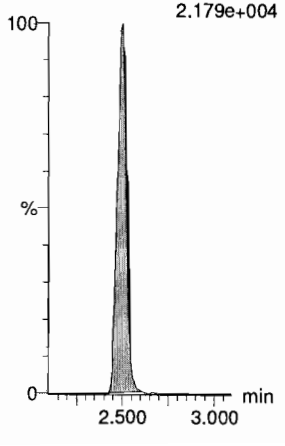
4:2 FTS



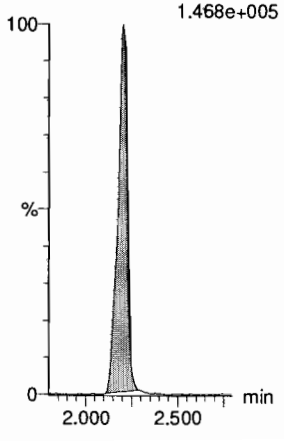
13C3-PFBA



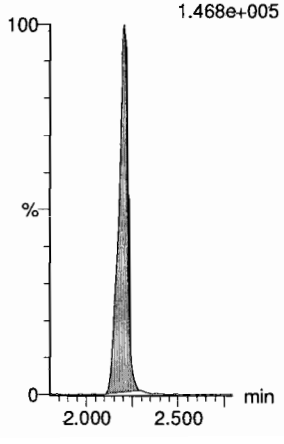
13C3-PFBS



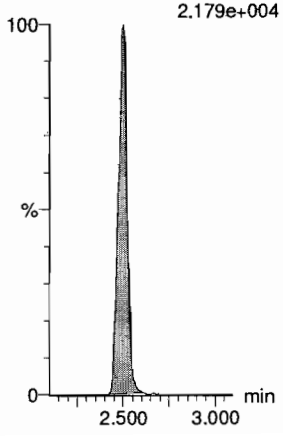
13C3-PFPeA



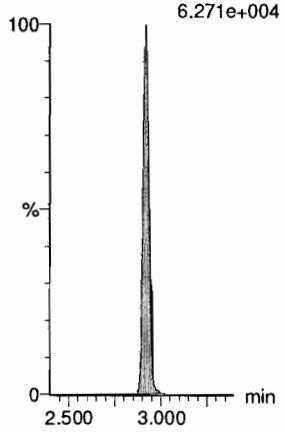
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

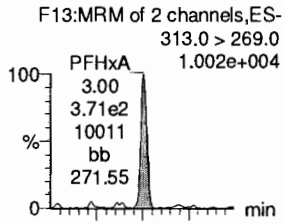


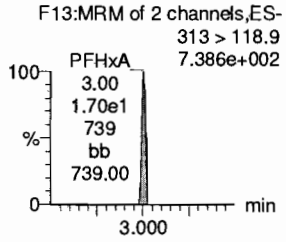
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

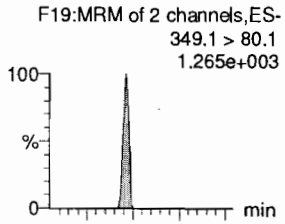
Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

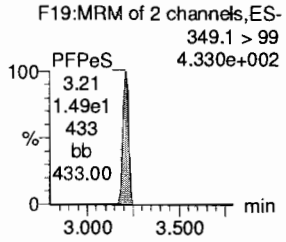
PFHxA



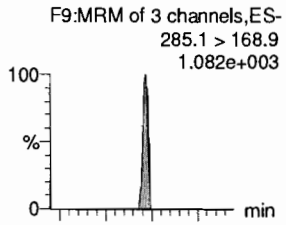


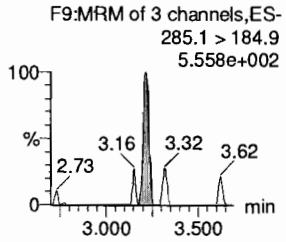
PFPeS



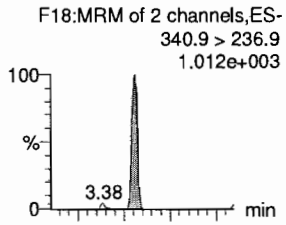


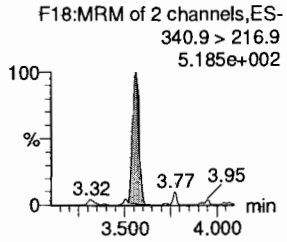
HFPO-DA





5:3 FTCA





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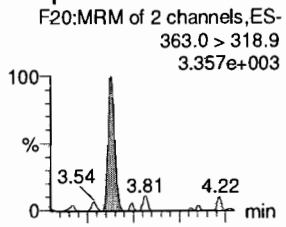

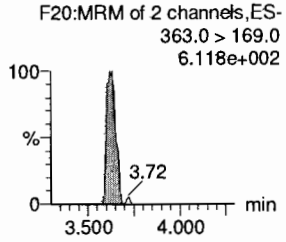

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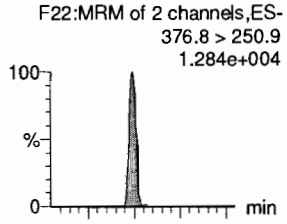

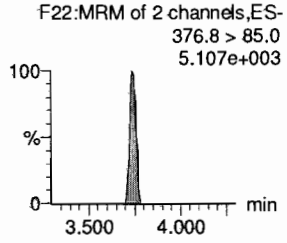

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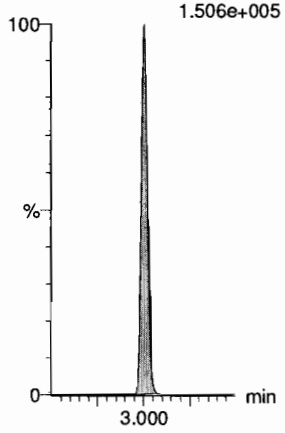
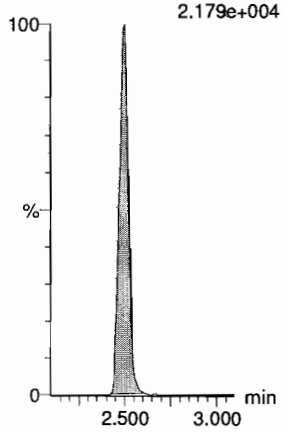
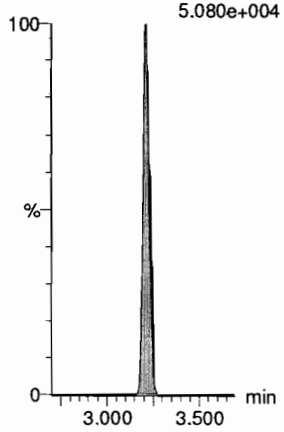


13C3-PFBS



13C3-HFPO-DA



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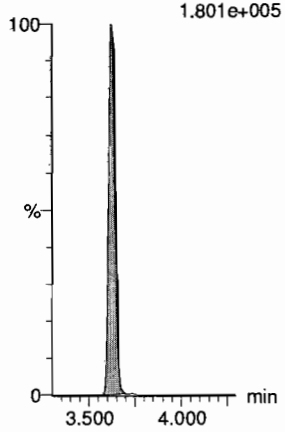

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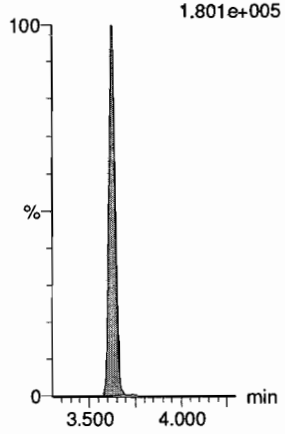

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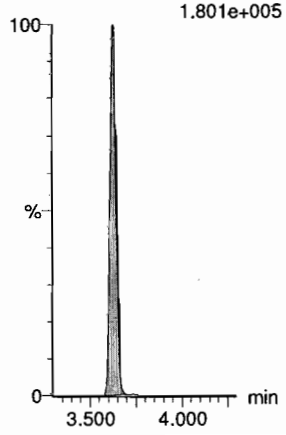
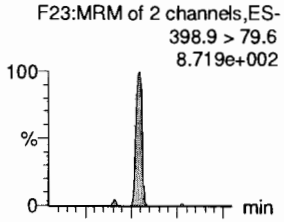


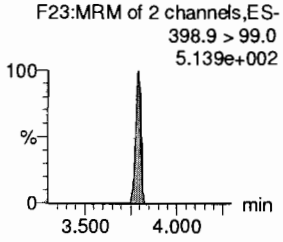
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

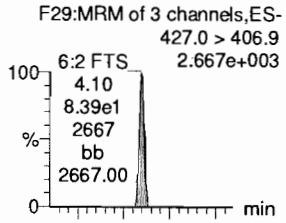
Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

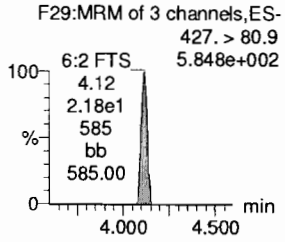
L-PFHxS



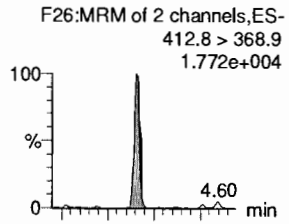


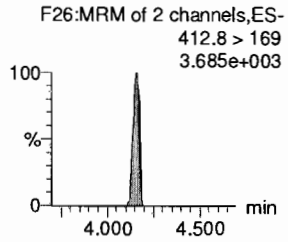
6:2 FTS





L-PFOA





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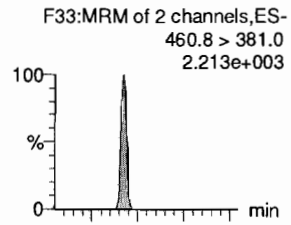

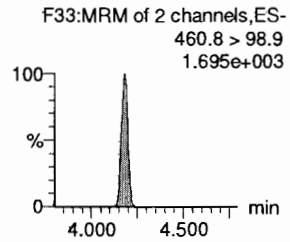

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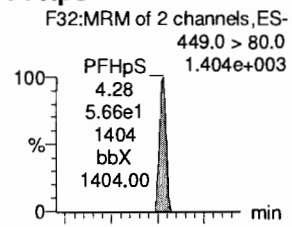
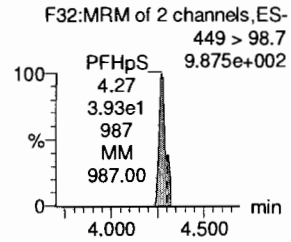
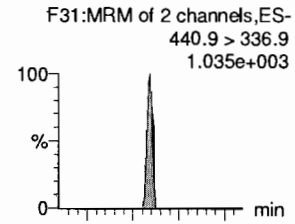
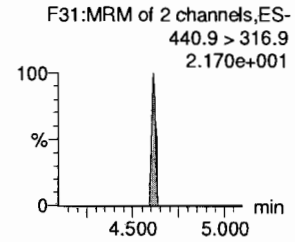




7:3 FTCA





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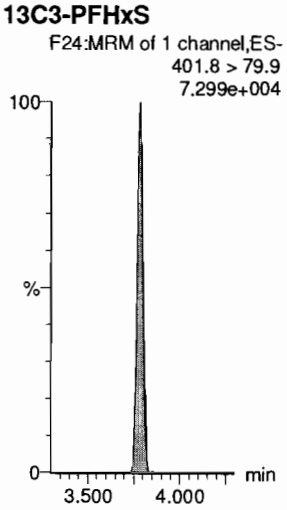
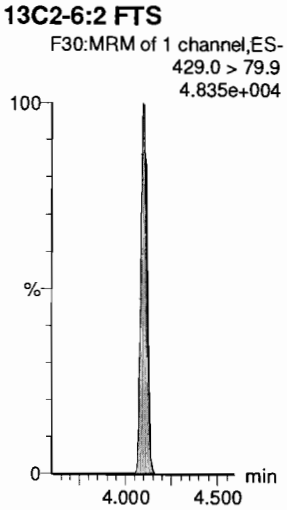


13C2-6:2 FTS



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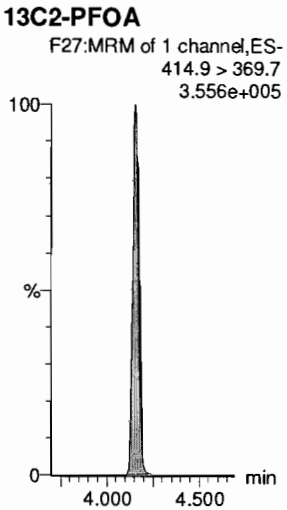
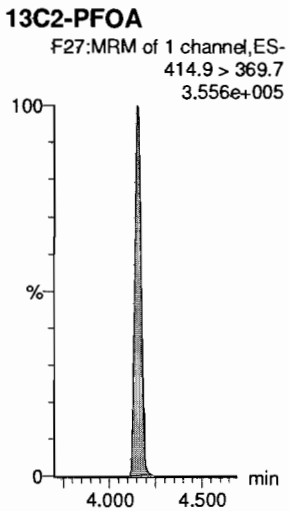
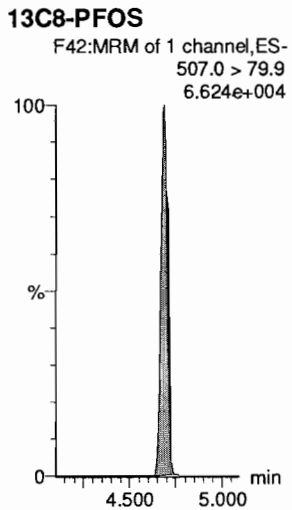


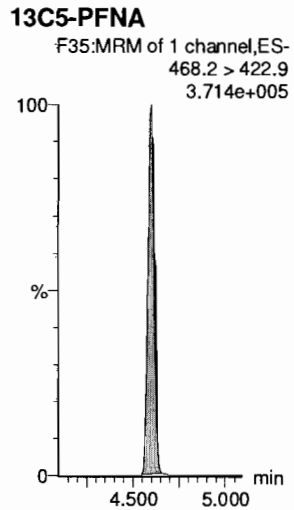
13C2-PFOA



13C8-PFOS



13C5-PFNA

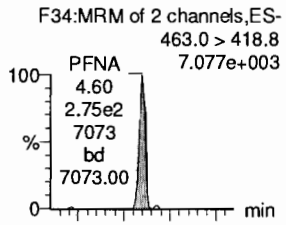


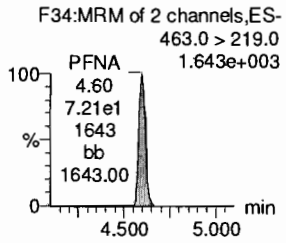
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

PFNA





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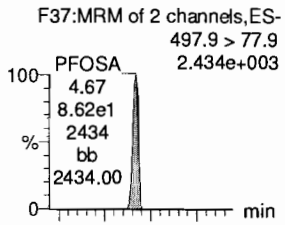
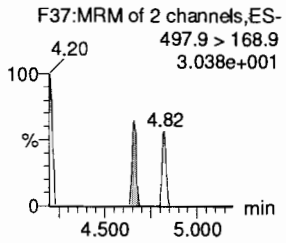
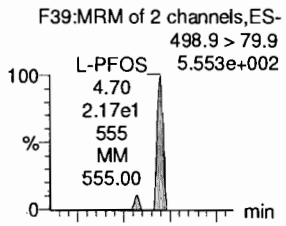
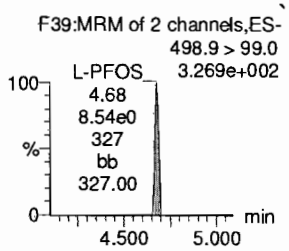




L-PFOS





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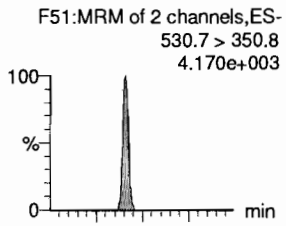
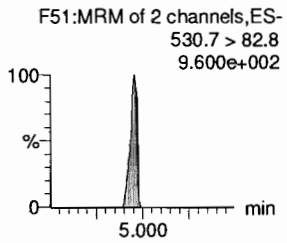
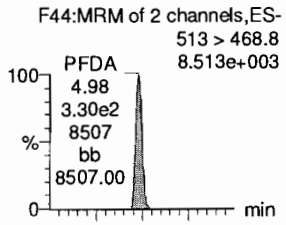
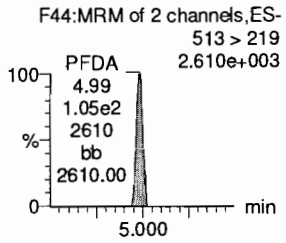




PFDA





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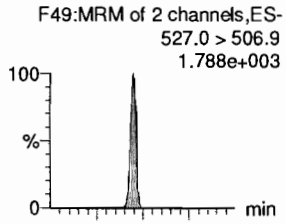

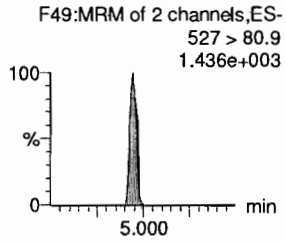

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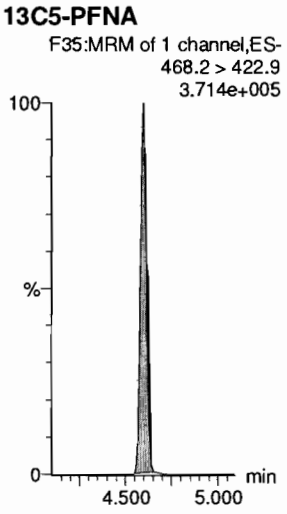

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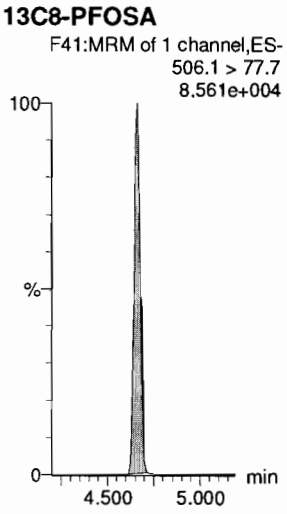

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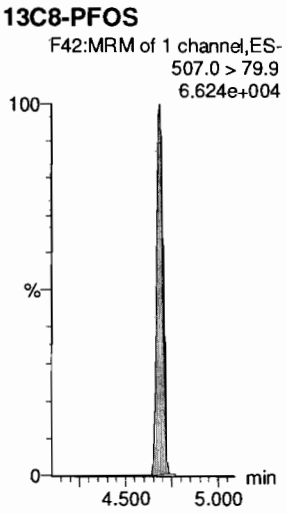

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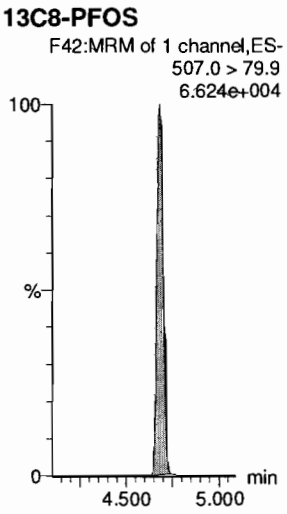

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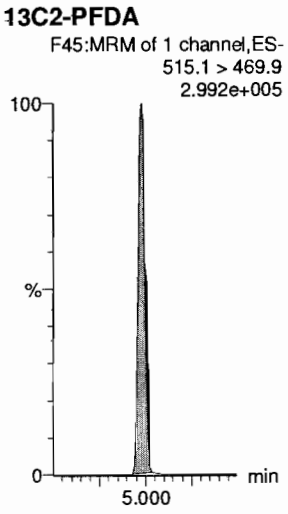

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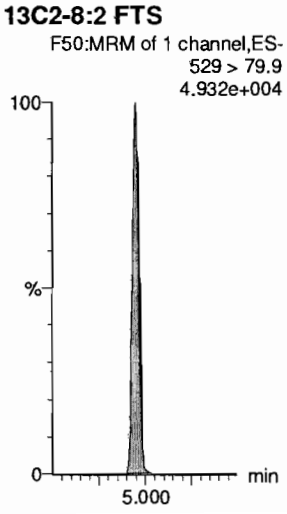
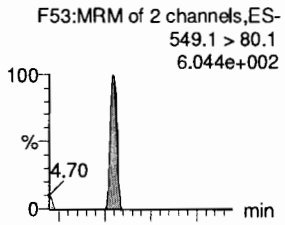


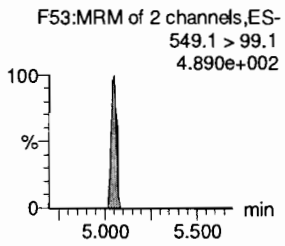
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

PFNS





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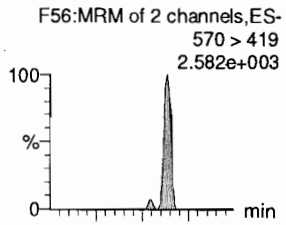

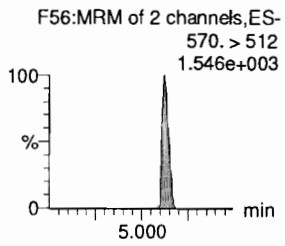

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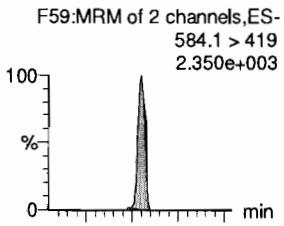
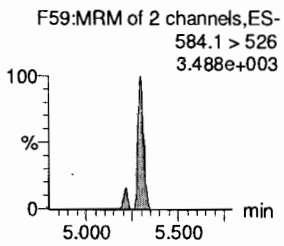
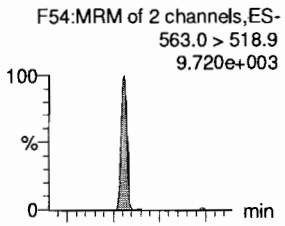
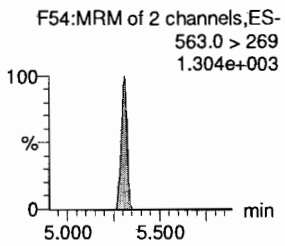




PFUdA





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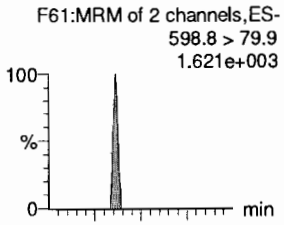
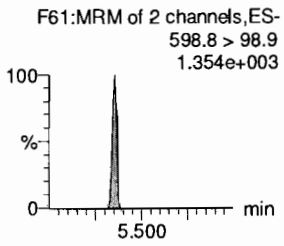
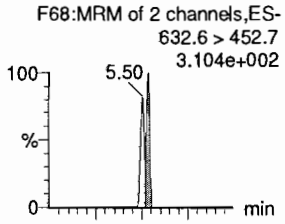
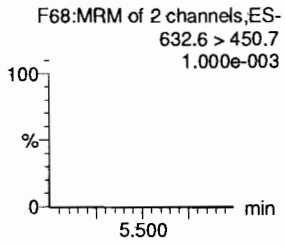


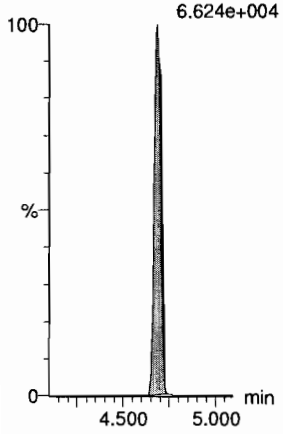


11Cl-PF30UdS

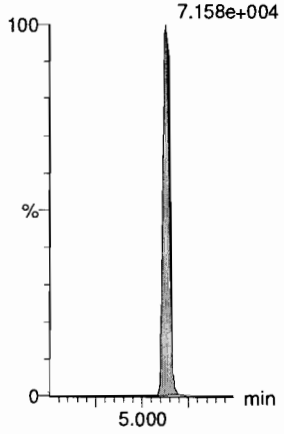




13C8-PFOS



d3-N-MeFOSAA



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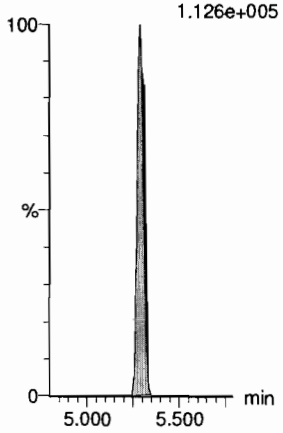
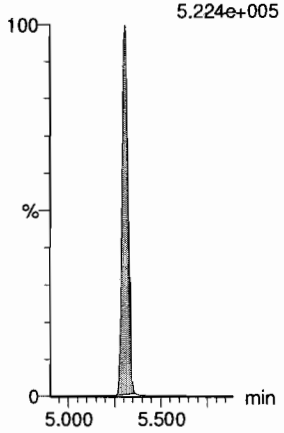
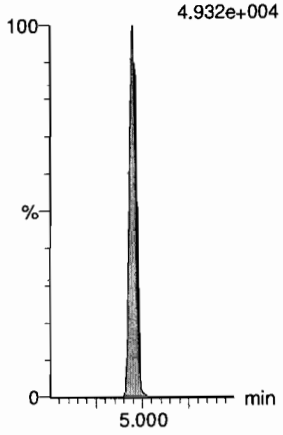


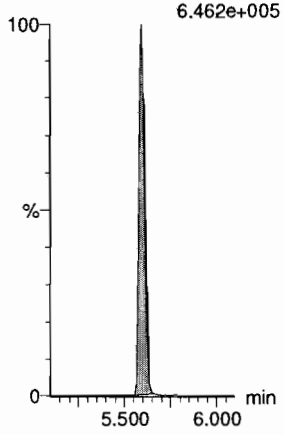
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

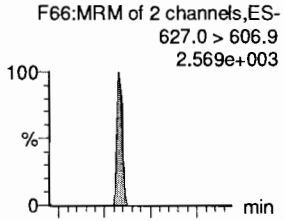


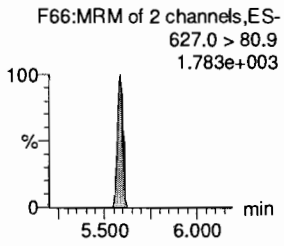
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

10:2 FTS





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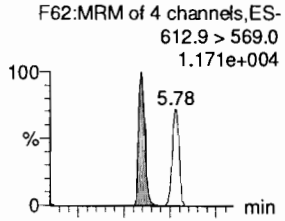

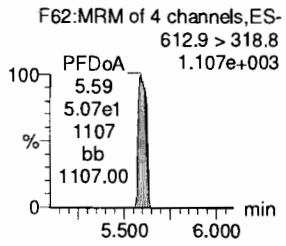

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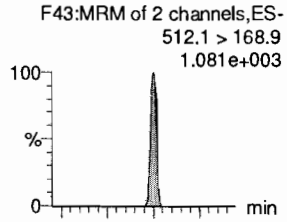

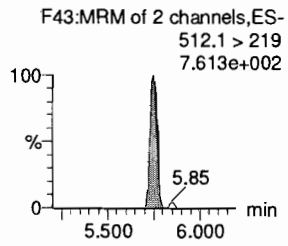

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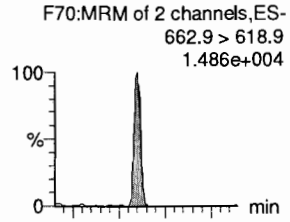
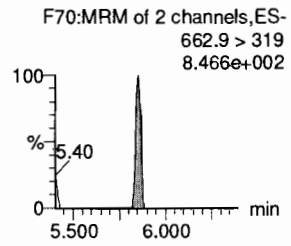
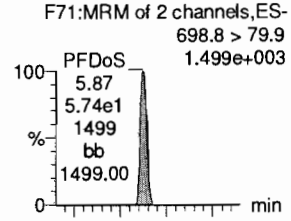
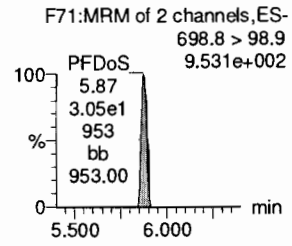


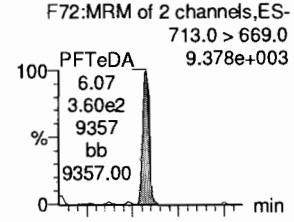


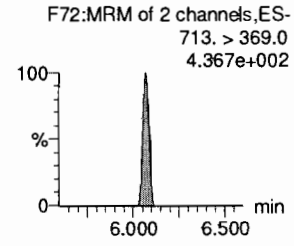
PFDoS



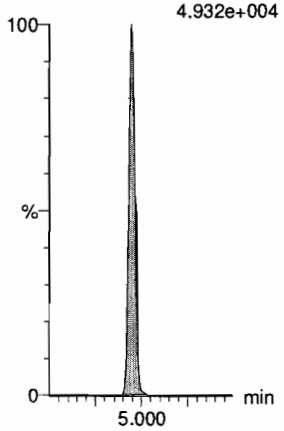


PFTeDA

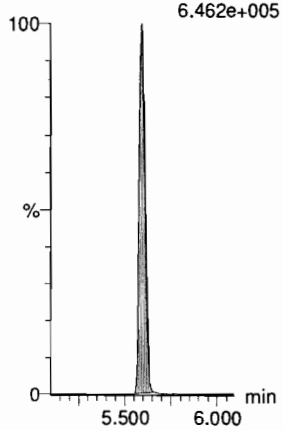




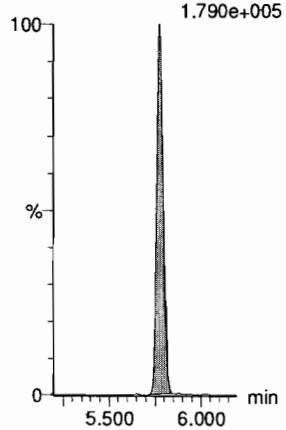
13C2-8:2 FTS



13C2-PFDoA



d3-N-MeFOSA



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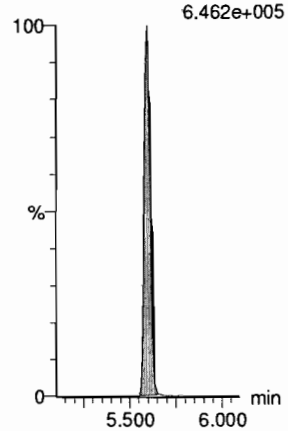

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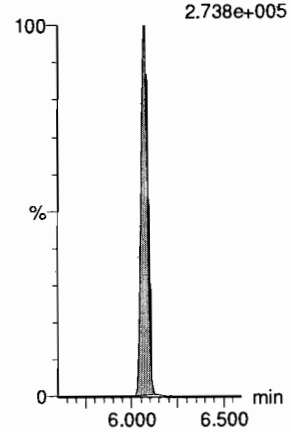

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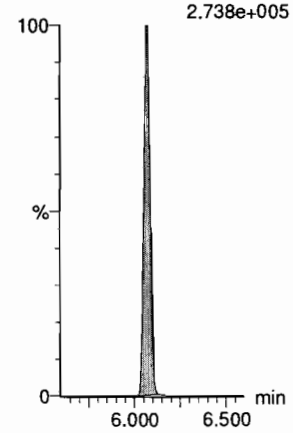
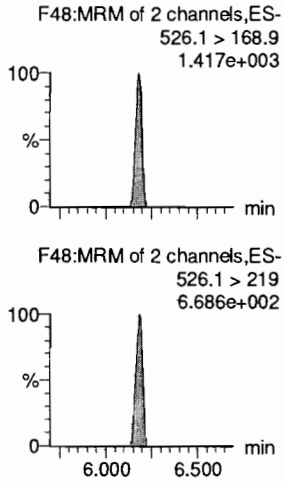


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

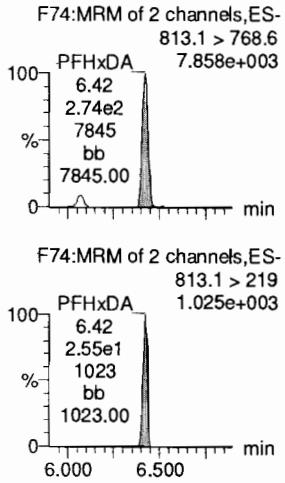
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

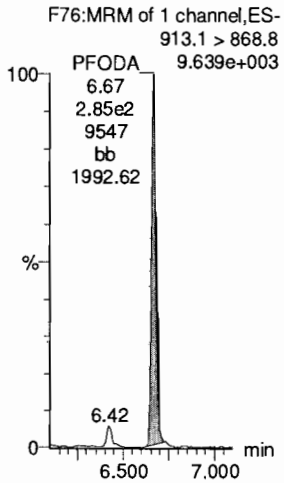
N-EtFOSA



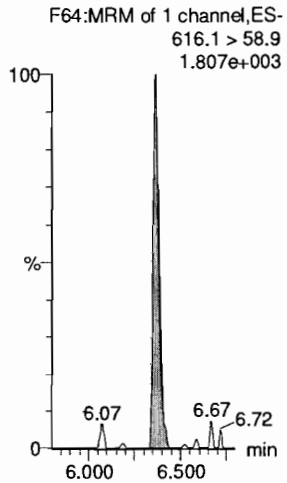
PFHxDA



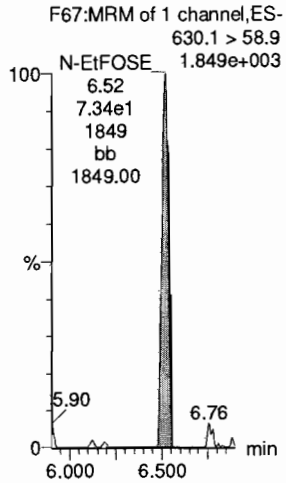
PFODA



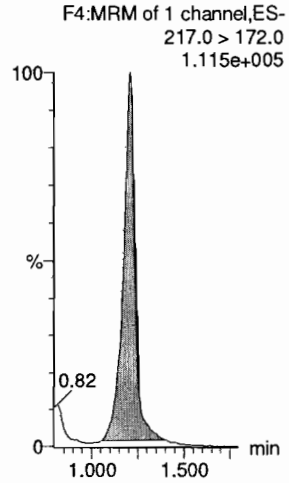
N-MeFOSE



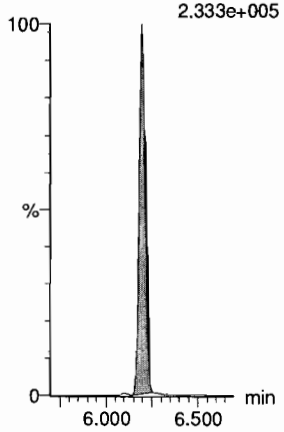
N-EtFOSE



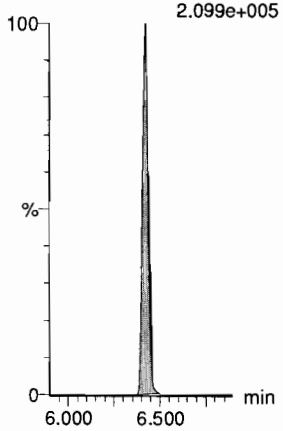
13C4-PFBA



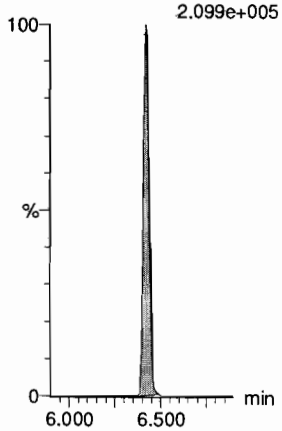
d5-N-ETFOSA



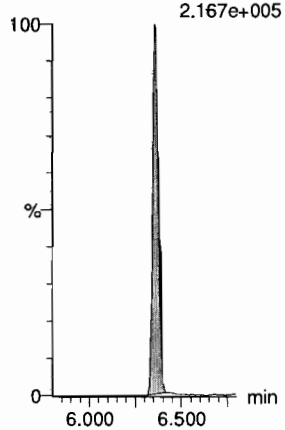
13C2-PFHxDA



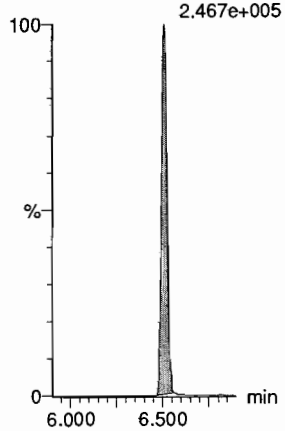
13C2-PFHxDA



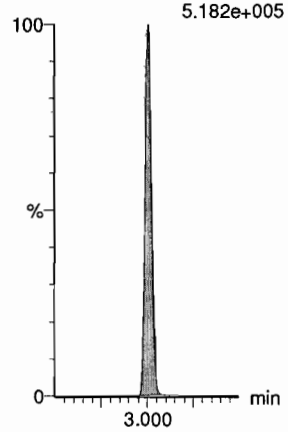
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

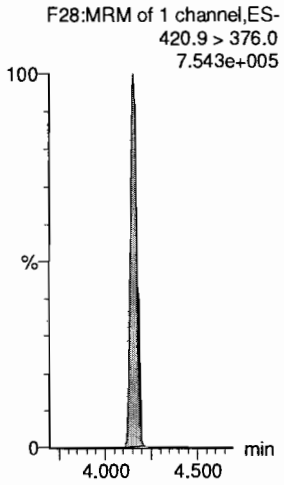


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

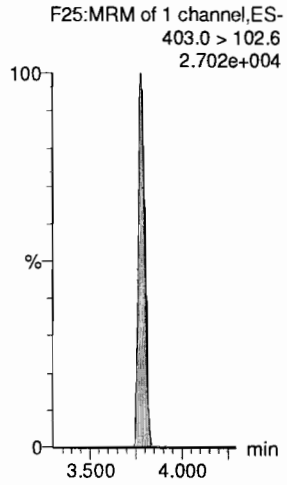
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_4, Date: 16-Jul-2019, Time: 17:05:59, ID: ST190716M2-1 PFC CS-2 19G1101, Description: PFC CS-2 19G1101

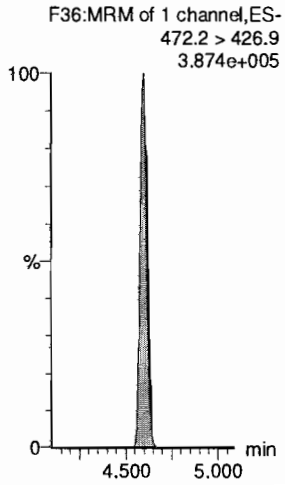
13C8-PFOA



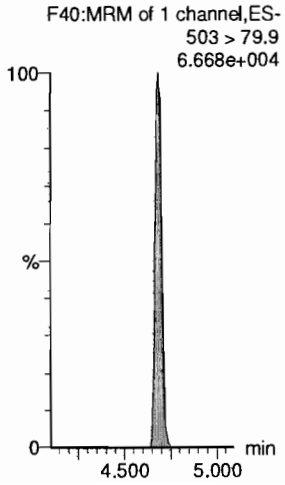
18O2-PFHxS



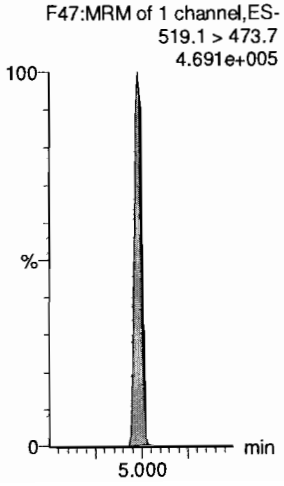
13C9-PFNA



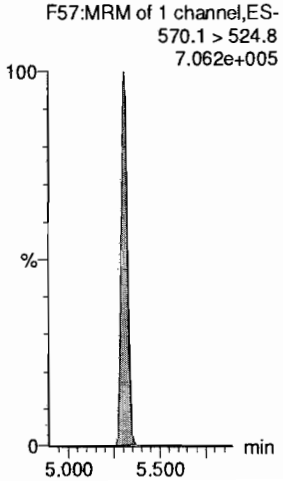
13C4-PFOS



13C6-PFDA



13C7-PFUdA

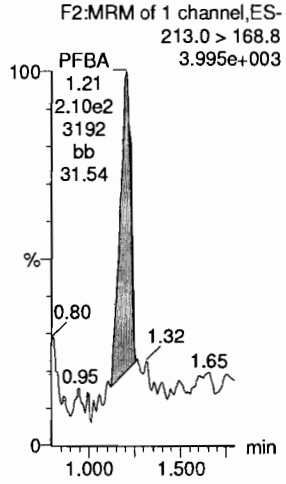


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

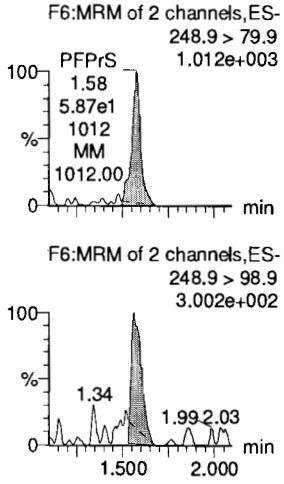
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

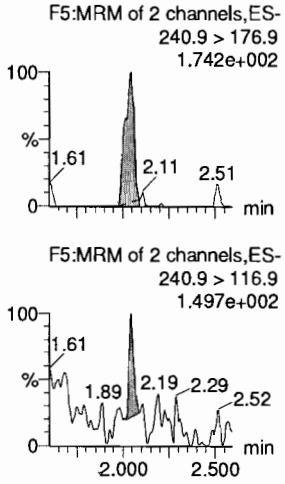
PFBA



PFPrS



3:3 FTCA



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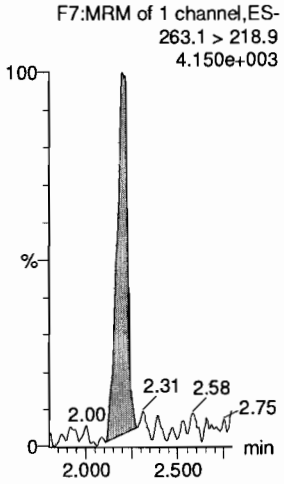
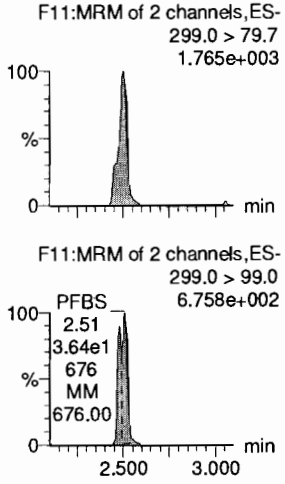
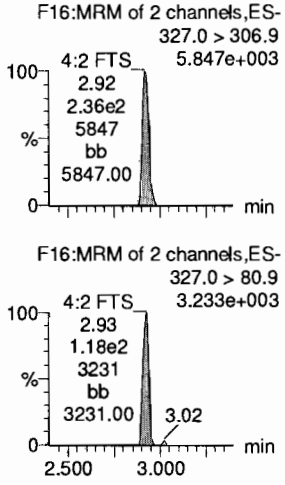


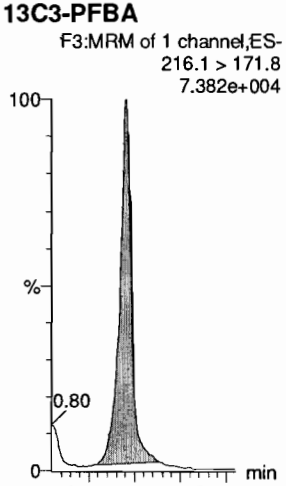
PFBS



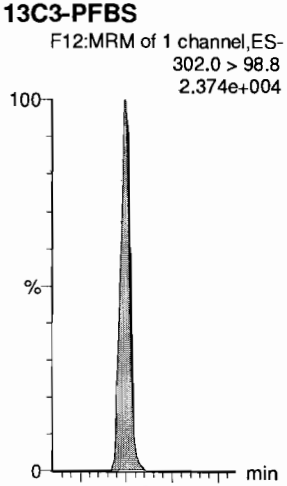
4:2 FTS



13C3-PFBA



13C3-PFBS



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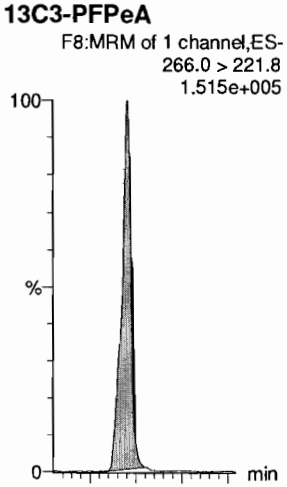

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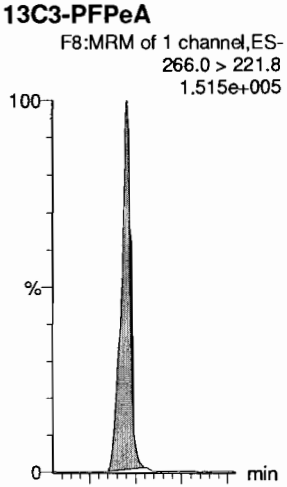

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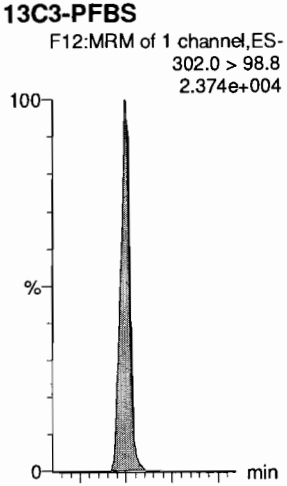
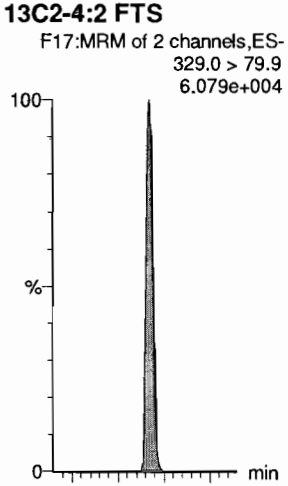


13C2-4:2 FTS

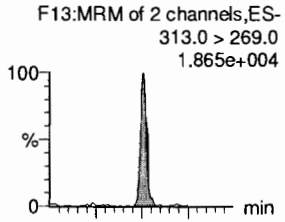


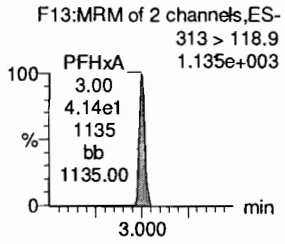
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

PFHxA





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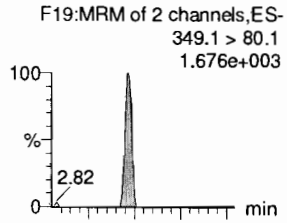
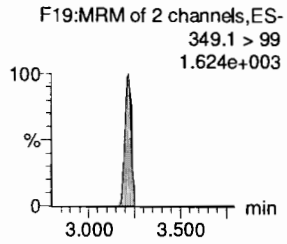
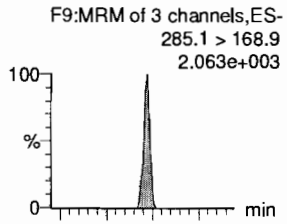
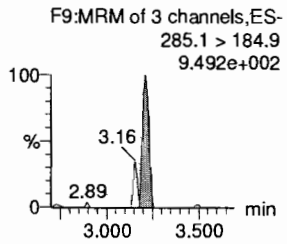


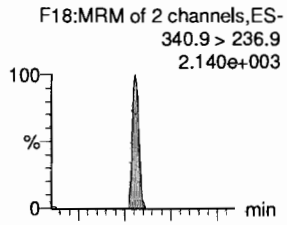


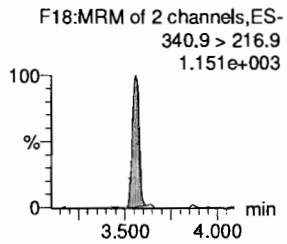
HFPO-DA





5:3 FTCA





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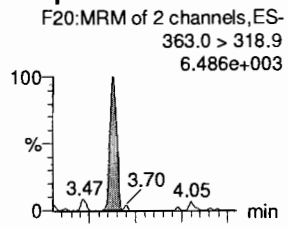
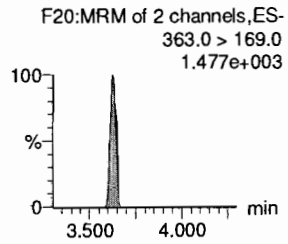
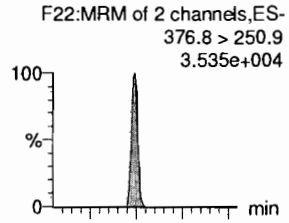
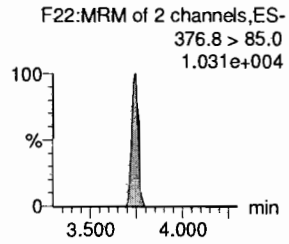


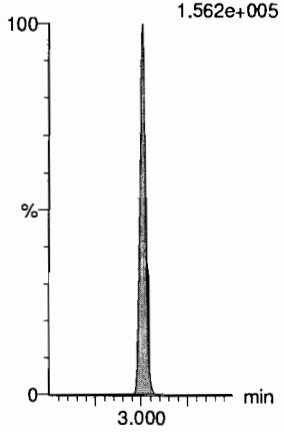


ADONA

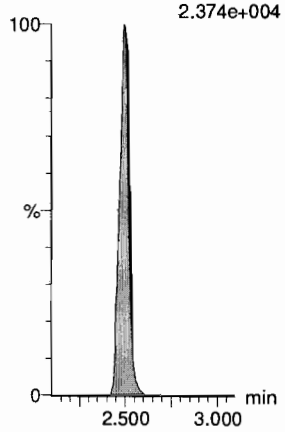




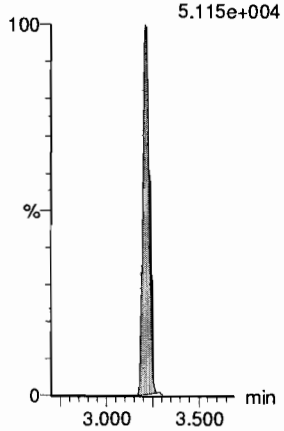
13C2-PFHxA



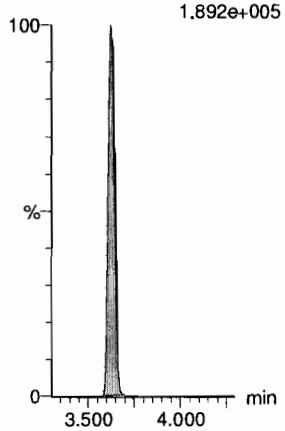
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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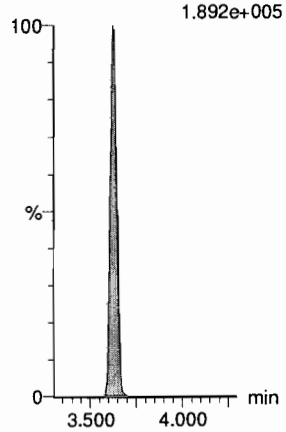

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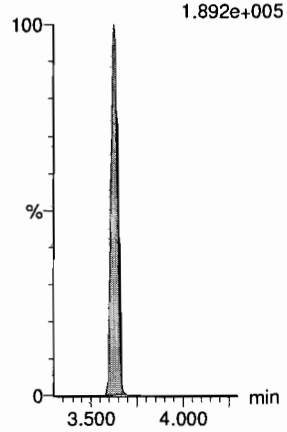
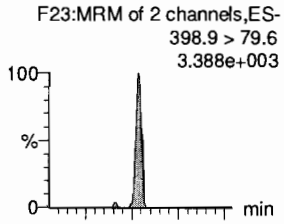


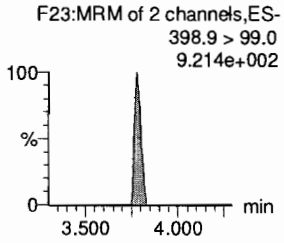
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

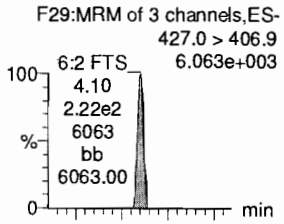
Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

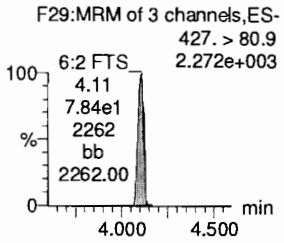
L-PFHxS



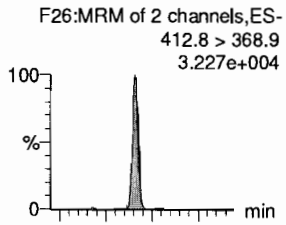


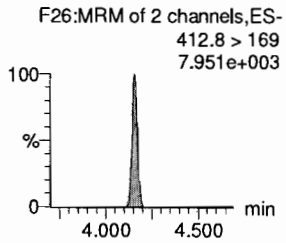
6:2 FTS



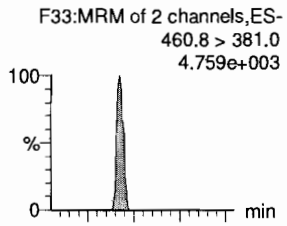


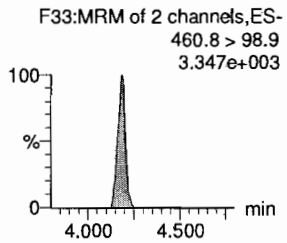
L-PFOA





PFEChS





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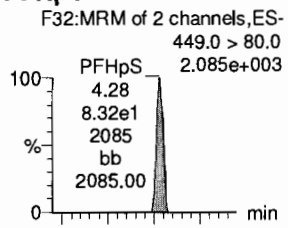
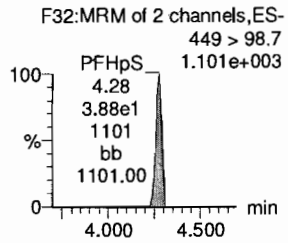
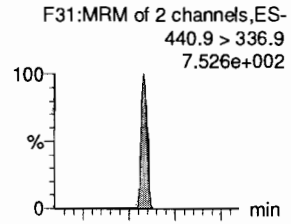
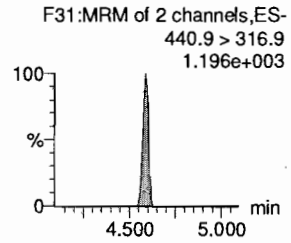


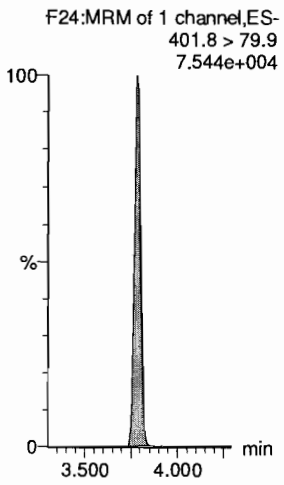


7:3 FTCA

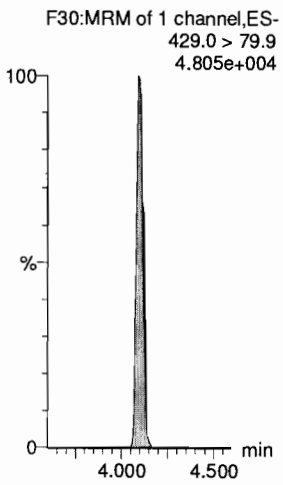




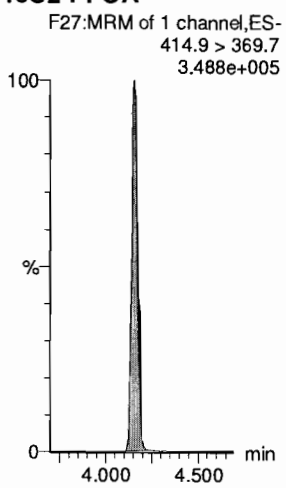
13C3-PFHxS



13C2-6:2 FTS



13C2-PFOA



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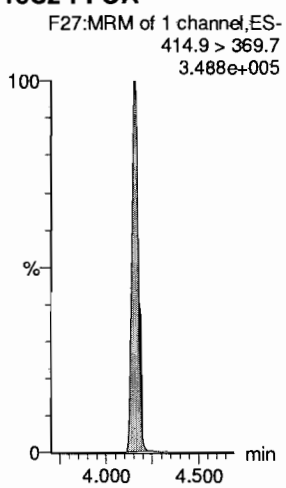
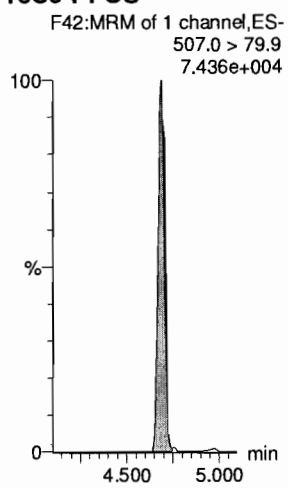


13C8-PFOS



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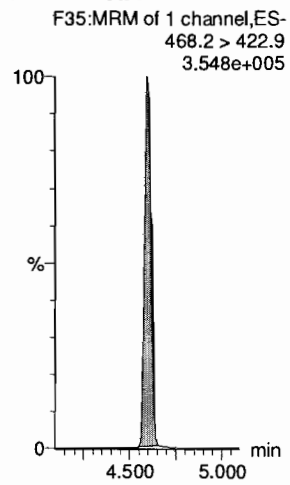
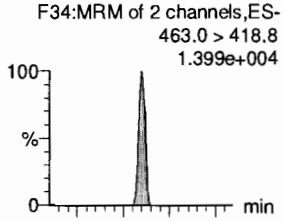


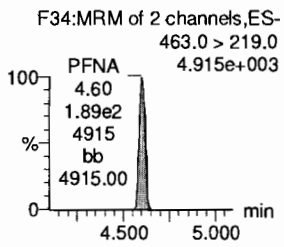
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

PFNA





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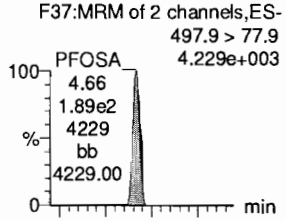
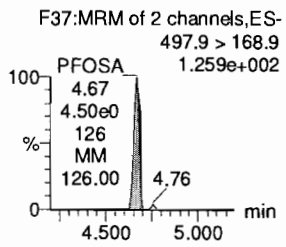
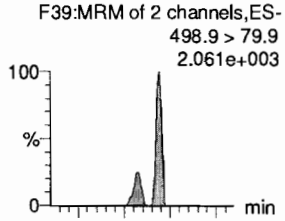
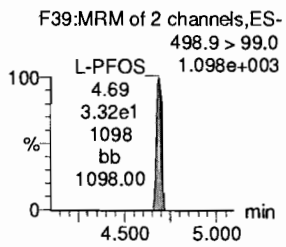


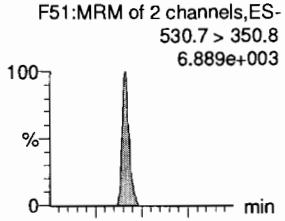


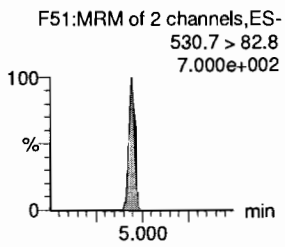
L-PFOS



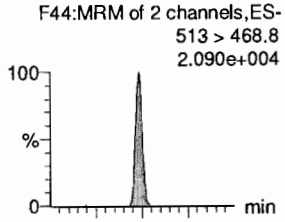


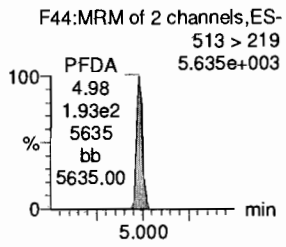
9Cl-PF30NS



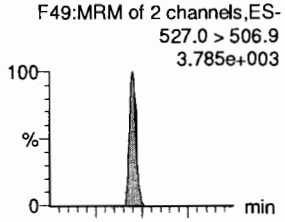


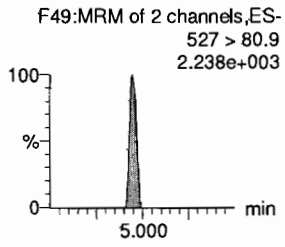
PFDA



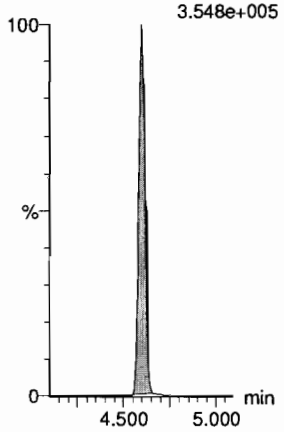


8:2 FTS

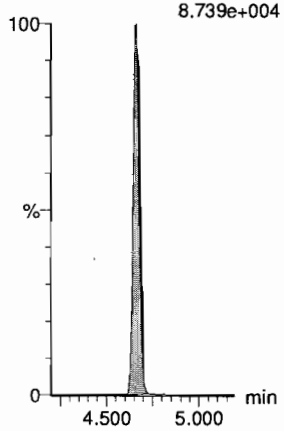




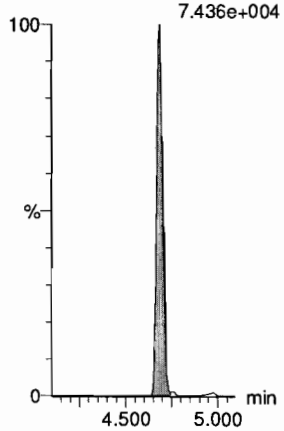
13C5-PFNA



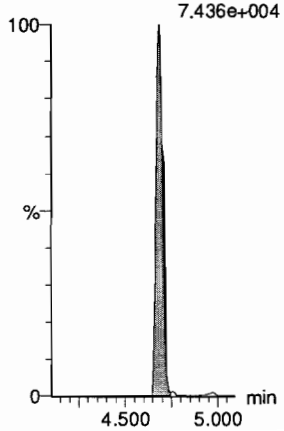
13C8-PFOSA



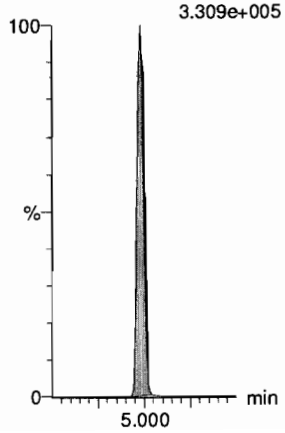
13C8-PFOS



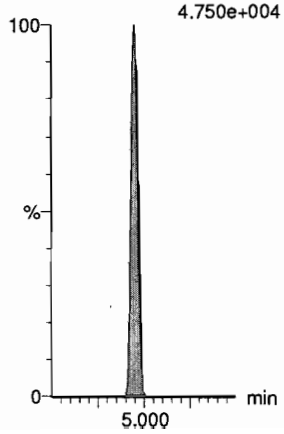
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

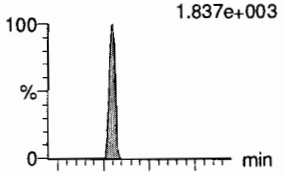


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

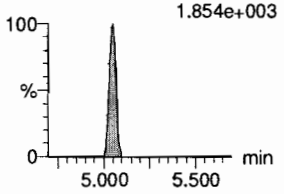
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

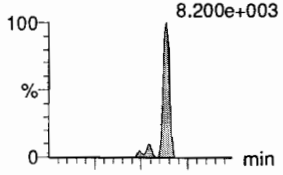
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
1.837e+003



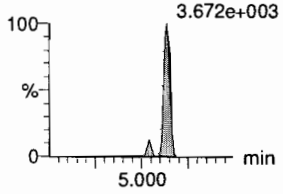
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.854e+003



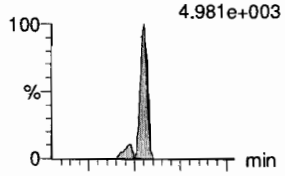
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
8.200e+003



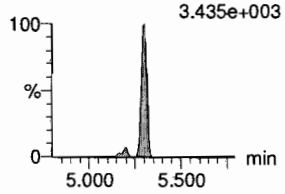
F56:MRM of 2 channels,ES-
570. > 512
3.672e+003



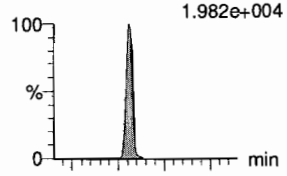
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
4.981e+003



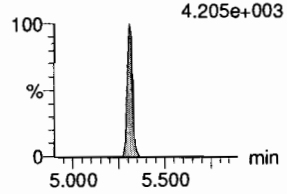
F59:MRM of 2 channels,ES-
584.1 > 526
3.435e+003



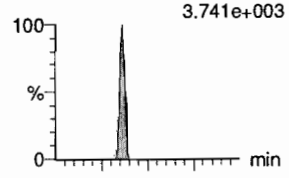
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.982e+004



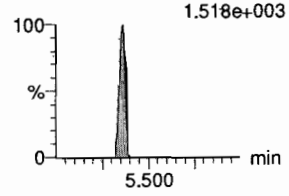
F54:MRM of 2 channels,ES-
563.0 > 269
4.205e+003



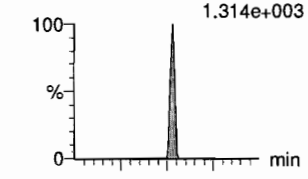
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
3.741e+003



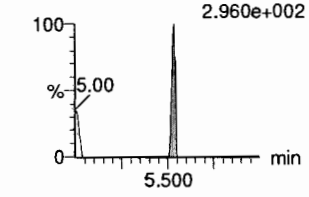
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.518e+003



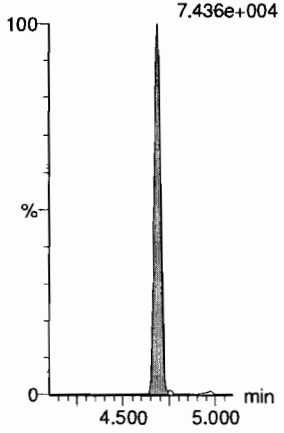
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.314e+003



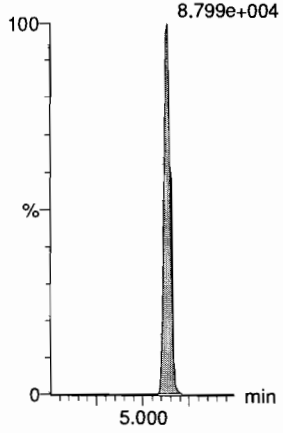
F68:MRM of 2 channels,ES-
632.6 > 450.7
2.960e+002



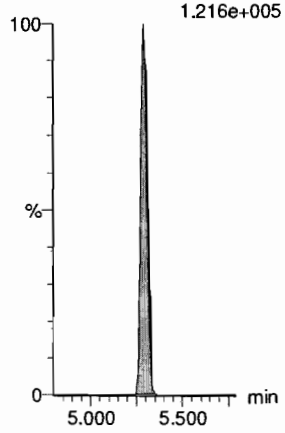
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.436e+004



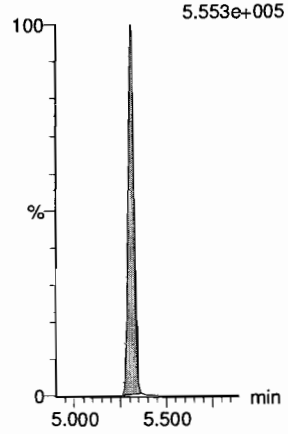
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.799e+004



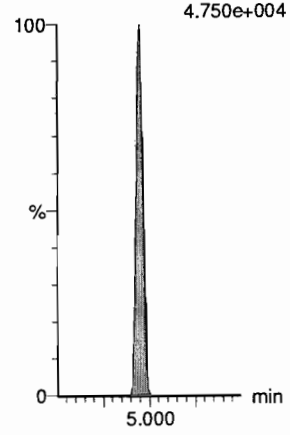
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.216e+005



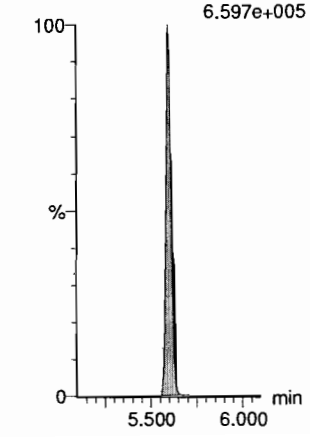
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.553e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.750e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.597e+005

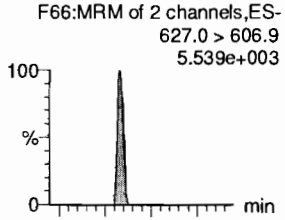


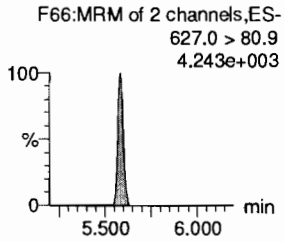
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

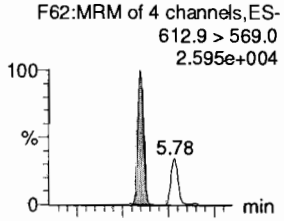
Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

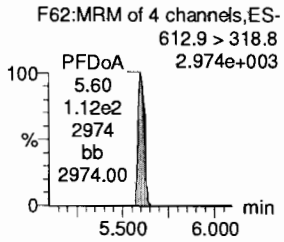
10:2 FTS



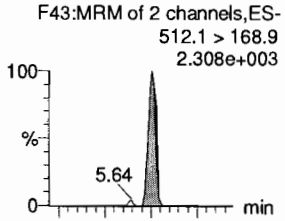


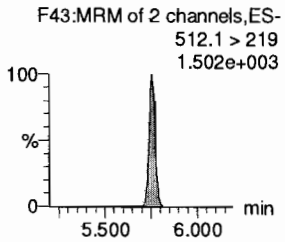
PFDoA



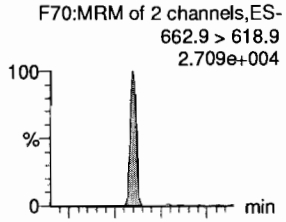


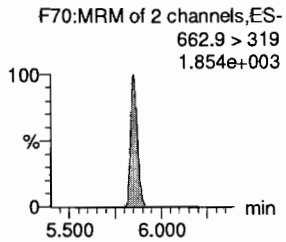
N-MeFOSA



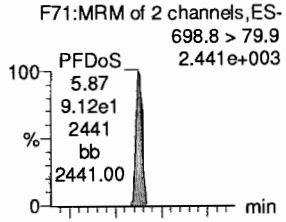


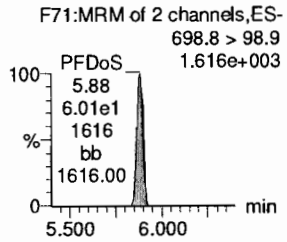
PFTrDA



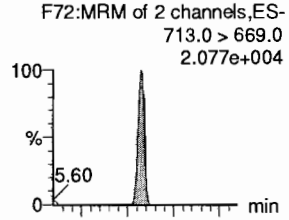


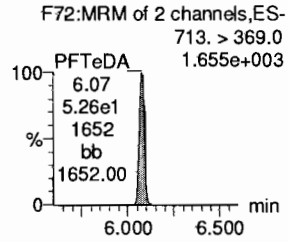
PFDoS



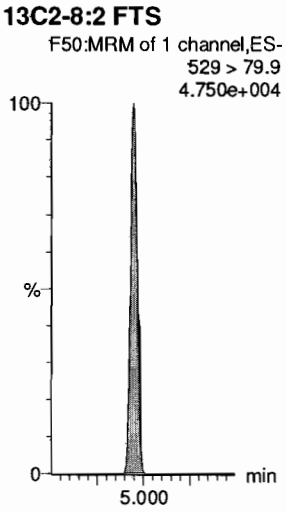


PFTeDA

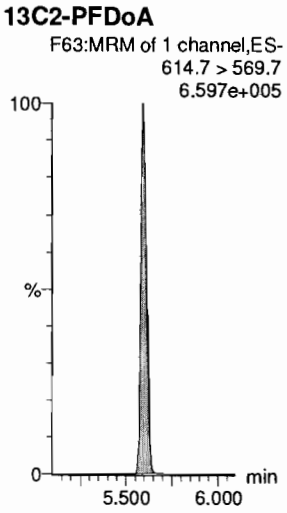




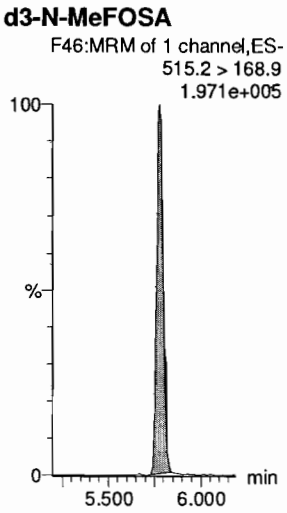
13C2-8:2 FTS



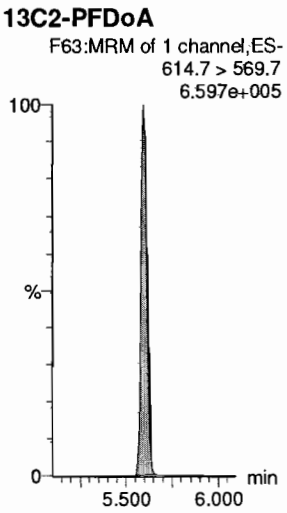
13C2-PFDoA



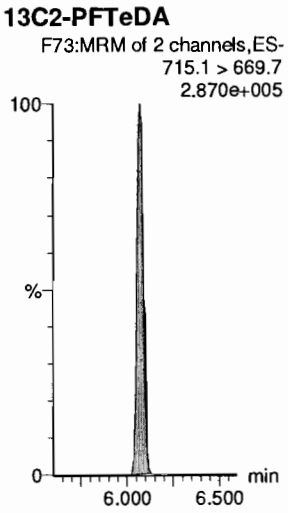
d3-N-MeFOSA



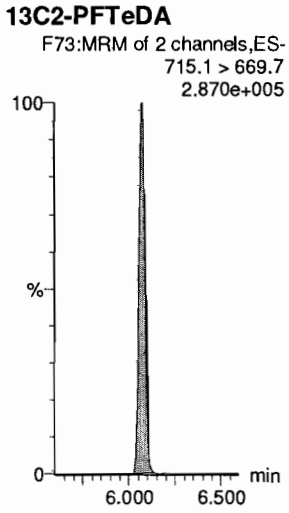
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

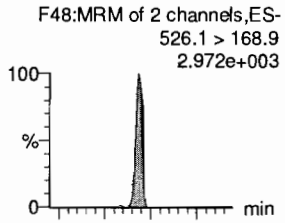


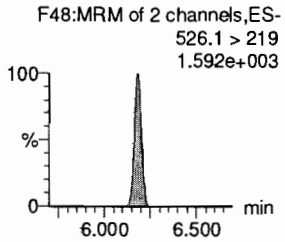
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

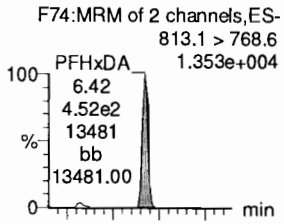
Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

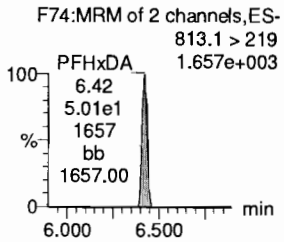
N-EtFOSA



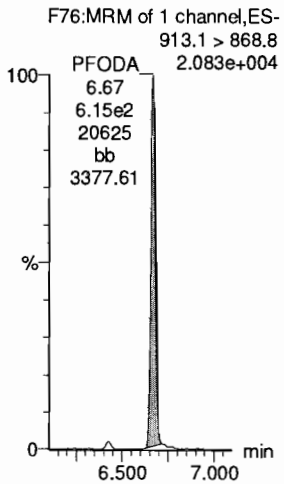


PFHxDA

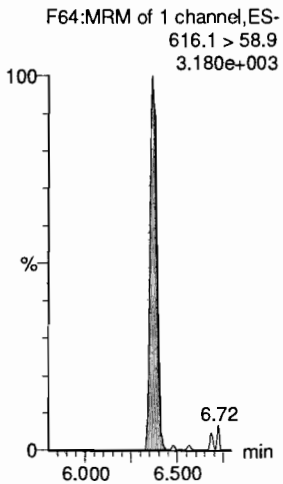




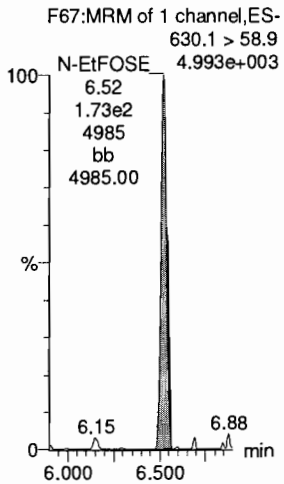
PFODA



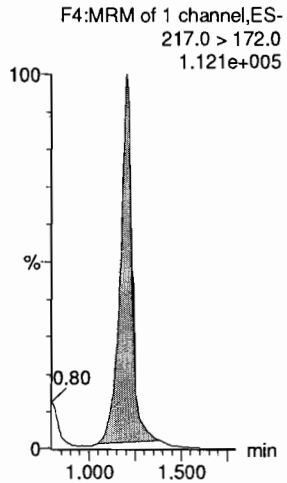
N-MeFOSE



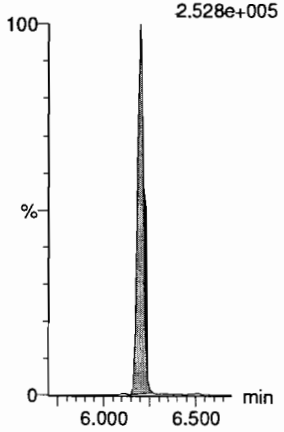
N-EtFOSE



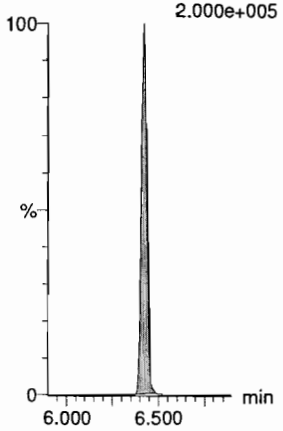
13C4-PFBA



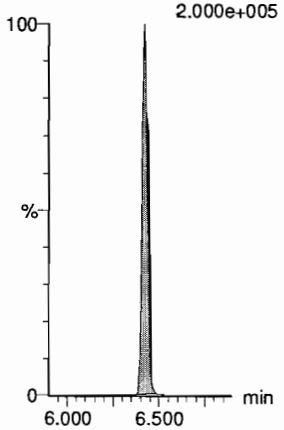
d5-N-ETFOSA



13C2-PFHxDA



13C2-PFHxDA



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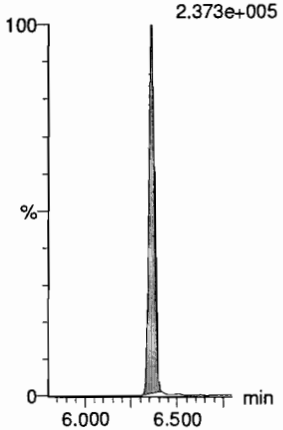
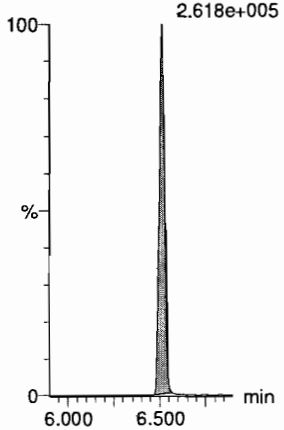
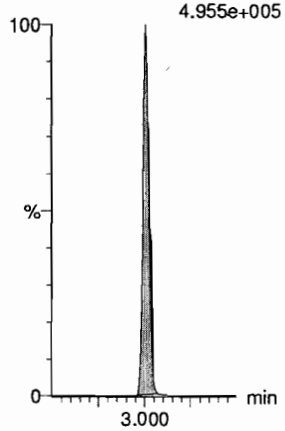


d9-N-EtFOSE



13C5-PFHxA

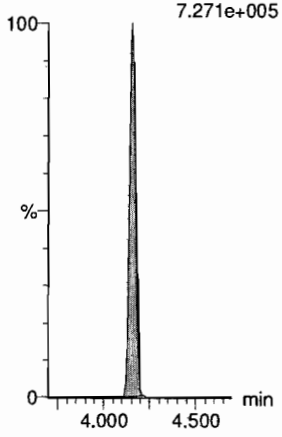


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

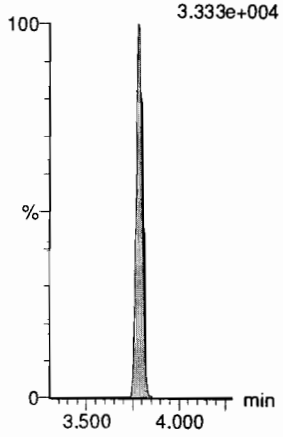
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_5, Date: 16-Jul-2019, Time: 17:16:31, ID: ST190716M2-2 PFC CS-1 19G1102, Description: PFC CS-1 19G1102

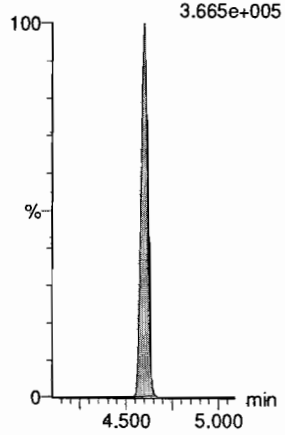
13C8-PFOA



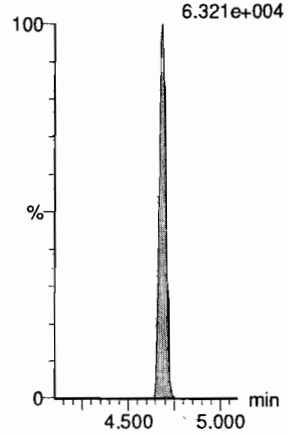
18O2-PFHxS



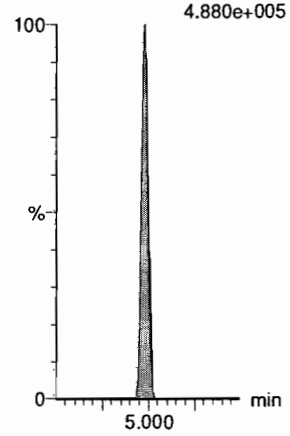
13C9-PFNA



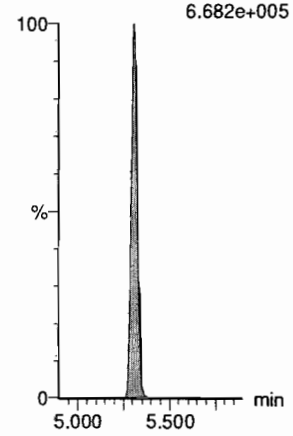
13C4-PFOS



13C6-PFDA



13C7-PFUdA

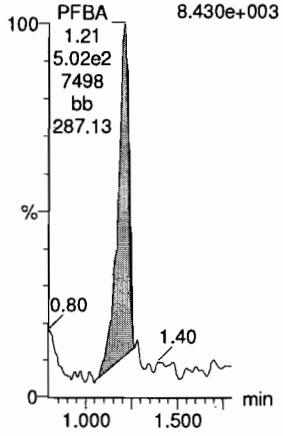


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

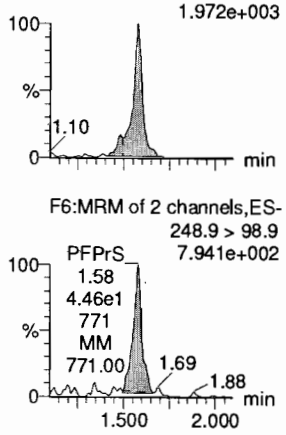
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

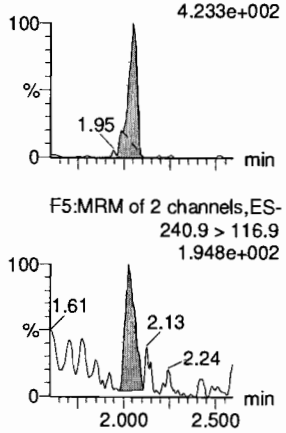
PFBA



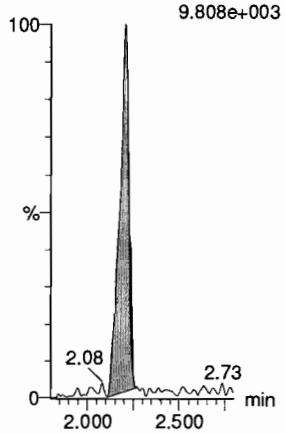
PFPrS



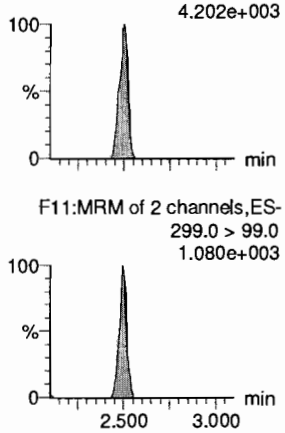
3:3 FTCA



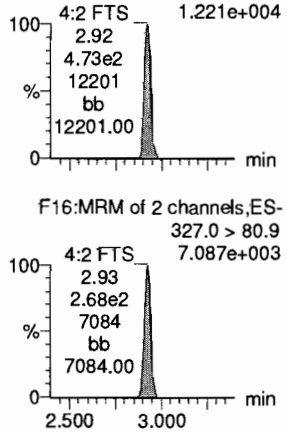
PFPeA



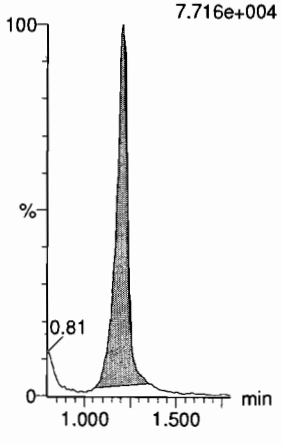
PFBS



4:2 FTS



13C3-PFBA



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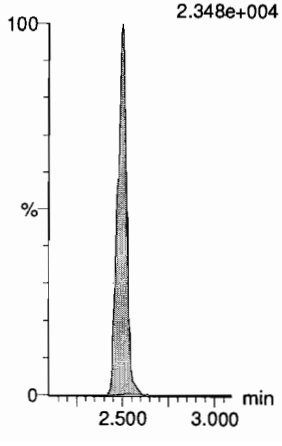
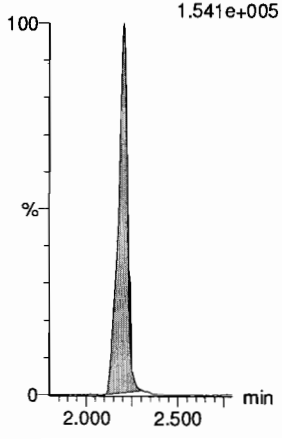


13C3-PFPeA



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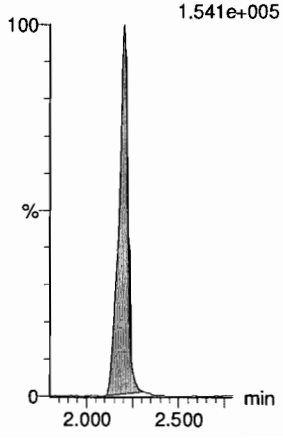

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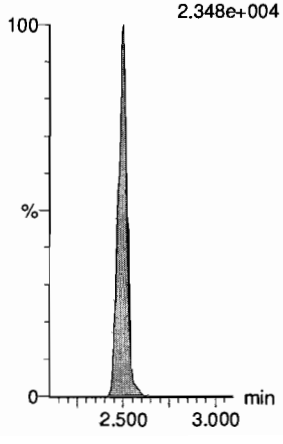
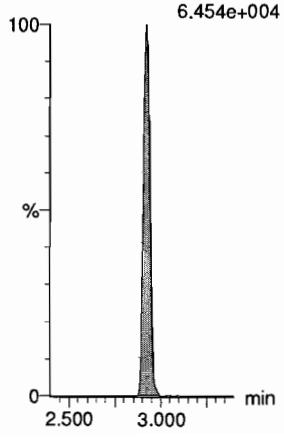


13C2-4:2 FTS

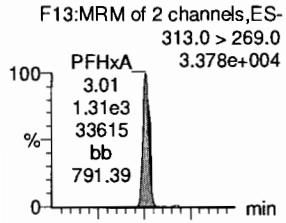


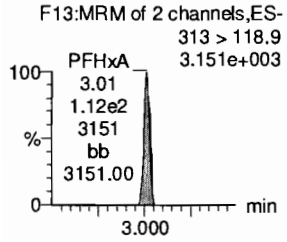
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

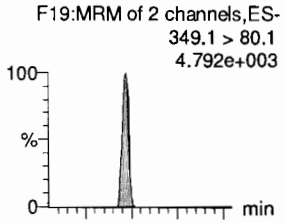
Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

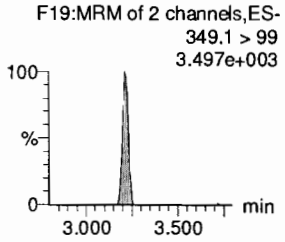
PFHxA



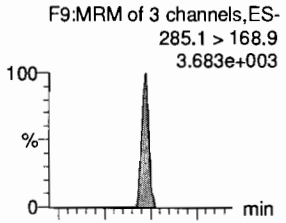


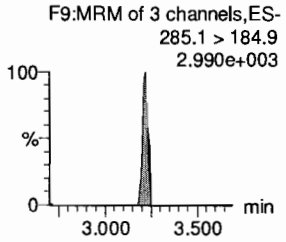
PFPeS



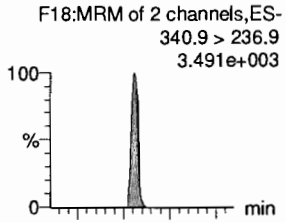


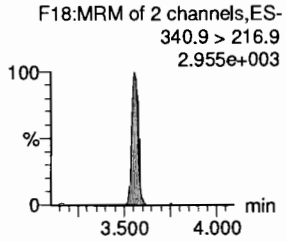
HFPO-DA



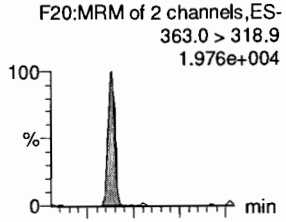


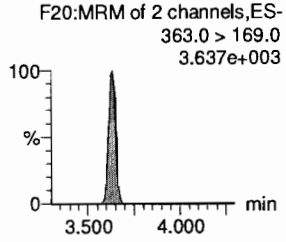
5:3 FTCA



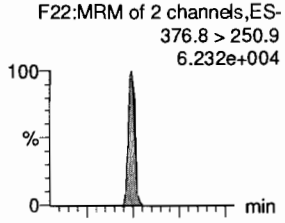


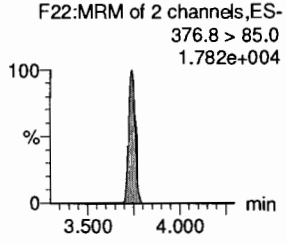
PFHpA



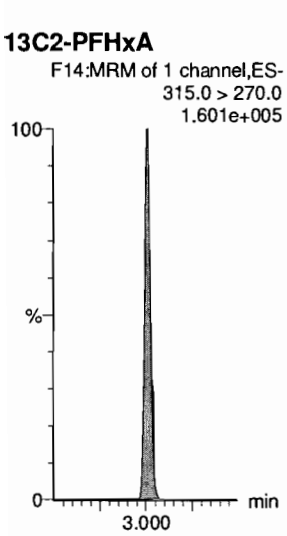


ADONA

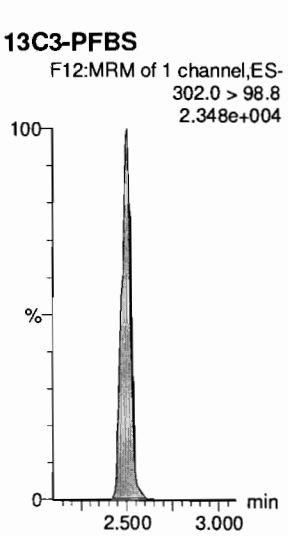




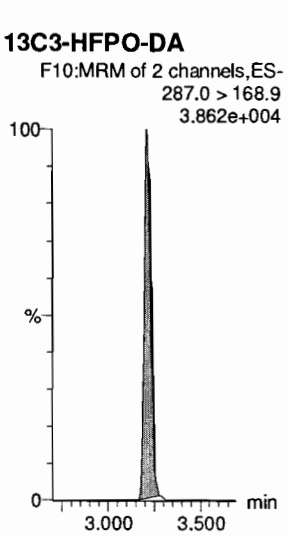
13C2-PFHxA



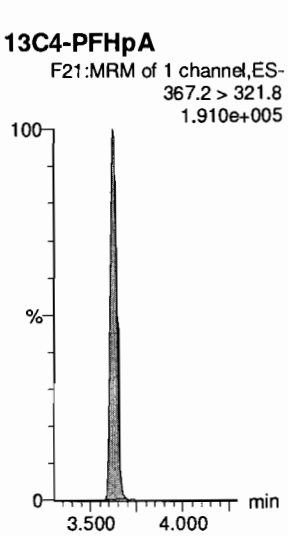
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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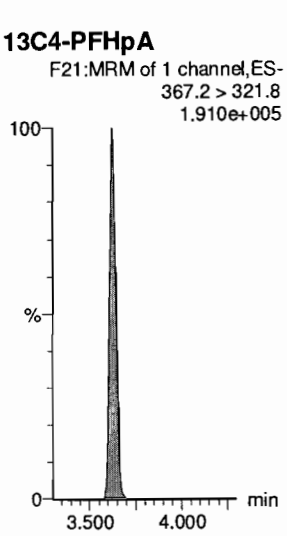
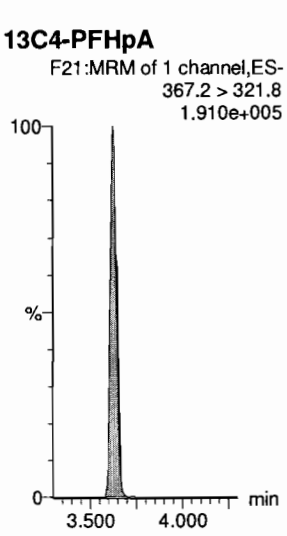


13C4-PFHpA

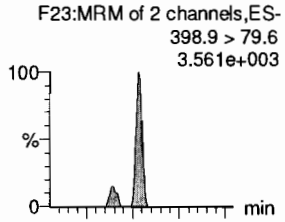


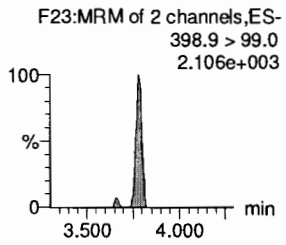
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

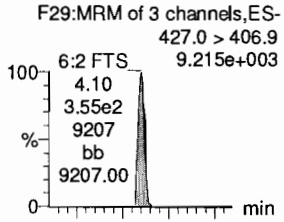
Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

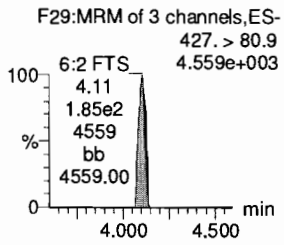
L-PFHxS



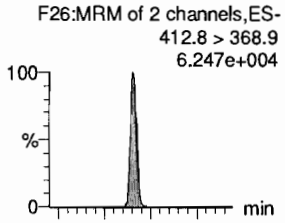


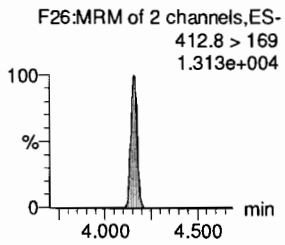
6:2 FTS



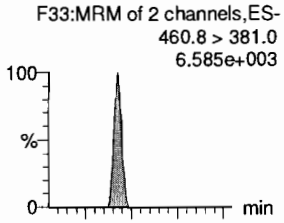


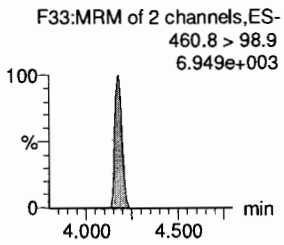
L-PFOA





PFEChS





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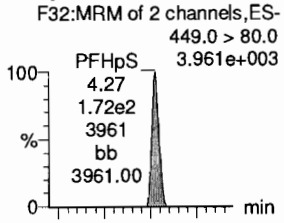
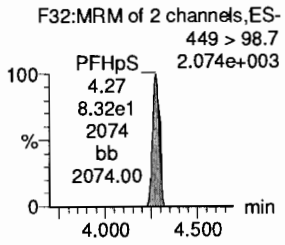
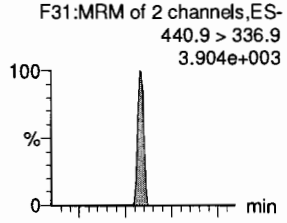
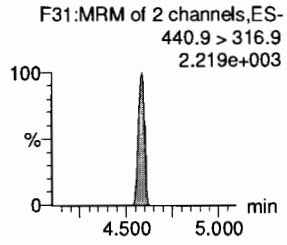


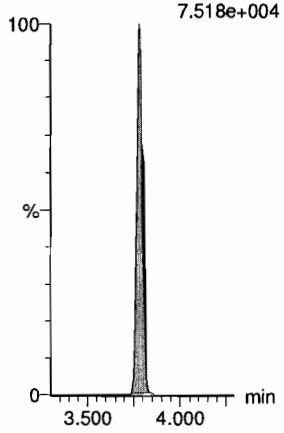


7:3 FTCA

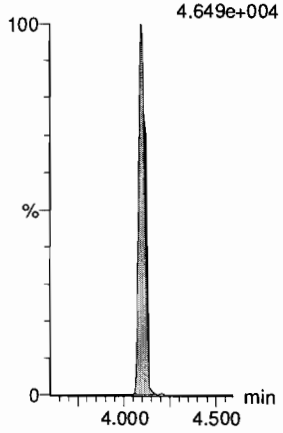




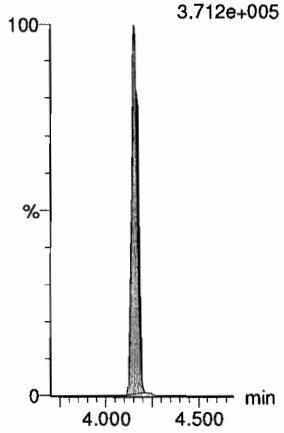
13C3-PFHxS



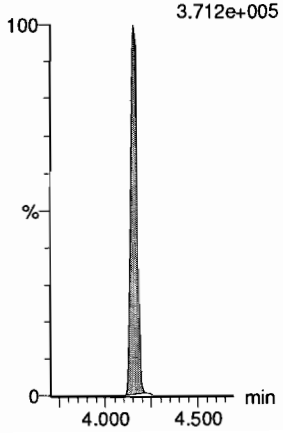
13C2-6:2 FTS



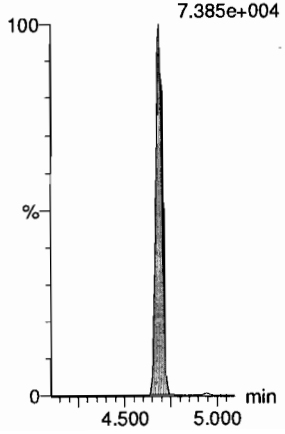
13C2-PFOA



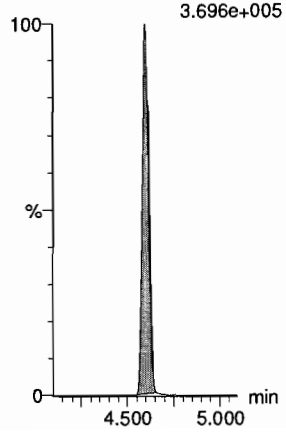
13C2-PFOA



13C8-PFOS



13C5-PFNA

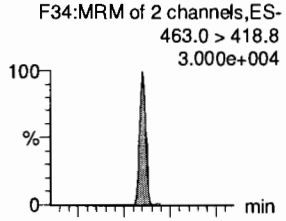


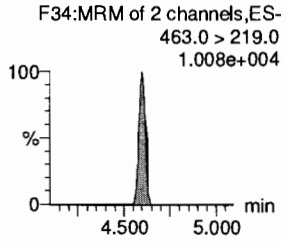
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

PFNA





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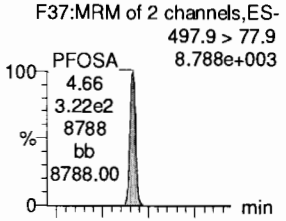
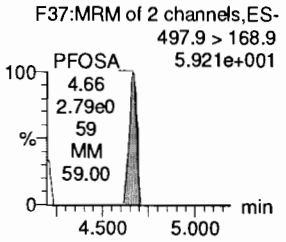
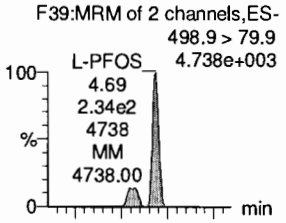
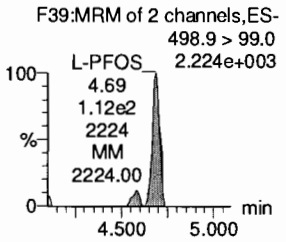


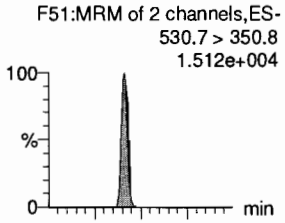


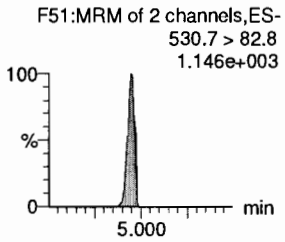
L-PFOS





9Cl-PF30NS





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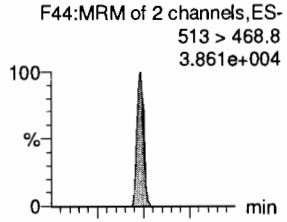
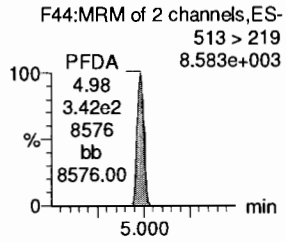
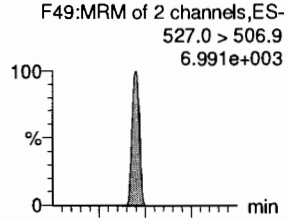
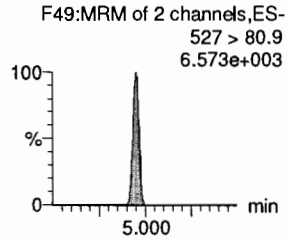


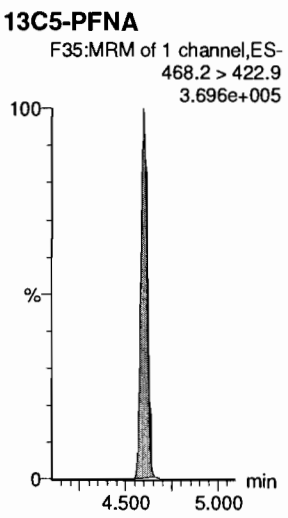


8:2 FTS

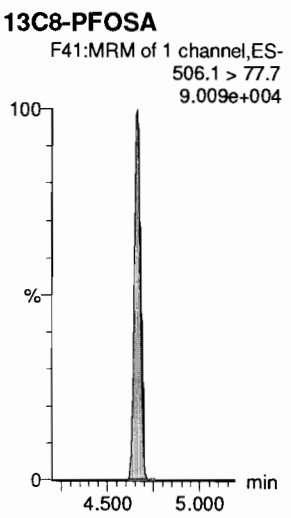




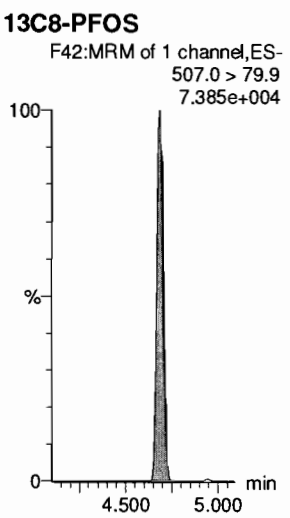
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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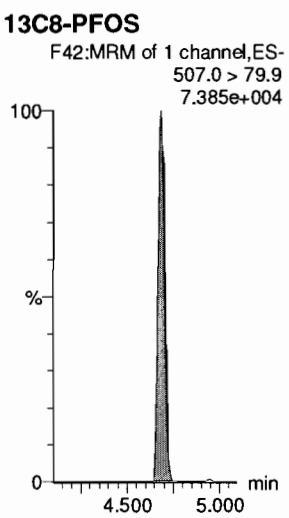
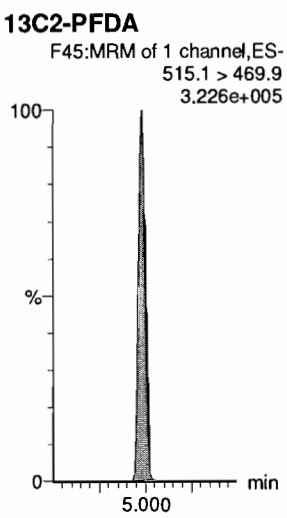
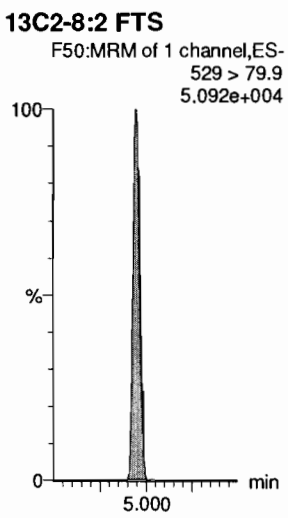


13C2-PFDA



13C2-8:2 FTS

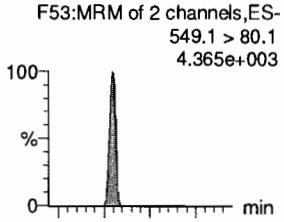


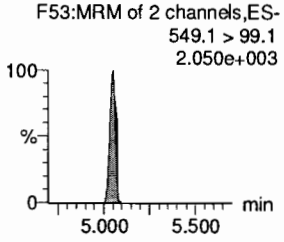
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

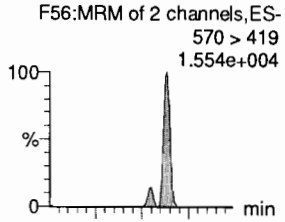
Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

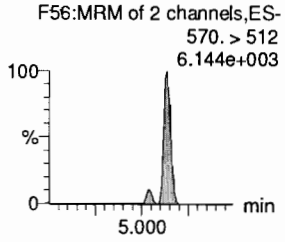
PFNS





L-MeFOSAA





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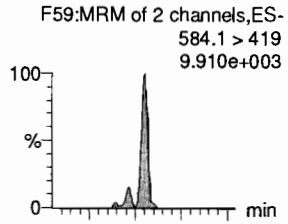
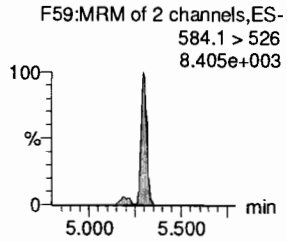
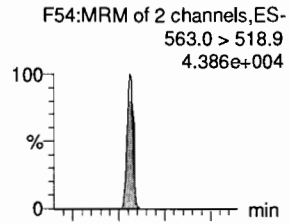
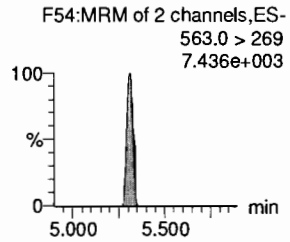


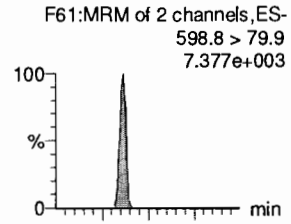


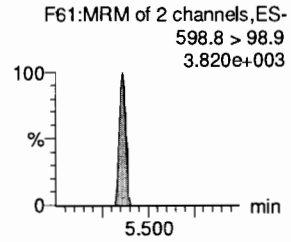
PFUdA



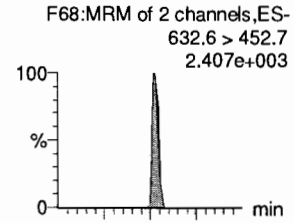


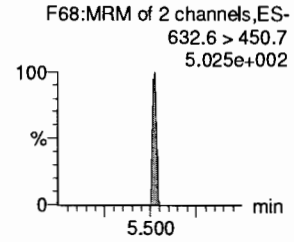
PFDS



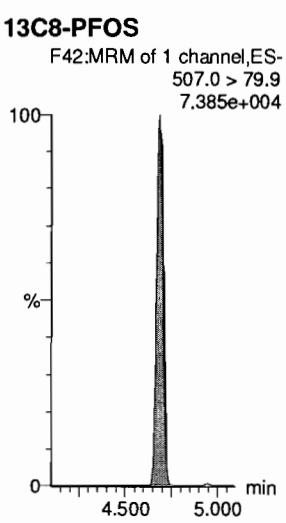


11Cl-PF30UdS

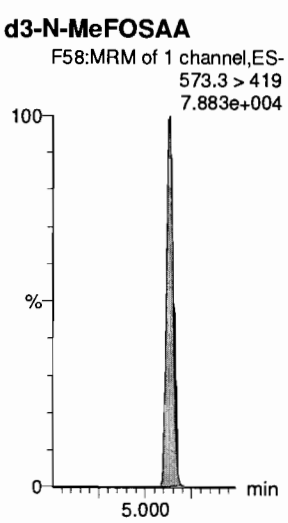




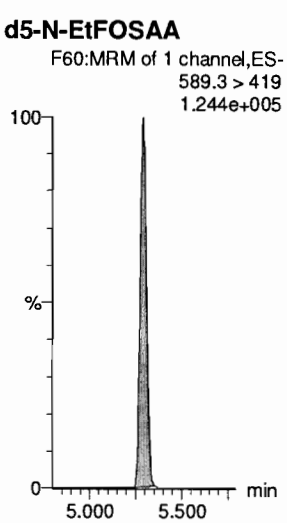
13C8-PFOS



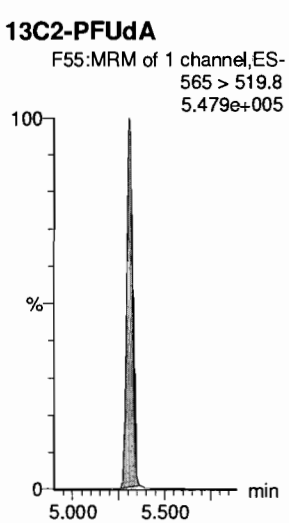
d3-N-MeFOSAA



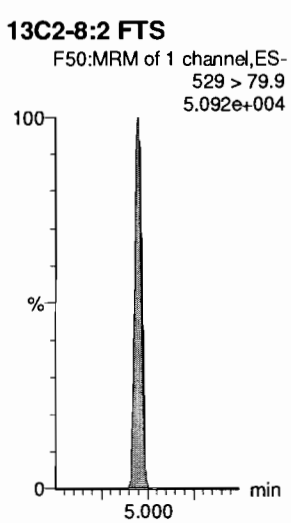
d5-N-EtFOSAA



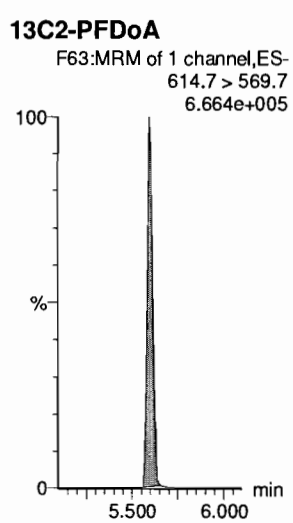
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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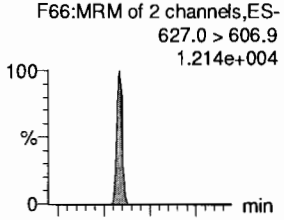
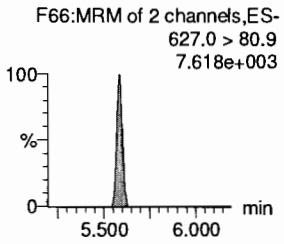
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

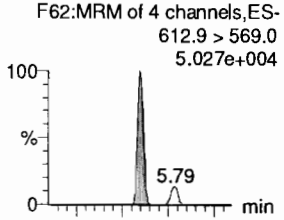
Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

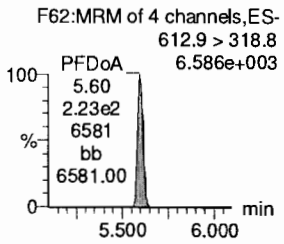
10:2 FTS



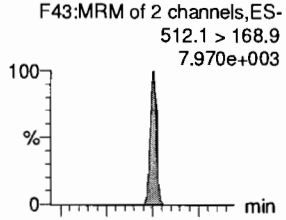


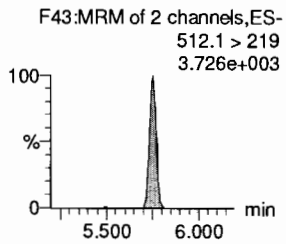
PFDoA



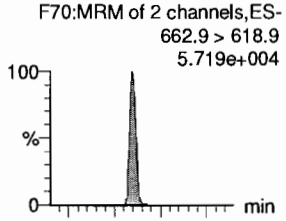


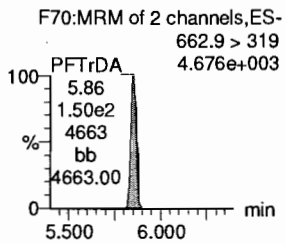
N-MeFOSA



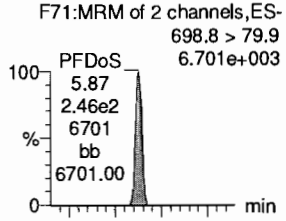


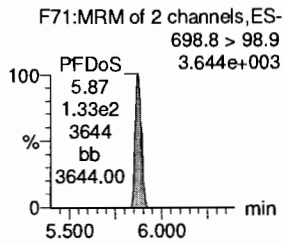
PFTrDA



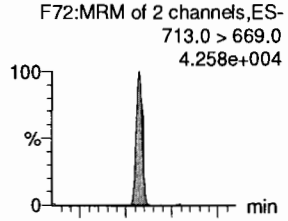


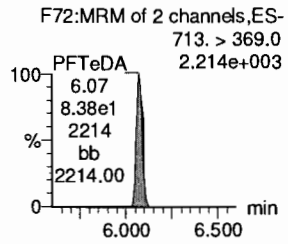
PFDoS



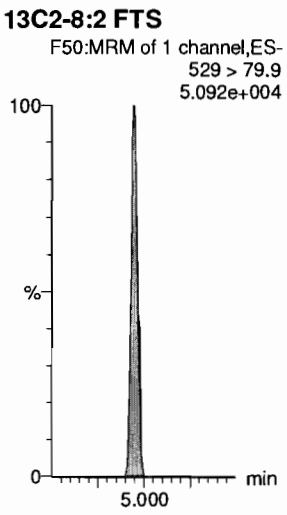


PFTeDA

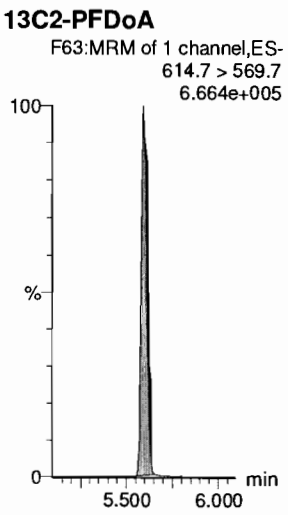




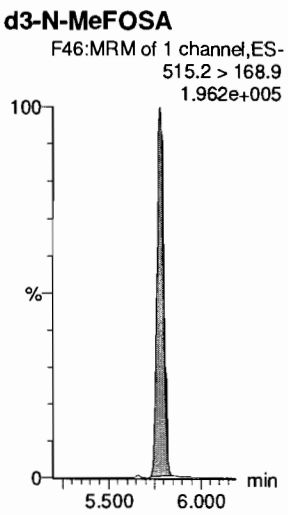
13C2-8:2 FTS



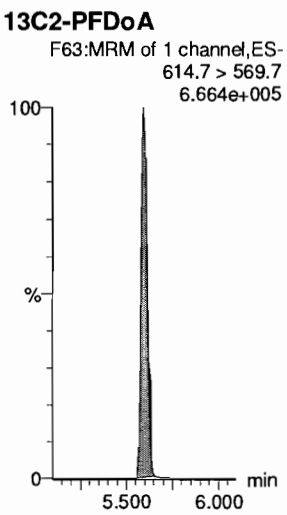
13C2-PFDoA



d3-N-MeFOSA



13C2-PFDoA



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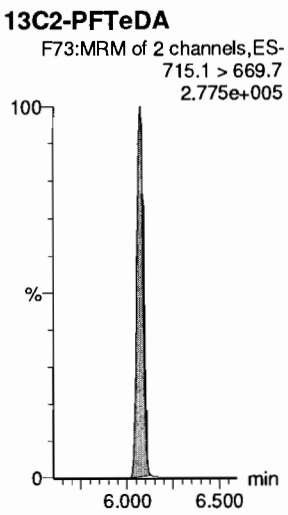
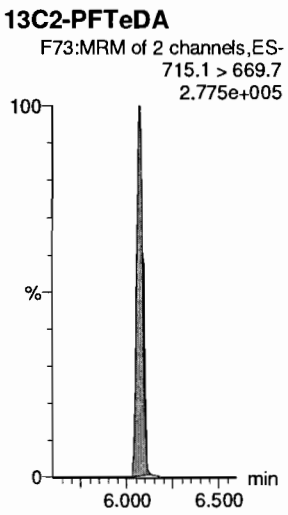


13C2-PFTeDA

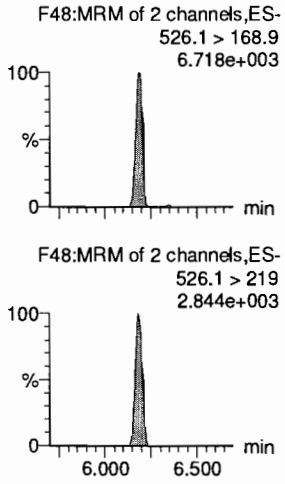


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

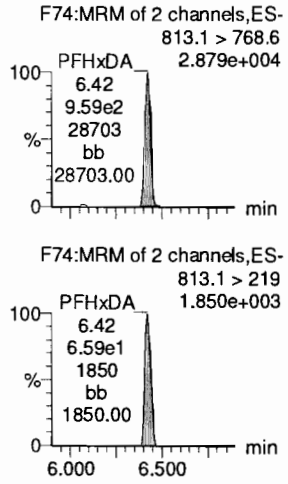
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

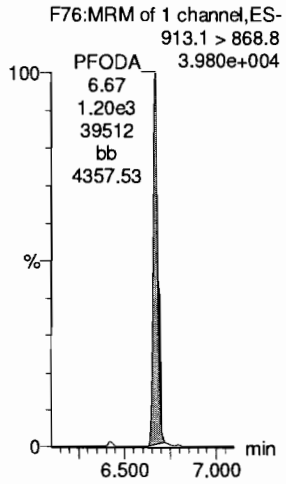
N-EtFOSA



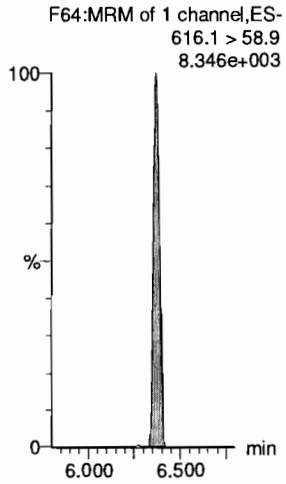
PFHxDA



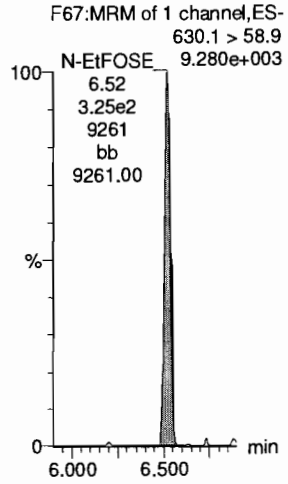
PFODA



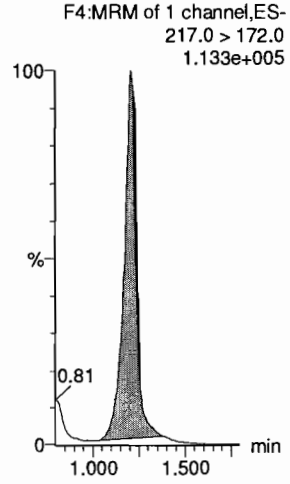
N-MeFOSE



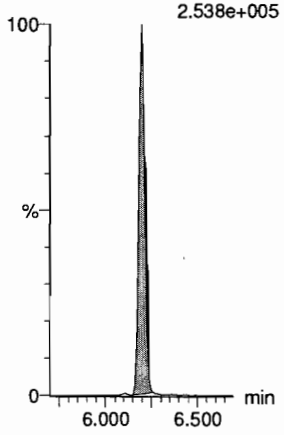
N-EtFOSE



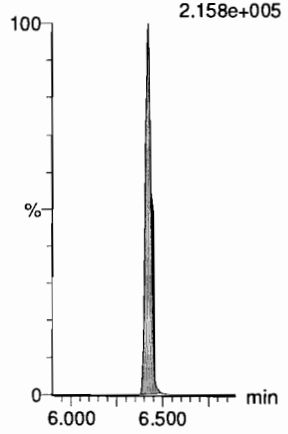
13C4-PFBA



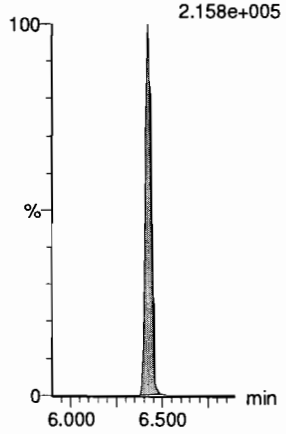
d5-N-ETFOSA



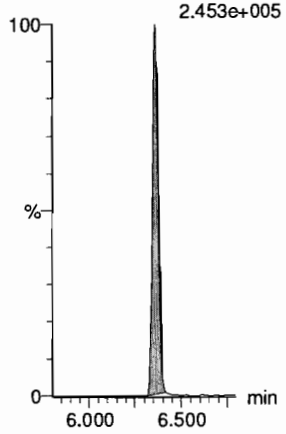
13C2-PFHxDA



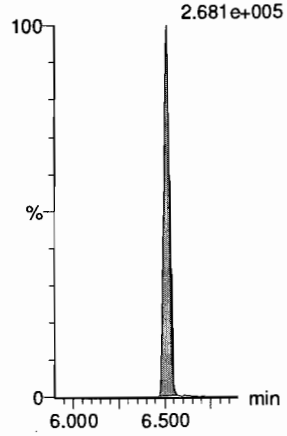
13C2-PFHxDA



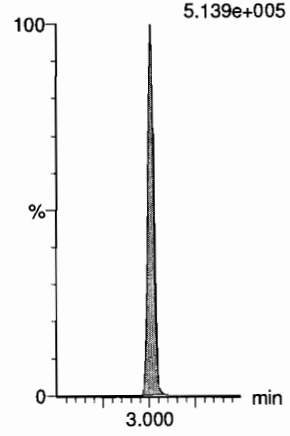
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

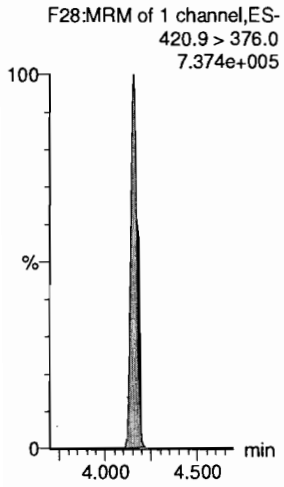


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

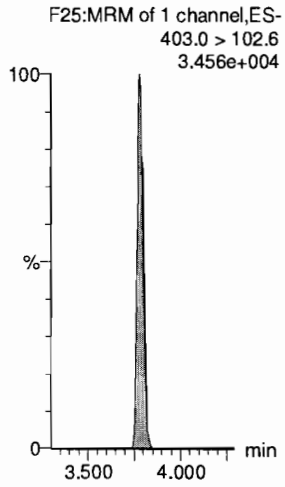
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_6, Date: 16-Jul-2019, Time: 17:27:02, ID: ST190716M2-3 PFC CS0 19G1103, Description: PFC CS0 19G1103

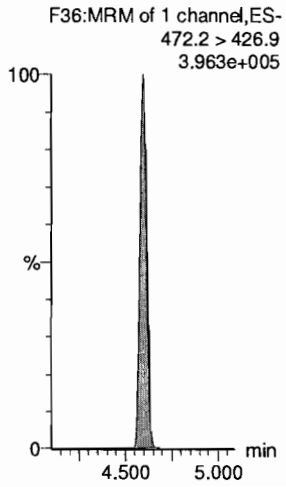
13C8-PFOA



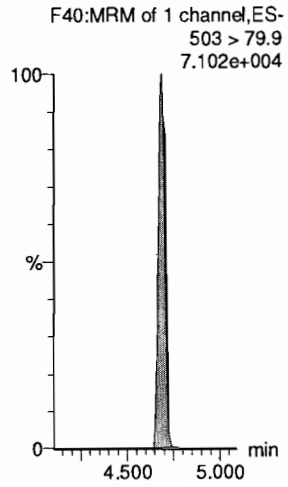
18O2-PFHxS



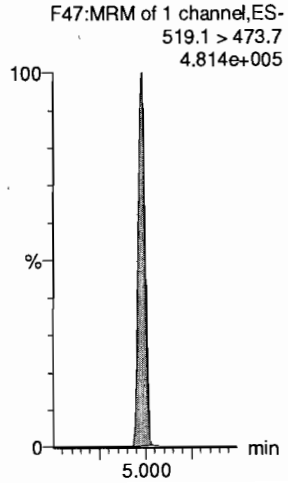
13C9-PFNA



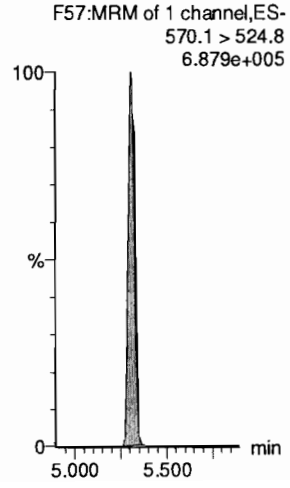
13C4-PFOS



13C6-PFDA



13C7-PFUdA

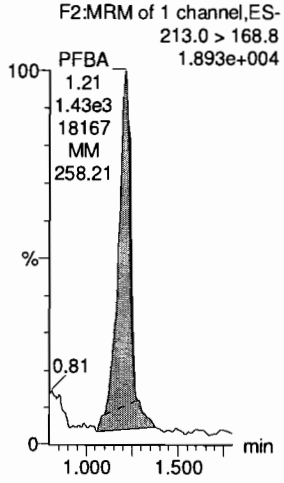


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

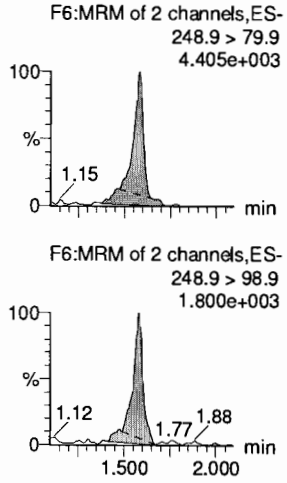
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

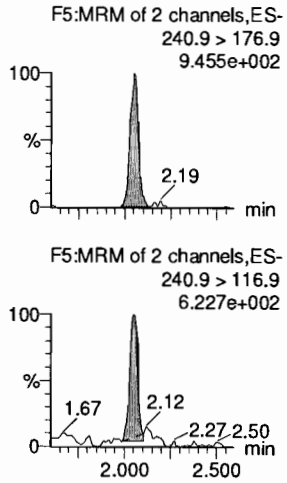
PFBA



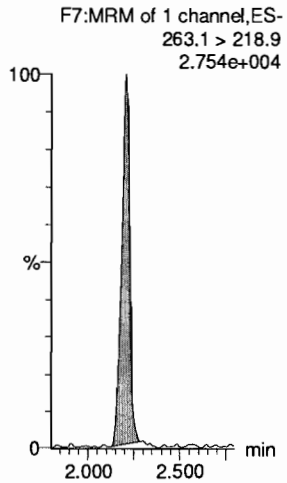
PFPrS



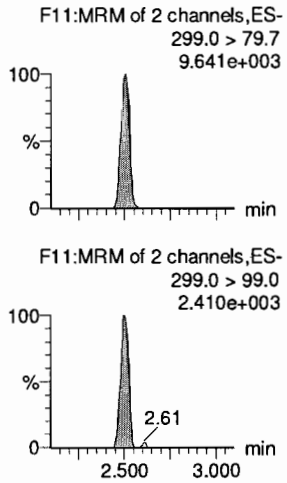
3:3 FTCA



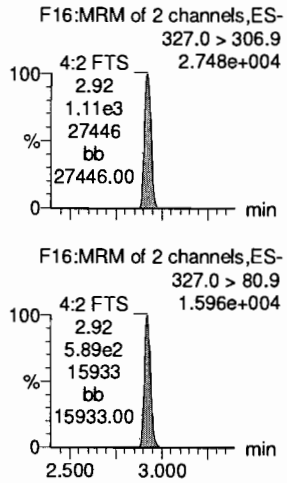
PFPeA



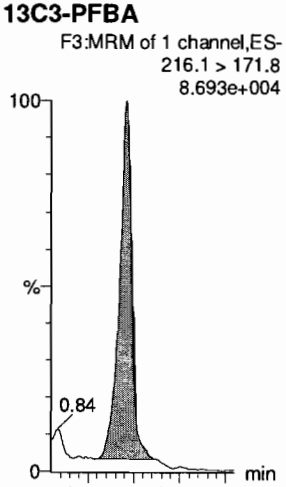
PFBS



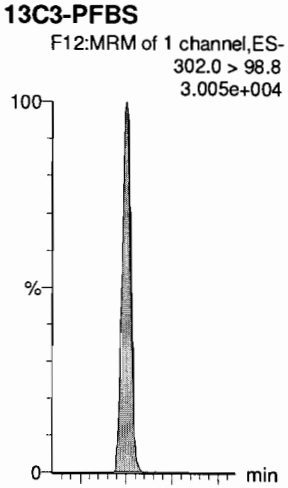
4:2 FTS



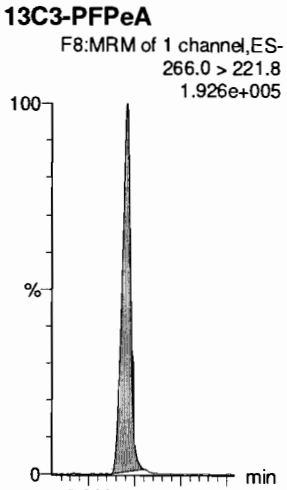
13C3-PFBA



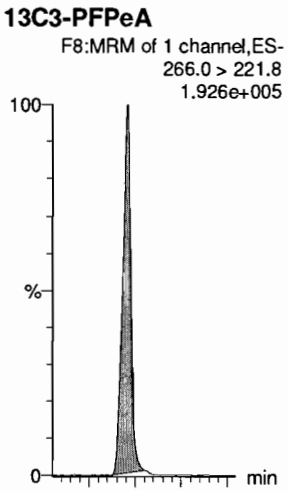
13C3-PFBS



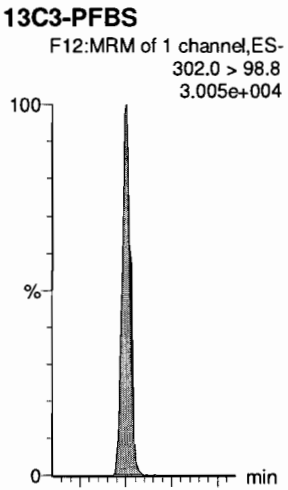
13C3-PFPeA



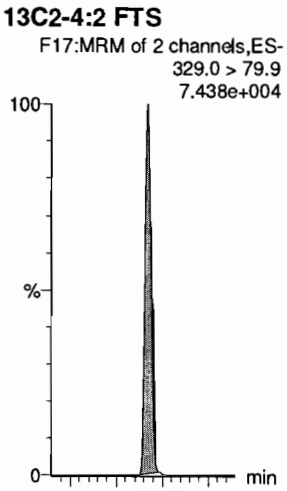
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

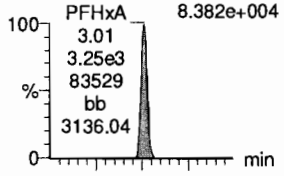


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

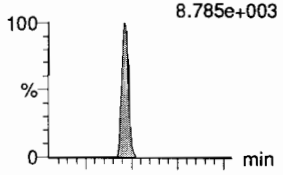
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

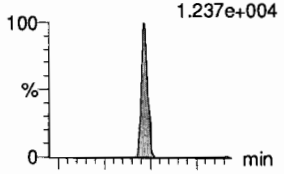
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
8.382e+004
PFHxA
3.01
3.25e3
83529
bb
3136.04



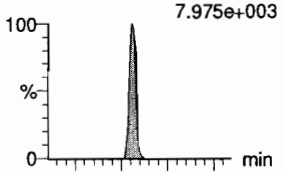
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
8.785e+003



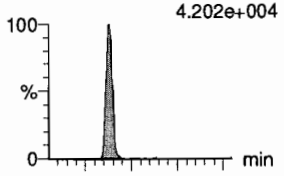
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
1.237e+004



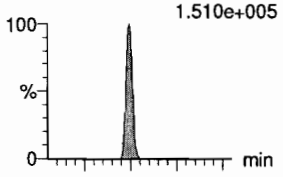
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
7.975e+003



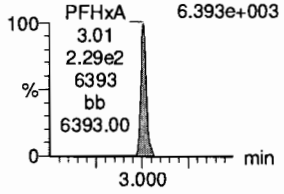
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
4.202e+004



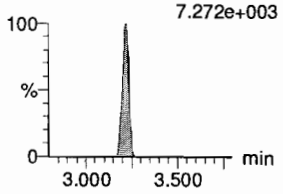
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
1.510e+005



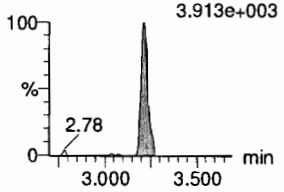
F13:MRM of 2 channels,ES-
313 > 118.9
6.393e+003
PFHxA
3.01
2.29e2
6393
bb
6393.00



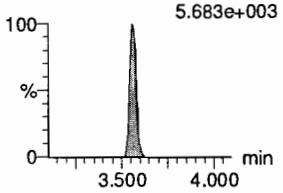
F19:MRM of 2 channels,ES-
349.1 > 99
7.272e+003



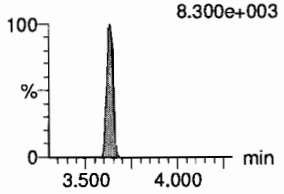
F9:MRM of 3 channels,ES-
285.1 > 184.9
3.913e+003
2.78



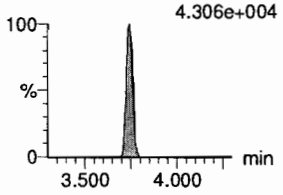
F18:MRM of 2 channels,ES-
340.9 > 216.9
5.683e+003



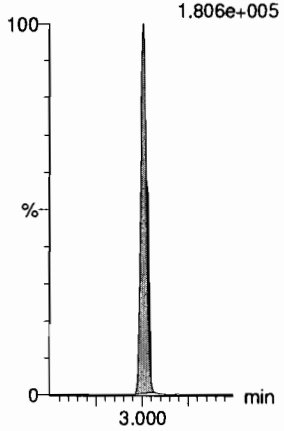
F20:MRM of 2 channels,ES-
363.0 > 169.0
8.300e+003



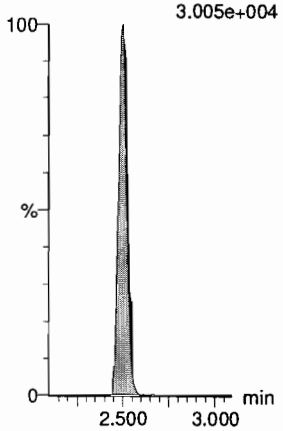
F22:MRM of 2 channels,ES-
376.8 > 85.0
4.306e+004



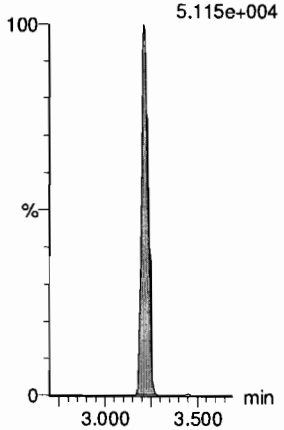
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.806e+005



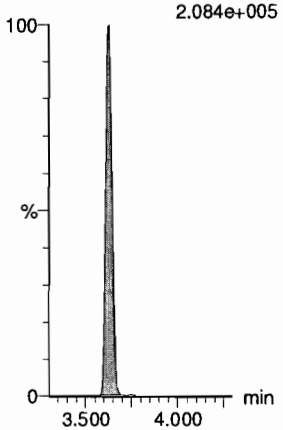
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
3.005e+004



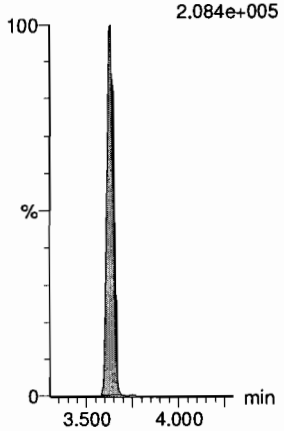
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
5.115e+004



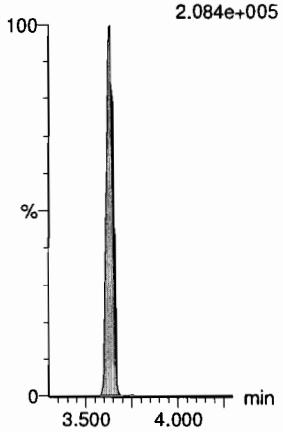
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.084e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.084e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
2.084e+005

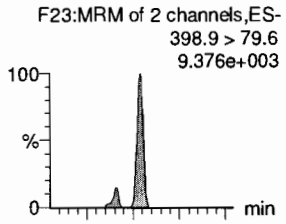


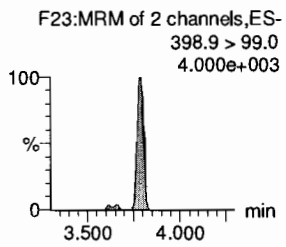
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

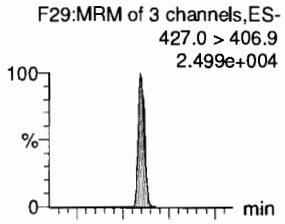
Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

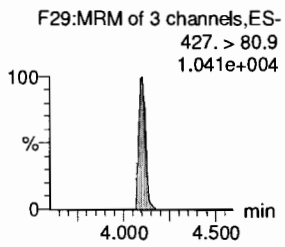
L-PFHxS



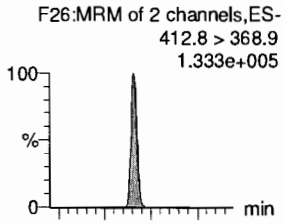


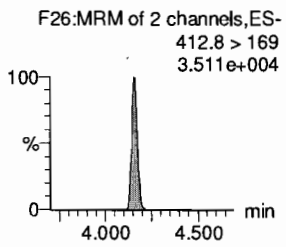
6:2 FTS



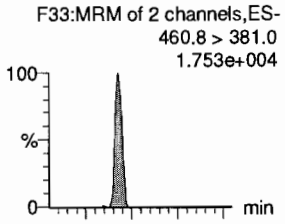


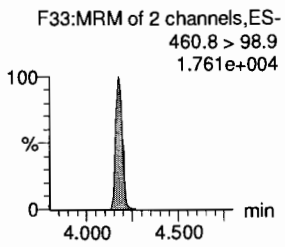
L-PFOA



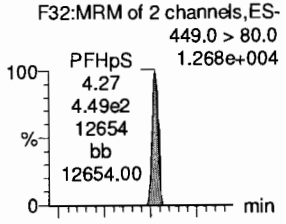


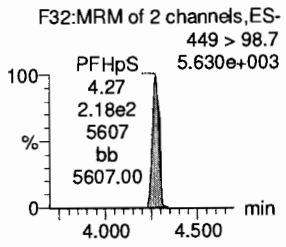
PFEChS



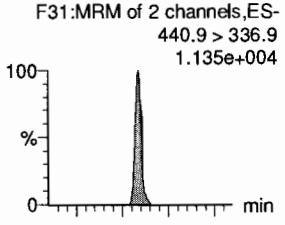


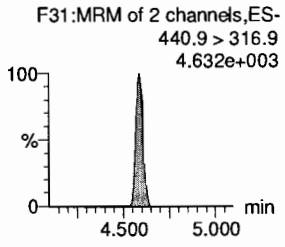
PFHpS



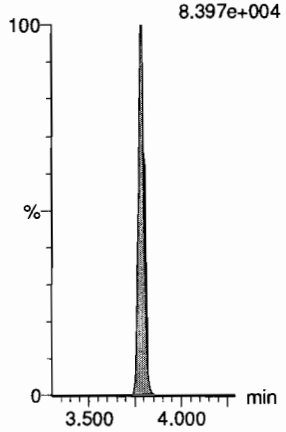


7:3 FTCA

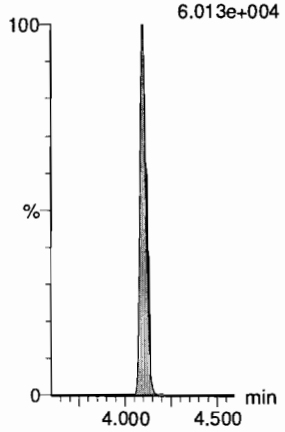




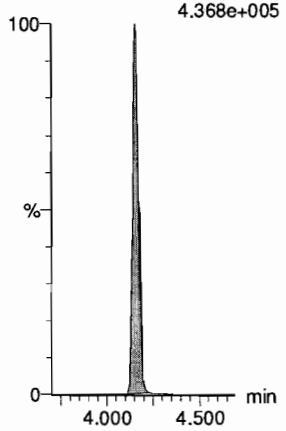
13C3-PFHxS



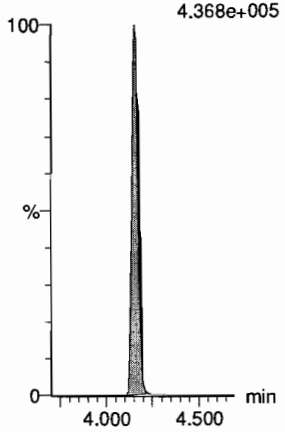
13C2-6:2 FTS



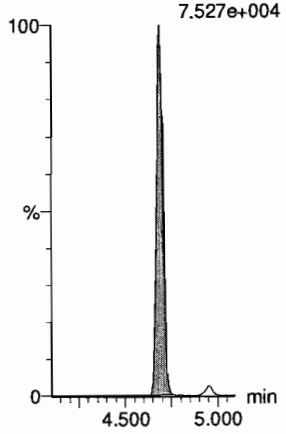
13C2-PFOA



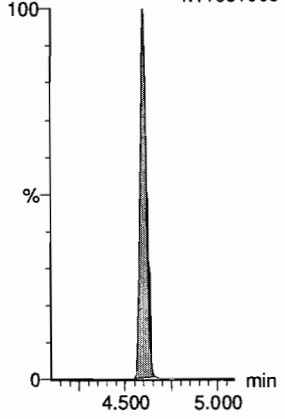
13C2-PFOA



13C8-PFOS



13C5-PFNA

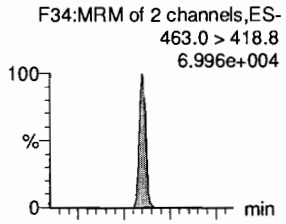


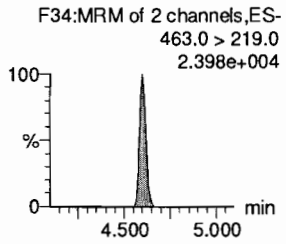
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

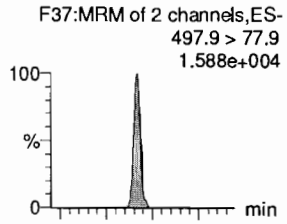
Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

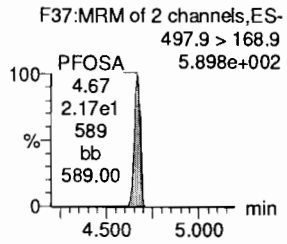
PFNA



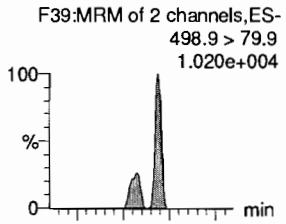


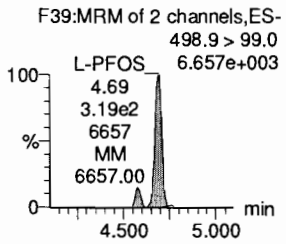
PFOSA



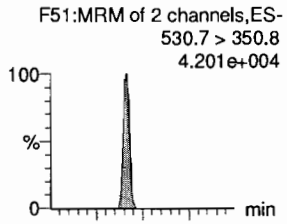


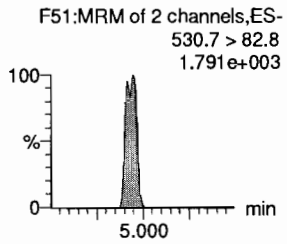
L-PFOS



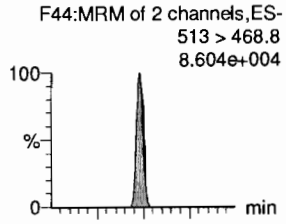


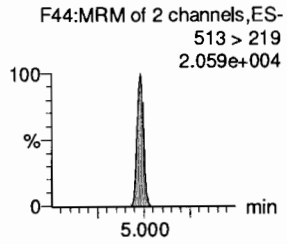
9Cl-PF30NS



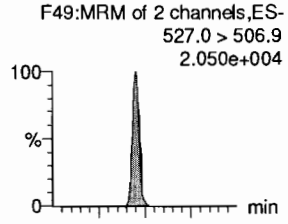


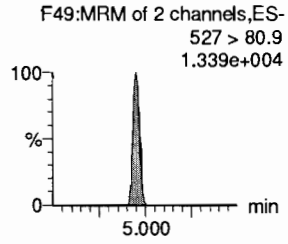
PFDA



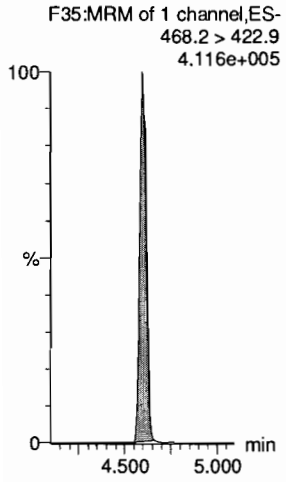


8:2 FTS

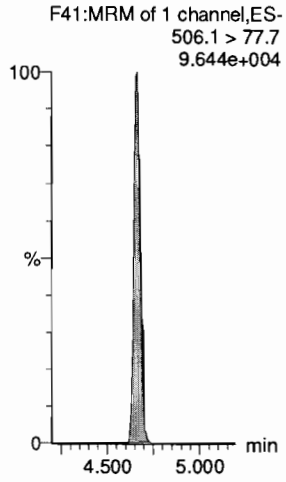




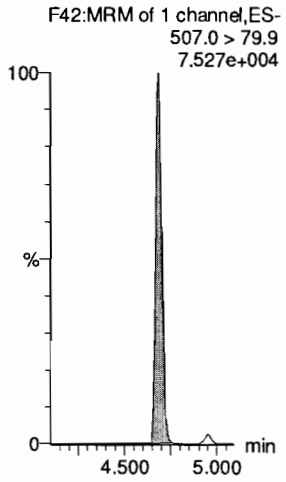
13C5-PFNA



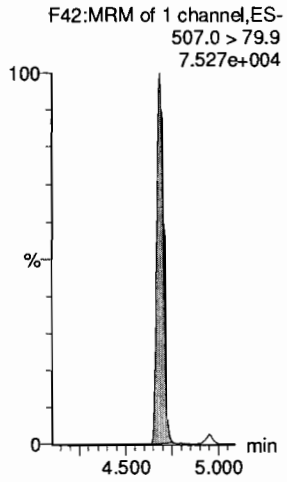
13C8-PFOSA



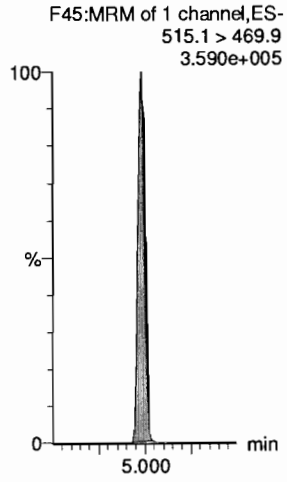
13C8-PFOS



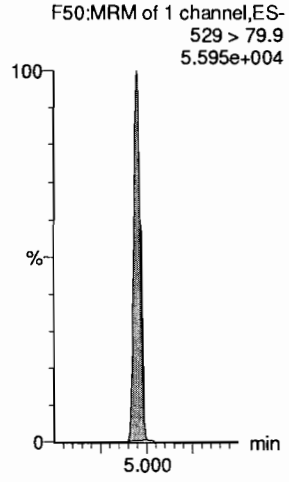
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

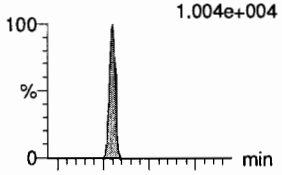


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

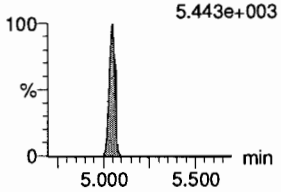
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

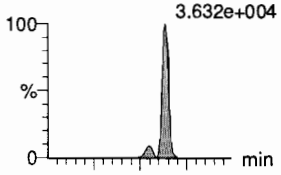
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
1.004e+004



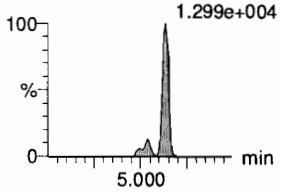
F53:MRM of 2 channels,ES-
549.1 > 99.1
5.443e+003



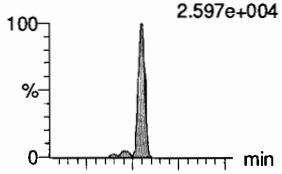
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
3.632e+004



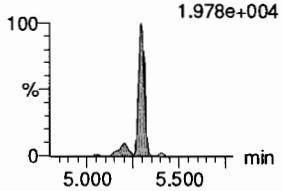
F56:MRM of 2 channels,ES-
570. > 512
1.299e+004



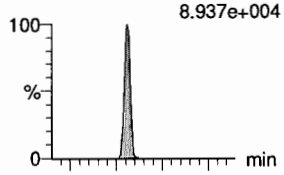
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
2.597e+004



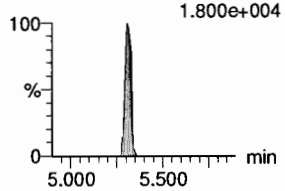
F59:MRM of 2 channels,ES-
584.1 > 526
1.978e+004



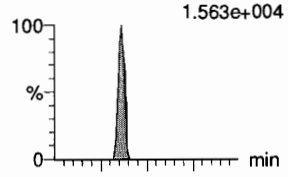
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
8.937e+004



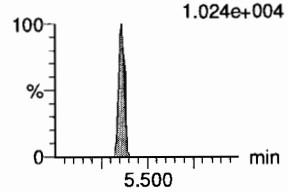
F54:MRM of 2 channels,ES-
563.0 > 269
1.800e+004



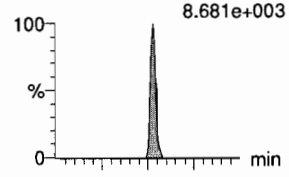
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
1.563e+004



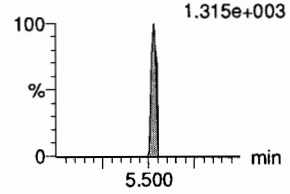
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.024e+004



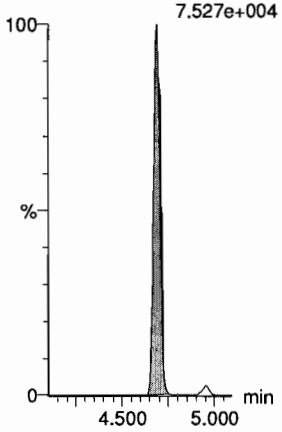
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
8.681e+003



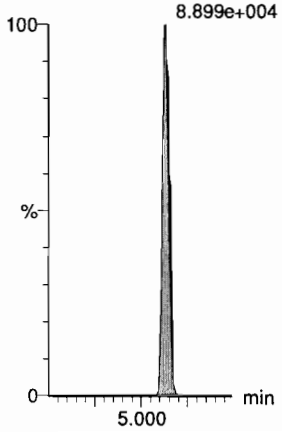
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.315e+003



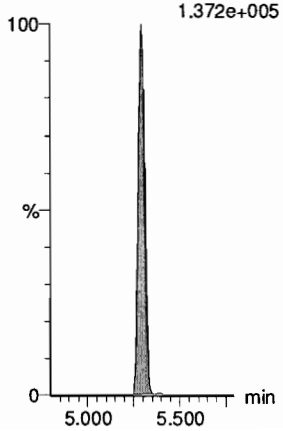
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
7.527e+004



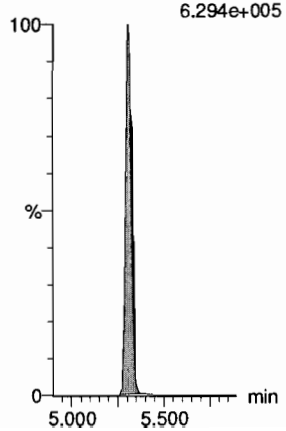
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.899e+004



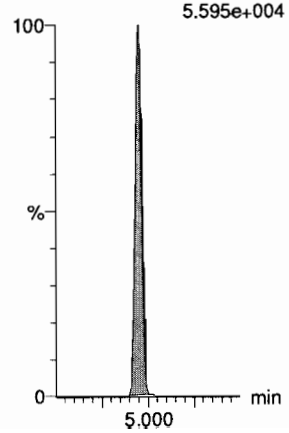
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.372e+005



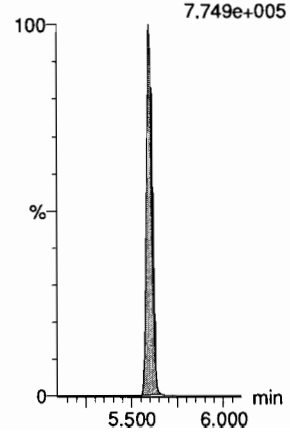
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
6.294e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
5.595e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.749e+005

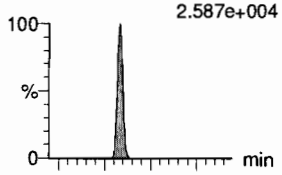


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

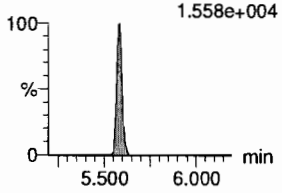
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

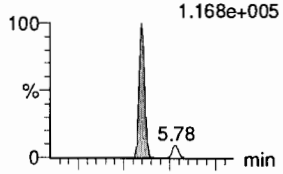
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
2.587e+004



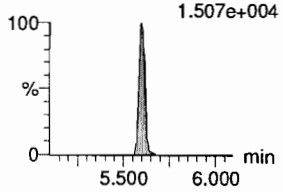
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.558e+004



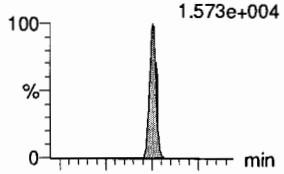
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.168e+005



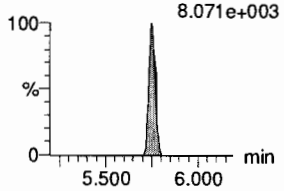
F62:MRM of 4 channels,ES-
612.9 > 318.8
1.507e+004



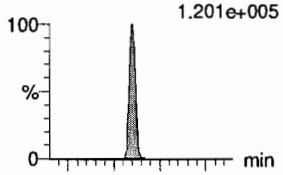
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
1.573e+004



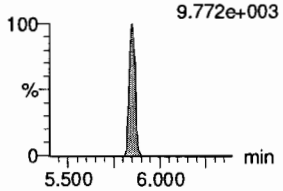
F43:MRM of 2 channels,ES-
512.1 > 219
8.071e+003



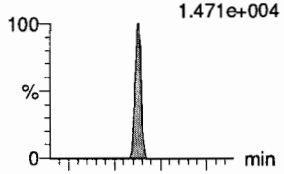
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.201e+005



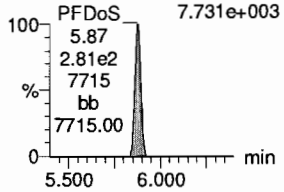
F70:MRM of 2 channels,ES-
662.9 > 319
9.772e+003



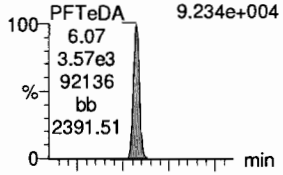
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
1.471e+004



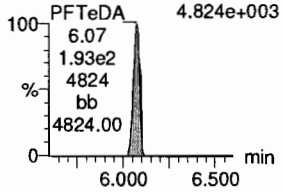
F71:MRM of 2 channels,ES-
698.8 > 98.9
7.731e+003



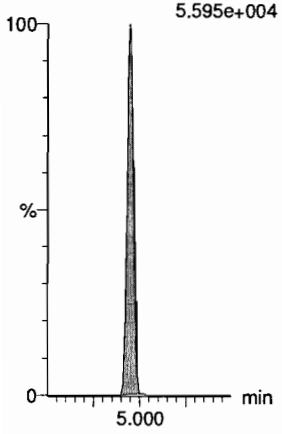
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
9.234e+004



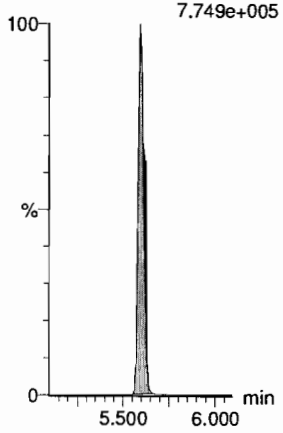
F72:MRM of 2 channels,ES-
713. > 369.0
4.824e+003



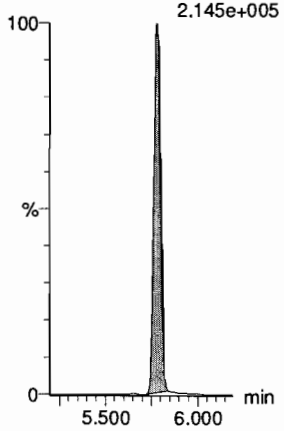
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
5.595e+004



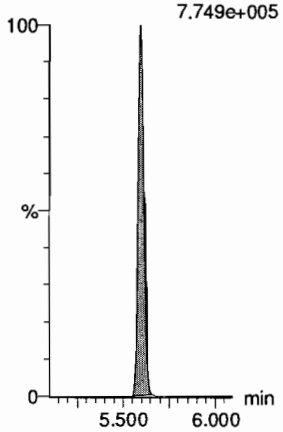
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.749e+005



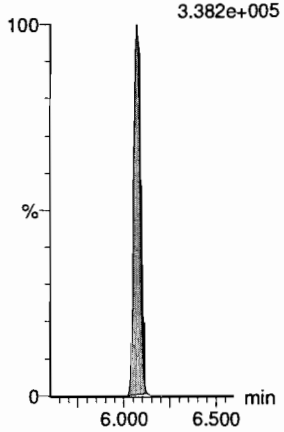
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.145e+005



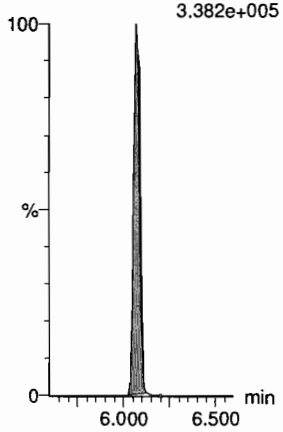
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
7.749e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.382e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
3.382e+005

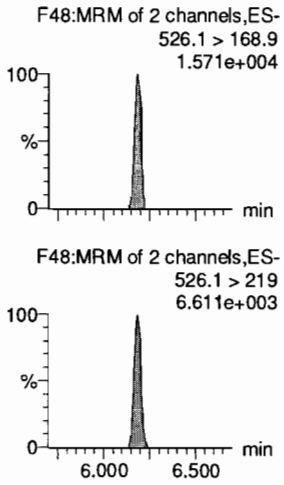


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

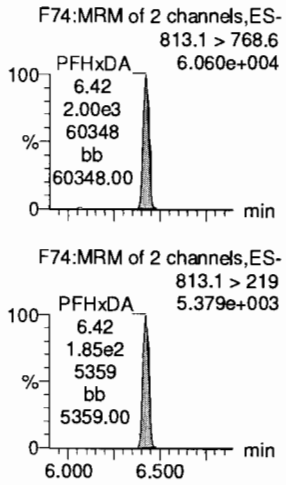
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

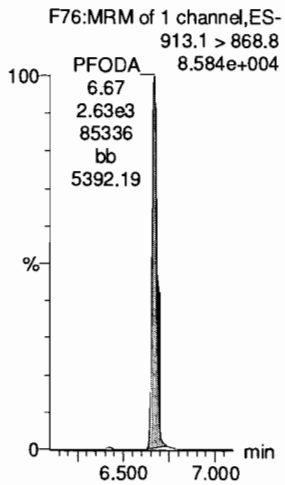
N-EtFOSA



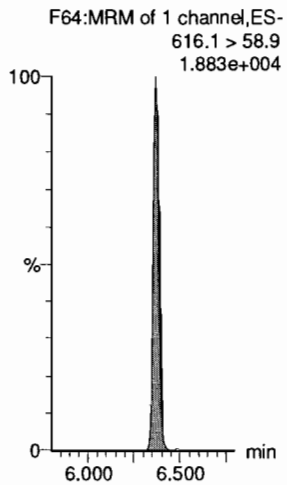
PFHxDA



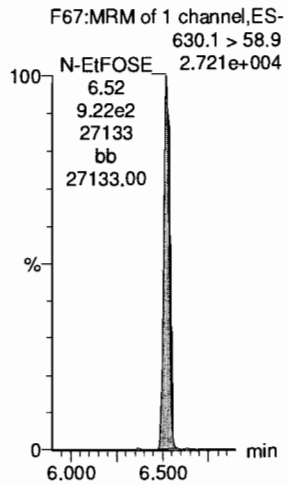
PFODA



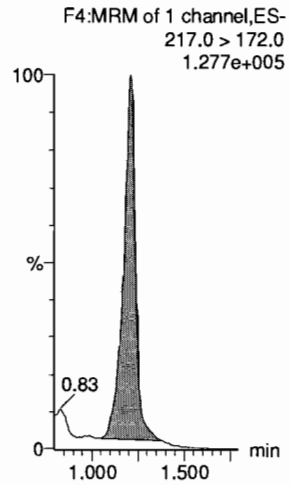
N-MeFOSE



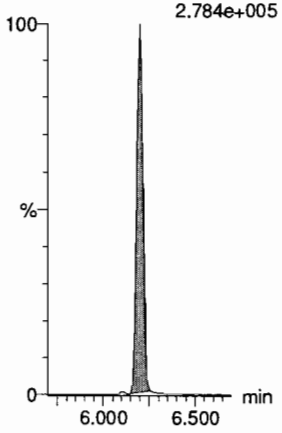
N-EtFOSE



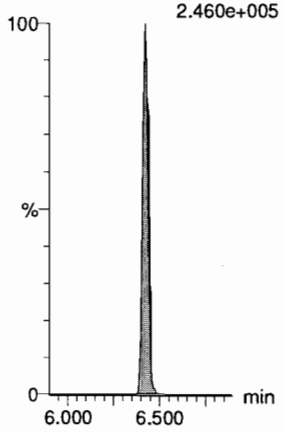
13C4-PFBA



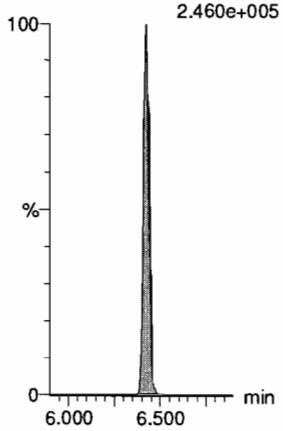
d5-N-ETFOSA



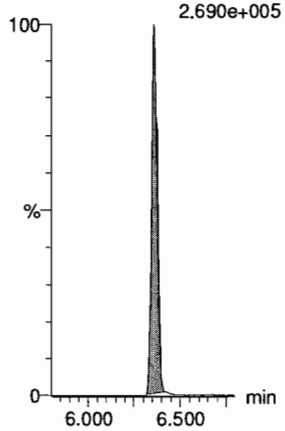
13C2-PFHxDA



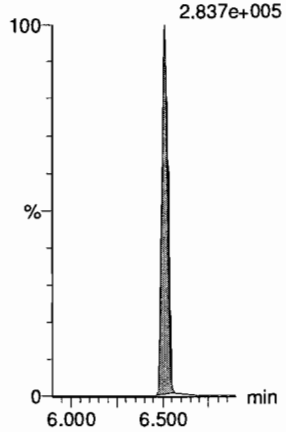
13C2-PFHxDA



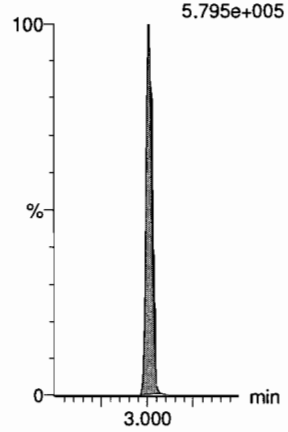
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

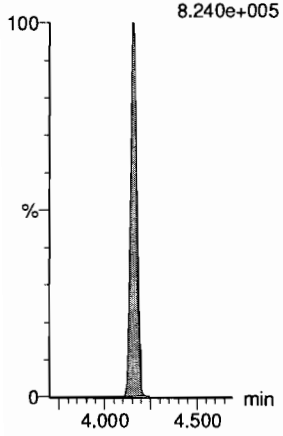


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

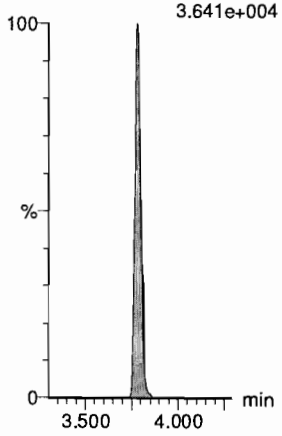
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_7, Date: 16-Jul-2019, Time: 17:37:40, ID: ST190716M2-4 PFC CS1 19G1104, Description: PFC CS1 19G1104

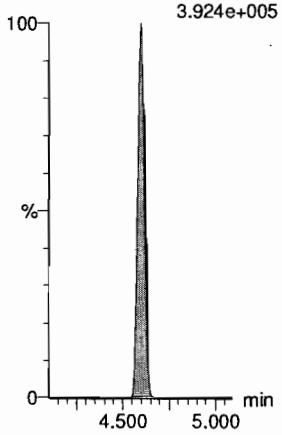
13C8-PFOA



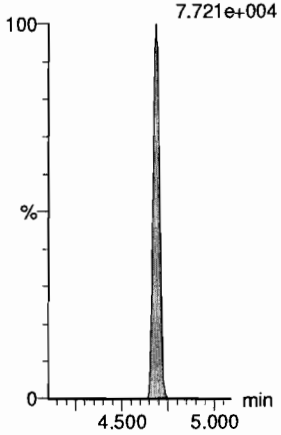
18O2-PFHxS



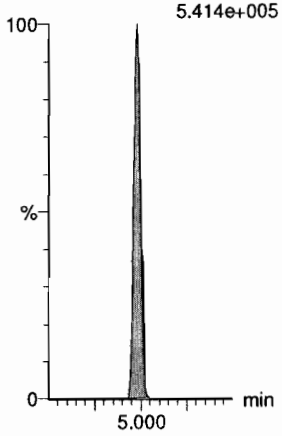
13C9-PFNA



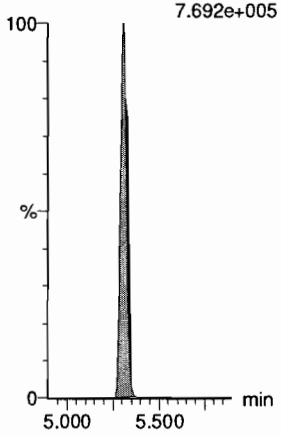
13C4-PFOS



13C6-PFDA



13C7-PFUdA

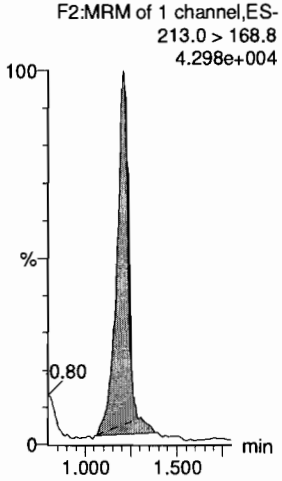


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

PFBA



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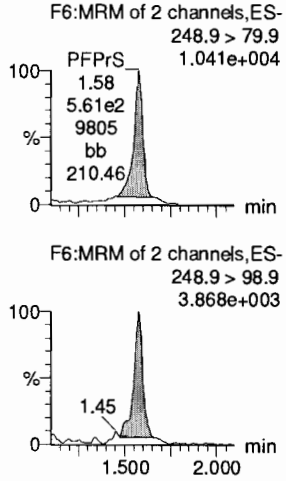
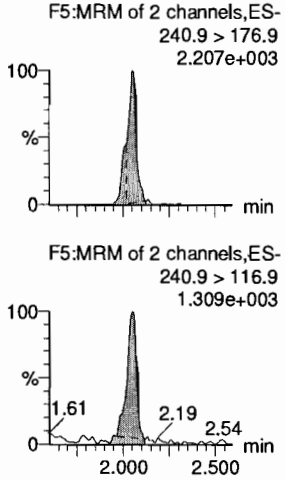
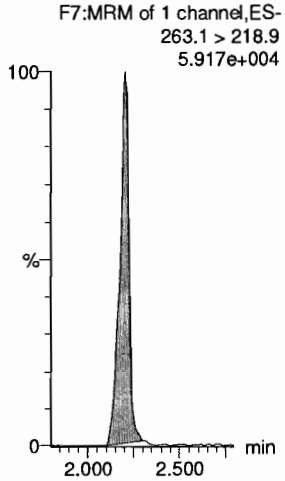


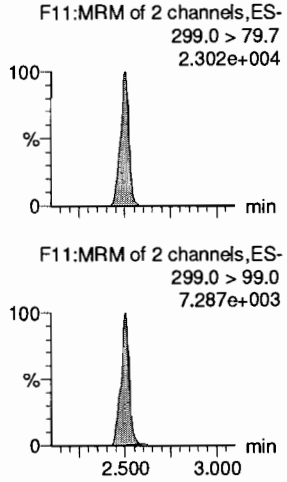
3:3 FTCA



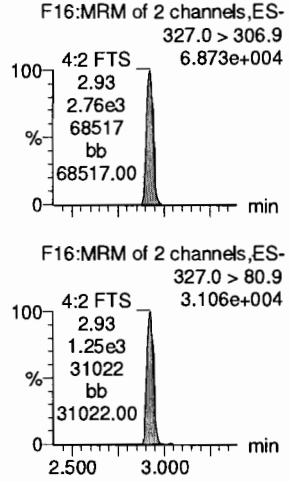
PFPeA



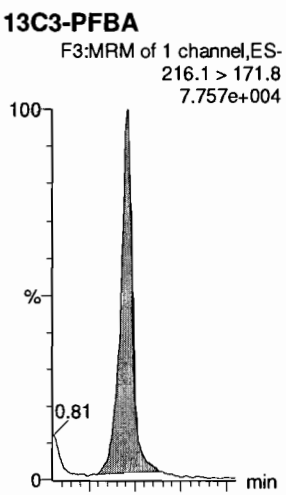
PFBS



4:2 FTS



13C3-PFBA



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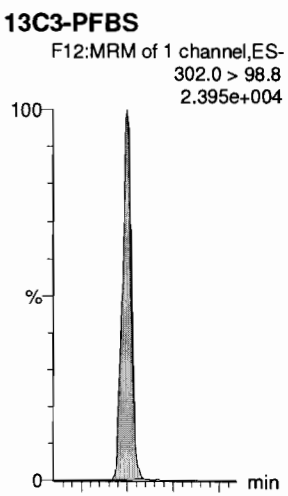

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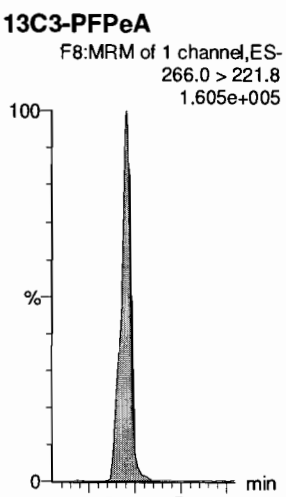

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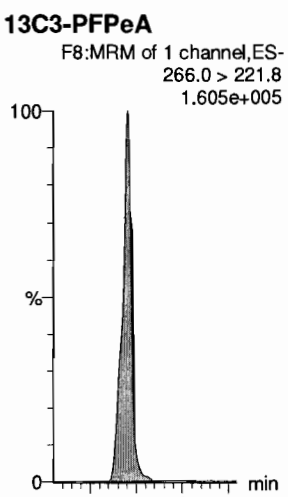

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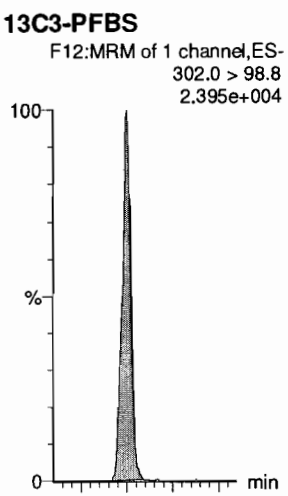
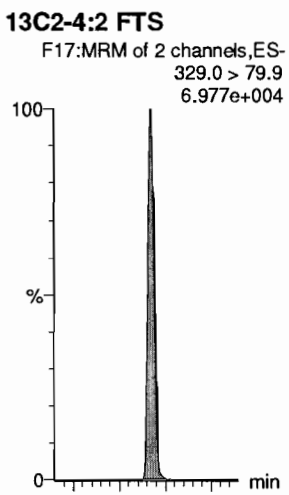


13C2-4:2 FTS



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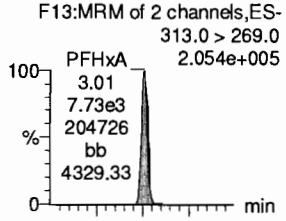
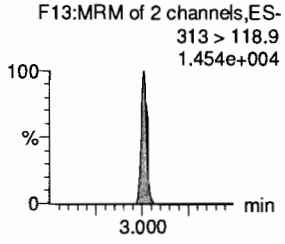
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

PFHxA





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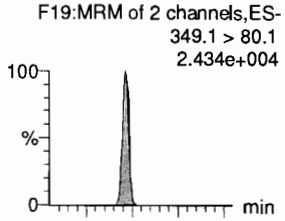
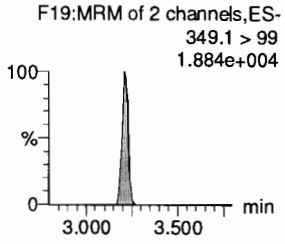
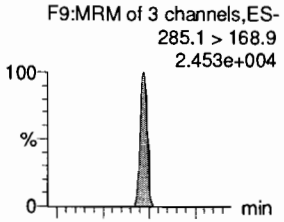
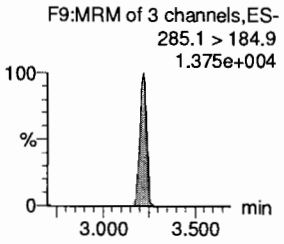


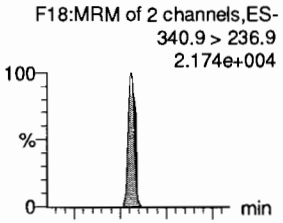


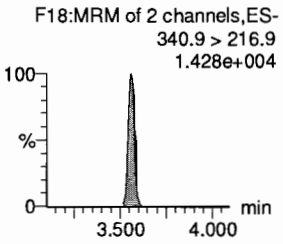
HFPO-DA



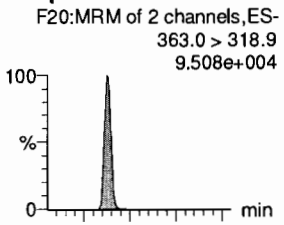


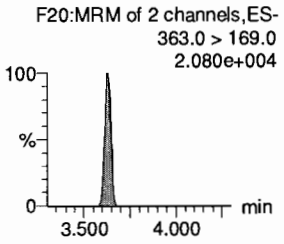
5:3 FTCA



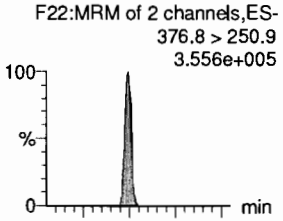


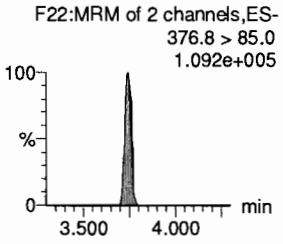
PFHpA



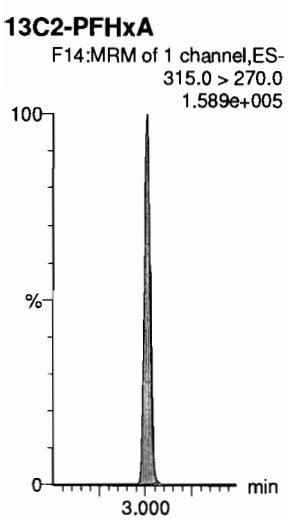


ADONA

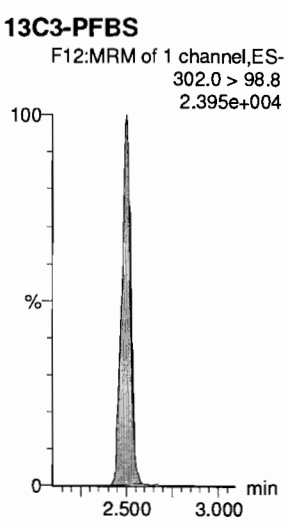




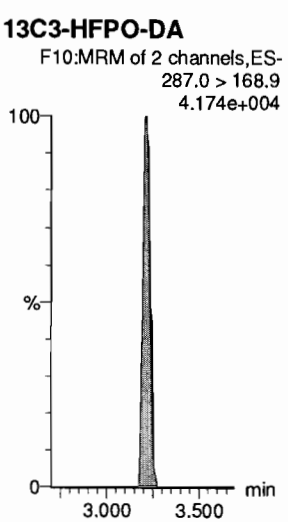
13C2-PFHxA



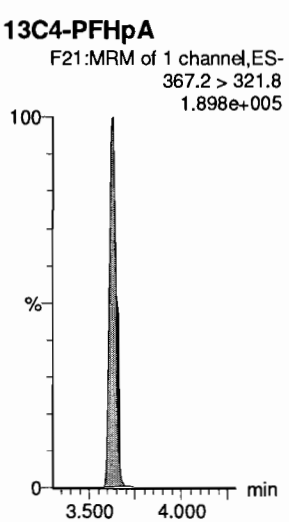
13C3-PFBS



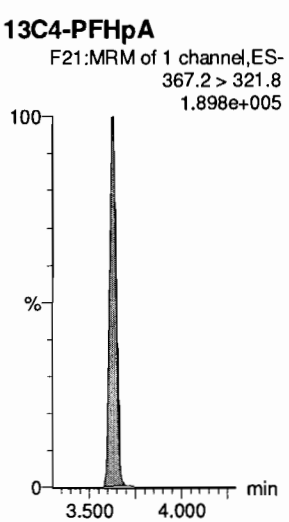
13C3-HFPO-DA



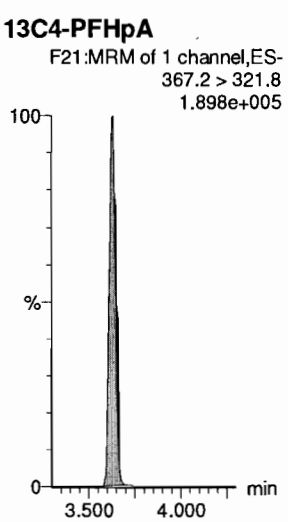
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA



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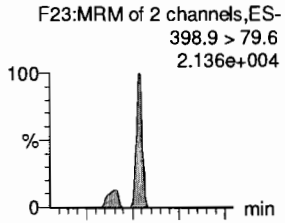
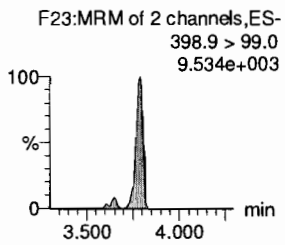
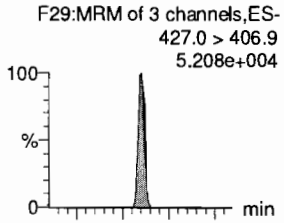
Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

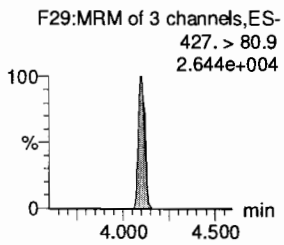
L-PFHxS



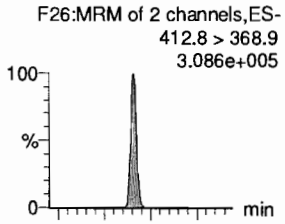


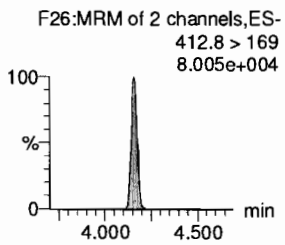
6:2 FTS



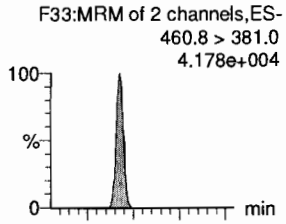


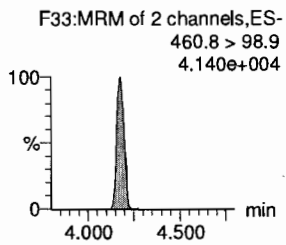
L-PFOA



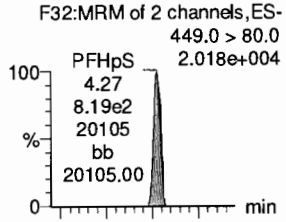


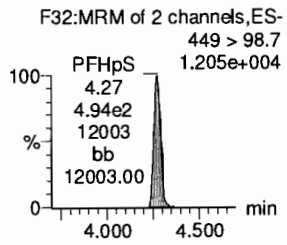
PFEChS



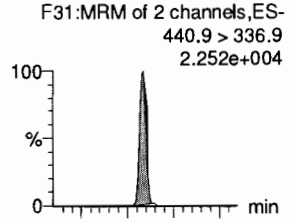


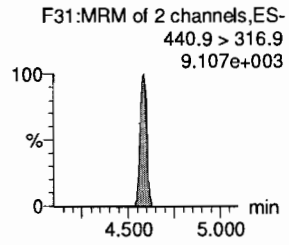
PFHpS



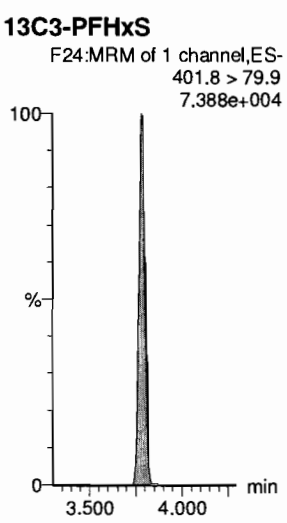


7:3 FTCA

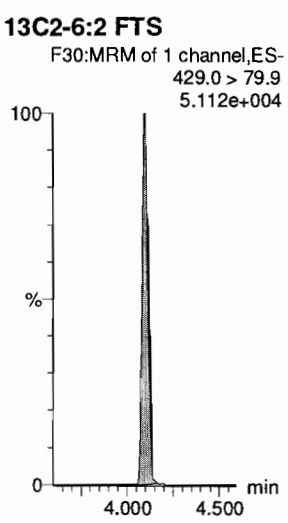




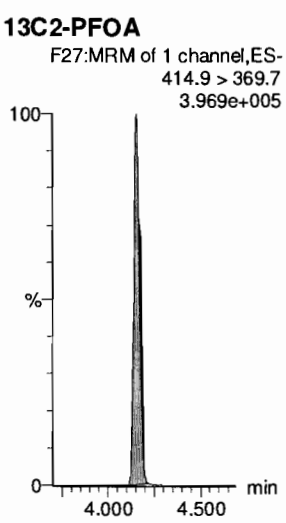
13C3-PFHxS



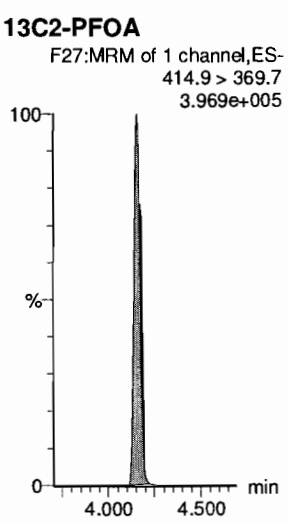
13C2-6:2 FTS



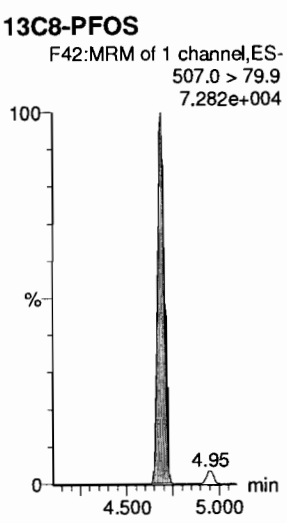
13C2-PFOA



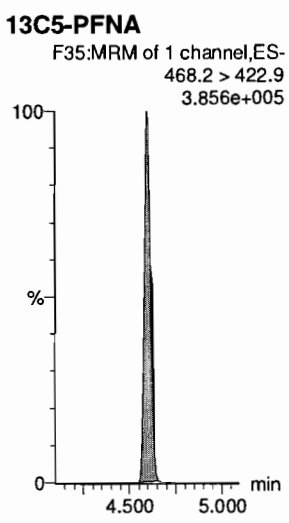
13C2-PFOA



13C8-PFOS



13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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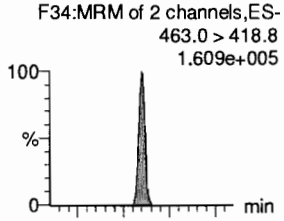
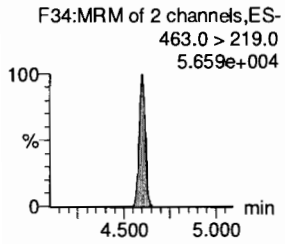
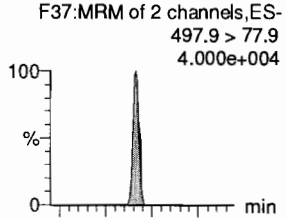
Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

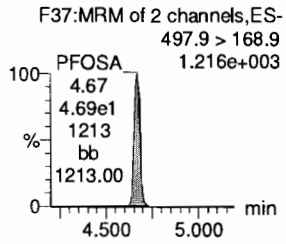
PFNA



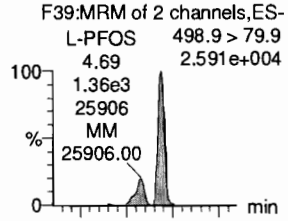


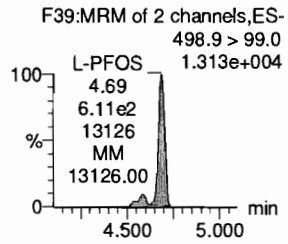
PFOSA



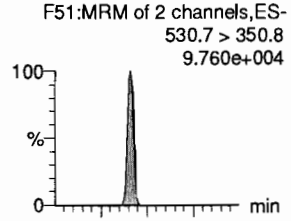


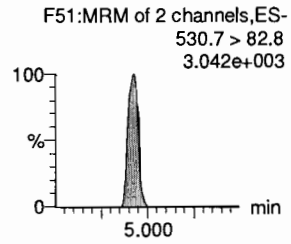
L-PFOS



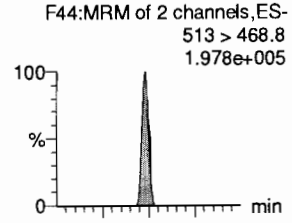


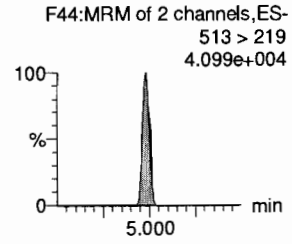
9Cl-PF30NS



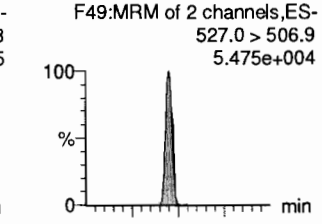


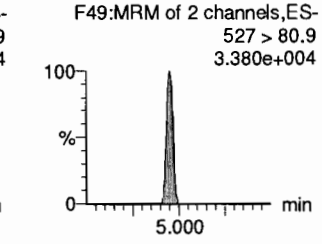
PFDA



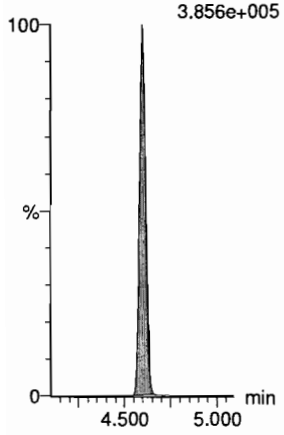


8:2 FTS

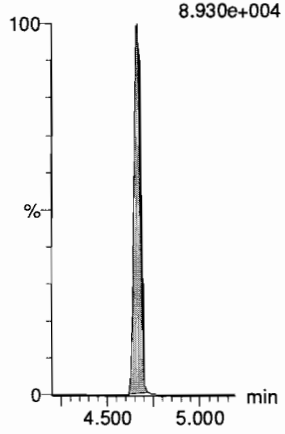




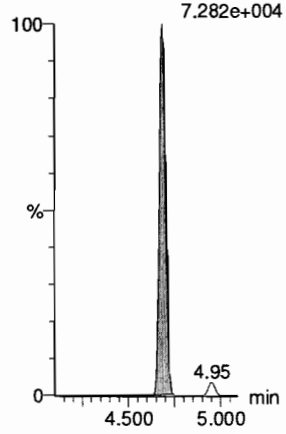
13C5-PFNA



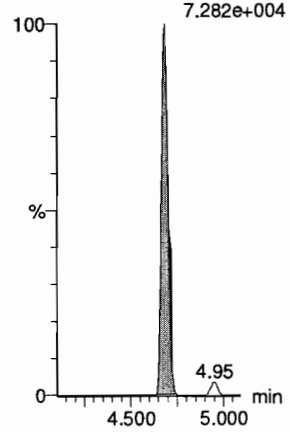
13C8-PFOSA



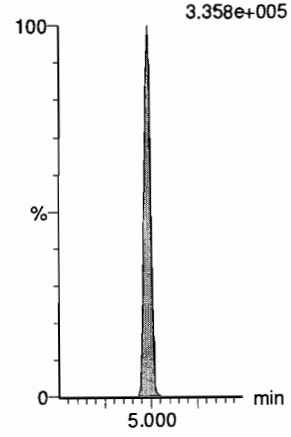
13C8-PFOS



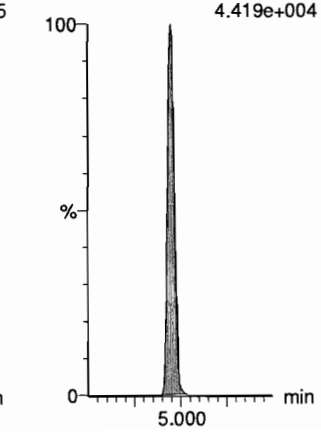
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

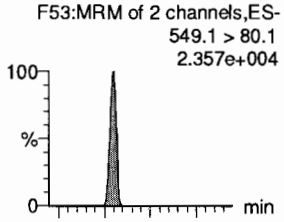


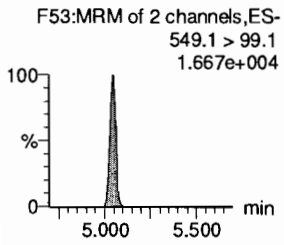
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

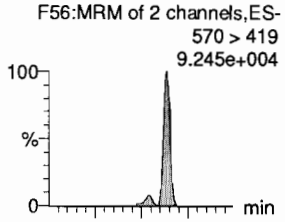
Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

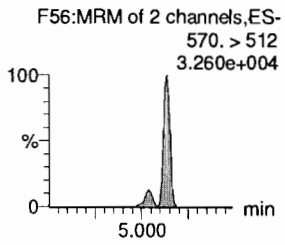
PFNS



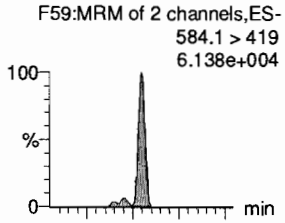


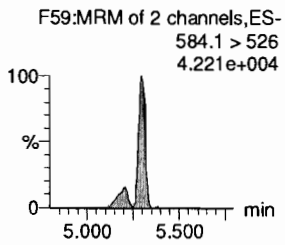
L-MeFOSAA



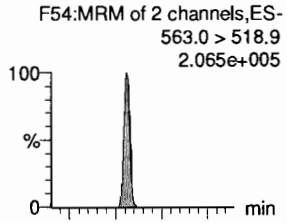


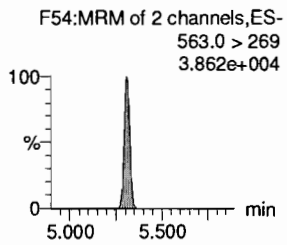
L-EtFOSAA



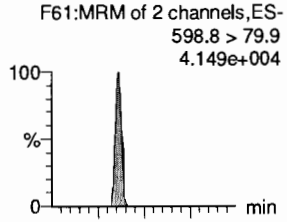


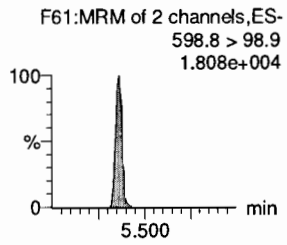
PFUdA



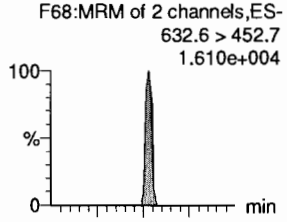


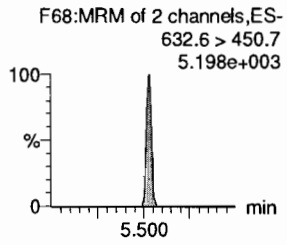
PFDS



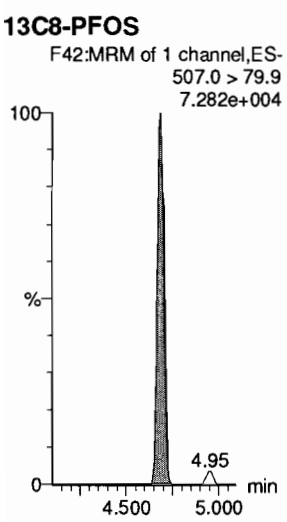


11Cl-PF30UdS

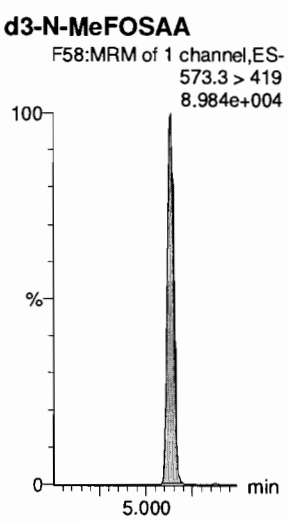




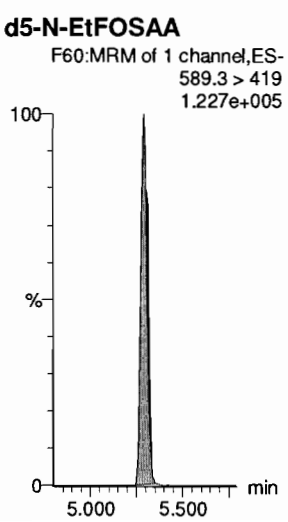
13C8-PFOS



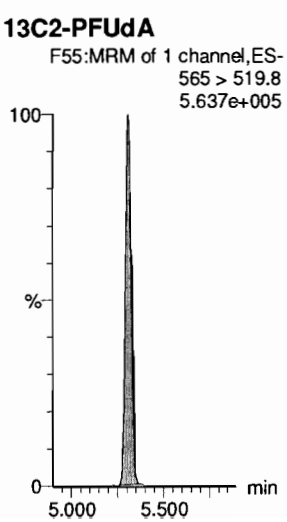
d3-N-MeFOSAA



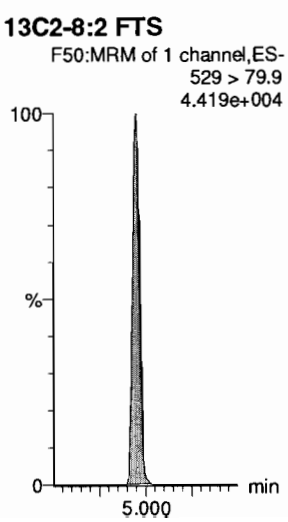
d5-N-EtFOSAA



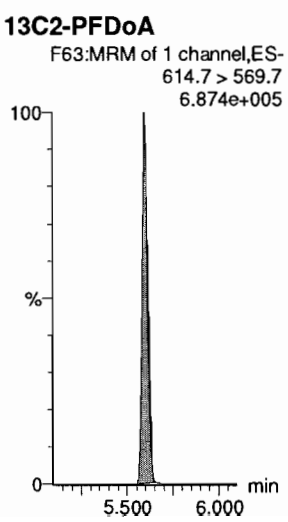
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA

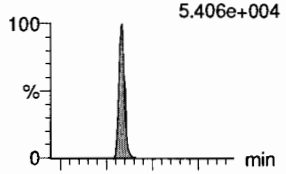


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

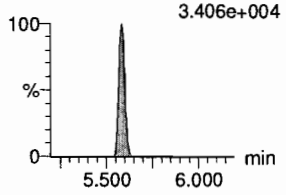
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

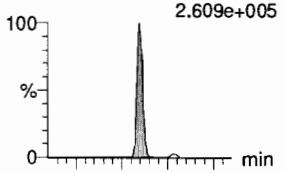
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
5.406e+004



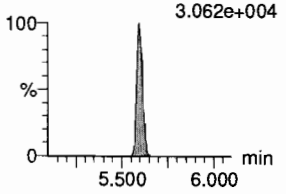
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.406e+004



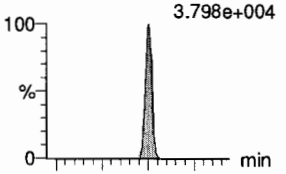
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.609e+005



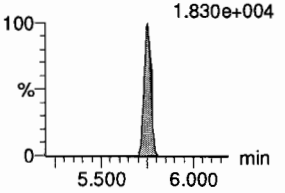
F62:MRM of 4 channels,ES-
612.9 > 318.8
3.062e+004



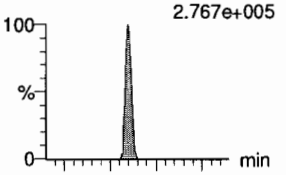
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
3.798e+004



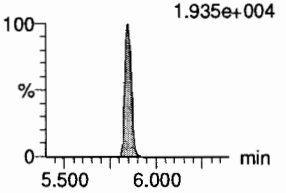
F43:MRM of 2 channels,ES-
512.1 > 219
1.830e+004



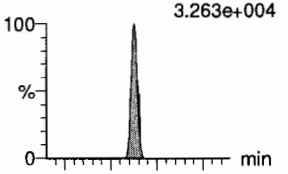
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.767e+005



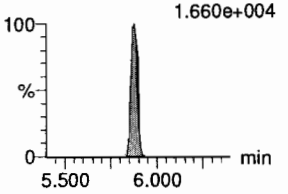
F70:MRM of 2 channels,ES-
662.9 > 319
1.935e+004



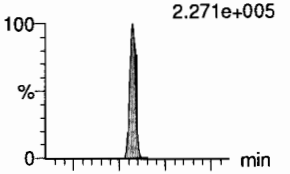
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
3.263e+004



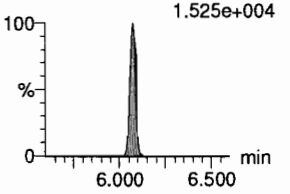
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.660e+004



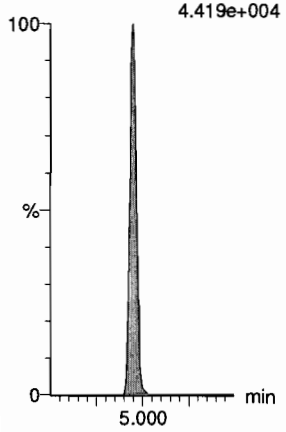
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
2.271e+005



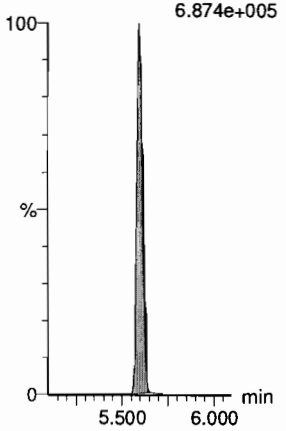
F72:MRM of 2 channels,ES-
713. > 369.0
1.525e+004



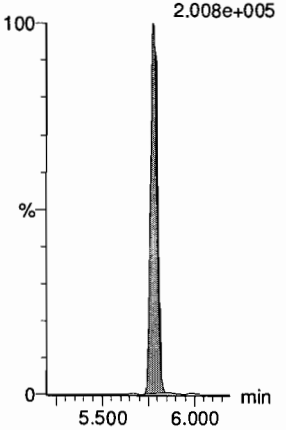
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.419e+004



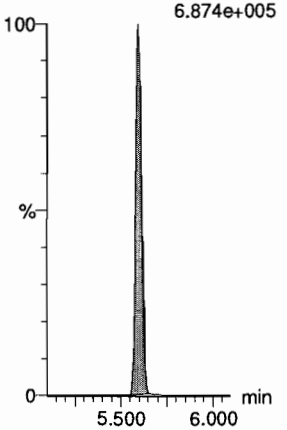
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.874e+005



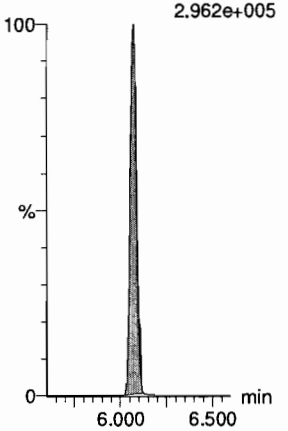
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
2.008e+005



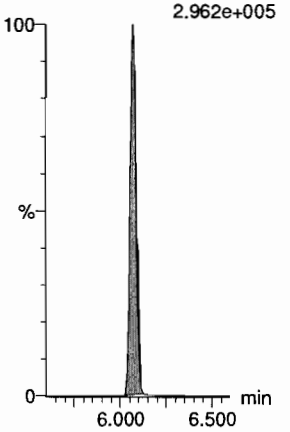
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.874e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.962e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.962e+005

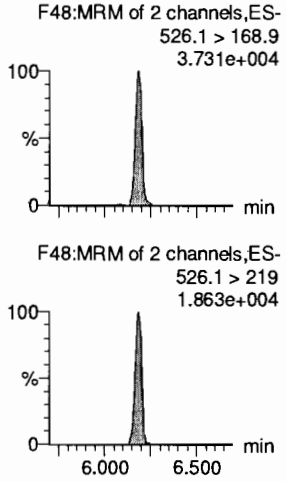


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

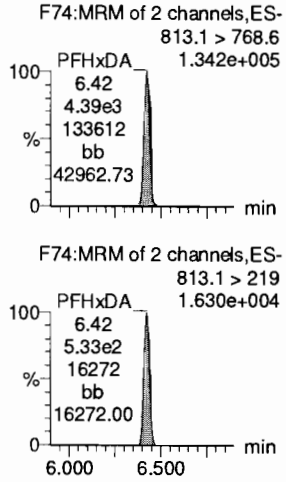
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

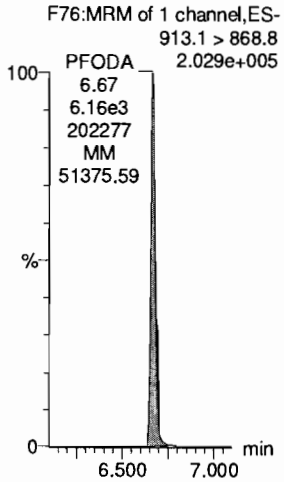
N-EtFOSA



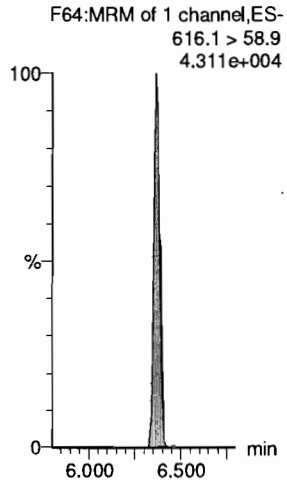
PFHxDA



PFODA



N-MeFOSE



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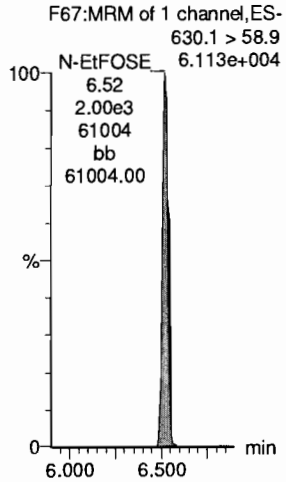
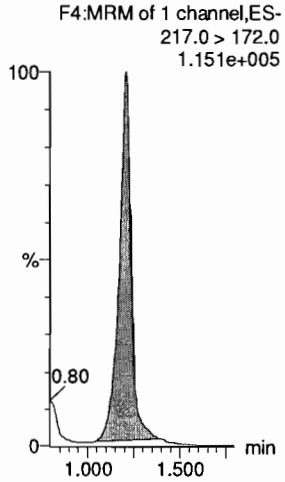
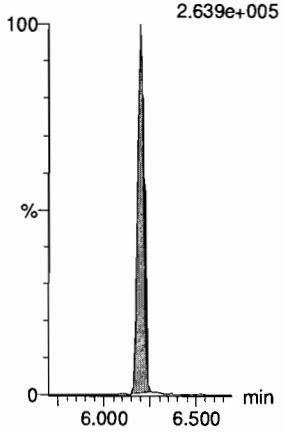


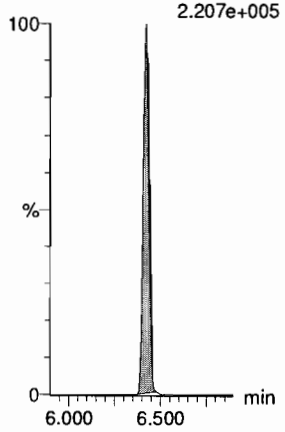
13C4-PFBA



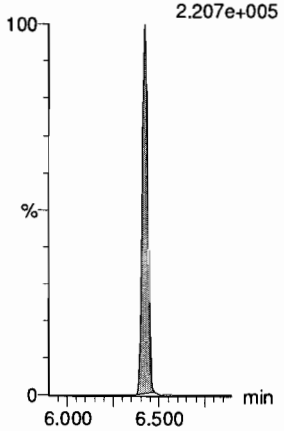
d5-N-ETFOSA



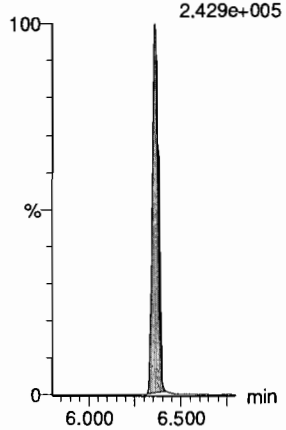
13C2-PFHxDA



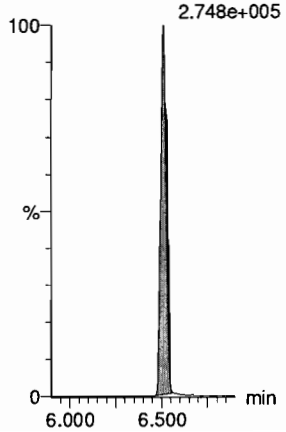
13C2-PFHxDA



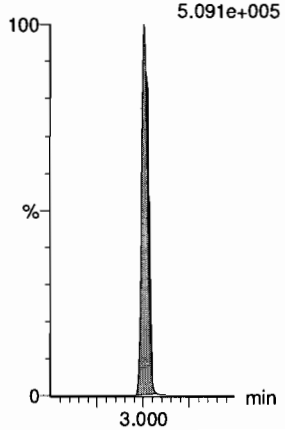
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

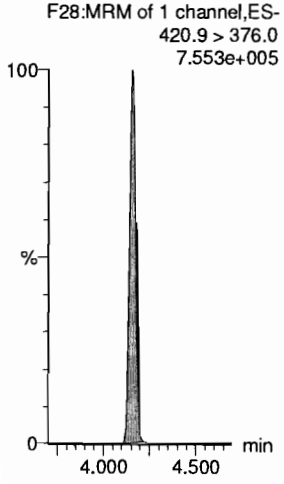


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

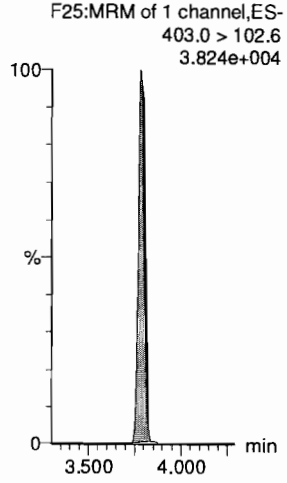
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_8, Date: 16-Jul-2019, Time: 17:48:13, ID: ST190716M2-5 PFC CS2 19G1105, Description: PFC CS2 19G1105

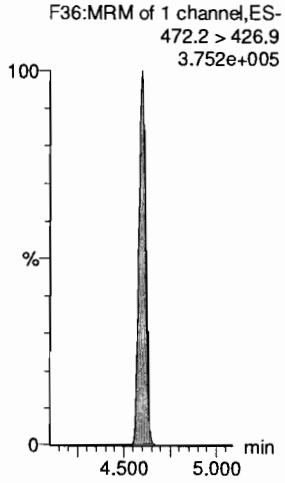
13C8-PFOA



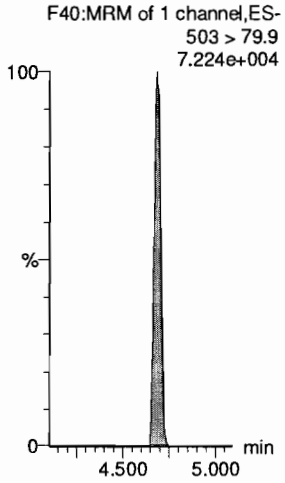
18O2-PFHxS



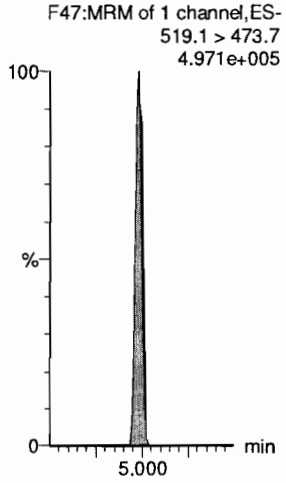
13C9-PFNA



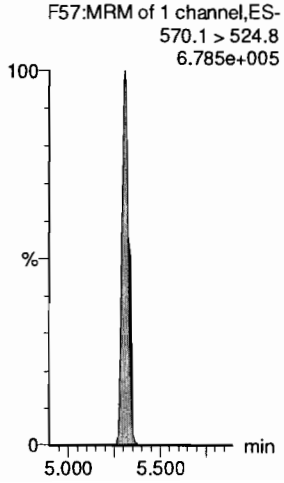
13C4-PFOS



13C6-PFDA



13C7-PFUdA

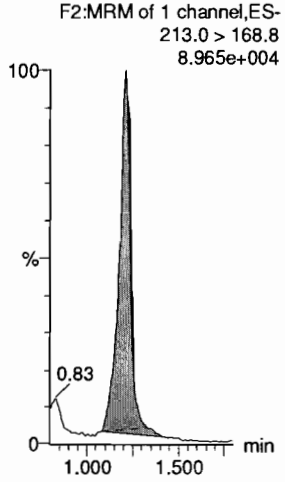


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

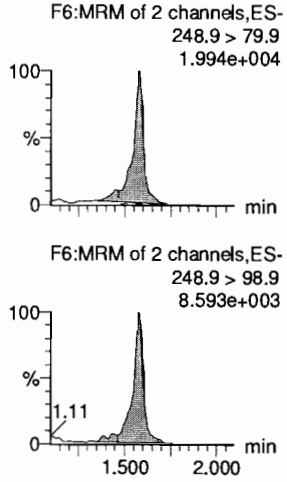
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

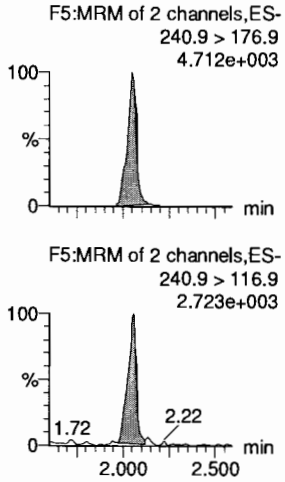
PFBA



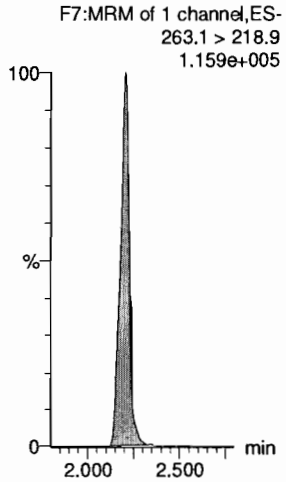
PFPrS



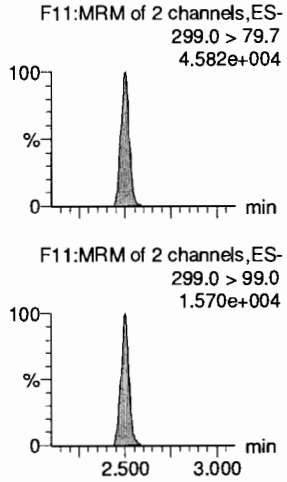
3:3 FTCA



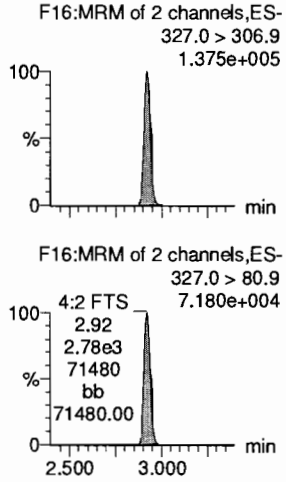
PFPeA



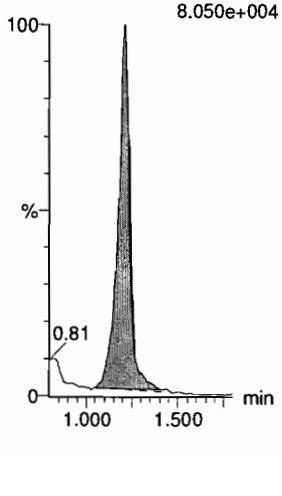
PFBS



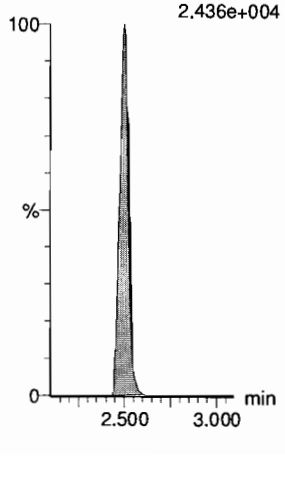
4:2 FTS



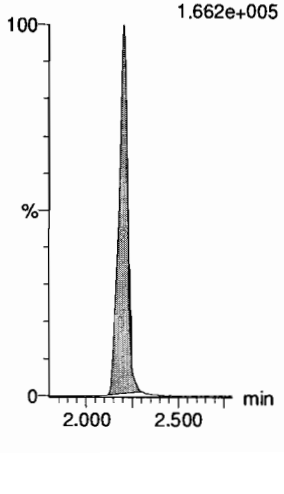
13C3-PFBA



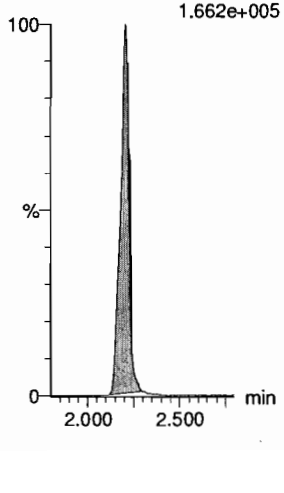
13C3-PFBS



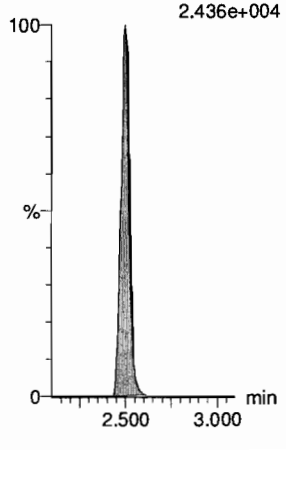
13C3-PFPeA



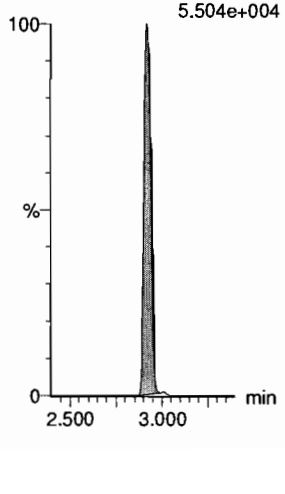
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

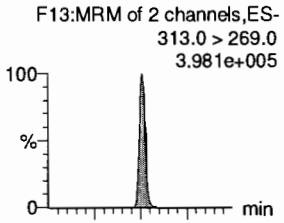


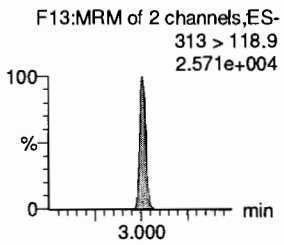
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

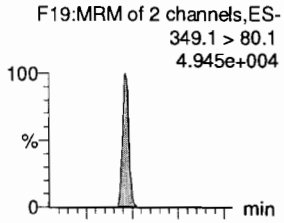
Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

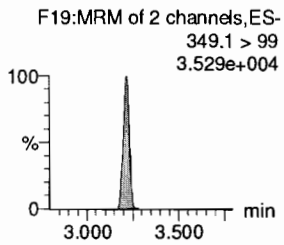
PFHxA



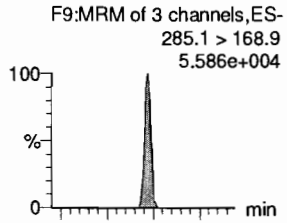


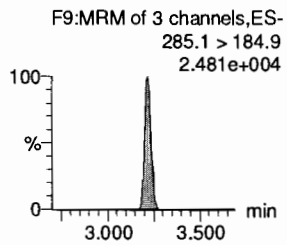
PFPeS



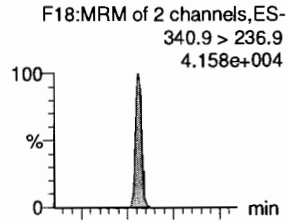


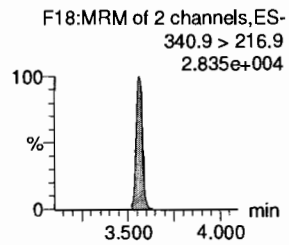
HFPO-DA



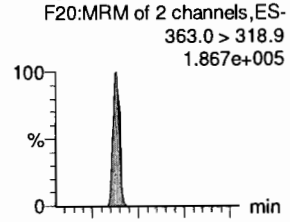


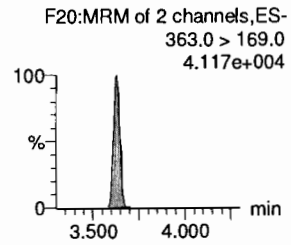
5:3 FTCA



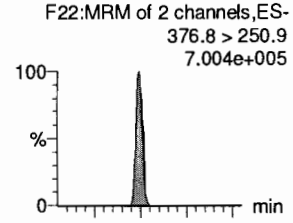


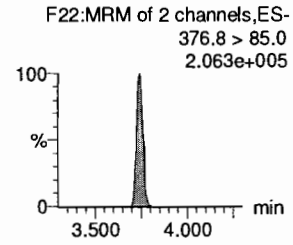
PFHpA



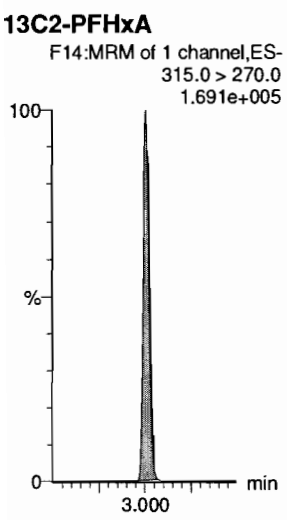


ADONA

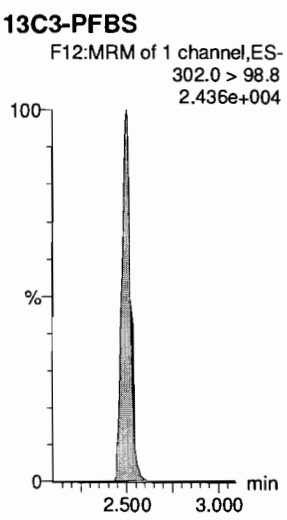




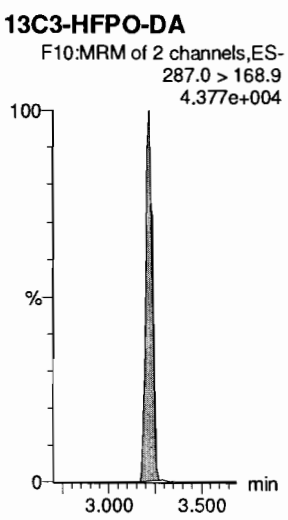
13C2-PFHxA



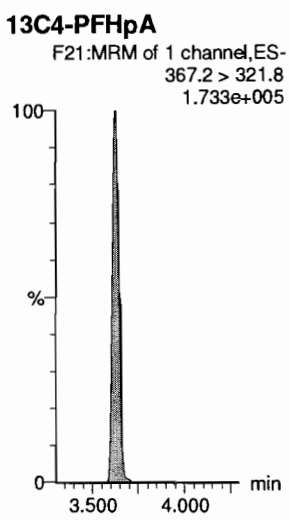
13C3-PFBS



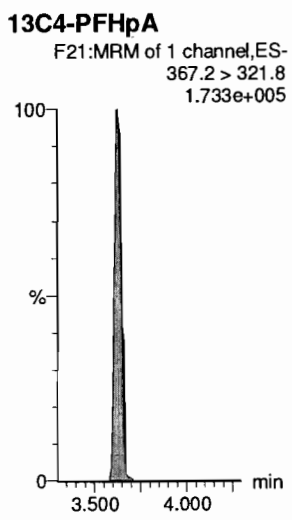
13C3-HFPO-DA



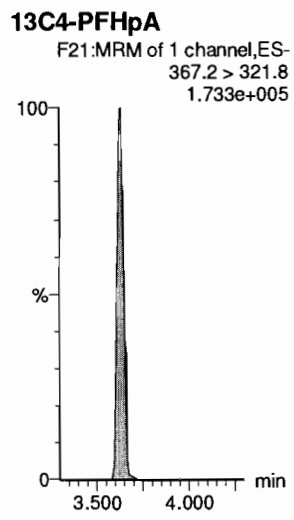
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

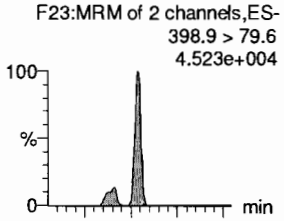


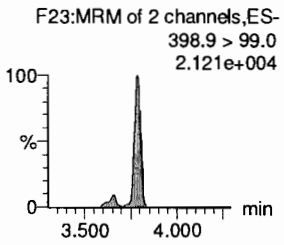
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

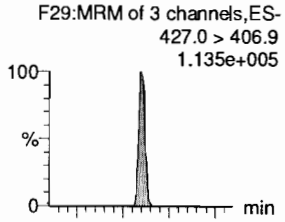
Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

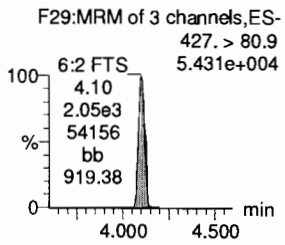
L-PFHxS



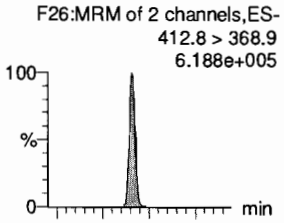


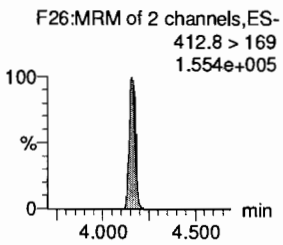
6:2 FTS



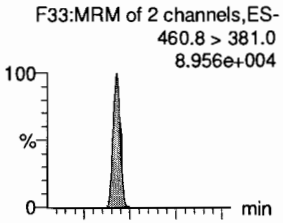


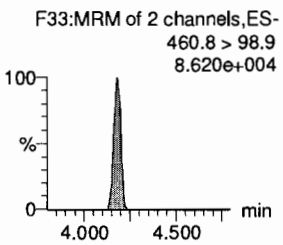
L-PFOA



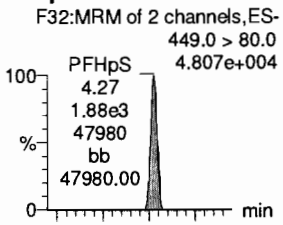


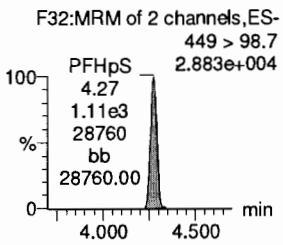
PFEChS



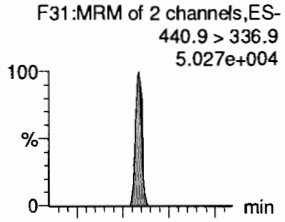


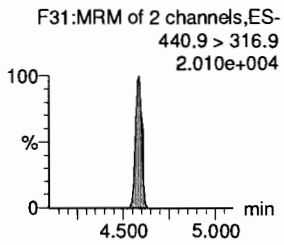
PFHpS



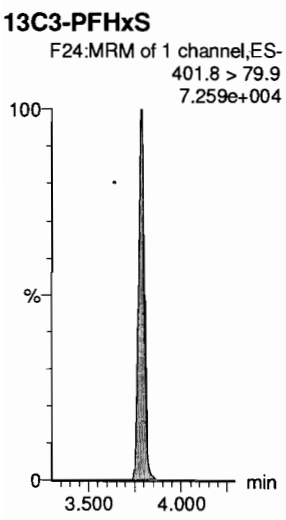


7:3 FTCA

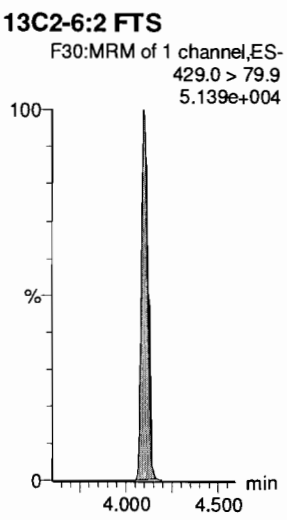




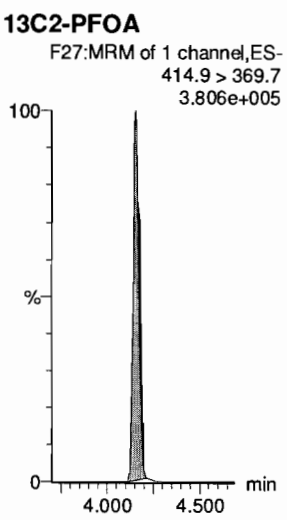
13C3-PFHxS



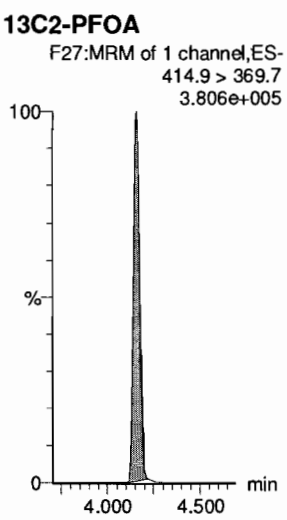
13C2-6:2 FTS



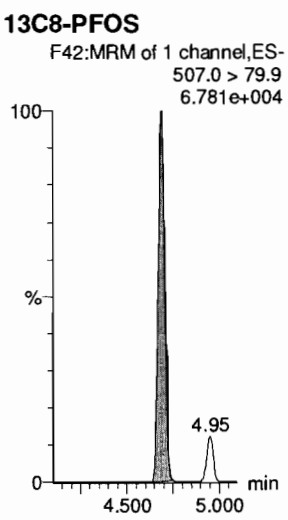
13C2-PFOA



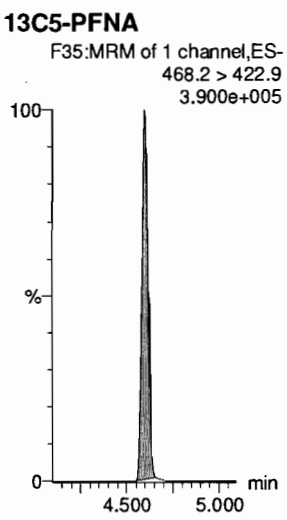
13C2-PFOA



13C8-PFOS



13C5-PFNA

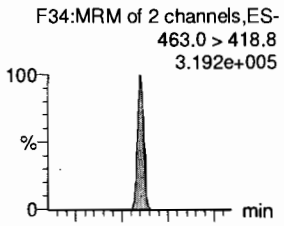


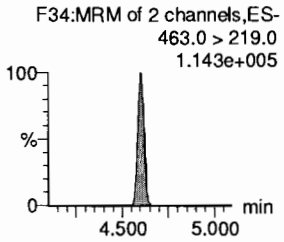
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

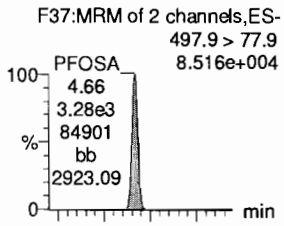
Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

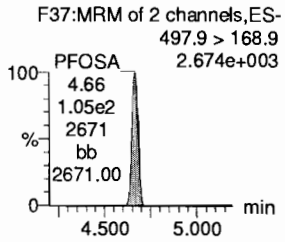
PFNA



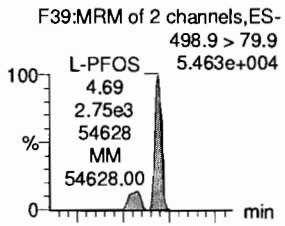


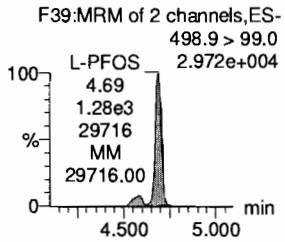
PFOSA



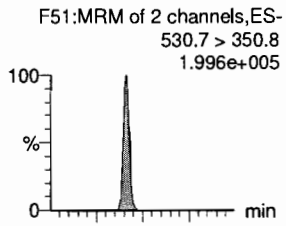


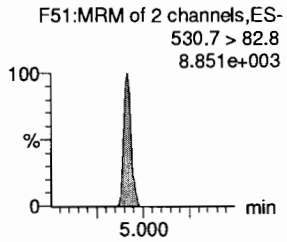
L-PFOS



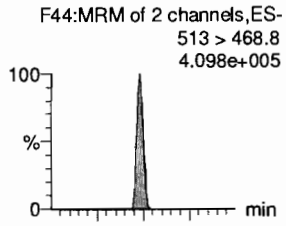


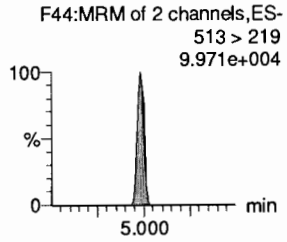
9Cl-PF30NS



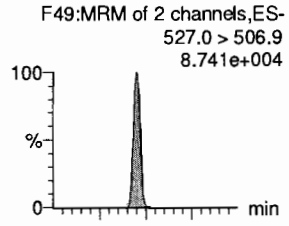


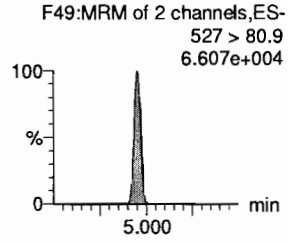
PFDA



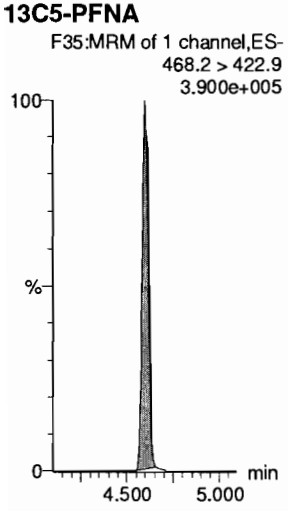


8:2 FTS

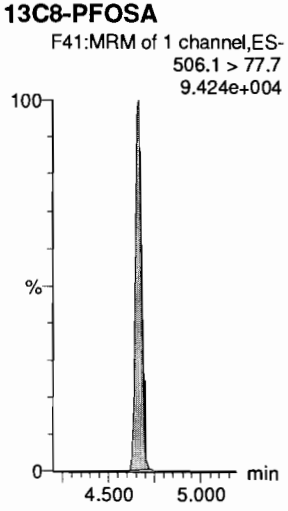




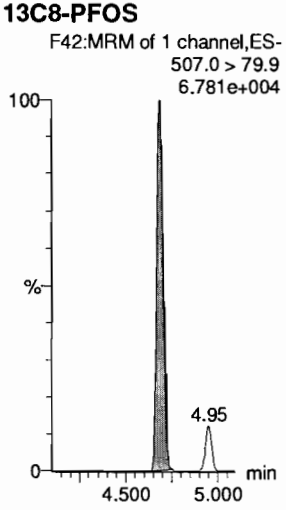
13C5-PFNA



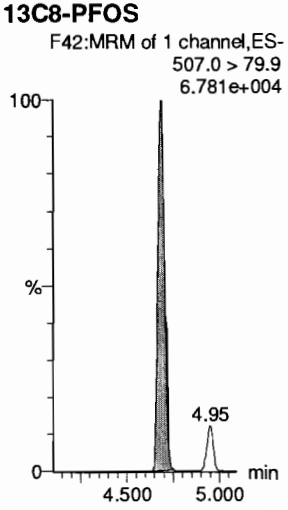
13C8-PFOSA



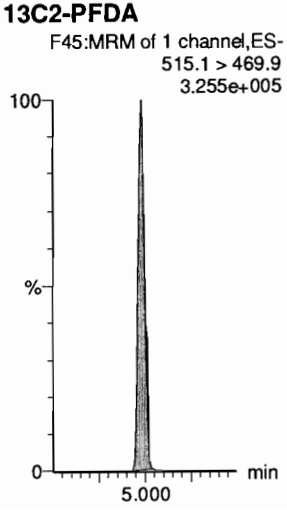
13C8-PFOS



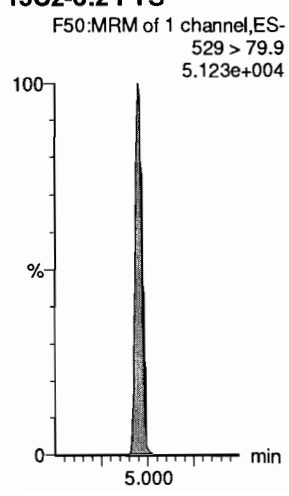
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

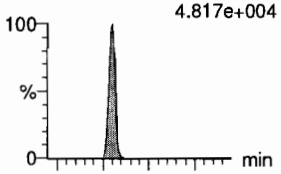


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

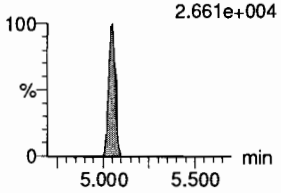
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

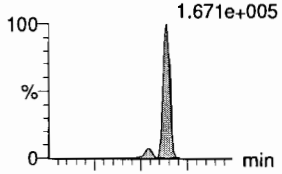
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
4.817e+004



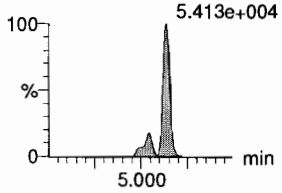
F53:MRM of 2 channels,ES-
549.1 > 99.1
2.661e+004



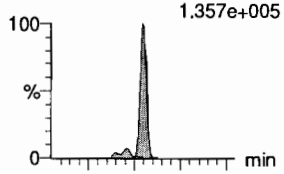
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
1.671e+005



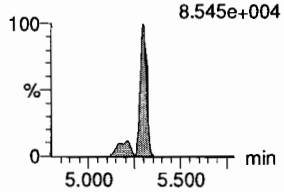
F56:MRM of 2 channels,ES-
570. > 512
5.413e+004



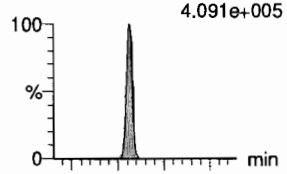
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
1.357e+005



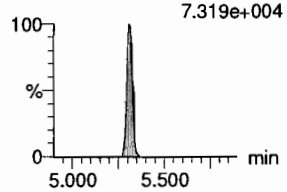
F59:MRM of 2 channels,ES-
584.1 > 526
8.545e+004



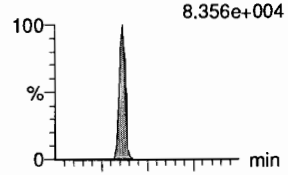
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
4.091e+005



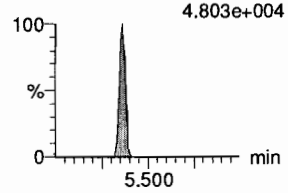
F54:MRM of 2 channels,ES-
563.0 > 269
7.319e+004



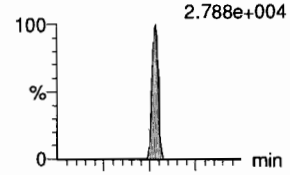
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
8.356e+004



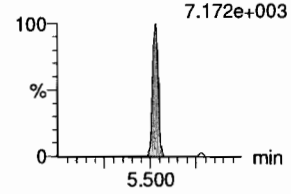
F61:MRM of 2 channels,ES-
598.8 > 98.9
4.803e+004



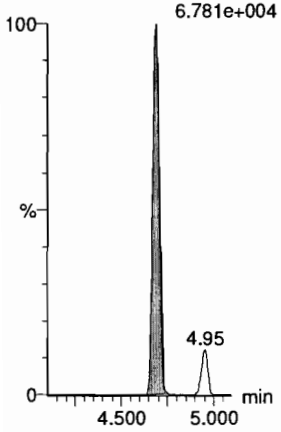
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
2.788e+004



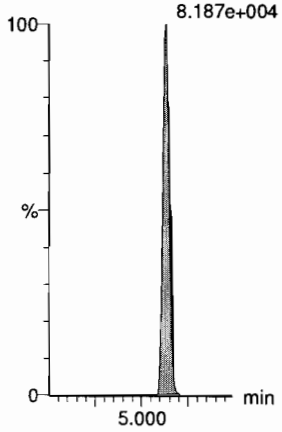
F68:MRM of 2 channels,ES-
632.6 > 450.7
7.172e+003



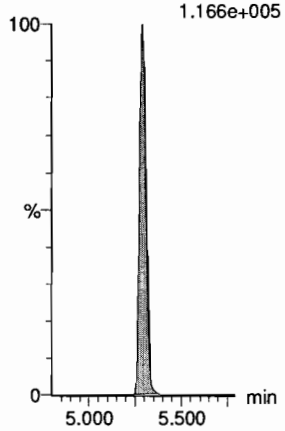
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.781e+004



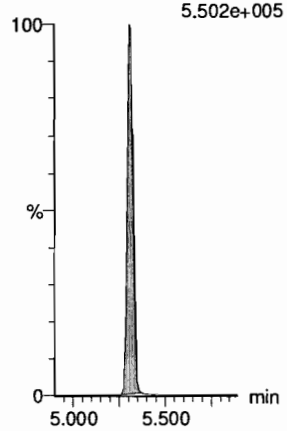
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
8.187e+004



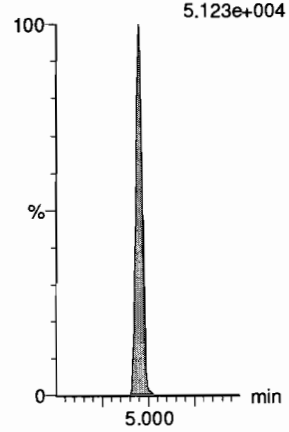
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.166e+005



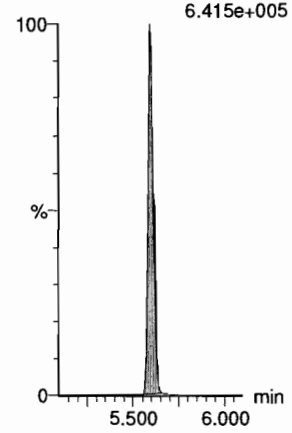
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.502e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
5.123e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.415e+005

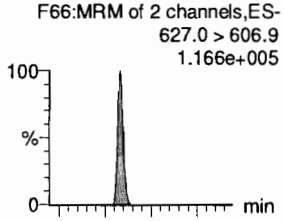


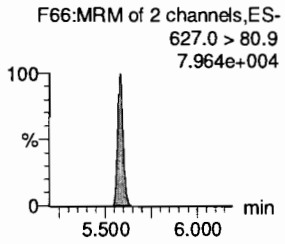
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

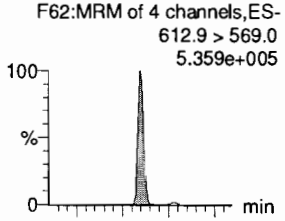
Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

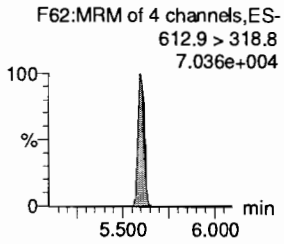
10:2 FTS



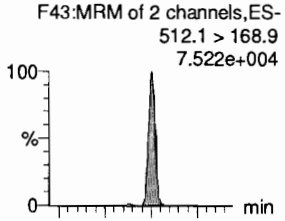


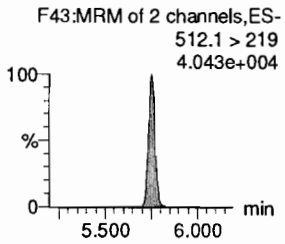
PFDoA



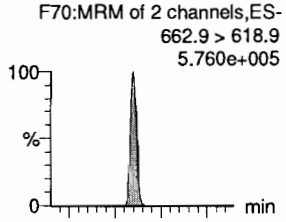


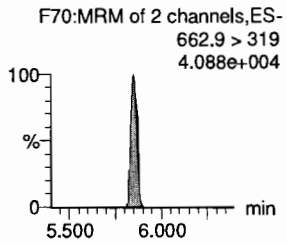
N-MeFOSA



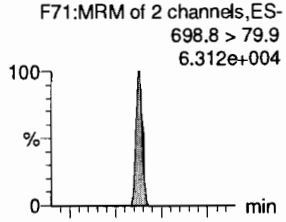


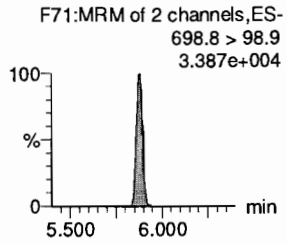
PFTrDA



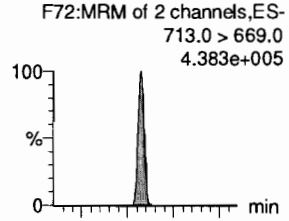


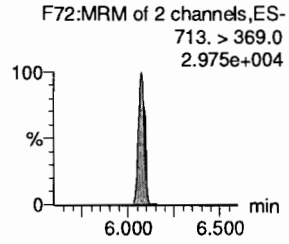
PFDoS



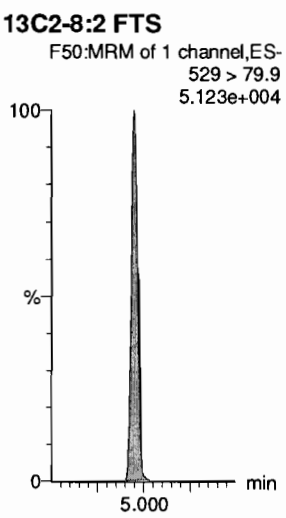


PFTeDA

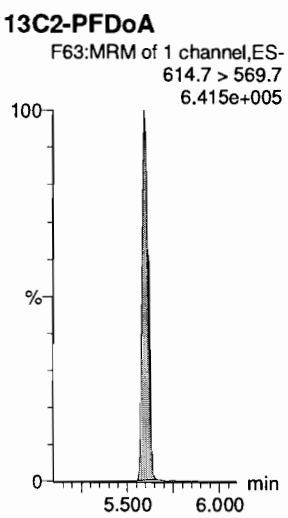




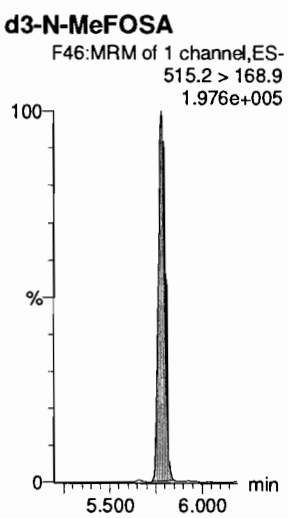
13C2-8:2 FTS



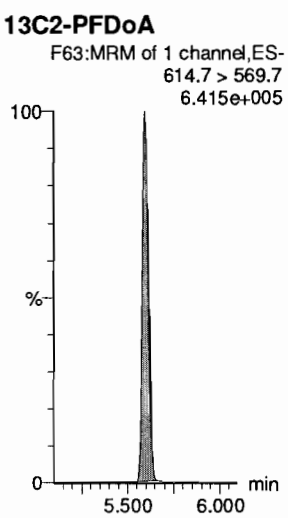
13C2-PFDoA



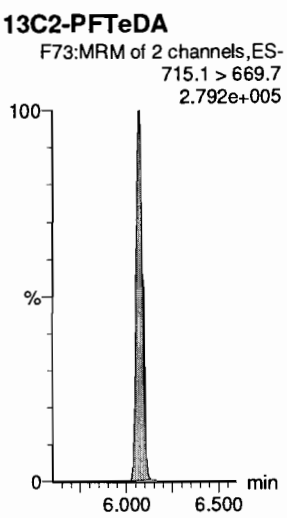
d3-N-MeFOSA



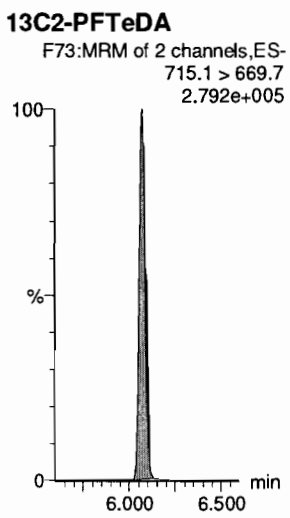
13C2-PFDoA



13C2-PFTeDA



13C2-PFTeDA

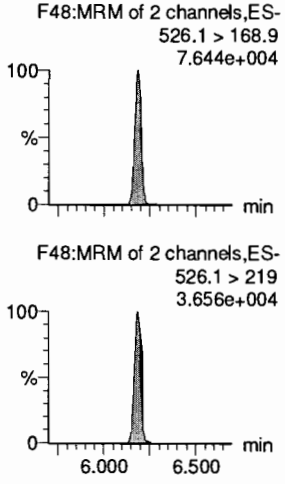


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

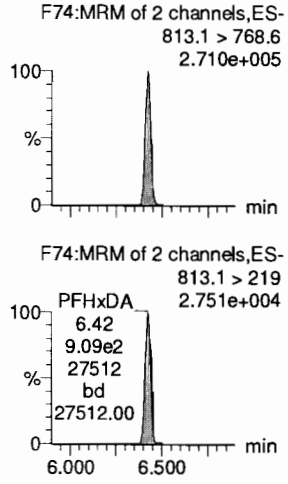
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

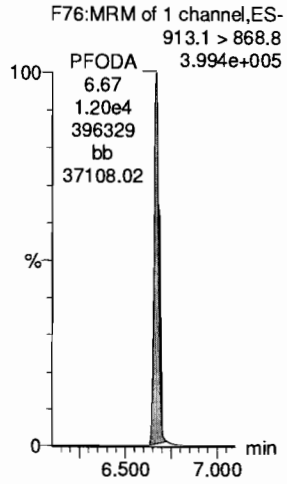
N-EtFOSA



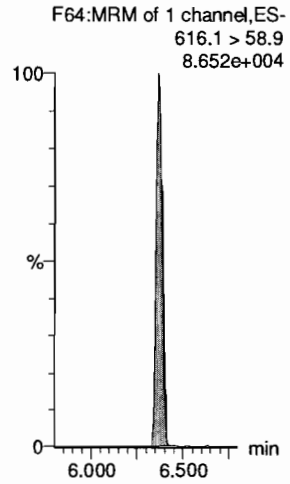
PFHxDA



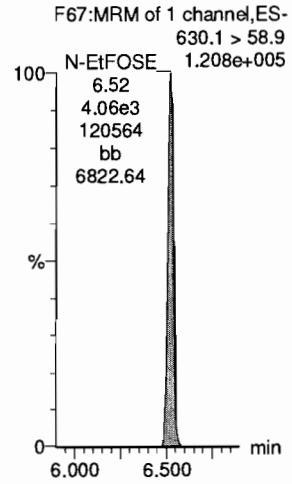
PFODA



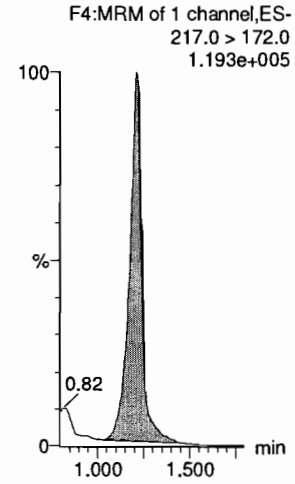
N-MeFOSE



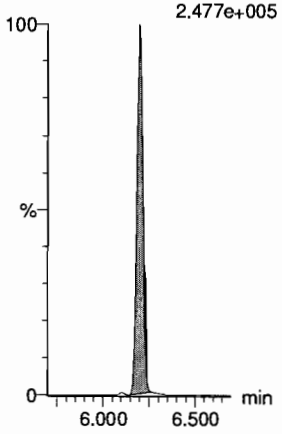
N-EtFOSE



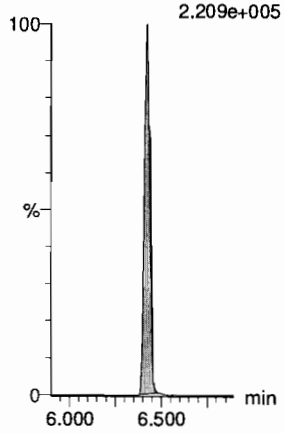
13C4-PFBA



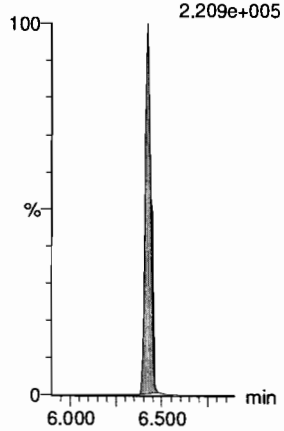
d5-N-ETFOSA



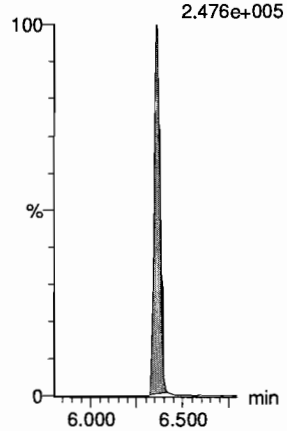
13C2-PFHxDA



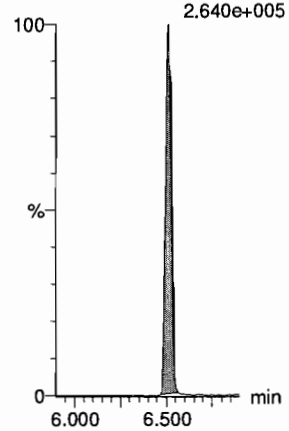
13C2-PFHxDA



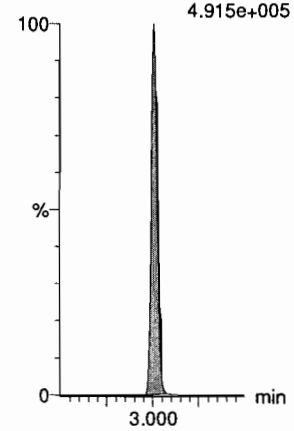
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

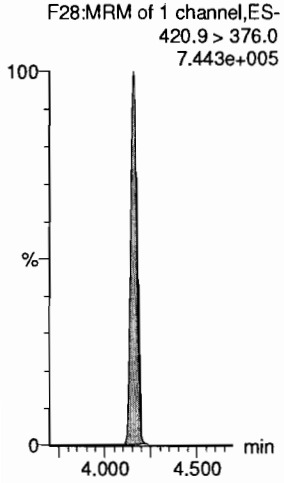


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

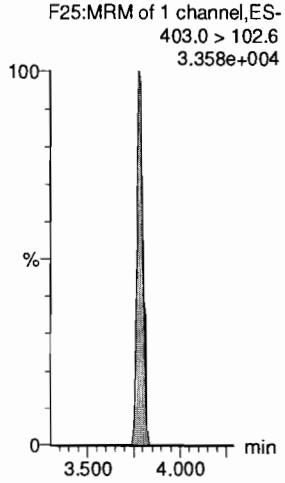
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_9, Date: 16-Jul-2019, Time: 17:58:51, ID: ST190716M2-6 PFC CS3 19G1106, Description: PFC CS3 19G1106

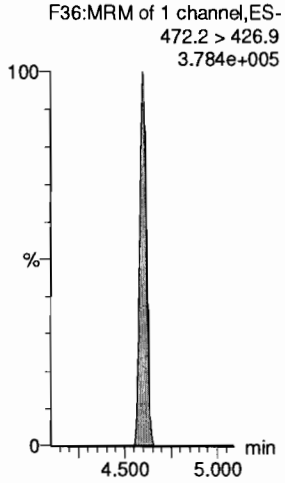
13C8-PFOA



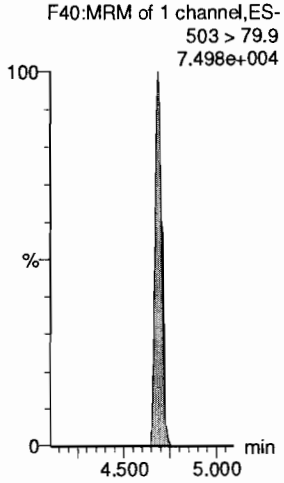
18O2-PFHxS



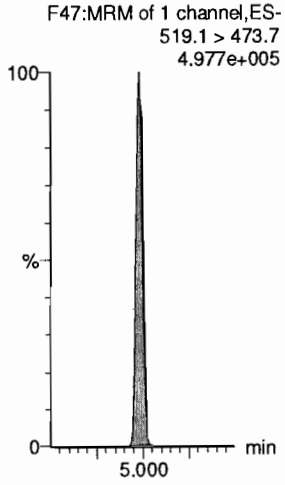
13C9-PFNA



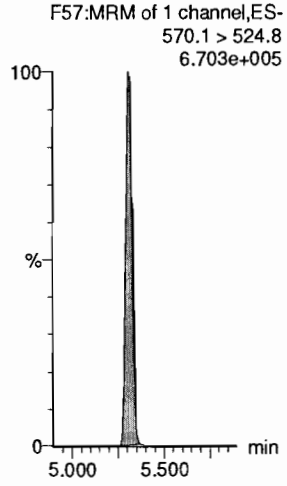
13C4-PFOS



13C6-PFDA



13C7-PFUdA

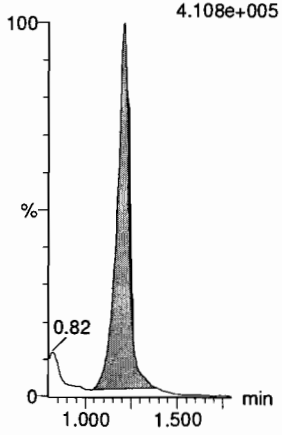


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

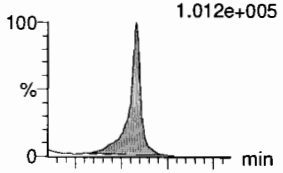
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

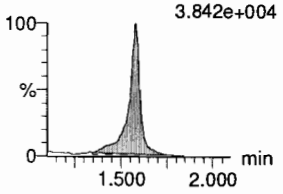
PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
4.108e+005



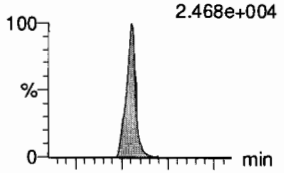
PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.9
1.012e+005



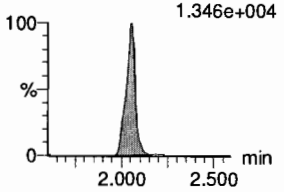
F6:MRM of 2 channels,ES-
248.9 > 98.9
3.842e+004



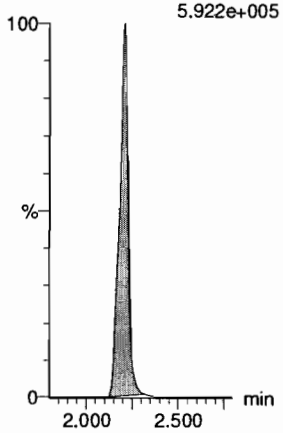
3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
2.468e+004



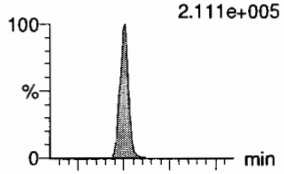
F5:MRM of 2 channels,ES-
240.9 > 116.9
1.346e+004



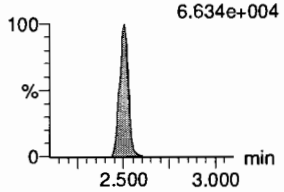
PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
5.922e+005



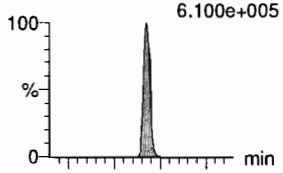
PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
2.111e+005



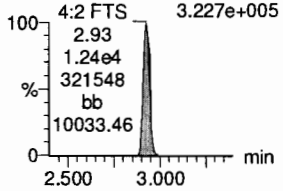
F11:MRM of 2 channels,ES-
299.0 > 99.0
6.634e+004



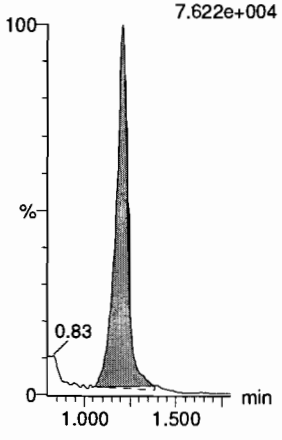
4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 306.9
6.100e+005



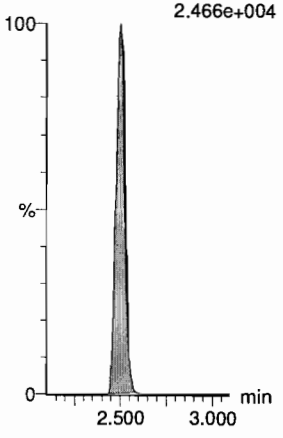
F16:MRM of 2 channels,ES-
327.0 > 80.9
3.227e+005



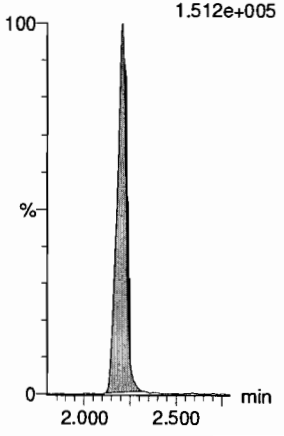
13C3-PFBA
F3:MRM of 1 channel,ES-
216.1 > 171.8
7.622e+004



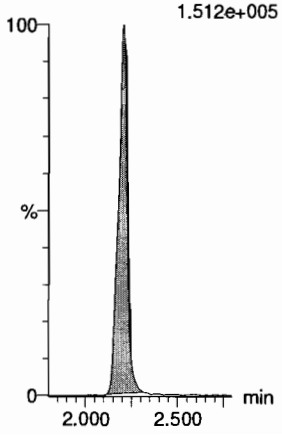
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.466e+004



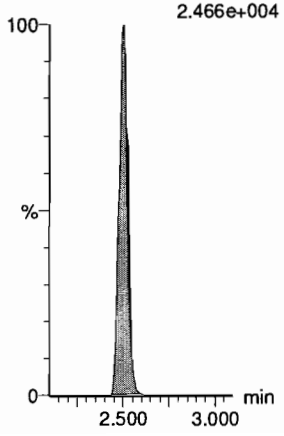
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.512e+005



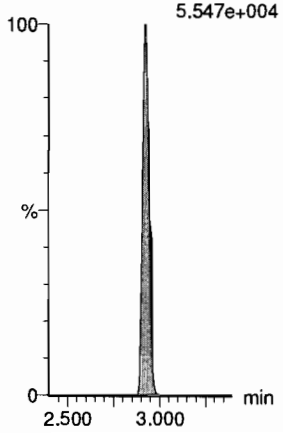
13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.512e+005



13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.466e+004



13C2-4:2 FTS
F17:MRM of 2 channels,ES-
329.0 > 79.9
5.547e+004

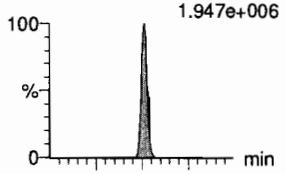


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

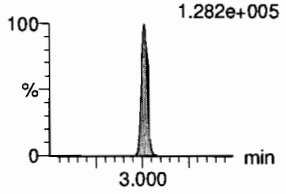
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

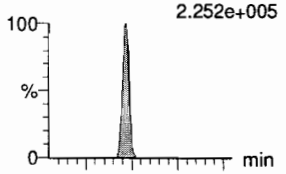
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
1.947e+006



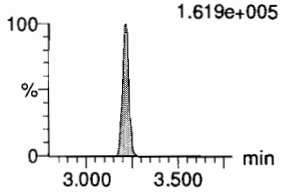
F13:MRM of 2 channels,ES-
313 > 118.9
1.282e+005



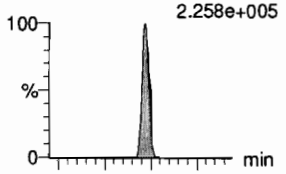
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
2.252e+005



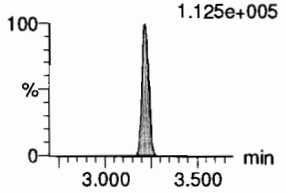
F19:MRM of 2 channels,ES-
349.1 > 99
1.619e+005



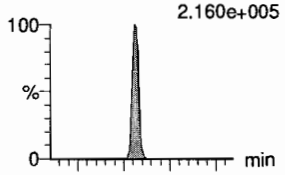
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
2.258e+005



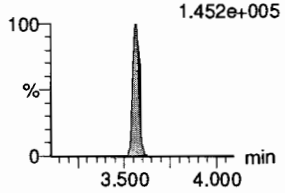
F9:MRM of 3 channels,ES-
285.1 > 184.9
1.125e+005



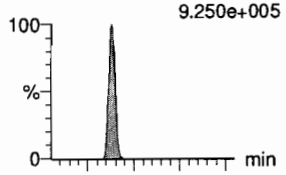
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
2.160e+005



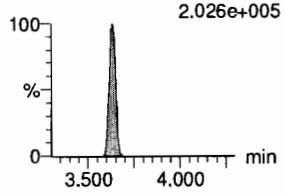
F18:MRM of 2 channels,ES-
340.9 > 216.9
1.452e+005



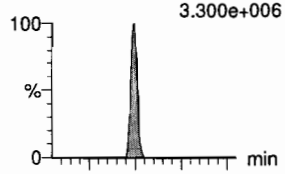
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
9.250e+005



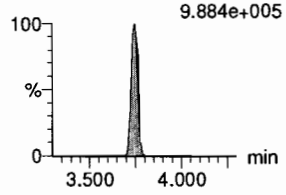
F20:MRM of 2 channels,ES-
363.0 > 169.0
2.026e+005



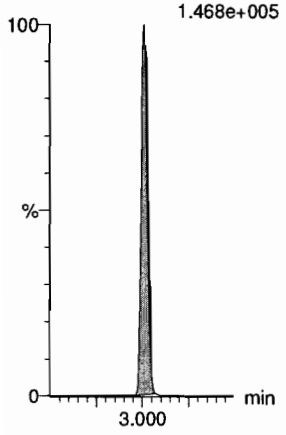
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
3.300e+006



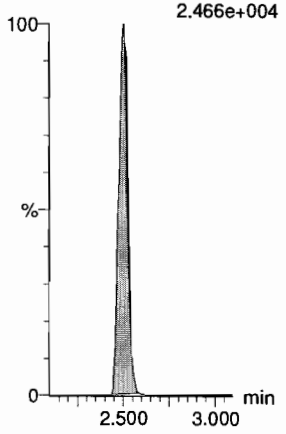
F22:MRM of 2 channels,ES-
376.8 > 85.0
9.884e+005



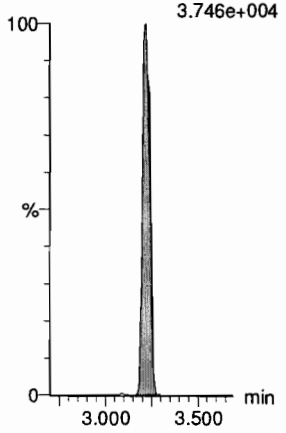
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.468e+005



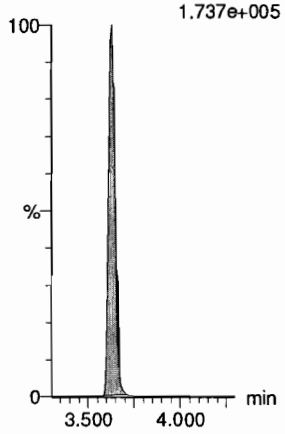
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.466e+004



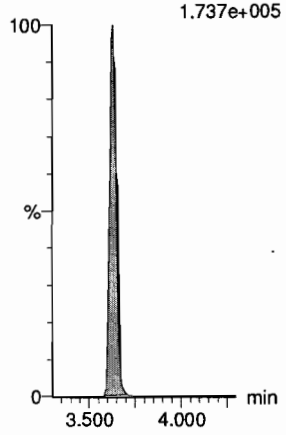
13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
3.746e+004



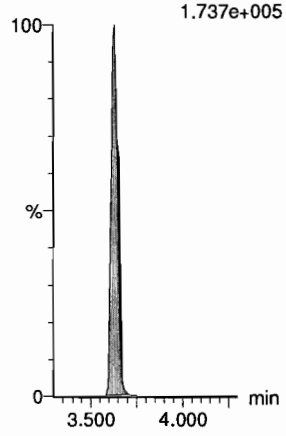
13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.737e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.737e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.737e+005

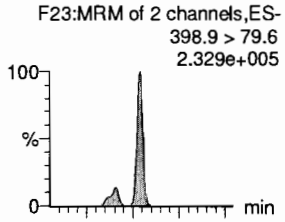


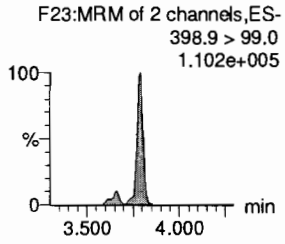
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

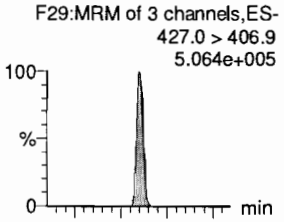
Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

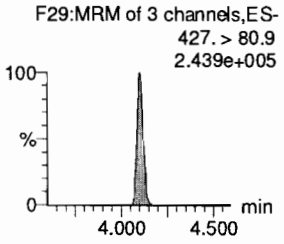
L-PFHxS



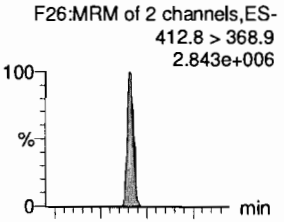


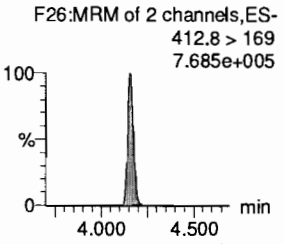
6:2 FTS



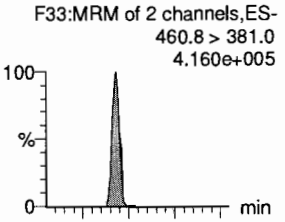


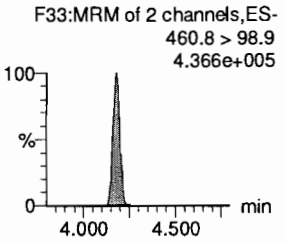
L-PFOA



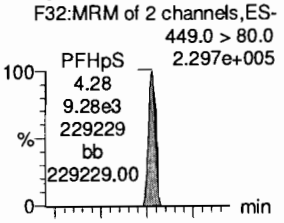


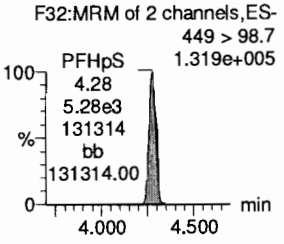
PFEChS



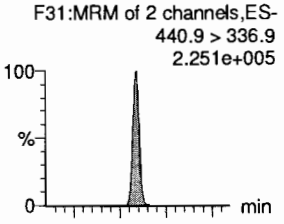


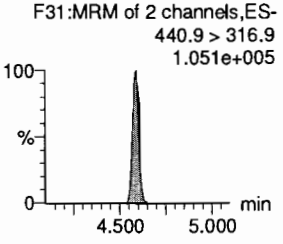
PFHpS



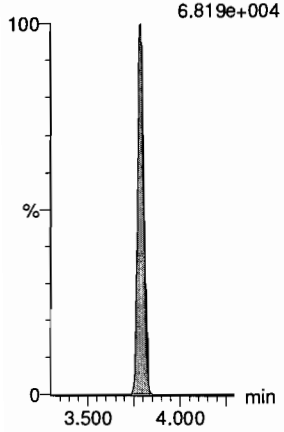


7:3 FTCA

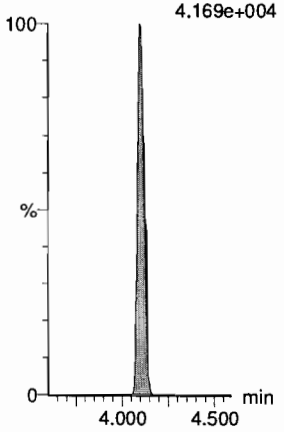




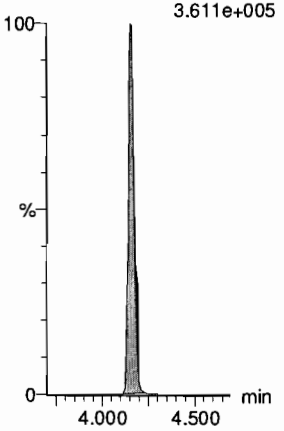
13C3-PFHxS



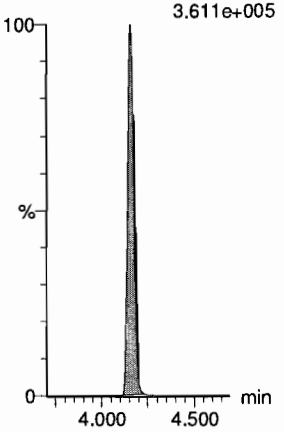
13C2-6:2 FTS



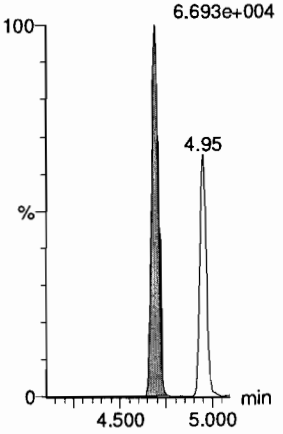
13C2-PFOA



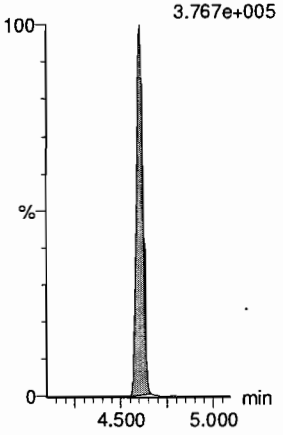
13C2-PFOA



13C8-PFOS



13C5-PFNA

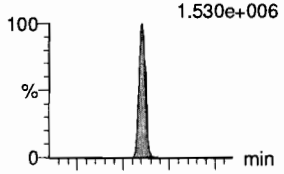


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

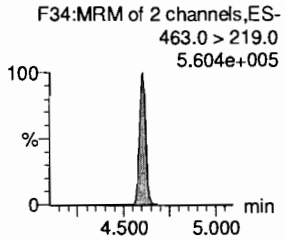
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

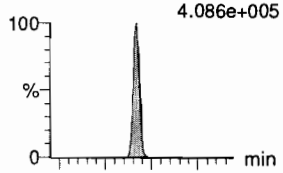
PFNA
F34:MRM of 2 channels,ES-
463.0 > 418.8
1.530e+006



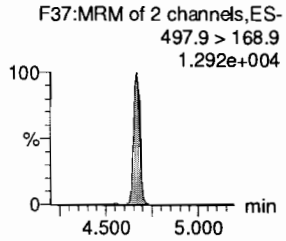
F34:MRM of 2 channels,ES-
463.0 > 219.0
5.604e+005



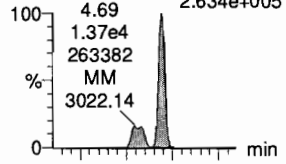
PFOSA
F37:MRM of 2 channels,ES-
497.9 > 77.9
4.086e+005



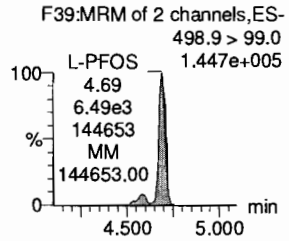
F37:MRM of 2 channels,ES-
497.9 > 168.9
1.292e+004



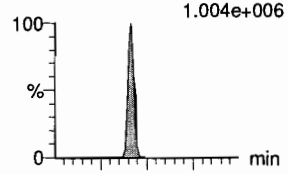
L-PFOS
F39:MRM of 2 channels,ES-
498.9 > 79.9
2.634e+005
L-PFOS
4.69
1.37e4
263382
MM
3022.14



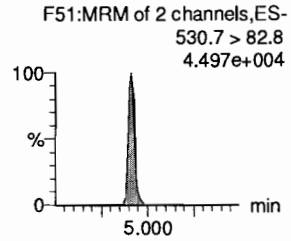
F39:MRM of 2 channels,ES-
498.9 > 99.0
1.447e+005
L-PFOS
4.69
6.49e3
144653
MM
144653.00



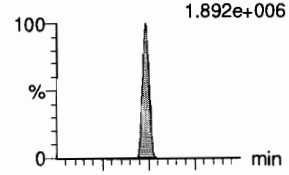
9Cl-PF30NS
F51:MRM of 2 channels,ES-
530.7 > 350.8
1.004e+006



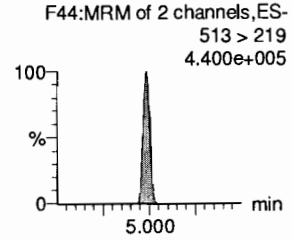
F51:MRM of 2 channels,ES-
530.7 > 82.8
4.497e+004



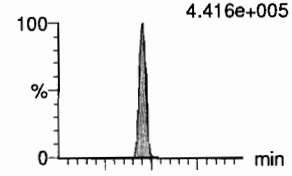
PFDA
F44:MRM of 2 channels,ES-
513 > 468.8
1.892e+006



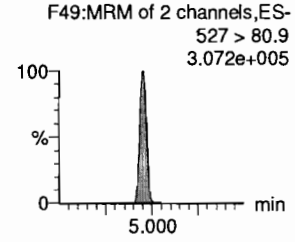
F44:MRM of 2 channels,ES-
513 > 219
4.400e+005



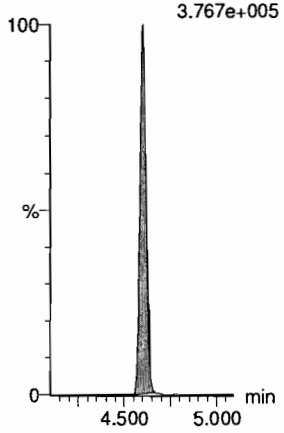
8:2 FTS
F49:MRM of 2 channels,ES-
527.0 > 506.9
4.416e+005



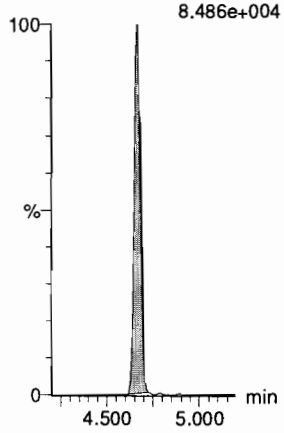
F49:MRM of 2 channels,ES-
527 > 80.9
3.072e+005



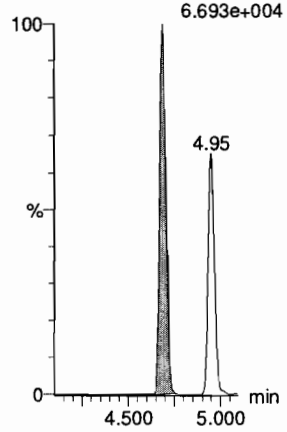
13C5-PFNA
F35:MRM of 1 channel,ES-
468.2 > 422.9
3.767e+005



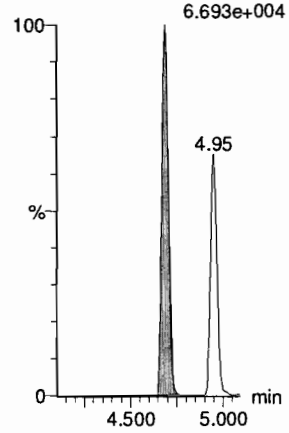
13C8-PFOSA
F41:MRM of 1 channel,ES-
506.1 > 77.7
8.486e+004



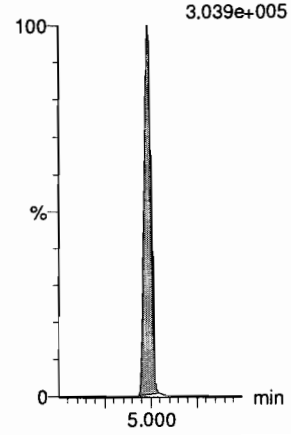
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.693e+004
4.95



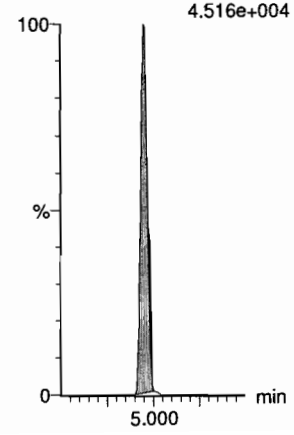
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.693e+004
4.95



13C2-PFDA
F45:MRM of 1 channel,ES-
515.1 > 469.9
3.039e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.516e+004

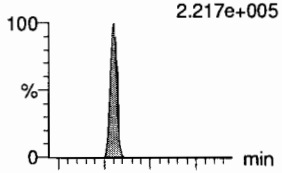


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

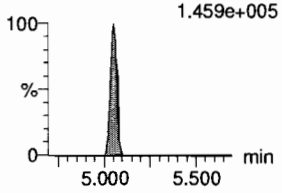
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

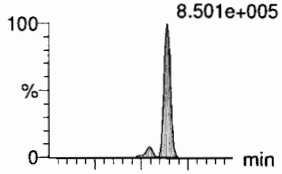
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
2.217e+005



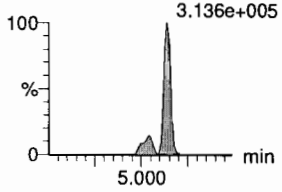
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.459e+005



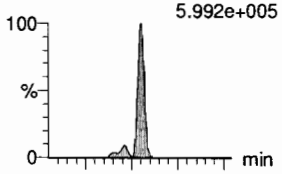
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
8.501e+005



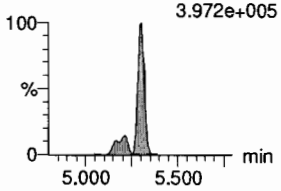
F56:MRM of 2 channels,ES-
570. > 512
3.136e+005



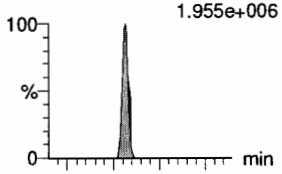
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
5.992e+005



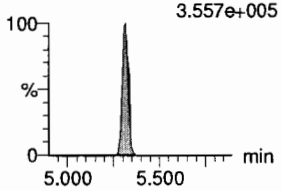
F59:MRM of 2 channels,ES-
584.1 > 526
3.972e+005



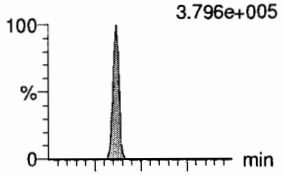
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.955e+006



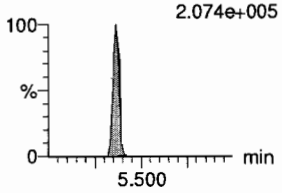
F54:MRM of 2 channels,ES-
563.0 > 269
3.557e+005



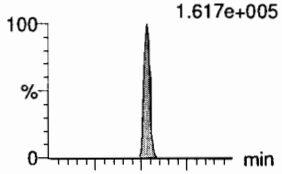
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
3.796e+005



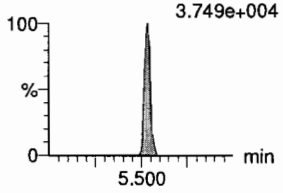
F61:MRM of 2 channels,ES-
598.8 > 98.9
2.074e+005



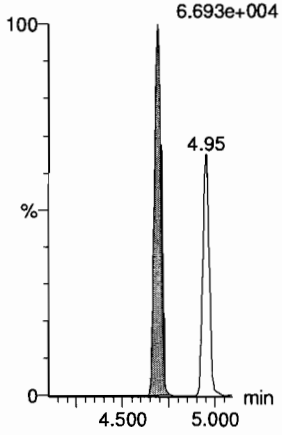
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.617e+005



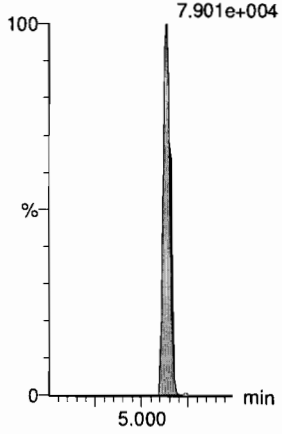
F68:MRM of 2 channels,ES-
632.6 > 450.7
3.749e+004



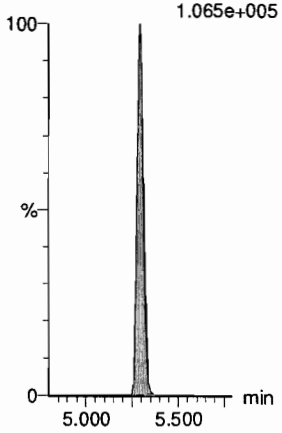
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
6.693e+004



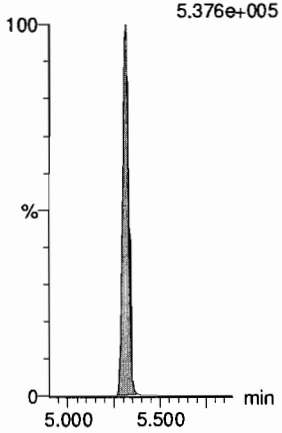
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
7.901e+004



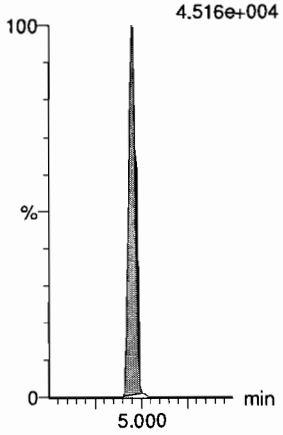
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
1.065e+005



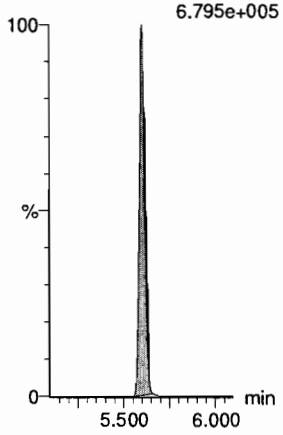
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
5.376e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.516e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.795e+005

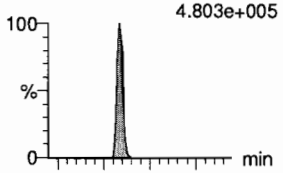


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

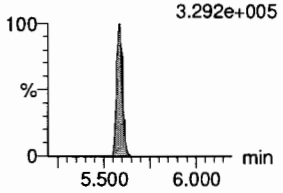
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

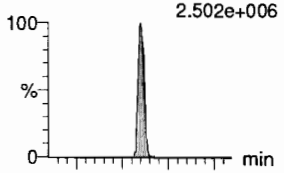
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
4.803e+005



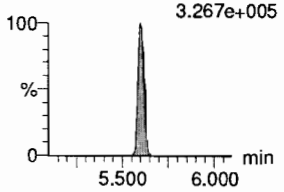
F66:MRM of 2 channels,ES-
627.0 > 80.9
3.292e+005



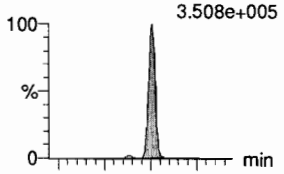
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
2.502e+006



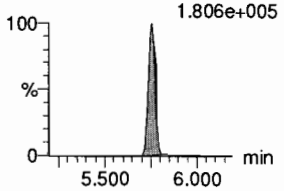
F62:MRM of 4 channels,ES-
612.9 > 318.8
3.267e+005



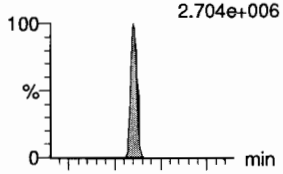
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
3.508e+005



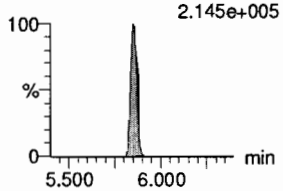
F43:MRM of 2 channels,ES-
512.1 > 219
1.806e+005



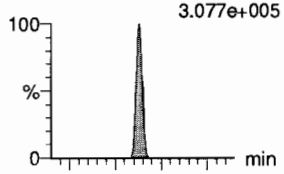
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
2.704e+006



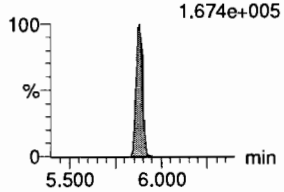
F70:MRM of 2 channels,ES-
662.9 > 319
2.145e+005



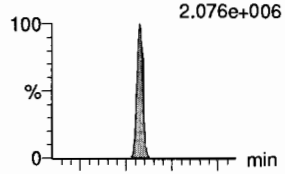
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
3.077e+005



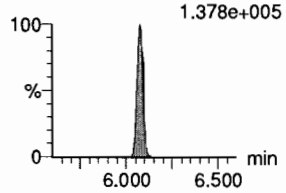
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.674e+005



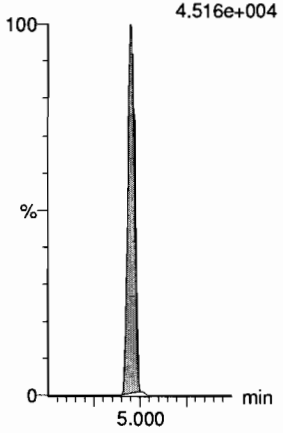
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
2.076e+006



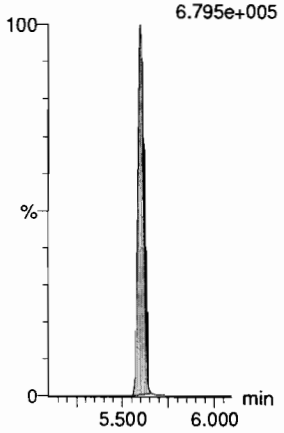
F72:MRM of 2 channels,ES-
713. > 369.0
1.378e+005



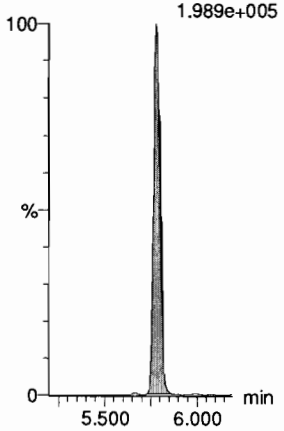
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
4.516e+004



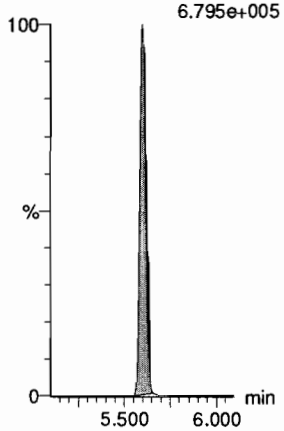
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.795e+005



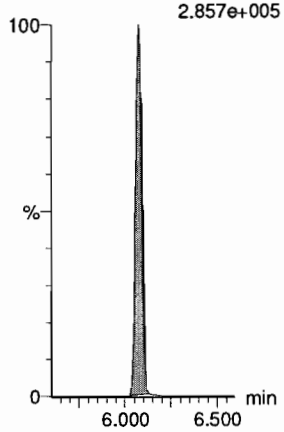
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
1.989e+005



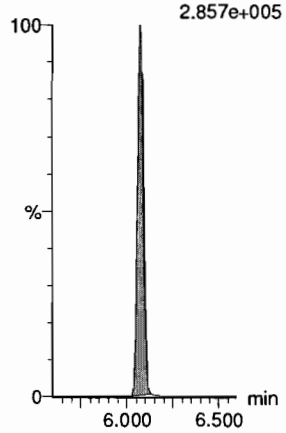
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.795e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.857e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.857e+005

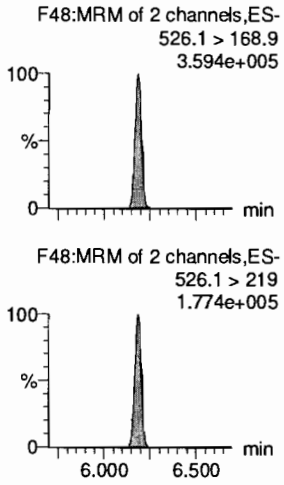


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

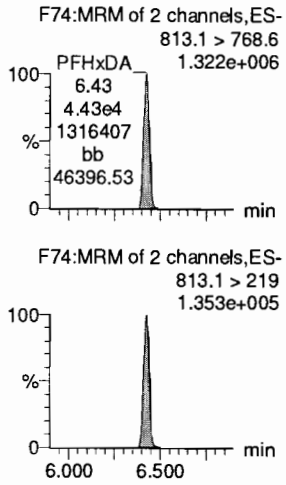
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

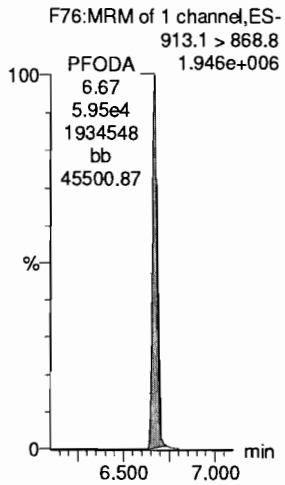
N-EtFOSA



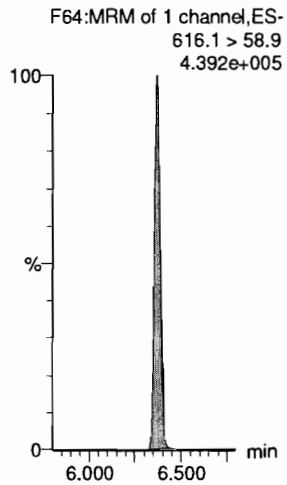
PFHxDA



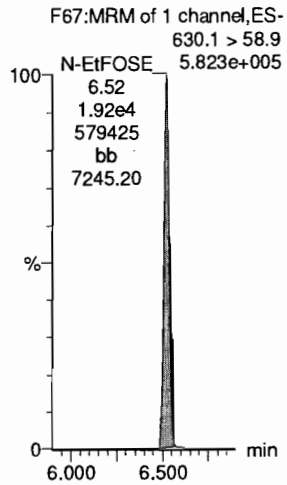
PFODA



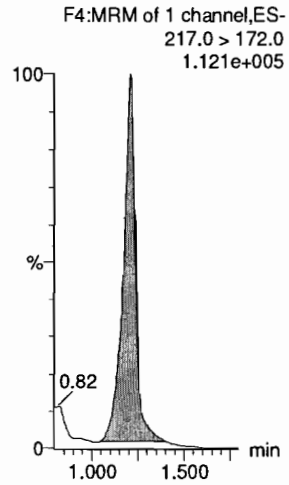
N-MeFOSE



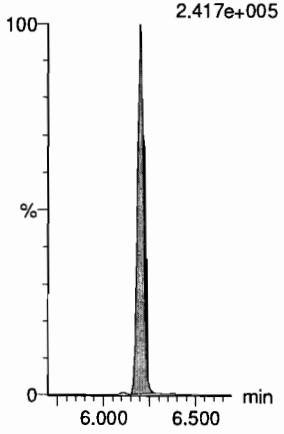
N-EtFOSE



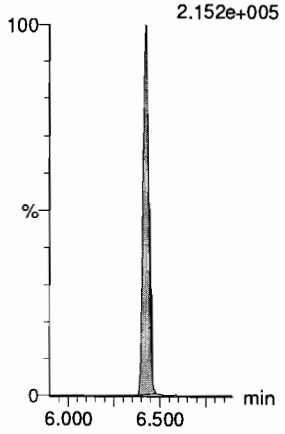
13C4-PFBA



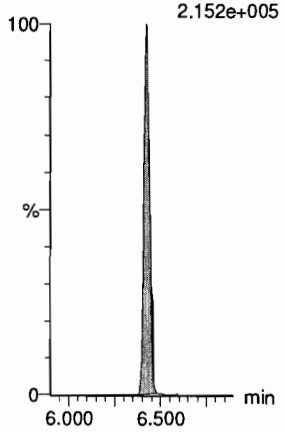
d5-N-ETFOSA



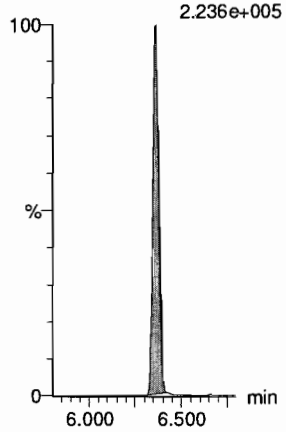
13C2-PFHxDA



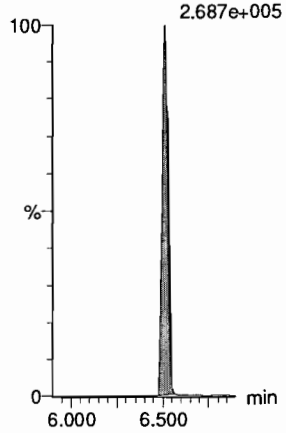
13C2-PFHxDA



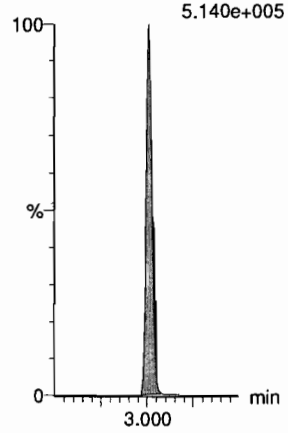
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

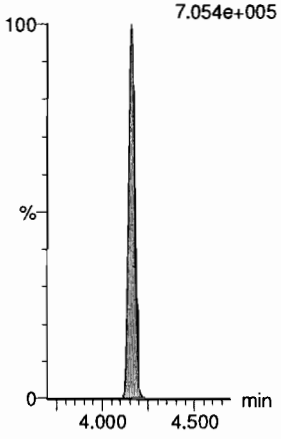


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

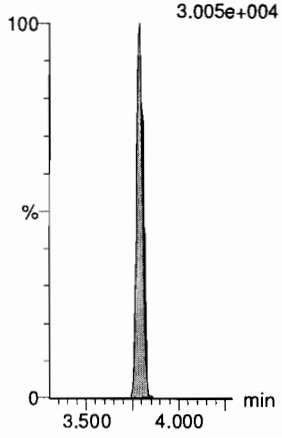
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_10, Date: 16-Jul-2019, Time: 18:09:24, ID: ST190716M2-7 PFC CS4 19G1107, Description: PFC CS4 19G1107

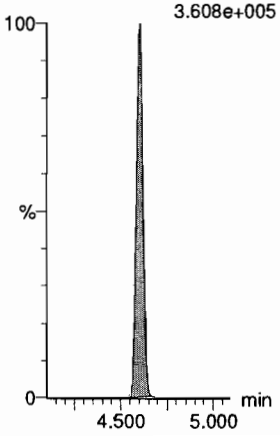
13C8-PFOA
F28:MRM of 1 channel,ES-
420.9 > 376.0
7.054e+005



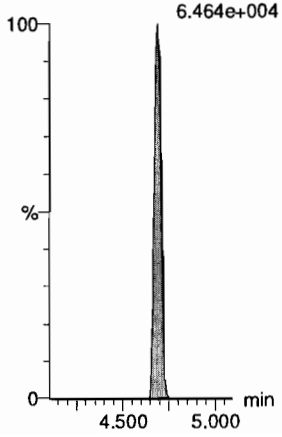
18O2-PFHxS
F25:MRM of 1 channel,ES-
403.0 > 102.6
3.005e+004



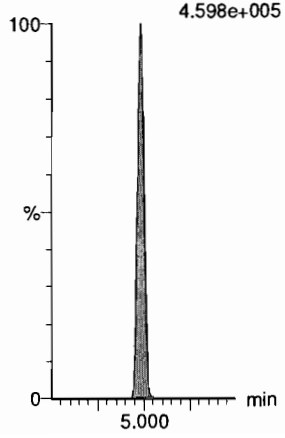
13C9-PFNA
F36:MRM of 1 channel,ES-
472.2 > 426.9
3.608e+005



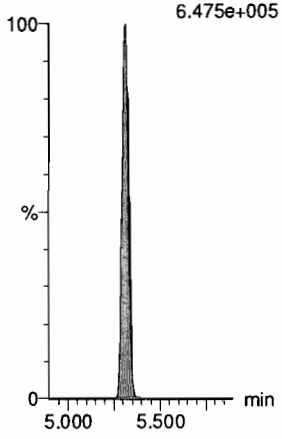
13C4-PFOS
F40:MRM of 1 channel,ES-
503 > 79.9
6.464e+004



13C6-PFDA
F47:MRM of 1 channel,ES-
519.1 > 473.7
4.598e+005



13C7-PFUdA
F57:MRM of 1 channel,ES-
570.1 > 524.8
6.475e+005

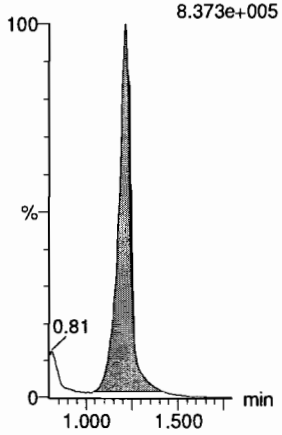


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

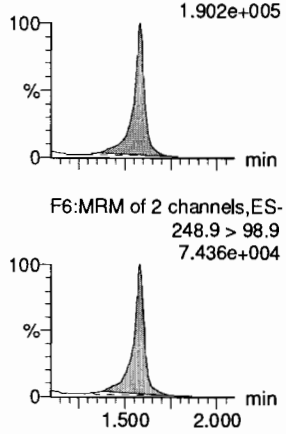
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

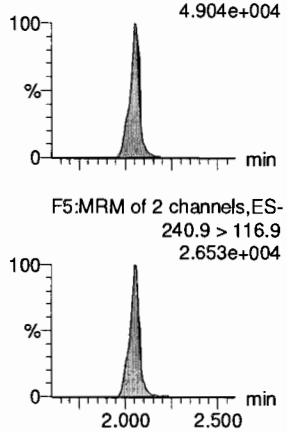
PFBA



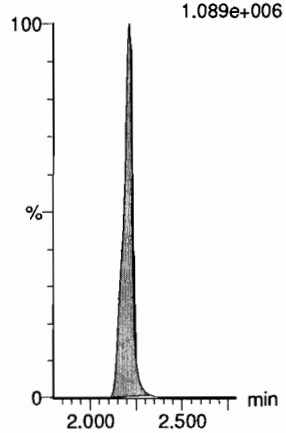
PFPrS



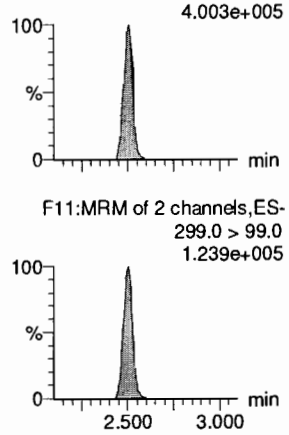
3:3 FTCA



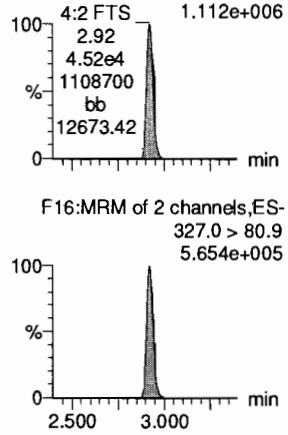
PFPeA



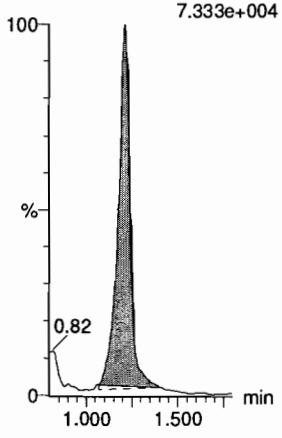
PFBS



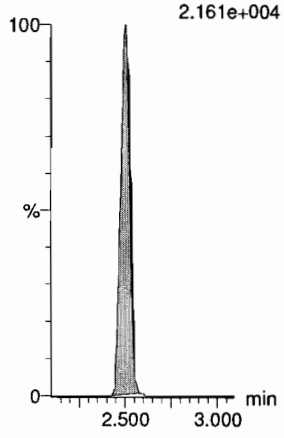
4:2 FTS



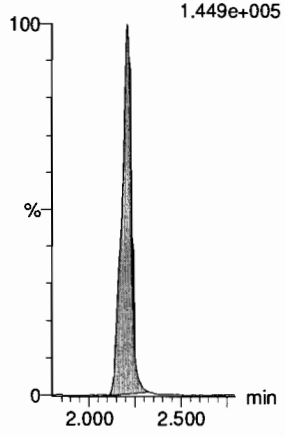
13C3-PFBA



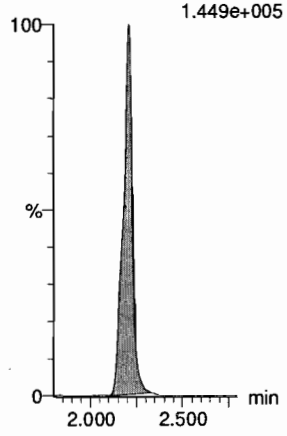
13C3-PFBS



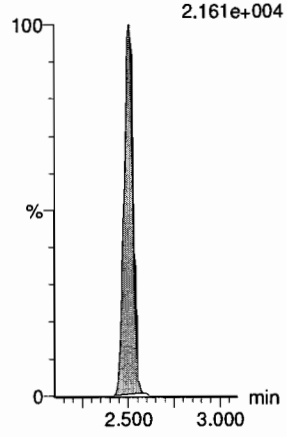
13C3-PFPeA



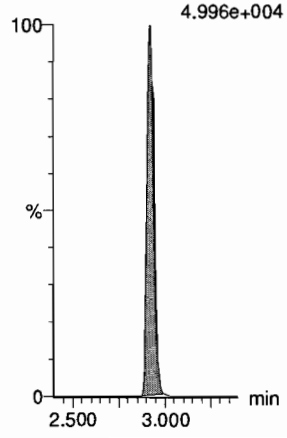
13C3-PFPeA



13C3-PFBS



13C2-4:2 FTS

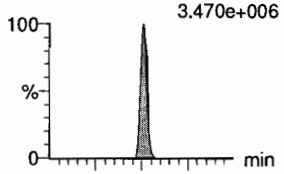


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

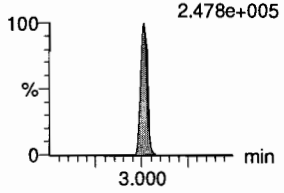
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

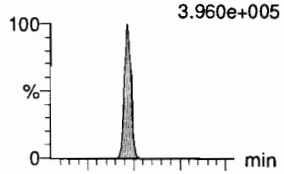
PFHxA
F13:MRM of 2 channels,ES-
313.0 > 269.0
3.470e+006



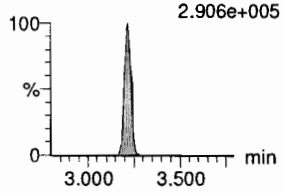
F13:MRM of 2 channels,ES-
313 > 118.9
2.478e+005



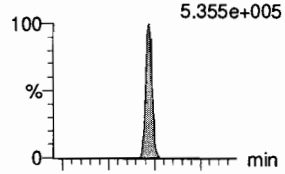
PFPeS
F19:MRM of 2 channels,ES-
349.1 > 80.1
3.960e+005



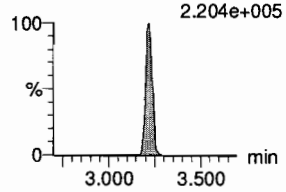
F19:MRM of 2 channels,ES-
349.1 > 99
2.906e+005



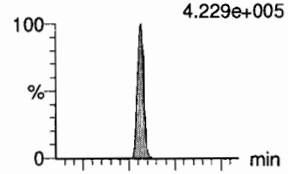
HFPO-DA
F9:MRM of 3 channels,ES-
285.1 > 168.9
5.355e+005



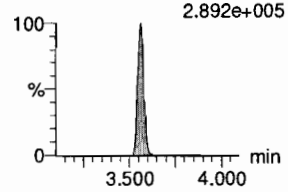
F9:MRM of 3 channels,ES-
285.1 > 184.9
2.204e+005



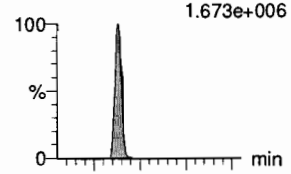
5:3 FTCA
F18:MRM of 2 channels,ES-
340.9 > 236.9
4.229e+005



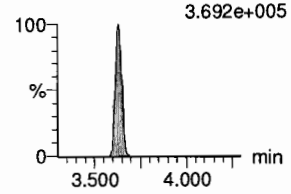
F18:MRM of 2 channels,ES-
340.9 > 216.9
2.892e+005



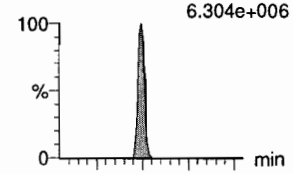
PFHpA
F20:MRM of 2 channels,ES-
363.0 > 318.9
1.673e+006



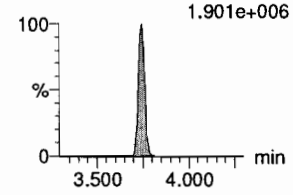
F20:MRM of 2 channels,ES-
363.0 > 169.0
3.692e+005



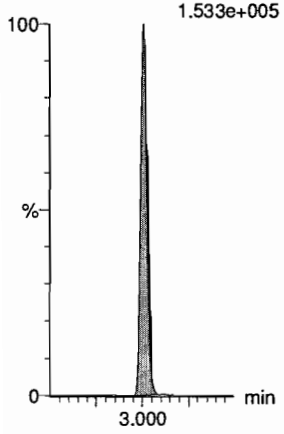
ADONA
F22:MRM of 2 channels,ES-
376.8 > 250.9
6.304e+006



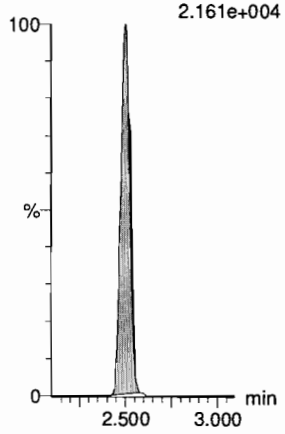
F22:MRM of 2 channels,ES-
376.8 > 85.0
1.901e+006



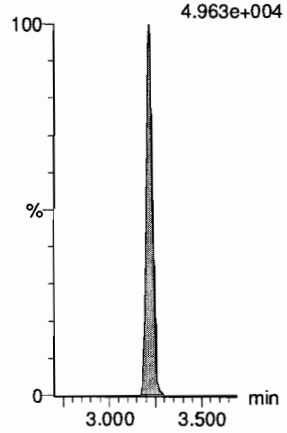
13C2-PFHxA
F14:MRM of 1 channel,ES-
315.0 > 270.0
1.533e+005



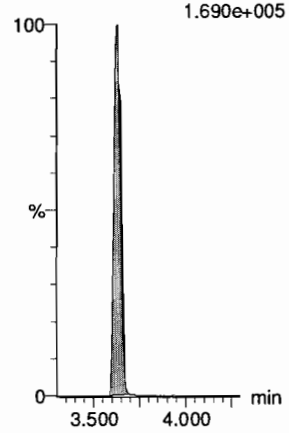
13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
2.161e+004



13C3-HFPO-DA
F10:MRM of 2 channels,ES-
287.0 > 168.9
4.963e+004



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.690e+005



13C4-PFHpA
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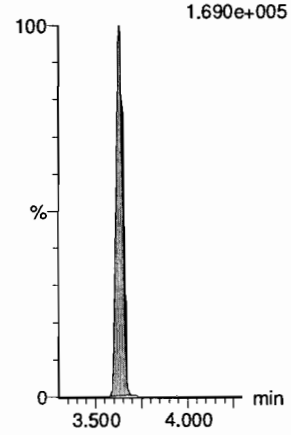
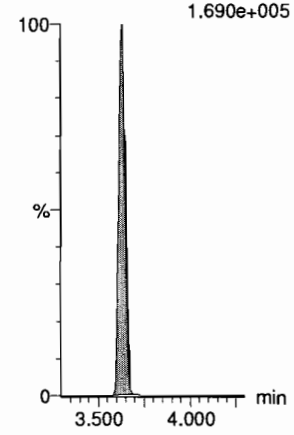
367.2 > 321.8
1.690e+005



13C4-PFHpA
F21:MRM of 1 channel,ES-
367.2 > 321.8
1.690e+005

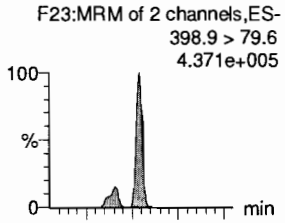


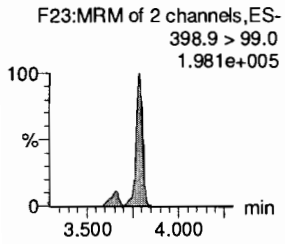
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

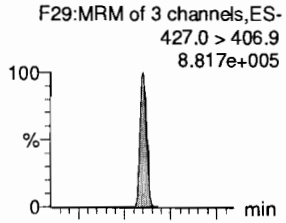
Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

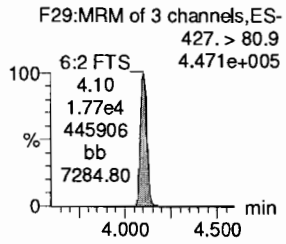
L-PFHxS





6:2 FTS





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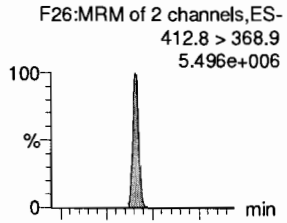

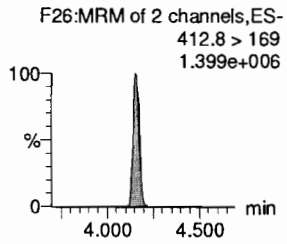

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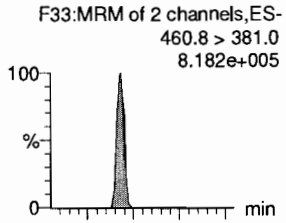

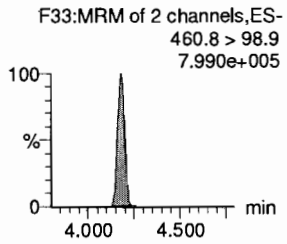

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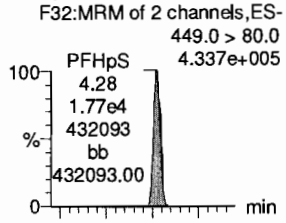
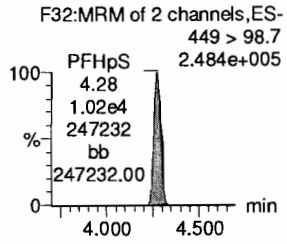
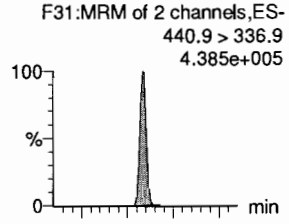
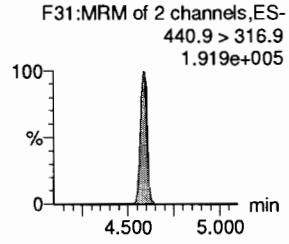


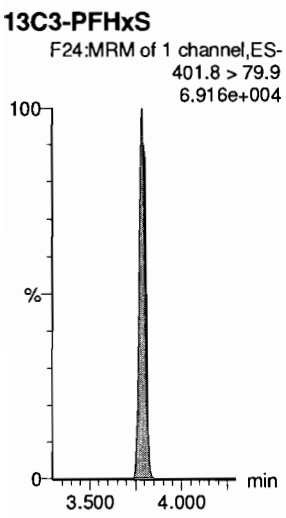


7:3 FTCA

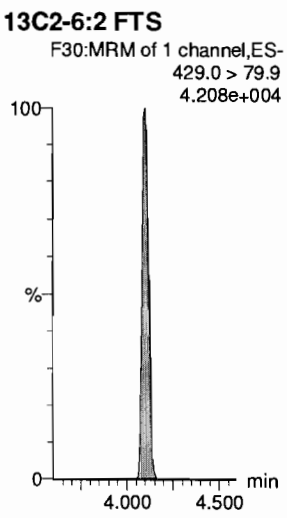




13C3-PFHxS



13C2-6:2 FTS



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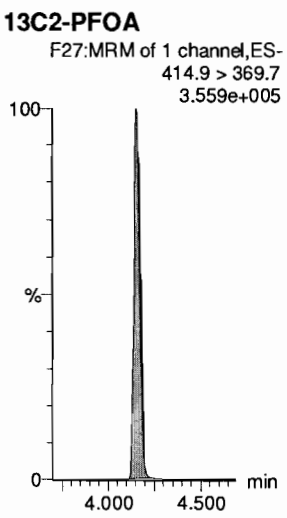

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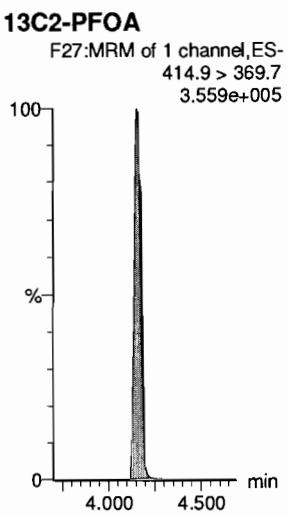
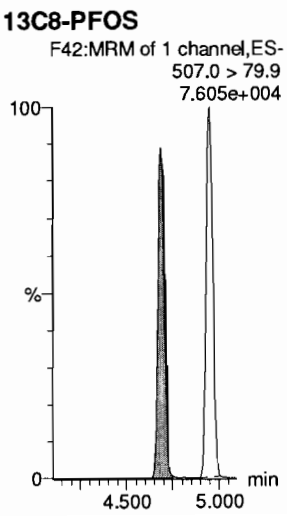


13C8-PFOS



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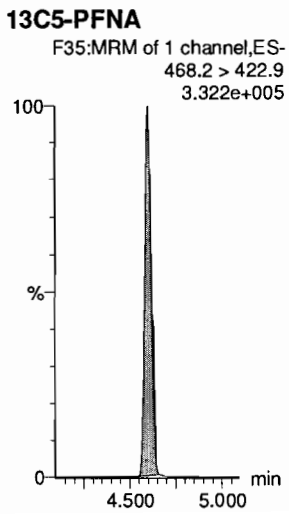
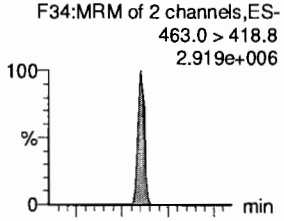


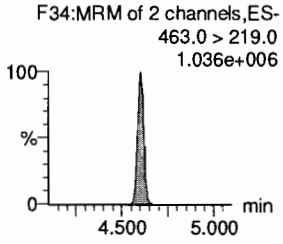
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

PFNA





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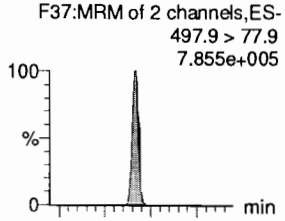
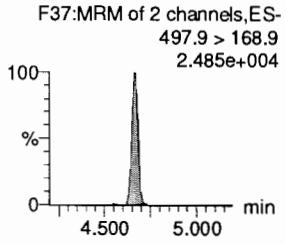
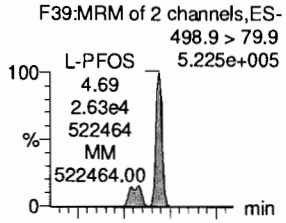
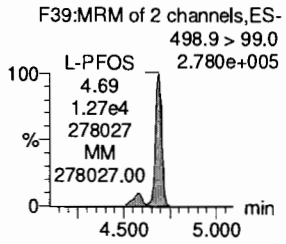


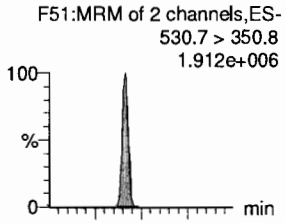


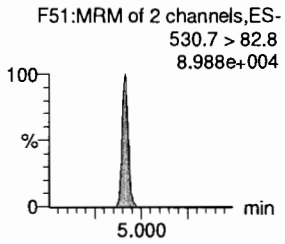
L-PFOS





9Cl-PF30NS





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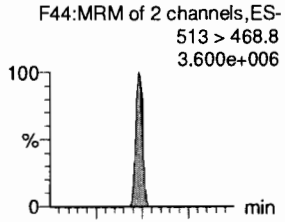

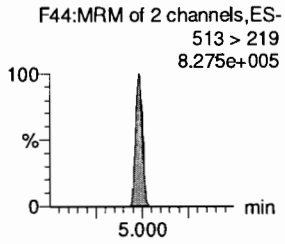

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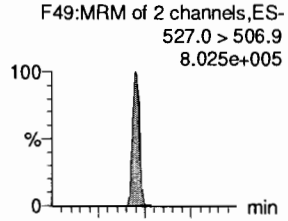
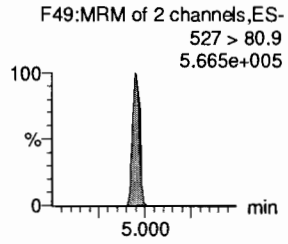
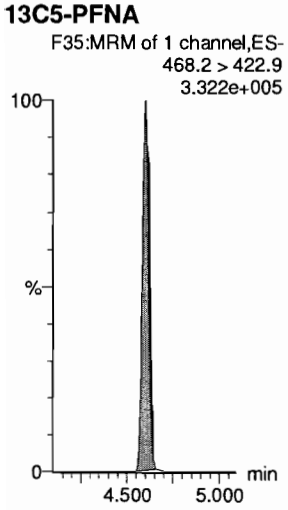
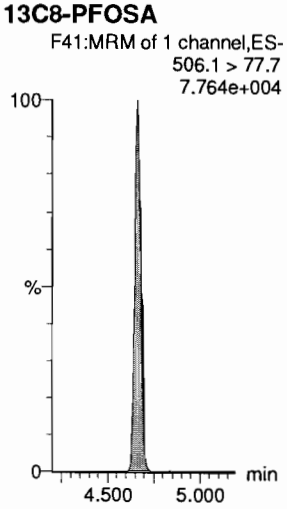




13C5-PFNA



13C8-PFOSA



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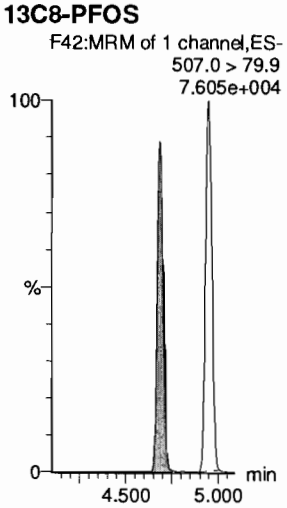

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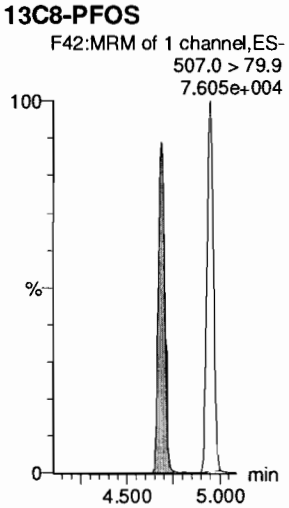
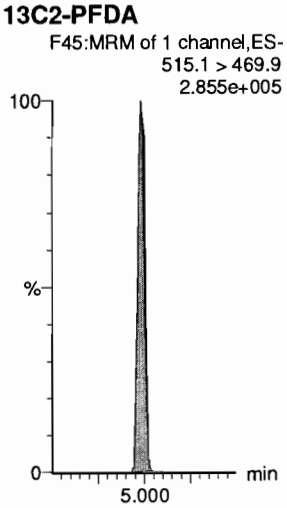
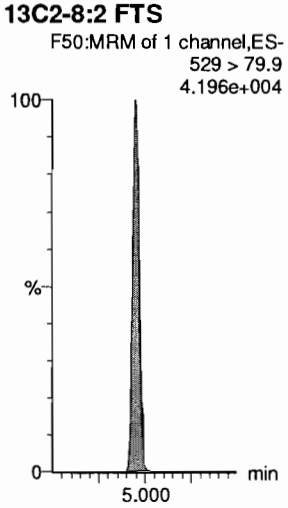


13C2-PFDA



13C2-8:2 FTS



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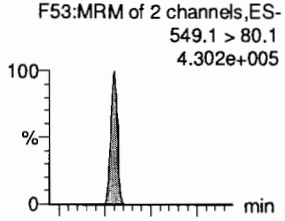
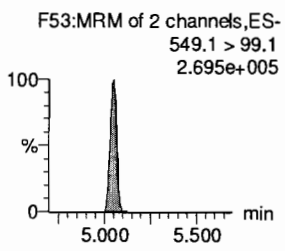
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

PFNS





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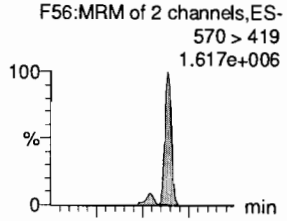
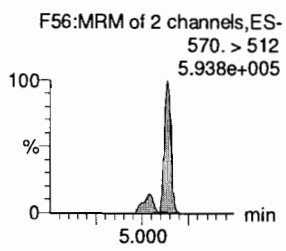
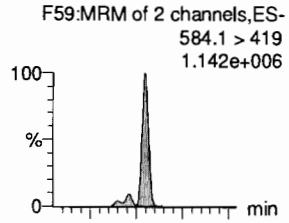
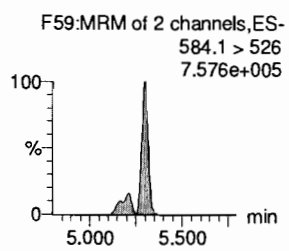


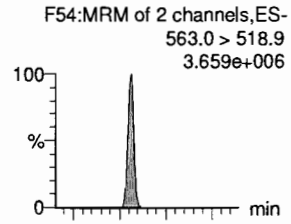


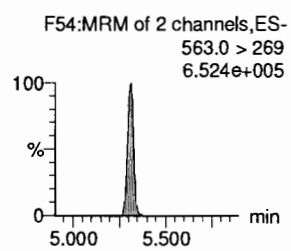
L-EtFOSAA



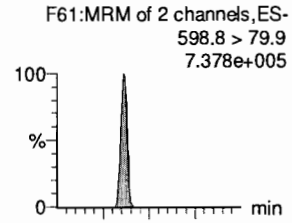


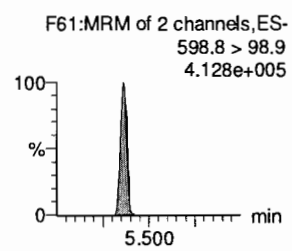
PFUdA





PFDS





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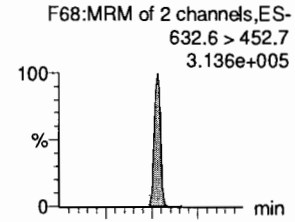
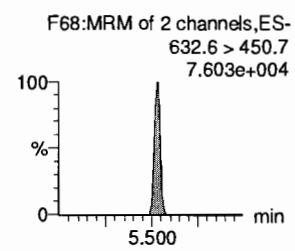
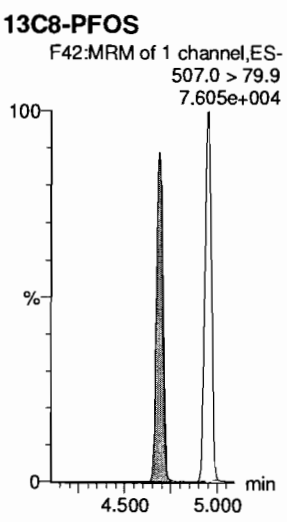
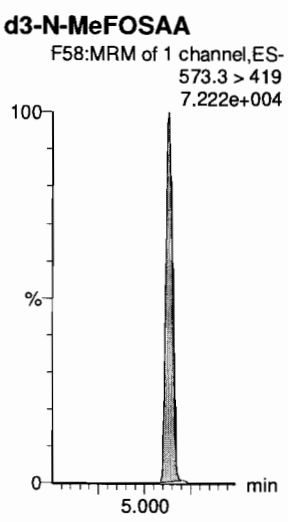




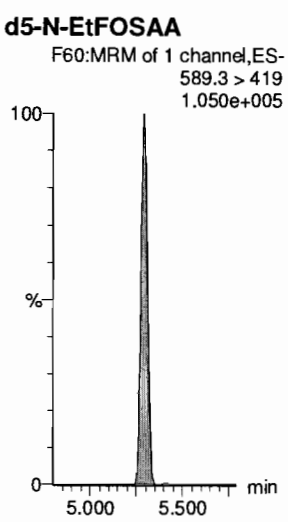
13C8-PFOS



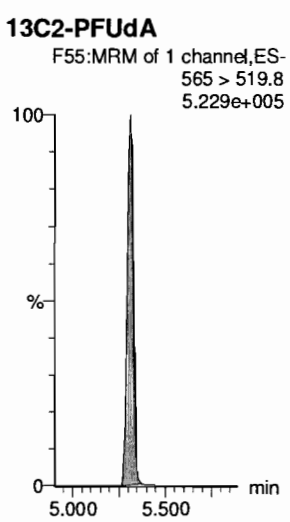
d3-N-MeFOSAA



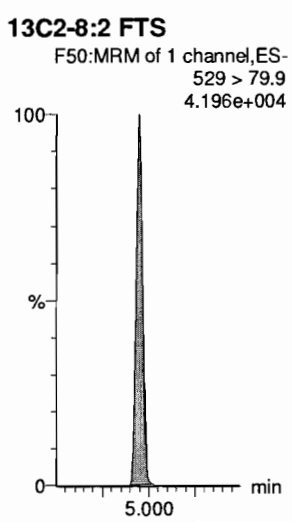
d5-N-EtFOSAA



13C2-PFUdA



13C2-8:2 FTS



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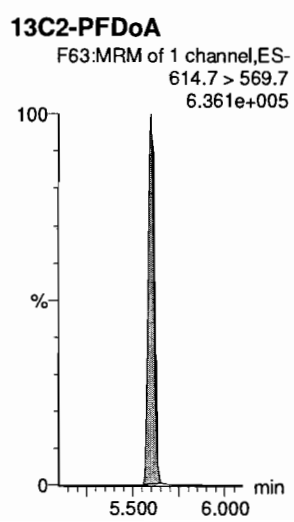
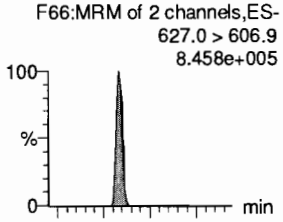


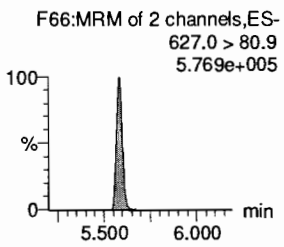
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

10:2 FTS





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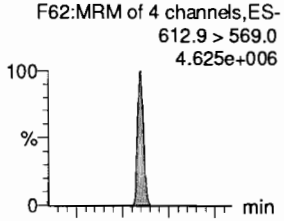

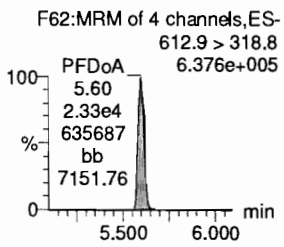

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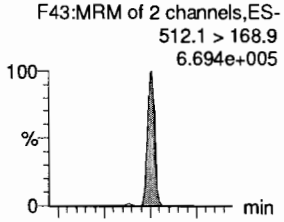

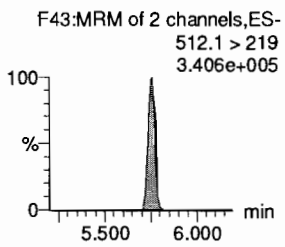

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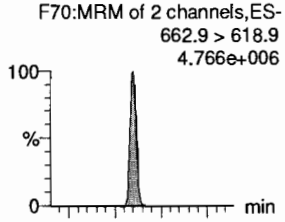

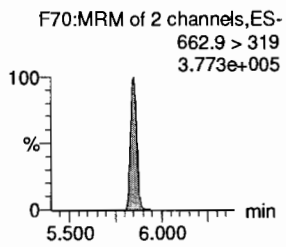

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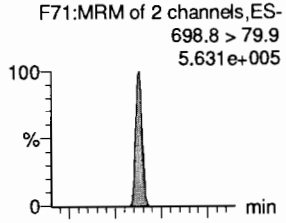

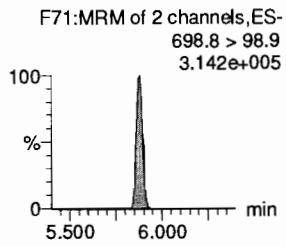

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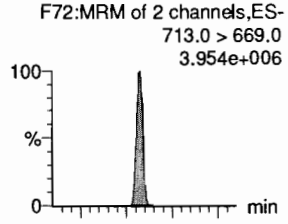
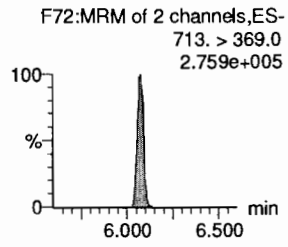
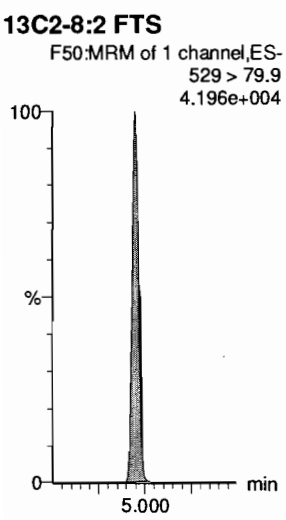




13C2-8:2 FTS



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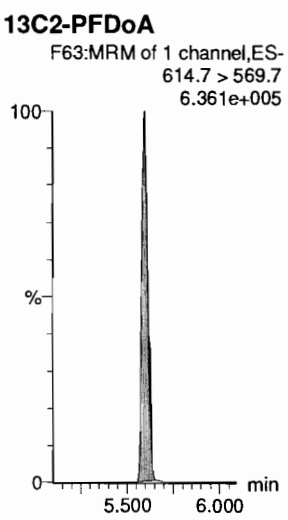

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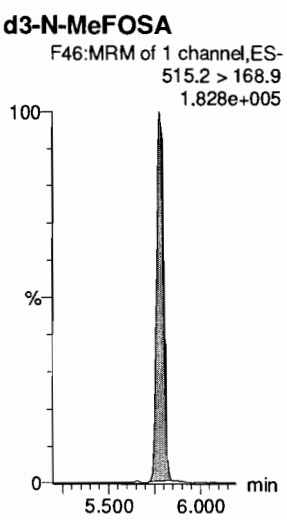

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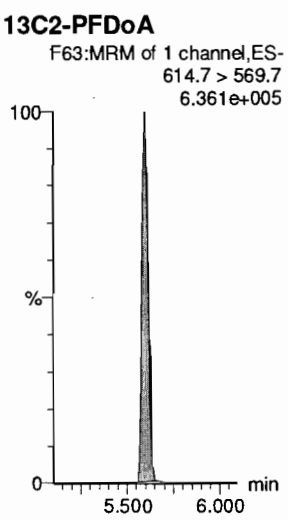

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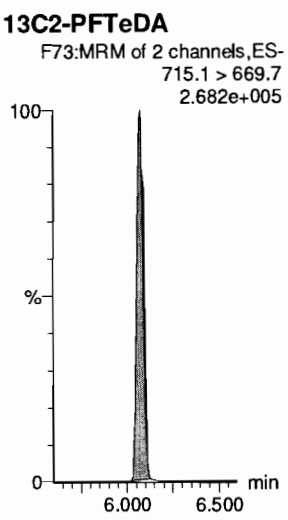

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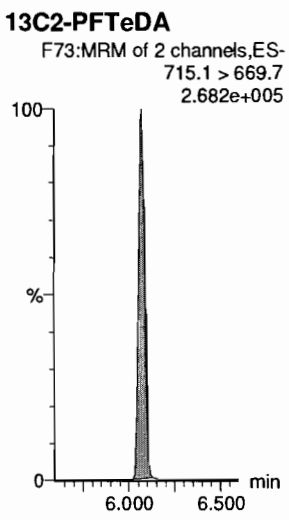
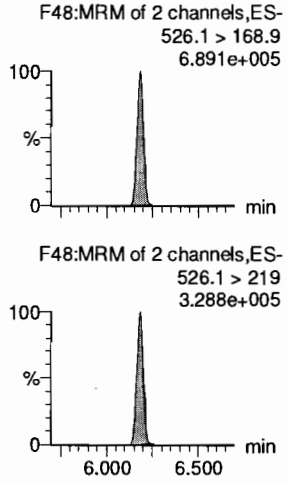


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

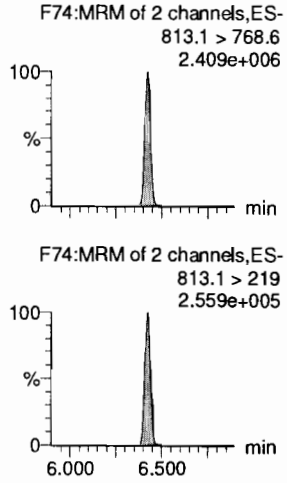
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

N-EtFOSA



PFHxDA



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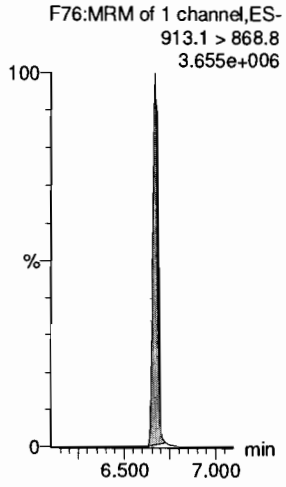
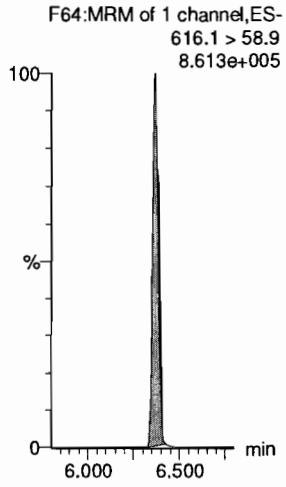


N-MeFOSE



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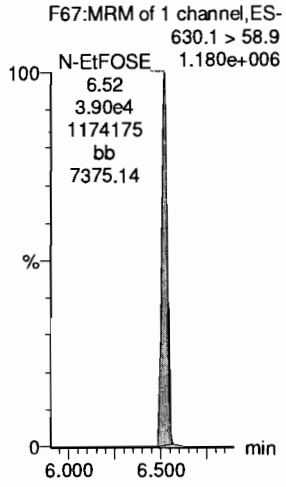

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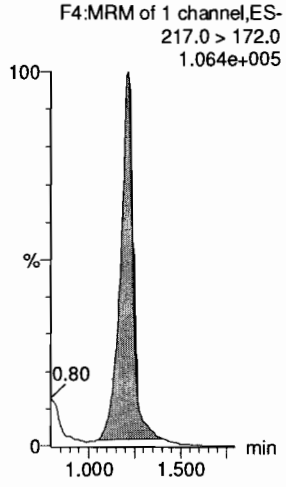

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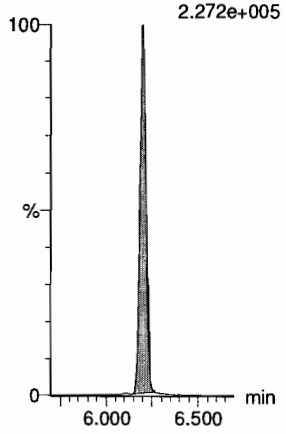

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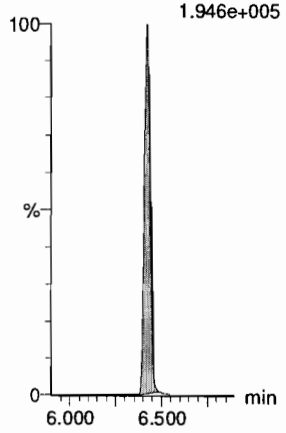

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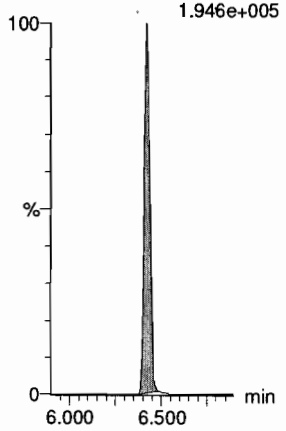
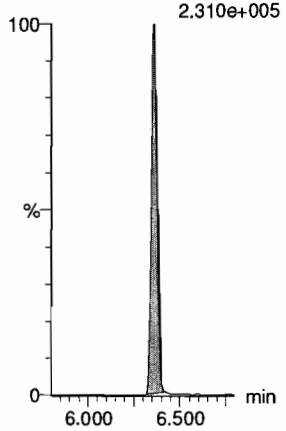
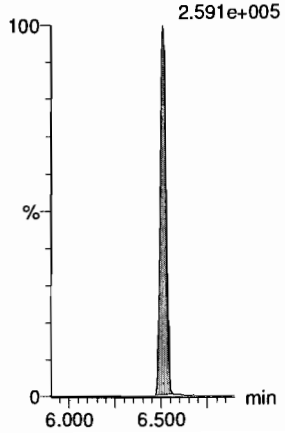


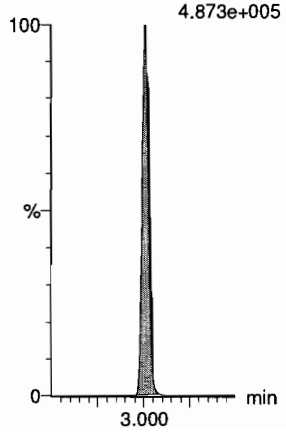
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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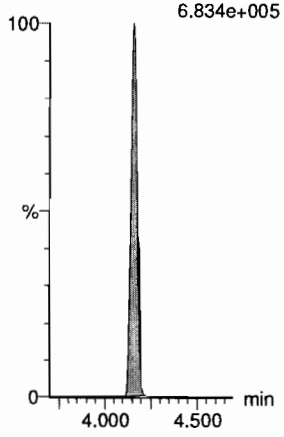
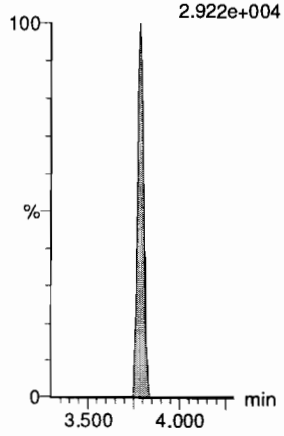
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_11, Date: 16-Jul-2019, Time: 18:20:03, ID: ST190716M2-8 PFC CS5 19G1108, Description: PFC CS5 19G1108

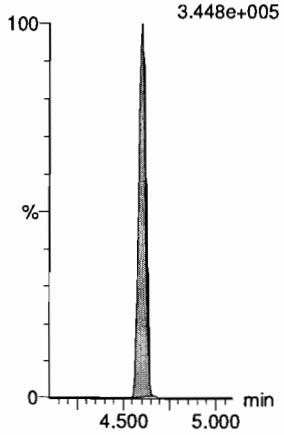
13C8-PFOA



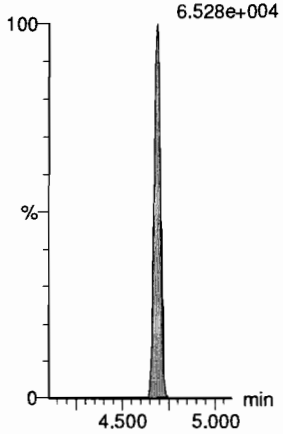
18O2-PFHxS



13C9-PFNA



13C4-PFOS



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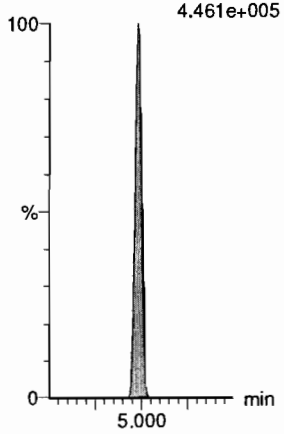
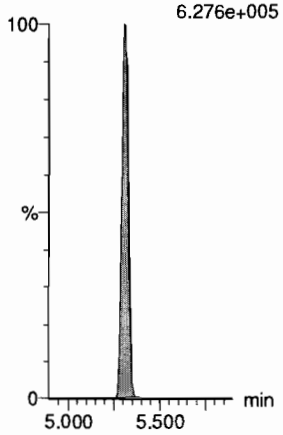


13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

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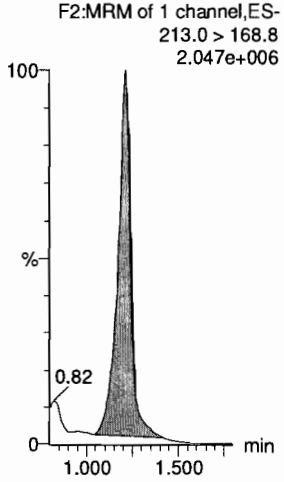
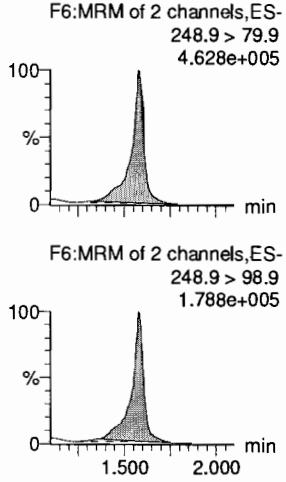
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

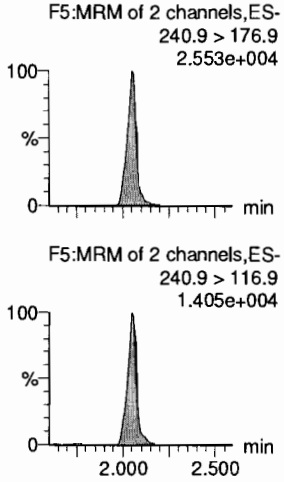
PFBA



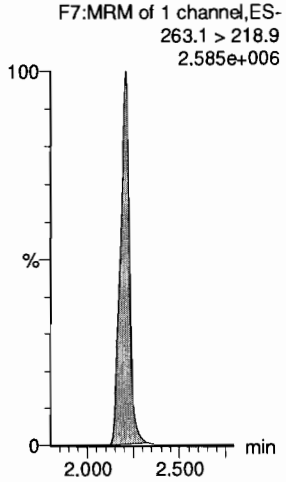
PFPrS



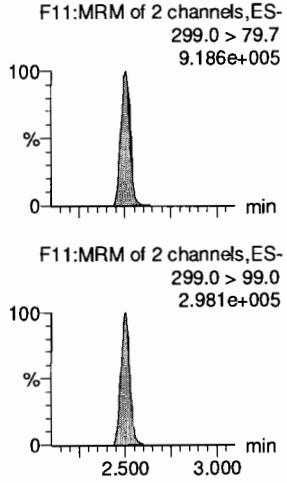
3:3 FTCA



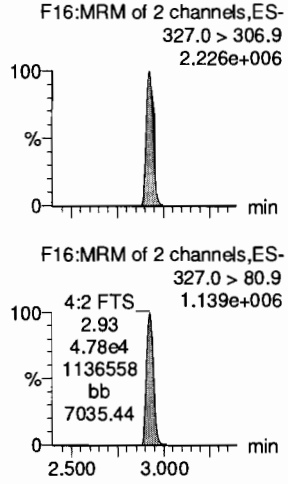
PFPeA



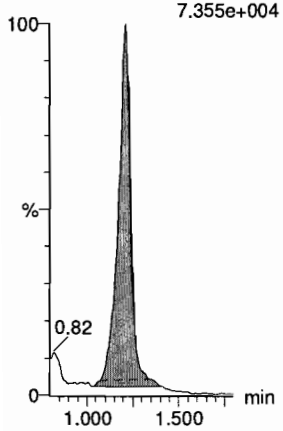
PFBS



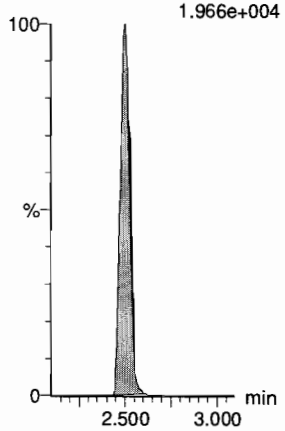
4:2 FTS



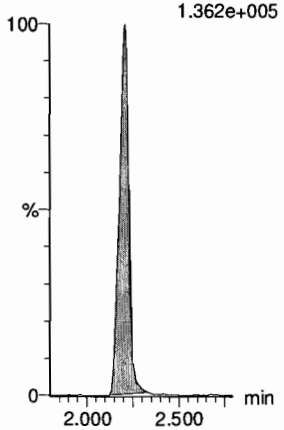
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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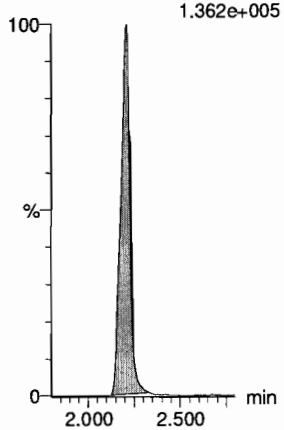

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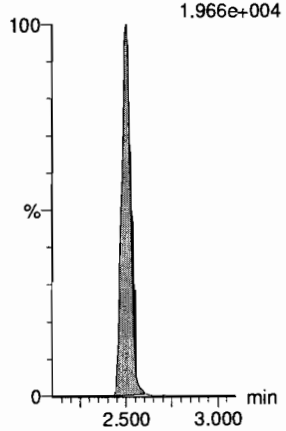
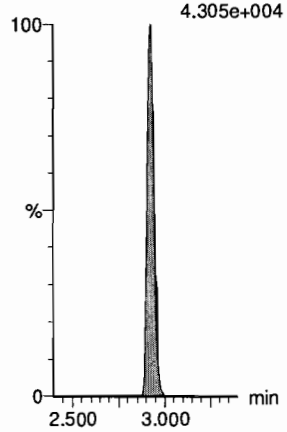


13C2-4:2 FTS

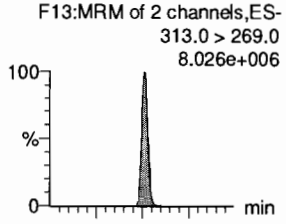


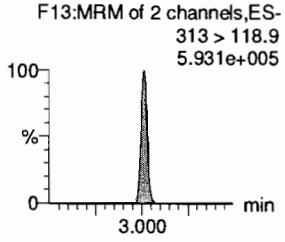
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

PFHxA





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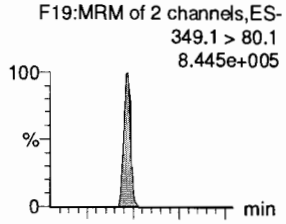
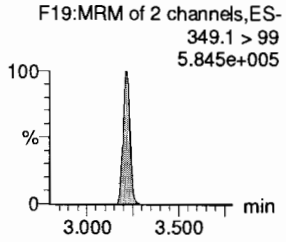
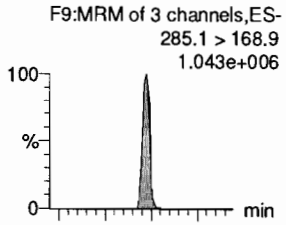
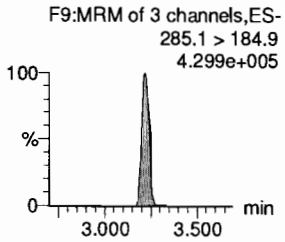




HFPO-DA





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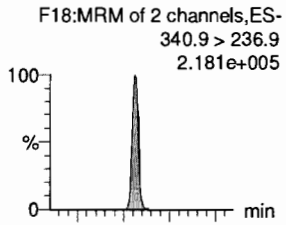

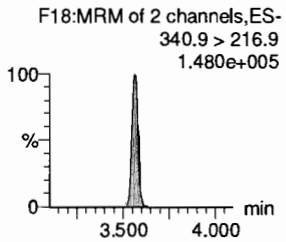

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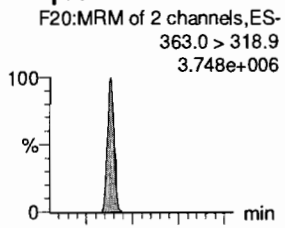

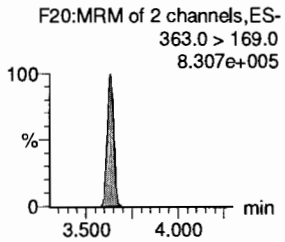

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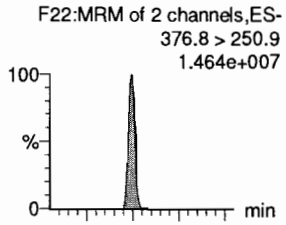

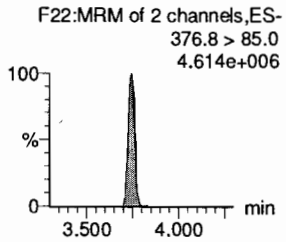

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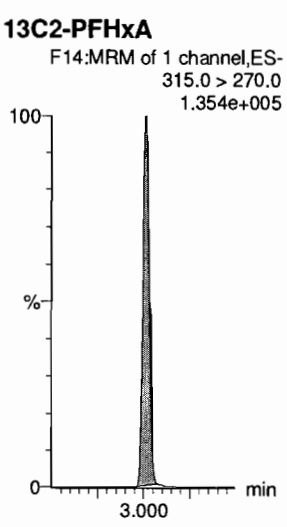
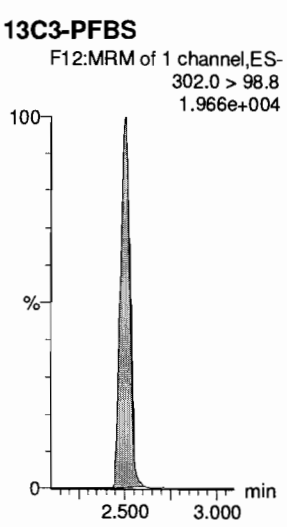


13C3-PFBS



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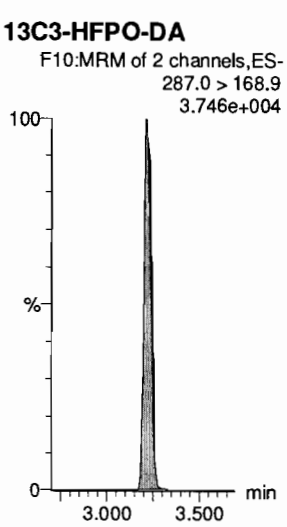

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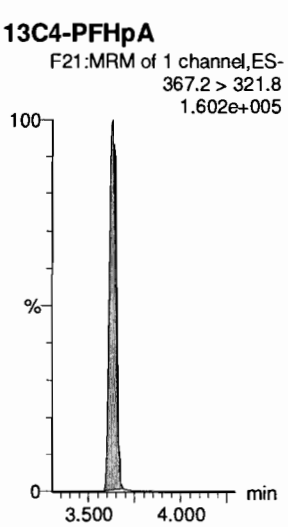

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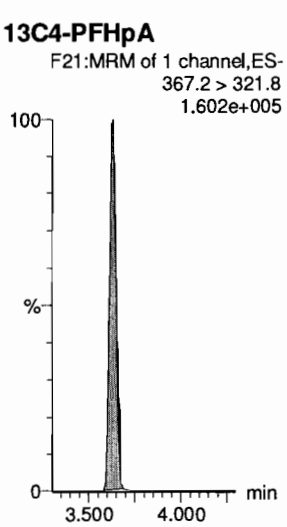

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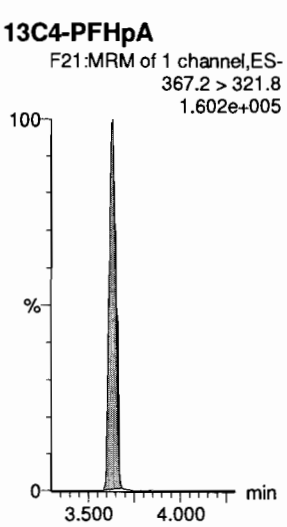

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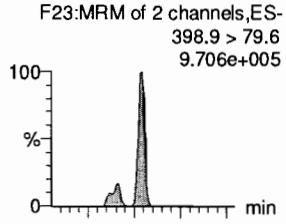
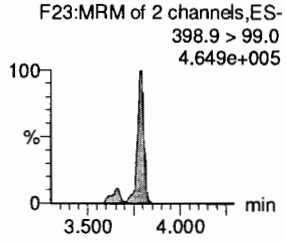
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

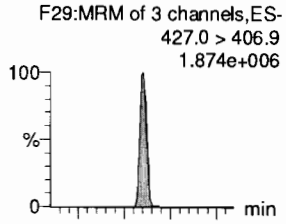
Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

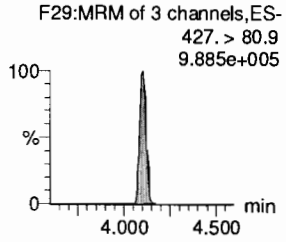
L-PFHxS





6:2 FTS





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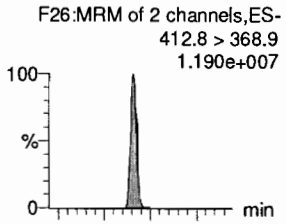

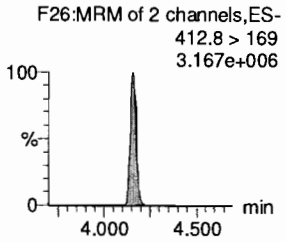

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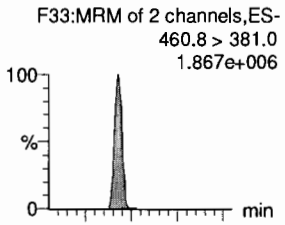

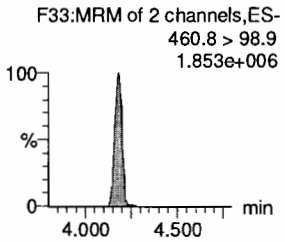

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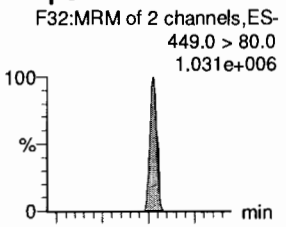

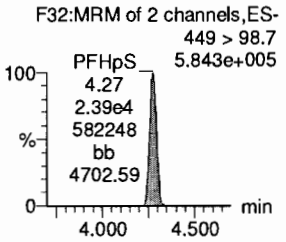

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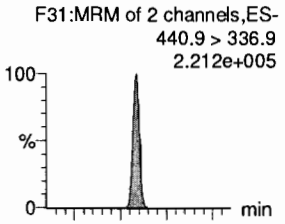

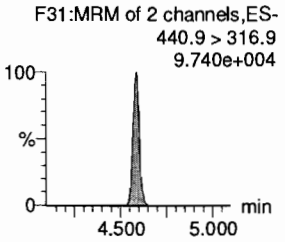

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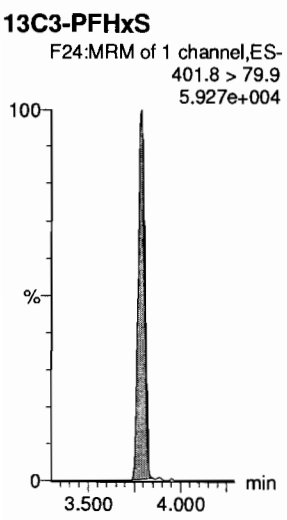

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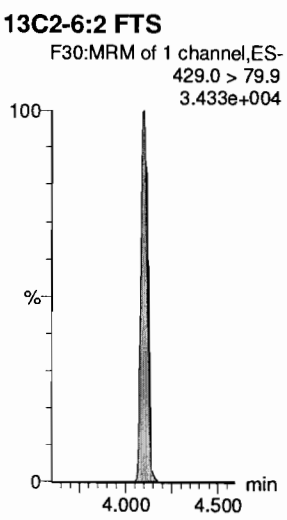

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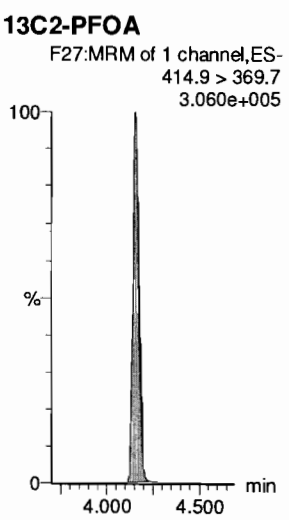

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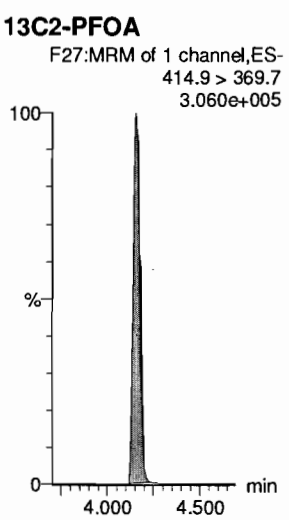
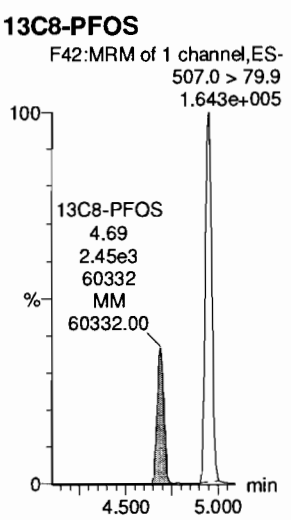


13C8-PFOS



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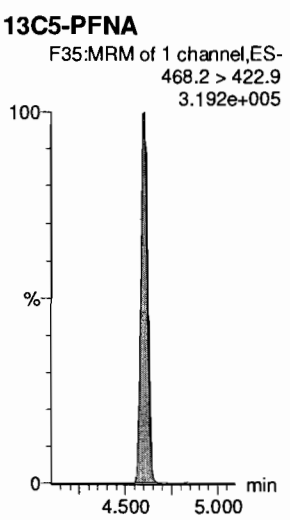

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Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

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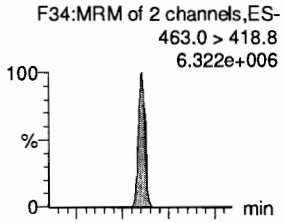

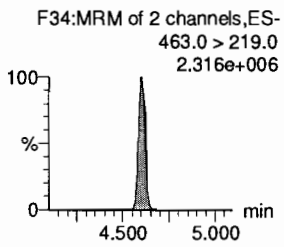

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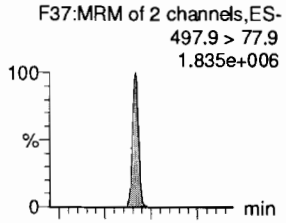
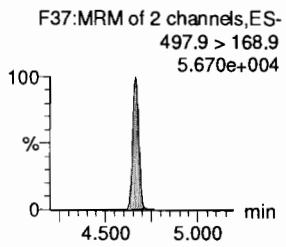
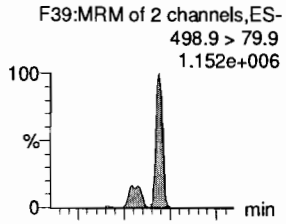
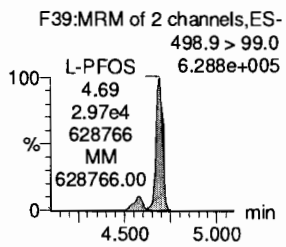


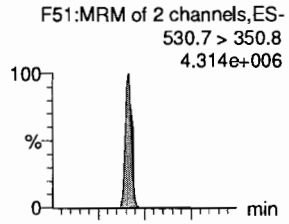


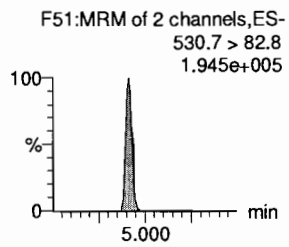
L-PFOS





9Cl-PF30NS





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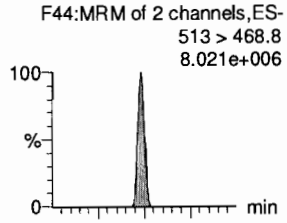

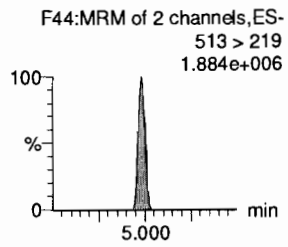

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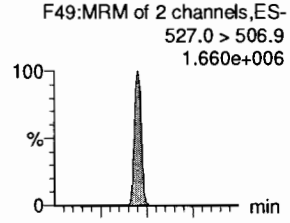

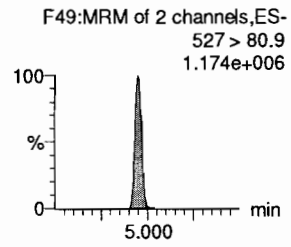

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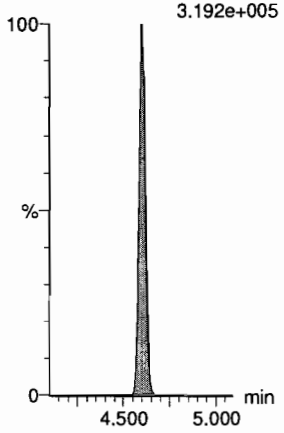
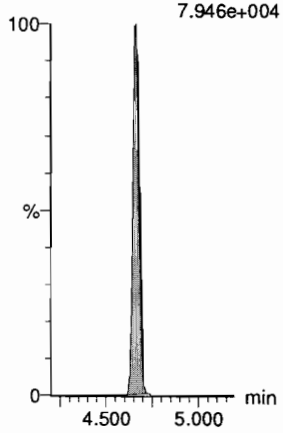


13C8-PFOSA



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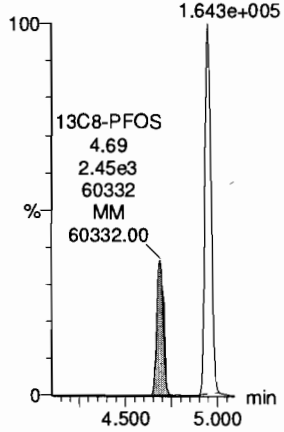

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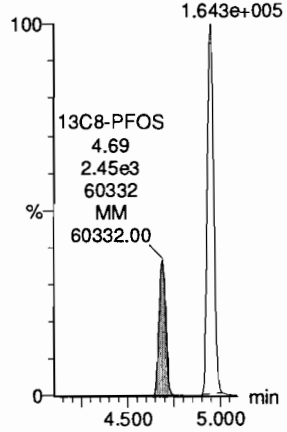
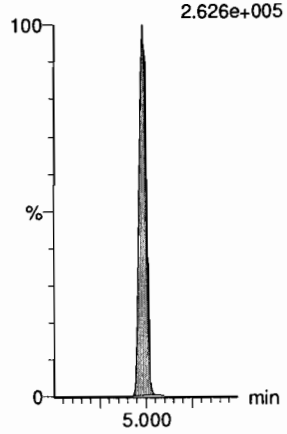
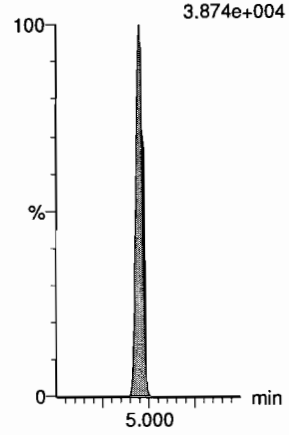


13C2-PFDA



13C2-8:2 FTS

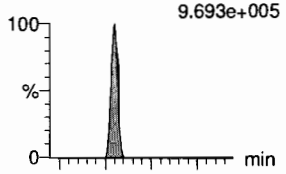


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

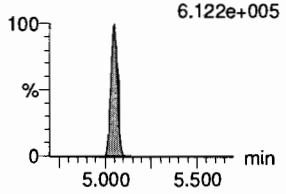
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

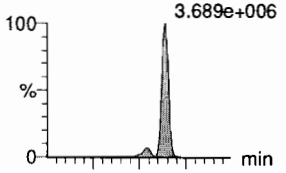
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
9.693e+005



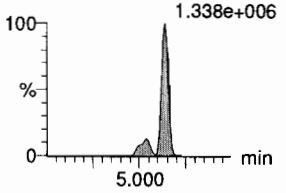
F53:MRM of 2 channels,ES-
549.1 > 99.1
6.122e+005



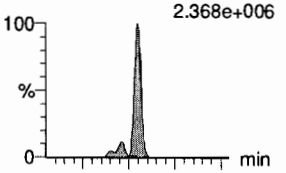
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
3.689e+006



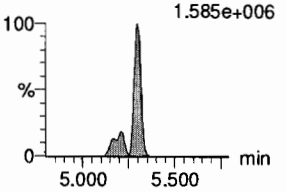
F56:MRM of 2 channels,ES-
570. > 512
1.338e+006



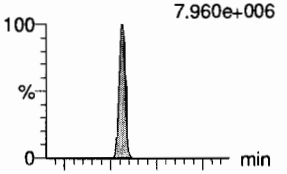
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
2.368e+006



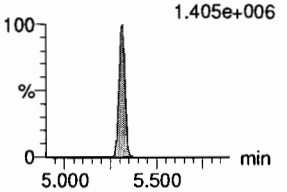
F59:MRM of 2 channels,ES-
584.1 > 526
1.585e+006



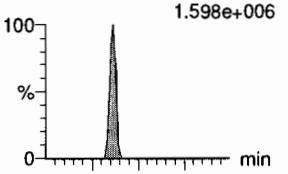
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
7.960e+006



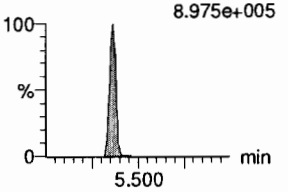
F54:MRM of 2 channels,ES-
563.0 > 269
1.405e+006



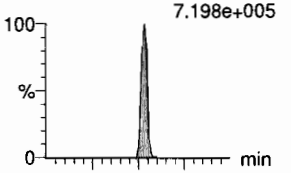
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
1.598e+006



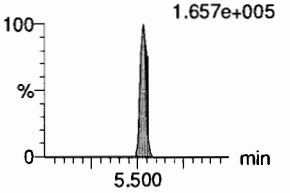
F61:MRM of 2 channels,ES-
598.8 > 98.9
8.975e+005



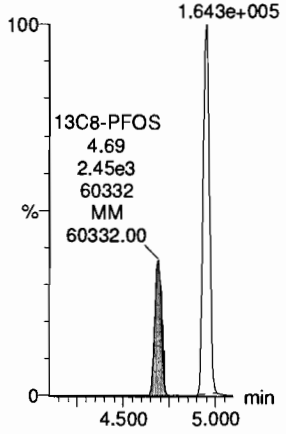
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
7.198e+005



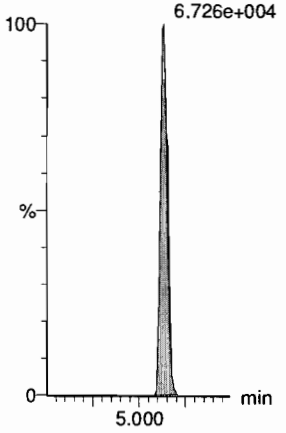
F68:MRM of 2 channels,ES-
632.6 > 450.7
1.657e+005



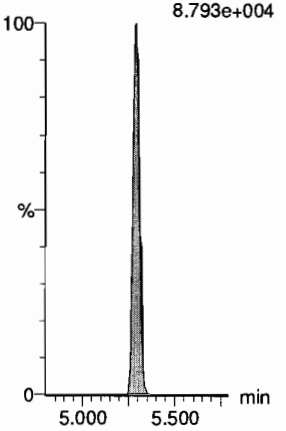
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
1.643e+005



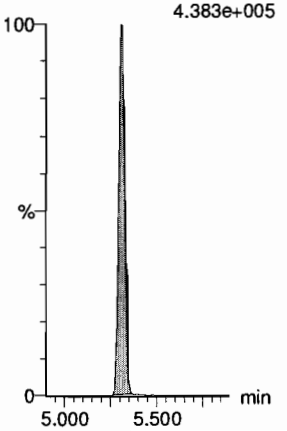
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
6.726e+004



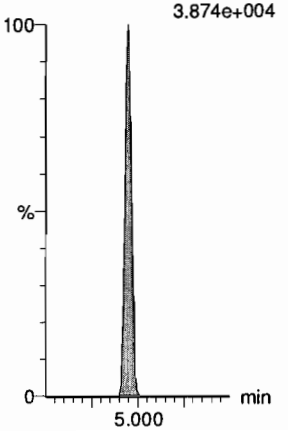
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
8.793e+004



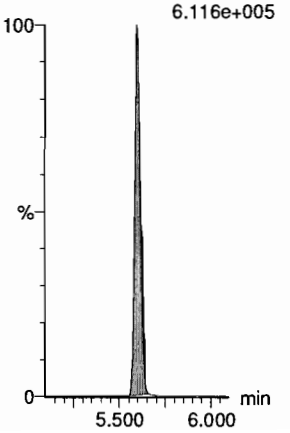
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
4.383e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.874e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
6.116e+005

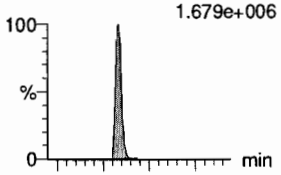


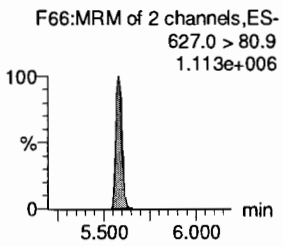
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

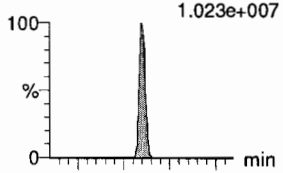
Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

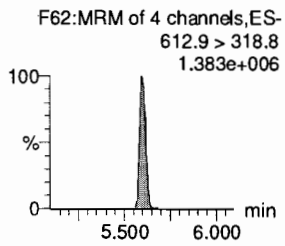
10:2 FTS



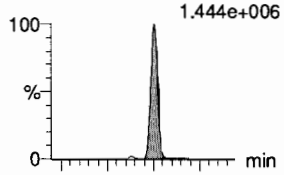


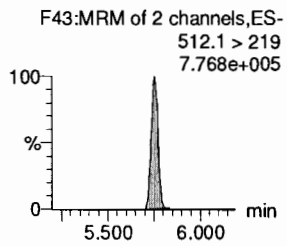
PFDoA



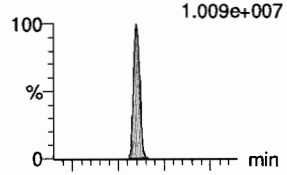


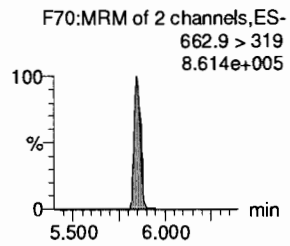
N-MeFOSA



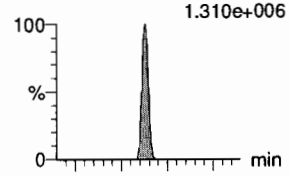


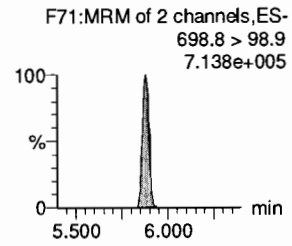
PFTrDA



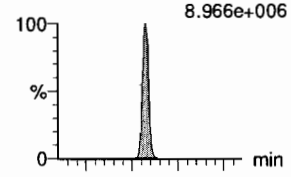


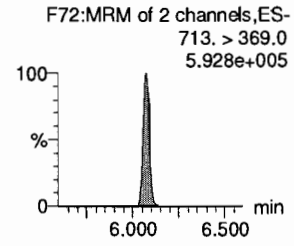
PFDoS



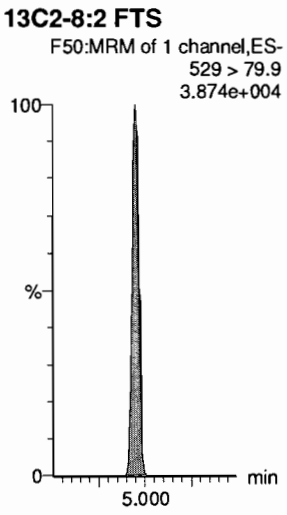


PFTeDA

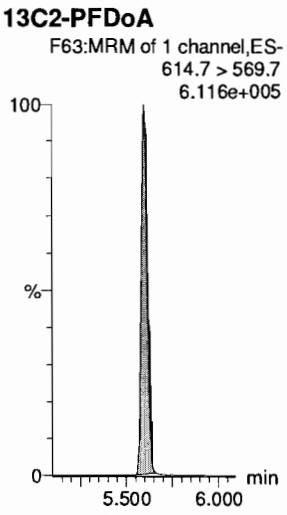




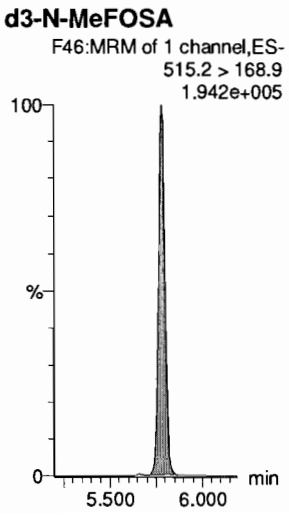
13C2-8:2 FTS



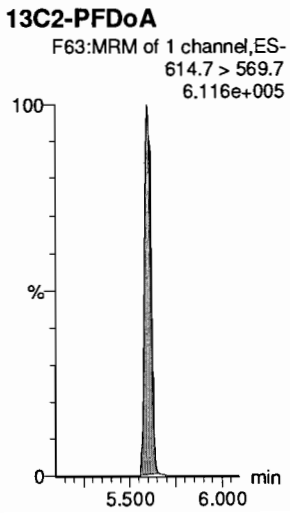
13C2-PFDoA



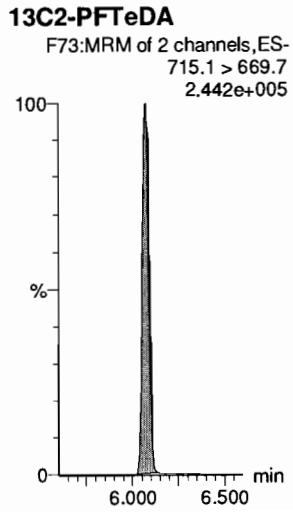
d3-N-MeFOSA



13C2-PFDoA



13C2-PFTeDA



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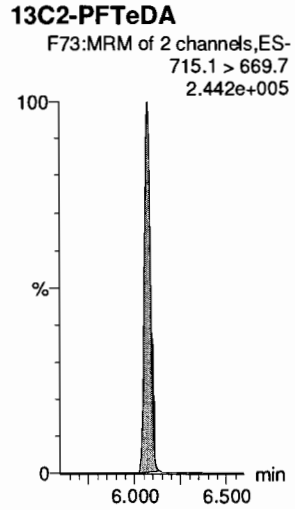
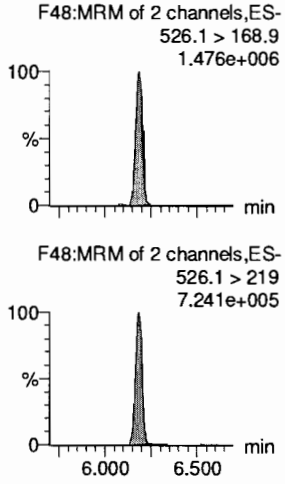


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

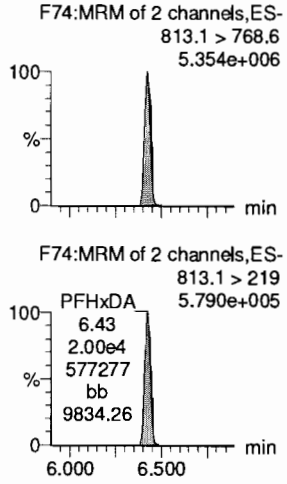
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

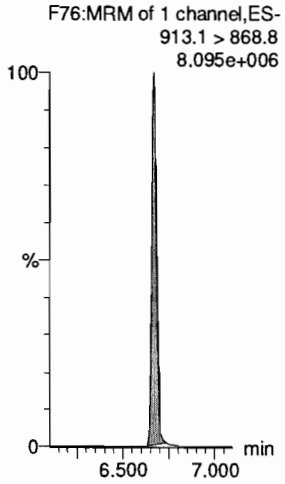
N-EtFOSA



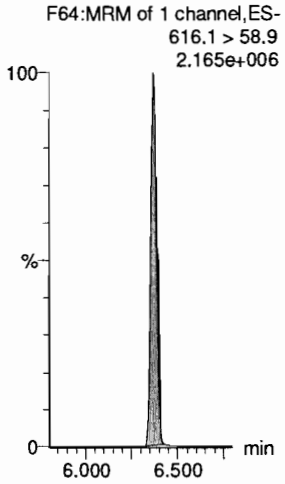
PFHxDA



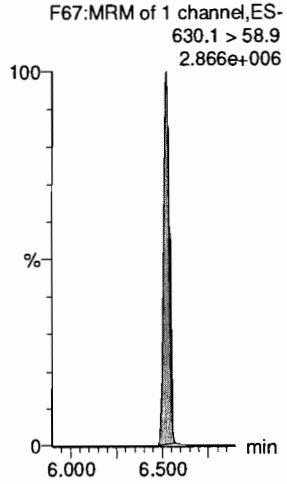
PFODA



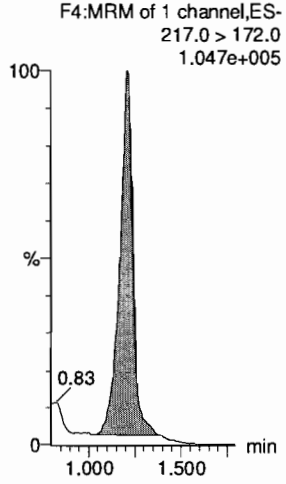
N-MeFOSE



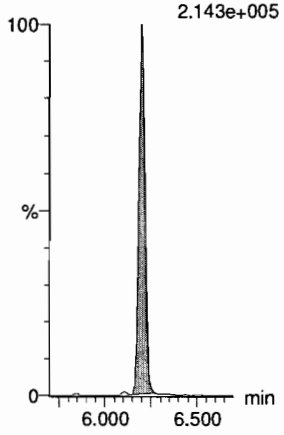
N-EtFOSE



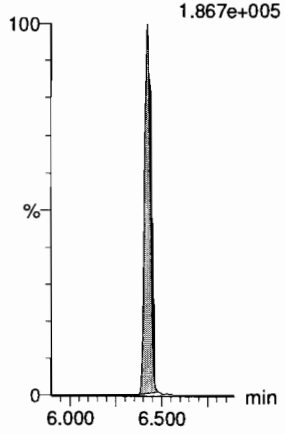
13C4-PFBA



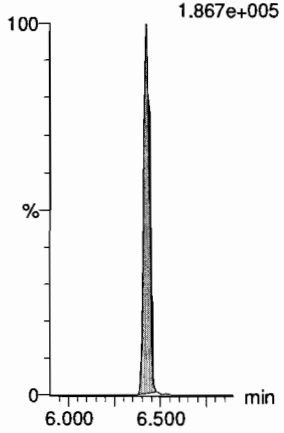
d5-N-ETFOSA



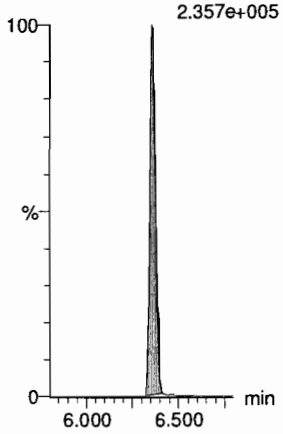
13C2-PFHxDA



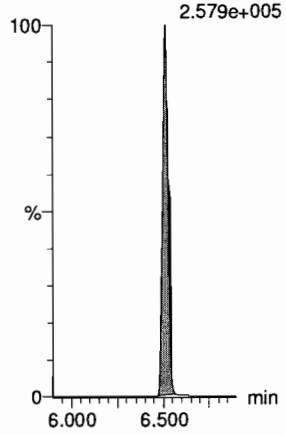
13C2-PFHxDA



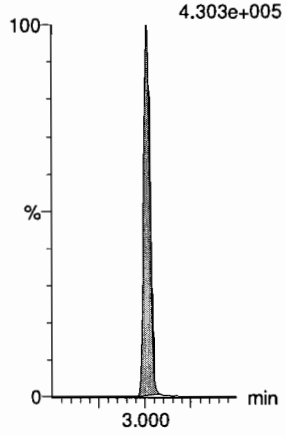
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

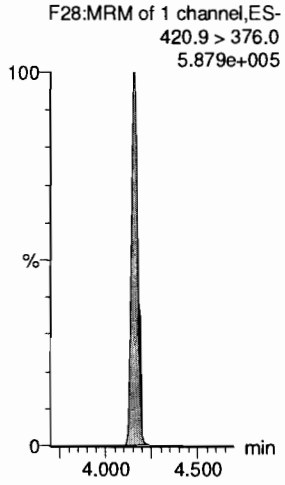


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

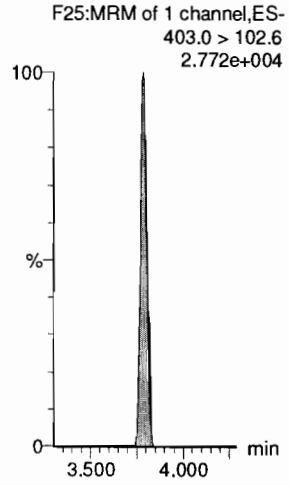
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_12, Date: 16-Jul-2019, Time: 18:30:36, ID: ST190716M2-9 PFC CS6 19G1109, Description: PFC CS6 19G1109

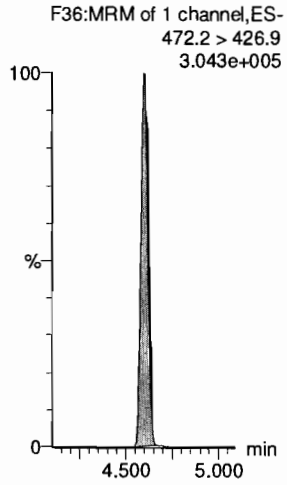
13C8-PFOA



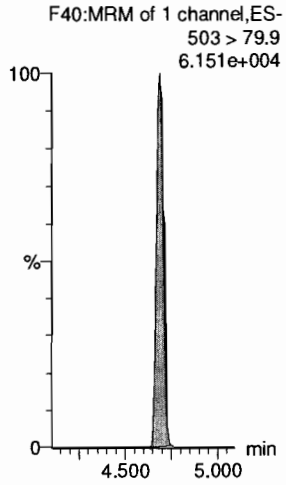
18O2-PFHxS



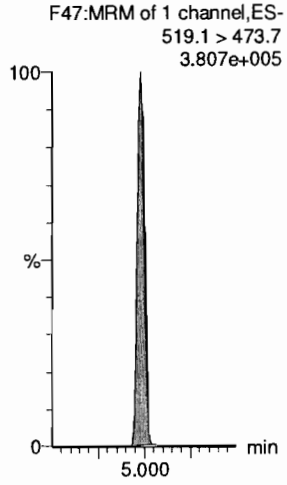
13C9-PFNA



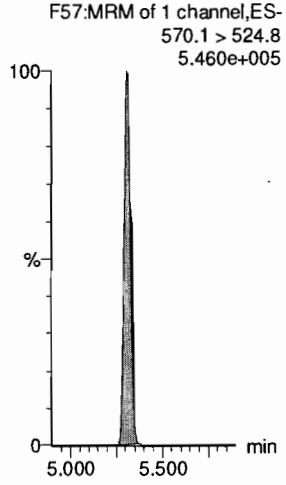
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

PFBA
F2:MRM of 1 channel,ES-
213.0 > 168.8
3.773e+006
0.85

PFPrS
F6:MRM of 2 channels,ES-
248.9 > 79.9
7.972e+005
F6:MRM of 2 channels,ES-
248.9 > 98.9
3.113e+005

3:3 FTCA
F5:MRM of 2 channels,ES-
240.9 > 176.9
5.510e+004
F5:MRM of 2 channels,ES-
240.9 > 116.9
3.093e+004

PFPeA
F7:MRM of 1 channel,ES-
263.1 > 218.9
4.703e+006

PFBS
F11:MRM of 2 channels,ES-
299.0 > 79.7
1.600e+006
F11:MRM of 2 channels,ES-
299.0 > 99.0
5.154e+005

4:2 FTS
F16:MRM of 2 channels,ES-
327.0 > 306.9
3.522e+006
F16:MRM of 2 channels,ES-
327.0 > 80.9
1.847e+006
4:2 FTS
2.93
7.95e4
1842975
bb
18552.32

13C3-PFBA
F3:MRM of 1 channel,ES-
216.1 > 171.8
6.549e+004
0.84

13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.697e+004

13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.281e+005

13C3-PFPeA
F8:MRM of 1 channel,ES-
266.0 > 221.8
1.281e+005

13C3-PFBS
F12:MRM of 1 channel,ES-
302.0 > 98.8
1.697e+004

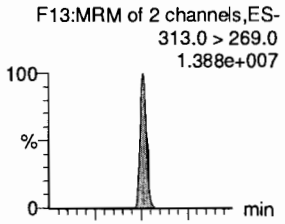
13C2-4:2 FTS
F17:MRM of 2 channels,ES-
329.0 > 79.9
3.649e+004

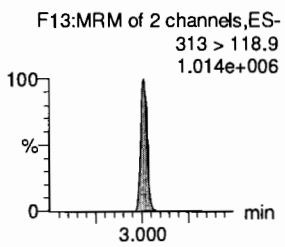
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

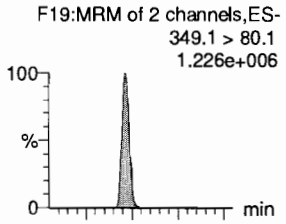
Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

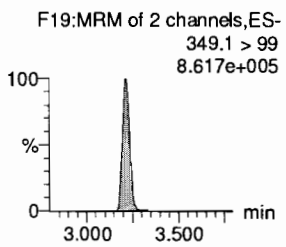
PFHxA



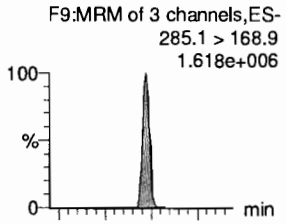


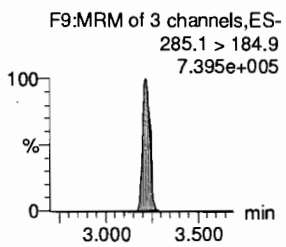
PFPeS



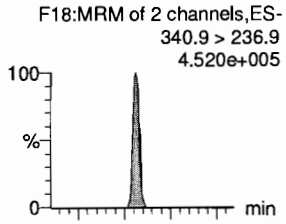


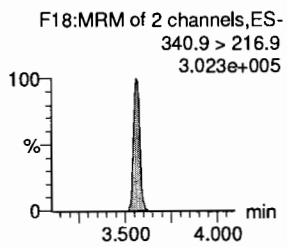
HFPO-DA



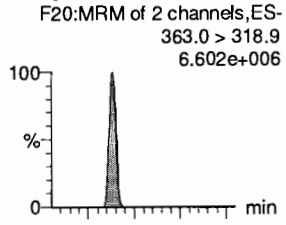


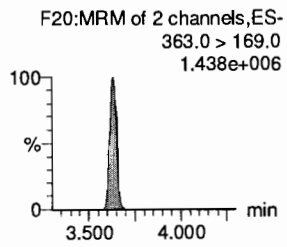
5:3 FTCA



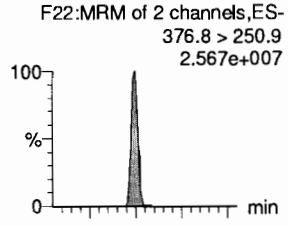


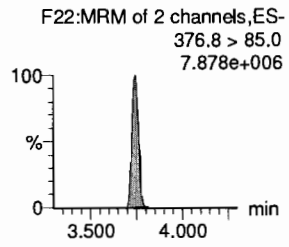
PFHpA



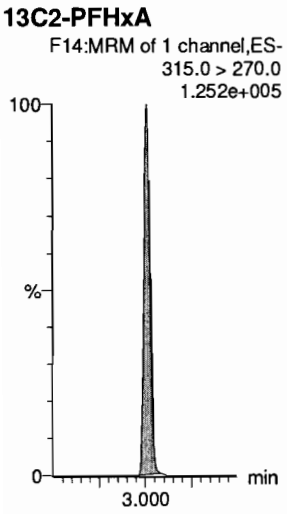


ADONA

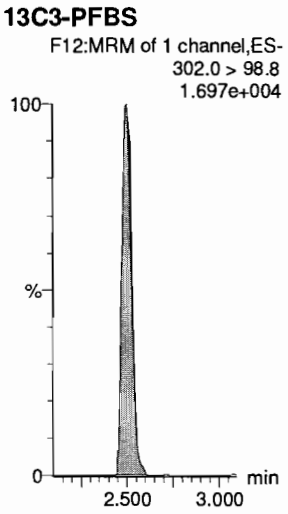




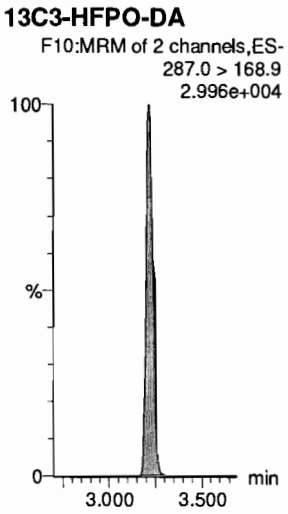
13C2-PFHxA



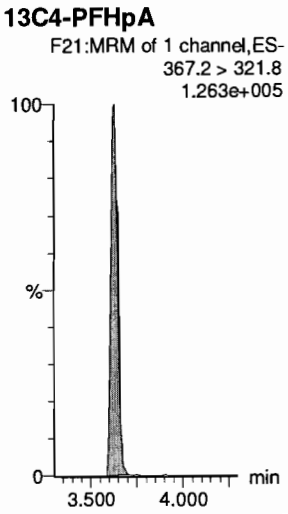
13C3-PFBS



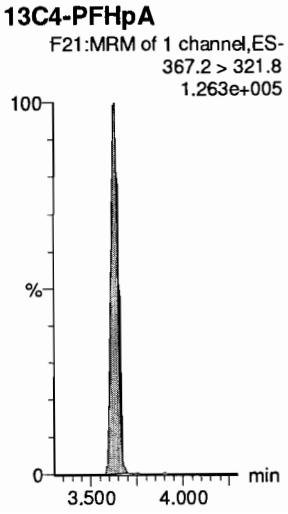
13C3-HFPO-DA



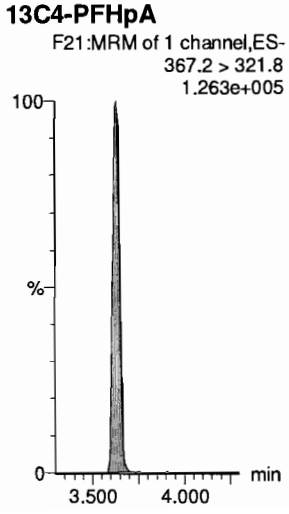
13C4-PFHpA



13C4-PFHpA



13C4-PFHpA

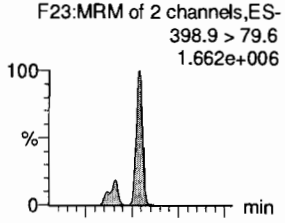


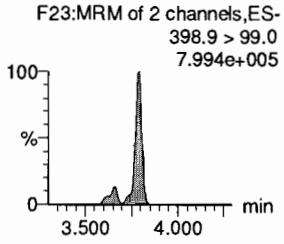
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

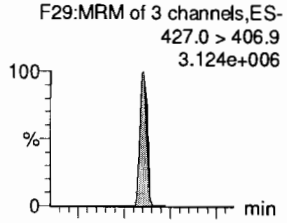
Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

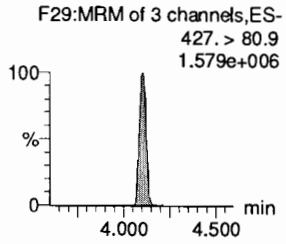
L-PFHxS



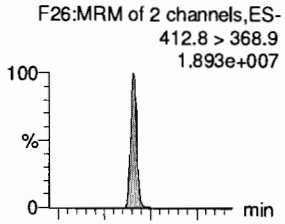


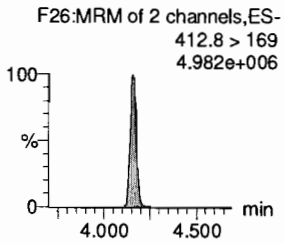
6:2 FTS



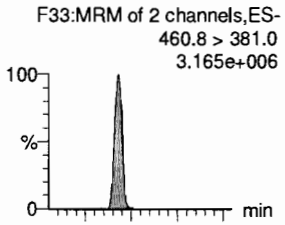


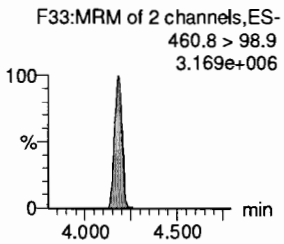
L-PFOA



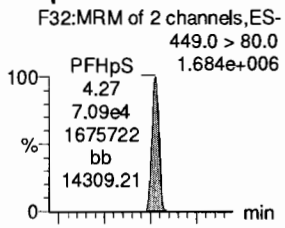


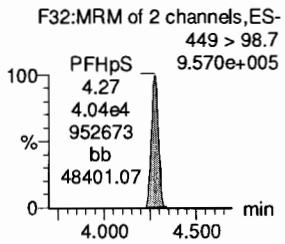
PFEChS



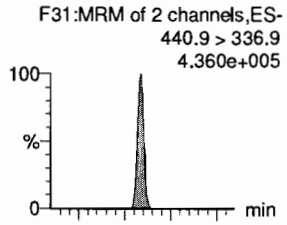


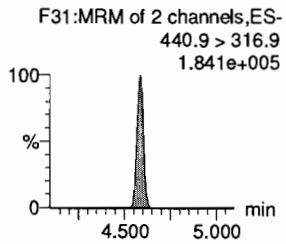
PFHpS



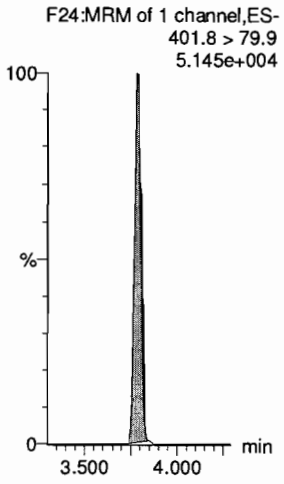


7:3 FTCA

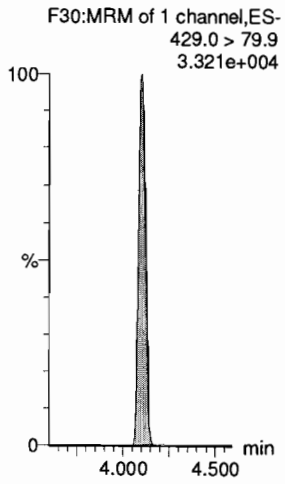




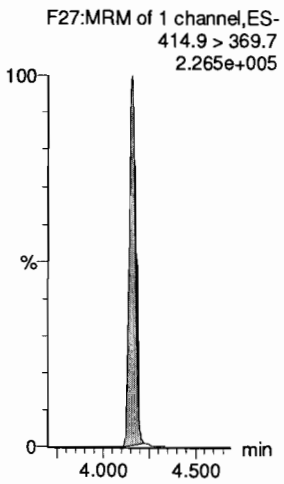
13C3-PFHxS



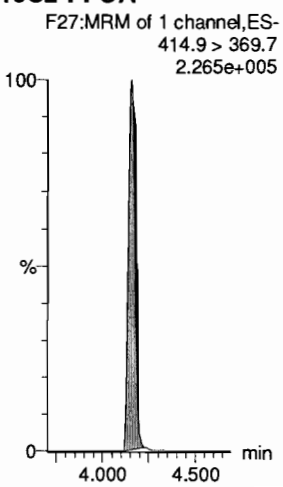
13C2-6:2 FTS



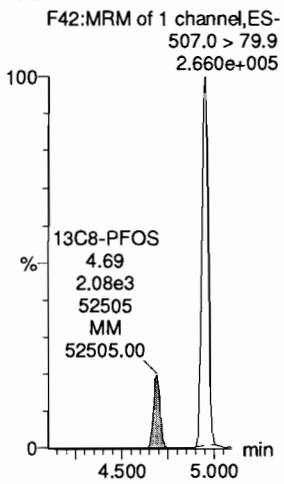
13C2-PFOA



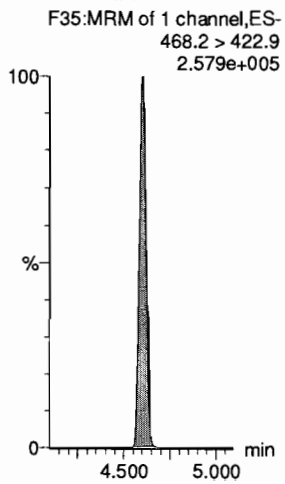
13C2-PFOA



13C8-PFOS



13C5-PFNA

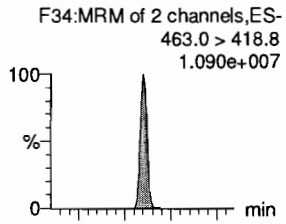


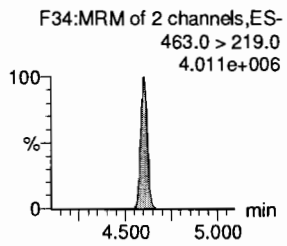
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

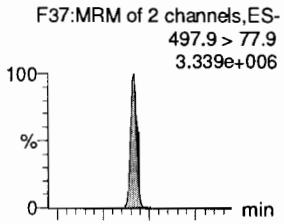
Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

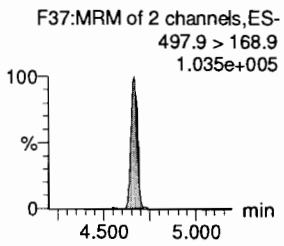
PFNA



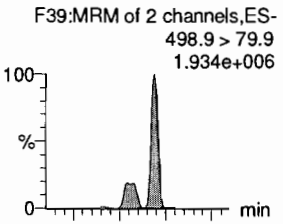


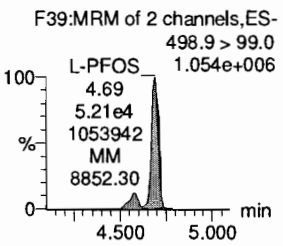
PFOSA



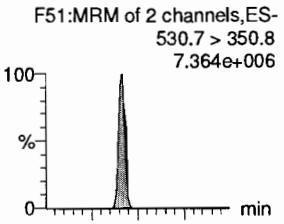


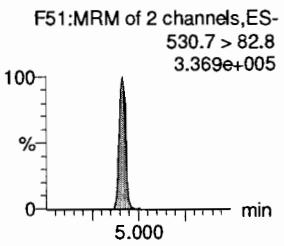
L-PFOS



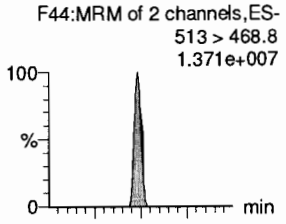


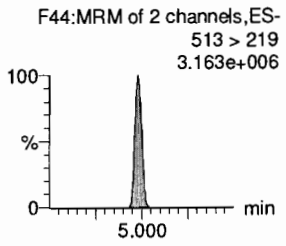
9Cl-PF30NS



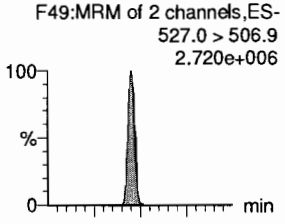


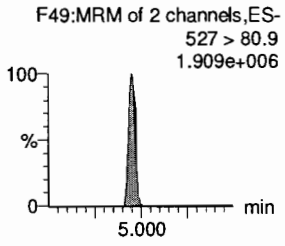
PFDA



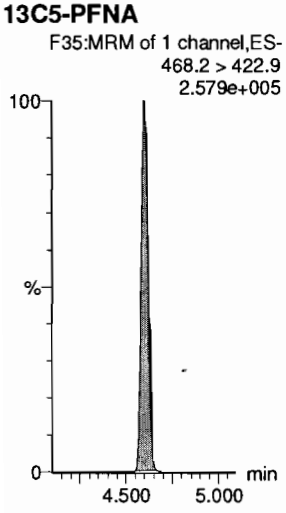


8:2 FTS

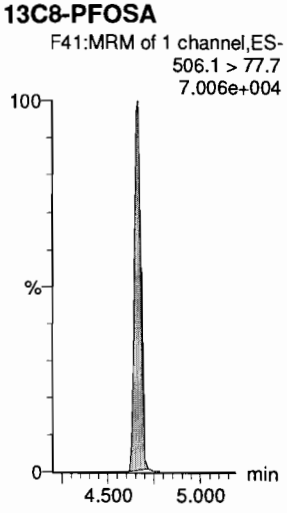




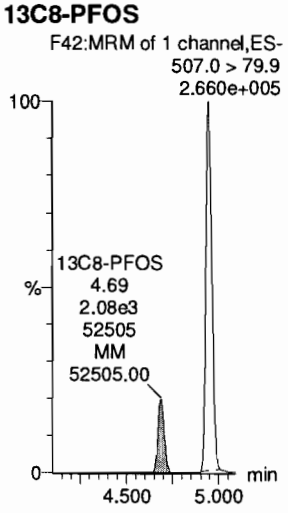
13C5-PFNA



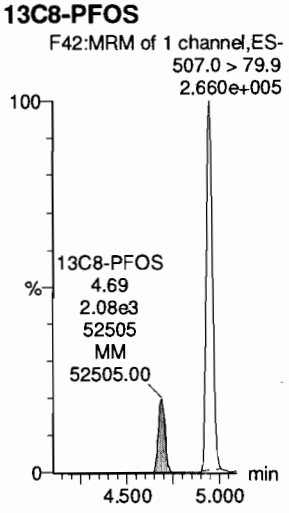
13C8-PFOSA



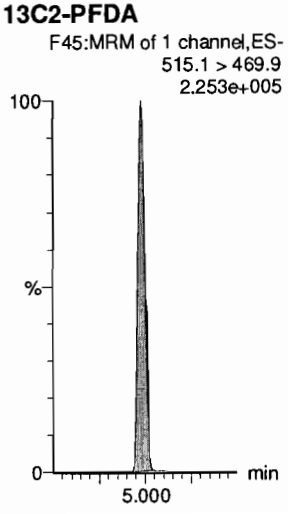
13C8-PFOS



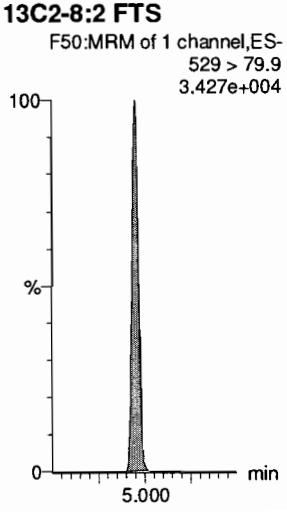
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

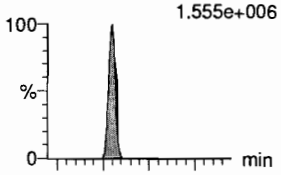


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

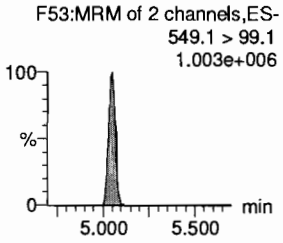
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

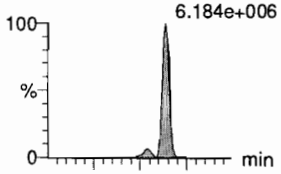
PFNS
F53:MRM of 2 channels,ES-
549.1 > 80.1
1.555e+006



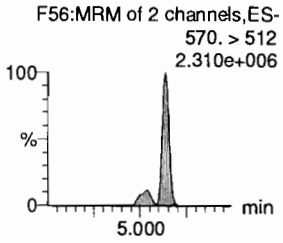
F53:MRM of 2 channels,ES-
549.1 > 99.1
1.003e+006



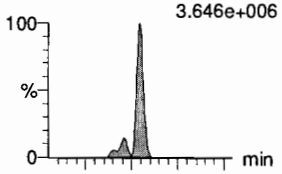
L-MeFOSAA
F56:MRM of 2 channels,ES-
570 > 419
6.184e+006



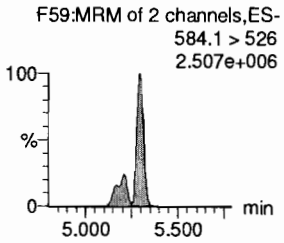
F56:MRM of 2 channels,ES-
570. > 512
2.310e+006



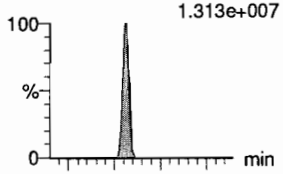
L-EtFOSAA
F59:MRM of 2 channels,ES-
584.1 > 419
3.646e+006



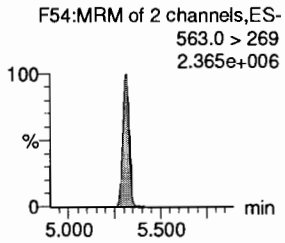
F59:MRM of 2 channels,ES-
584.1 > 526
2.507e+006



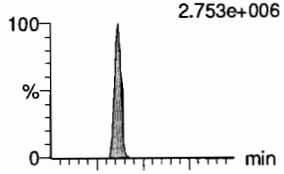
PFUdA
F54:MRM of 2 channels,ES-
563.0 > 518.9
1.313e+007



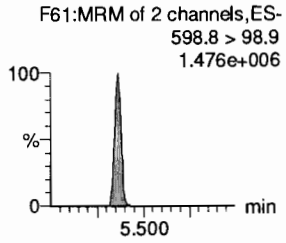
F54:MRM of 2 channels,ES-
563.0 > 269
2.365e+006



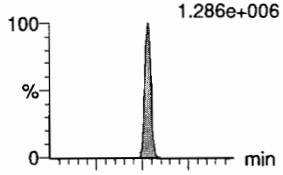
PFDS
F61:MRM of 2 channels,ES-
598.8 > 79.9
2.753e+006



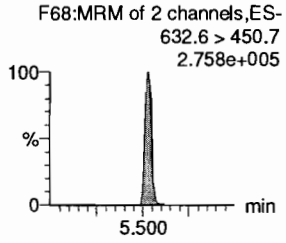
F61:MRM of 2 channels,ES-
598.8 > 98.9
1.476e+006



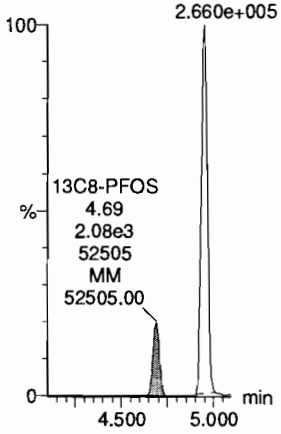
11Cl-PF30UdS
F68:MRM of 2 channels,ES-
632.6 > 452.7
1.286e+006



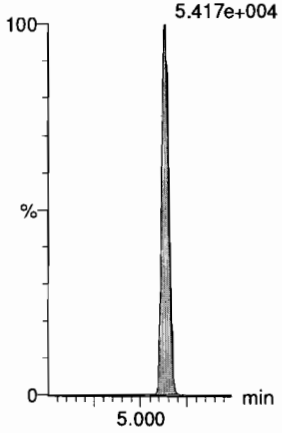
F68:MRM of 2 channels,ES-
632.6 > 450.7
2.758e+005



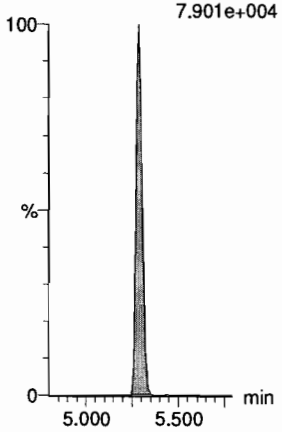
13C8-PFOS
F42:MRM of 1 channel,ES-
507.0 > 79.9
2.660e+005



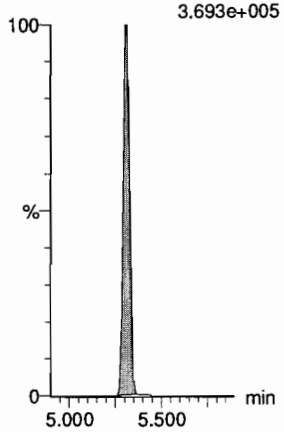
d3-N-MeFOSAA
F58:MRM of 1 channel,ES-
573.3 > 419
5.417e+004



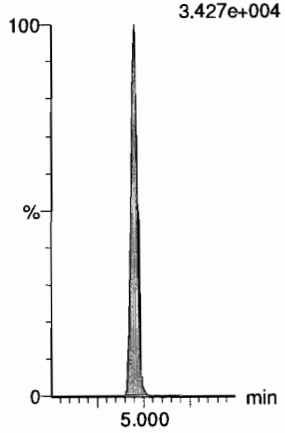
d5-N-EtFOSAA
F60:MRM of 1 channel,ES-
589.3 > 419
7.901e+004



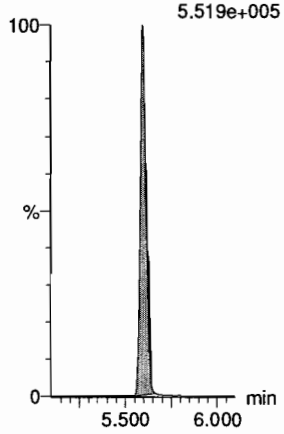
13C2-PFUdA
F55:MRM of 1 channel,ES-
565 > 519.8
3.693e+005



13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.427e+004



13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.519e+005

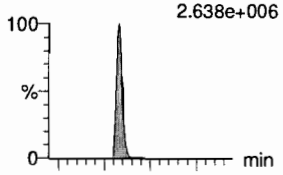


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

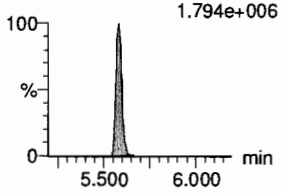
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

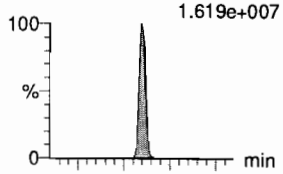
10:2 FTS
F66:MRM of 2 channels,ES-
627.0 > 606.9
2.638e+006



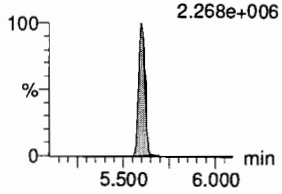
F66:MRM of 2 channels,ES-
627.0 > 80.9
1.794e+006



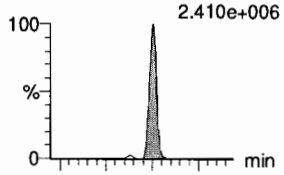
PFDoA
F62:MRM of 4 channels,ES-
612.9 > 569.0
1.619e+007



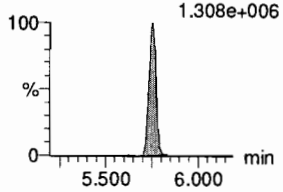
F62:MRM of 4 channels,ES-
612.9 > 318.8
2.268e+006



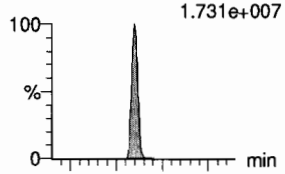
N-MeFOSA
F43:MRM of 2 channels,ES-
512.1 > 168.9
2.410e+006



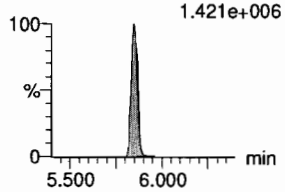
F43:MRM of 2 channels,ES-
512.1 > 219
1.308e+006



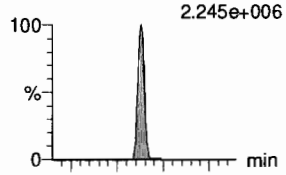
PFTrDA
F70:MRM of 2 channels,ES-
662.9 > 618.9
1.731e+007



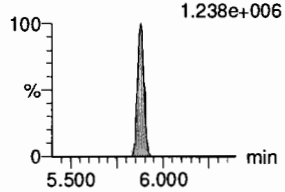
F70:MRM of 2 channels,ES-
662.9 > 319
1.421e+006



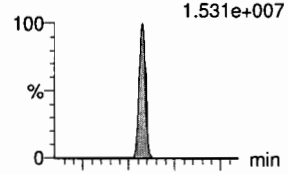
PFDoS
F71:MRM of 2 channels,ES-
698.8 > 79.9
2.245e+006



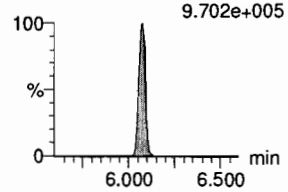
F71:MRM of 2 channels,ES-
698.8 > 98.9
1.238e+006



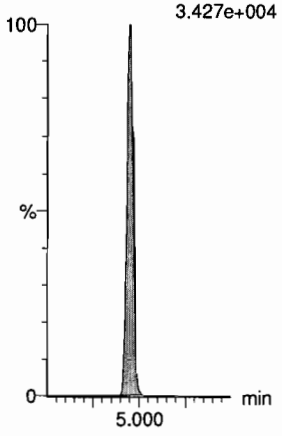
PFTeDA
F72:MRM of 2 channels,ES-
713.0 > 669.0
1.531e+007



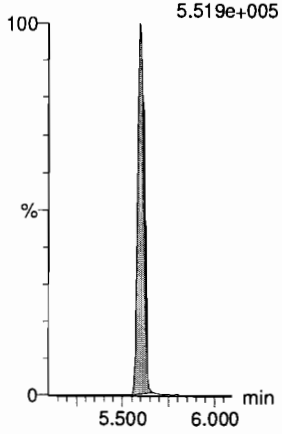
F72:MRM of 2 channels,ES-
713. > 369.0
9.702e+005



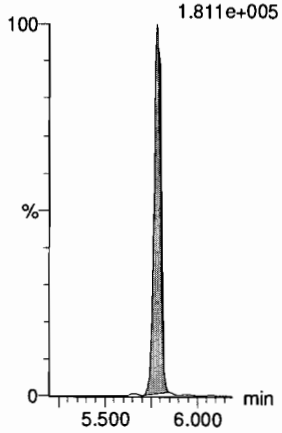
13C2-8:2 FTS
F50:MRM of 1 channel,ES-
529 > 79.9
3.427e+004



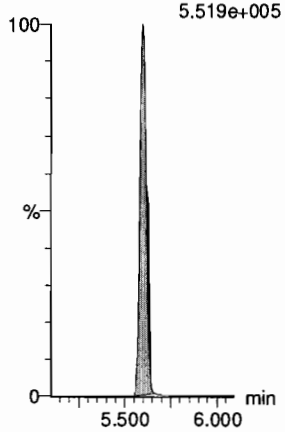
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.519e+005



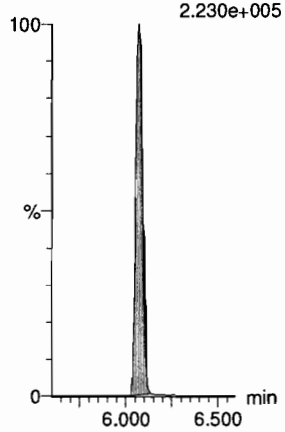
d3-N-MeFOSA
F46:MRM of 1 channel,ES-
515.2 > 168.9
1.811e+005



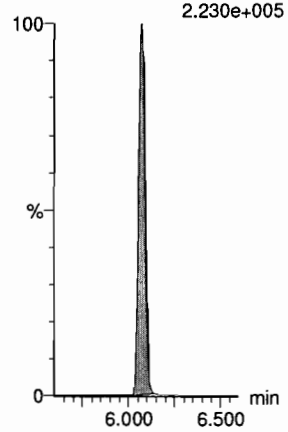
13C2-PFDoA
F63:MRM of 1 channel,ES-
614.7 > 569.7
5.519e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.230e+005



13C2-PFTeDA
F73:MRM of 2 channels,ES-
715.1 > 669.7
2.230e+005

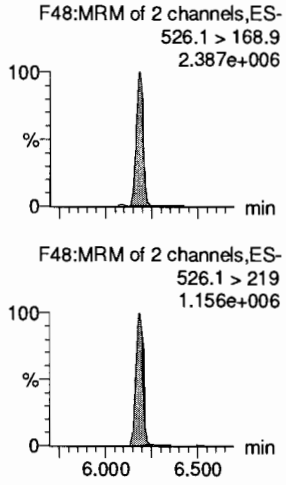


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

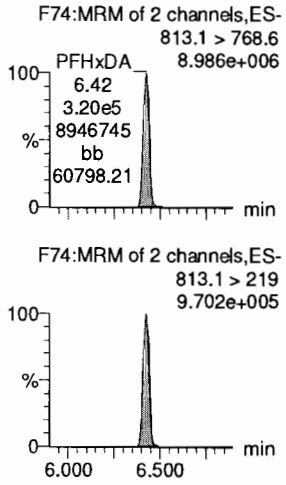
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

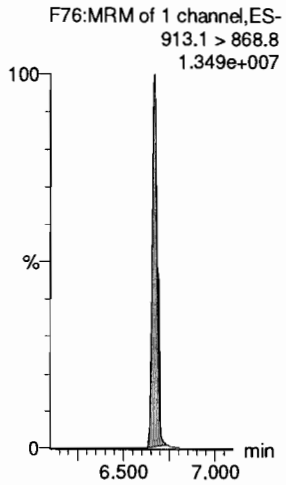
N-EtFOSA



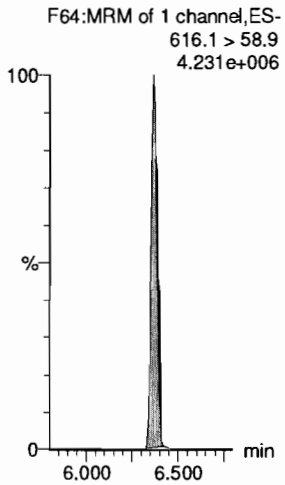
PFHxDA



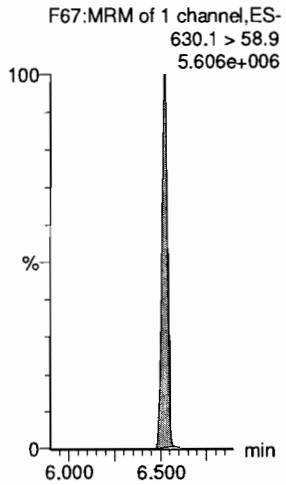
PFODA



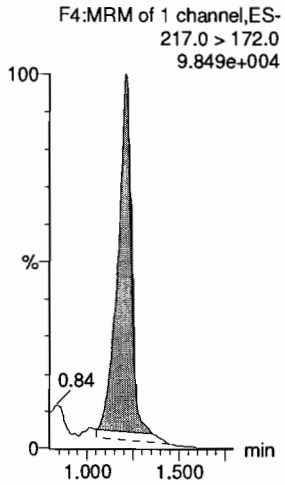
N-MeFOSE



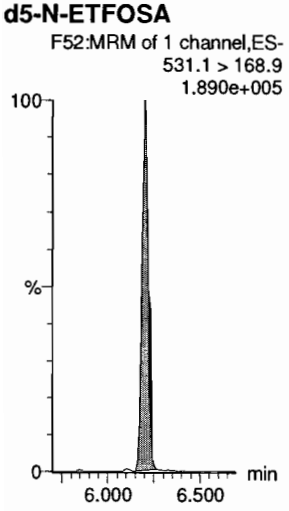
N-EtFOSE



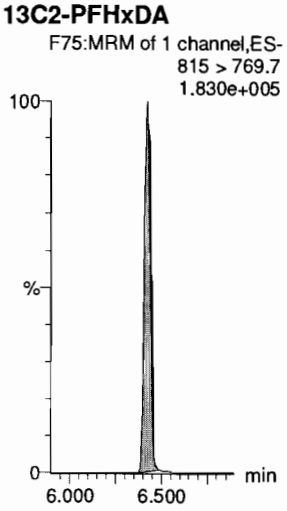
13C4-PFBA



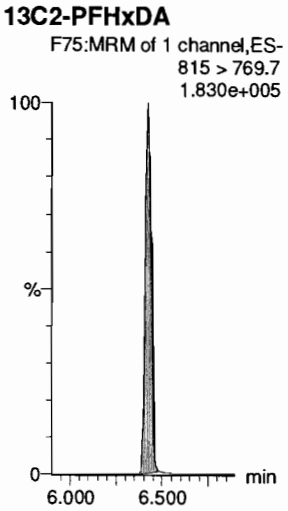
d5-N-ETFOSA



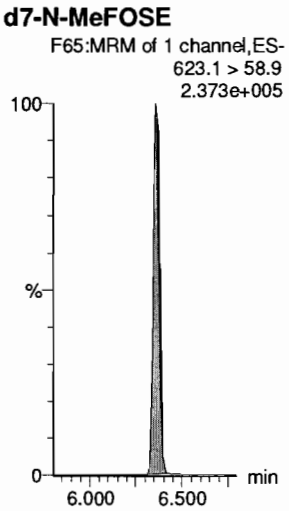
13C2-PFHxDA



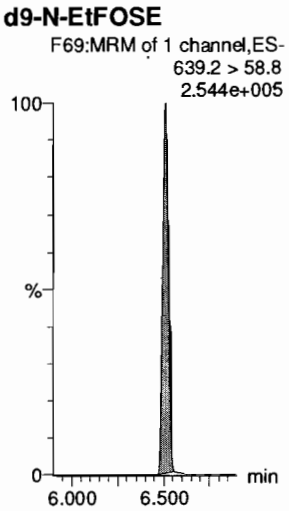
13C2-PFHxDA



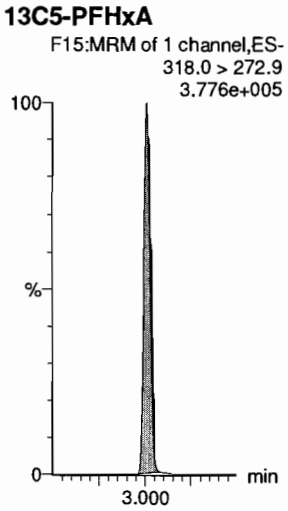
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

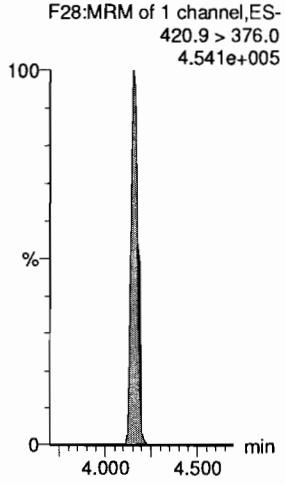


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-CRV.qld

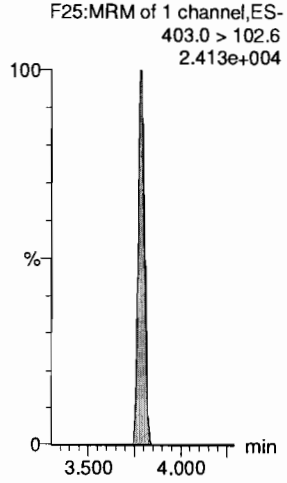
Last Altered: Wednesday, July 17, 2019 08:22:43 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:27:25 Pacific Daylight Time

Name: 190716M2_13, Date: 16-Jul-2019, Time: 18:41:14, ID: ST190716M2-10 PFC CS7 19G1110, Description: PFC CS7 19G1110

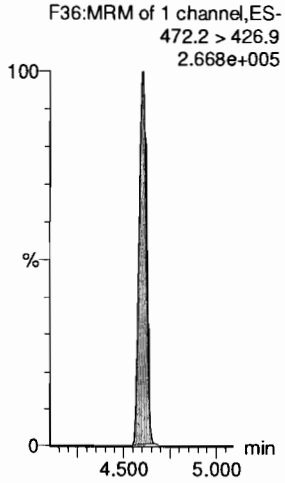
13C8-PFOA



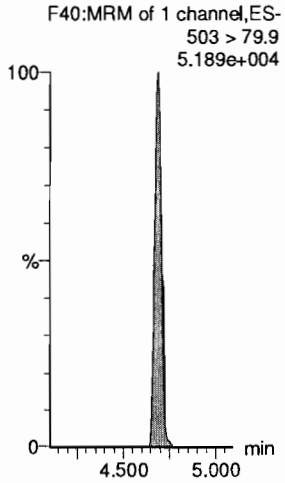
18O2-PFHxS



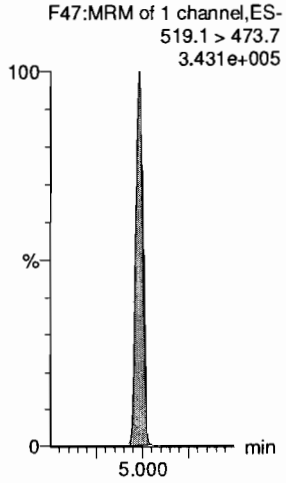
13C9-PFNA



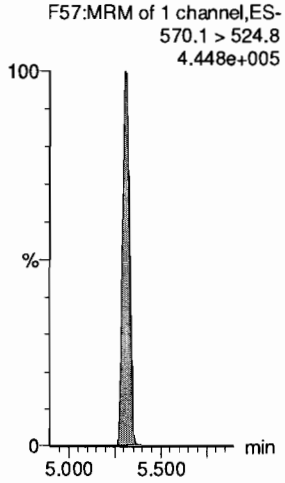
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

Ⓐ Compounds not present in ICV

Last Altered: Wednesday, July 17, 2019 08:52:17 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

✓ KM 7/17/19

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8	4363.565	4926.459	1.00	1.21	11.072	7.9	78.5	NO		
2	2	PFPrS	248.9 > 79.9		1253.513	1.00				Ⓐ	NO		
3	3	3:3 FTCA	240.9 > 176.9		7963.219	1.00				↓	NO		
4	4	PFPeA	263.1 > 218.9	4726.042	7963.219	1.00	2.21	7.419	8.0	80.5	NO		
5	5	PFBS	299.0 > 79.7	1519.645	1253.513	1.00	2.51	15.154	6.6	74.9	NO	3.722	NO
6	6	4:2 FTS	327.0 > 306.9	3442.900	2298.010	1.00	2.93	18.728	6.8	73.1	NO	1.939	NO
7	47	13C3-PFBA	216.1 > 171.8	4926.459	7524.424	1.00	1.21	8.184	12.2	97.5	NO		
8	49	13C3-PFBS	302.0 > 98.8	1253.513	1173.605	1.00	2.51	13.351	12.9	103.2	NO		
9	48	13C3-PFPeA	266.0 > 221.8	7963.219	17868.363	1.00	2.21	5.571	12.3	98.4	NO		
10	48	13C3-PFPeA	266.0 > 221.8	7963.219	17868.363	1.00	2.21	5.571	12.3	98.4	NO		
11	49	13C3-PFBS	302.0 > 98.8	1253.513	1173.605	1.00	2.51	13.351	12.9	103.2	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2298.010	1173.605	1.00	2.93	24.476	13.2	105.4	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0	11246.001	5516.453	1.00	3.01	10.193	8.8	88.1	NO	15.477	NO
15	8	PFPeS	349.1>80.1	1129.023	1253.513	1.00	3.22	11.259	7.5	74.7	NO	1.383	NO
16	9	HFPO-DA	285.1 > 168.9		1730.130	1.00				Ⓐ	NO		
17	10	5:3 FTCA	340.9 > 236.9		6624.121	1.00				↓	NO		
18	11	PFHpA	363.0 > 318.9	5131.471	6624.121	1.00	3.63	9.683	7.7	77.4	NO	4.273	NO
19	12	ADONA	376.8 > 250.9		6624.121	1.00				Ⓐ	NO		
20	52	13C2-PFHxA	315.0 > 270.0	5516.453	17868.363	1.00	3.01	3.859	4.9	97.6	NO		
21	49	13C3-PFBS	302.0 > 98.8	1253.513	1173.605	1.00	2.51	13.351	12.9	103.2	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1730.130	17868.363	1.00	3.22	1.210	5.3	106.8	NO		
23	53	13C4-PFHpA	367.2 > 321.8	6624.121	17868.363	1.00	3.63	4.634	12.7	101.6	NO		
24	53	13C4-PFHpA	367.2 > 321.8	6624.121	17868.363	1.00	3.63	4.634	12.7	101.6	NO		
25	53	13C4-PFHpA	367.2 > 321.8	6624.121	17868.363	1.00	3.63	4.634	12.7	101.6	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6	1490.313	2543.976	1.00	3.79	7.323	7.4	81.1	NO	2.737	NO
28	15	6:2 FTS	427.0 > 406.9	2742.435	1749.315	1.00	4.11	19.596	6.8	71.1	NO	1.831	NO
29	16	L-PFOA	412.8 > 368.9	16411.793	13819.985	1.00	4.17	14.844	7.4	74.2	NO	3.770	NO
30	18	PFecHS	460.8 > 381.0		13819.985	1.00				Ⓐ	NO		
31	19	PFHpS	449.0 > 80.0	1171.383	2594.266	1.00	4.28	5.644	6.7	70.2	NO	1.967	NO
32	20	7:3 FTCA	440.9 > 336.9		14447.843	1.00				Ⓐ	NO		
33	54	13C3-PFHxS	401.8 > 79.9	2543.976	1173.605	1.00	3.79	27.096	12.3	98.1	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1749.315	2688.253	1.00	4.11	8.134	11.9	95.4	NO		
35	58	13C2-PFOA	414.9 > 369.7	13819.985	25522.281	1.00	4.16	6.769	13.3	106.4	NO		
36	58	13C2-PFOA	414.9 > 369.7	13819.985	25522.281	1.00	4.16	6.769	13.3	106.4	NO		

Calc 7/17/19

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

Last Altered: Wednesday, July 17, 2019 08:52:17 Pacific Daylight Time
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Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2594.266	2688.253	1.00	4.70	12.063	11.9	95.1	NO		
38	56	13C5-PFNA	468.2 > 422.9	14447.843	13964.532	1.00	4.60	12.933	13.0	103.7	NO		
39	-1												
40	21	PFNA	463.0 > 418.8	9405.347	14447.843	1.00	4.61	8.137	7.8	78.5	NO	2.872	NO
41	22	PFOSA	497.9 > 77.9	2243.404	3075.545	1.00	4.67	9.118	7.9	78.7	NO	29.541	NO
42	23	L-PFOS	498.9 > 79.9	1882.771	2594.266	1.00	4.69	9.072	7.2	77.5	NO	2.380	NO
43	25	9Cl-PF30NS	530.7 > 350.8		2594.266	1.00				A	NO		
44	26	PFDA	513 > 468.8	11317.940	11547.107	1.00	4.99	12.252	8.2	81.9	NO	4.410	NO
45	27	8:2 FTS	527.0 > 506.9	2491.488	1854.353	1.00	4.95	16.795	6.8	71.3	NO	1.508	NO
46	56	13C5-PFNA	468.2 > 422.9	14447.843	13964.532	1.00	4.60	12.933	13.0	103.7	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3075.545	23646.482	1.00	4.67	1.626	11.7	93.8	NO		
48	59	13C8-PFOS	507.0 > 79.9	2594.266	2688.253	1.00	4.70	12.063	11.9	95.1	NO		
49	59	13C8-PFOS	507.0 > 79.9	2594.266	2688.253	1.00	4.70	12.063	11.9	95.1	NO		
50	60	13C2-PFDA	515.1 > 469.9	11547.107	17476.191	1.00	4.99	8.259	12.3	98.8	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1854.353	2688.253	1.00	4.95	8.622	12.6	100.6	NO		
52	-1												
53	28	PFNS	549.1 > 80.1	1203.337	2594.266	1.00	5.05	5.798	7.2	75.4	NO	1.614	NO
54	29	L-MeFOSAA	570 > 419	6217.467	2901.036	1.00	5.14	26.790	9.1	90.8	NO	2.821	NO
55	31	L-EtFOSAA	584.1 > 419	4897.610	4092.577	1.00	5.30	14.959	9.5	95.3	NO	1.441	NO
56	33	PFUdA	563.0 > 518.9	11064.234	19076.258	1.00	5.32	7.250	8.1	81.0	NO	5.245	NO
57	34	PFDS	598.8 > 79.9	1921.170	1854.353	1.00	5.36	12.950	7.0	72.4	NO	1.722	NO
58	35	11Cl-PF30UdS	632.6 > 452.7		21896.582	1.00				A	NO		
59	59	13C8-PFOS	507.0 > 79.9	2594.266	2688.253	1.00	4.70	12.063	11.9	95.1	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	2901.036	23646.482	1.00	5.14	1.534	12.4	98.8	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	4092.577	23646.482	1.00	5.30	2.163	12.4	99.3	NO		
62	63	13C2-PFUdA	565 > 519.8	19076.258	23646.482	1.00	5.32	10.084	12.4	99.4	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1854.353	2688.253	1.00	4.95	8.622	12.6	100.6	NO		
64	65	13C2-PFDoA	614.7 > 569.7	21896.582	17476.191	1.00	5.60	15.662	11.9	95.5	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1854.353	1.00				A	NO		
67	37	PFDoA	612.9 > 569.0	13978.540	21896.582	1.00	5.60	7.980	8.3	82.7	NO	7.466	NO
68	38	N-MeFOSA	512.1 > 168.9		7472.431	1.00				A	NO		
69	39	PFTrDA	662.9 > 618.9	14609.241	21896.582	1.00	5.86	8.340	8.2	81.5	NO	12.779	NO
70	40	PFDoS	698.8 > 79.9		10114.721	1.00				A	NO		
71	41	PFTeDA	713.0 > 669.0	11397.718	10114.721	1.00	6.08	14.086	7.9	79.3	NO	14.844	NO
72	65	13C2-PFDoA	614.7 > 569.7	21896.582	17476.191	1.00	5.60	15.662	11.9	95.5	NO		

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

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Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	21896.582	17476.191	1.00	5.60	15.662	11.9	95.5	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	7472.431	23646.482	1.00	5.79	3.950	142.9	95.3	NO		
75	65	13C2-PFDoA	614.7 > 569.7	21896.582	17476.191	1.00	5.60	15.662	11.9	95.5	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	10114.721	23646.482	1.00	6.08	5.347	12.2	97.9	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	10114.721	23646.482	1.00	6.08	5.347	12.2	97.9	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		9028.043	1.00					NO		
80	43	PFHxDA	813.1 > 768.6		6618.411	1.00					NO		
81	44	PFODA	913.1 > 868.8		6618.411	1.00					NO		
82	45	N-MeFOSE	616.1 > 58.9		7808.417	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		8195.822	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	7524.424	7524.424	1.00	1.22	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	9028.043	23646.482	1.00	6.20	4.772	147.0	98.0	NO		
86	69	13C2-PFHxDA	815 > 769.7	6618.411	23646.482	1.00	6.43	3.499	4.8	96.1	NO		
87	69	13C2-PFHxDA	815 > 769.7	6618.411	23646.482	1.00	6.43	3.499	4.8	96.1	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	7808.417	23646.482	1.00	6.36	4.128	138.8	92.5	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	8195.822	23646.482	1.00	6.51	4.332	142.3	94.9	NO		
90	73	13C5-PFHxA	318.0 > 272.9	17868.363	17868.363	1.00	3.01	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	25522.281	25522.281	1.00	4.16	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1173.605	1173.605	1.00	3.79	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	13964.532	13964.532	1.00	4.60	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2688.253	2688.253	1.00	4.70	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	17476.191	17476.191	1.00	4.99	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	23646.482	23646.482	1.00	5.31	12.500	12.5	100.0	NO		

Vista Analytical Laboratory

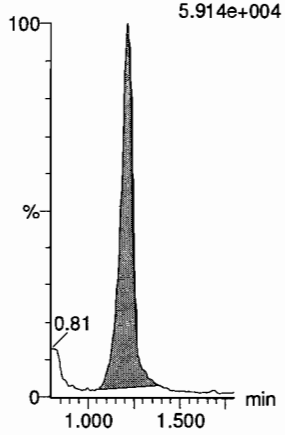
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

Last Altered: Wednesday, July 17, 2019 08:52:17 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

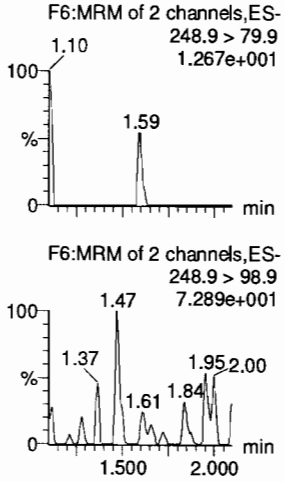
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619_ICV.mdb 17 Jul 2019 08:46:40
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

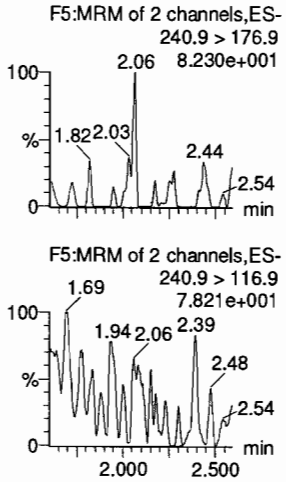
PFBA



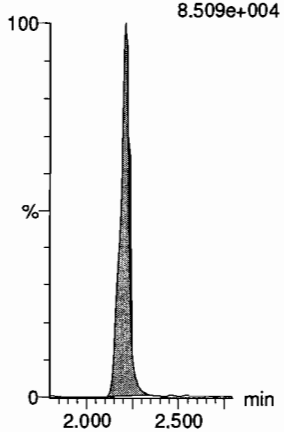
PFPrS



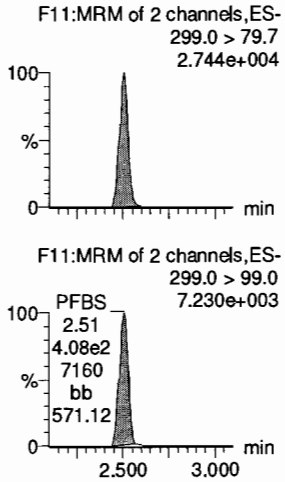
3:3 FTCA



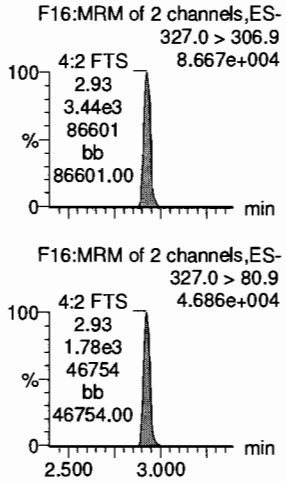
PFPeA



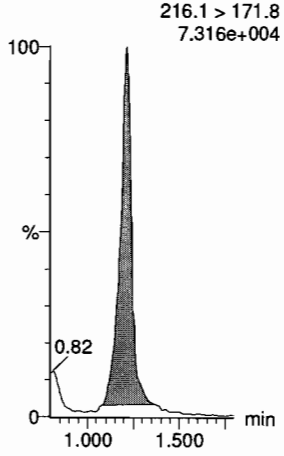
PFBS



4:2 FTS



13C3-PFBA



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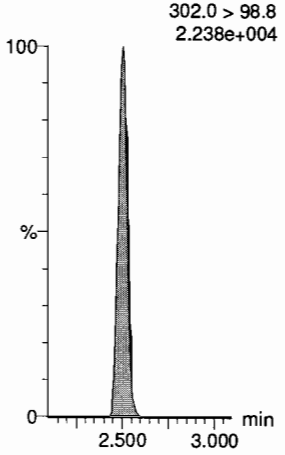

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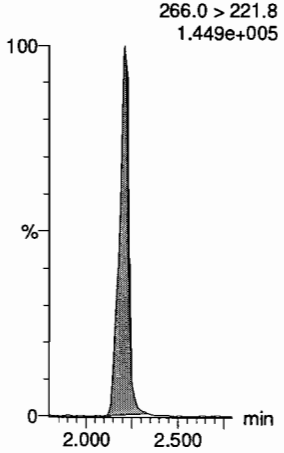

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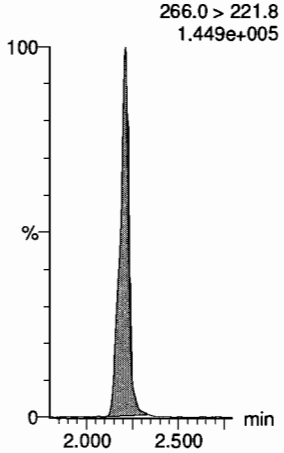

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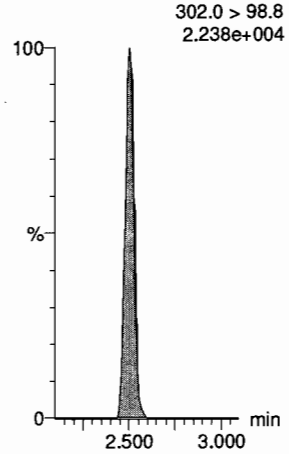
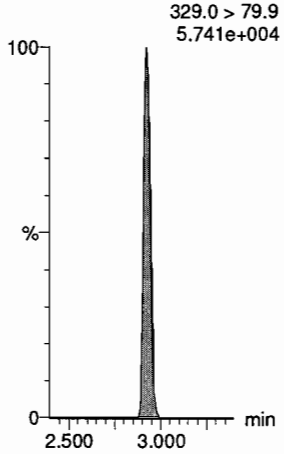


13C2-4:2 FTS



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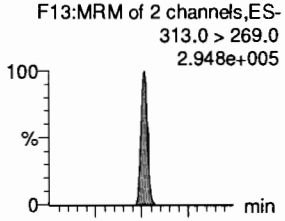
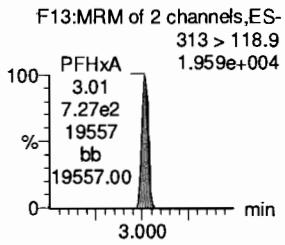
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

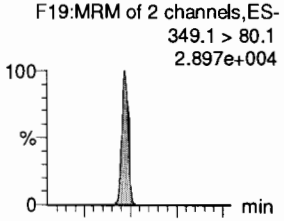
Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

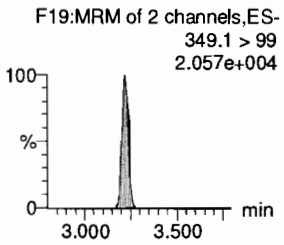
PFHxA



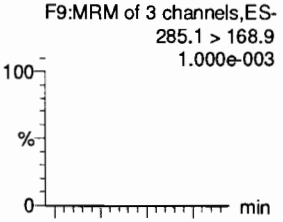


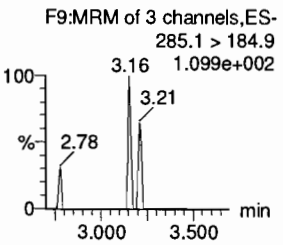
PFPeS



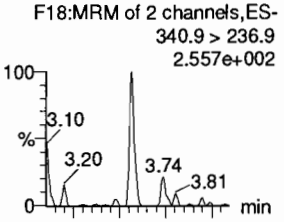


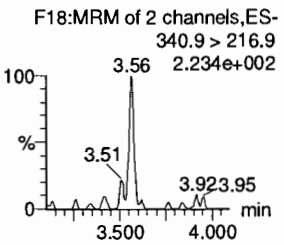
HFPO-DA





5:3 FTCA





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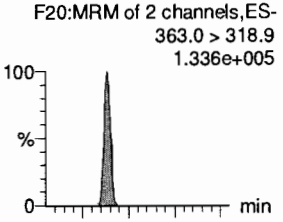
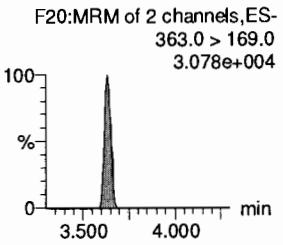
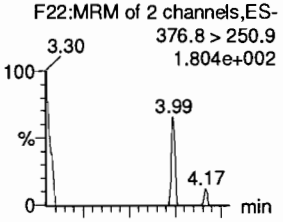
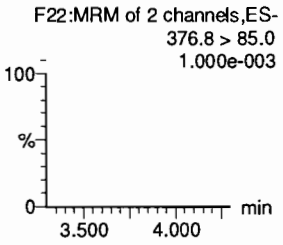


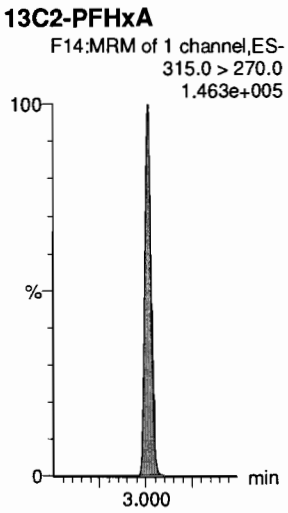


ADONA

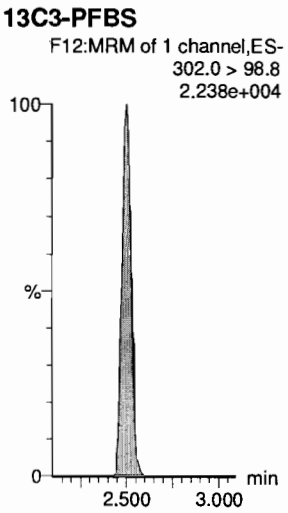




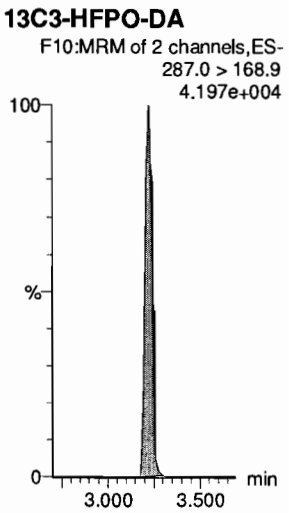
13C2-PFHxA



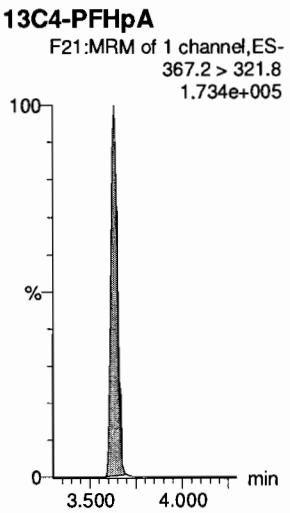
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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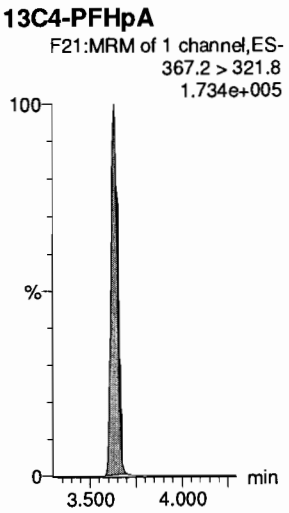

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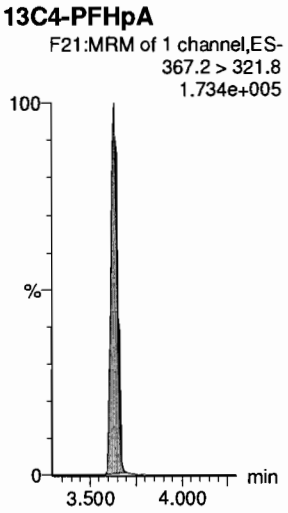

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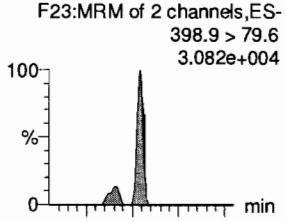
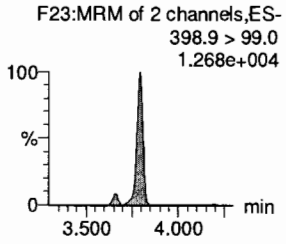
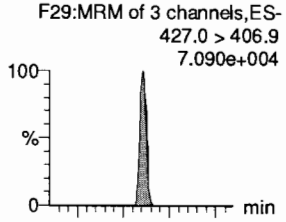
Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

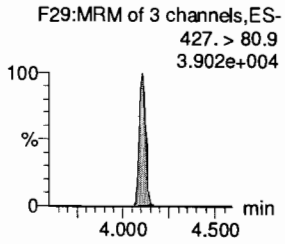
L-PFHxS



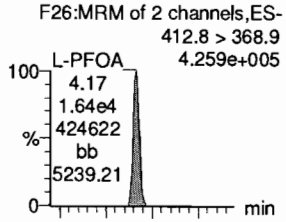


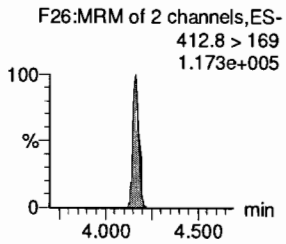
6:2 FTS





L-PFOA





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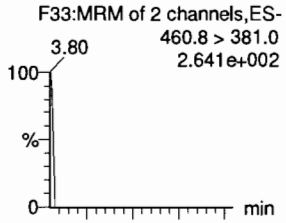
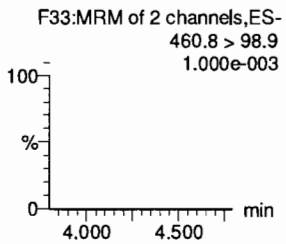
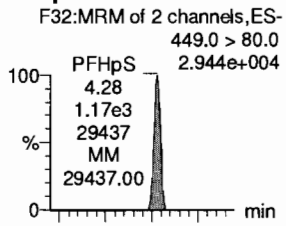
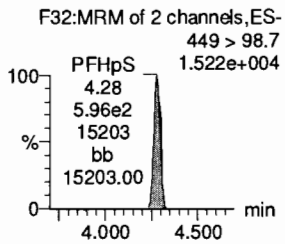


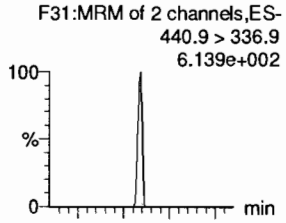


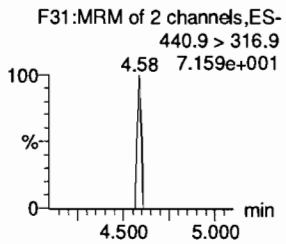
PFHpS



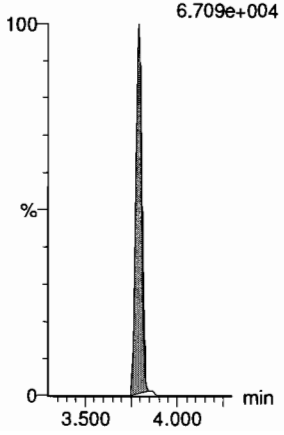


7:3 FTCA

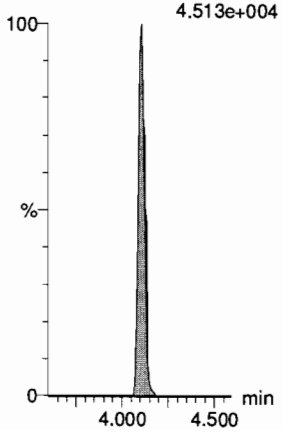




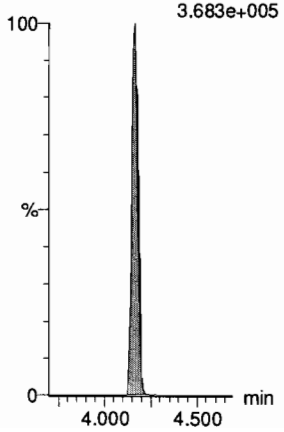
13C3-PFHxS



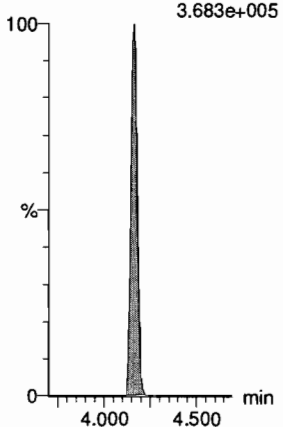
13C2-6:2 FTS



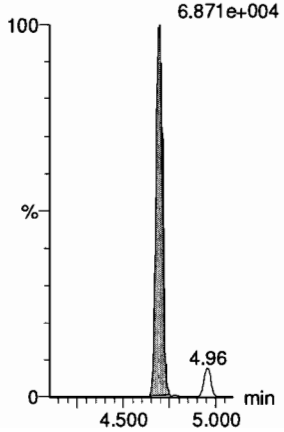
13C2-PFOA



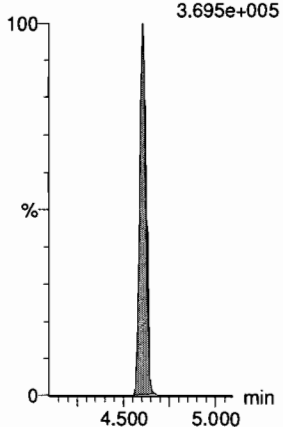
13C2-PFOA



13C8-PFOS



13C5-PFNA



Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

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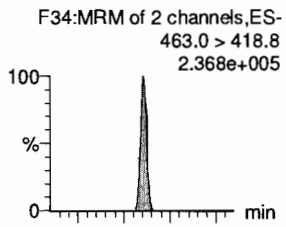
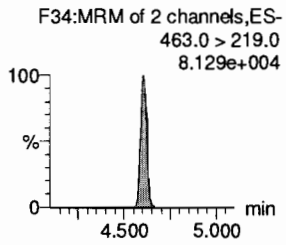
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

PFNA





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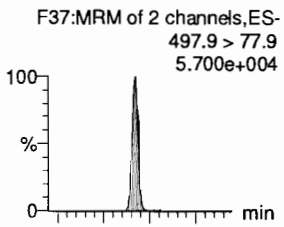
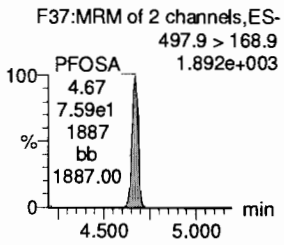
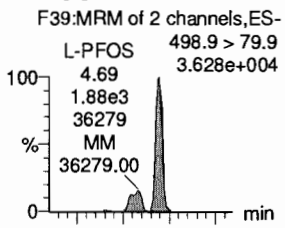
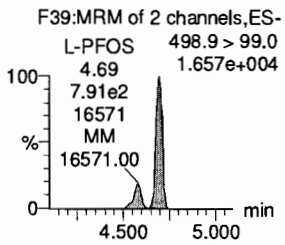




L-PFOS





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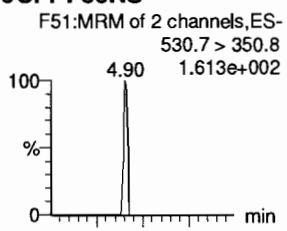

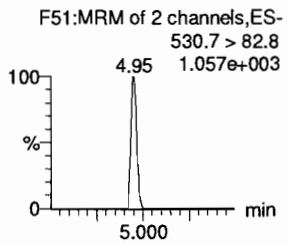

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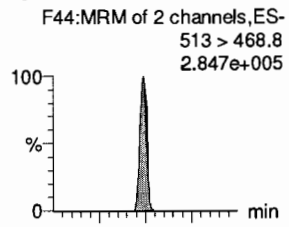
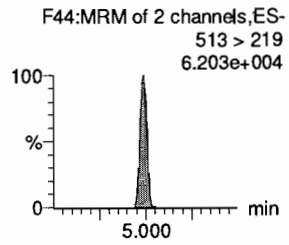
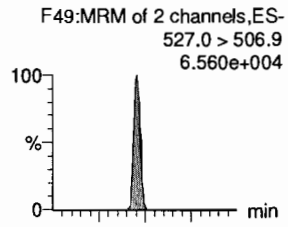
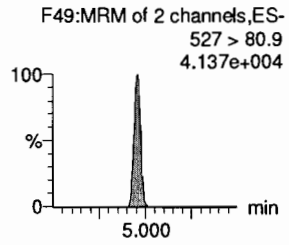




8:2 FTS





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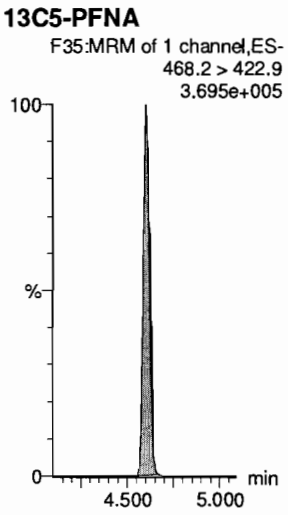

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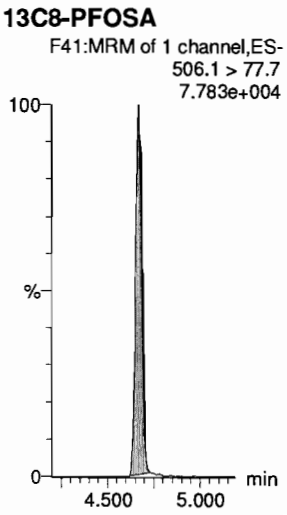

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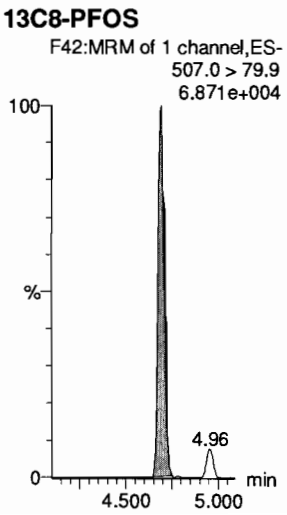

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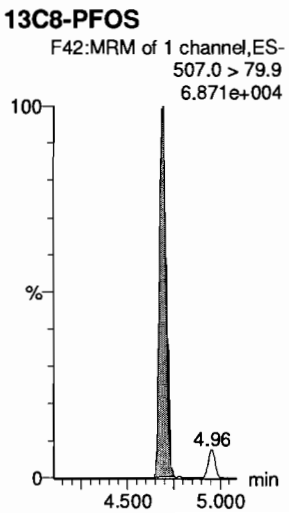

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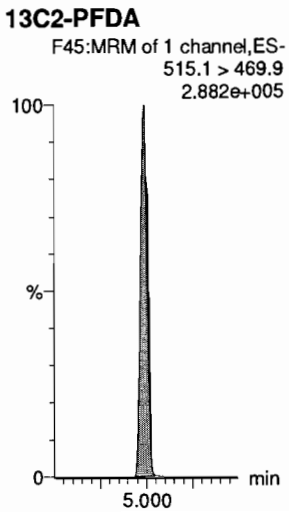
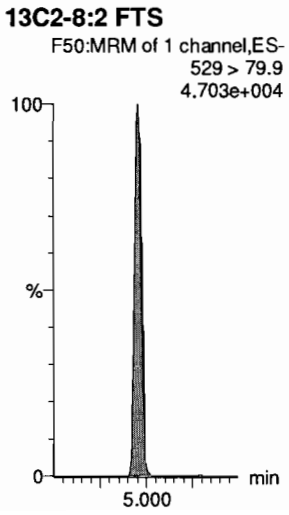


13C2-8:2 FTS



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Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

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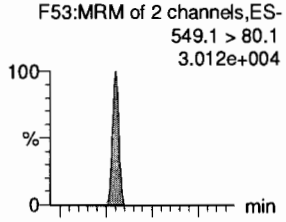

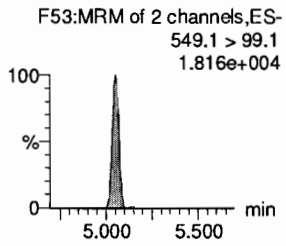

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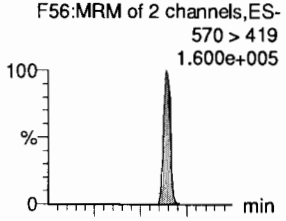

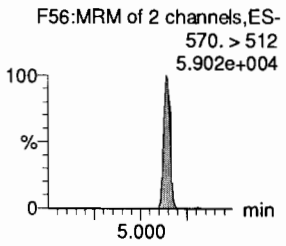

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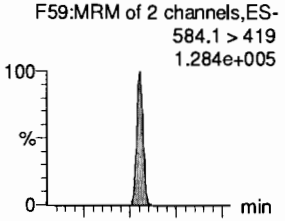

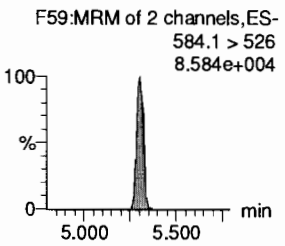

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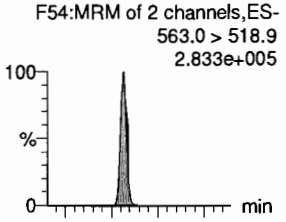

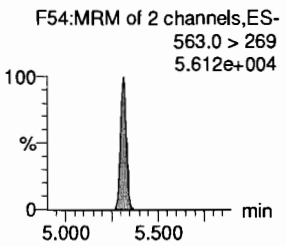

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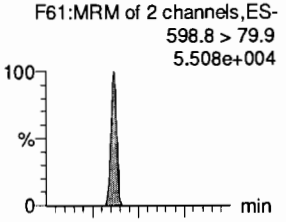

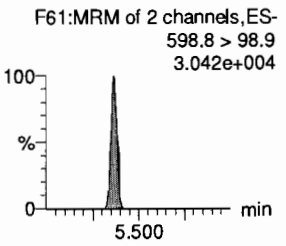

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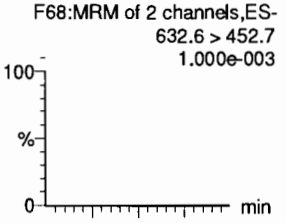
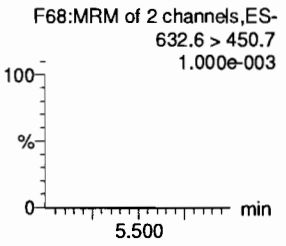
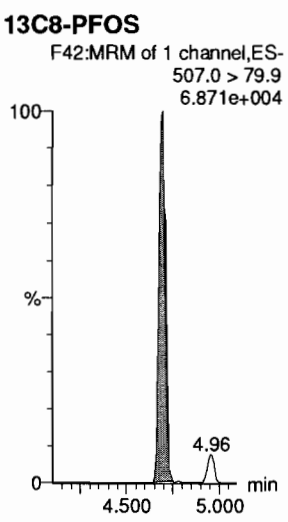




13C8-PFOS



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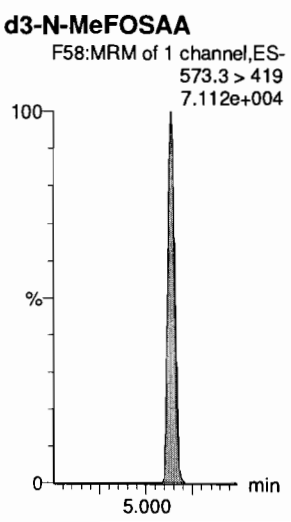

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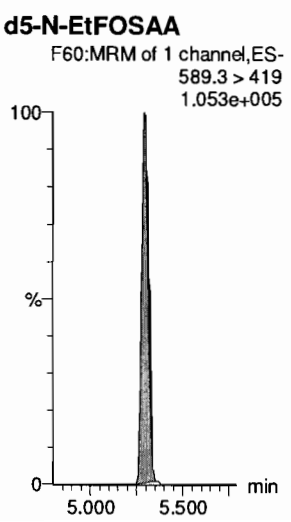

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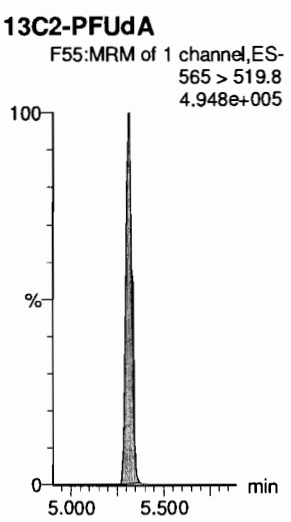
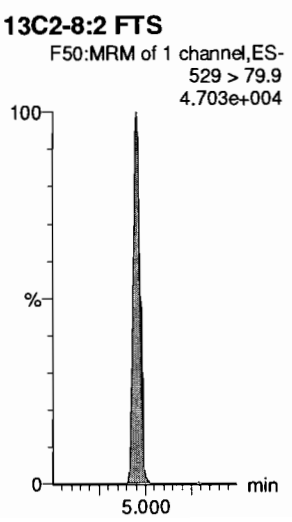


13C2-8:2 FTS



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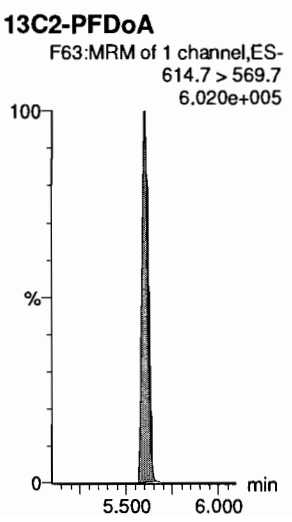

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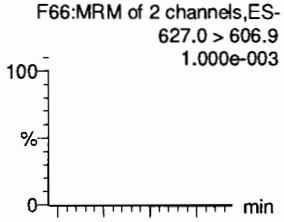
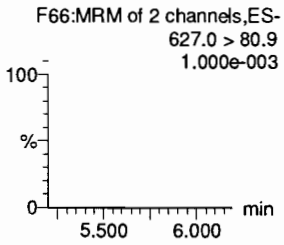
10:2 FTS





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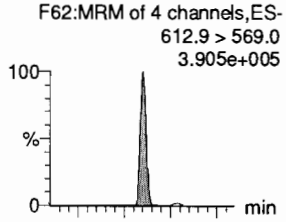
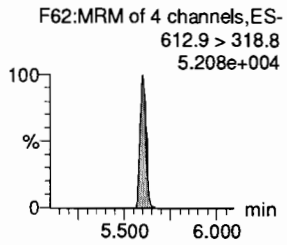
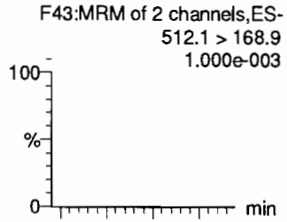
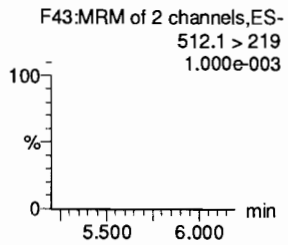




N-MeFOSA





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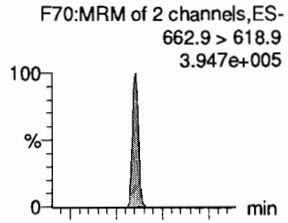

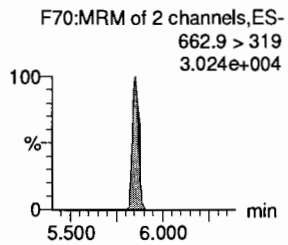

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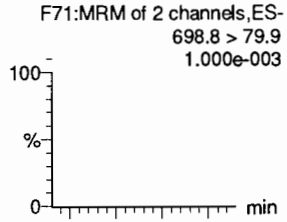

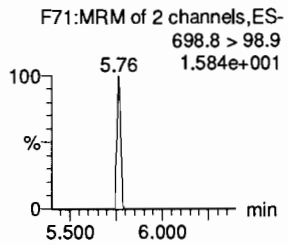

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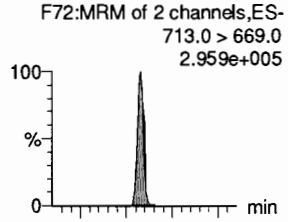

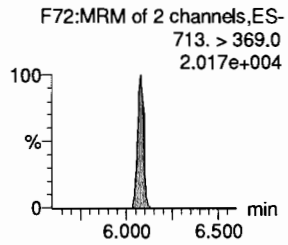

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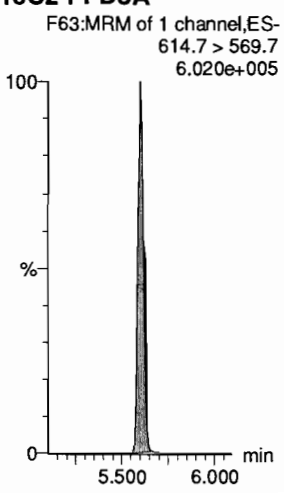

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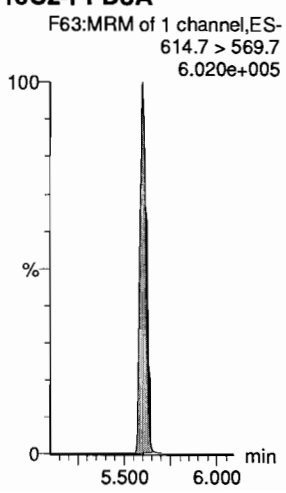

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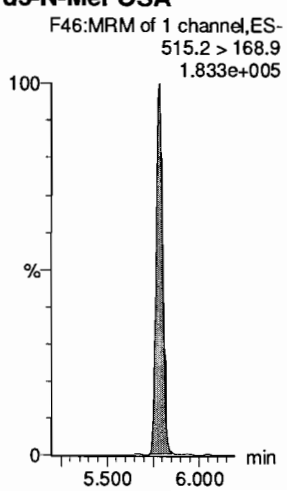

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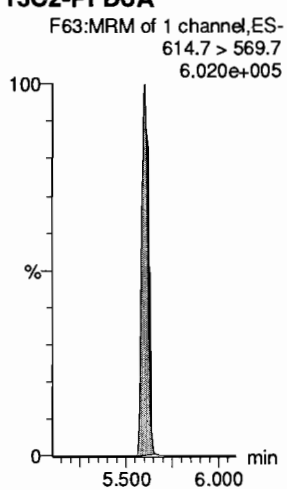

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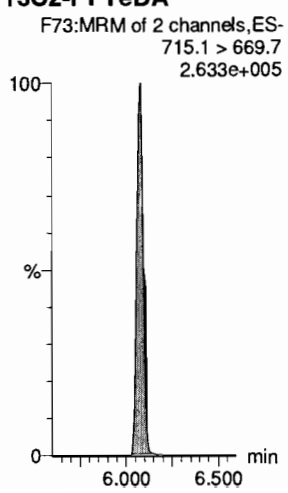

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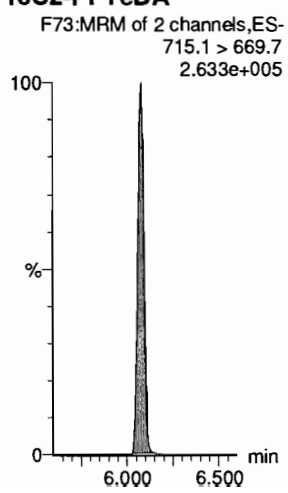

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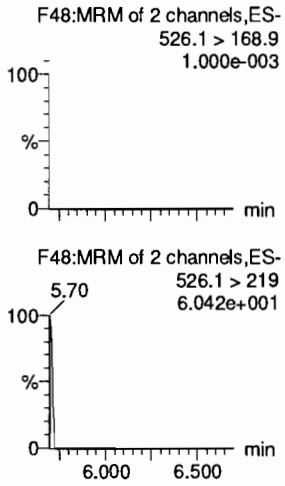
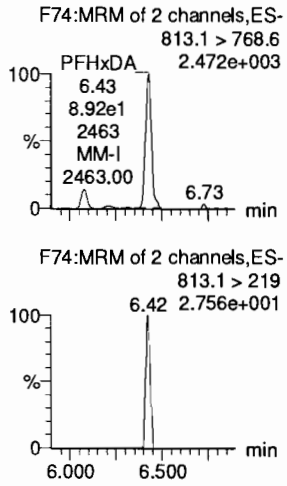
Last Altered: Wednesday, July 17, 2019 08:52:17 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

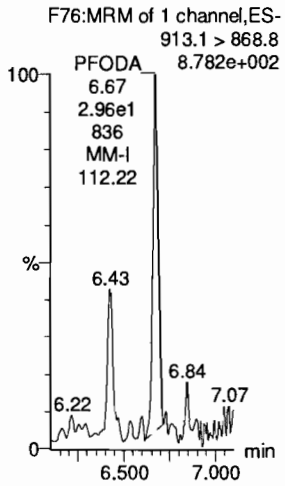
N-EtFOSA



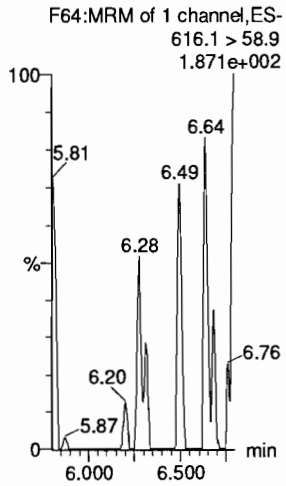
PFHxDA



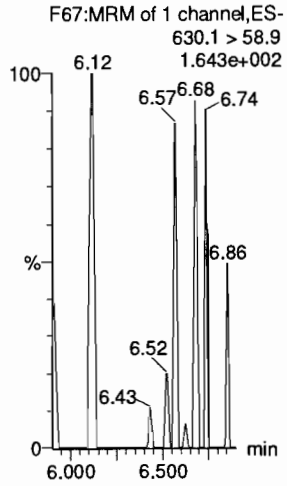
PFODA



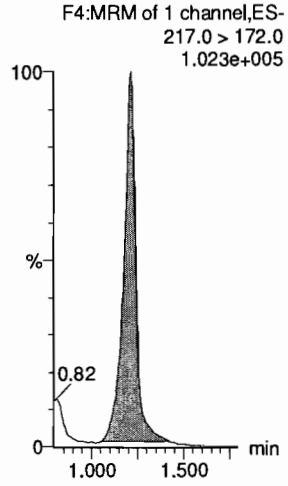
N-MeFOSE



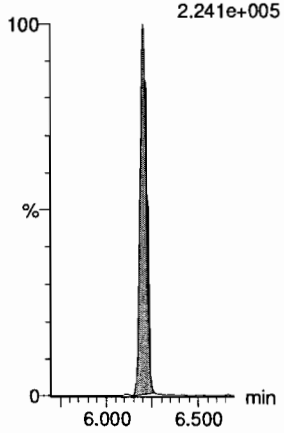
N-EtFOSE



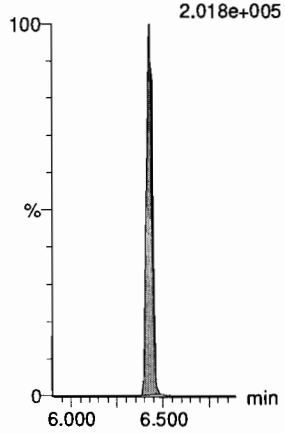
13C4-PFBA



d5-N-ETFOSA



13C2-PFHxDA



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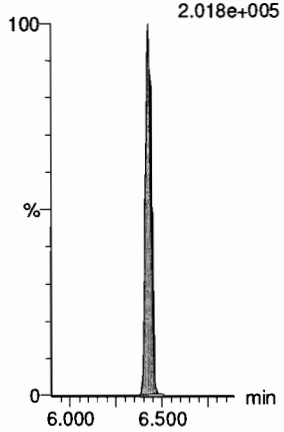
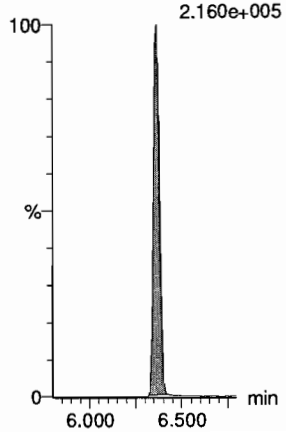
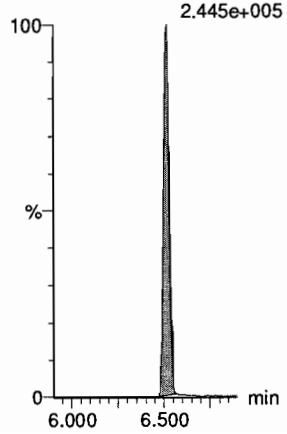


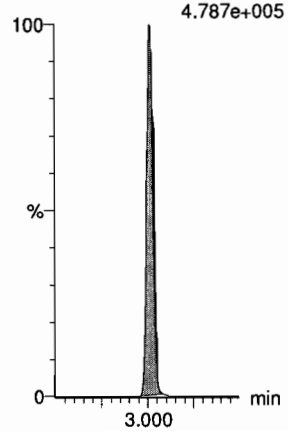
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

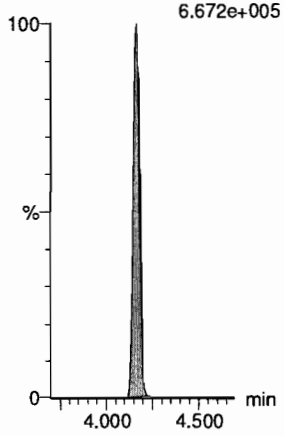


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-ICV.qld

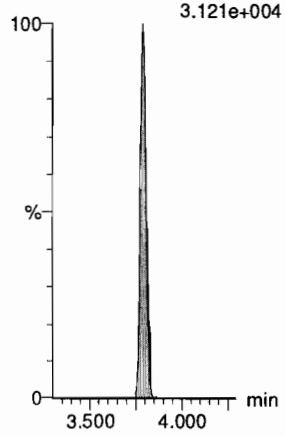
Last Altered: Wednesday, July 17, 2019 08:52:17 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 08:52:22 Pacific Daylight Time

Name: 190716M2_16, Date: 16-Jul-2019, Time: 19:13:05, ID: ICV190716M2-2 PFC ICV 19F2922, Description: PFC ICV 19F2922

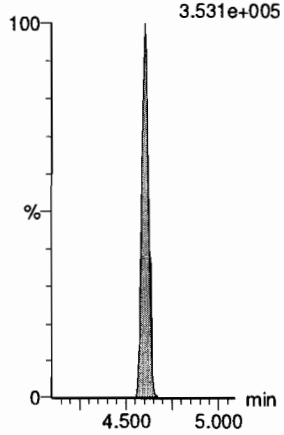
13C8-PFOA



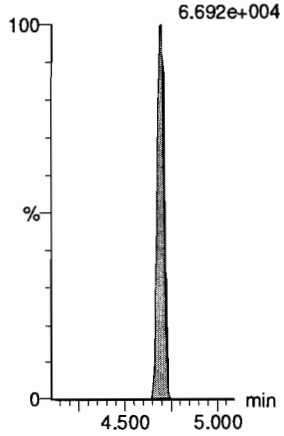
18O2-PFHxS



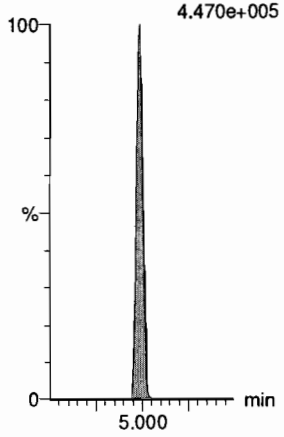
13C9-PFNA



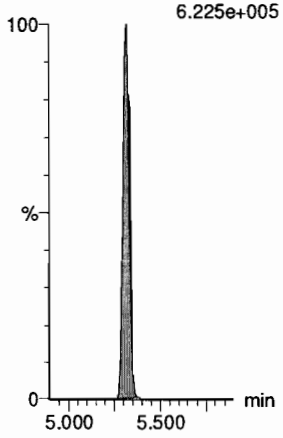
13C4-PFOS



13C6-PFDA



13C7-PFUdA



Vista Analytical Laboratory

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
1	1	PFBA	213.0 > 168.8		5113.750	1.00					NO		
2	2	PFPrS	248.9 > 79.9		1282.185	1.00					NO		
3	3	3:3 FTCA	240.9 > 176.9		8320.054	1.00					NO		
4	4	PFPeA	263.1 > 218.9		8320.054	1.00					NO		
5	5	PFBS	299.0 > 79.7		1282.185	1.00					NO		
6	6	4:2 FTS	327.0 > 306.9		2365.948	1.00					NO		
7	47	13C3-PFBA	216.1 > 171.8	5113.750	7656.683	1.00	1.21	8.349	12.4	99.5	NO		
8	49	13C3-PFBS	302.0 > 98.8	1282.185	1247.576	1.00	2.50	12.847	12.4	99.3	NO		
9	48	13C3-PFPeA	266.0 > 221.8	8320.054	19207.180	1.00	2.21	5.415	11.9	95.6	NO		
10	48	13C3-PFPeA	266.0 > 221.8	8320.054	19207.180	1.00	2.21	5.415	11.9	95.6	NO		
11	49	13C3-PFBS	302.0 > 98.8	1282.185	1247.576	1.00	2.50	12.847	12.4	99.3	NO		
12	51	13C2-4:2 FTS	329.0 >79.9	2365.948	1247.576	1.00	2.92	23.705	12.8	102.0	NO		
13	-1												
14	7	PFHxA	313.0 > 269.0		5651.475	1.00					NO		
15	8	PFPeS	349.1>80.1		1282.185	1.00					NO		
16	9	HFPO-DA	285.1 > 168.9		1839.802	1.00					NO		
17	10	5:3 FTCA	340.9 > 236.9		6770.303	1.00					NO		
18	11	PFHpA	363.0 > 318.9		6770.303	1.00					NO		
19	12	ADONA	376.8 > 250.9		6770.303	1.00					NO		
20	52	13C2-PFHxA	315.0 > 270.0	5651.475	19207.180	1.00	3.01	3.678	4.6	93.0	NO		
21	49	13C3-PFBS	302.0 > 98.8	1282.185	1247.576	1.00	2.50	12.847	12.4	99.3	NO		
22	50	13C3-HFPO-DA	287.0 > 168.9	1839.802	19207.180	1.00	3.22	1.197	5.3	105.7	NO		
23	53	13C4-PFHpA	367.2 > 321.8	6770.303	19207.180	1.00	3.63	4.406	12.1	96.6	NO		
24	53	13C4-PFHpA	367.2 > 321.8	6770.303	19207.180	1.00	3.63	4.406	12.1	96.6	NO		
25	53	13C4-PFHpA	367.2 > 321.8	6770.303	19207.180	1.00	3.63	4.406	12.1	96.6	NO		
26	-1												
27	13	L-PFHxS	398.9 > 79.6		2625.818	1.00					NO		
28	15	6:2 FTS	427.0 > 406.9		1819.089	1.00					NO		
29	16	L-PFOA	412.8 > 368.9	108.783	14228.129	1.00	4.16	0.096	0.0		NO	12.175	YES
30	18	PFecHS	460.8 > 381.0		14228.129	1.00					NO		
31	19	PFHpS	449.0 > 80.0		2643.491	1.00					NO		
32	20	7:3 FTCA	440.9 > 336.9		14342.804	1.00					NO		
33	54	13C3-PFHxS	401.8 > 79.9	2625.818	1247.576	1.00	3.78	26.309	11.9	95.2	NO		
34	55	13C2-6:2 FTS	429.0 >79.9	1819.089	2556.150	1.00	4.10	8.896	13.0	104.3	NO		
35	58	13C2-PFOA	414.9 > 369.7	14228.129	26935.404	1.00	4.16	6.603	13.0	103.8	NO		
36	58	13C2-PFOA	414.9 > 369.7	14228.129	26935.404	1.00	4.16	6.603	13.0	103.8	NO		

CGH 7/17/2019

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
37	59	13C8-PFOS	507.0 > 79.9	2643.491	2556.150	1.00	4.69	12.927	12.7	101.9	NO		
38	56	13C5-PFNA	468.2 > 422.9	14342.804	14352.137	1.00	4.60	12.492	12.5	100.1	NO		
39	-1												
40	21	PFNA	463.0 > 418.8		14342.804	1.00					NO		
41	22	PFOSA	497.9 > 77.9		3429.524	1.00					NO		
42	23	L-PFOS	498.9 > 79.9		2643.491	1.00					NO		
43	25	9Cl-PF30NS	530.7 > 350.8		2643.491	1.00					NO		
44	26	PFDA	513 > 468.8		11656.171	1.00					NO		
45	27	8:2 FTS	527.0 > 506.9		1854.000	1.00					NO		
46	56	13C5-PFNA	468.2 > 422.9	14342.804	14352.137	1.00	4.60	12.492	12.5	100.1	NO		
47	57	13C8-PFOSA	506.1 > 77.7	3429.524	24937.297	1.00	4.66	1.719	12.4	99.2	NO		
48	59	13C8-PFOS	507.0 > 79.9	2643.491	2556.150	1.00	4.69	12.927	12.7	101.9	NO		
49	59	13C8-PFOS	507.0 > 79.9	2643.491	2556.150	1.00	4.69	12.927	12.7	101.9	NO		
50	60	13C2-PFDA	515.1 > 469.9	11656.171	17999.309	1.00	4.98	8.095	12.1	96.8	NO		
51	61	13C2-8:2 FTS	529 > 79.9	1854.000	2556.150	1.00	4.95	9.066	13.2	105.8	NO		
52	-1												
53	28	PFNS	549.1 > 80.1		2643.491	1.00					NO		
54	29	L-MeFOSAA	570 > 419		3077.407	1.00					NO		
55	31	L-EtFOSAA	584.1 > 419		4362.194	1.00					NO		
56	33	PFUdA	563.0 > 518.9		20018.008	1.00					NO		
57	34	PFDS	598.8 > 79.9		1854.000	1.00					NO		
58	35	11Cl-PF30UdS	632.6 > 452.7		22167.055	1.00					NO		
59	59	13C8-PFOS	507.0 > 79.9	2643.491	2556.150	1.00	4.69	12.927	12.7	101.9	NO		
60	62	d3-N-MeFOSAA	573.3 > 419	3077.407	24937.297	1.00	5.13	1.543	12.4	99.4	NO		
61	64	d5-N-EtFOSAA	589.3 > 419	4362.194	24937.297	1.00	5.29	2.187	12.5	100.3	NO		
62	63	13C2-PFUdA	565 > 519.8	20018.008	24937.297	1.00	5.31	10.034	12.4	98.9	NO		
63	61	13C2-8:2 FTS	529 > 79.9	1854.000	2556.150	1.00	4.95	9.066	13.2	105.8	NO		
64	65	13C2-PFDoA	614.7 > 569.7	22167.055	17999.309	1.00	5.60	15.394	11.7	93.9	NO		
65	-1												
66	36	10:2 FTS	627.0 > 606.9		1854.000	1.00					NO		
67	37	PFDoA	612.9 > 569.0		22167.055	1.00					NO		
68	38	N-MeFOSA	512.1 > 168.9		7672.123	1.00					NO		
69	39	PFTrDA	662.9 > 618.9		22167.055	1.00					NO		
70	40	PFDoS	698.8 > 79.9		10168.024	1.00					NO		
71	41	PFTeDA	713.0 > 669.0		10168.024	1.00					NO		
72	65	13C2-PFDoA	614.7 > 569.7	22167.055	17999.309	1.00	5.60	15.394	11.7	93.9	NO		

CGH 7/17/2019

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

	#	Name	Trace	Area	IS Area	wt/vol	RT	Response	Conc.	%Rec	Recovery ...	Ion Ratio	Ratio Out?
73	65	13C2-PFDoA	614.7 > 569.7	22167.055	17999.309	1.00	5.60	15.394	11.7	93.9	NO		
74	66	d3-N-MeFOSA	515.2 > 168.9	7672.123	24937.297	1.00	5.78	3.846	139.1	92.7	NO		
75	65	13C2-PFDoA	614.7 > 569.7	22167.055	17999.309	1.00	5.60	15.394	11.7	93.9	NO		
76	67	13C2-PFTeDA	715.1 > 669.7	10168.024	24937.297	1.00	6.07	5.097	11.7	93.3	NO		
77	67	13C2-PFTeDA	715.1 > 669.7	10168.024	24937.297	1.00	6.07	5.097	11.7	93.3	NO		
78	-1												
79	42	N-EtFOSA	526.1 > 168.9		9534.104	1.00					NO		
80	43	PFHxDA	813.1 > 768.6	98.527	6637.449	1.00	6.42	0.074	0.1		NO	9.602	NO
81	44	PFODA	913.1 > 868.8	75.754	6637.449	1.00	6.67	0.057			NO		
82	45	N-MeFOSE	616.1 > 58.9		8062.253	1.00					NO		
83	46	N-EtFOSE	630.1 > 58.9		8250.367	1.00					NO		
84	72	13C4-PFBA	217.0 > 172.0	7656.683	7656.683	1.00	1.21	12.500	12.5	100.0	NO		
85	68	d5-N-ETFOSA	531.1 > 168.9	9534.104	24937.297	1.00	6.20	4.779	147.2	98.1	NO		
86	69	13C2-PFHxDA	815 > 769.7	6637.449	24937.297	1.00	6.42	3.327	4.6	91.4	NO		
87	69	13C2-PFHxDA	815 > 769.7	6637.449	24937.297	1.00	6.42	3.327	4.6	91.4	NO		
88	70	d7-N-MeFOSE	623.1 > 58.9	8062.253	24937.297	1.00	6.36	4.041	135.9	90.6	NO		
89	71	d9-N-EtFOSE	639.2 > 58.8	8250.367	24937.297	1.00	6.51	4.136	135.8	90.5	NO		
90	73	13C5-PFHxA	318.0 > 272.9	19207.180	19207.180	1.00	3.01	12.500	12.5	100.0	NO		
91	-1												
92	75	13C8-PFOA	420.9 > 376.0	26935.404	26935.404	1.00	4.16	12.500	12.5	100.0	NO		
93	74	18O2-PFHxS	403.0 > 102.6	1247.576	1247.576	1.00	3.79	12.500	12.5	100.0	NO		
94	76	13C9-PFNA	472.2 > 426.9	14352.137	14352.137	1.00	4.60	12.500	12.5	100.0	NO		
95	77	13C4-PFOS	503 > 79.9	2556.150	2556.150	1.00	4.69	12.500	12.5	100.0	NO		
96	78	13C6-PFDA	519.1 > 473.7	17999.309	17999.309	1.00	4.98	12.500	12.5	100.0	NO		
97	79	13C7-PFUdA	570.1 > 524.8	24937.297	24937.297	1.00	5.31	12.500	12.5	100.0	NO		

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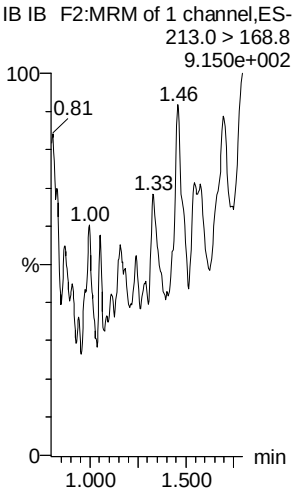
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

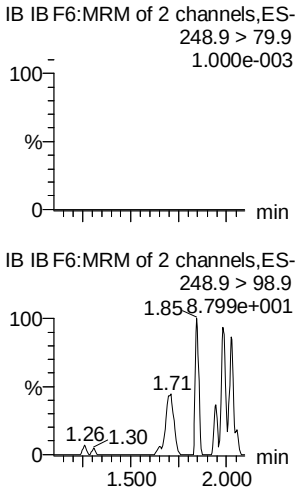
Method: F:\Projects\PFAS.PRO\MethDB\PFAS_FULL_80C_071619.mdb 17 Jul 2019 08:01:43
Calibration: F:\Projects\PFAS.PRO\CurveDB\C18_VAL-PFAS_Q4_07-16-19.cdb 17 Jul 2019 08:22:43

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

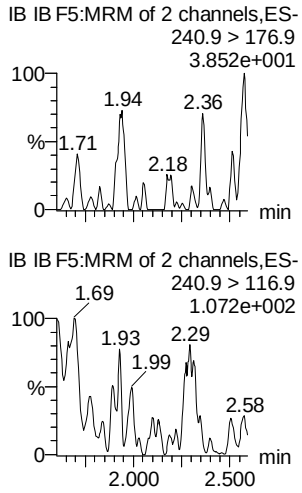
PFBA



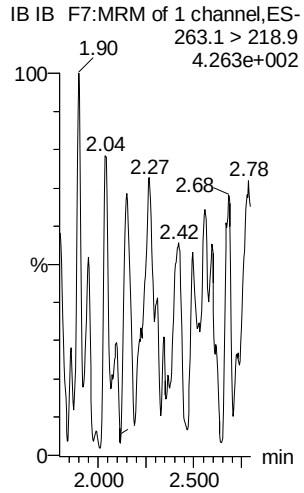
PFPrS



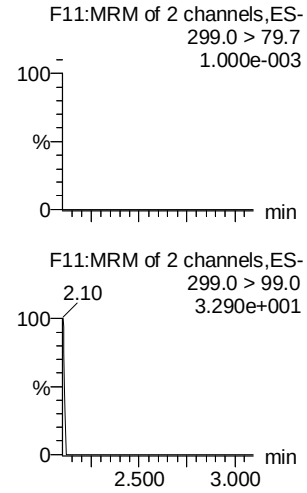
3:3 FTCA



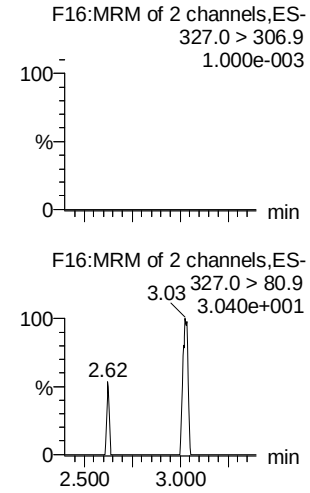
PFPeA



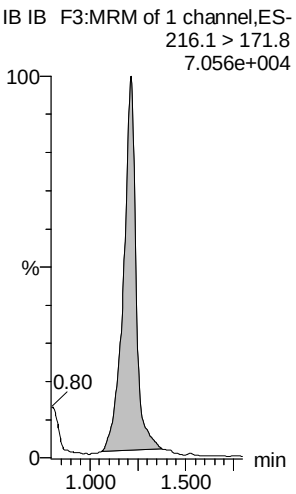
PFBS



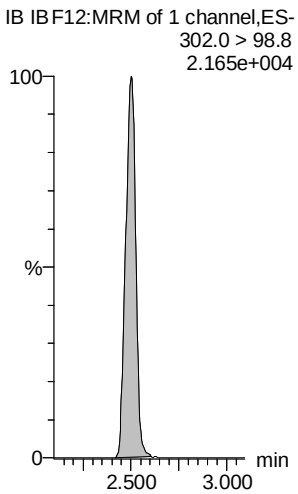
4:2 FTS



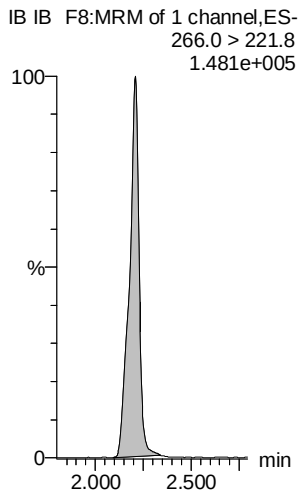
13C3-PFBA



13C3-PFBS



13C3-PFPeA



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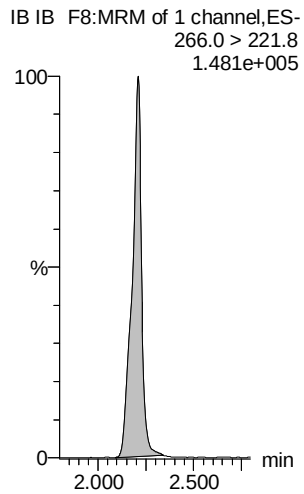

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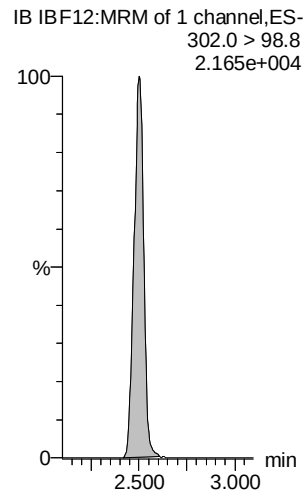
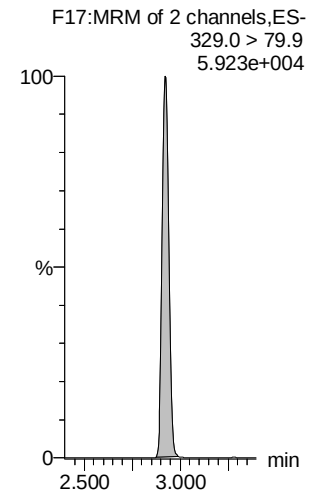


13C2-4:2 FTS



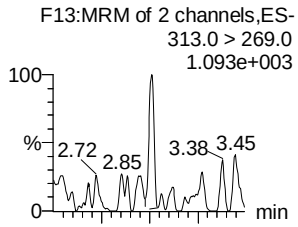
CGH 7/17/2019

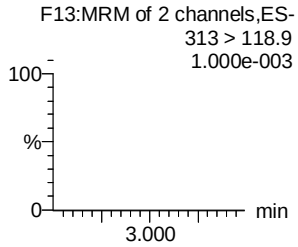
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

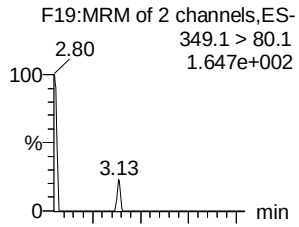
Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

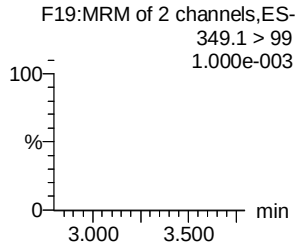
PFHxA



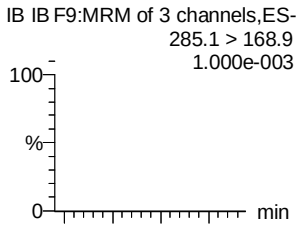


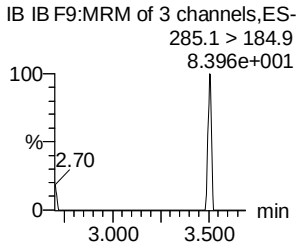
PFPeS



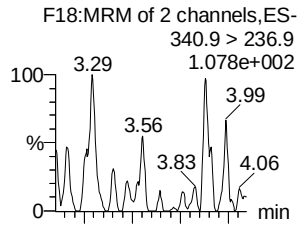


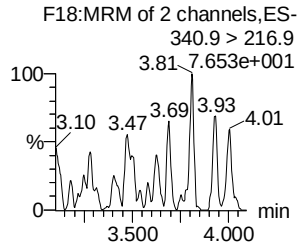
HFPO-DA





5:3 FTCA





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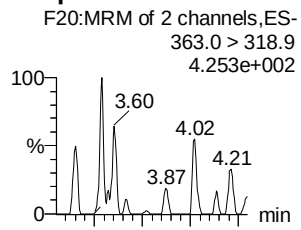

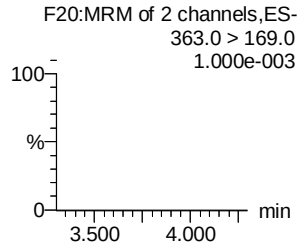

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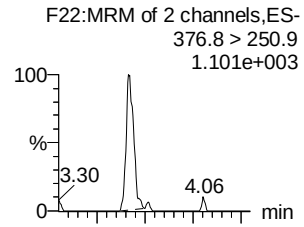

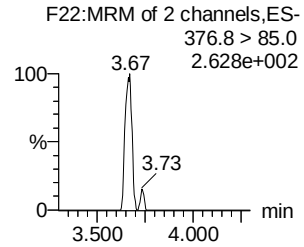

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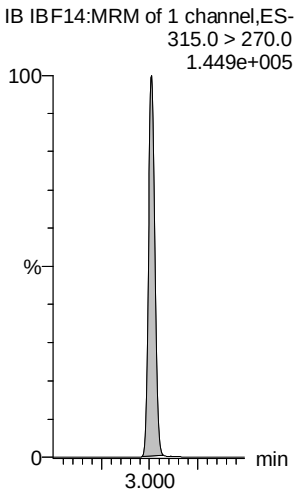
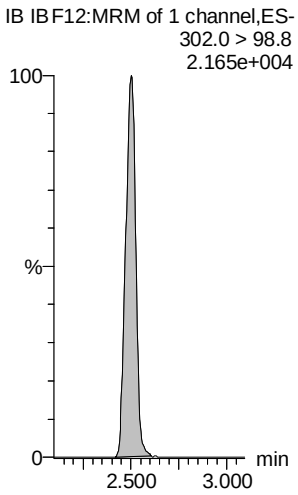
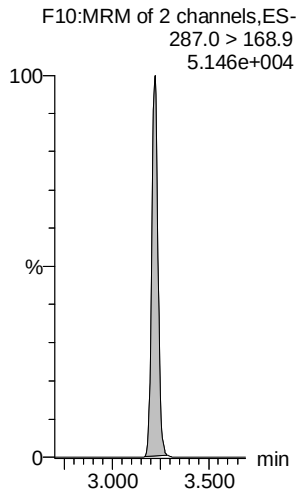


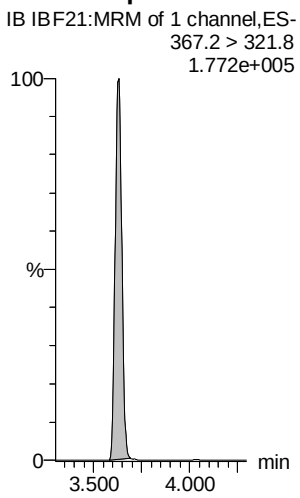
13C3-PFBS



13C3-HFPO-DA



13C4-PFHpA



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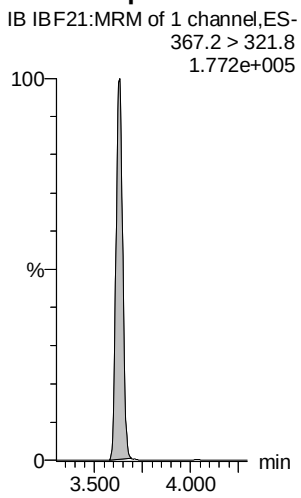

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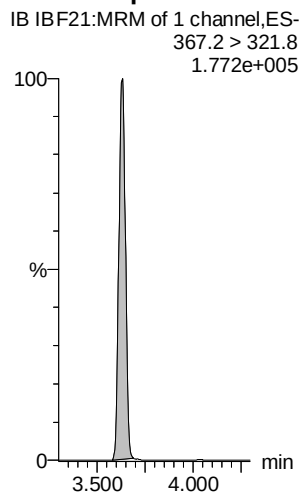

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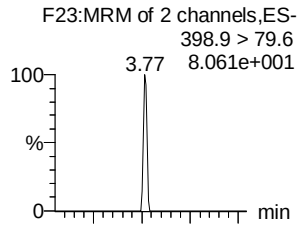
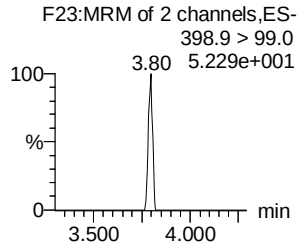
Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

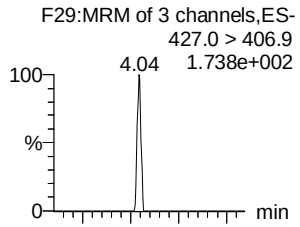
Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

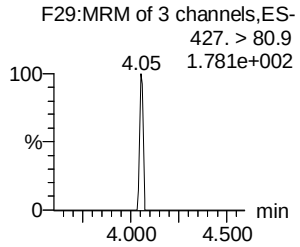
L-PFHxS



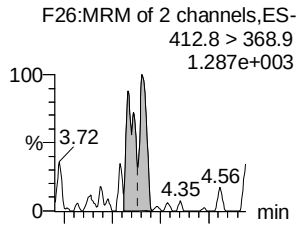


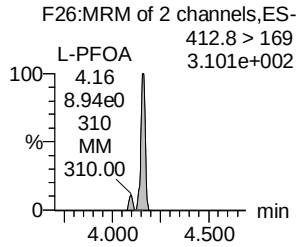
6:2 FTS





L-PFOA





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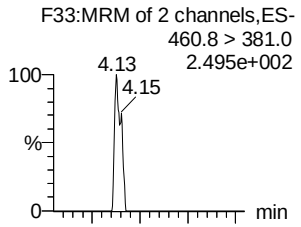
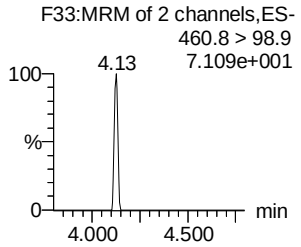
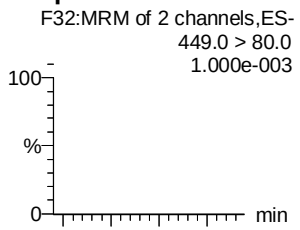
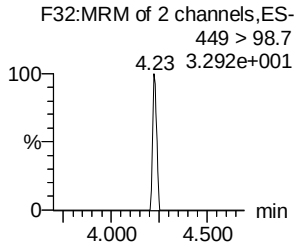


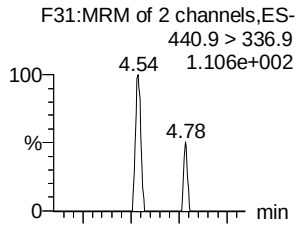


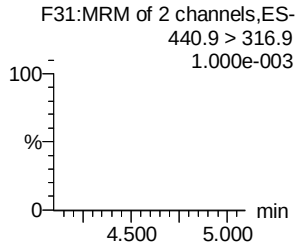
PFHpS



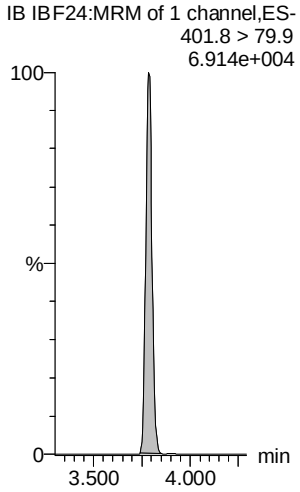


7:3 FTCA

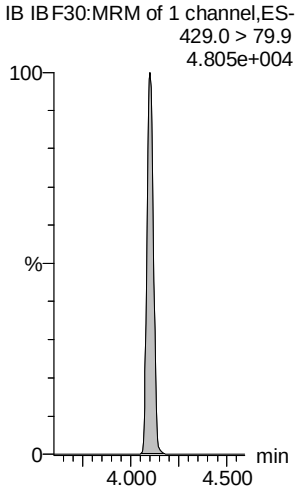




13C3-PFHxS



13C2-6:2 FTS



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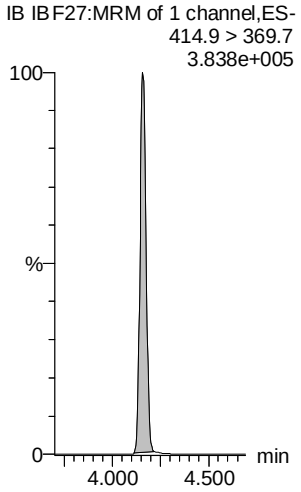
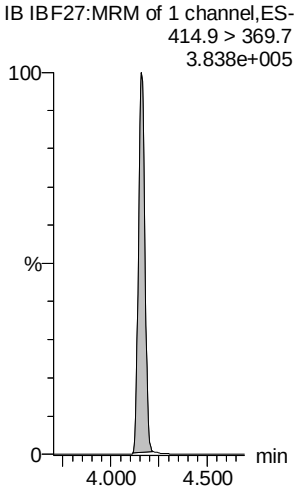
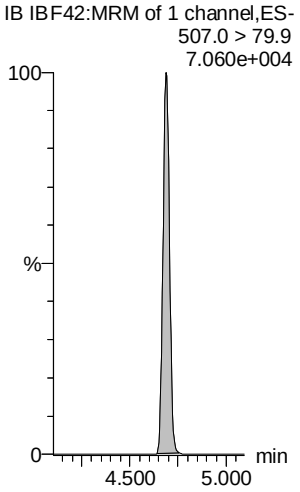


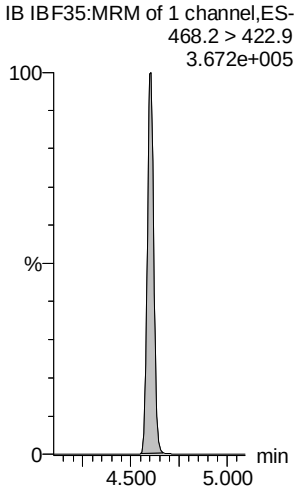
13C2-PFOA



13C8-PFOS



13C5-PFNA

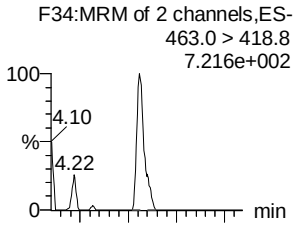


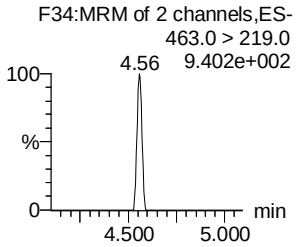
Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

PFNA





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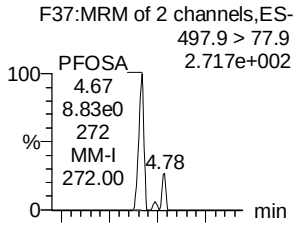
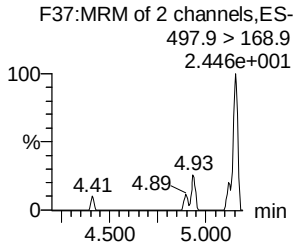
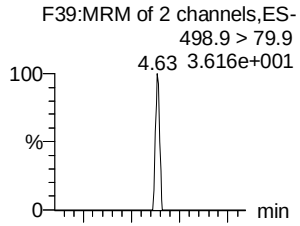
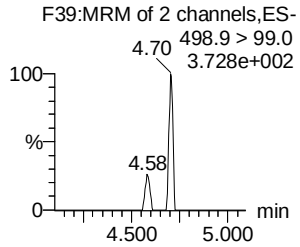




L-PFOS





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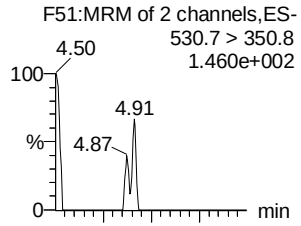

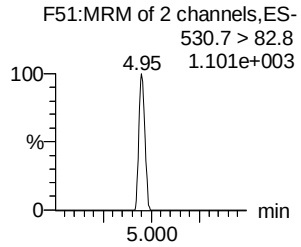

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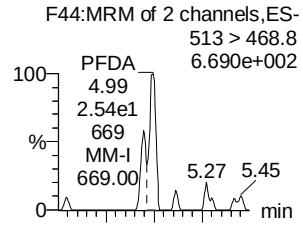
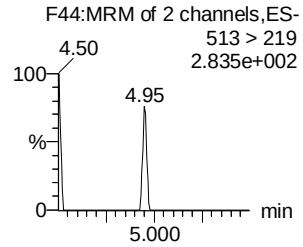
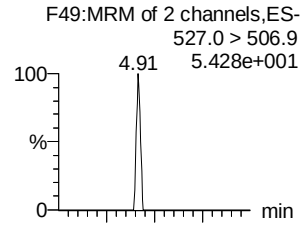
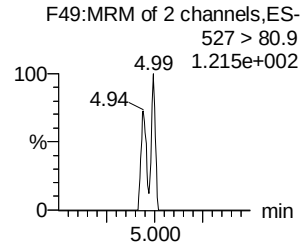


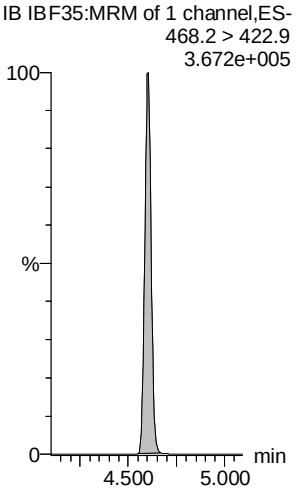


8:2 FTS

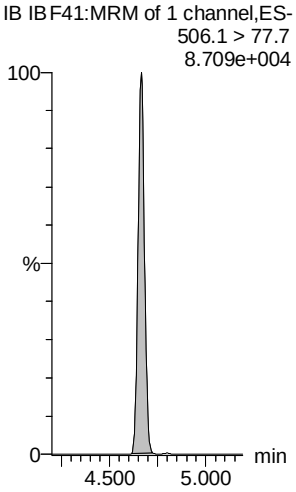




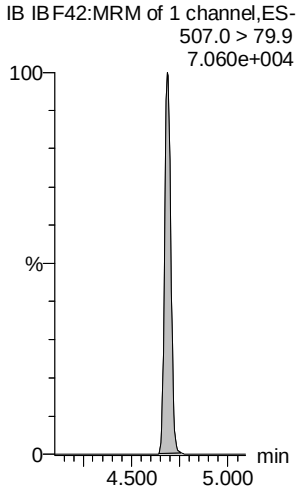
13C5-PFNA



13C8-PFOSA



13C8-PFOS



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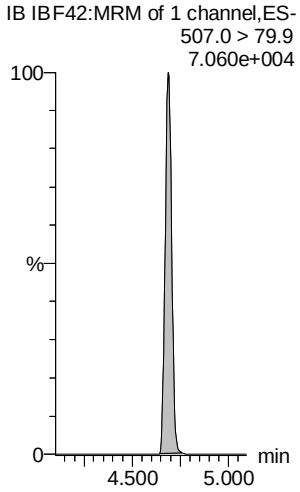
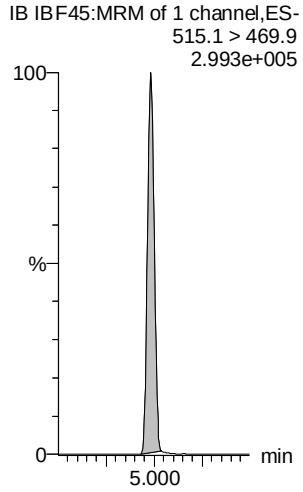
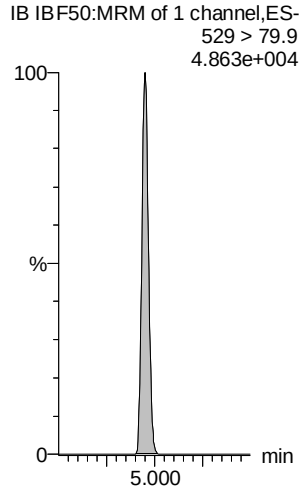


13C2-PFDA



13C2-8:2 FTS



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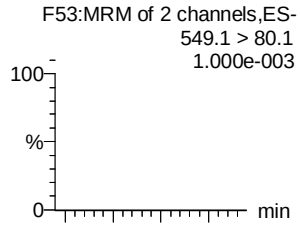
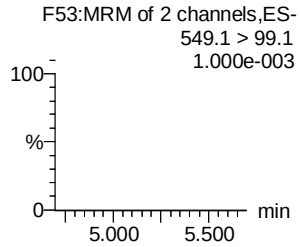
Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

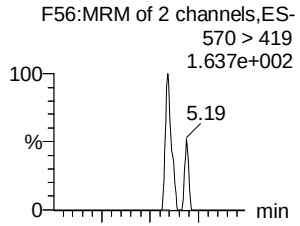
Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

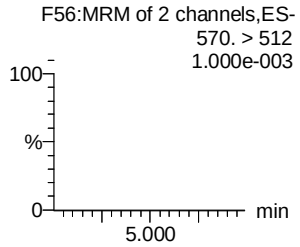
PFNS





L-MeFOSAA





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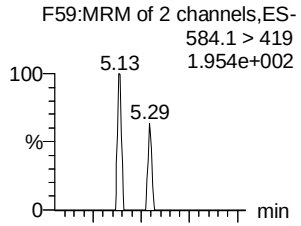
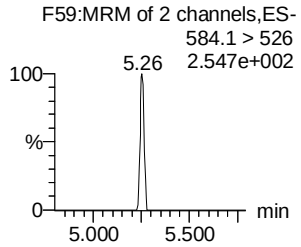
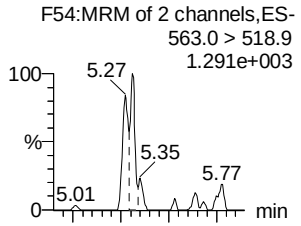
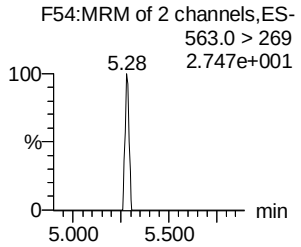


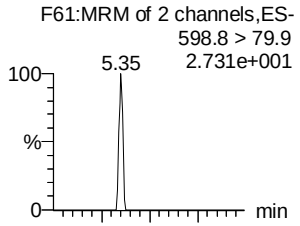


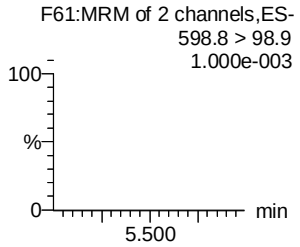
PFUdA





PFDS





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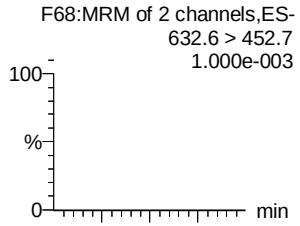
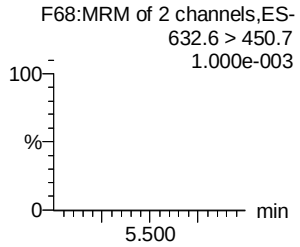
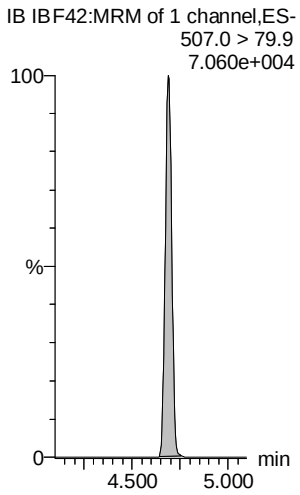
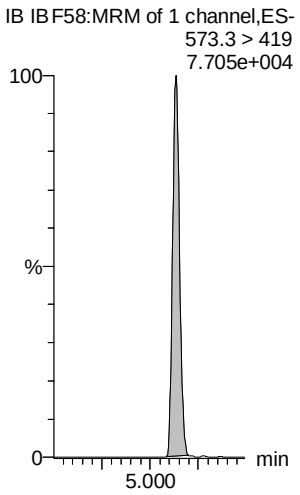




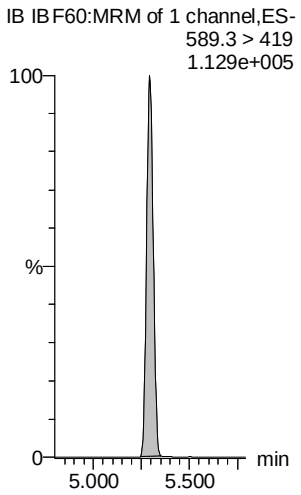
13C8-PFOS



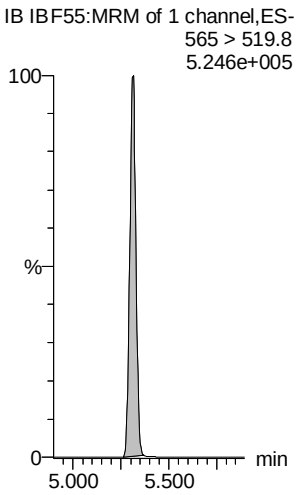
d3-N-MeFOSAA



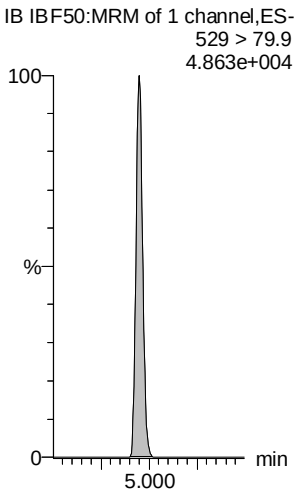
d5-N-EtFOSAA



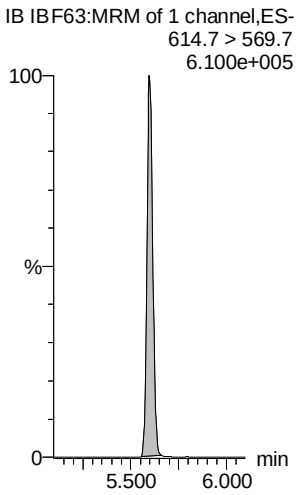
13C2-PFUdA



13C2-8:2 FTS



13C2-PFDoA



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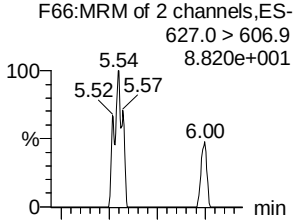
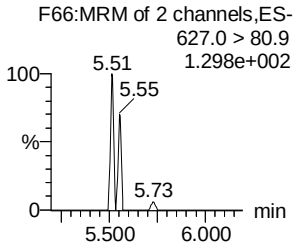
Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

10:2 FTS





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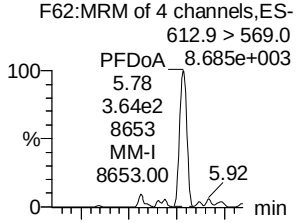
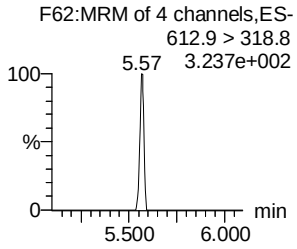
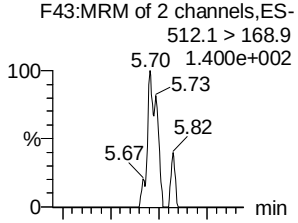
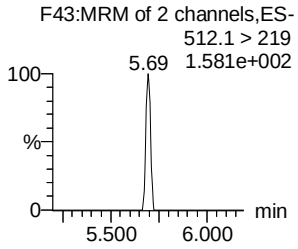


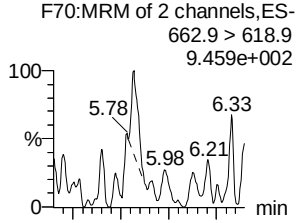


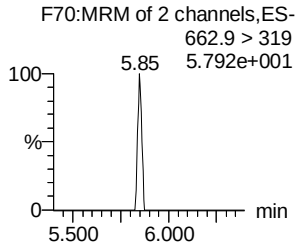
N-MeFOSA



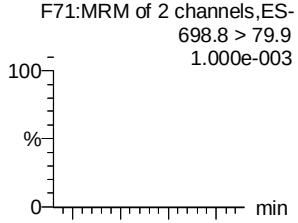


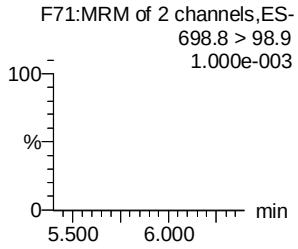
PFTrDA



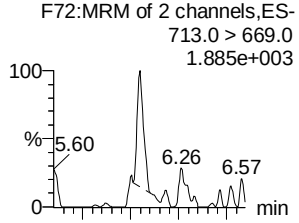


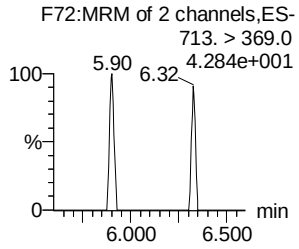
PFDoS



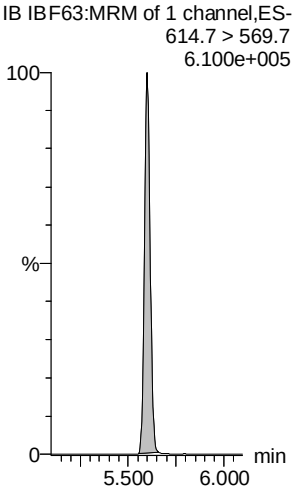


PFTeDA

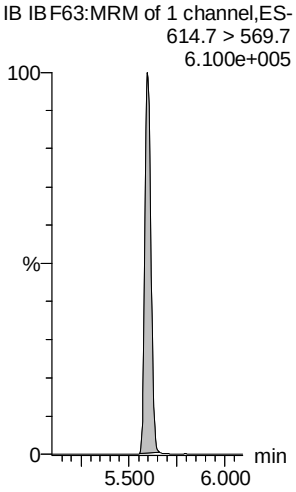




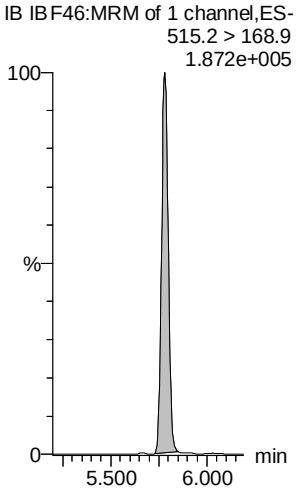
13C2-PFDoA



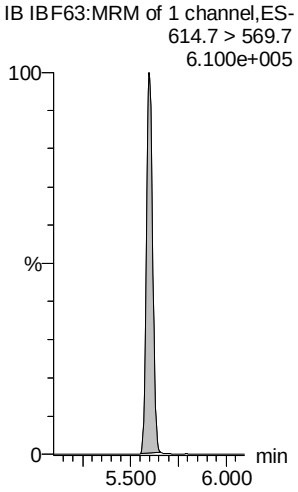
13C2-PFDoA



d3-N-MeFOSA



13C2-PFDoA



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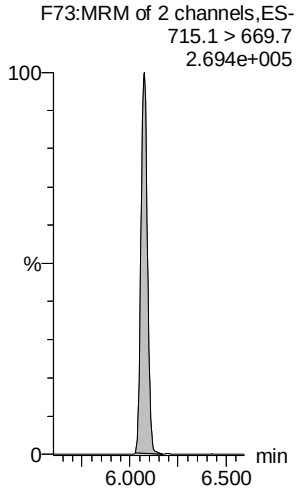

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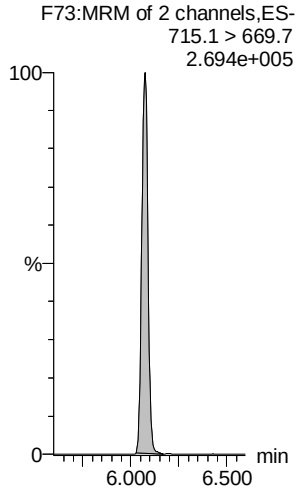

Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

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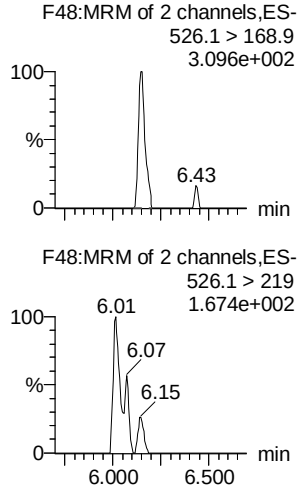
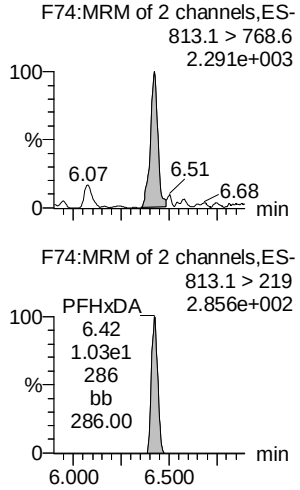
Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

N-EtFOSA



PFHxDA



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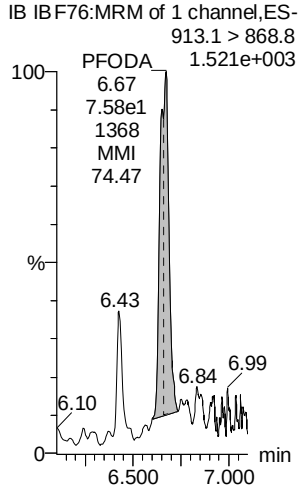
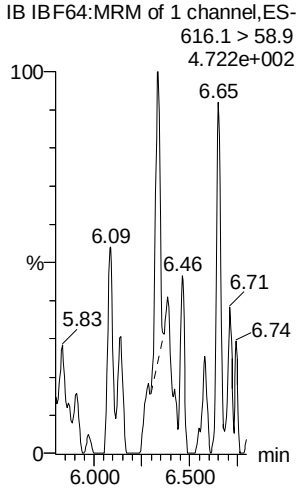


N-MeFOSE



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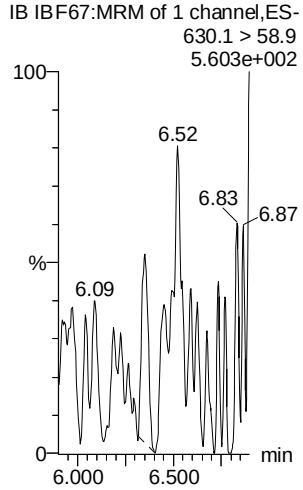

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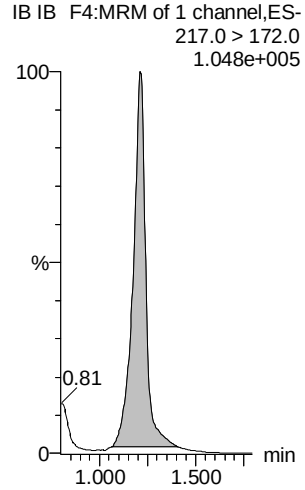
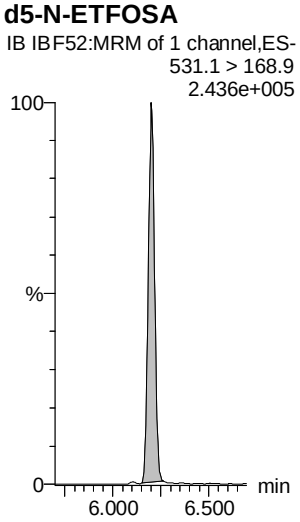


d5-N-ETFOSA



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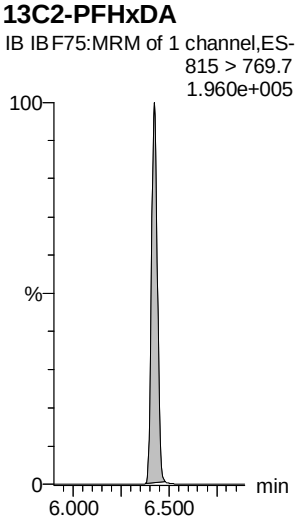
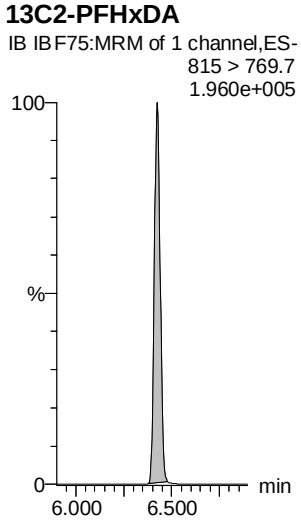
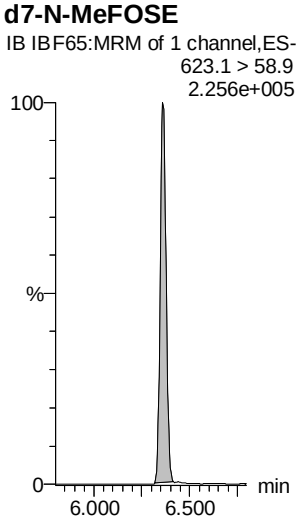


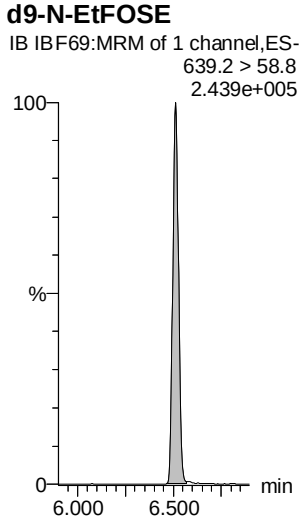
13C2-PFHxDA



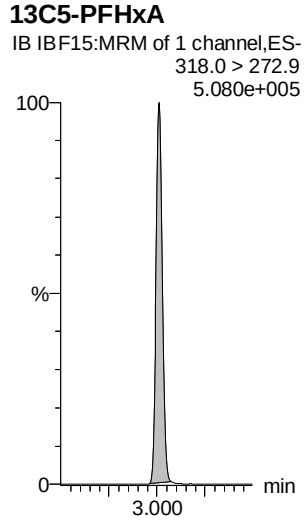
d7-N-MeFOSE



d9-N-EtFOSE



13C5-PFHxA

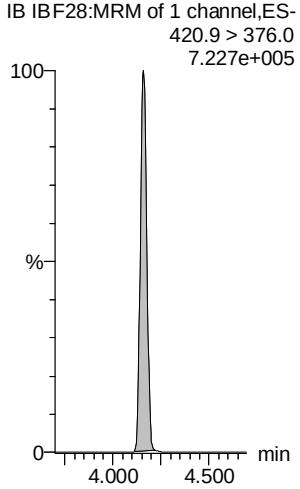


Dataset: F:\Projects\PFAS.PRO\Results\190716M2\190716M2-IB.qld

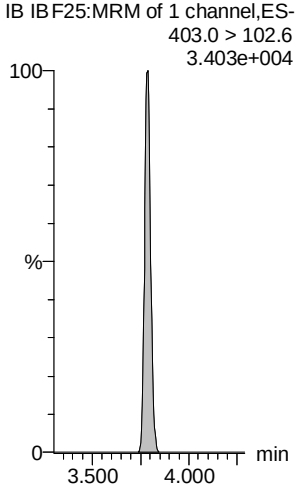
Last Altered: Wednesday, July 17, 2019 09:04:24 Pacific Daylight Time
Printed: Wednesday, July 17, 2019 09:04:46 Pacific Daylight Time

Name: 190716M2_14, Date: 16-Jul-2019, Time: 18:51:48, ID: IB, Description: IB

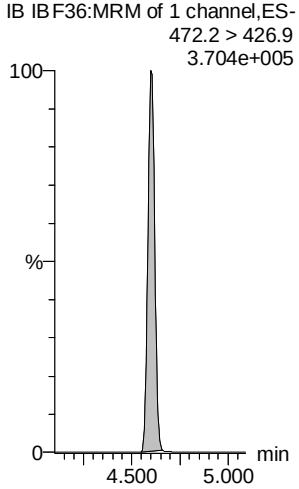
13C8-PFOA



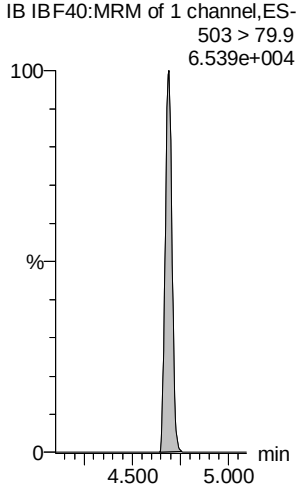
18O2-PFHxS



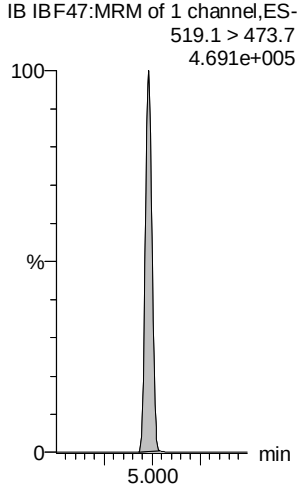
13C9-PFNA



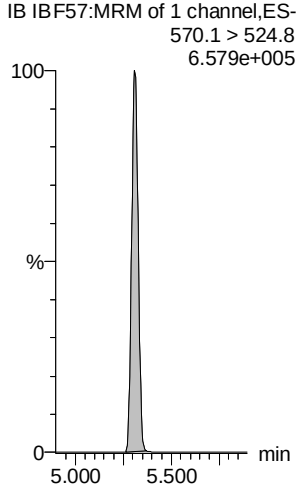
13C4-PFOS



13C6-PFDA



13C7-PFUdA



TUNE CHECKS

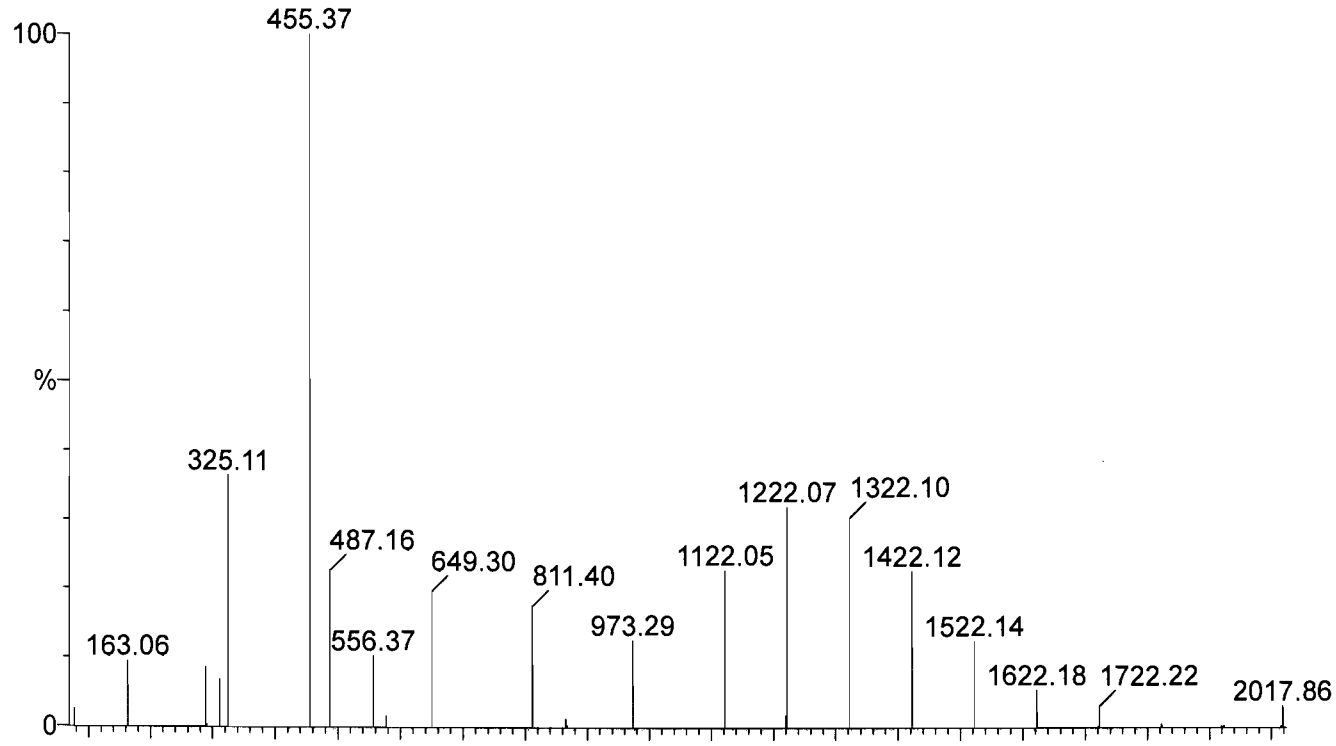
Q4(M) 07-01-19

06/24/19 Calf 7/1/19

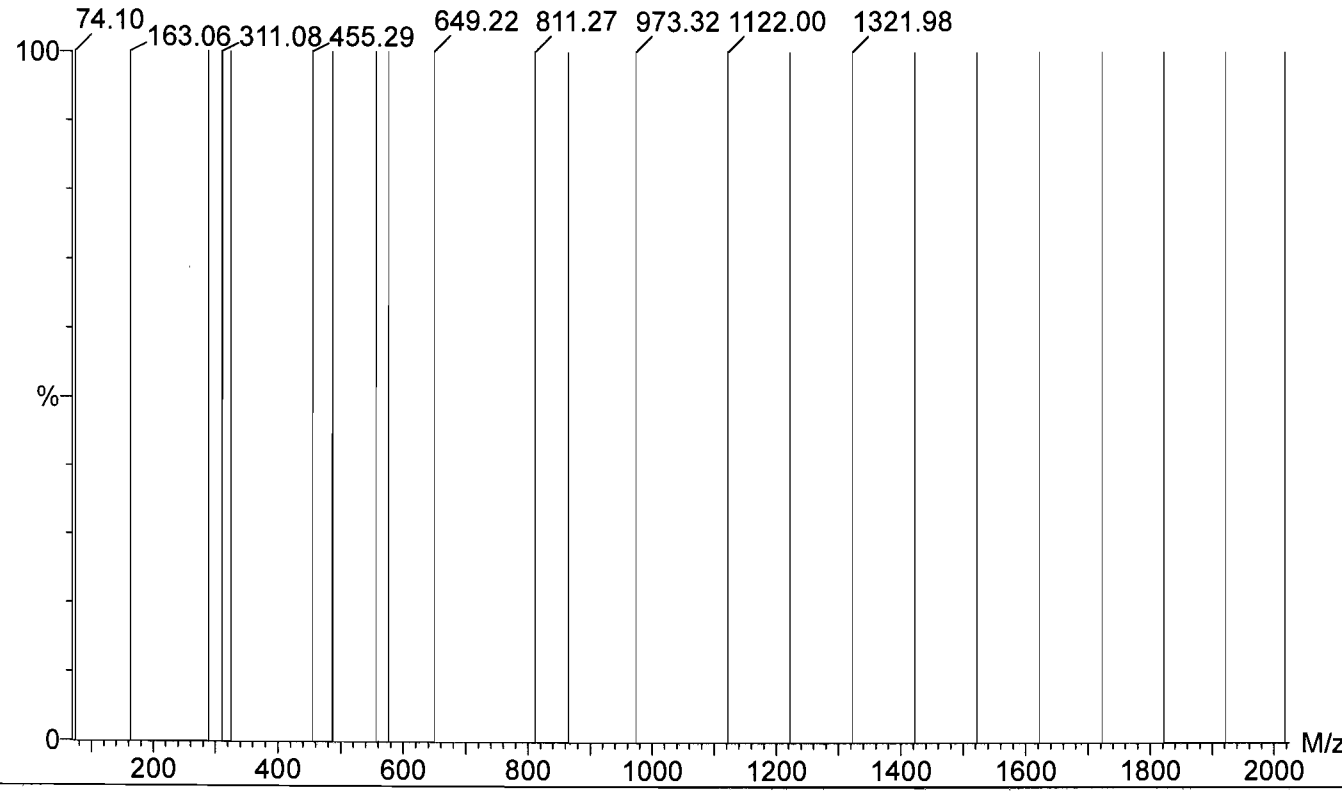
Calibration Verification Report - MS1 Static

Printed: **Mon Jul 01 07:39:58 2019**

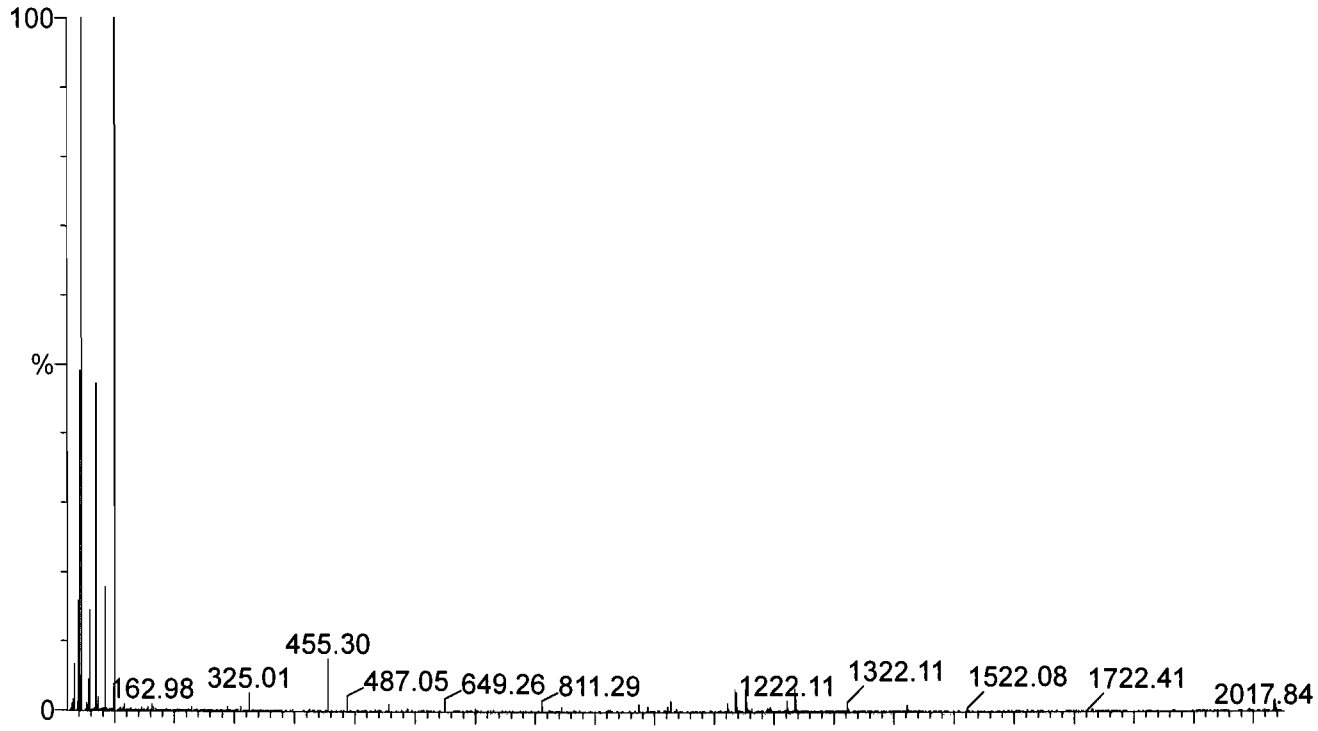
Data file: STATMS1V - Calibrated 22 matches of 23 tested references



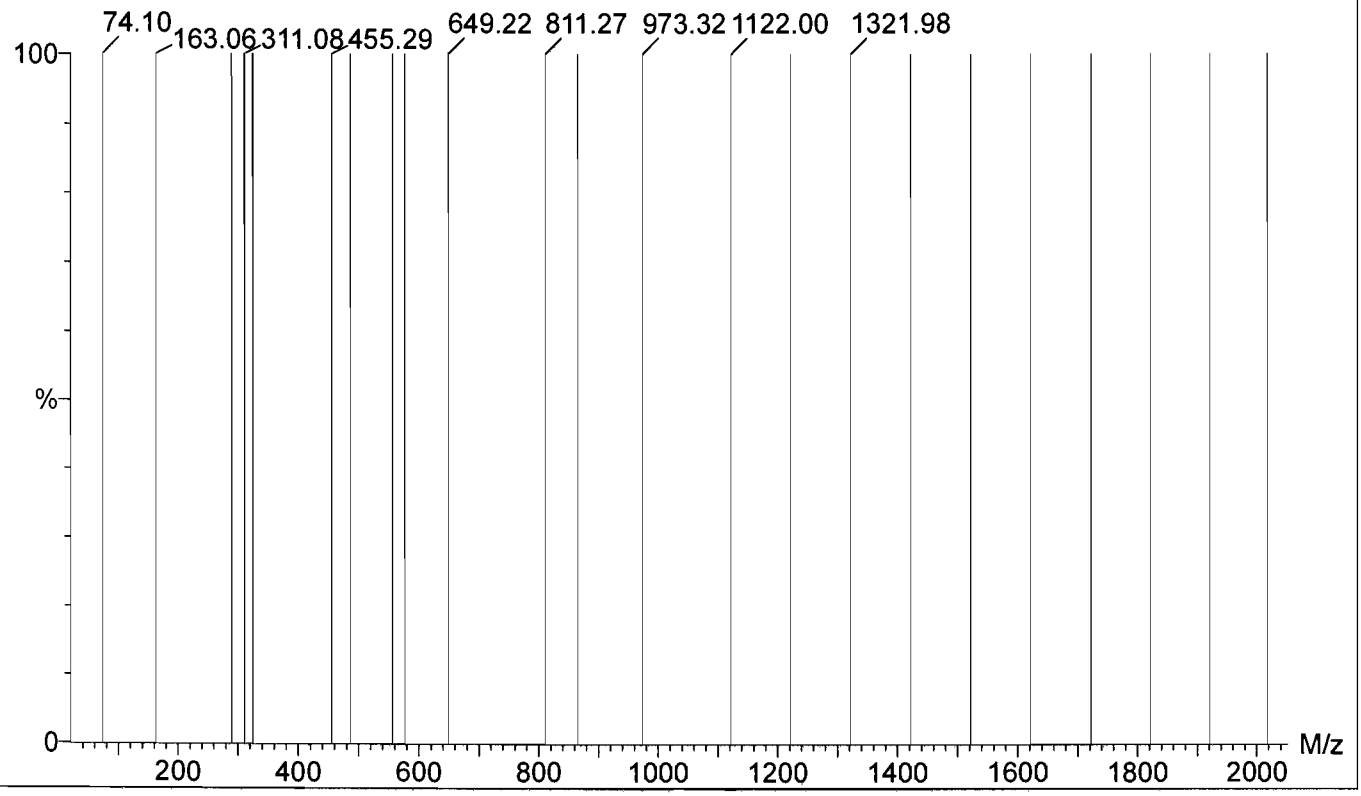
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.109 amu



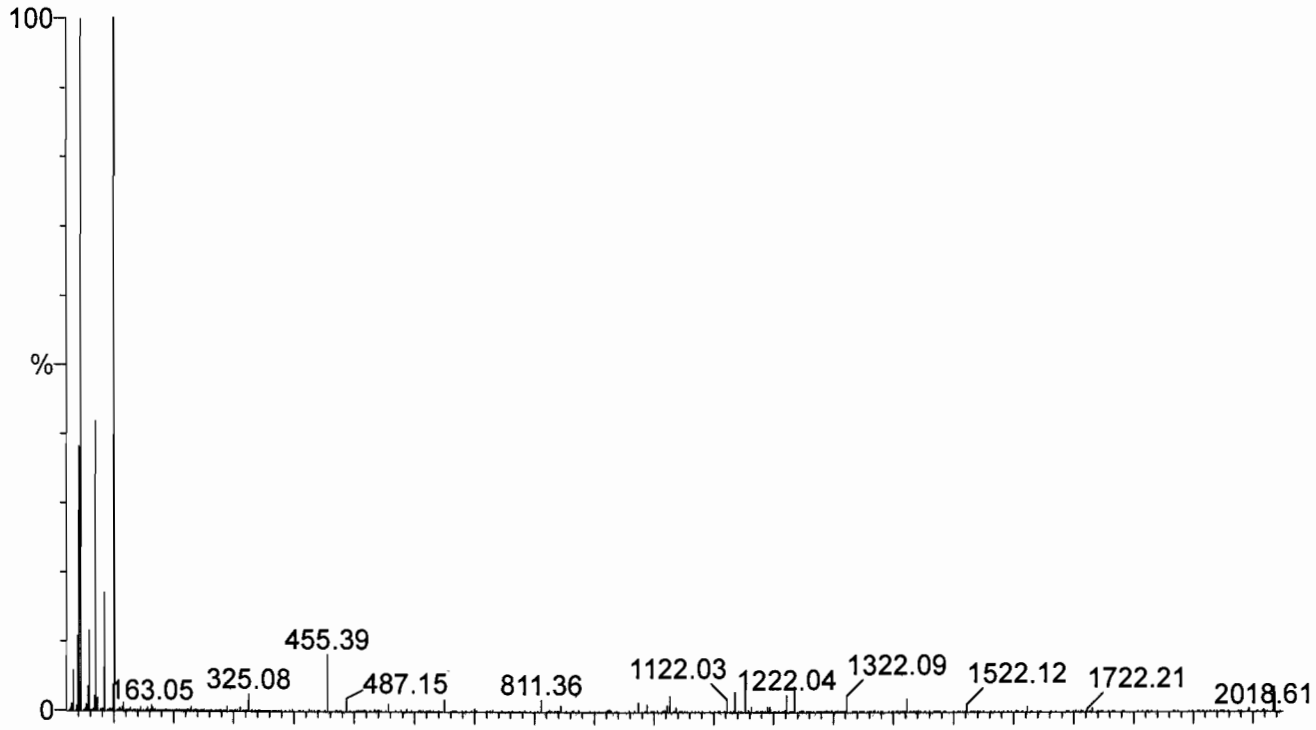
Data file: SCNMS1V - Calibrated 22 matches of 23 tested references



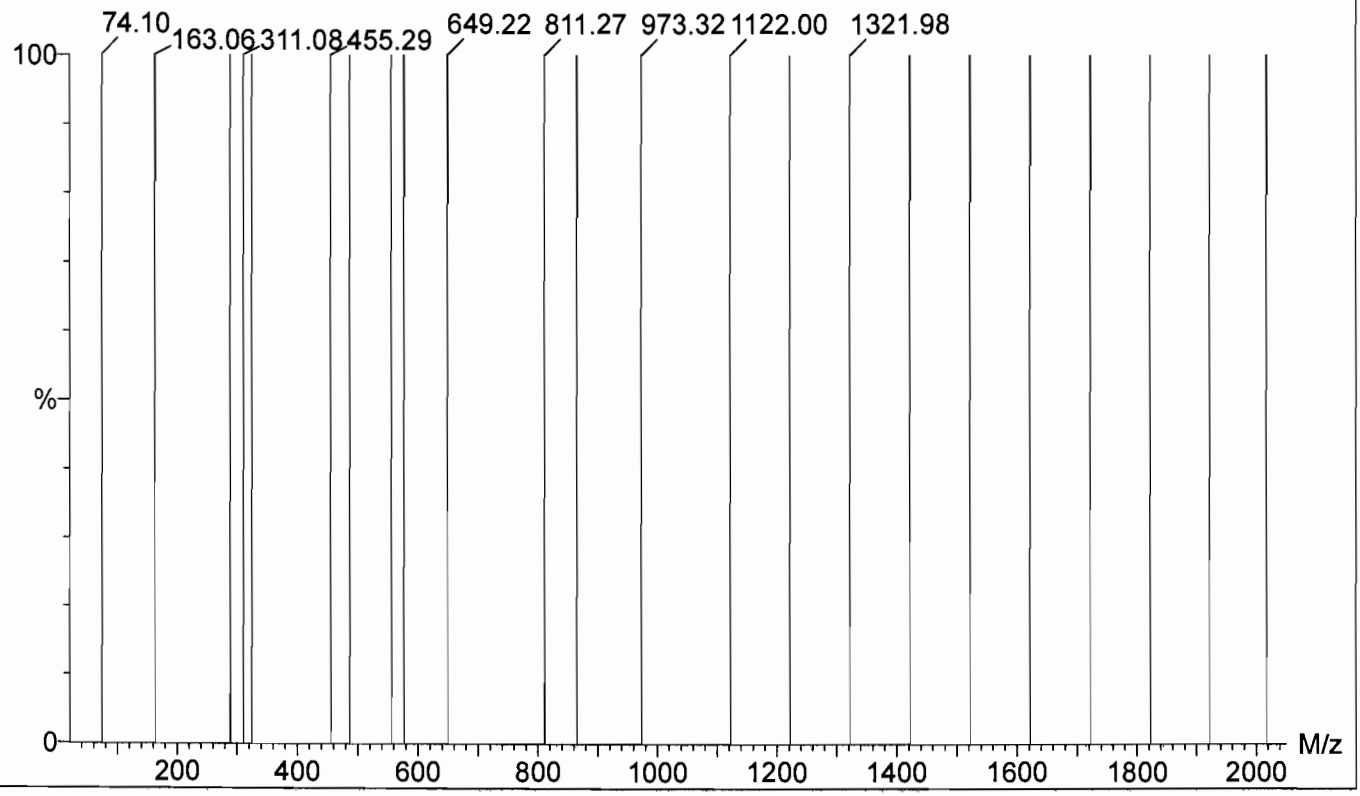
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.111 amu



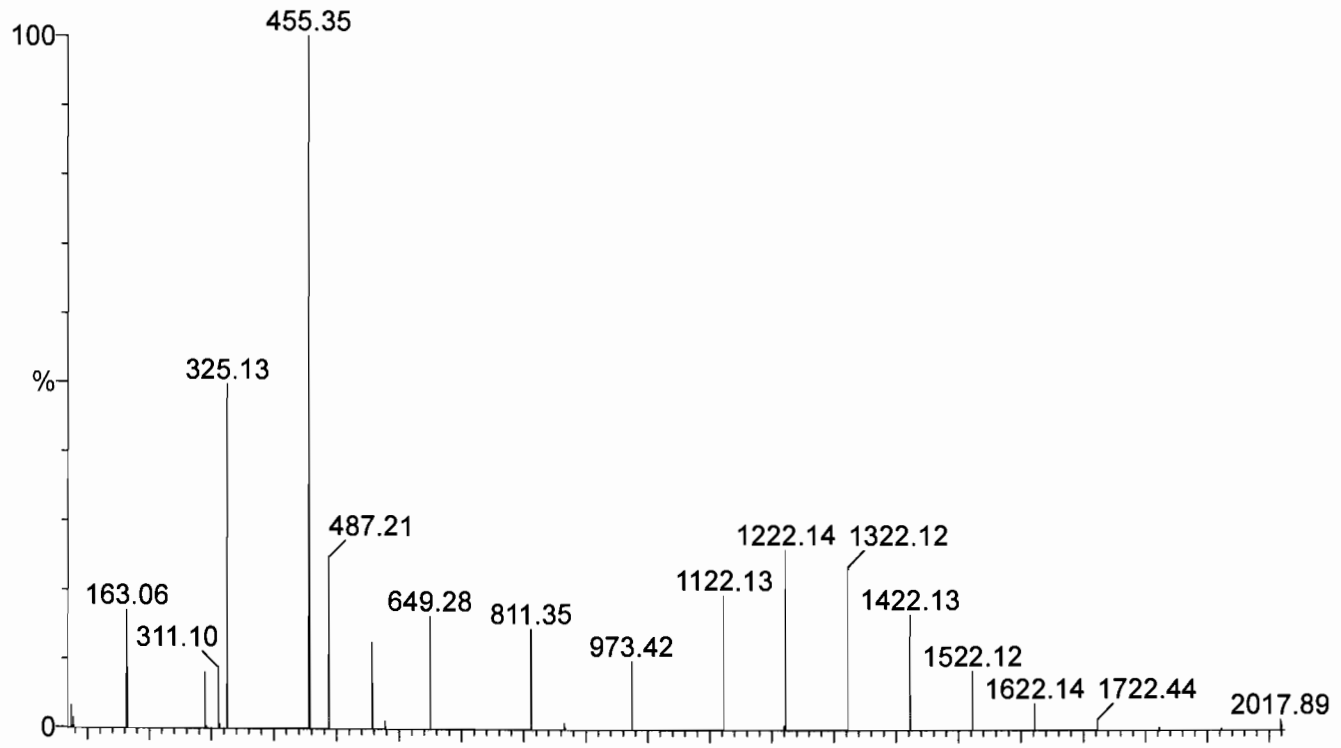
Data file: FASTMS1V - Calibrated 22 matches of 23 tested references



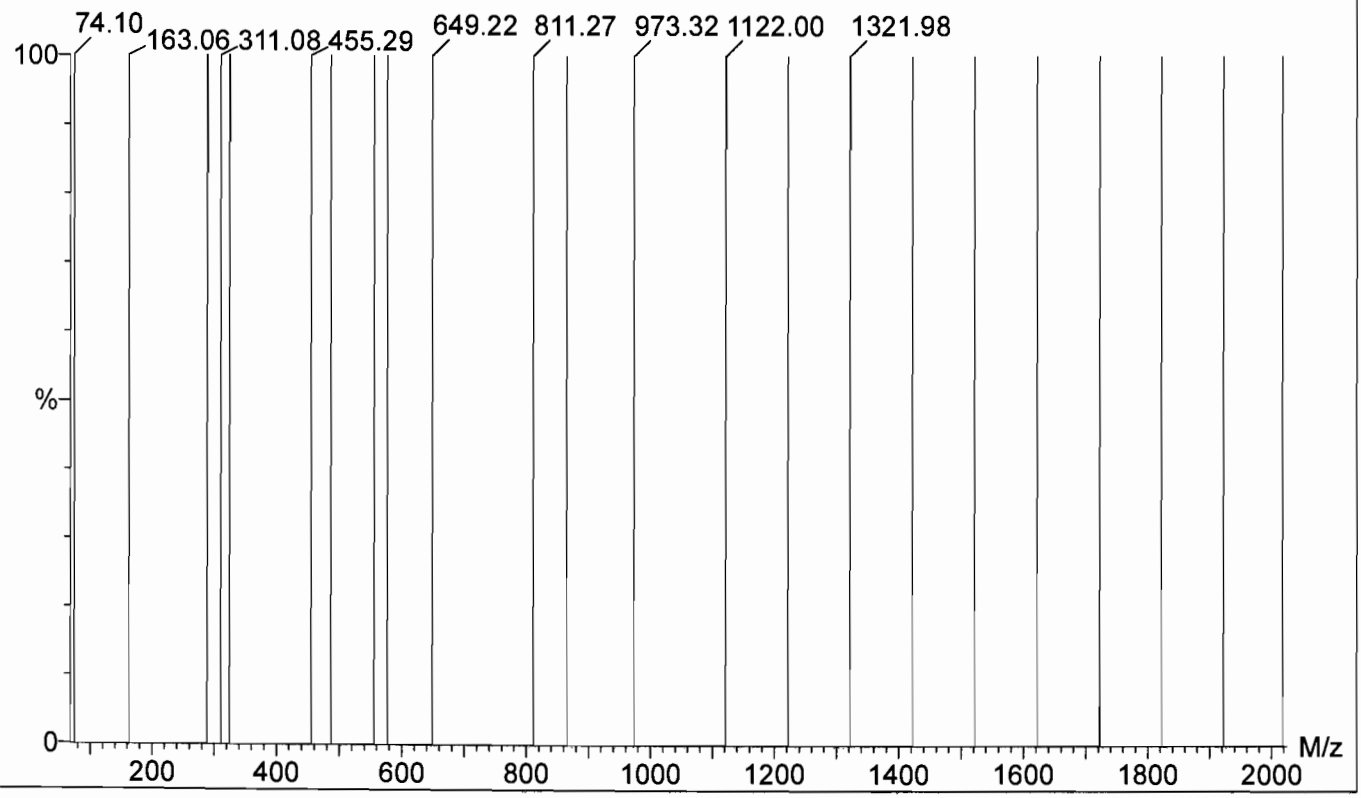
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.162 amu



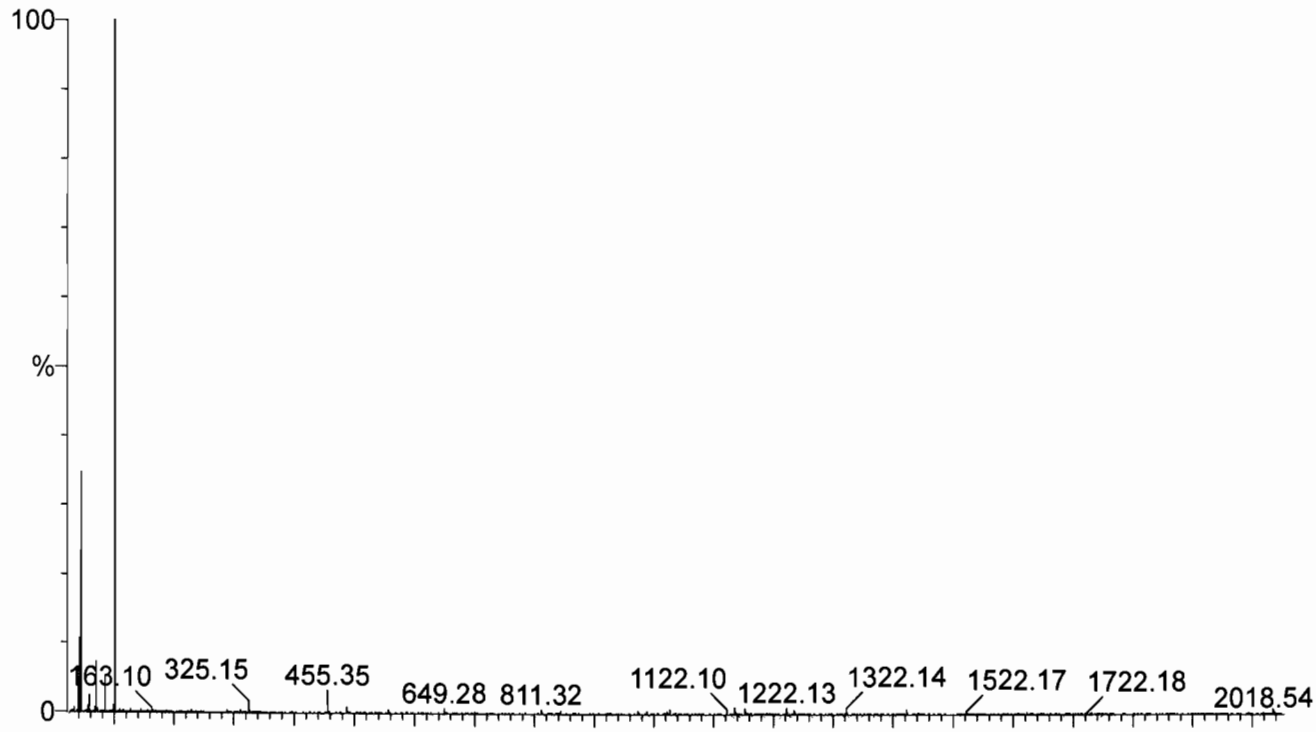
Data file: STATMS2V - Calibrated 23 matches of 23 tested references



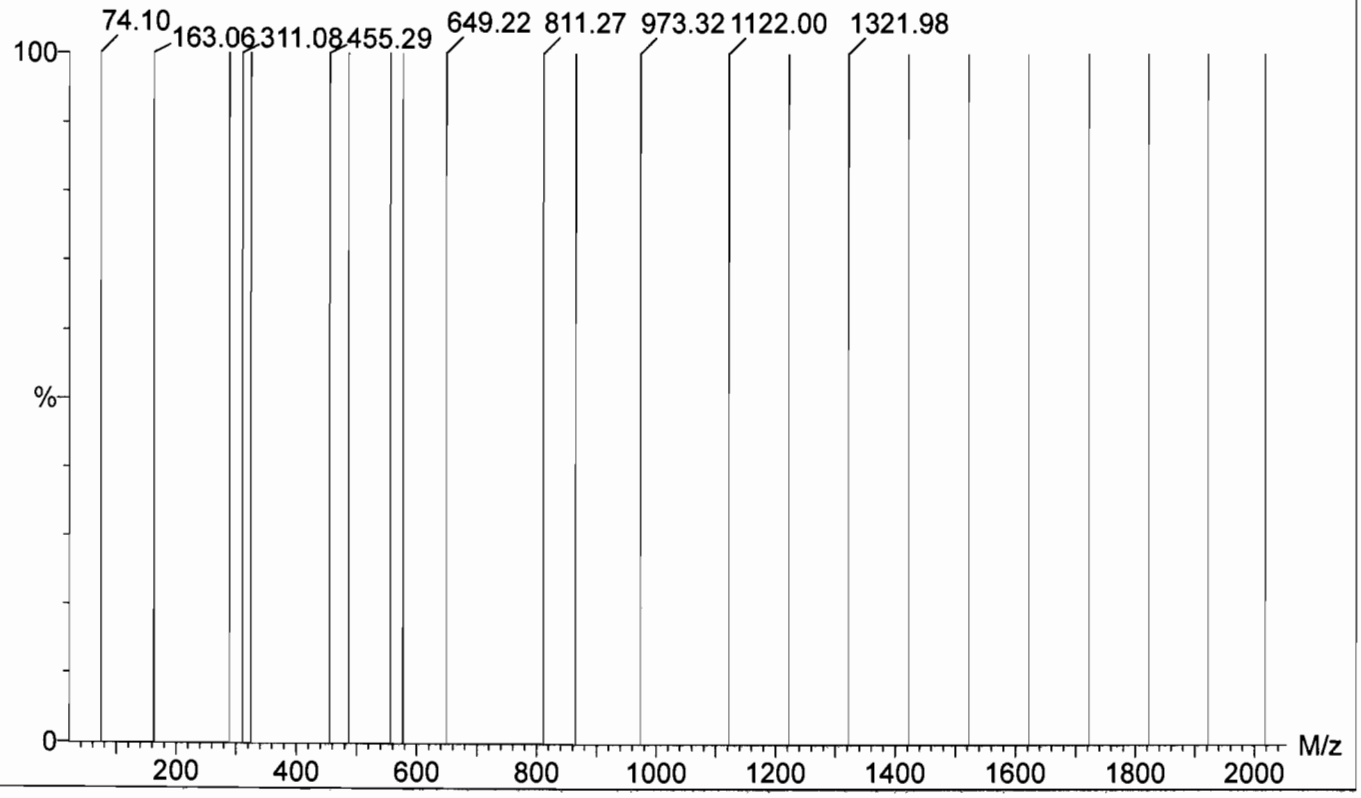
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.132 amu



Data file: SCNMS2V - Calibrated 20 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.135 amu

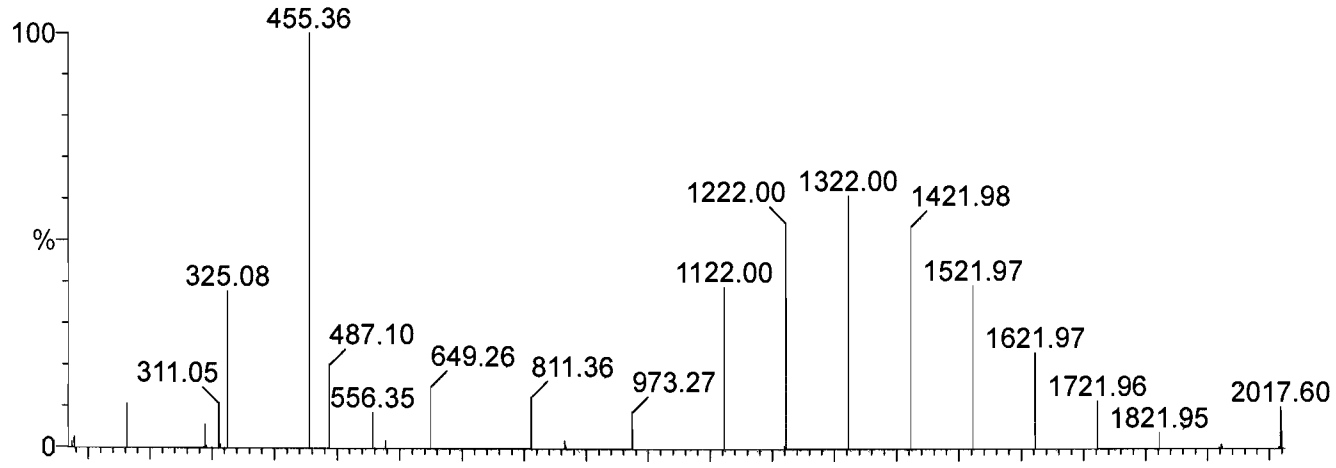


Q4(M) 07-02-19
7/2/19 CAG 7/2/19

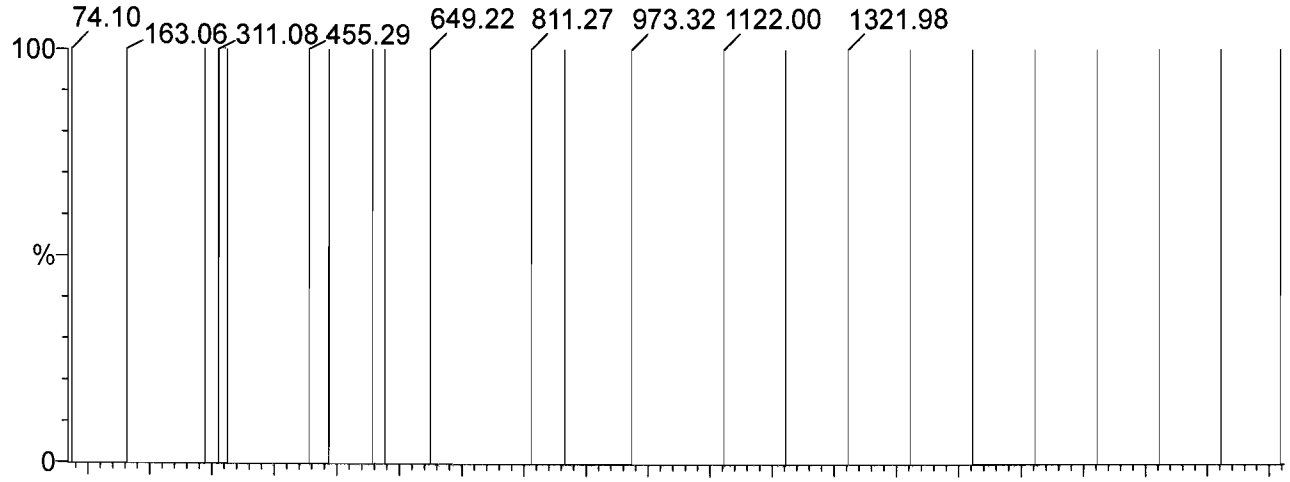
Calibration Report - MS1 Static

Printed: **Tue Jul 02 07:41:07 2019**

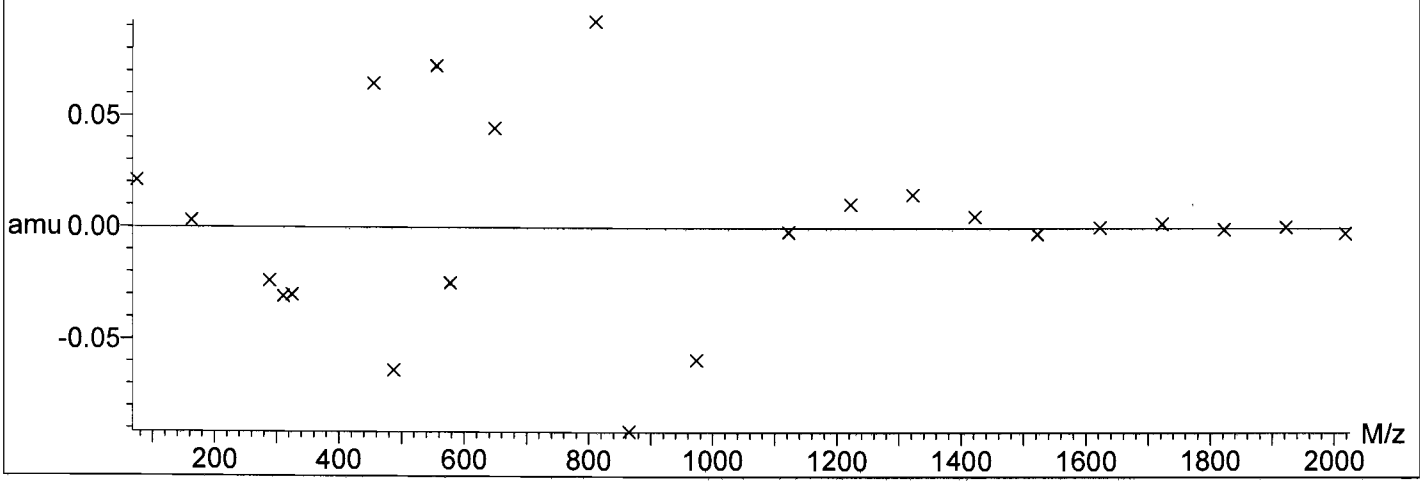
Data file: STATMS1 - Calibrated 23 matches of 23 tested references



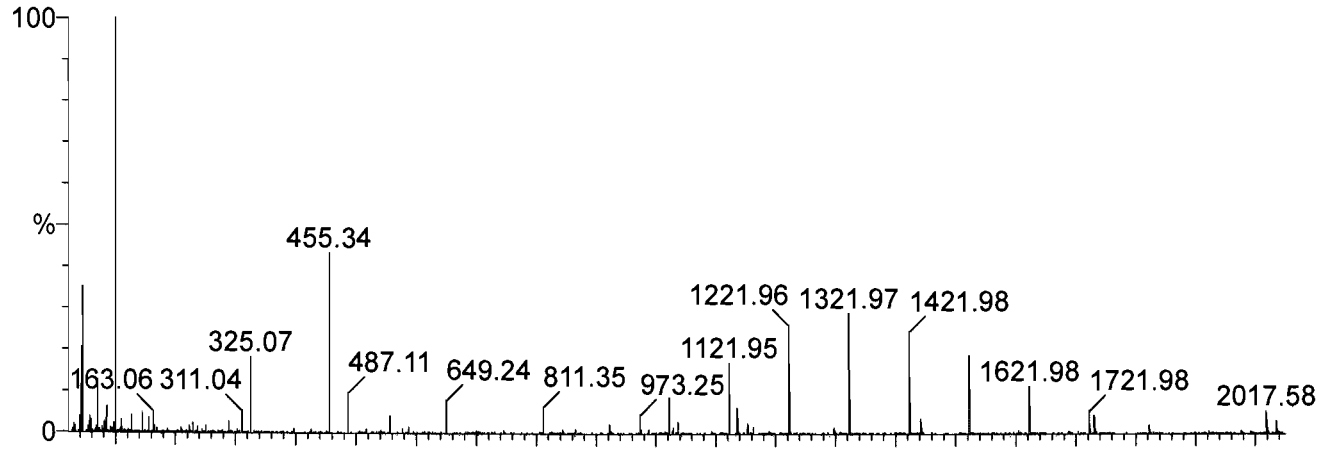
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0288 amu



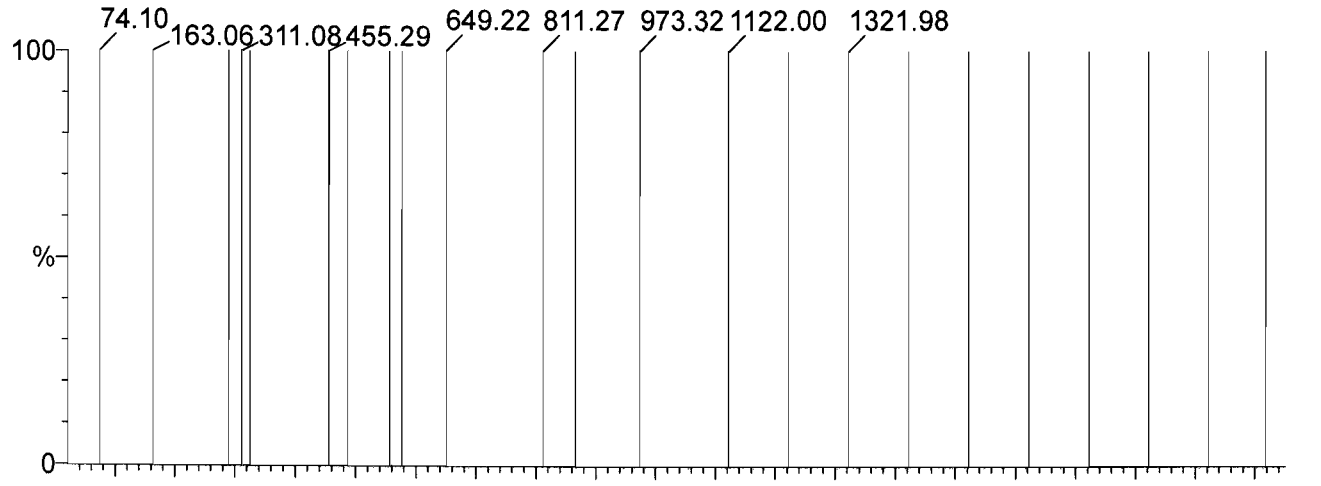
Residual Polynomial order = 4 RMS residual = 0.0415 amu



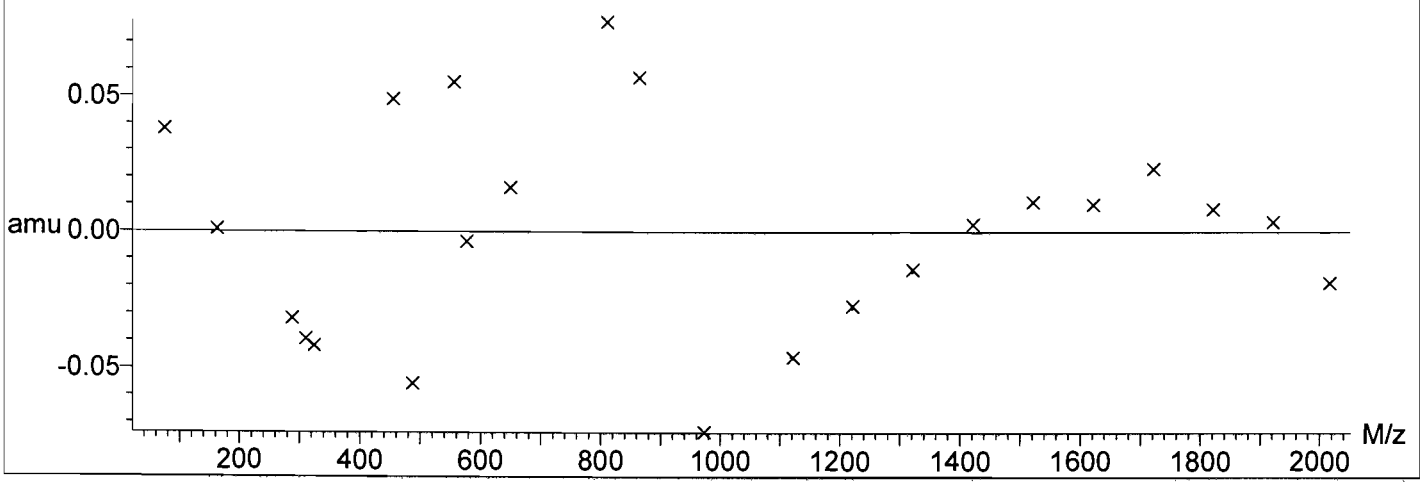
Data file: SCNMS1 - Calibrated 23 matches of 23 tested references



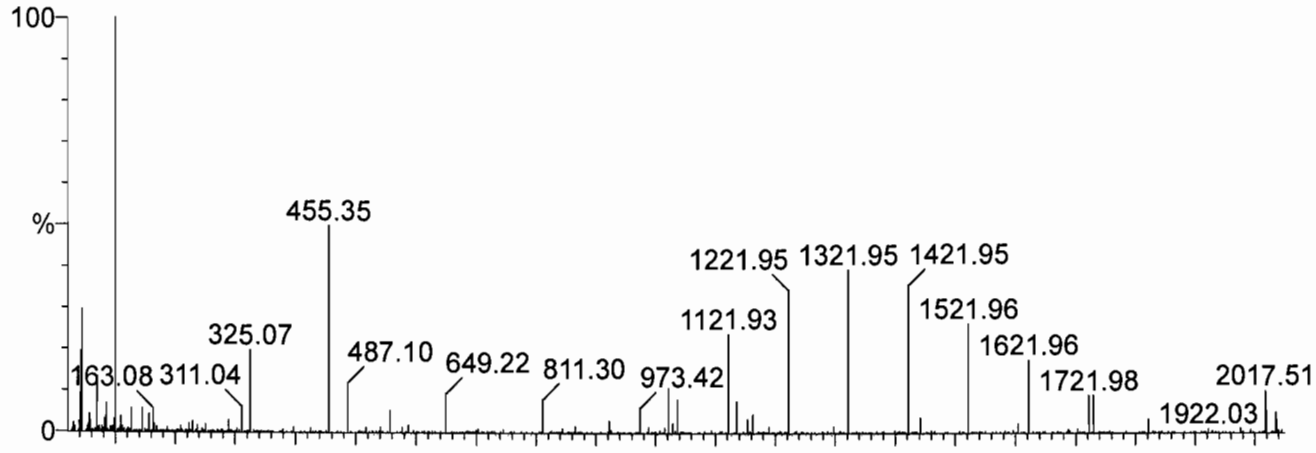
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0306 amu



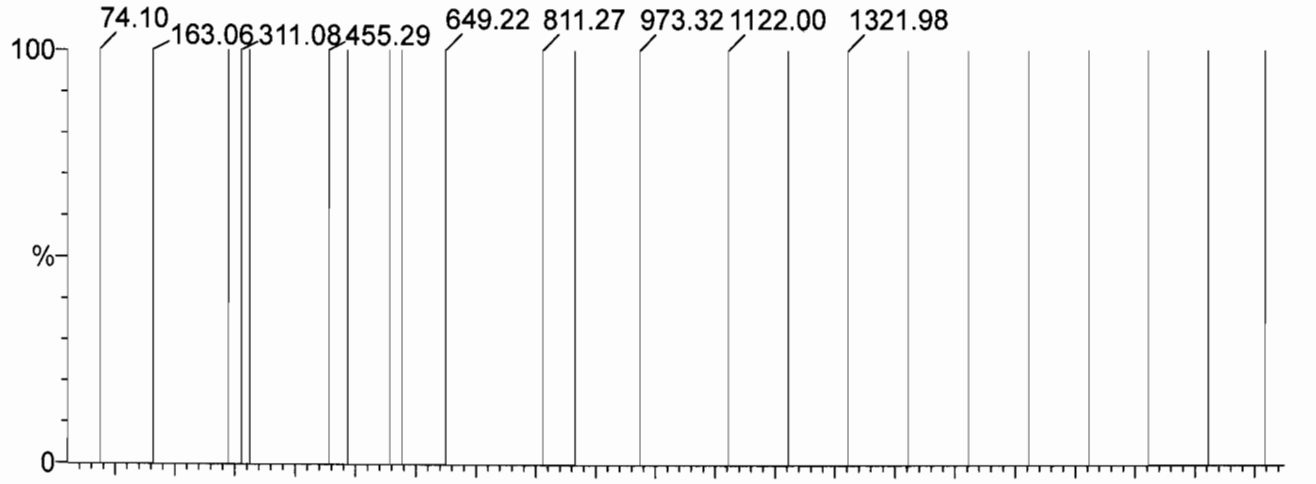
Residual Polynomial order = 4 RMS residual = 0.0382 amu



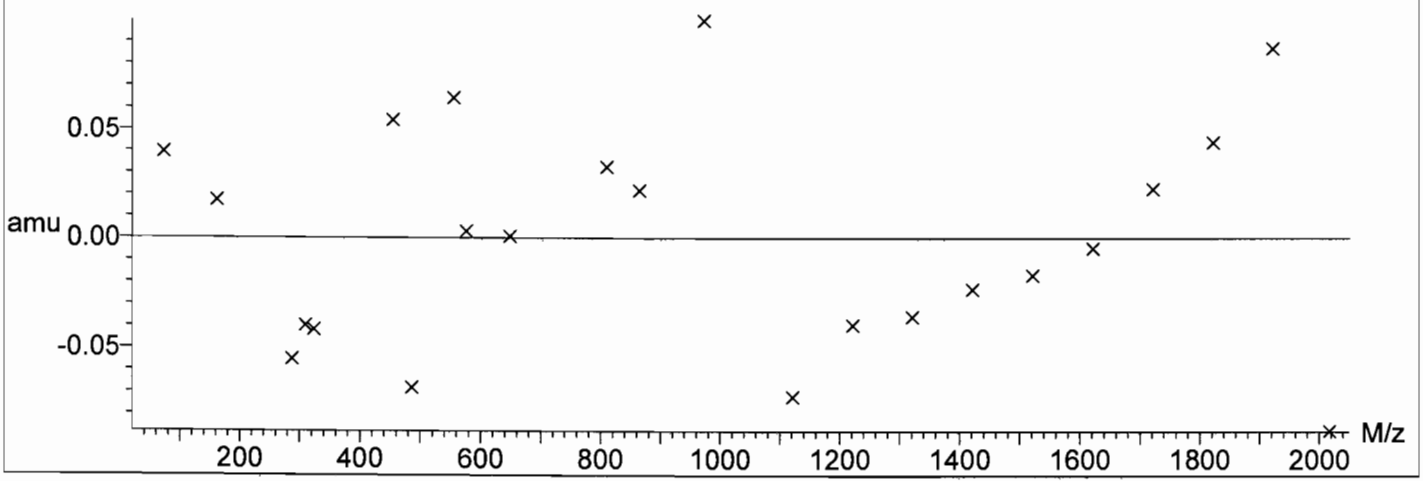
Data file: FASTMS1 - Calibrated 23 matches of 23 tested references



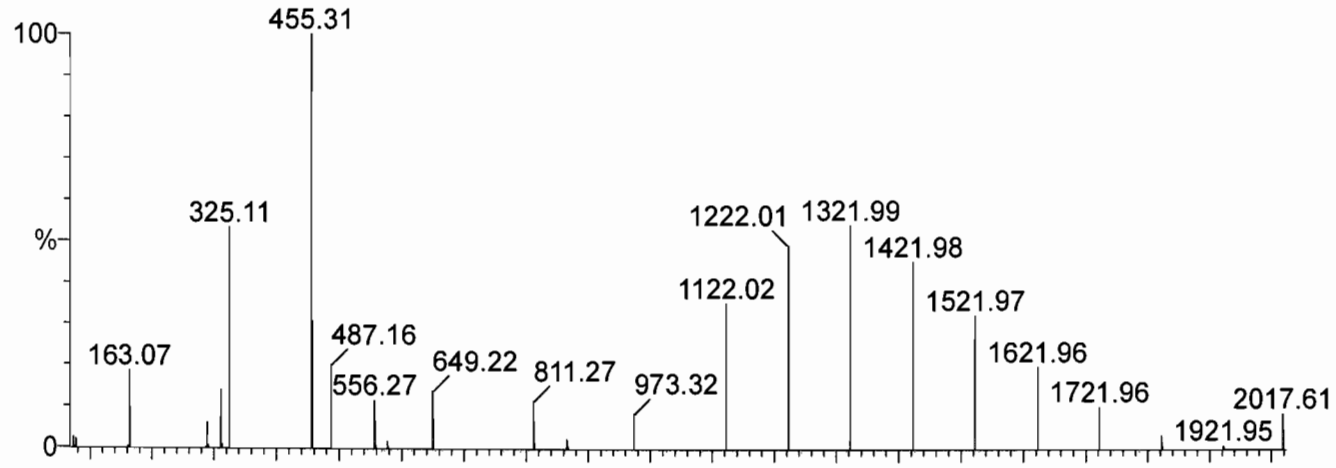
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0422 amu



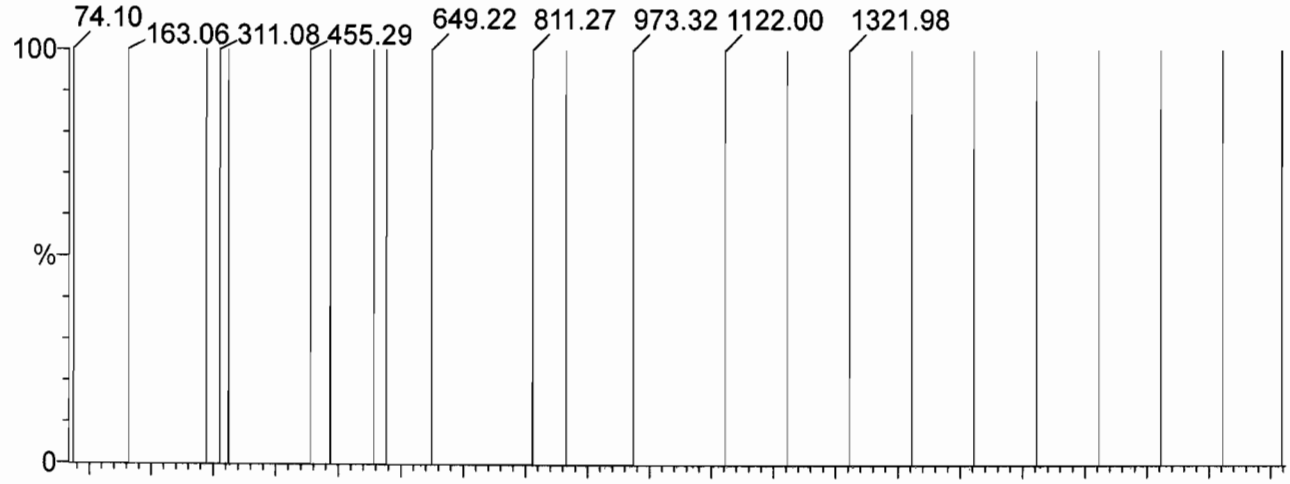
Residual Polynomial order = 4 RMS residual = 0.0502 amu



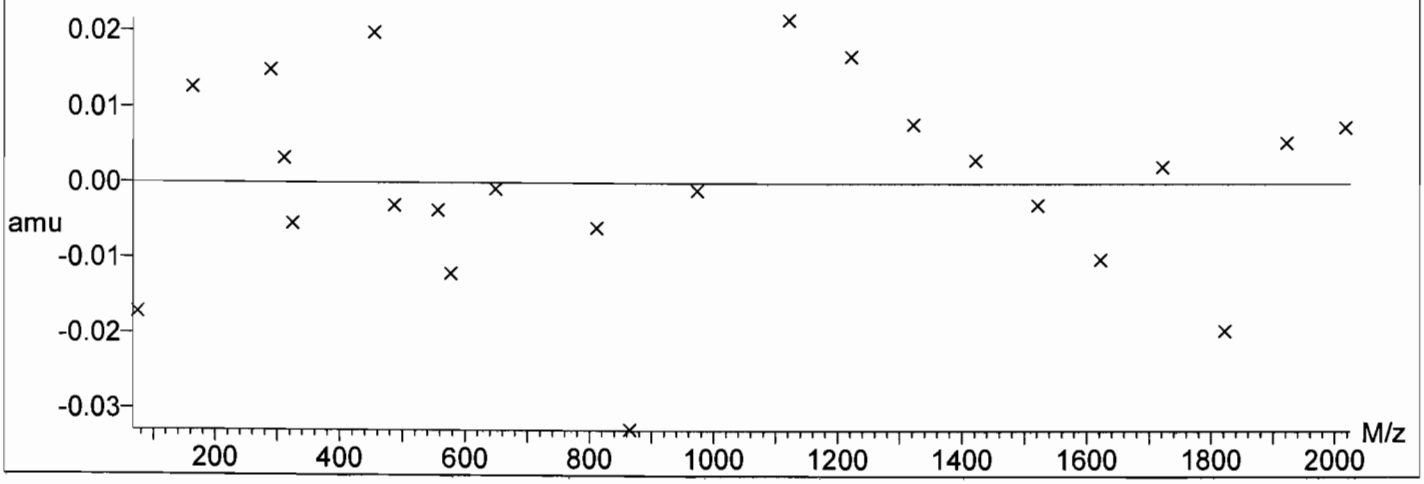
Data file: STATMS2 - Calibrated 23 matches of 23 tested references



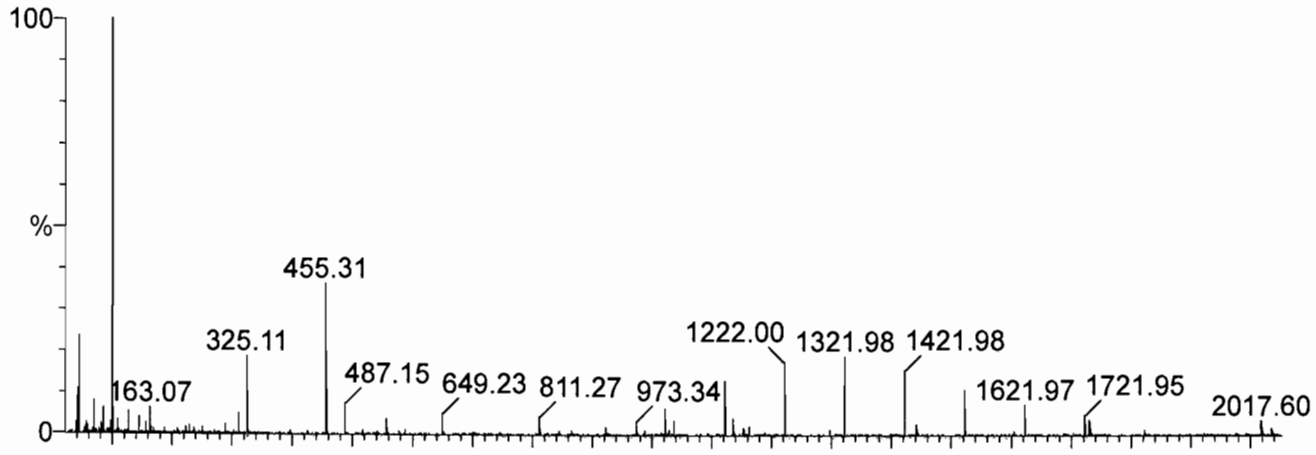
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.00996 amu



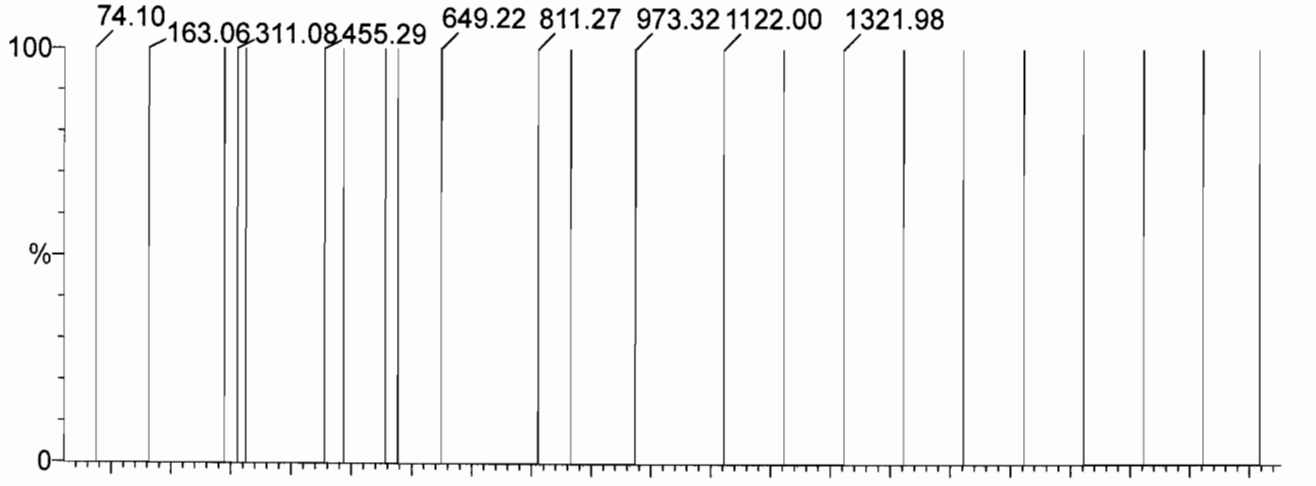
Residual Polynomial order = 4 RMS residual = 0.0128 amu



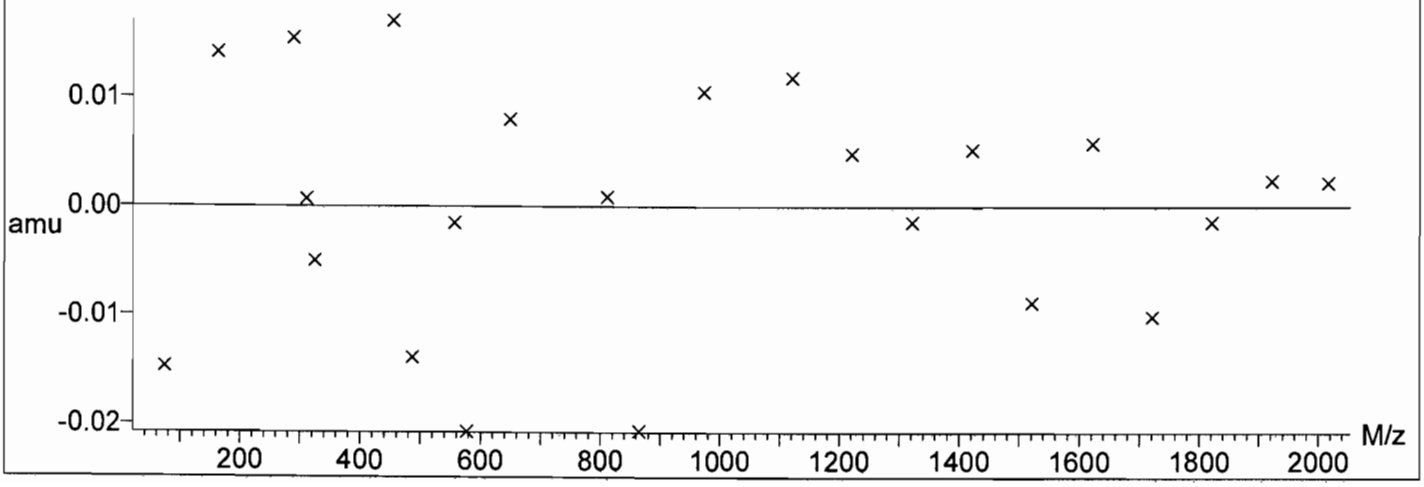
Data file: SCNMS2 - Calibrated 23 matches of 23 tested references



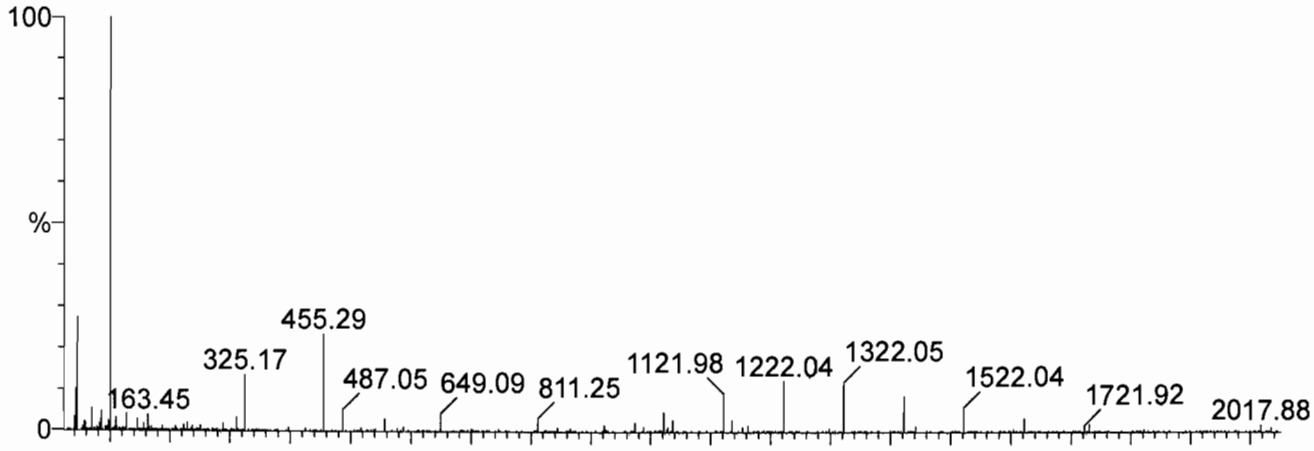
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.00857 amu



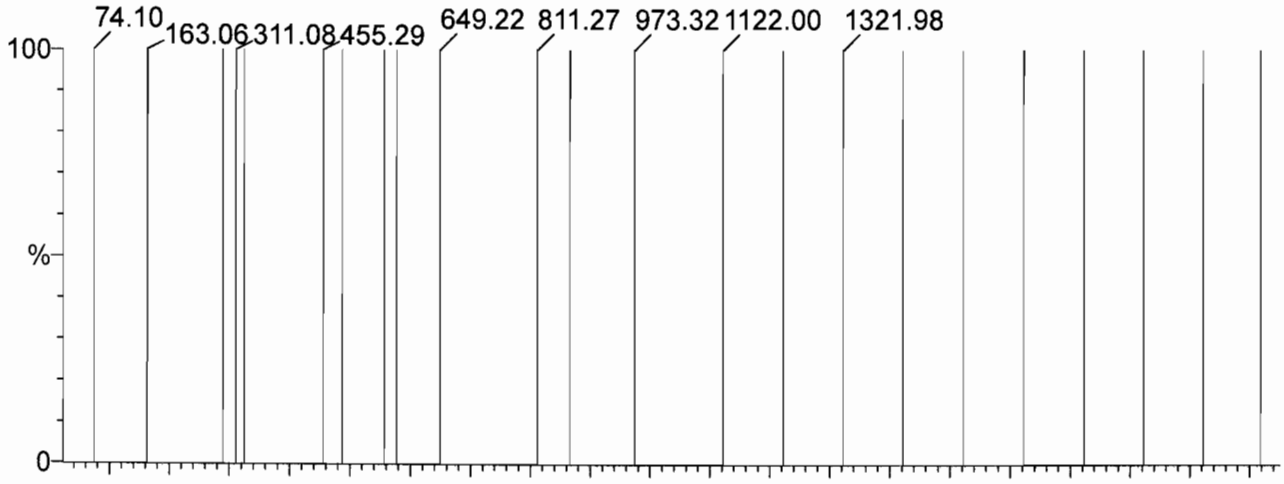
Residual Polynomial order = 4 RMS residual = 0.0107 amu



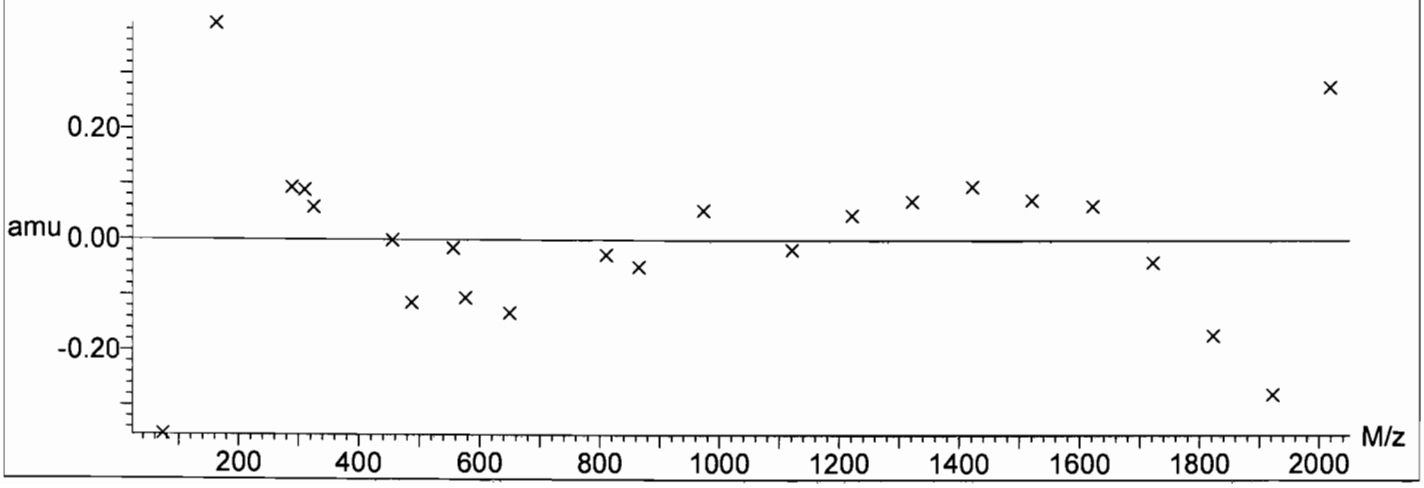
Data file: FASTMS2 - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.113 amu



Residual Polynomial order = 4 RMS residual = 0.155 amu



Q4(M) 07-10-19

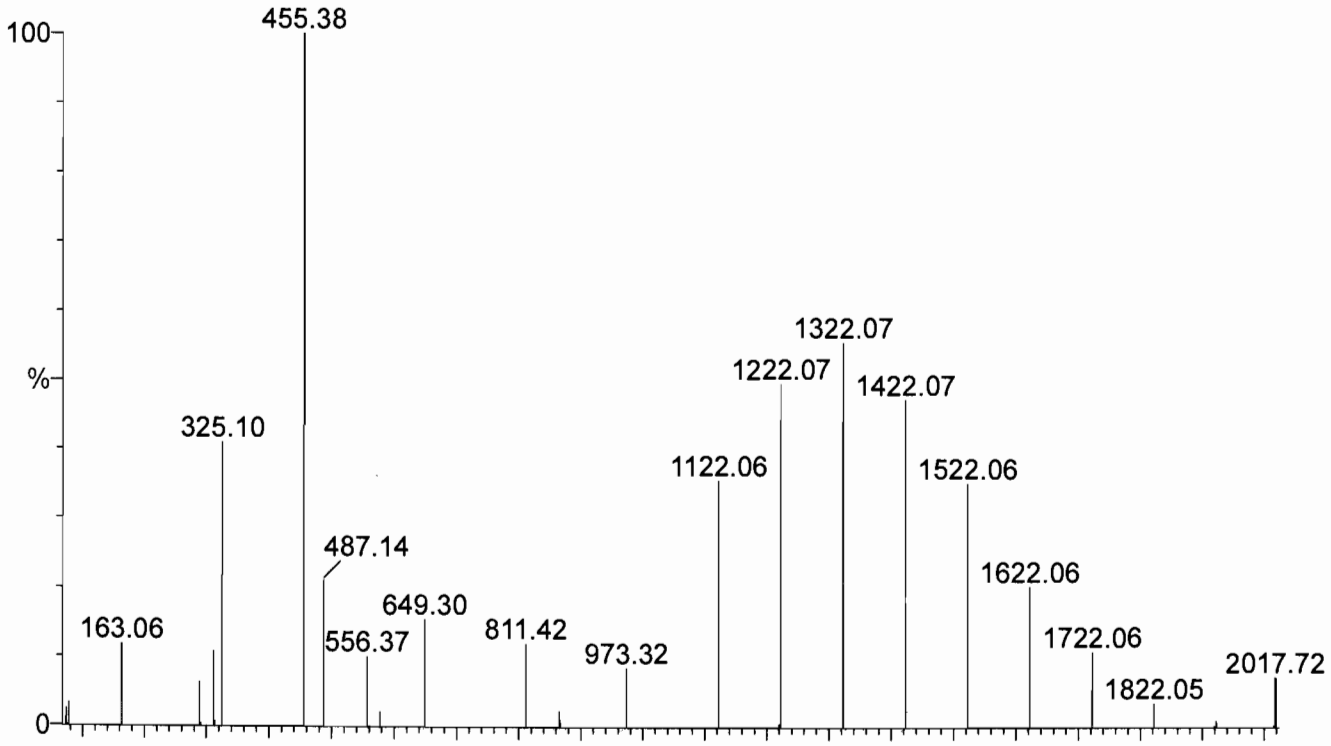
07/03/19 Calt 7/10/19

Calibration Verification Report - MS1 Static

Printed: **Wed Jul 10 07:44:01 2019**

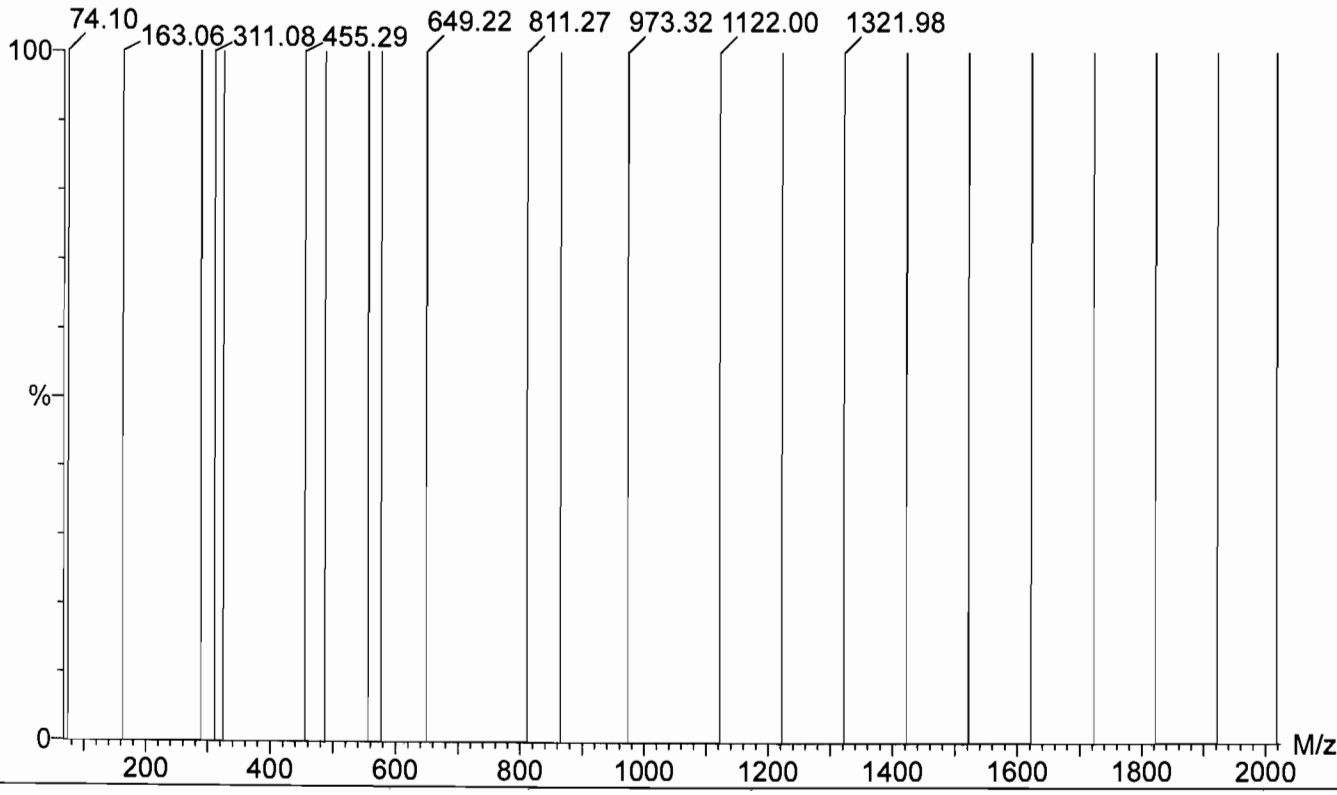
Data file: STATMS1V - Calibrated

23 matches of 23 tested references

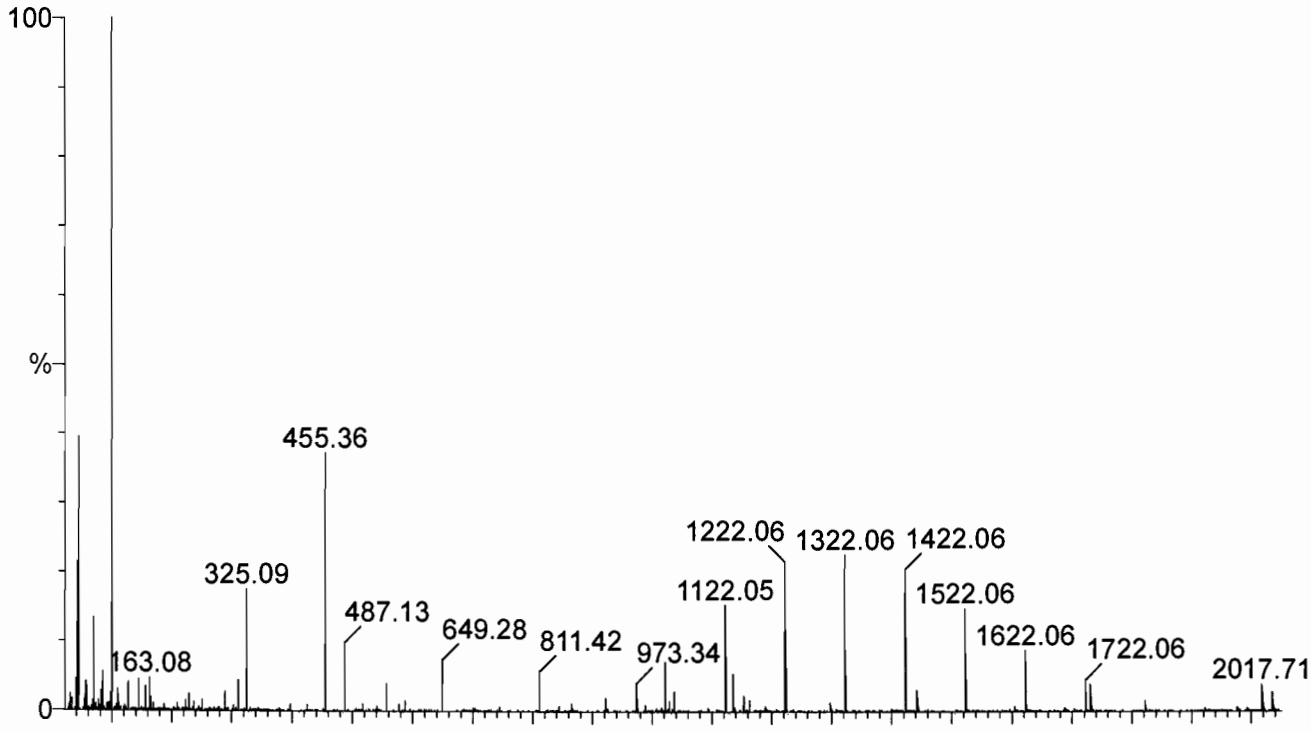


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref

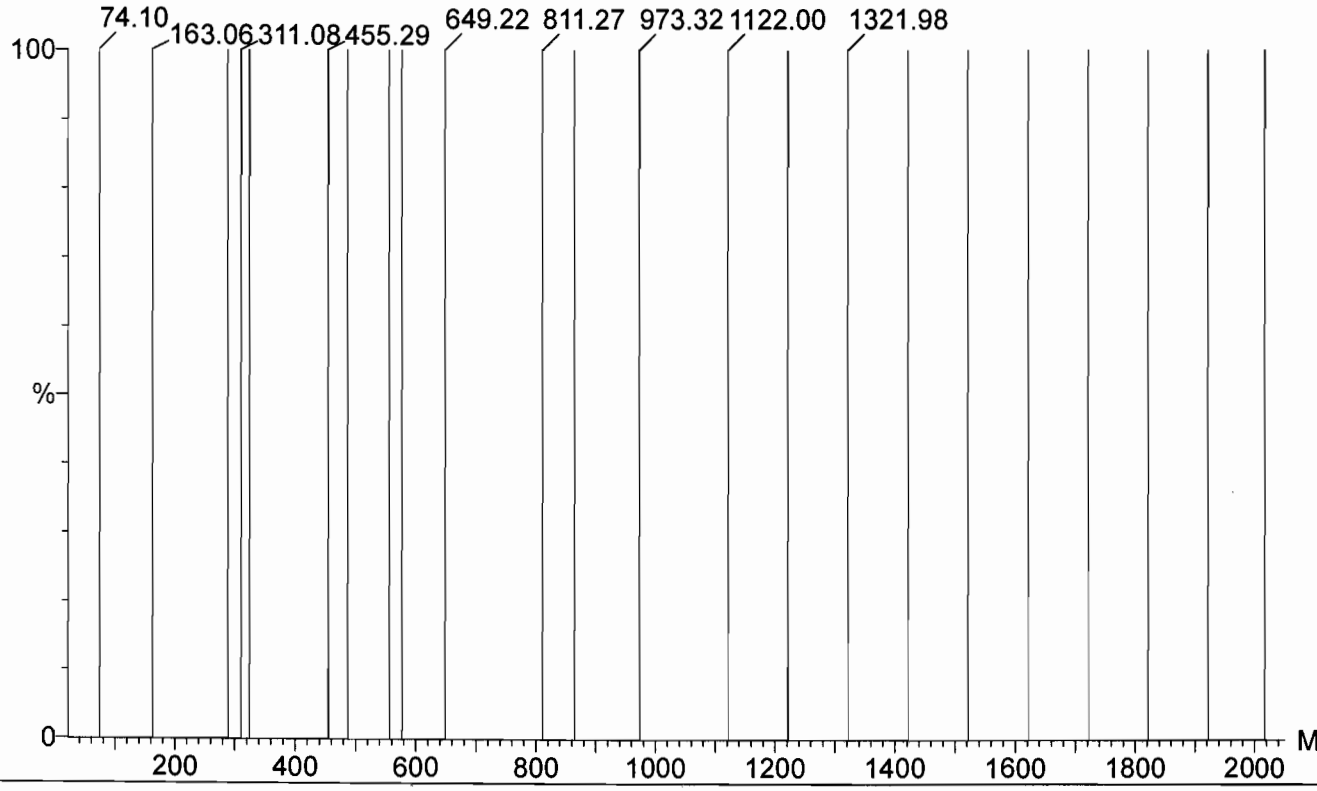
Mean residual = 0.0661 amu



Data file: SCNMS1V - Calibrated 23 matches of 23 tested references

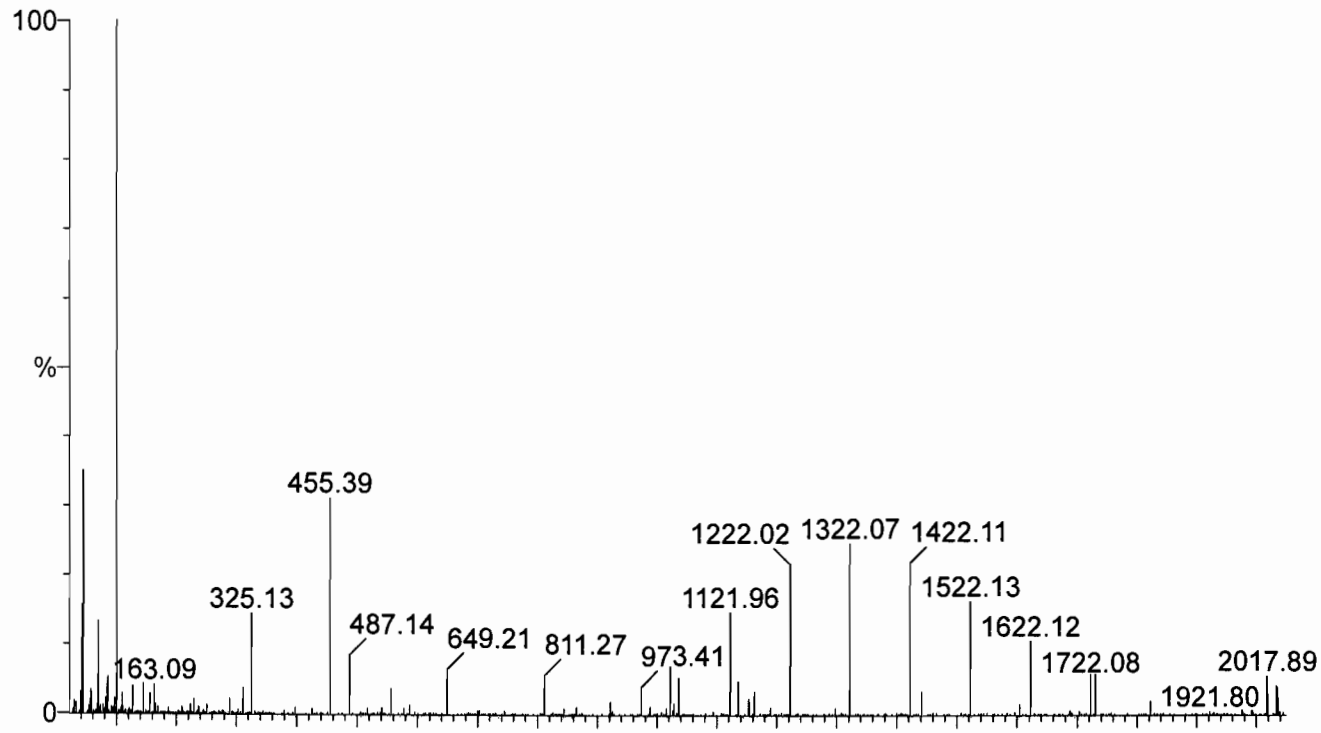


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0656 amu



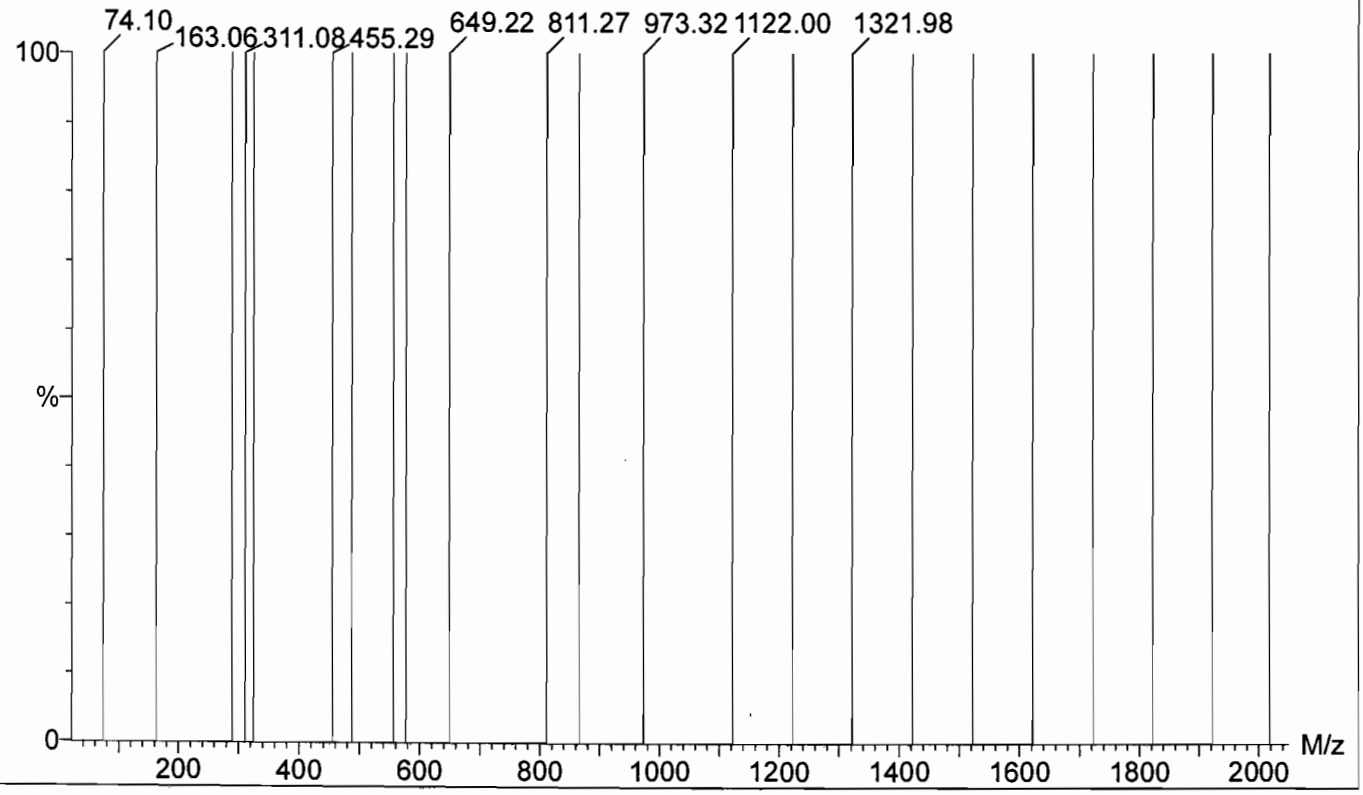
Data file: FASTMS1V - Calibrated

23 matches of 23 tested references

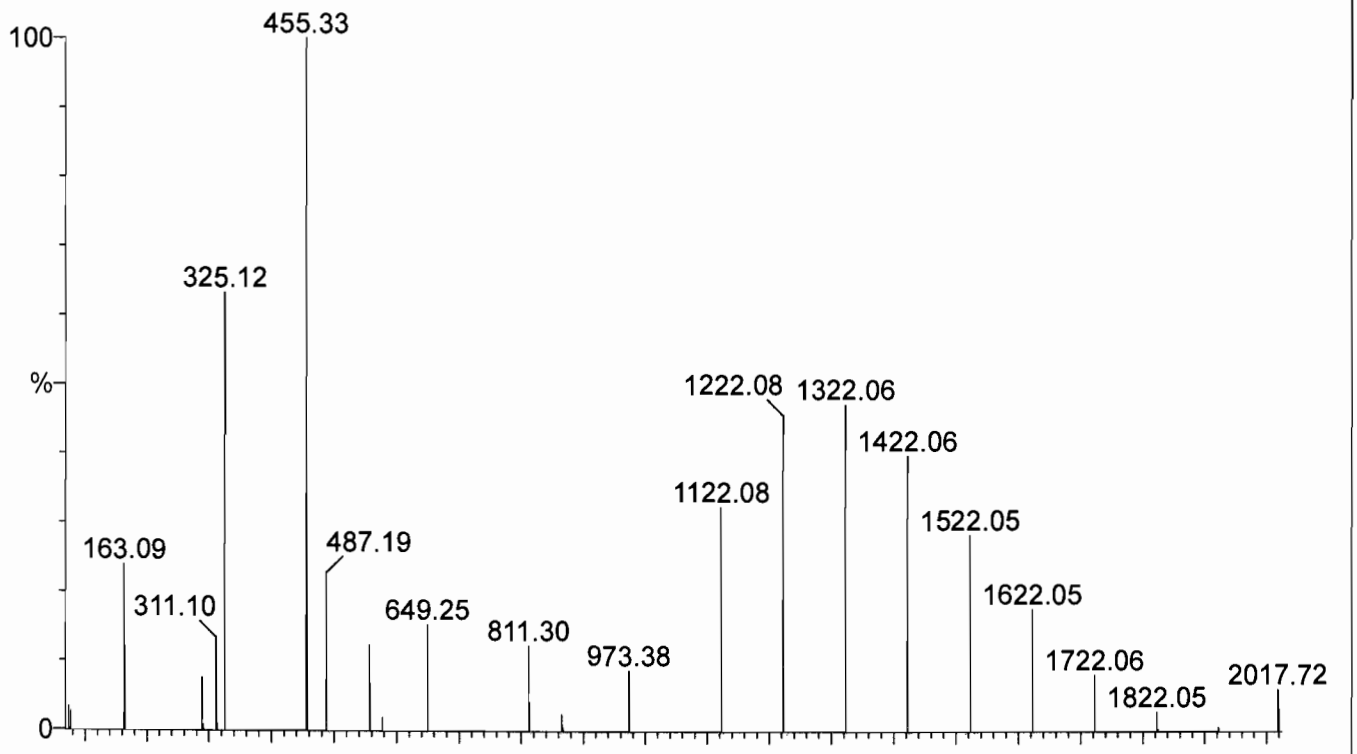


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref

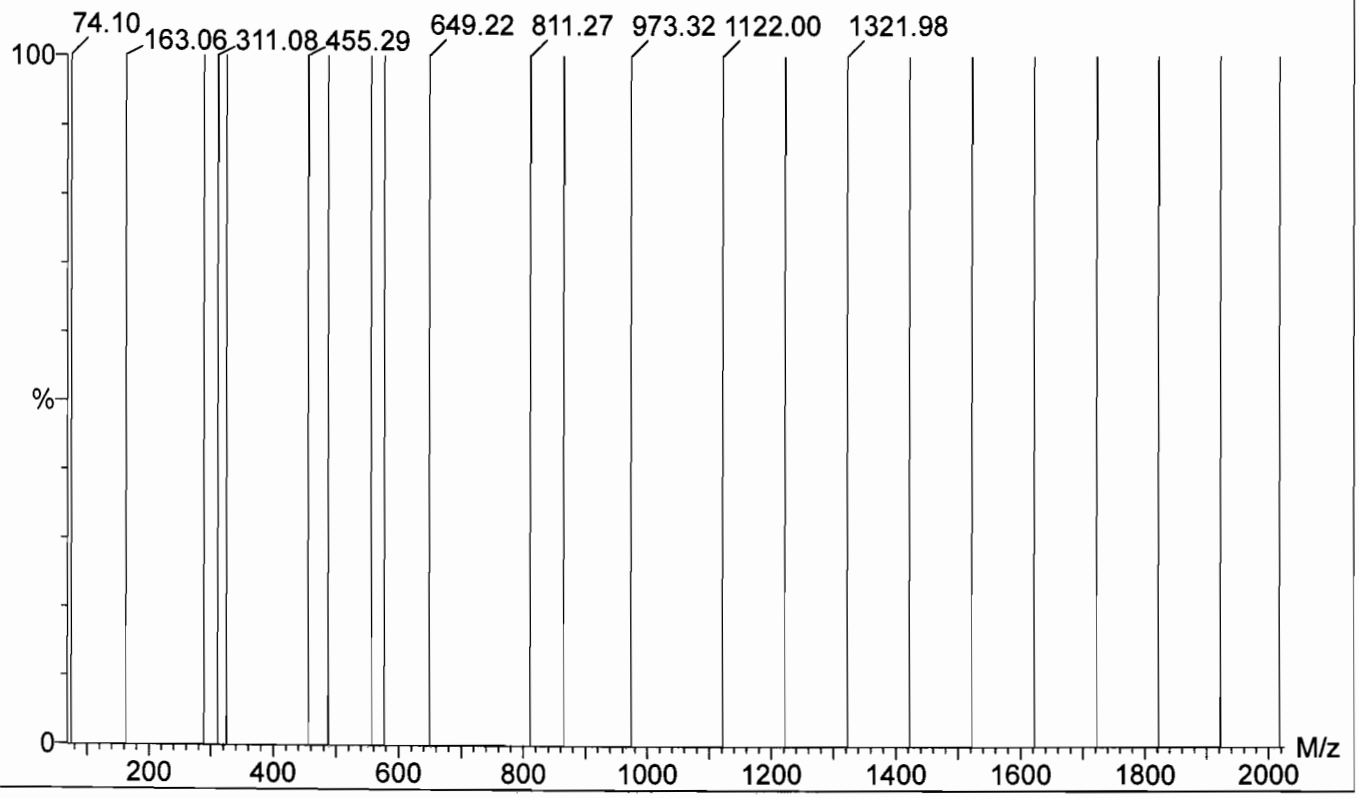
Mean residual = 0.0675 amu



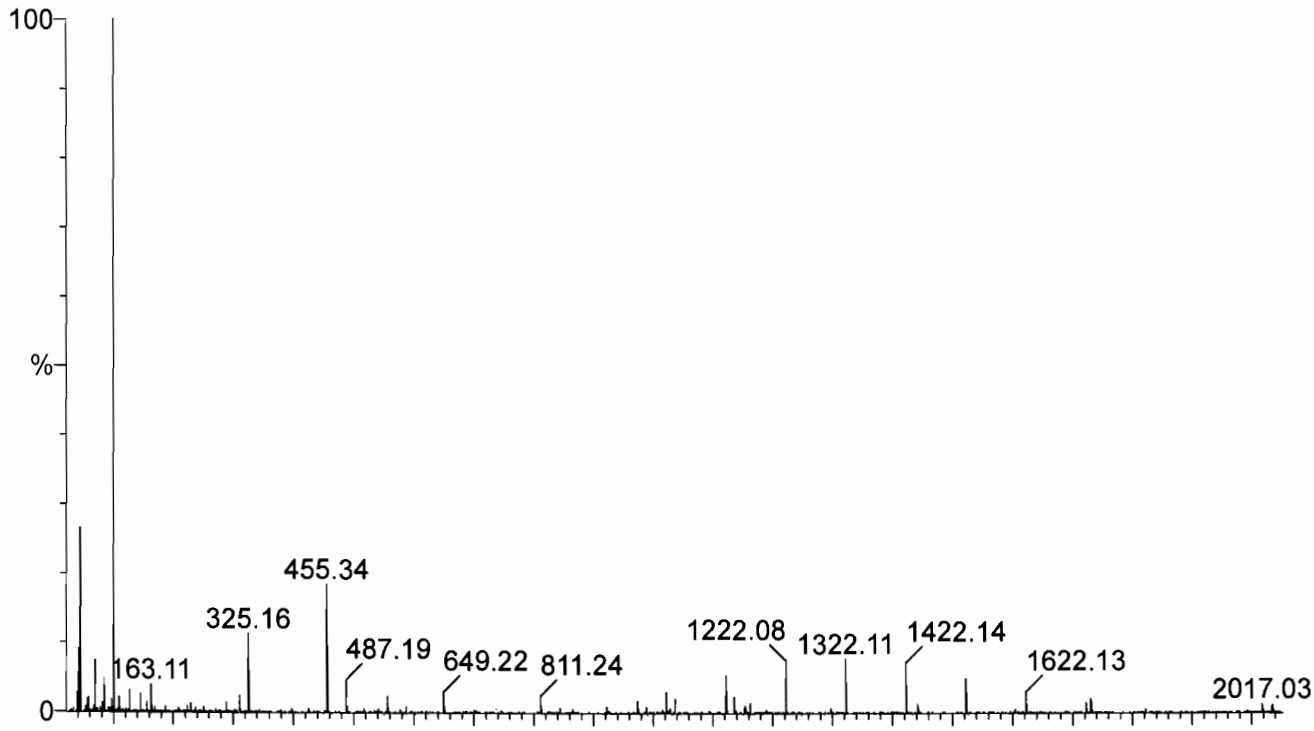
Data file: STATMS2V - Calibrated 23 matches of 23 tested references



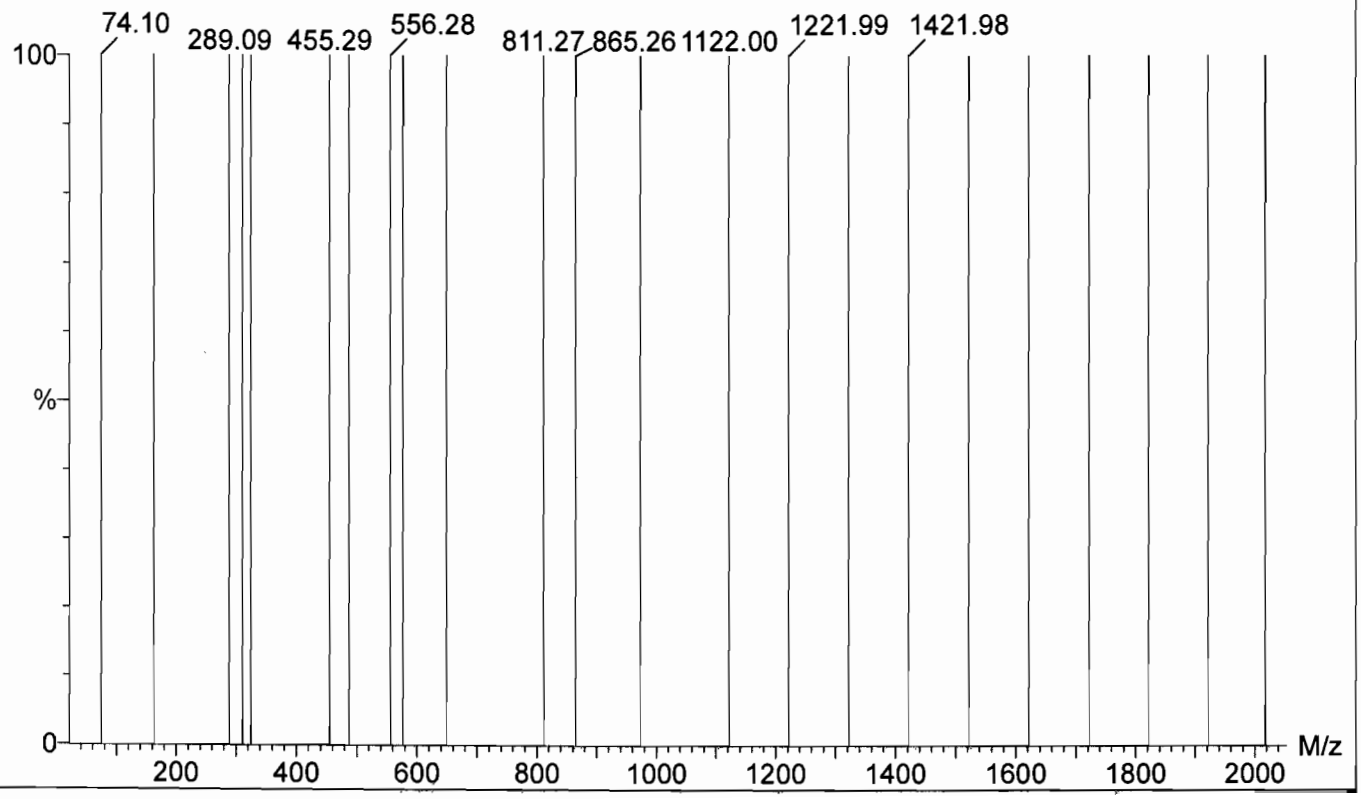
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0542 amu



Data file: SCNMS2V - Calibrated 23 matches of 23 tested references

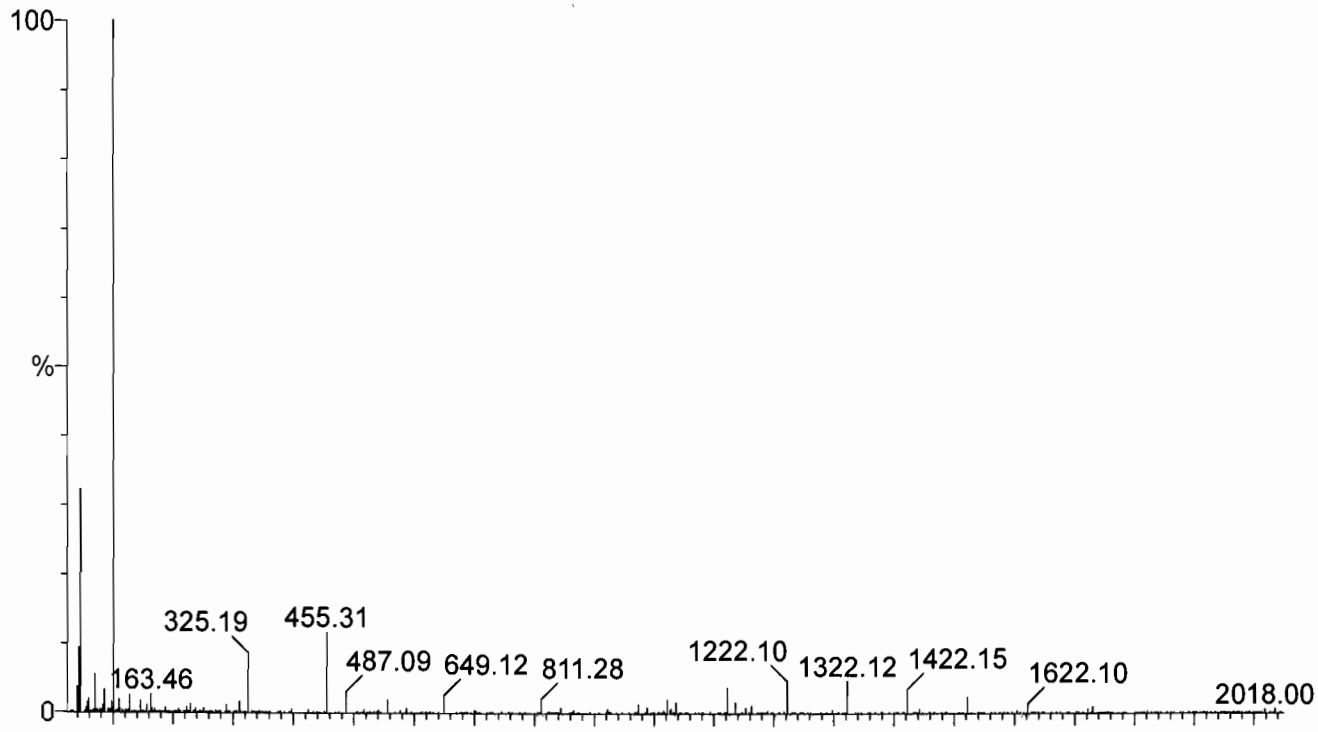


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0969 amu

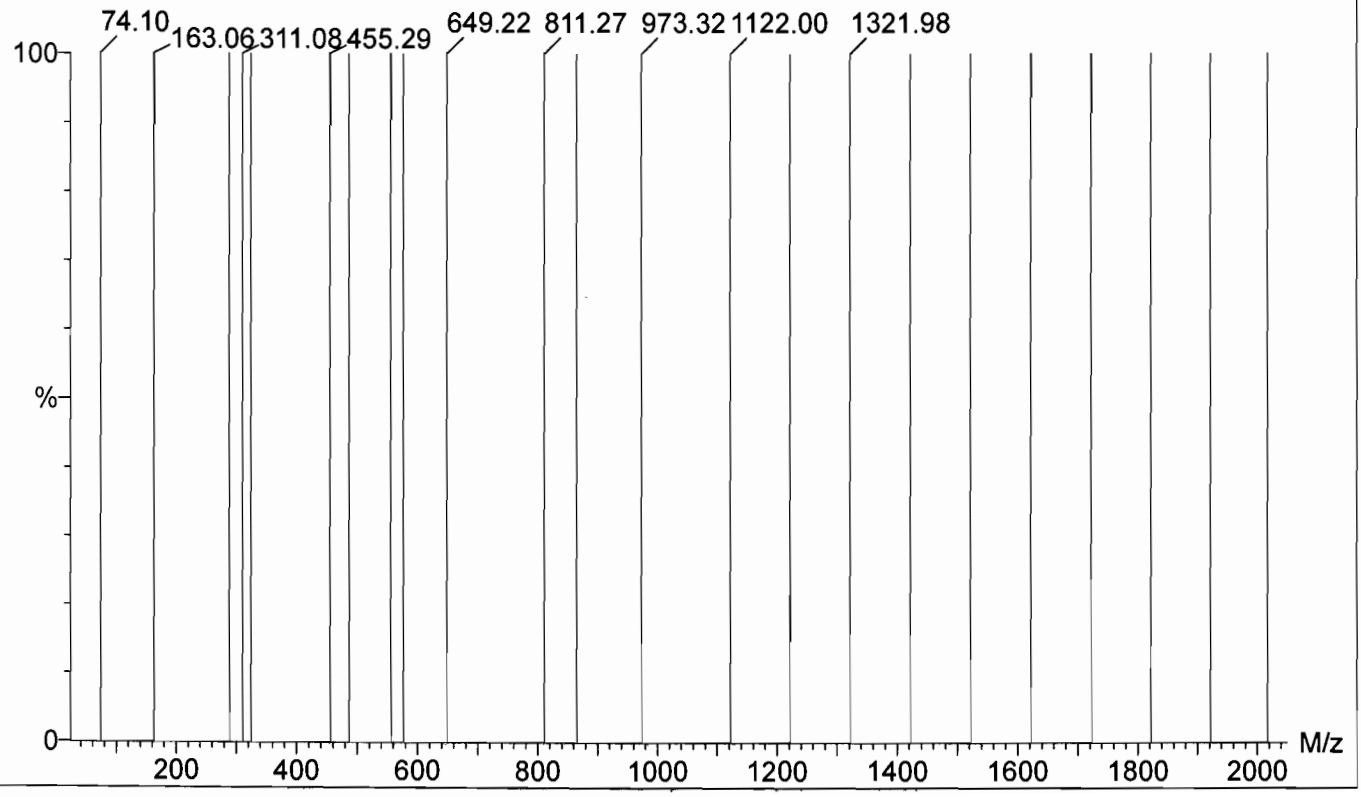


Printed: **Wed Jul 10 07:50:03 2019**

Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.121 amu



Q4_07-12-19

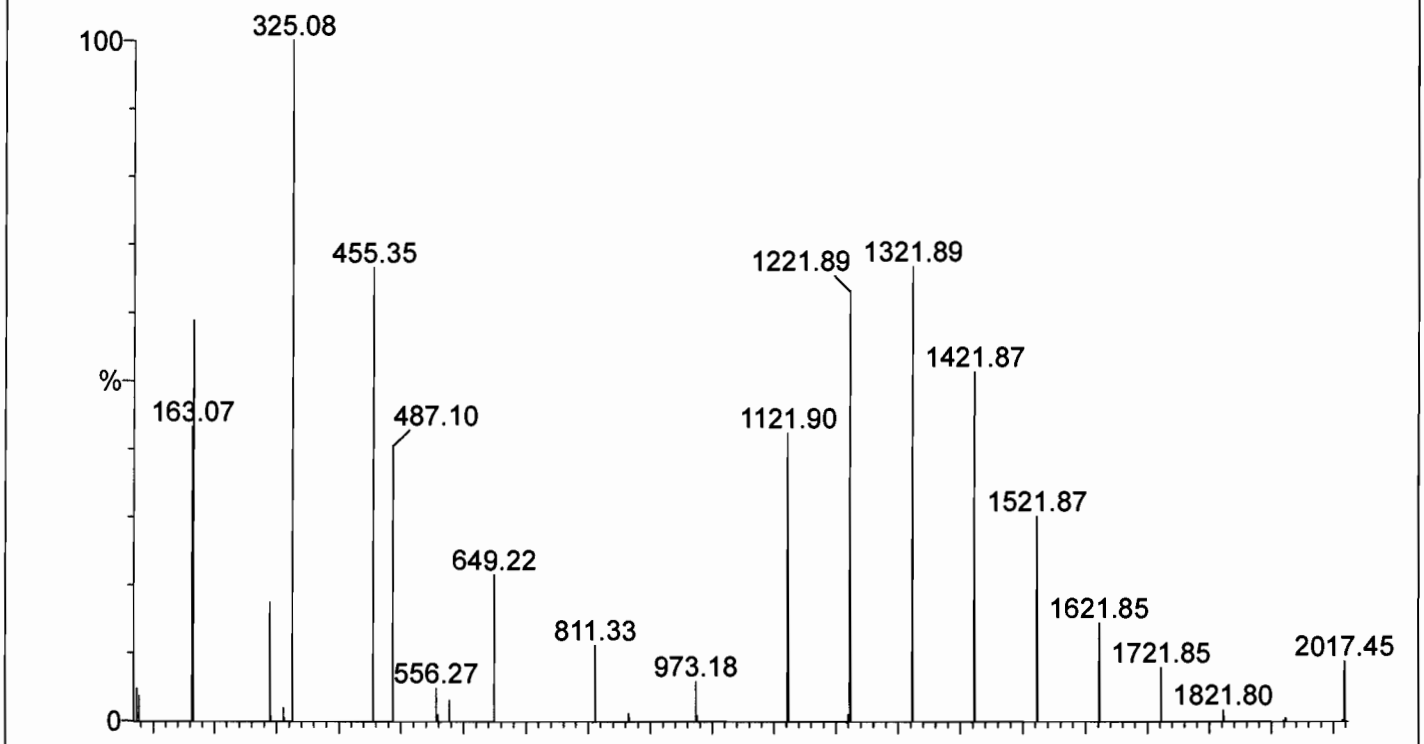
07/03/19 Cal 7/12/19

Calibration Verification Report - MS1 Static

Printed: **Fri Jul 12 10:05:31 2019**

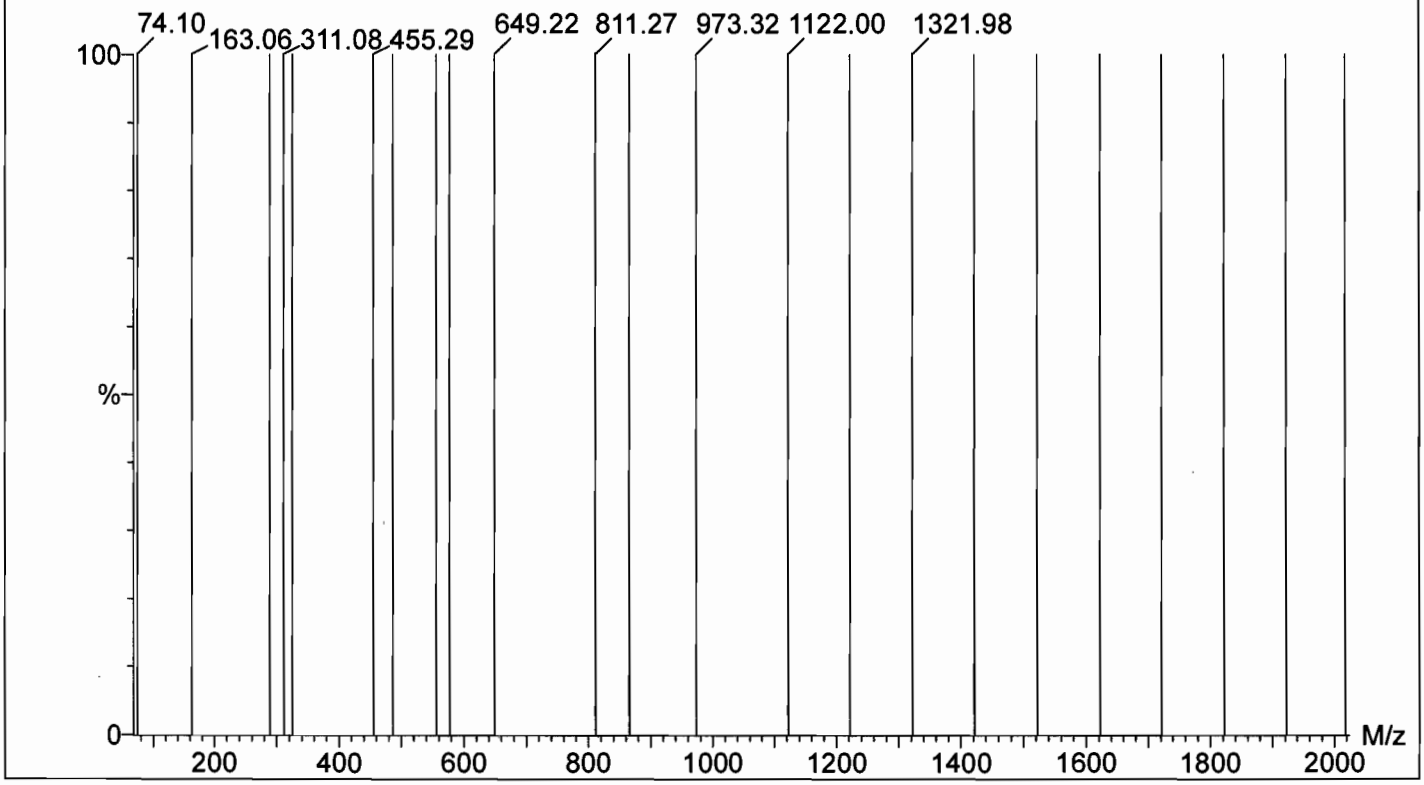
Data file: STATMS1V - Calibrated

22 matches of 23 tested references

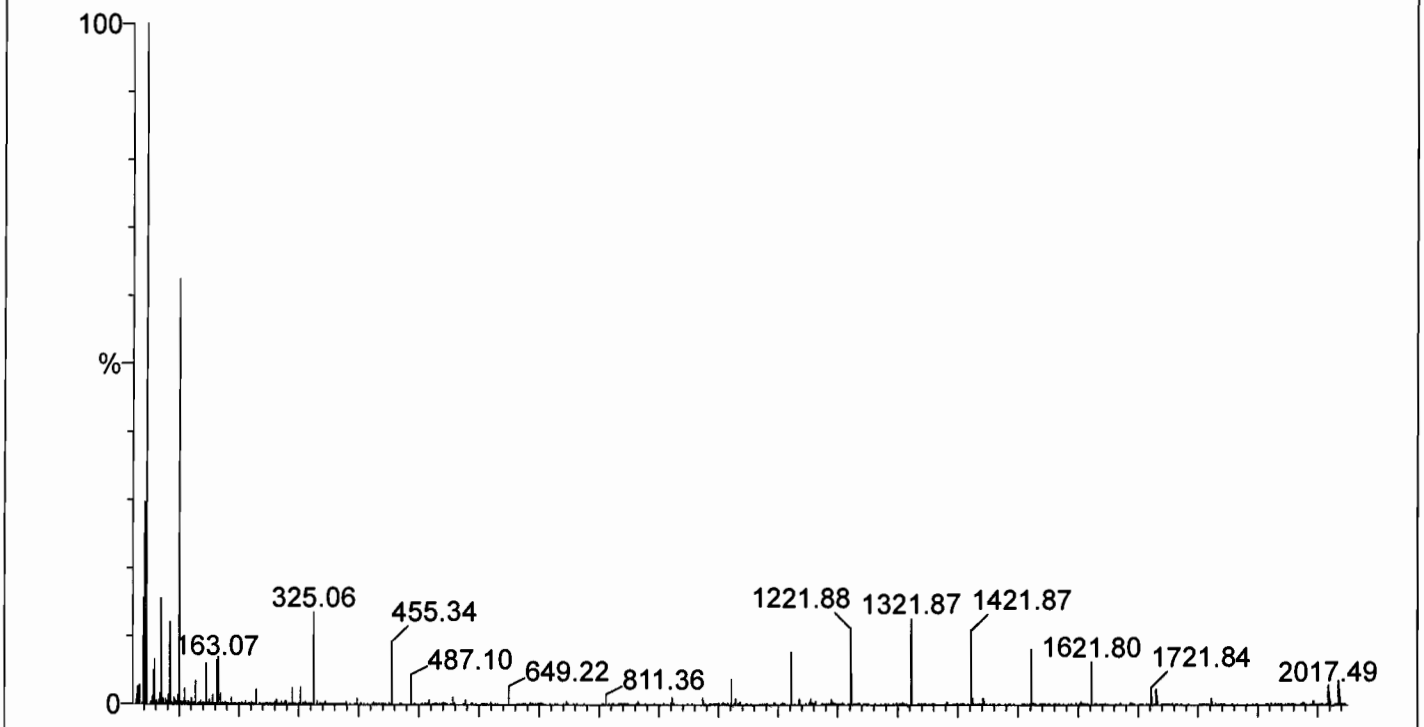


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref

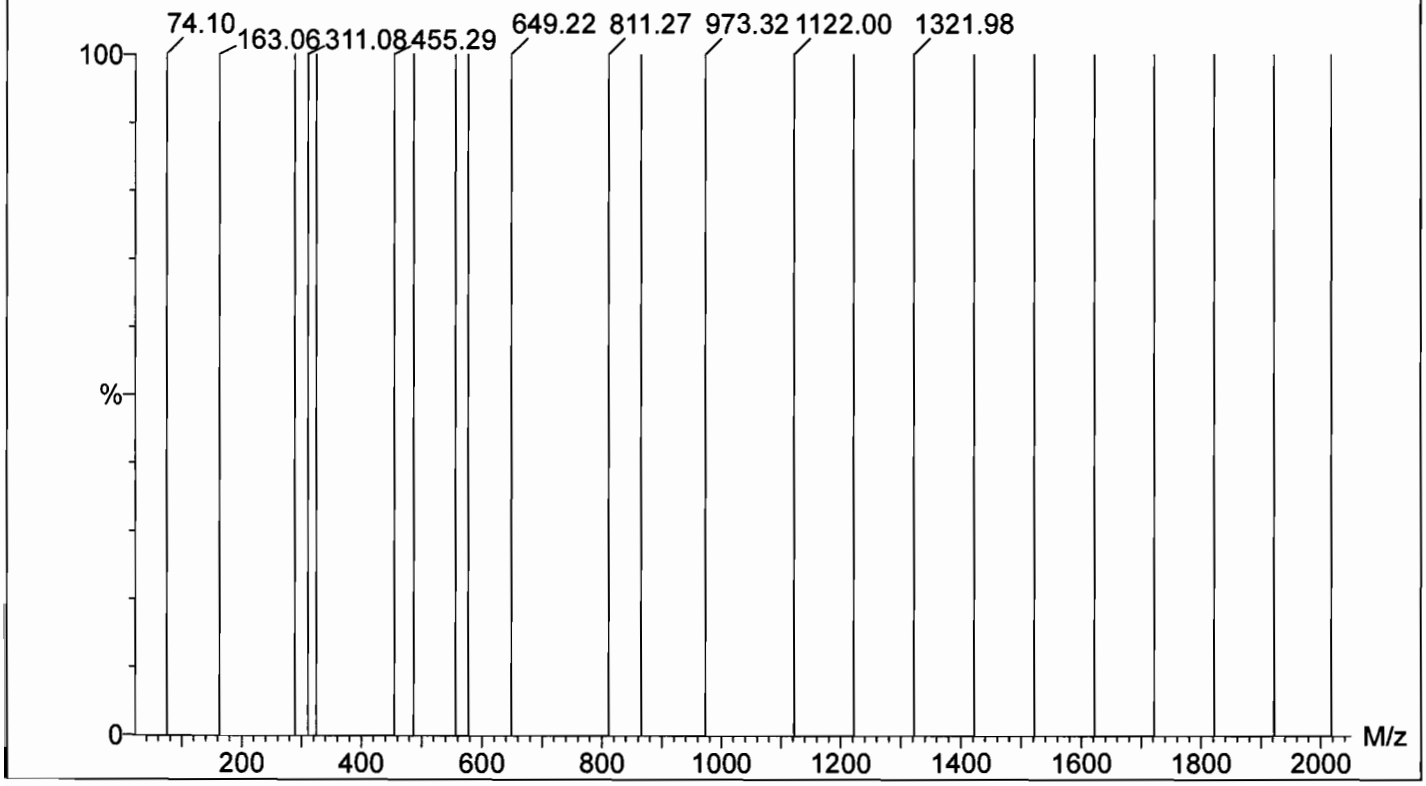
Mean residual = 0.0841 amu



Data file: SCNMS1V - Calibrated 23 matches of 23 tested references

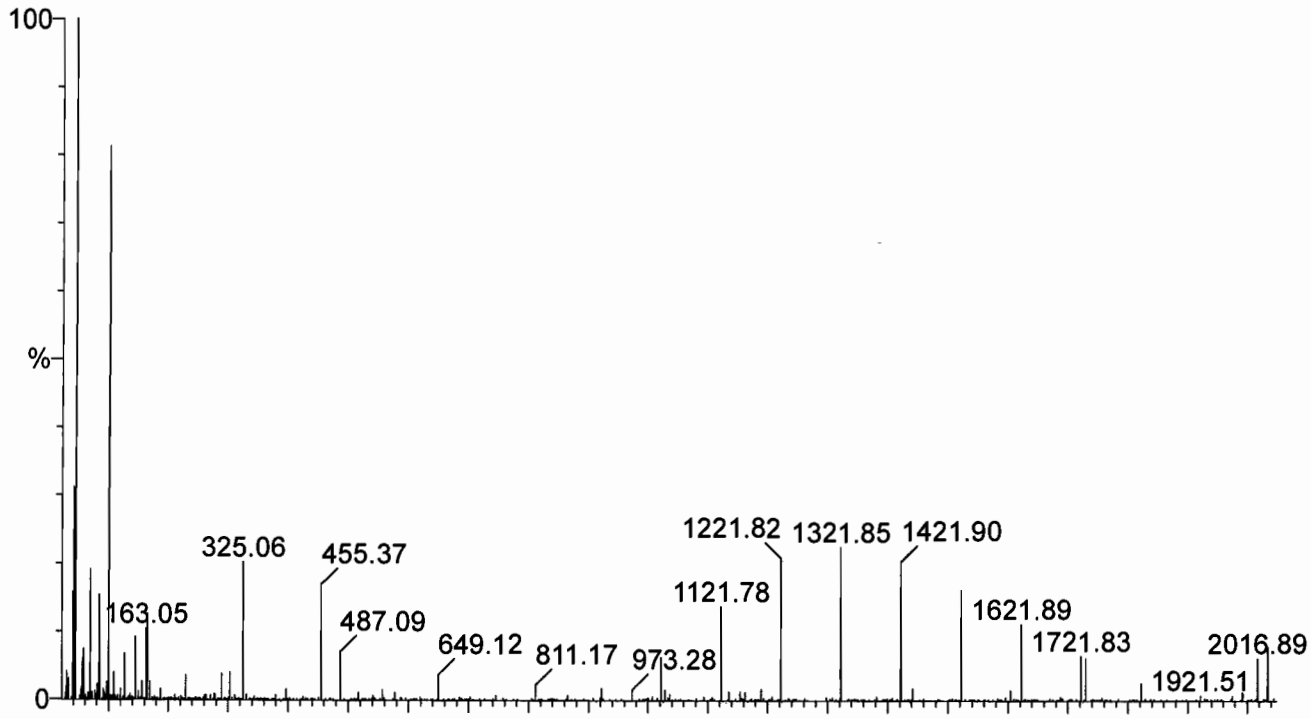


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0782 amu

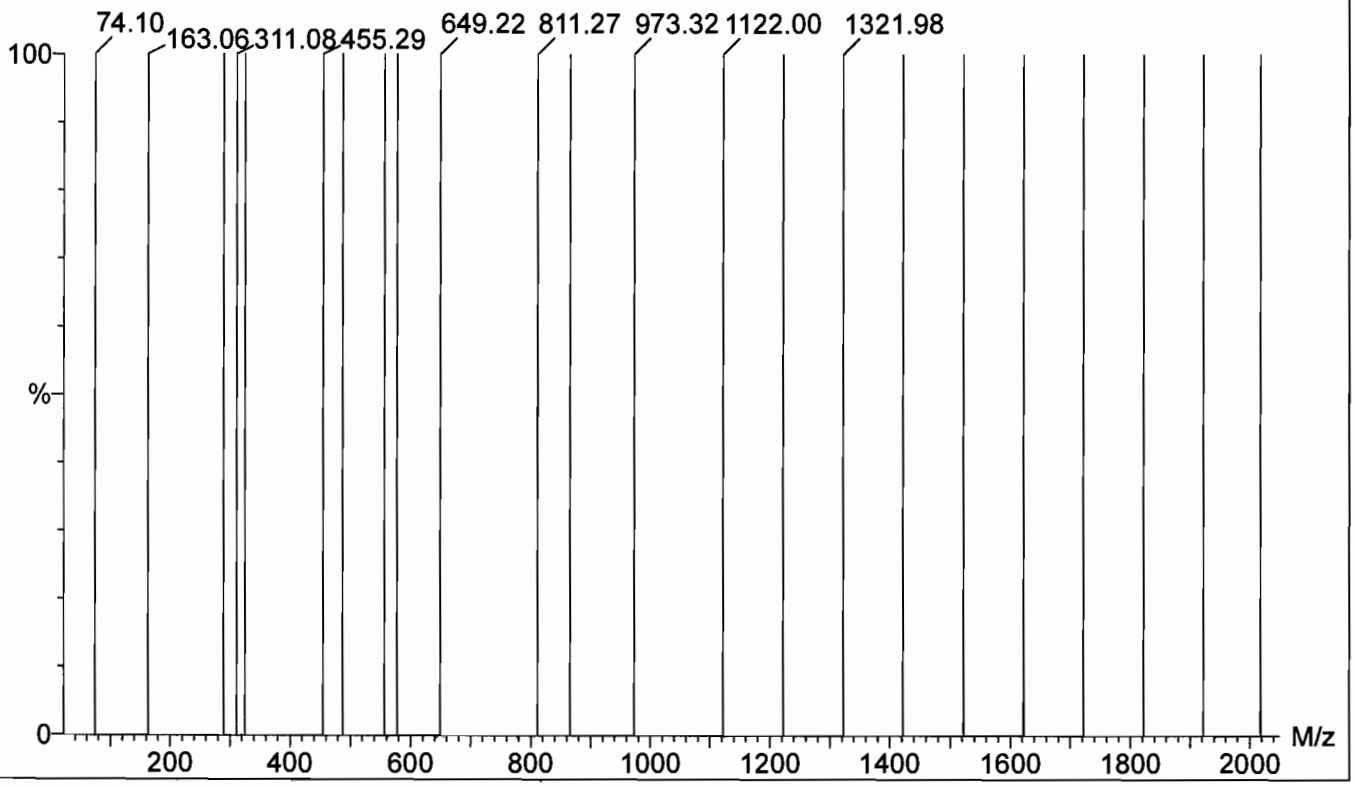


Printed: **Fri Jul 12 10:07:51 2019**

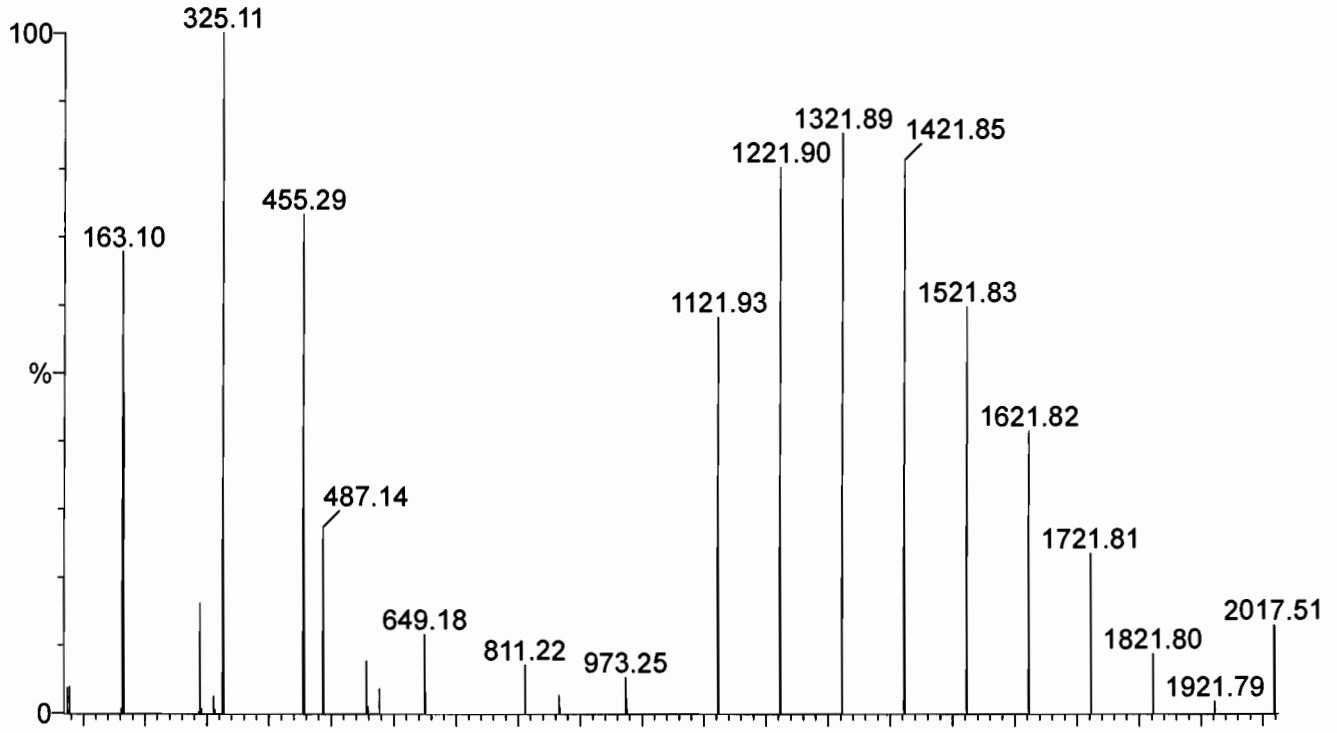
Data file: FASTMS1V - Calibrated 22 matches of 23 tested references



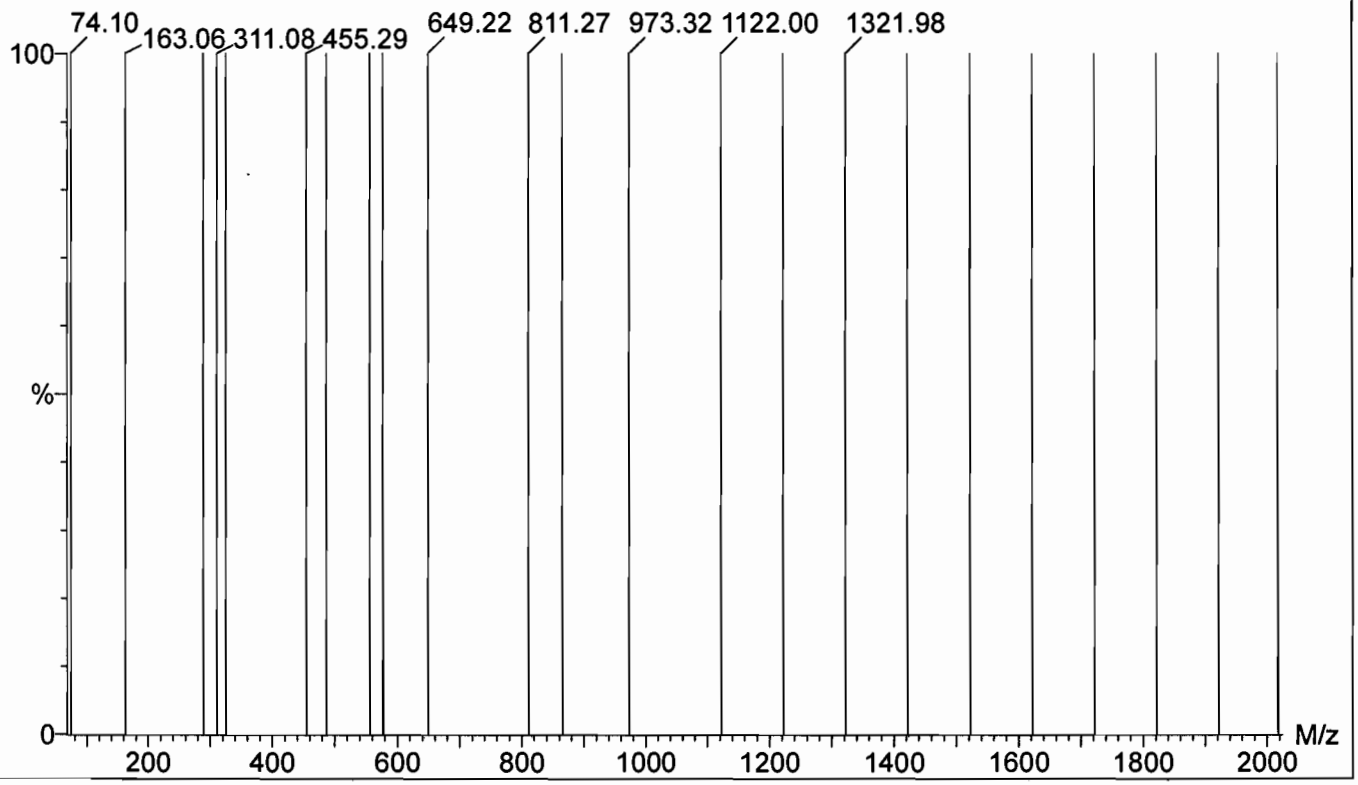
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.142 amu



Data file: STATMS2V - Calibrated 23 matches of 23 tested references

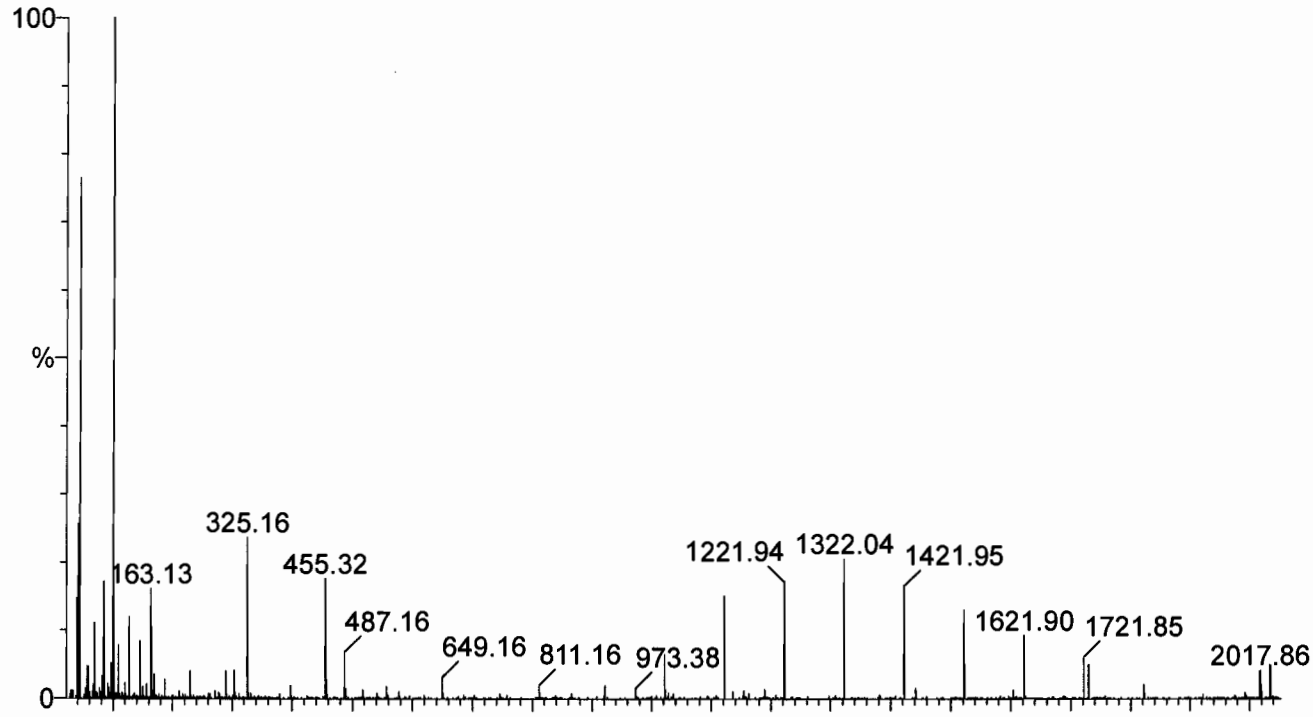


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0721 amu

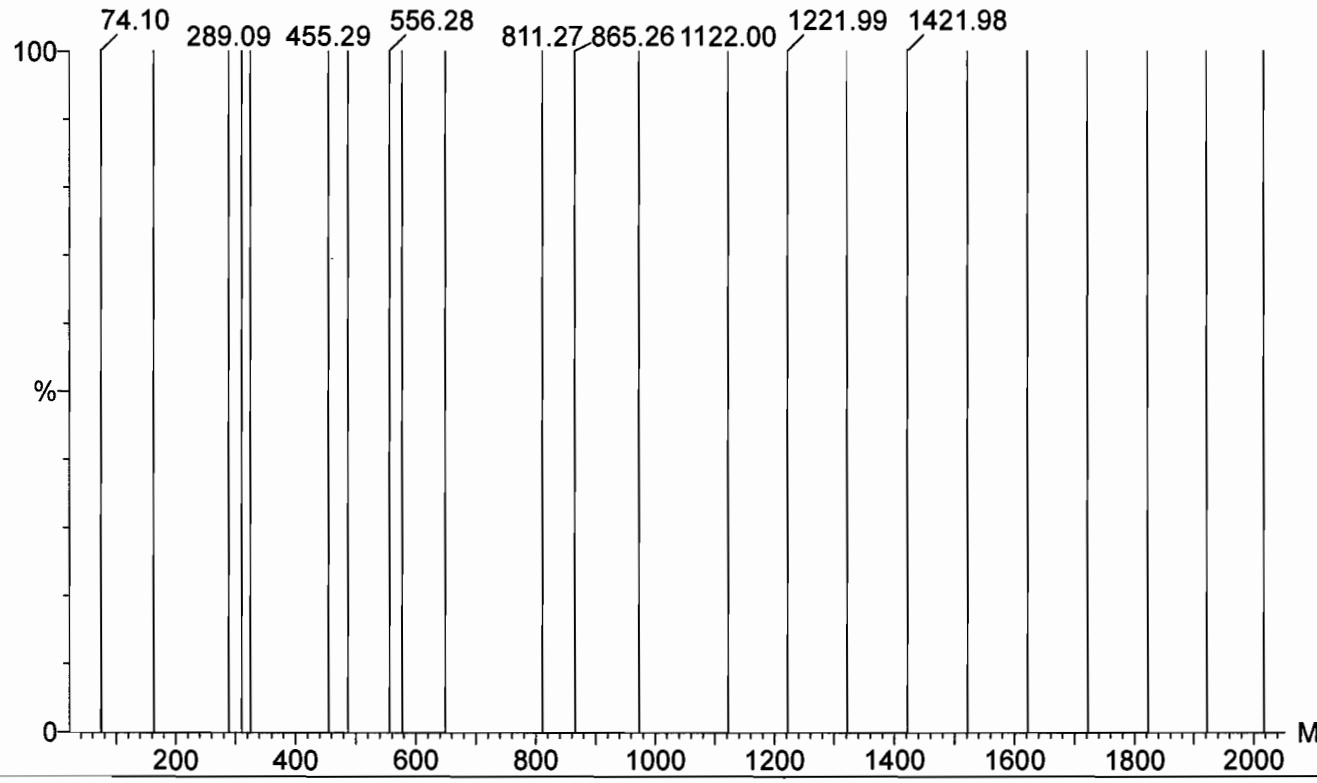


Printed: **Fri Jul 12 10:10:08 2019**

Data file: SCNMS2V - Calibrated 23 matches of 23 tested references

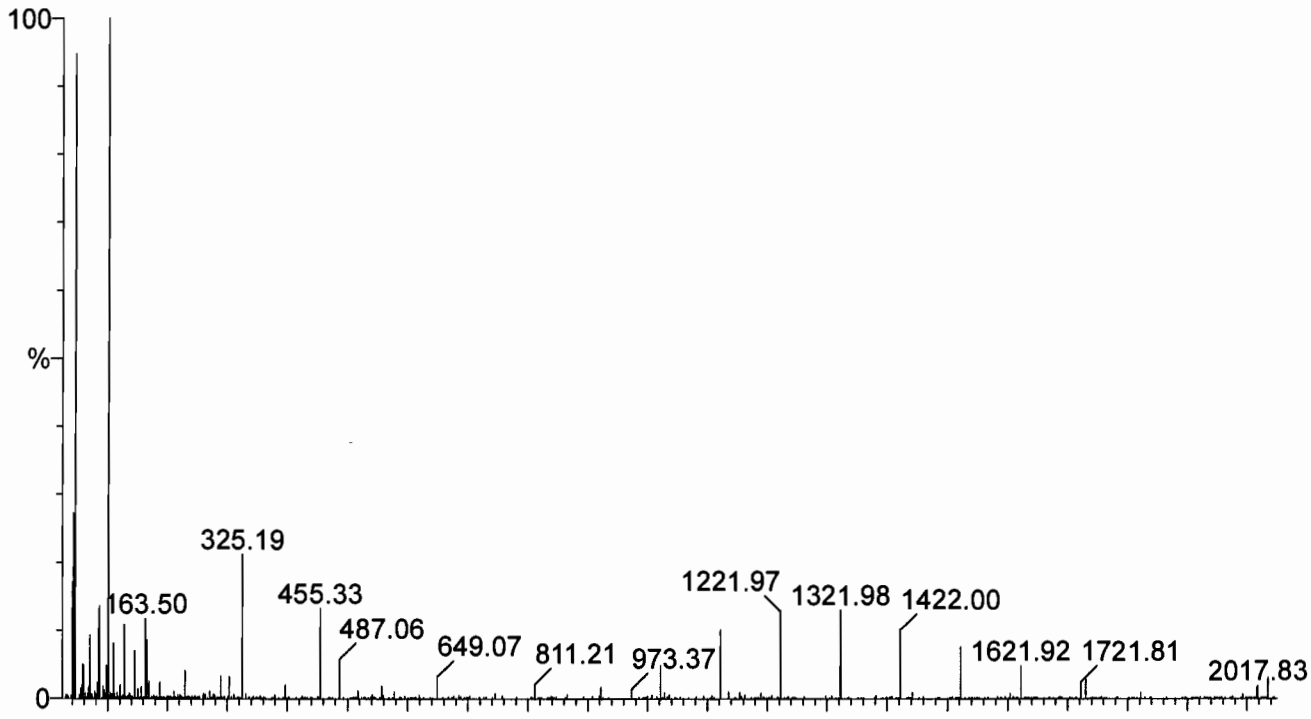


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.078 amu

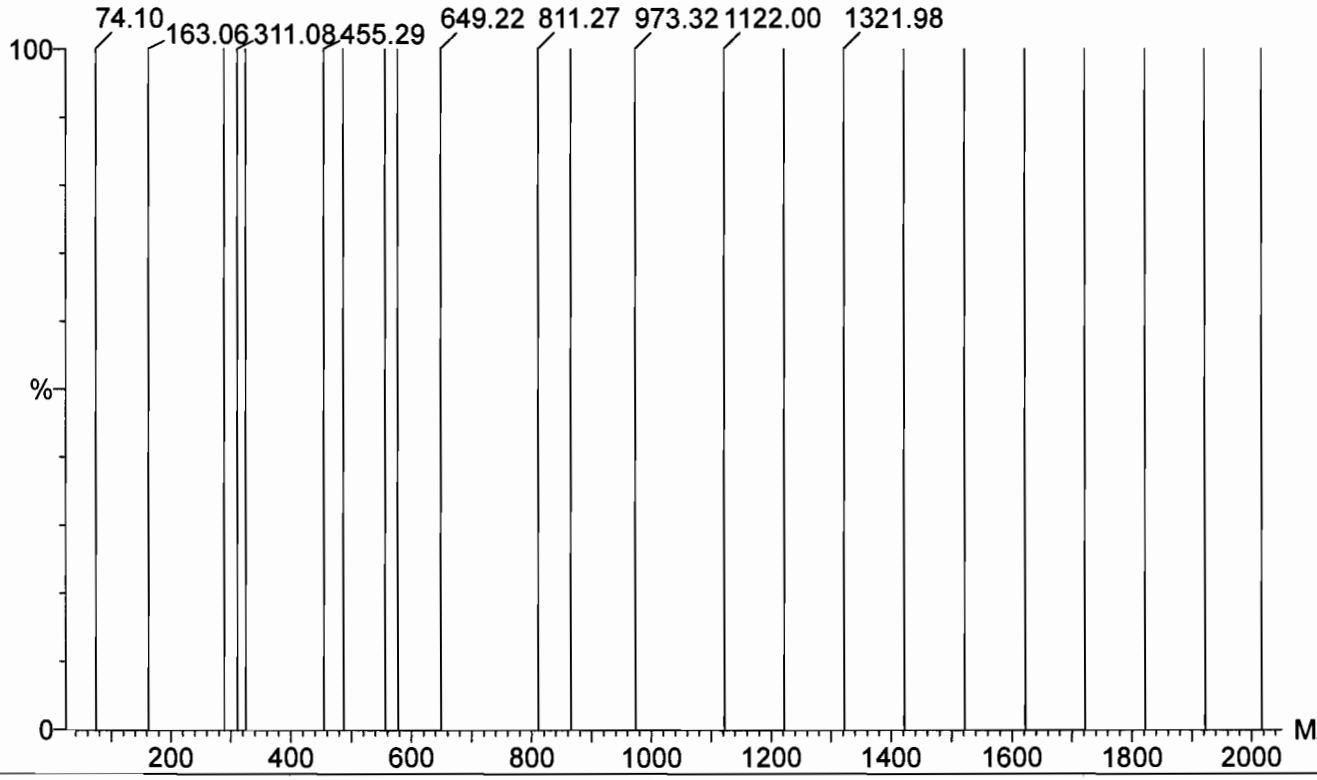


Printed: **Fri Jul 12 10:11:34 2019**

Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.123 amu



Q4(M) 07-16-19

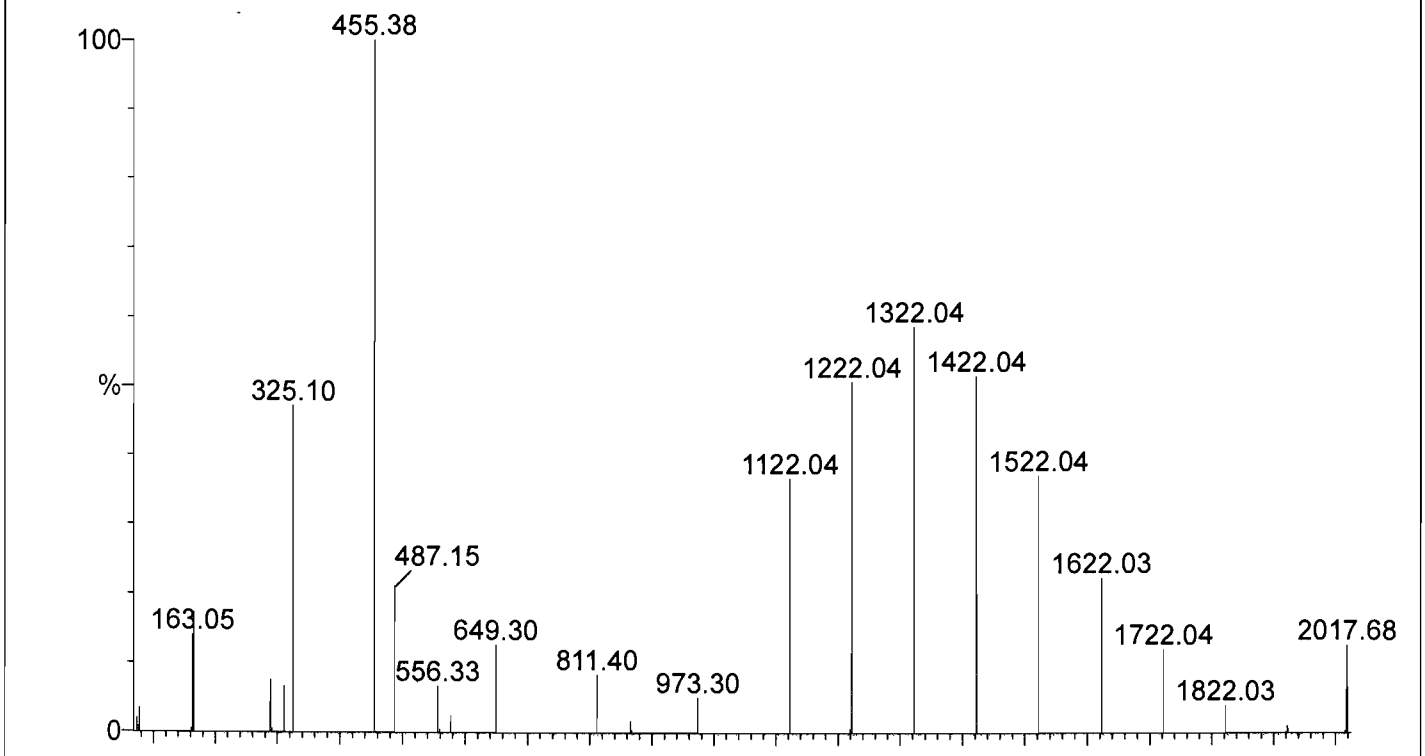
07/15/19 CG 7/16/19

Calibration Verification Report - MS1 Static

Printed: **Tue Jul 16 08:50:38 2019**

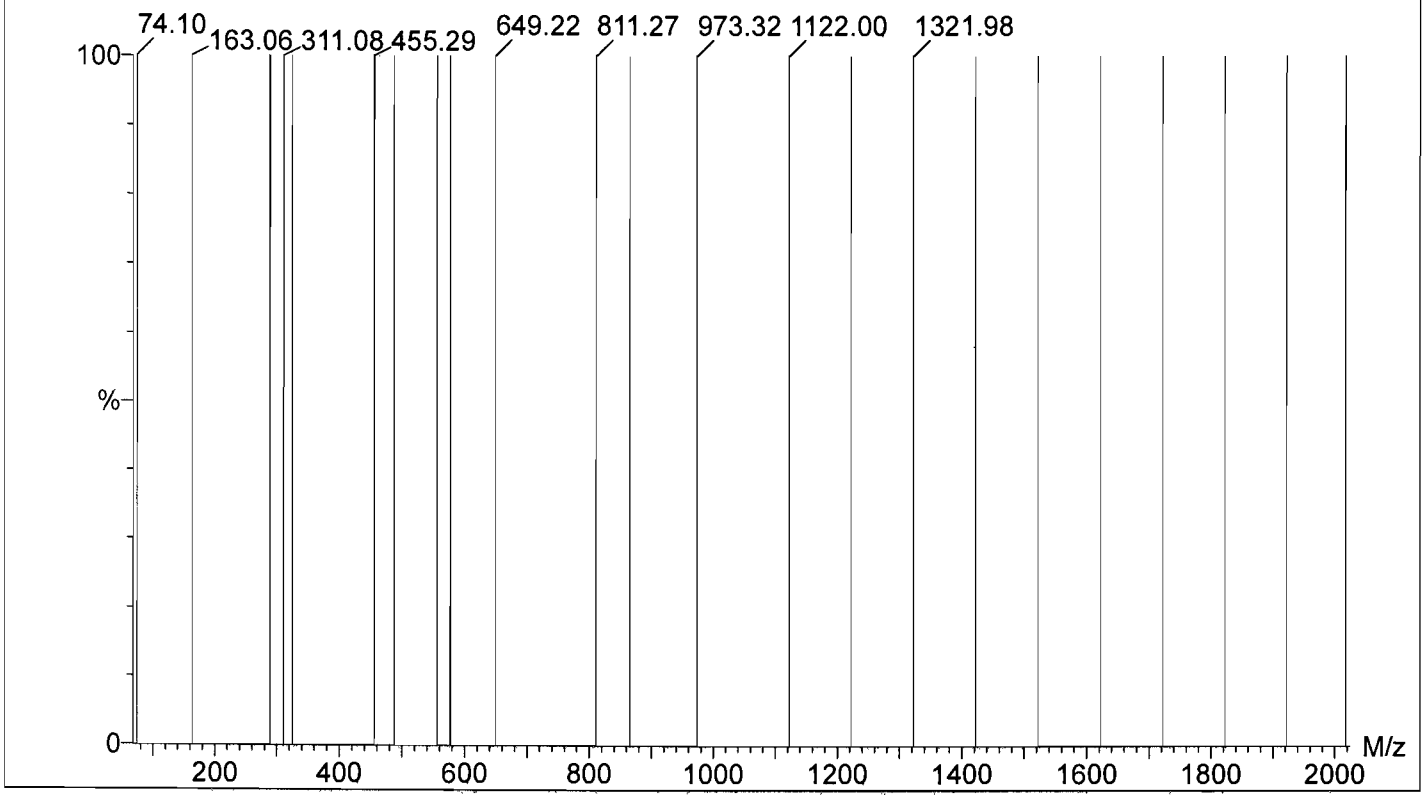
Data file: STATMS1V - Calibrated

23 matches of 23 tested references

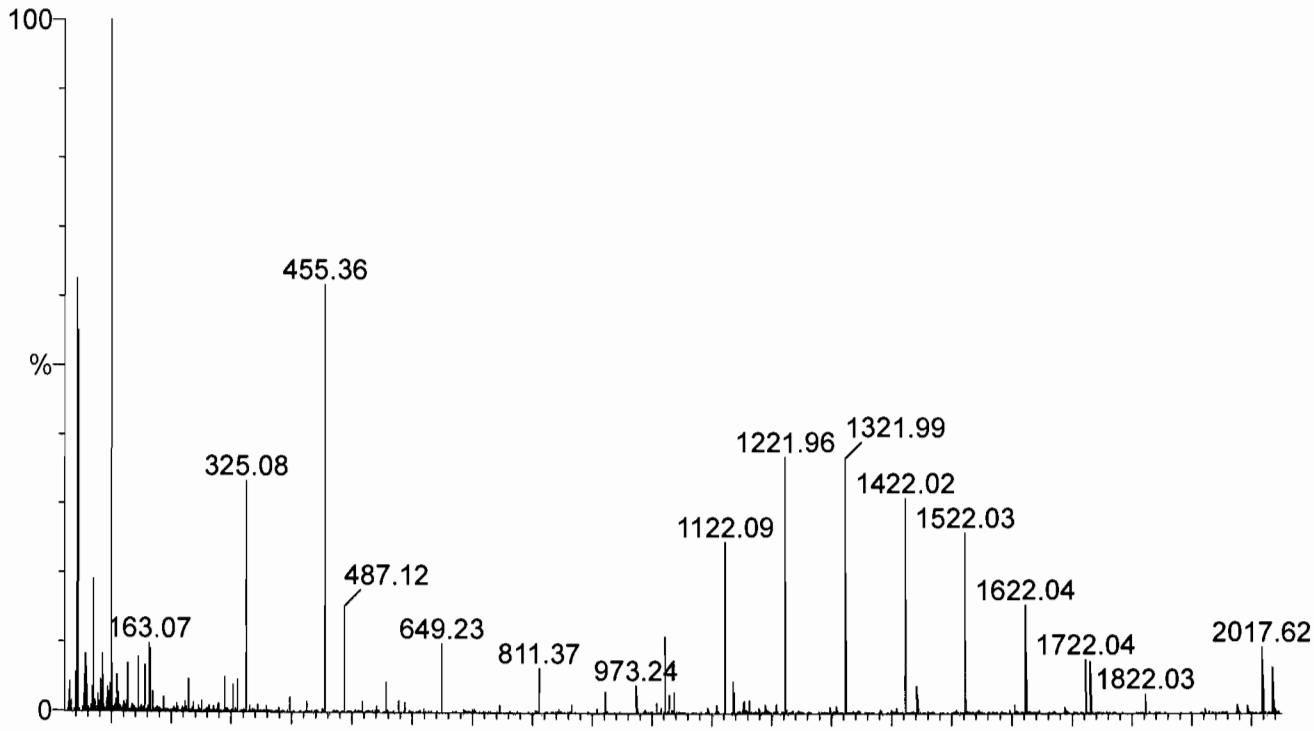


Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref

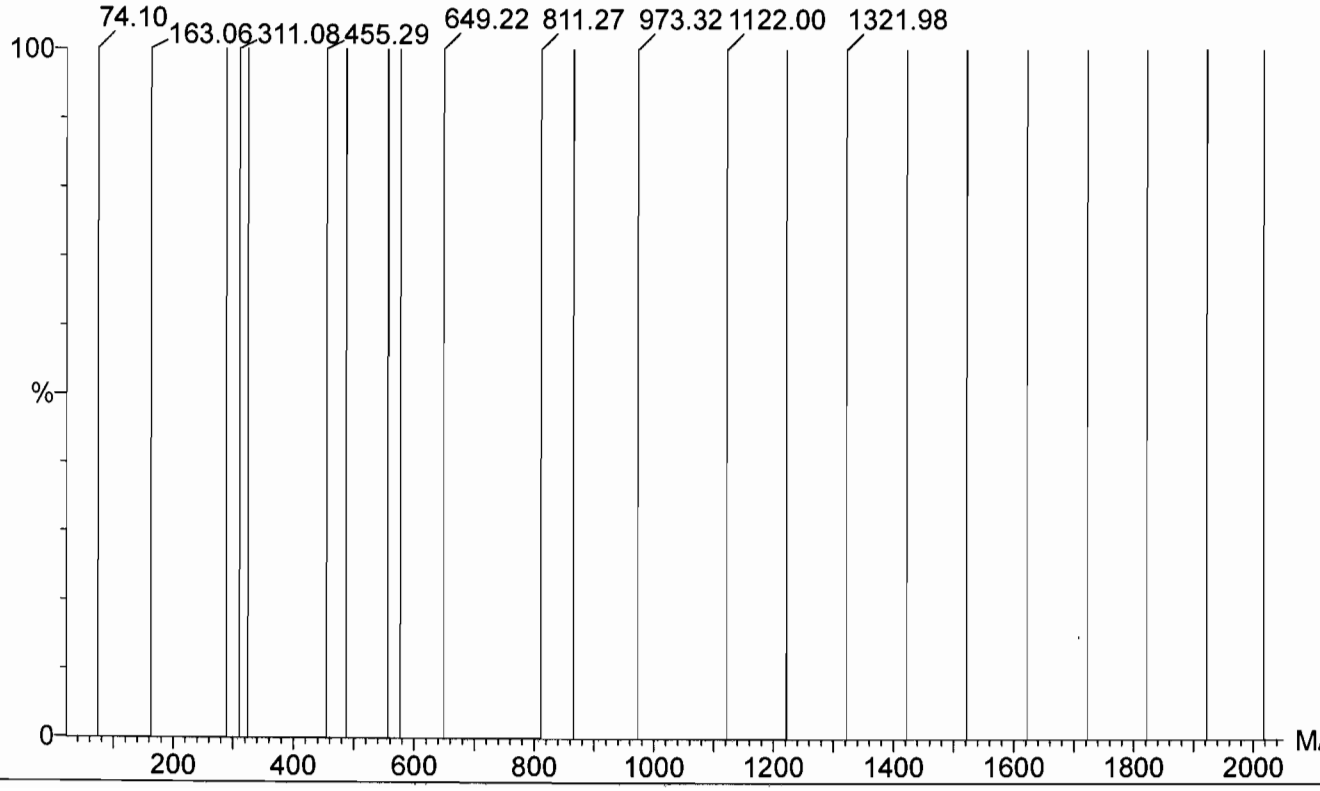
Mean residual = 0.0542 amu



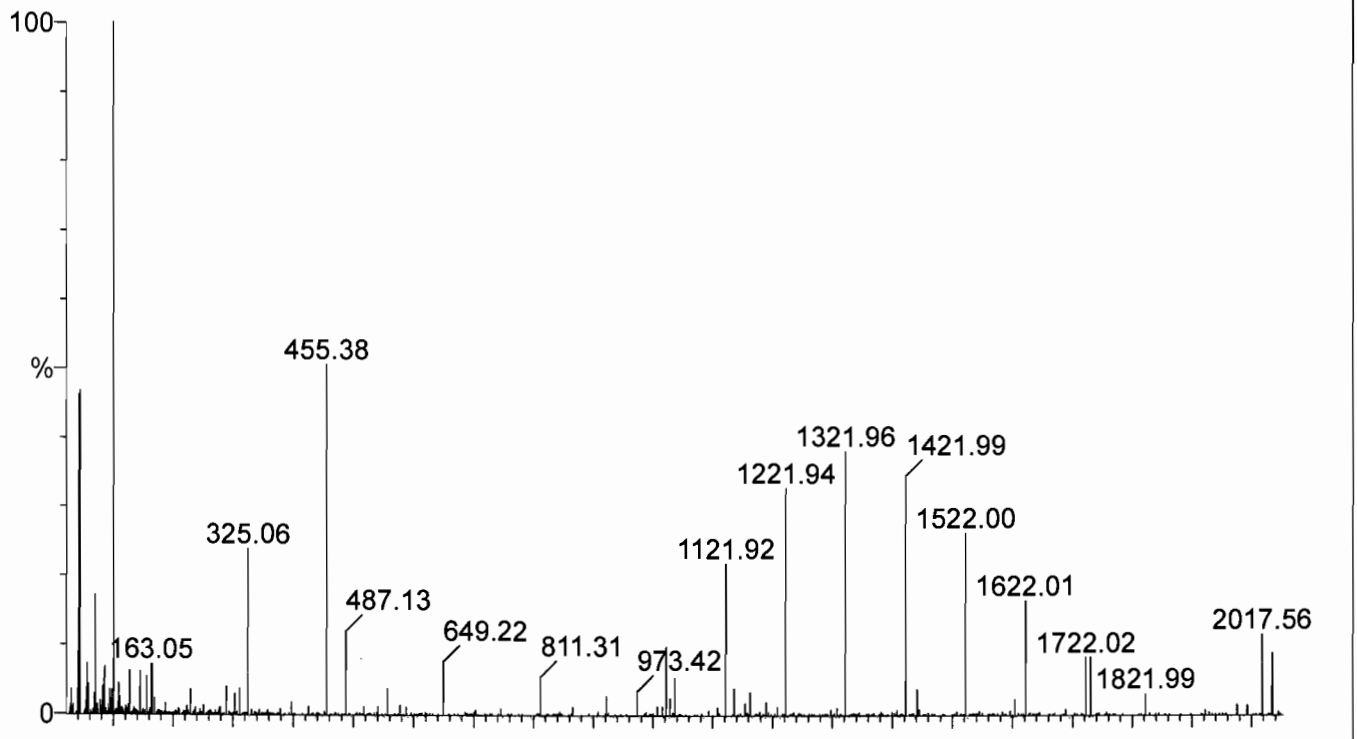
Data file: SCNMS1V - Calibrated 23 matches of 23 tested references



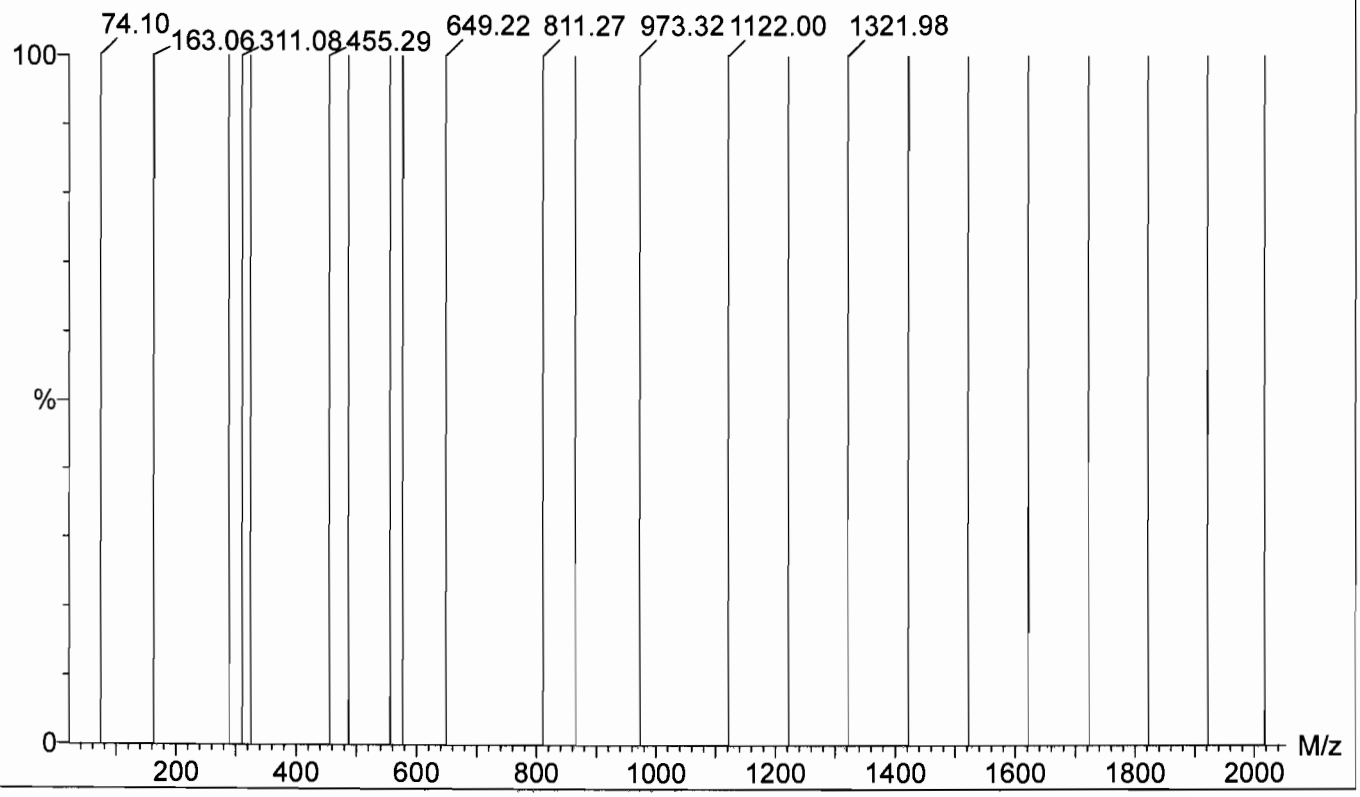
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0488 amu



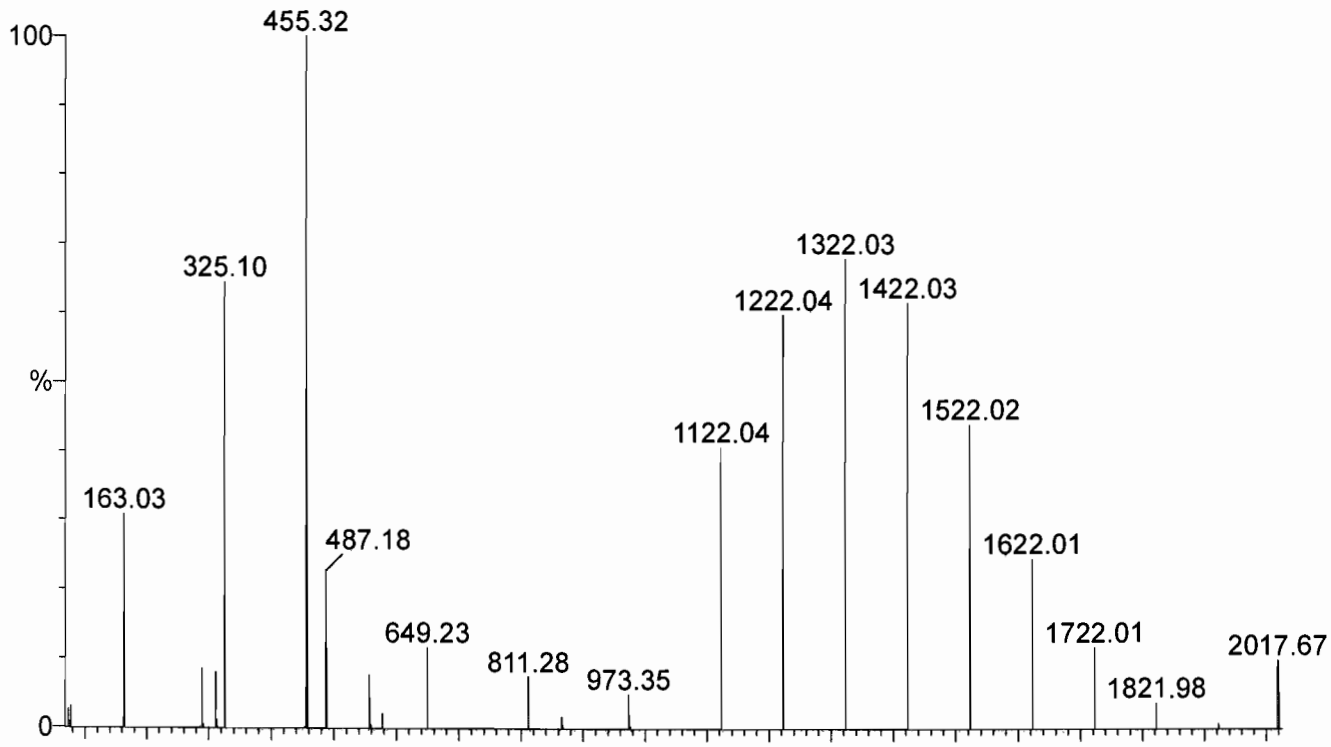
Data file: FASTMS1V - Calibrated 23 matches of 23 tested references



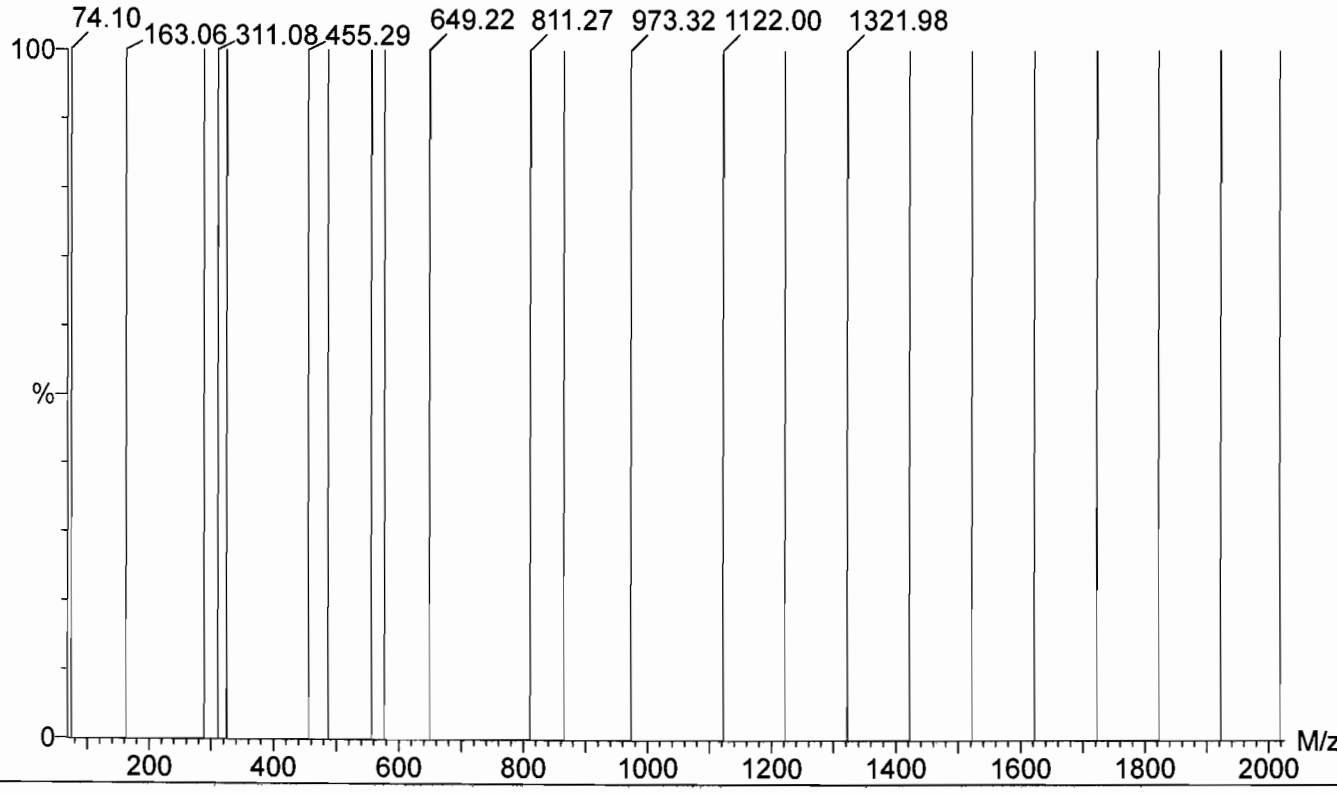
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0414 amu



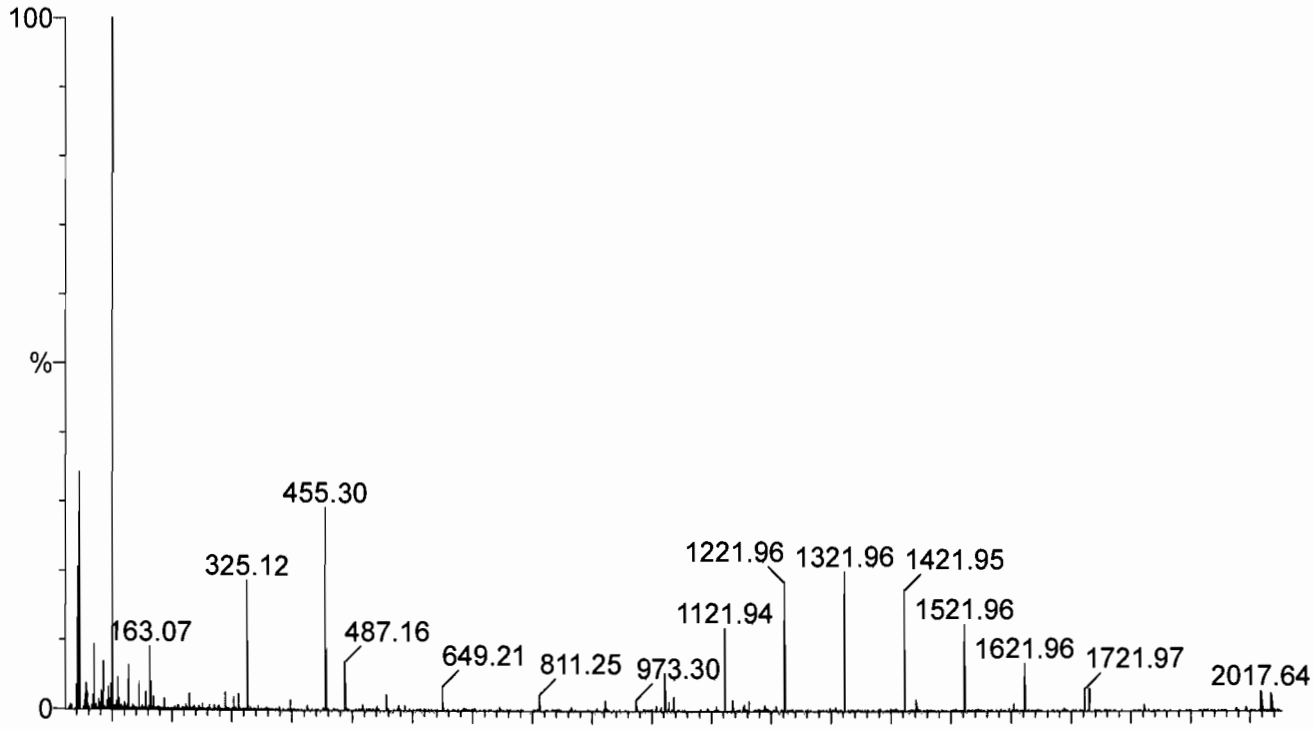
Data file: STATMS2V - Calibrated 23 matches of 23 tested references



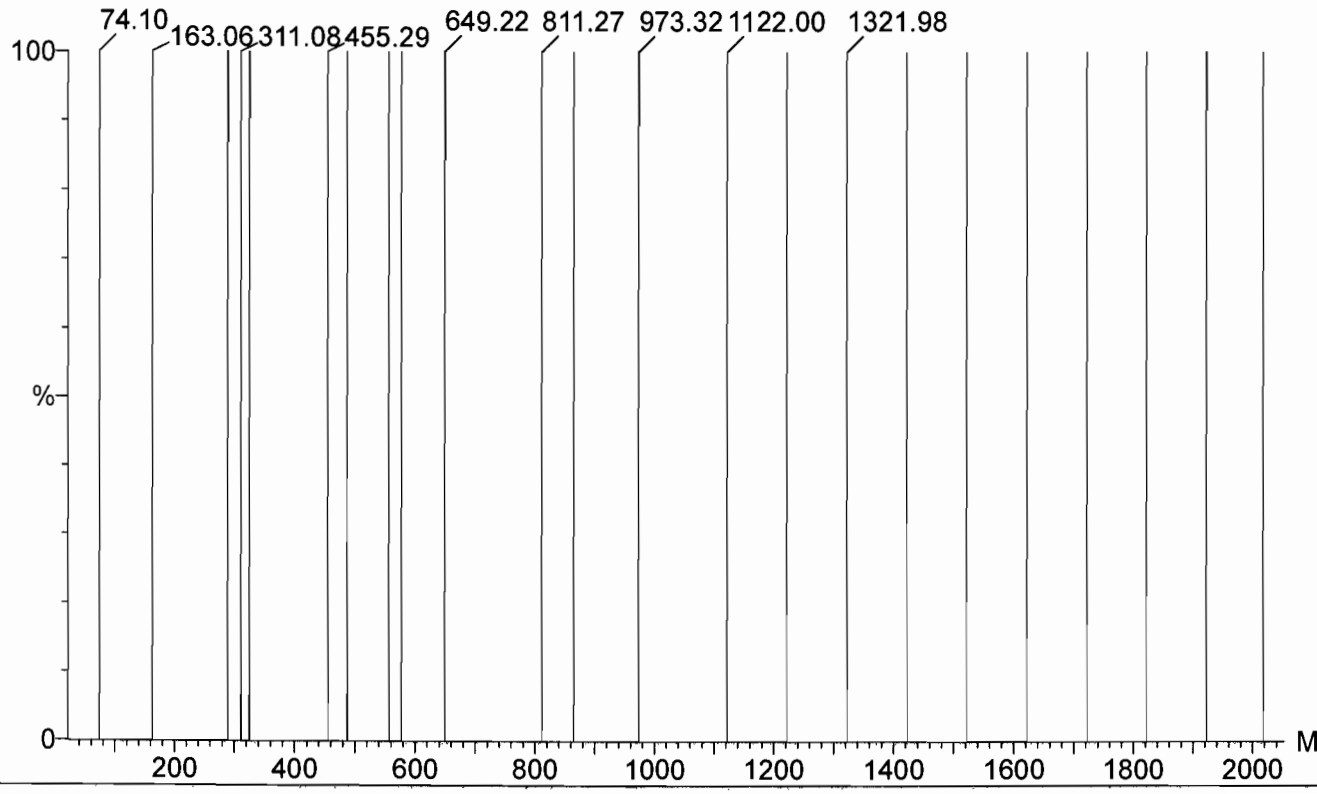
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0324 amu



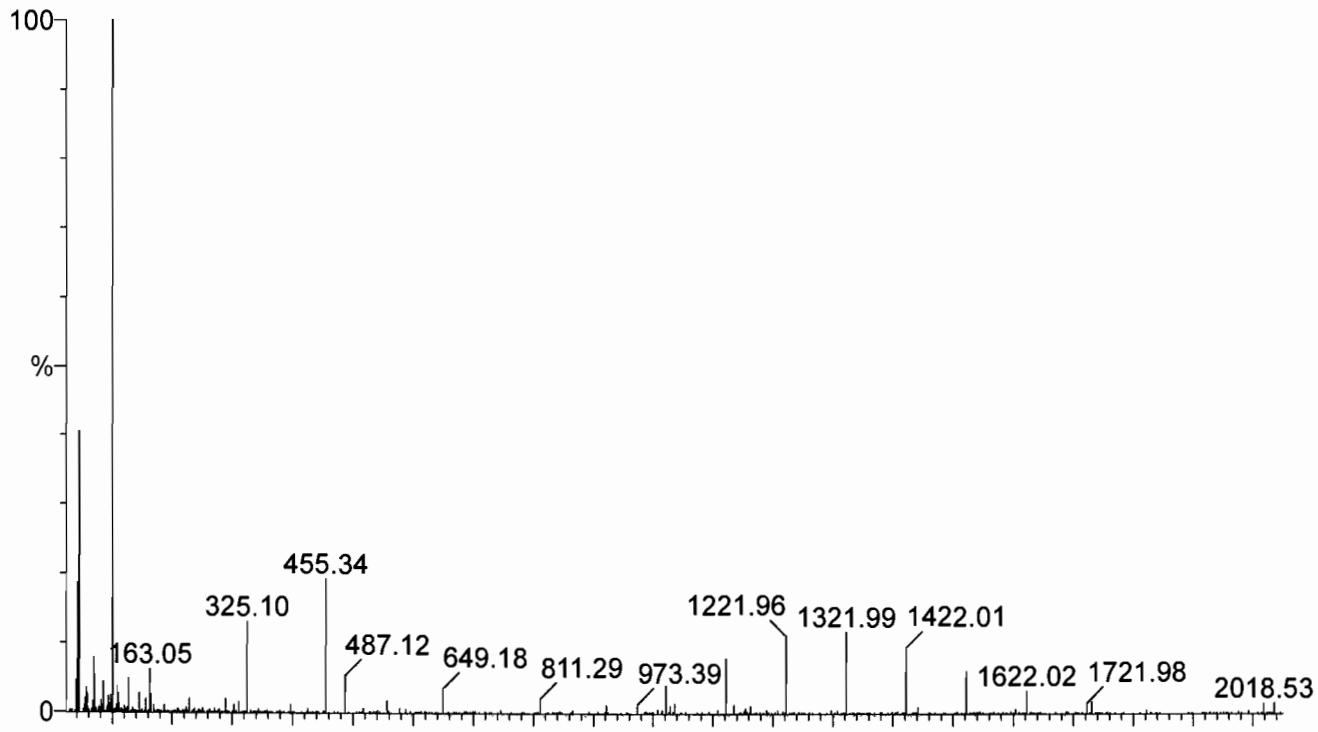
Data file: SCNMS2V - Calibrated 23 matches of 23 tested references



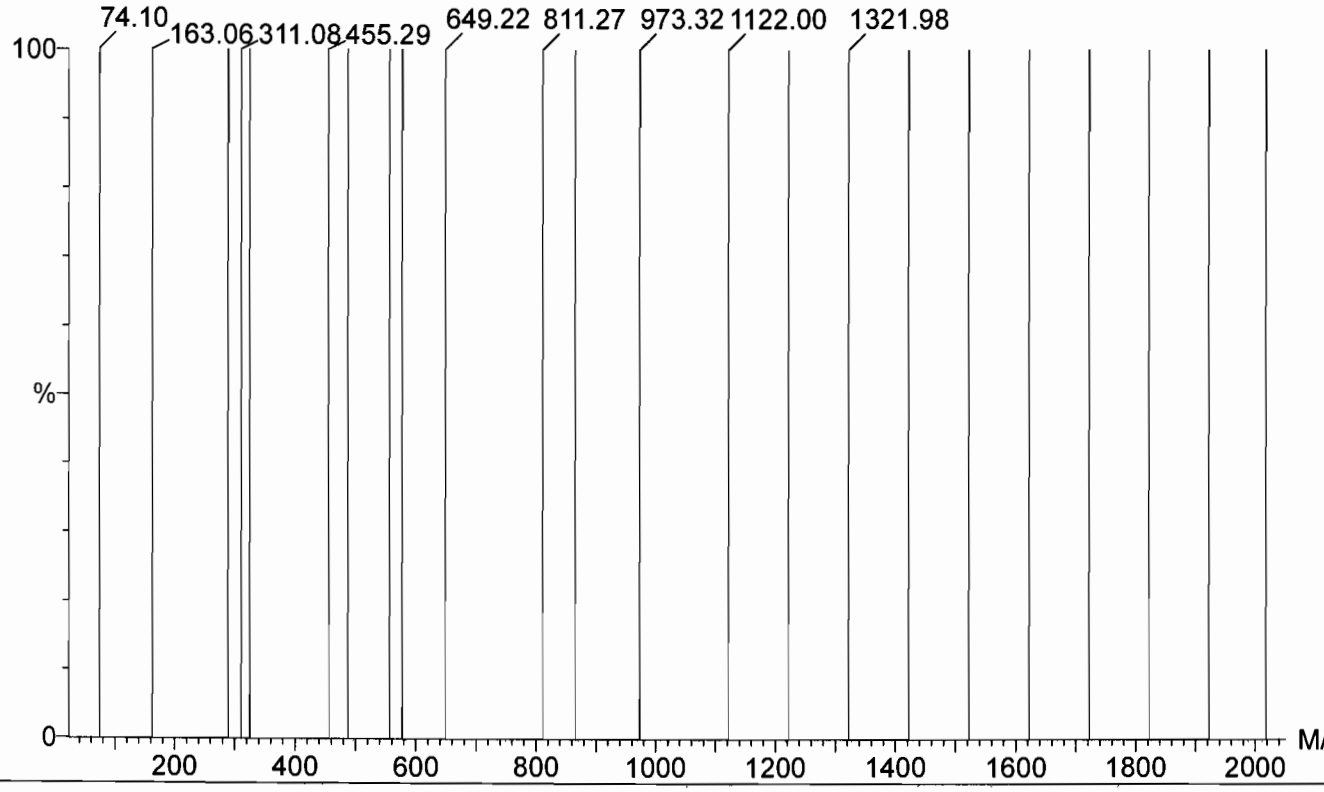
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0359 amu



Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0725 amu

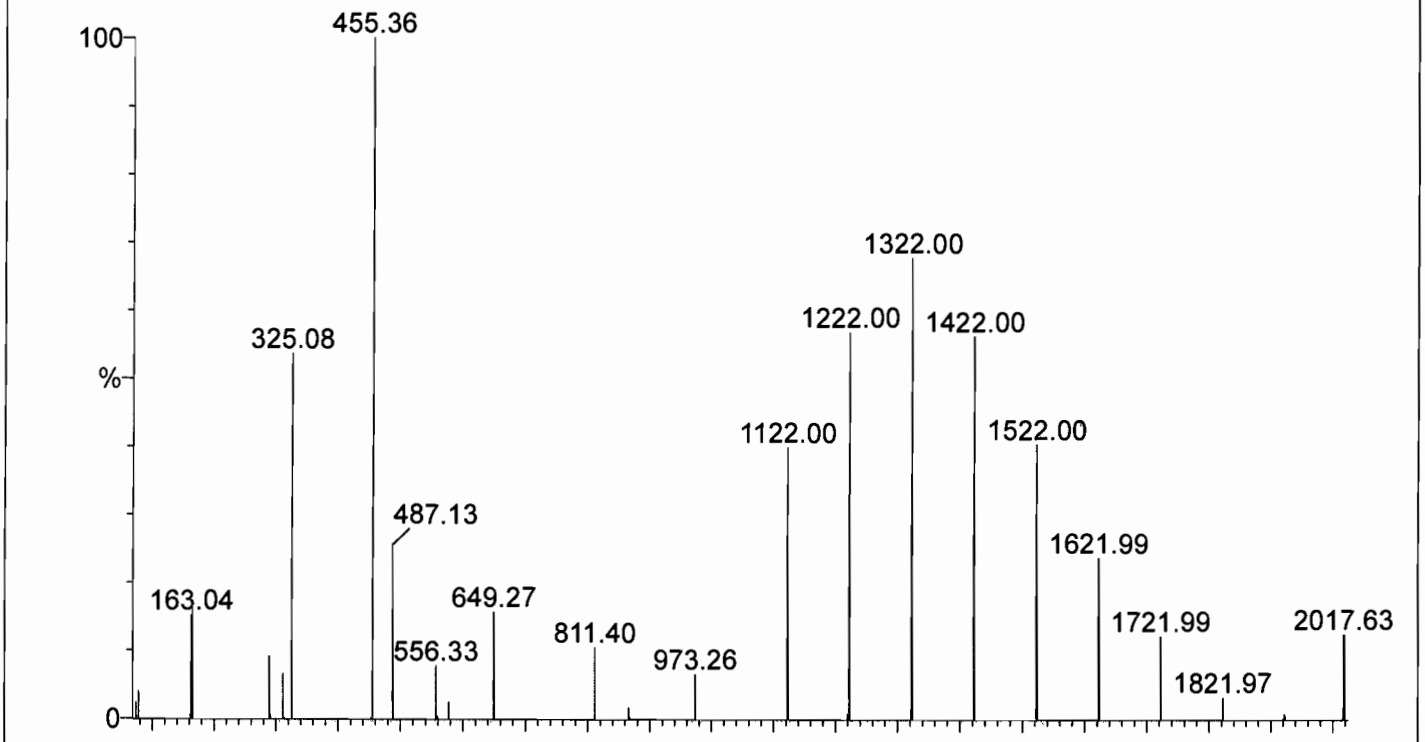


Q4(M) 07-18-19

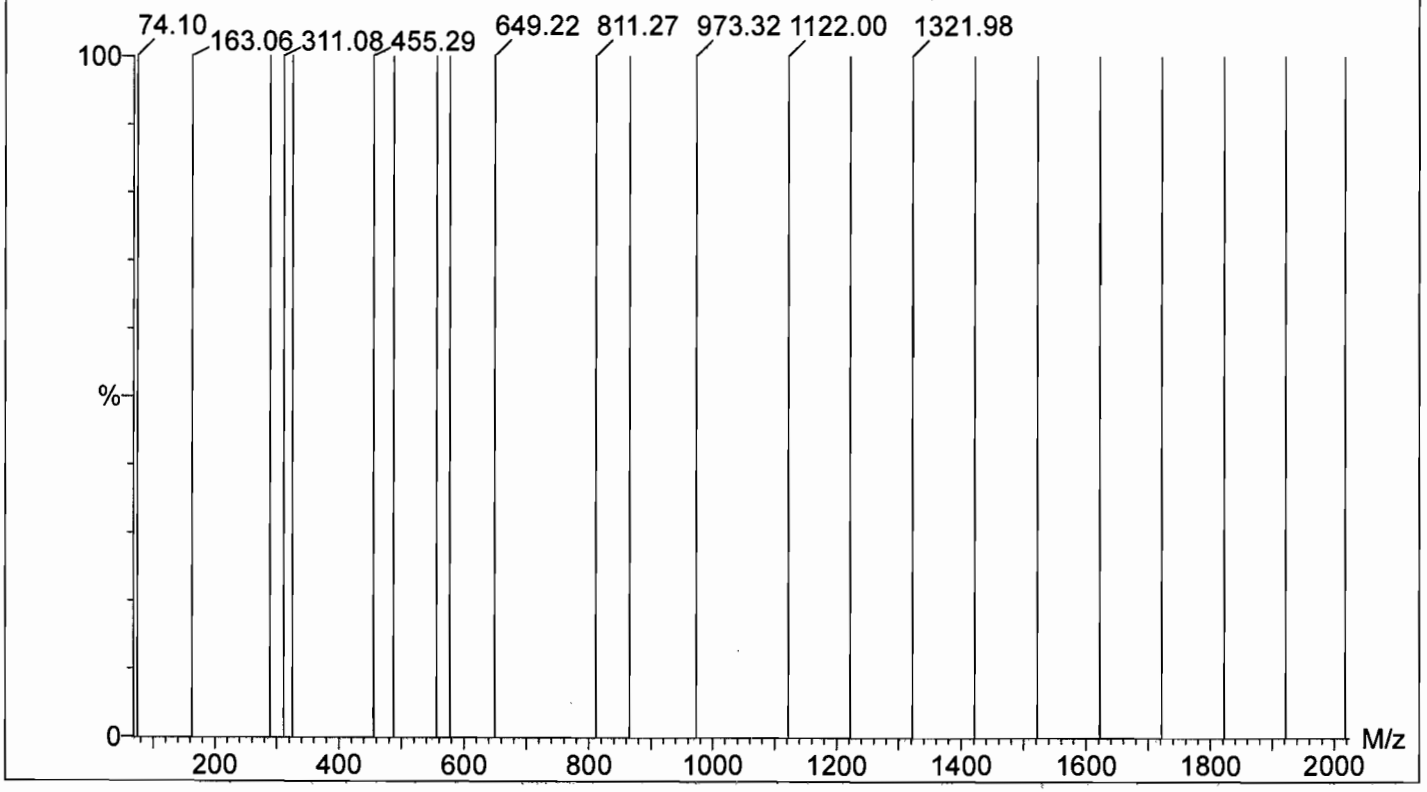
Calibration Verification Report - MS1 Static 07/15/19 Calk 7/15/19 **Page 1 of 6**

Printed: **Thu Jul 18 07:44:19 2019**

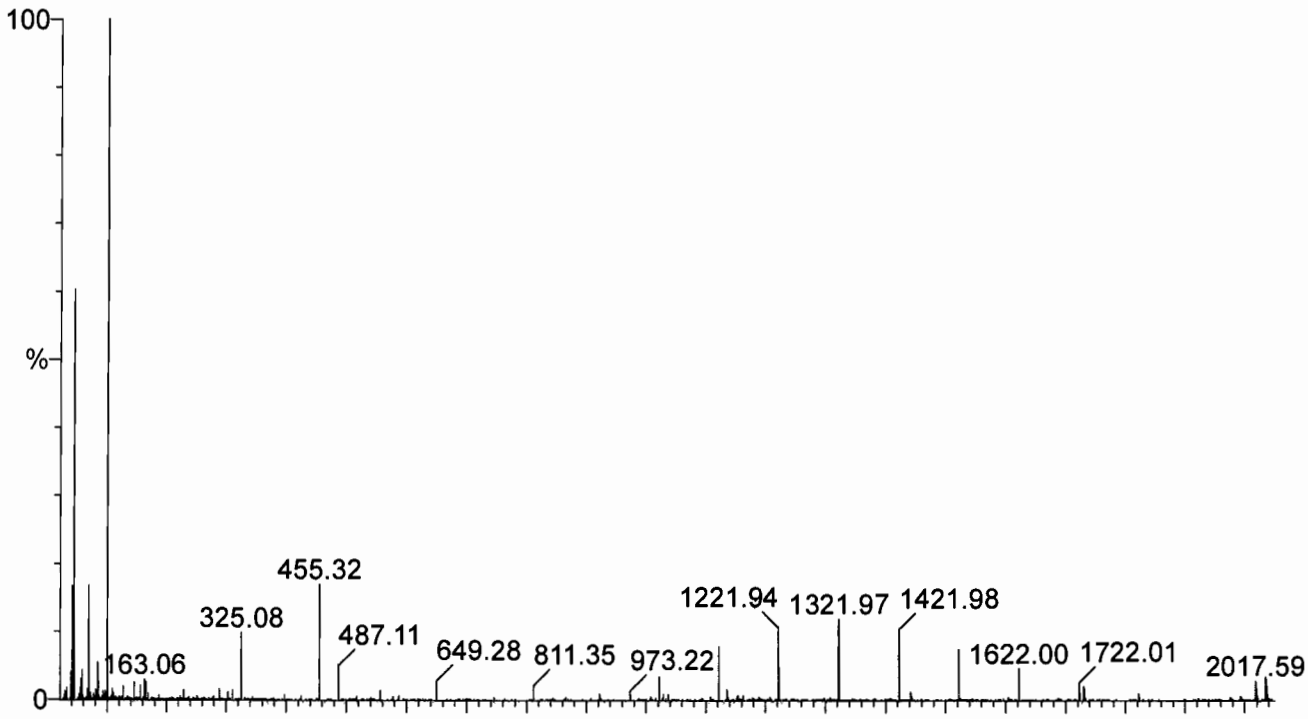
Data file: STATMS1V - Calibrated 23 matches of 23 tested references



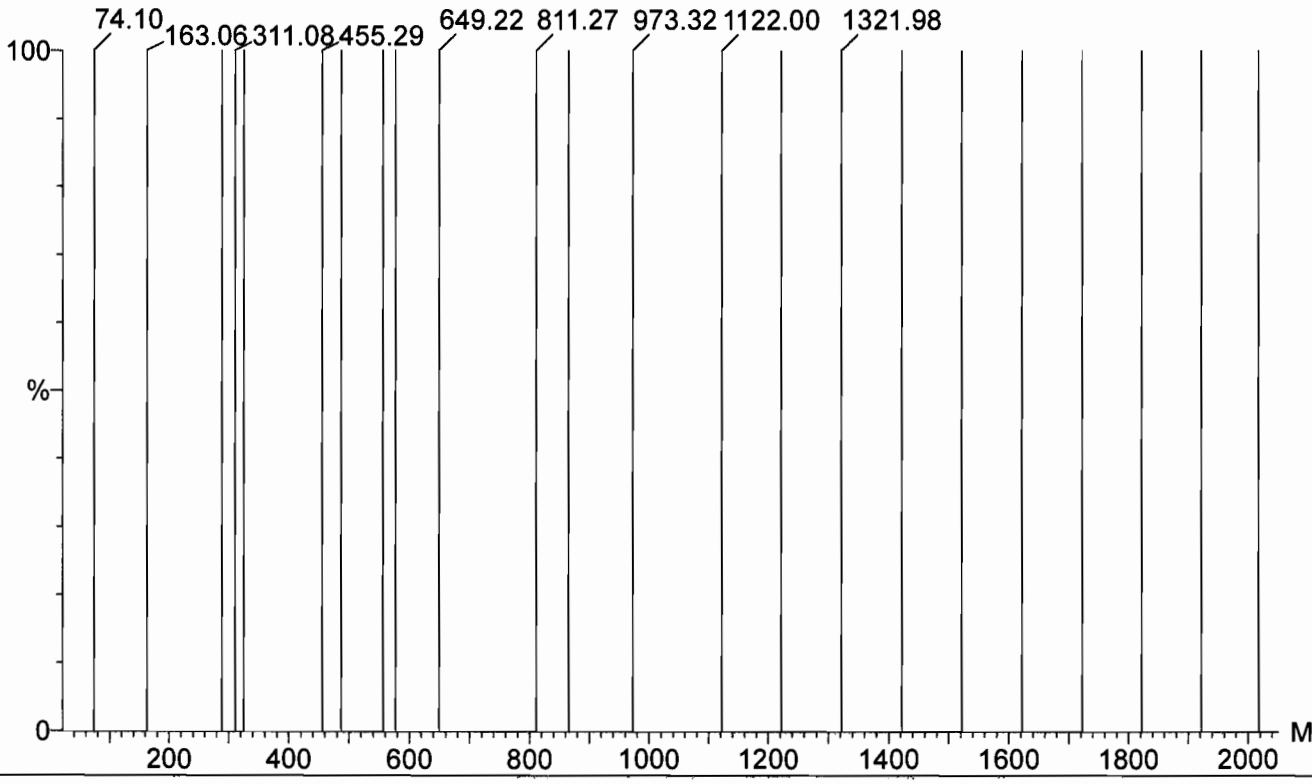
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0378 amu



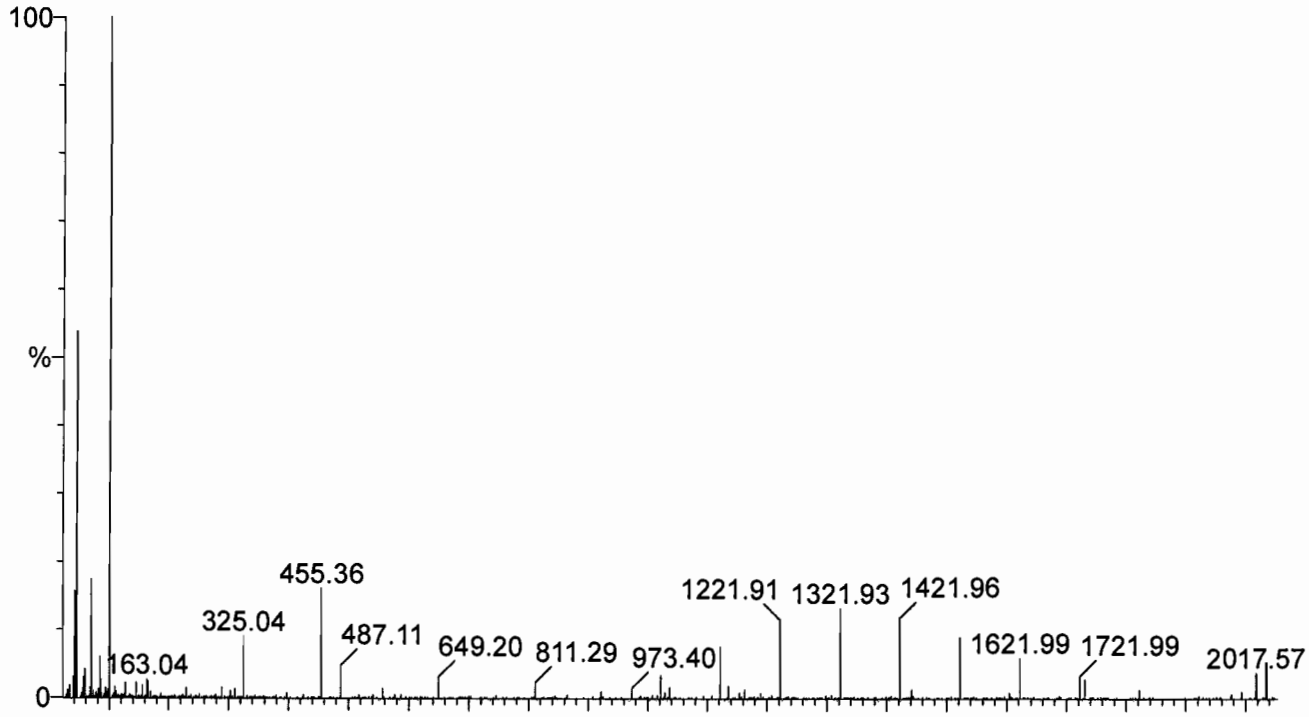
Data file: SCNMS1V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.035 amu



Data file: FASTMS1V - Calibrated 23 matches of 23 tested references



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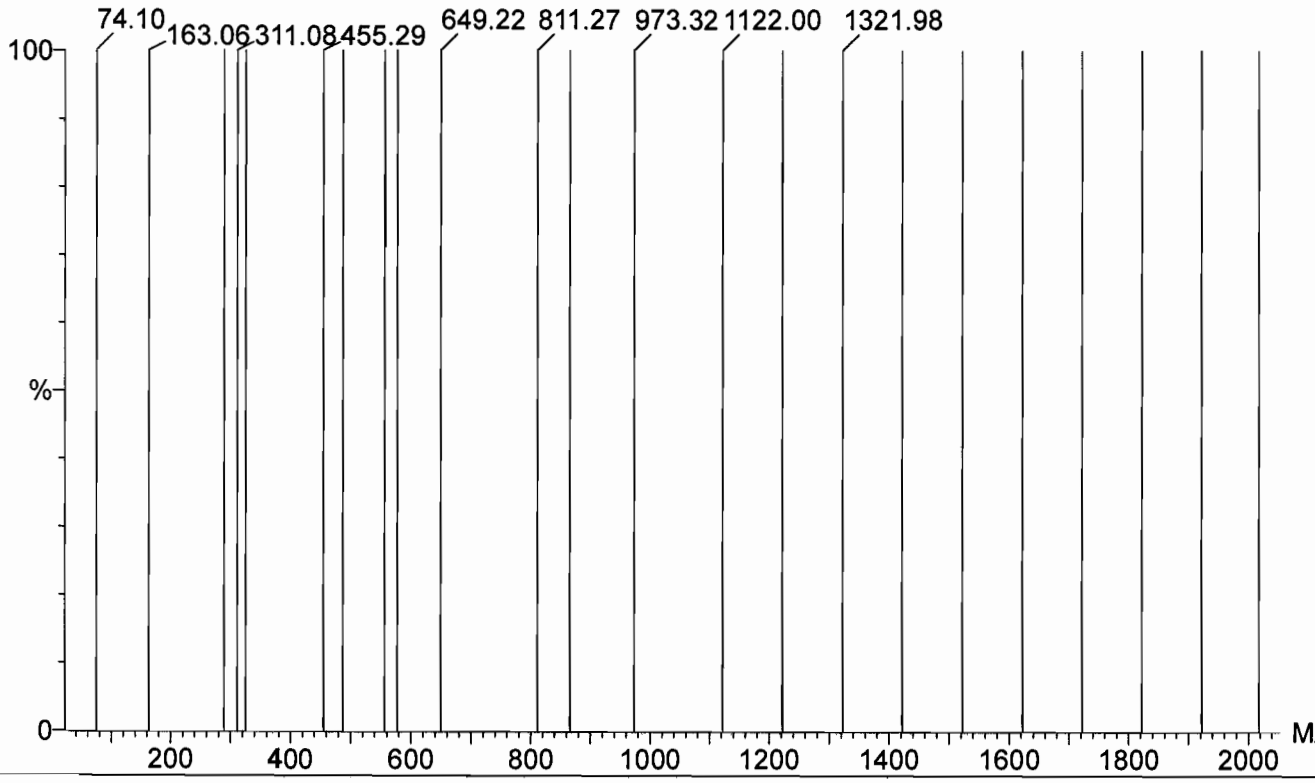
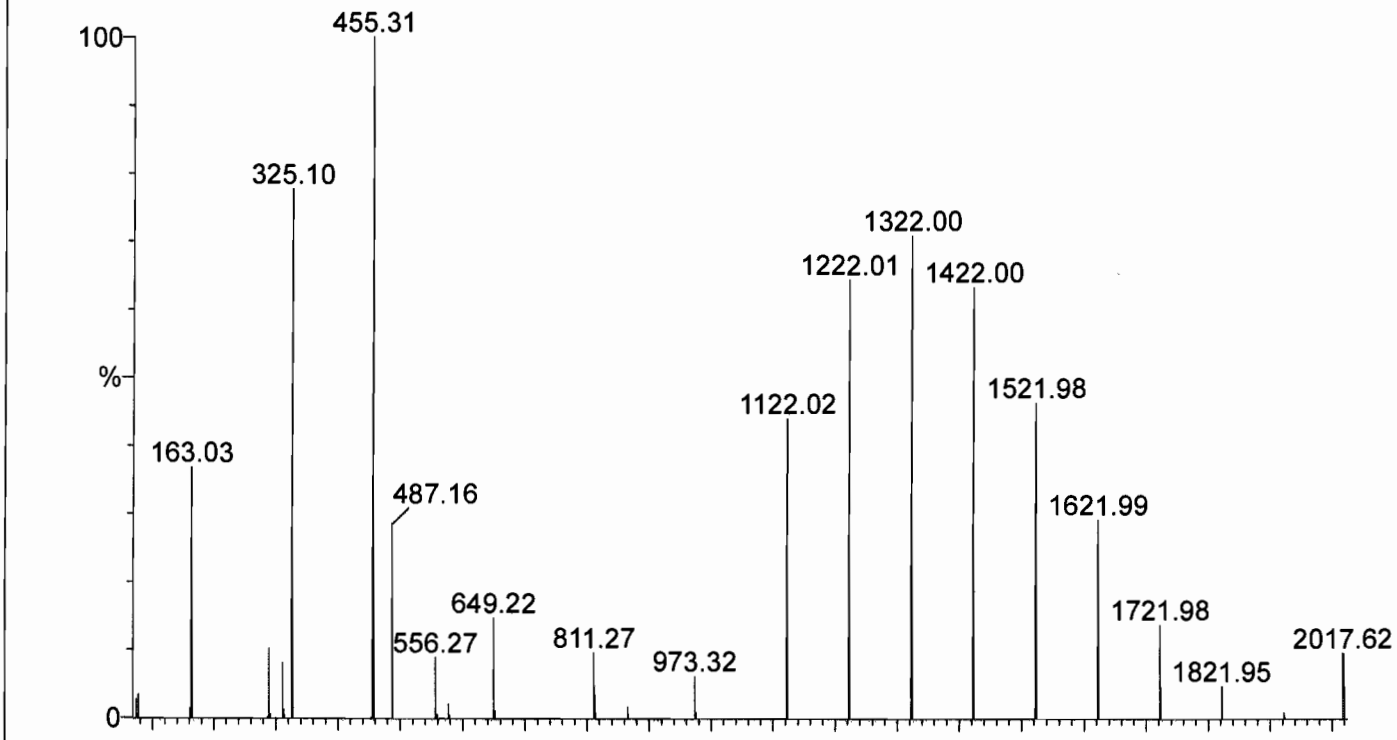
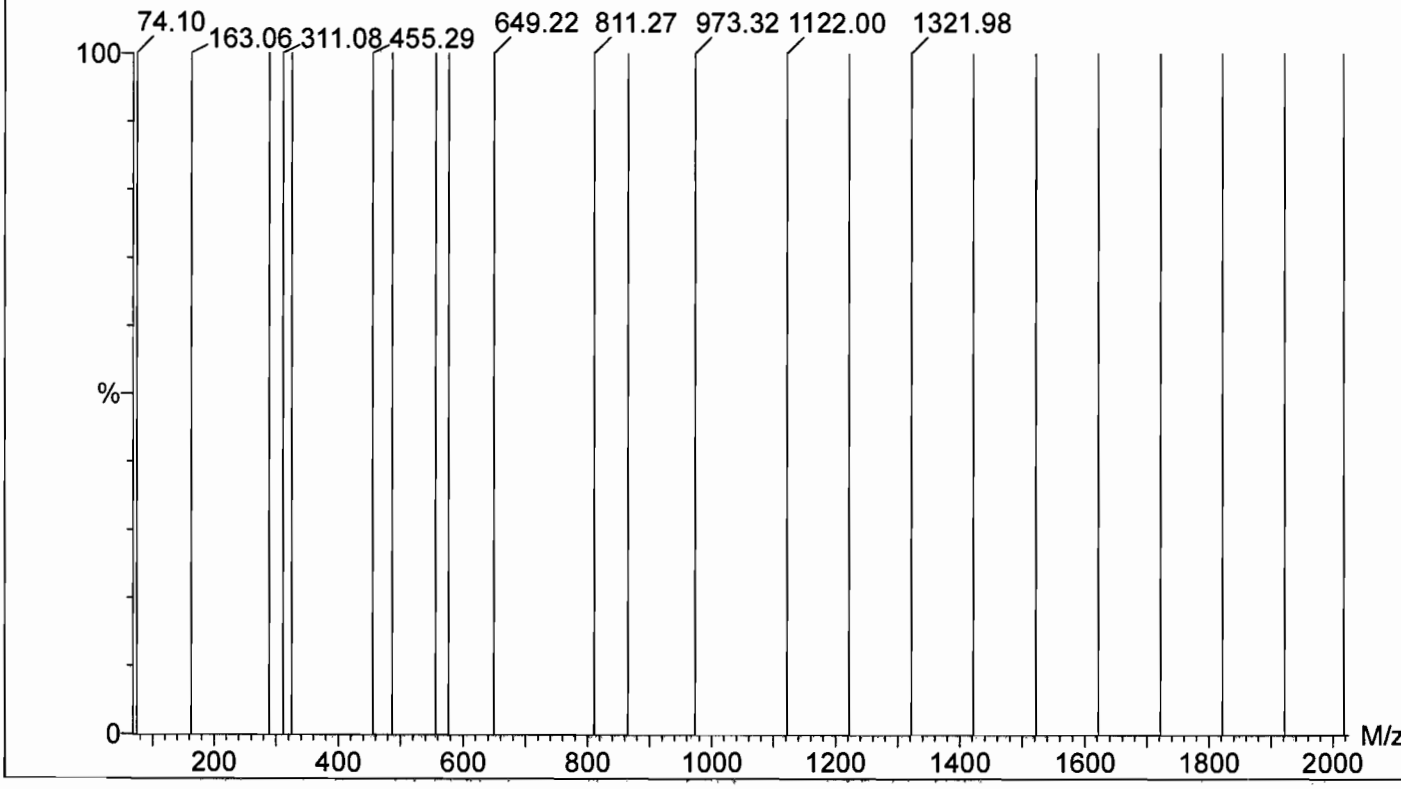


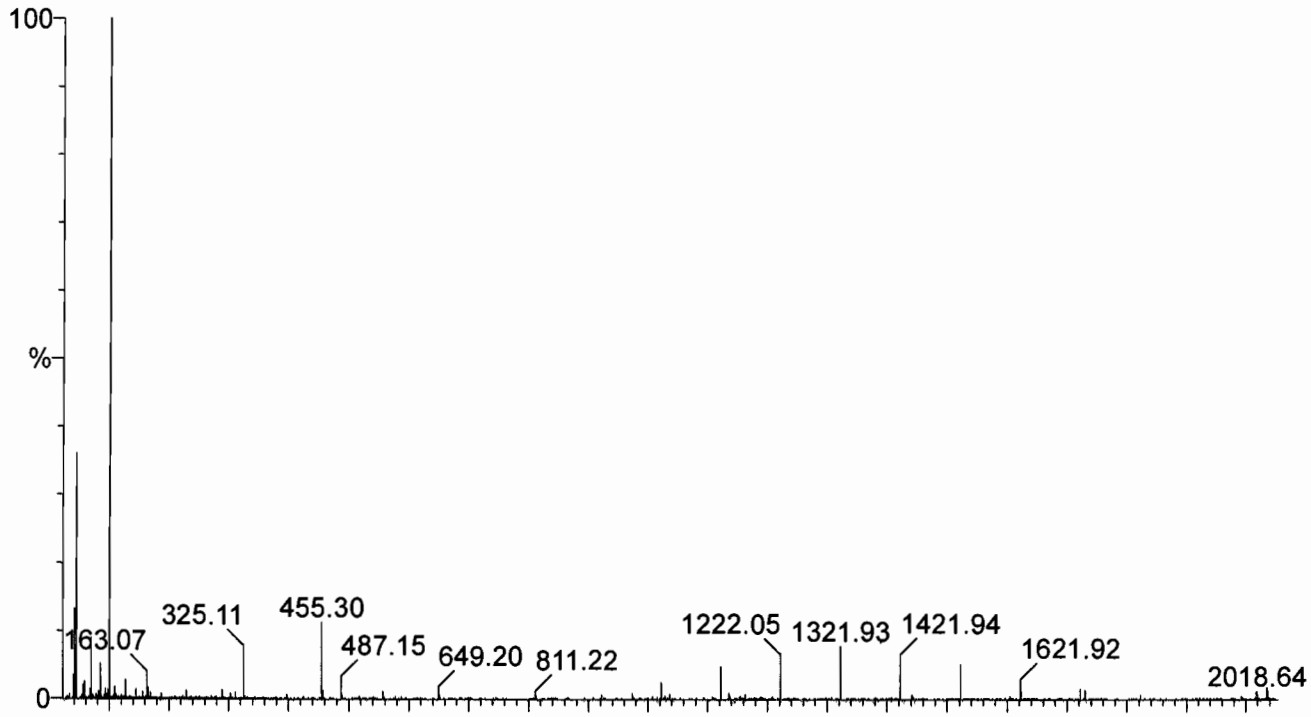
Data file: STATMS2V - Calibrated 23 matches of 23 tested references



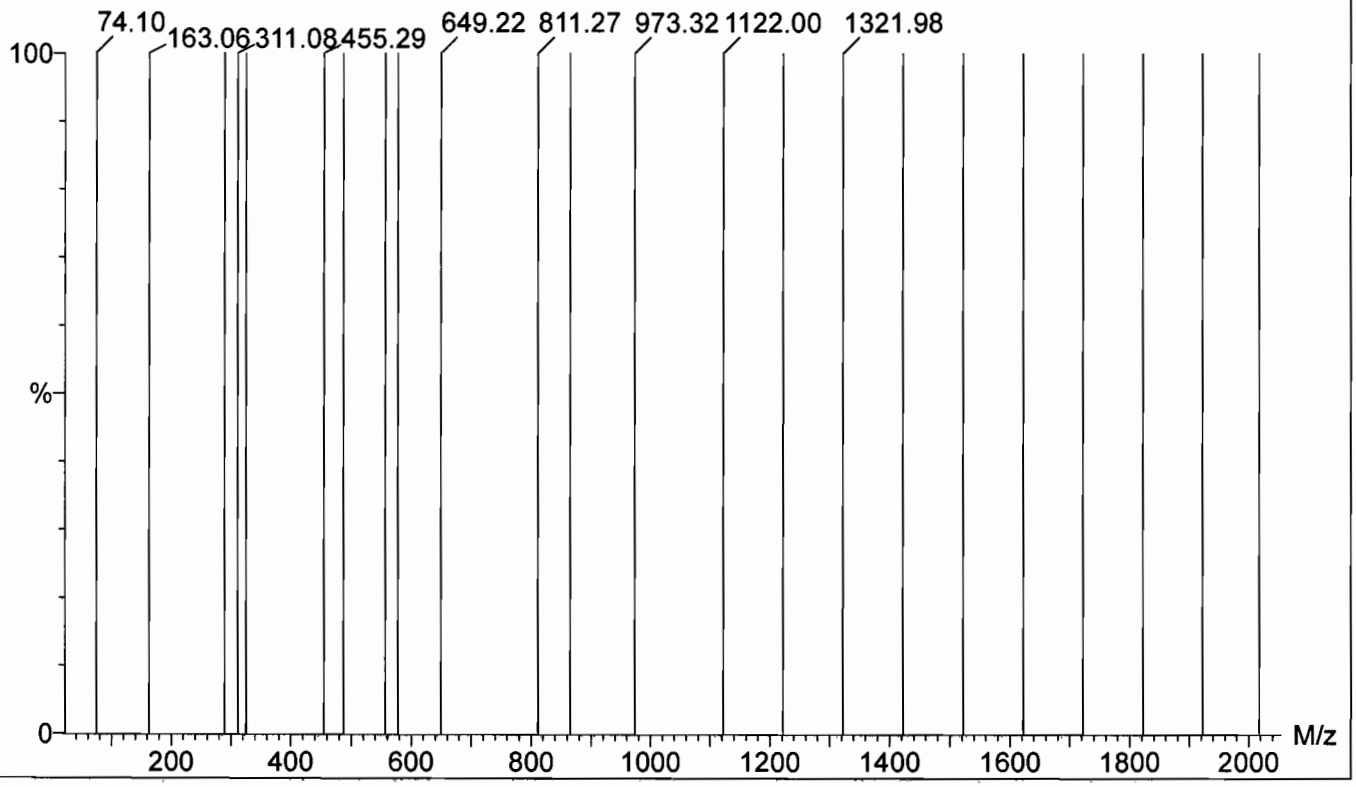
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0185 amu



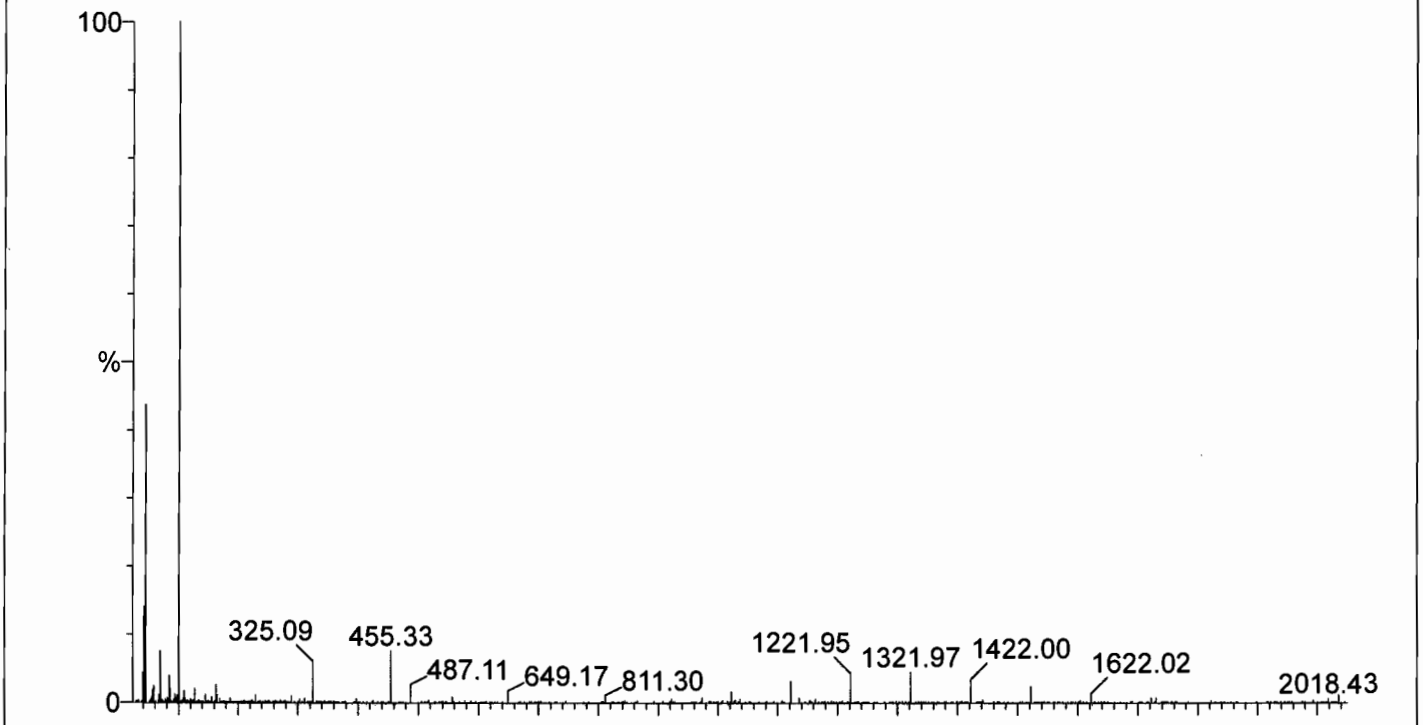
Data file: SCNMS2V - Calibrated 23 matches of 23 tested references



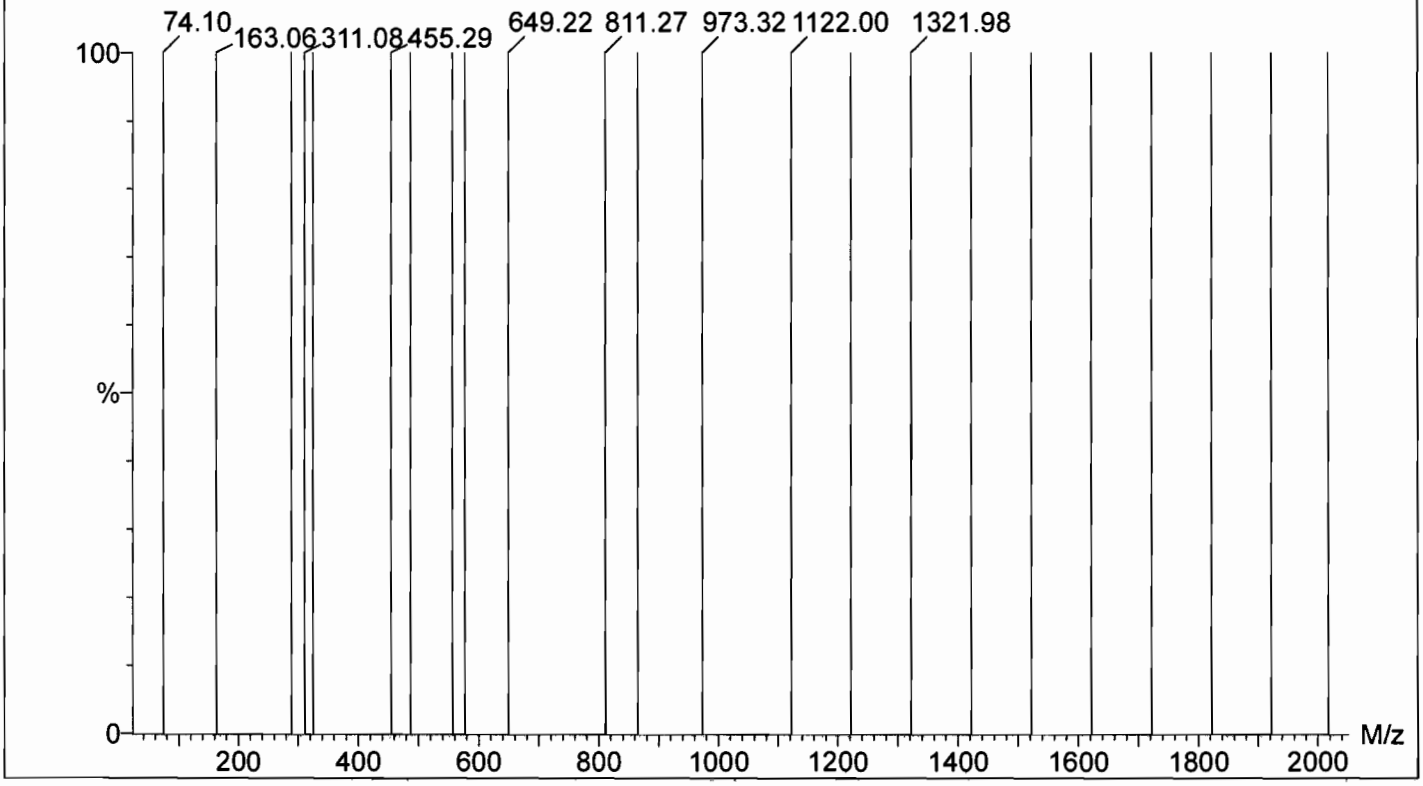
Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.102 amu



Data file: FASTMS2V - Calibrated 23 matches of 23 tested references



Reference: c:\masslynx\ref\ESI Calibration TQ ResCal.ref Mean residual = 0.0739 amu



STANDARDS

Analytical Standard Record

Vista Analytical Laboratory

19E2201

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	(mls)
18L2001	13C2-4:2 FTS	20-Dec-18	** Vendor **	01-Sep-22	1.07
18L2002	13C2-6:2 FTS	20-Dec-18	** Vendor **	22-Nov-23	1.05
18L2003	13C2-8:2 FTS	20-Dec-18	** Vendor **	24-Jan-23	1.04
18L2004	13C3-PFBA	20-Dec-18	** Vendor **	14-Dec-22	1
18L2005	13C2-PFDA	20-Dec-18	** Vendor **	06-Dec-23	1
18L2006	13C2-PFUdA	20-Dec-18	** Vendor **	11-May-23	1
18L2007	13C2-PFTeDA	20-Dec-18	** Vendor **	30-Nov-22	1
18L2008	13C5-PFNA	20-Dec-18	** Vendor **	14-Dec-22	1
18L2009	13C2-PFDoA	20-Dec-18	** Vendor **	16-Feb-23	1
18L2010	13C4-PFHpA	20-Dec-18	** Vendor **	06-Jul-23	1
18L2011	13C2-PFOA	20-Dec-18	** Vendor **	10-Oct-23	1
18L2012	13C3-PFPeA	20-Dec-18	** Vendor **	20-Apr-22	1
18L2013	13C8-FOSA-I	20-Dec-18	** Vendor **	10-Oct-23	1
18L2014	d3-N-Me-FOSAA	20-Dec-18	** Vendor **	23-Aug-23	1
18L2015	d5-N-EtFOSAA	20-Dec-18	** Vendor **	23-Aug-23	1
18L2016	13C3-PFBS	20-Dec-18	** Vendor **	10-Dec-23	1.075
18L2017	13C8-PFOS	20-Dec-18	** Vendor **	20-Sep-23	1.045
18L2019	13C2-PFHxA	20-Dec-18	** Vendor **	22-May-23	0.4
18L2020	13C2-PFHxDA	20-Dec-18	** Vendor **	11-Oct-23	0.4
18L2027	13C3-PFHxS	20-Dec-18	** Vendor **	20-Jun-23	1.06
18L2077	13C3-HFPO-DA	20-Dec-18	** Vendor **	24-Oct-21	1

Description:	PFC - IS	Expires:	28-May-21
Standard Type:	Reagent	Prepared:	28-May-19
Solvent:	MeOH	Prepared By:	Giana R. Bilotta
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	28-May-19 09:02 by GRB

Analyte	CAS Number	Concentration	Units
13C3-PFBA		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		0.5	ug/mL
13C2-PFHxDA		0.5	ug/mL
13C2-PFOA		1.25	ug/mL
13C2-PFTeDA		1.25	ug/mL
13C2-4:2 FTS		1.25	ug/mL
13C3-HFPO-DA		1.25	ug/mL
d5-EtFOSAA		1.25	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

19E2201

Description:	PFC - IS	Expires:	28-May-21
Standard Type:	Reagent	Prepared:	28-May-19
Solvent:	MeOH	Prepared By:	Giana R. Bilotta
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	28-May-19 09:02 by GRB

Analyte	CAS Number	Concentration	Units
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-PFUnA		1.25	ug/mL

18L2001

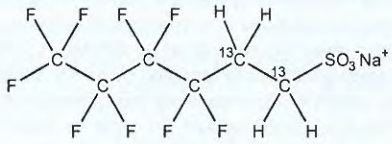
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-4:2FTS **LOT NUMBER:** M242FTS0817

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)	09/01/2017		
EXPIRY DATE: (mm/dd/yyyy)	09/01/2022		
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.
- 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).

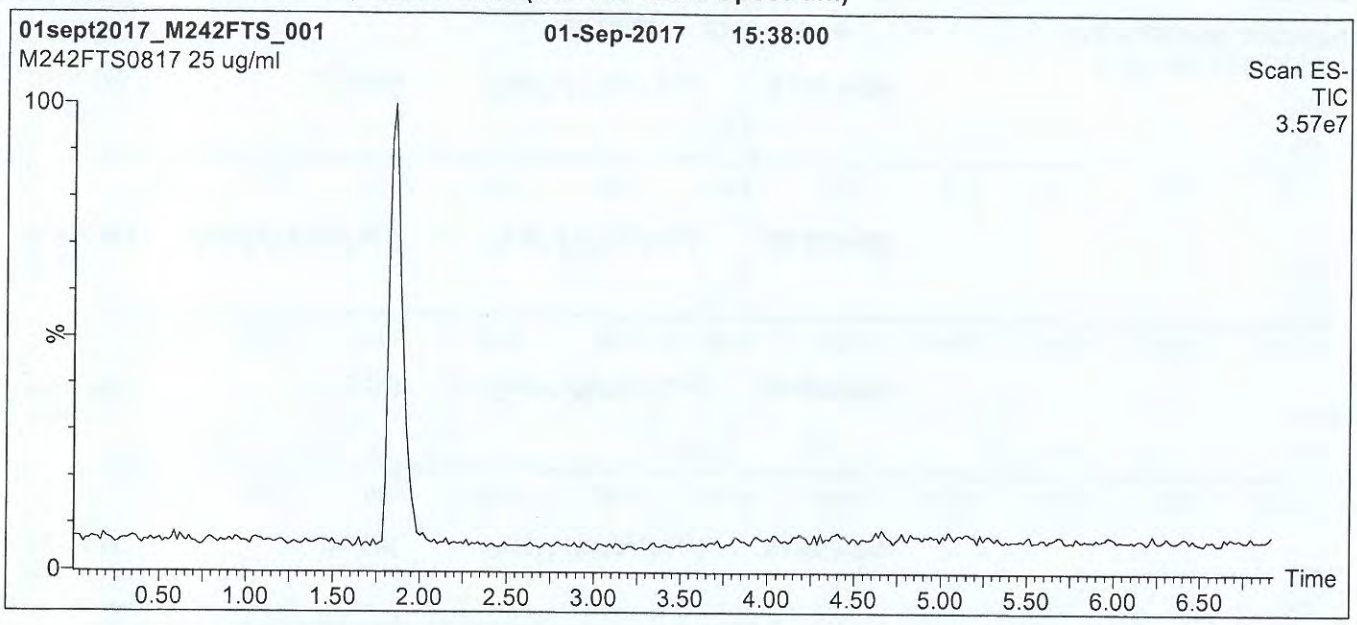
FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

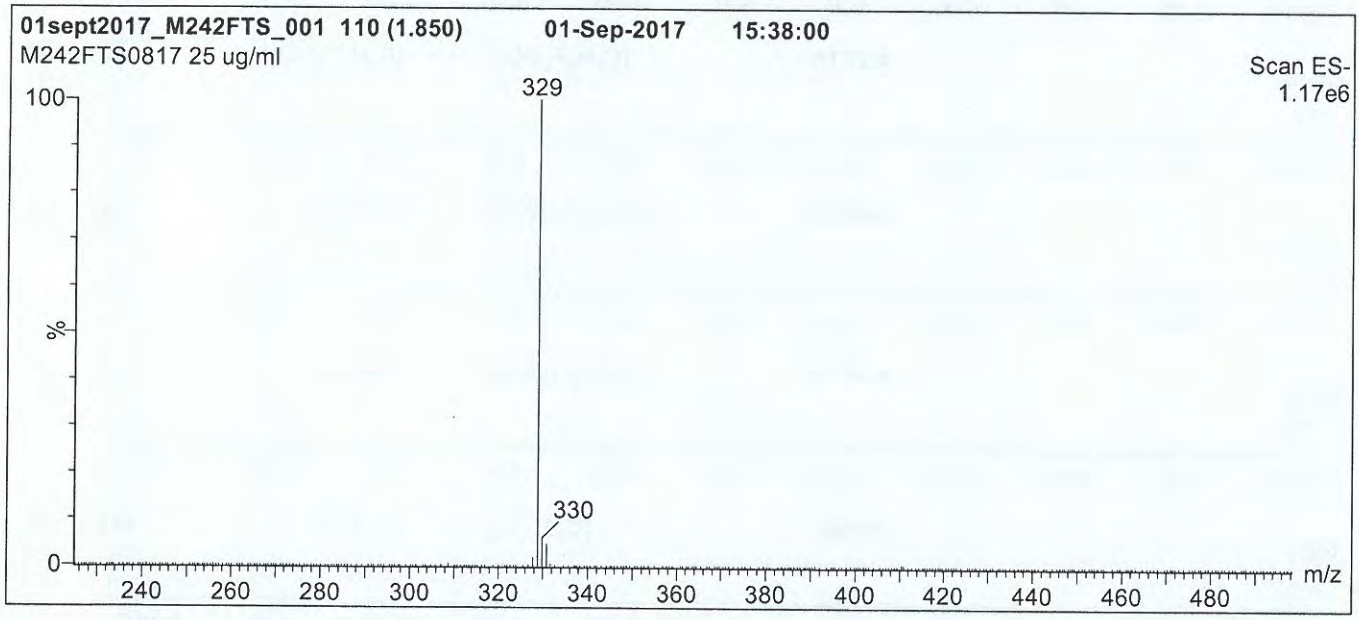
Certified By: _____ **Date:** 09/29/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

18L2001

Figure 1: **M2-4:2FTS; 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: 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 1 min before returning
to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

18L2001

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).

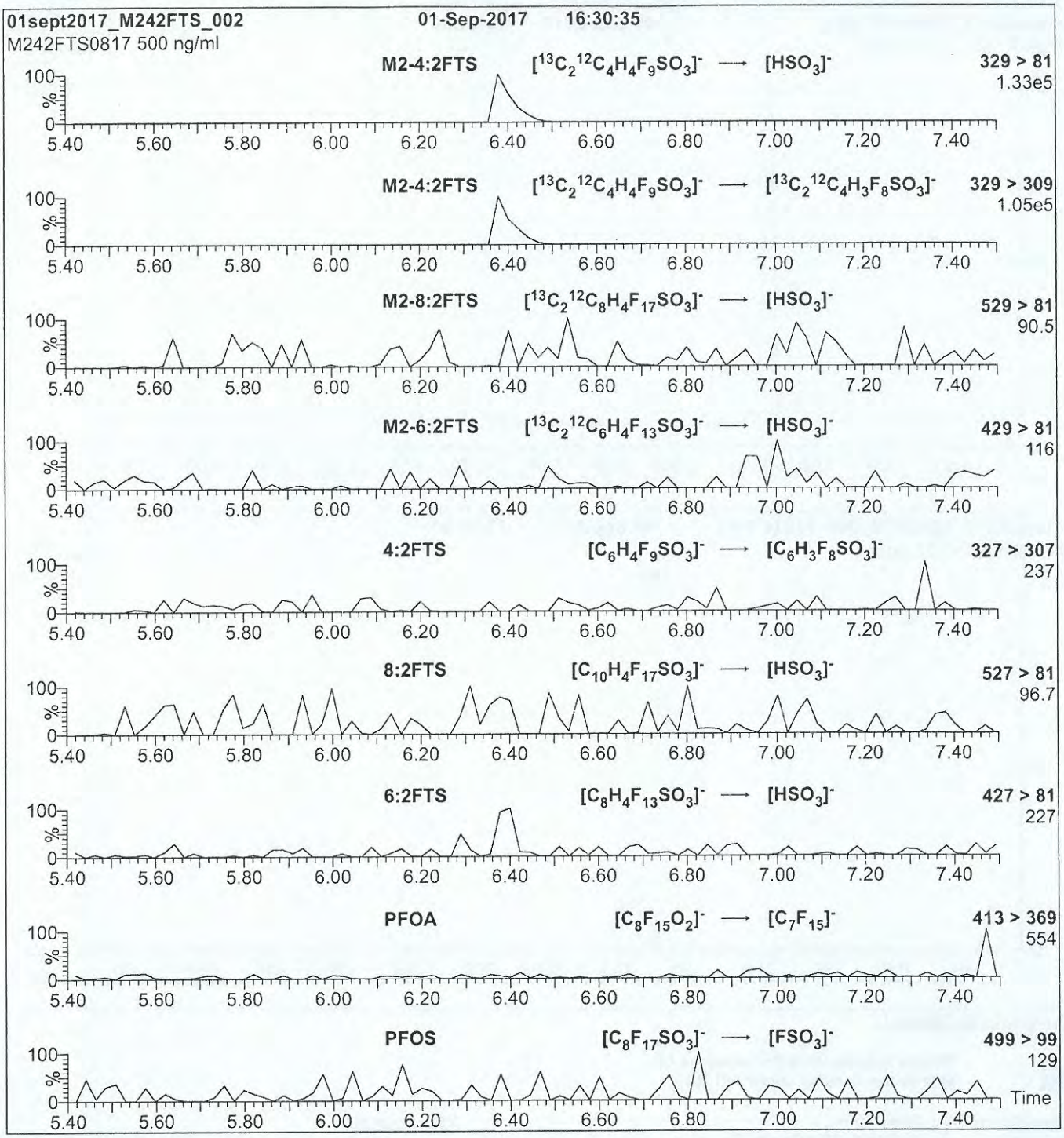
CALA Testing Accreditation No. A 1226

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

1812001

Figure 2: **M2-4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2-4:2FTS)

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) = 3.28e-3
Collision Energy (eV) = 25

18L2002

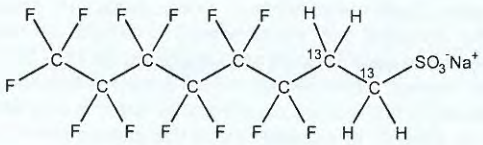
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-6:2FTS **LOT NUMBER:** M262FTS1118

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)	**SOLVENT(S):**	Methanol
	47.5 ± 2.4 µg/ml (M2-6:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	11/22/2018		
EXPIRY DATE: (mm/dd/yyyy)	11/22/2023		
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:** 11/26/2018 (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

18L2002

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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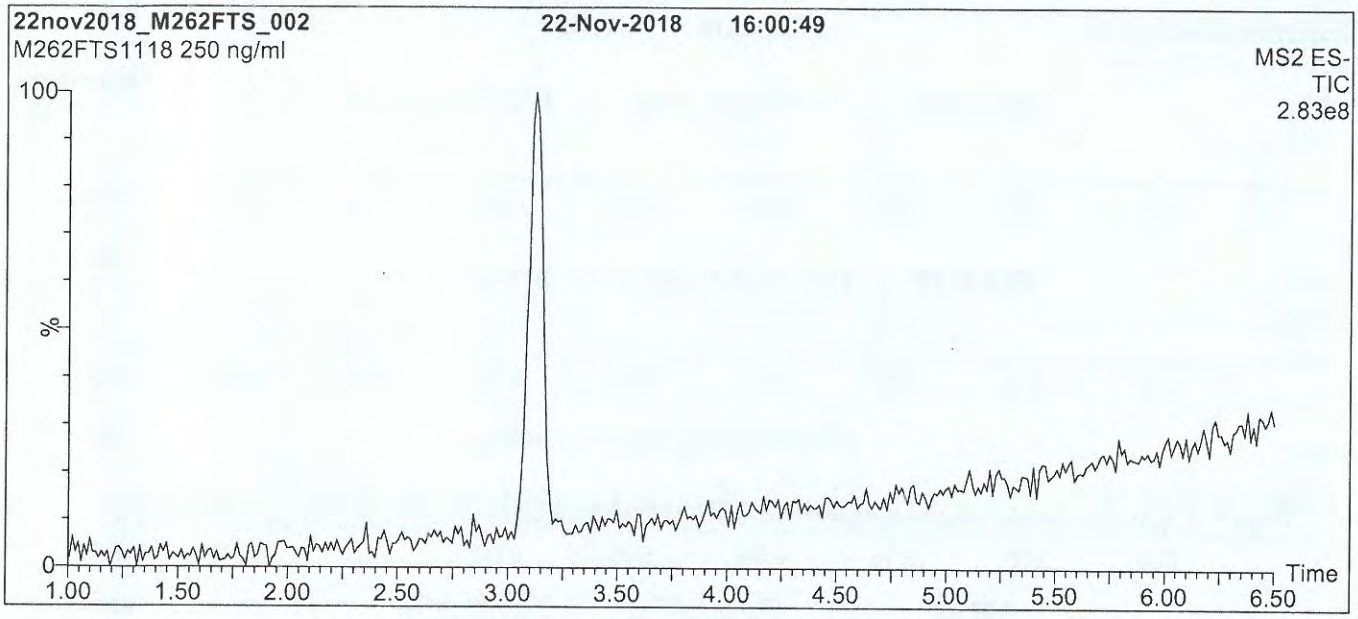
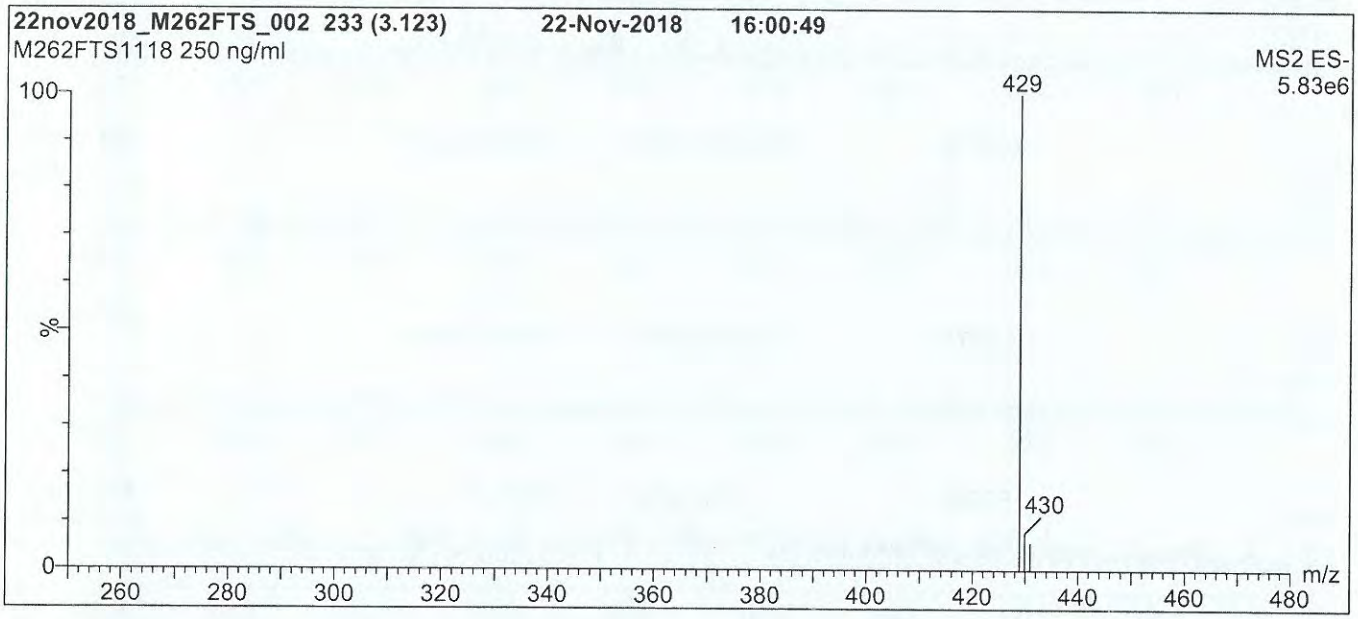
18L2002

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: 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

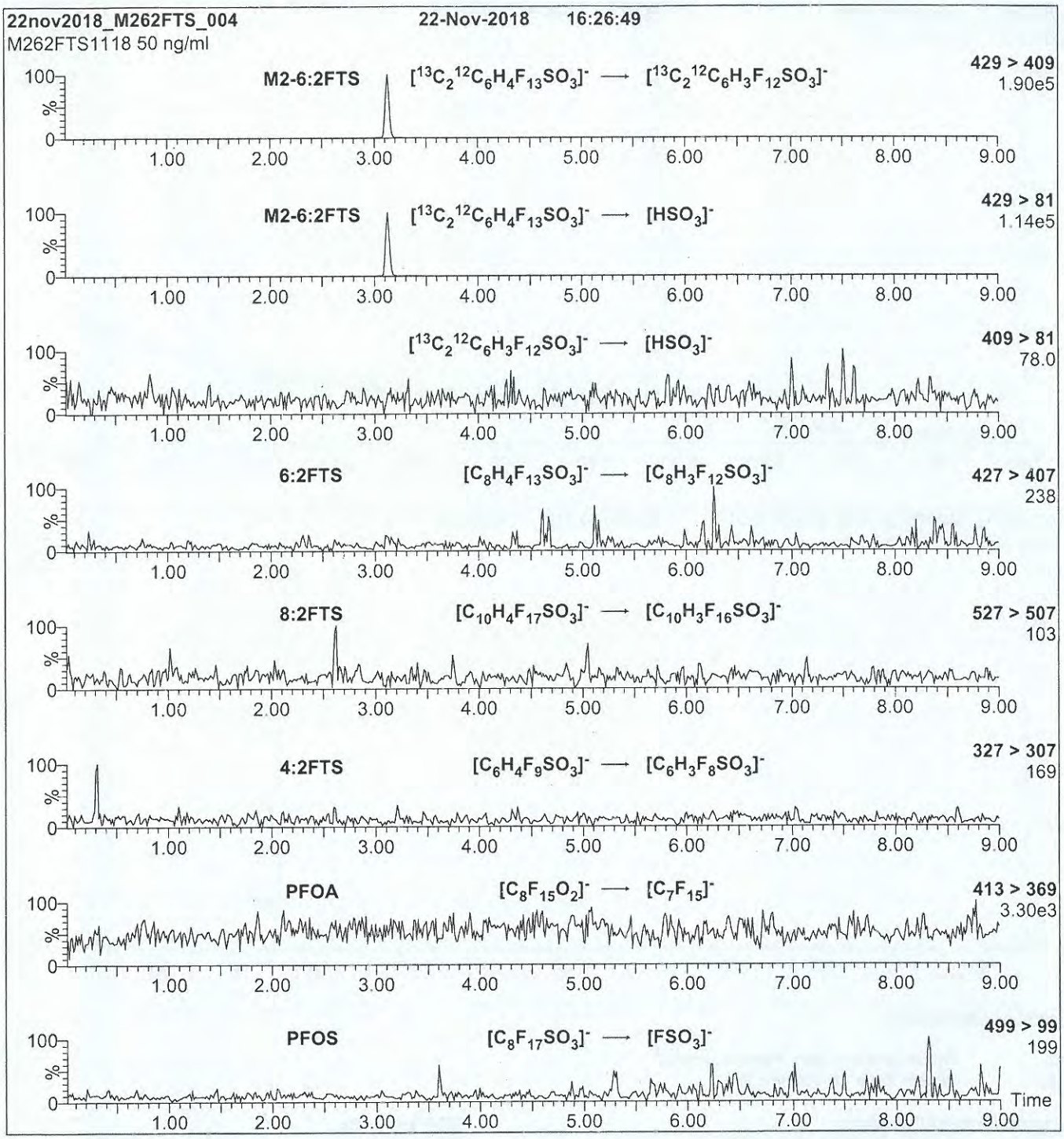
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812002

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) = 2.97e-3
Collision Energy (eV) = 20

18L2003

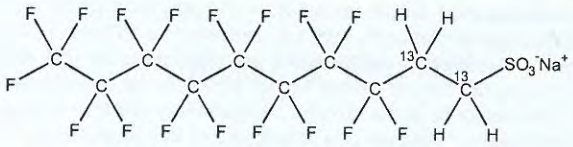
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS0118

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)	01/24/2018		
EXPIRY DATE: (mm/dd/yyyy)	01/24/2023		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 01/26/2018 (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

Form#:27, Issued 2004-11-10
Revision#:5, Revised 2018-01-22

18L2003

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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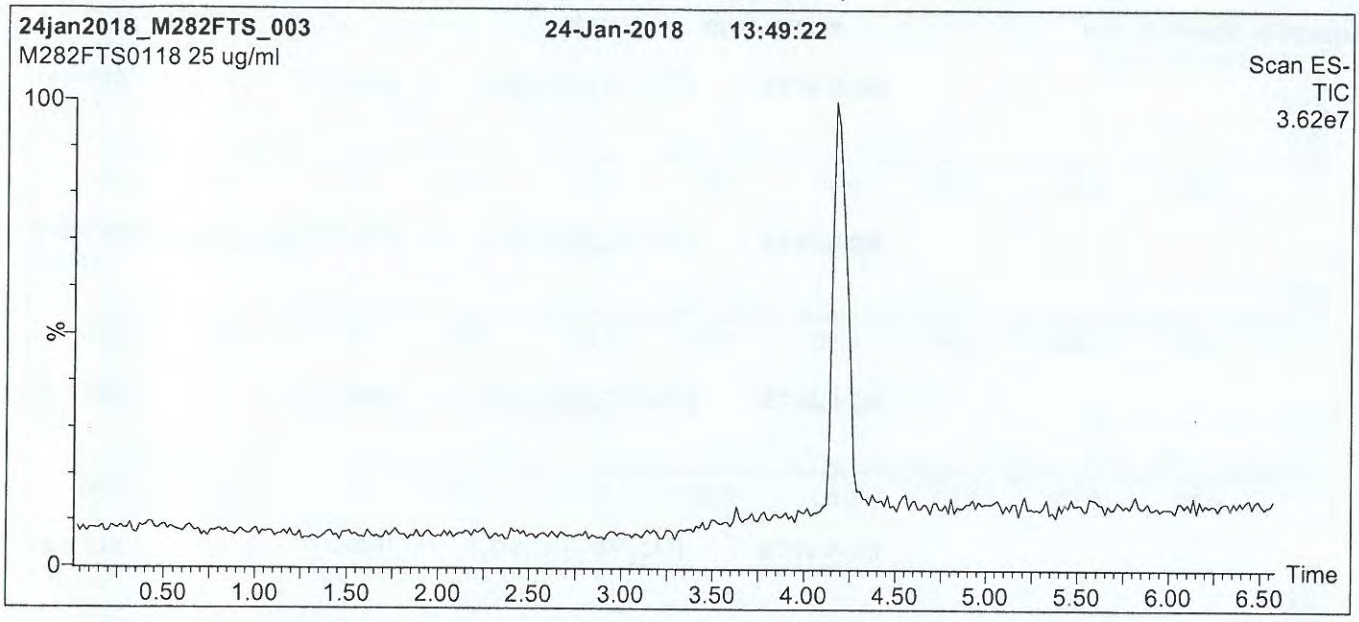
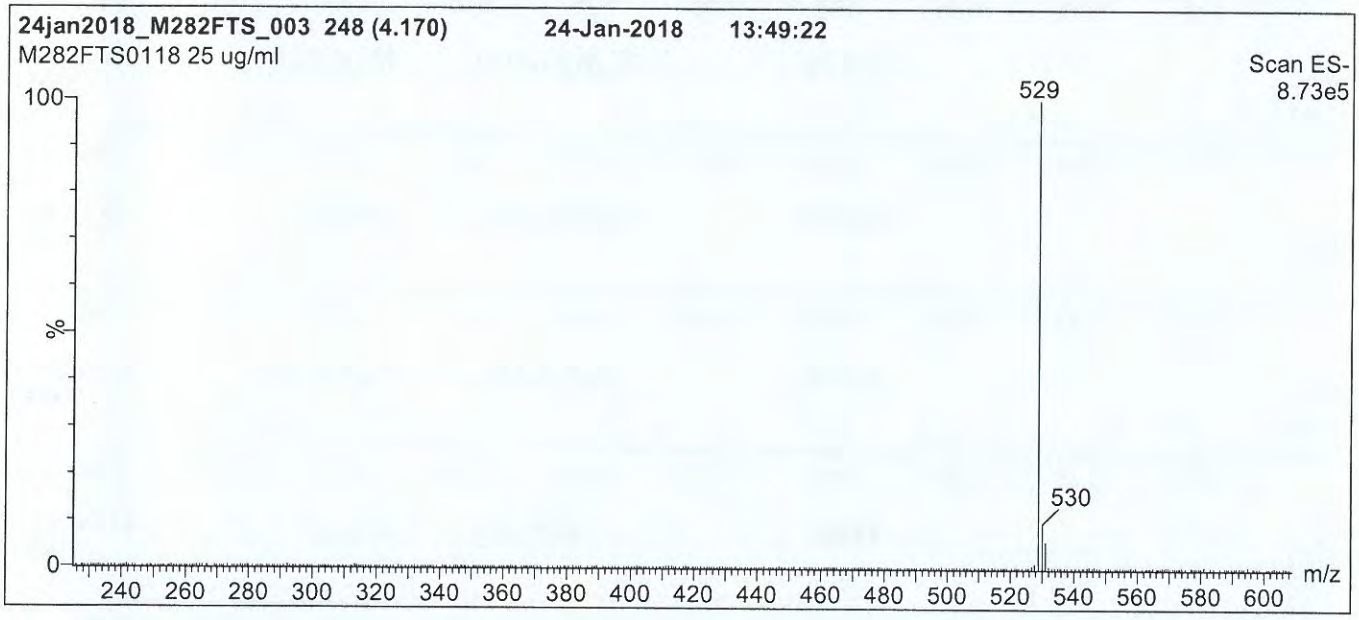
1812003

Figure 1: **M2-8:2FTS; 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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

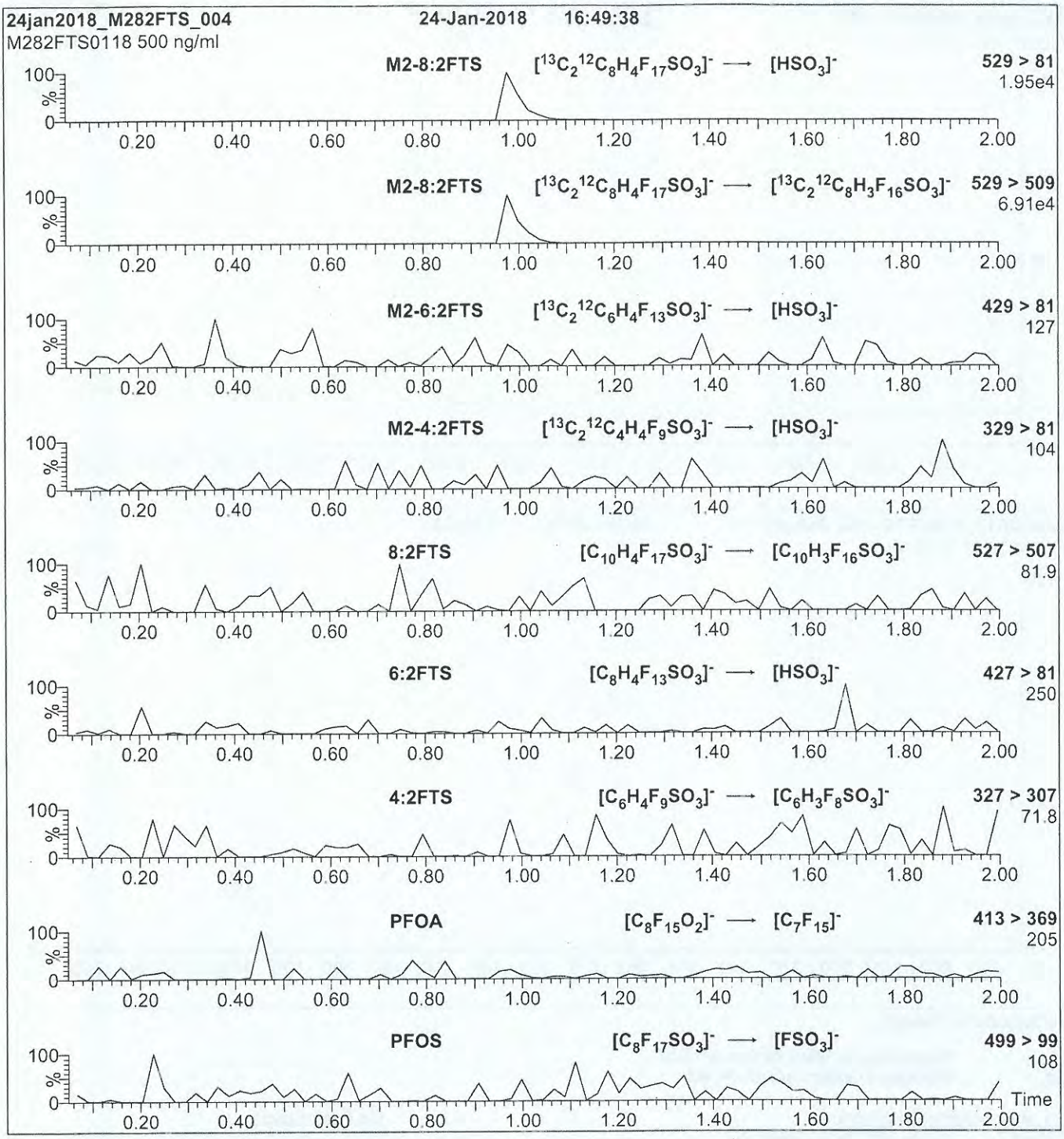
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source:Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

1812003

Figure 2: **M2-8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2-8:2FTS)

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

18L2004

WELLINGTON LABORATORIES

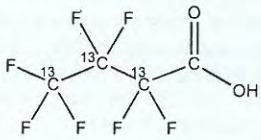
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFBA
COMPOUND: Perfluoro-n-[2,3,4-$^{13}C_3$]butanoic acid

LOT NUMBER: M3PFBA1217

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

18L2004

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).

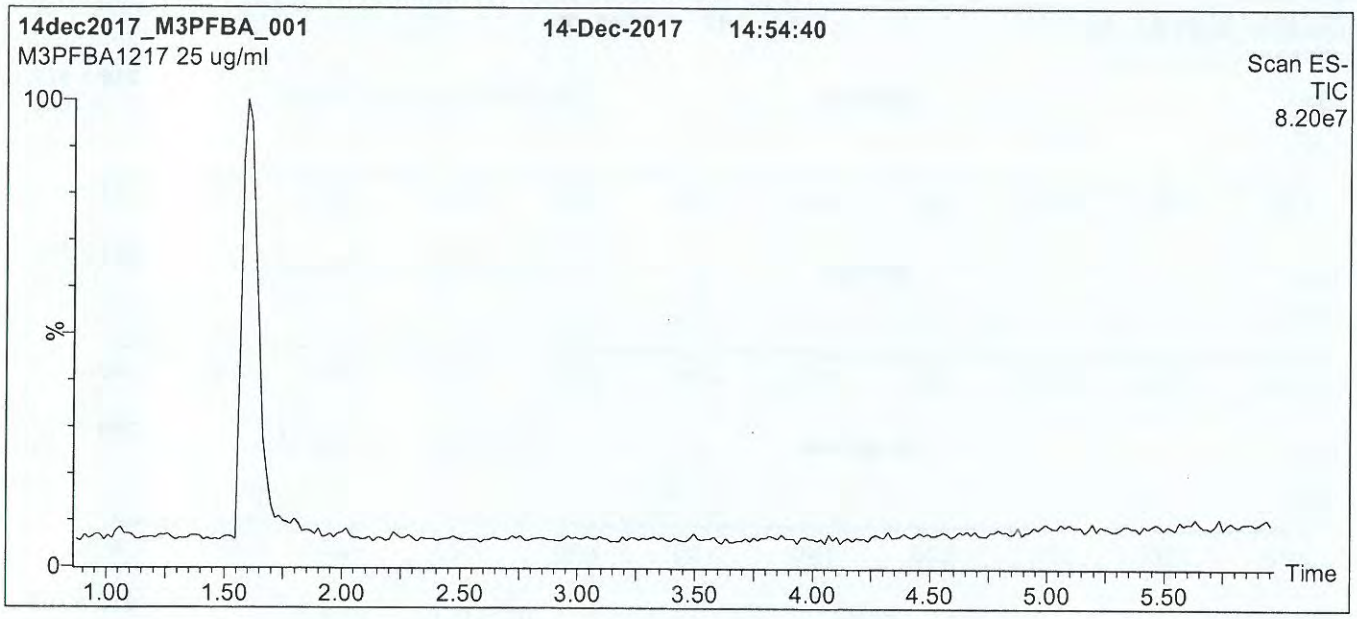
CALA Testing Accreditation No. A 1226

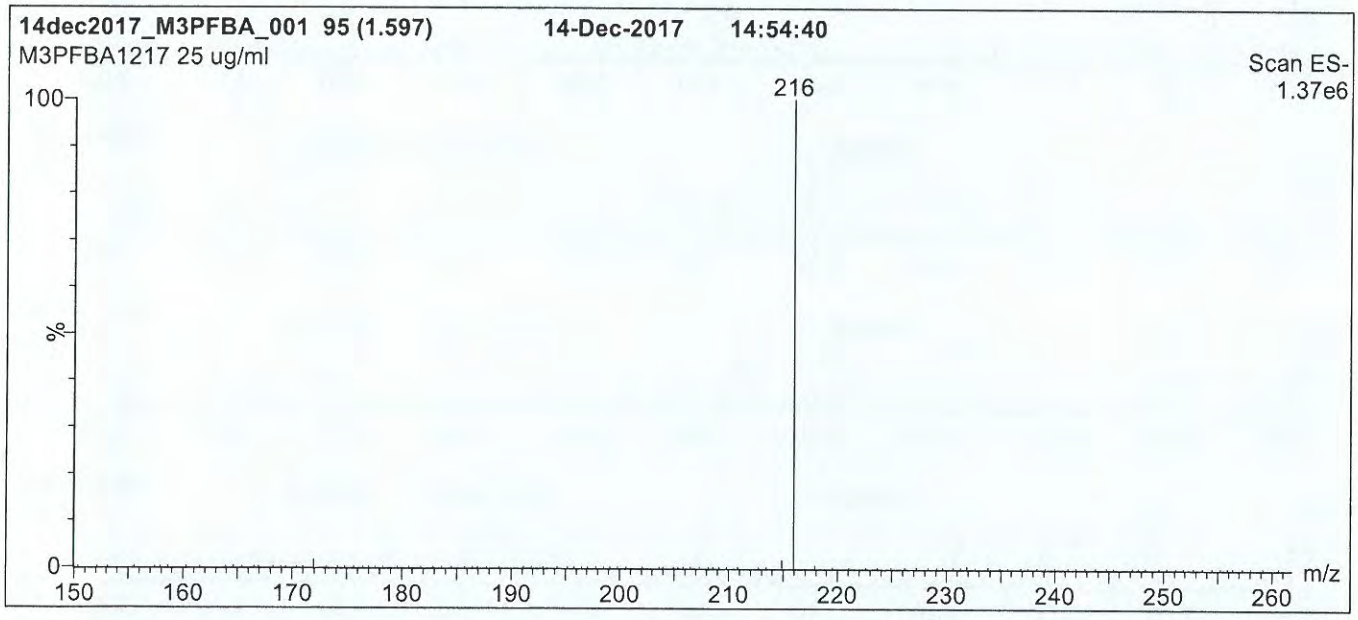
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812004

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

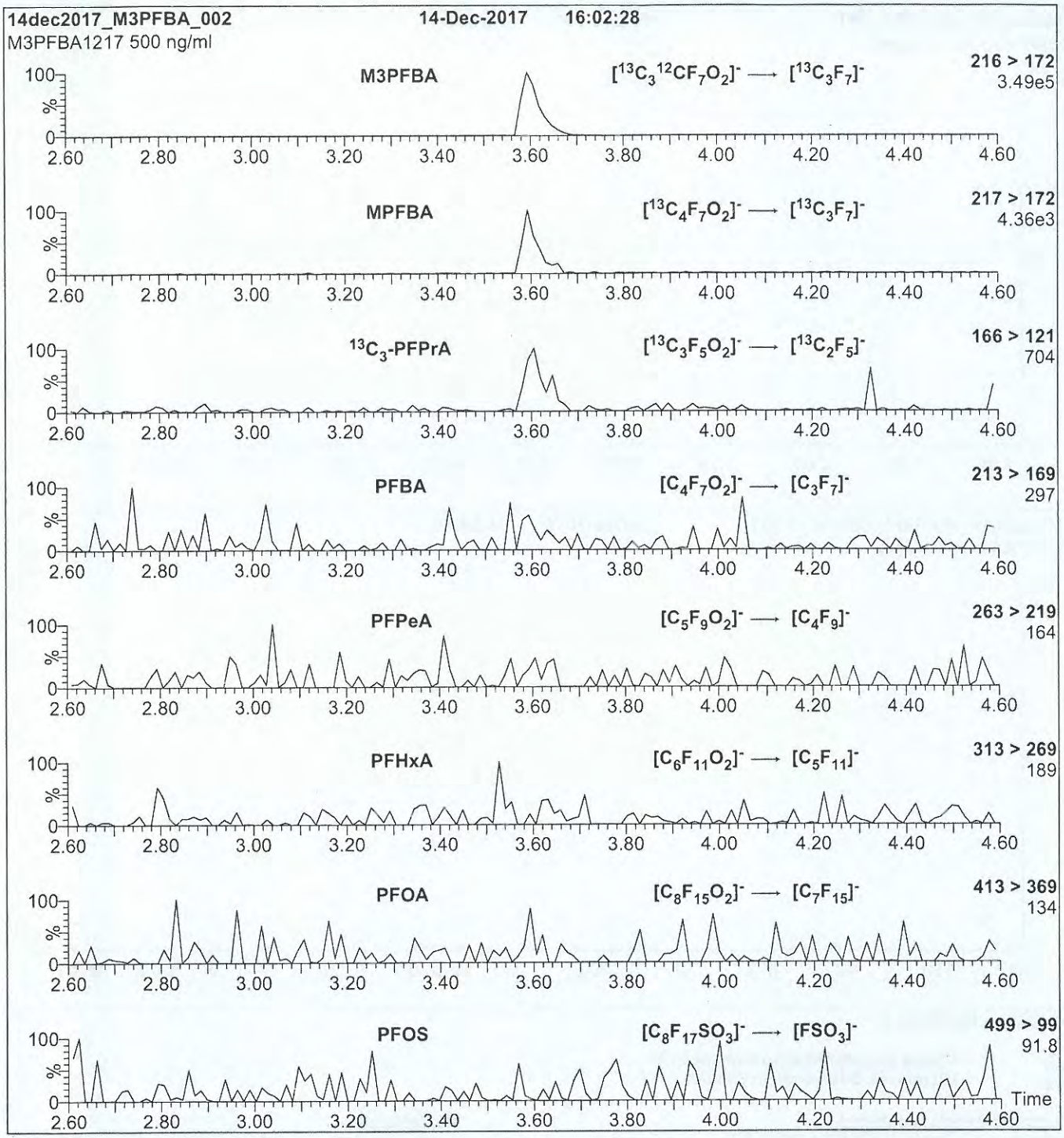
MS Parameters

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

18L2004

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

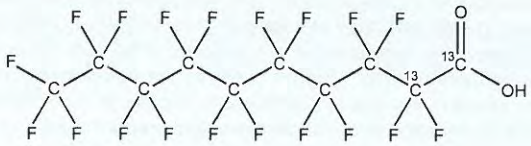
Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 10

18L2005

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFDA	**LOT NUMBER:**	MPFDA1218
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-$^{13}C_2$)
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 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

1812005

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).

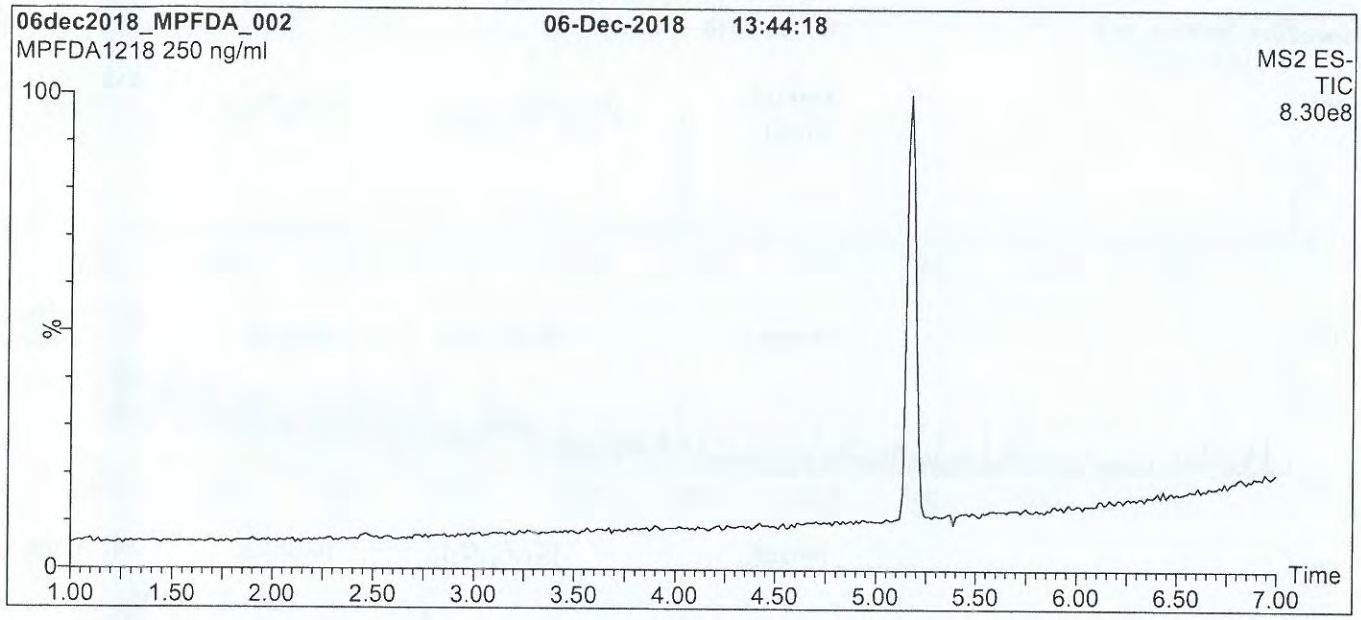
CALA Testing Accreditation No. A 1226

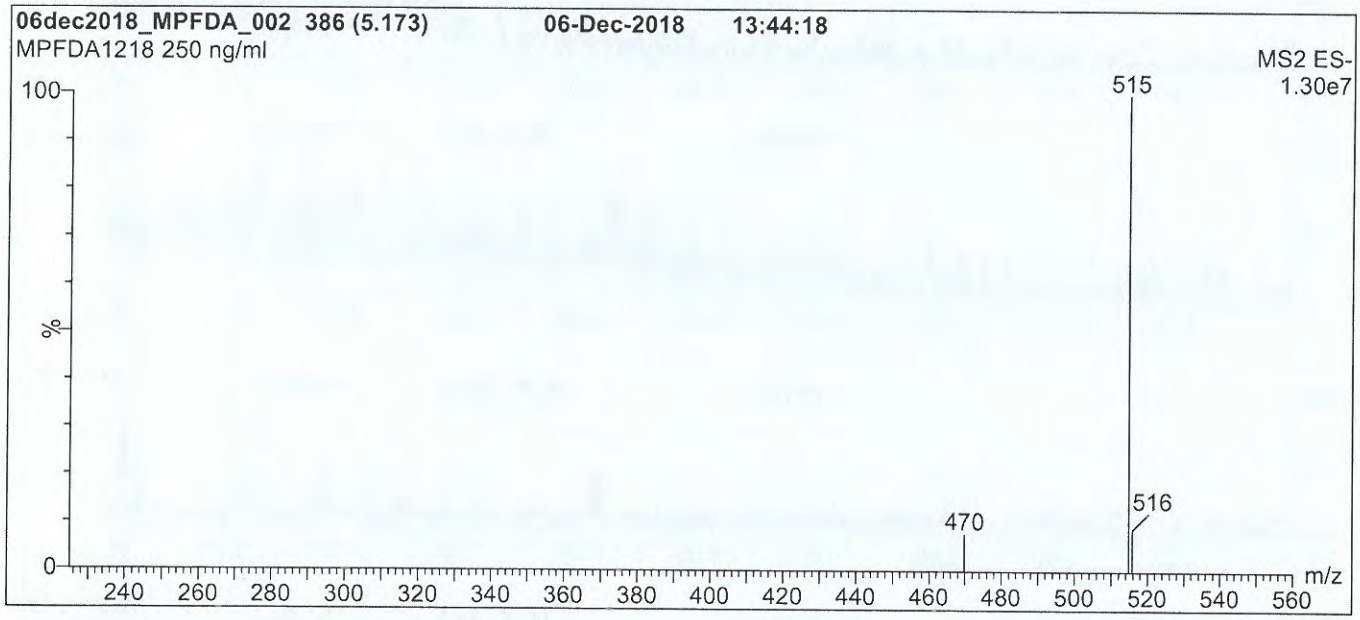
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812005

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: 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

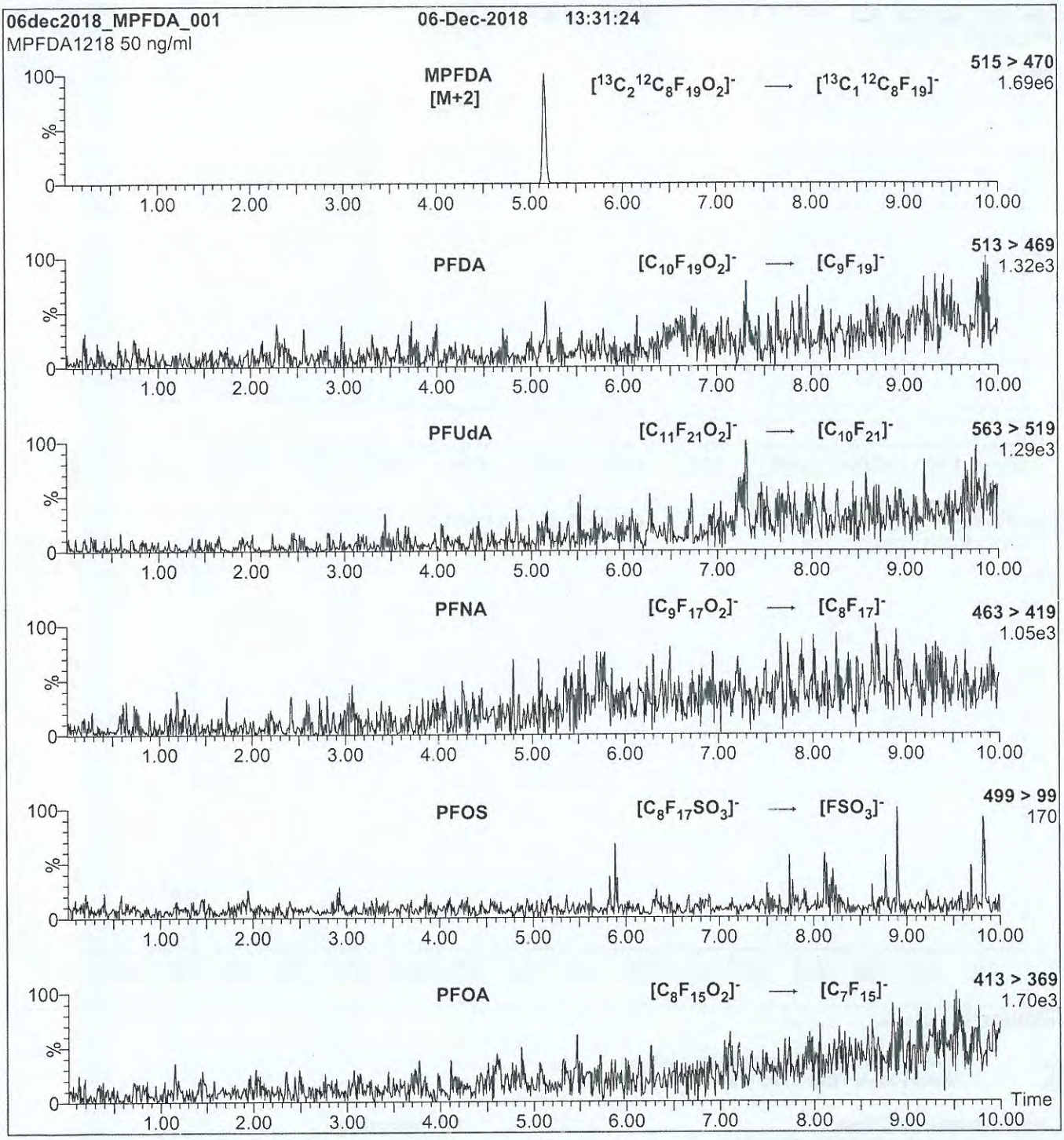
MS Parameters

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

1812005

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

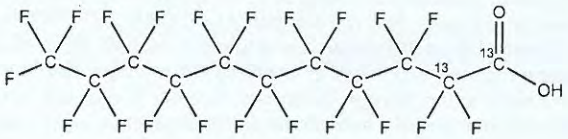
Collision Gas (mbar) = 3.27e-3
Collision Energy (eV) = 10

18L2006

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFUdA	**LOT NUMBER:**	MPFUdA0518
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)	05/11/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/11/2023		
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.
- 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:** 05/25/2018 (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

1812006

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:

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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.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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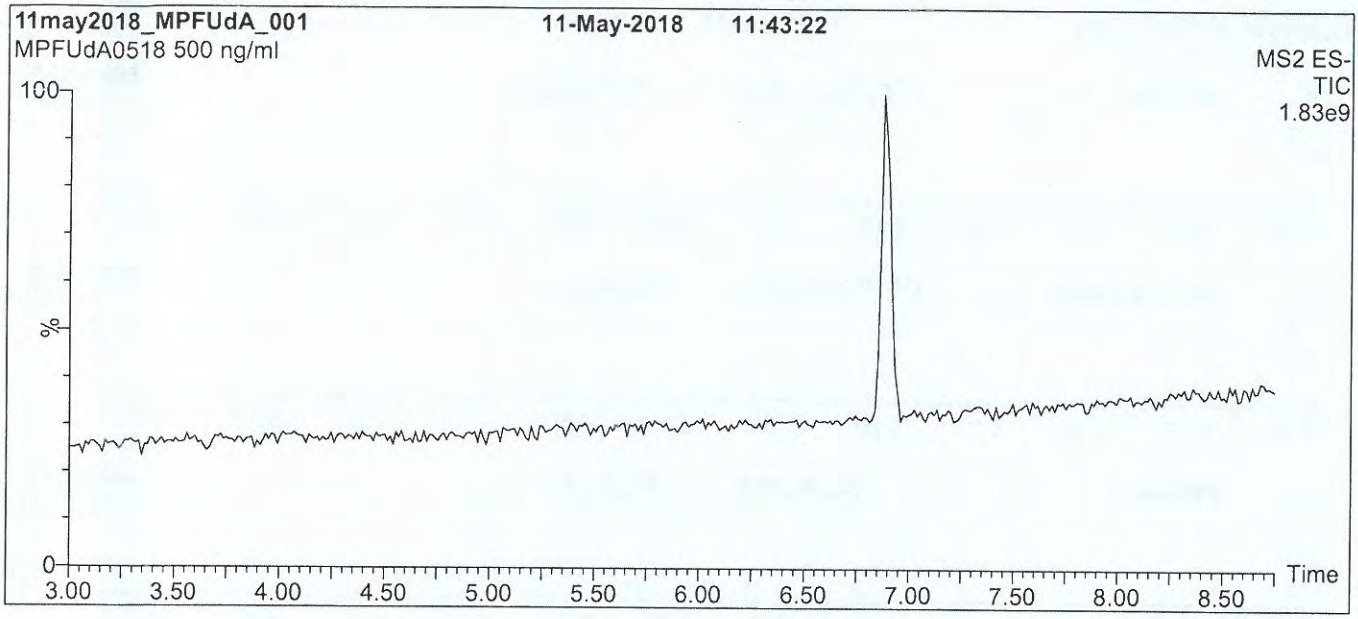
CALA Testing Accreditation No. A 1226

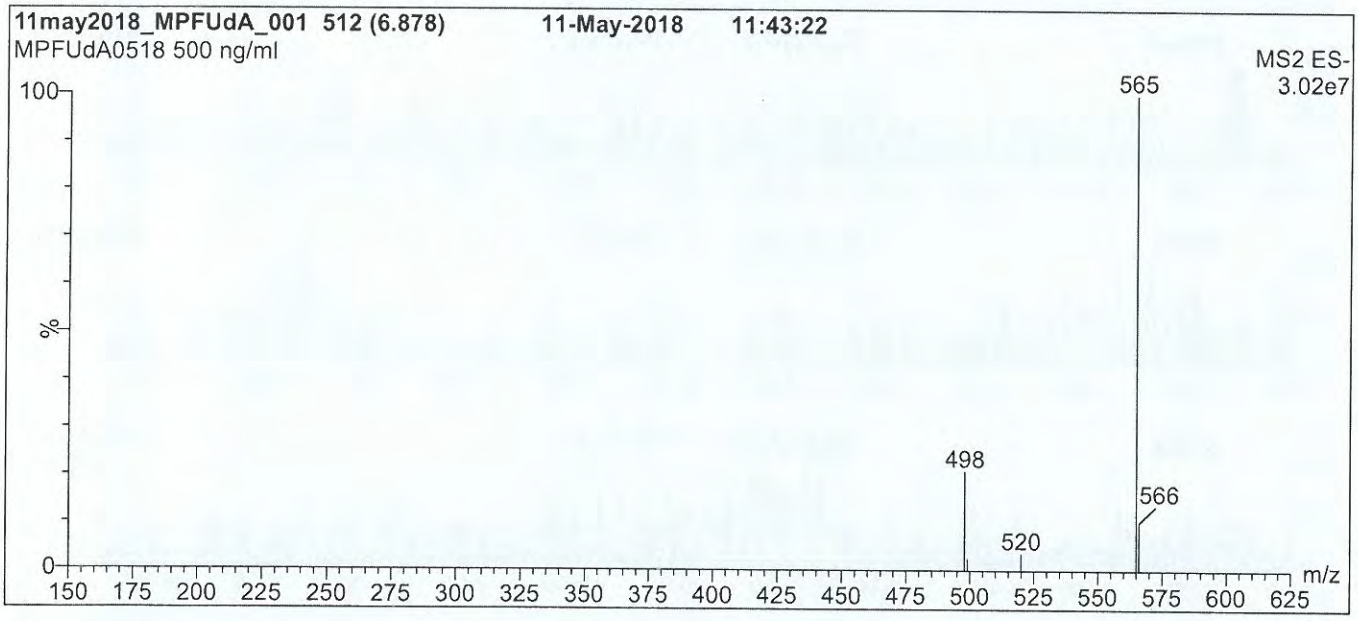
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

18L2006

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: 50% (80:20 MeOH:ACN) / 50% 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

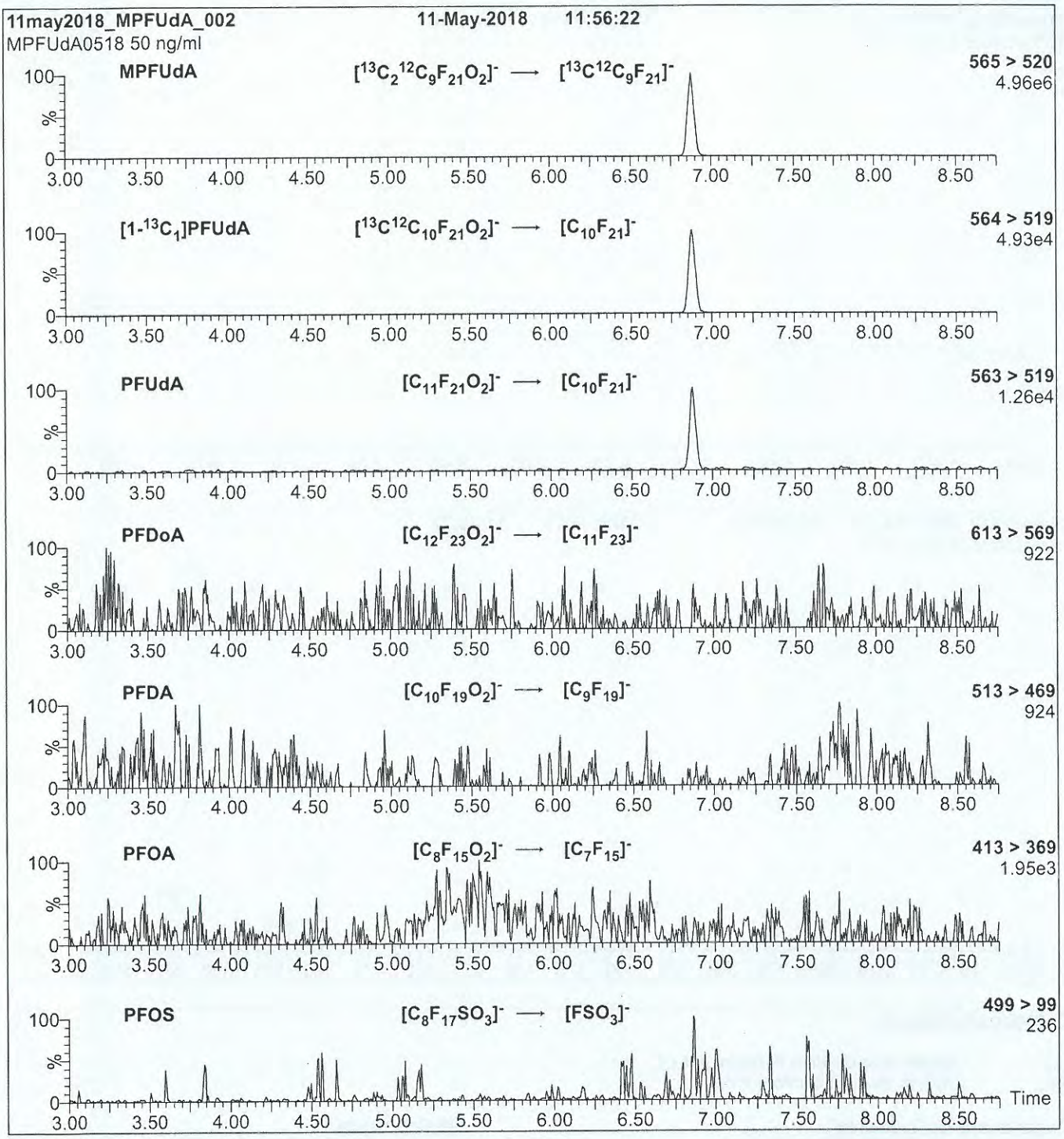
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2006

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

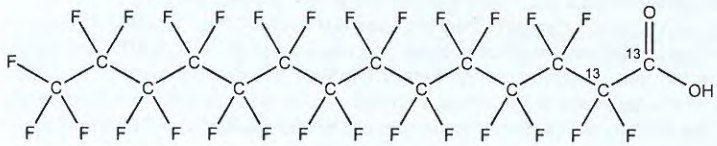
Collision Gas (mbar) = 3.51e-3
Collision Energy (eV) = 12

18L2007

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2PFTeDA	**LOT NUMBER:**	M2PFTeDA1117
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)	11/30/2017		
EXPIRY DATE: (mm/dd/yyyy)	11/30/2022		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/01/2017 (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

1812007

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.

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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,...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).

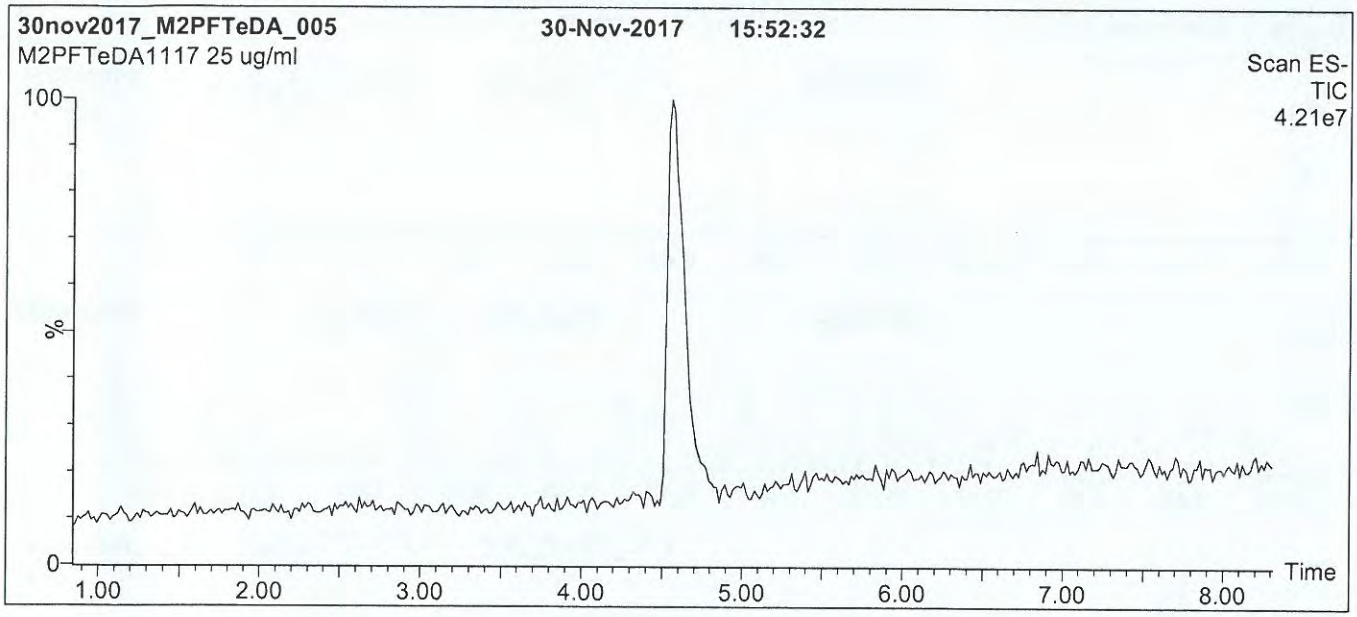
CALA Testing Accreditation No. A1226

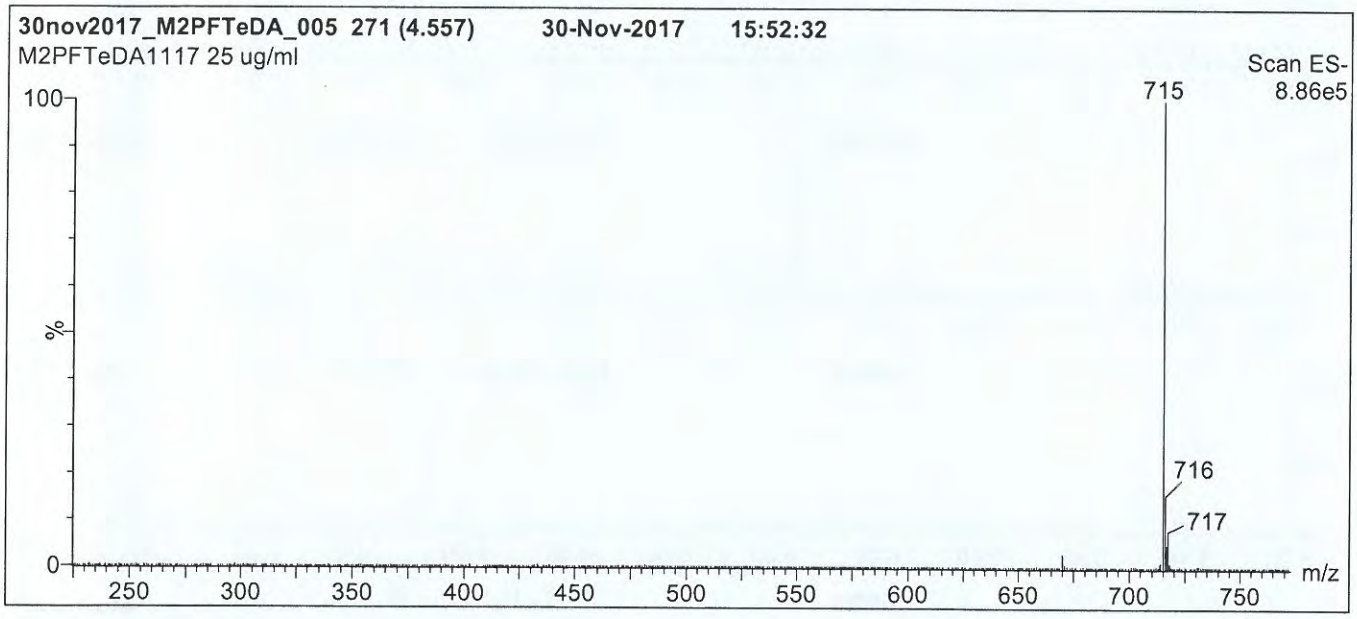
ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

1862007

Figure 1: **M2PFTeDA; 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: 65% (80:20 MeOH:ACN) / 35% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

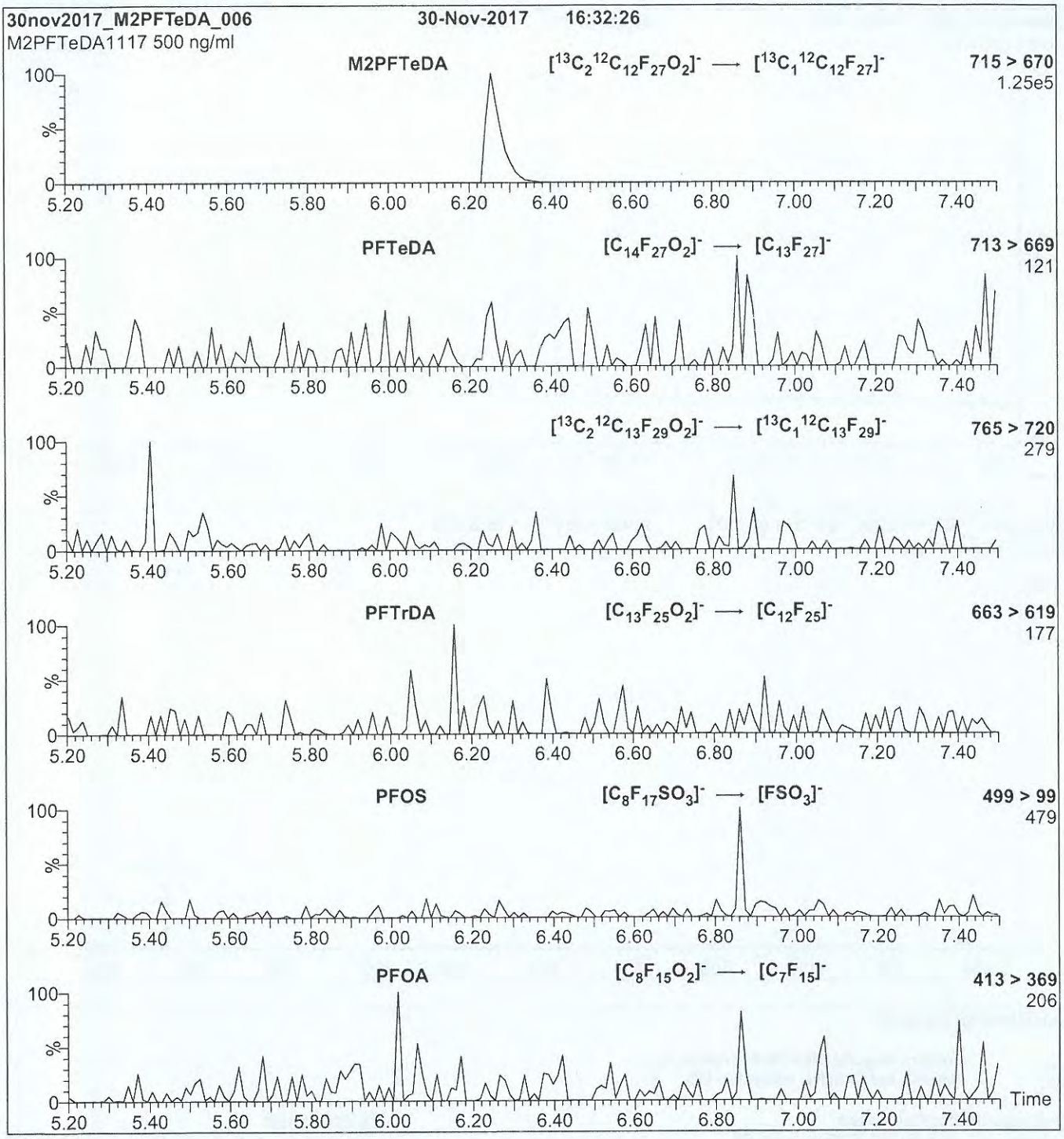
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

18L2007

Figure 2: **M2PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2PFTeDA)

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) = 3.31e-3
Collision Energy (eV) = 14

1812008

WELLINGTON LABORATORIES

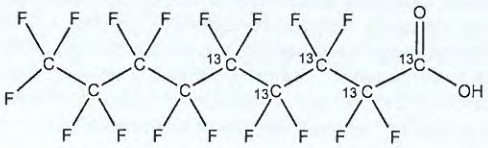
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFNA
COMPOUND: Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid

LOT NUMBER: MPFNA1217

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)	12/14/2017		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/19/2017 (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

1812008

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.

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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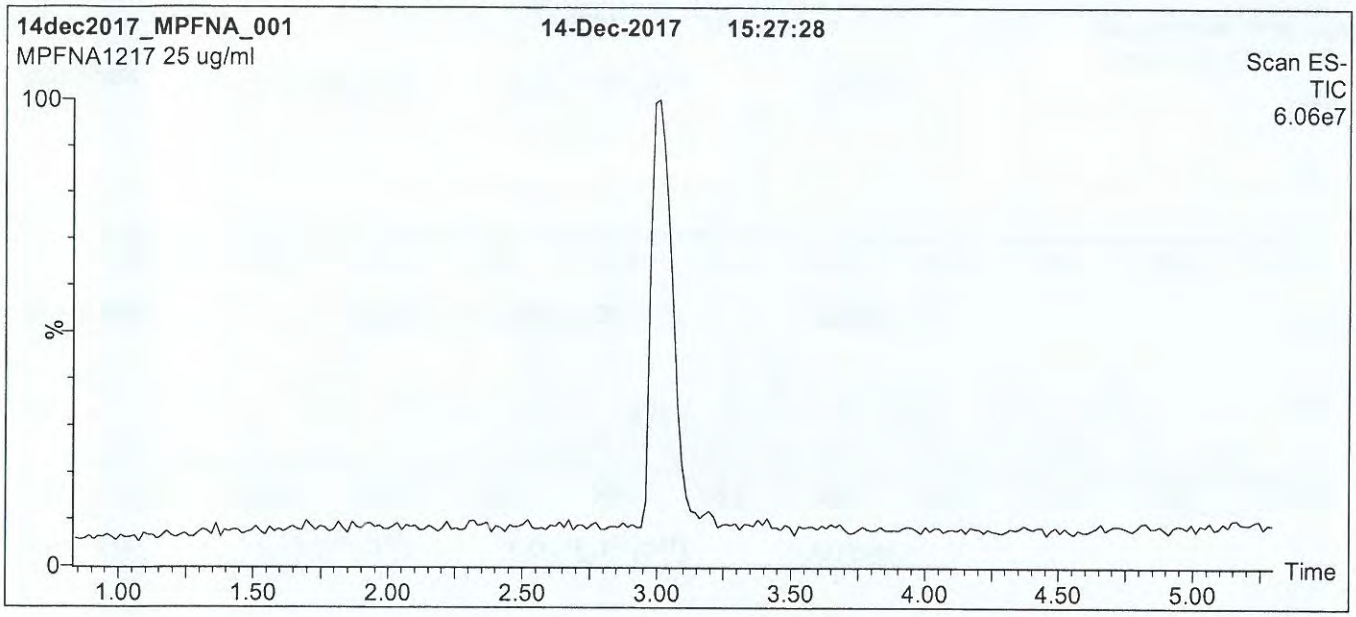
CALA Testing Accreditation No. A 1226

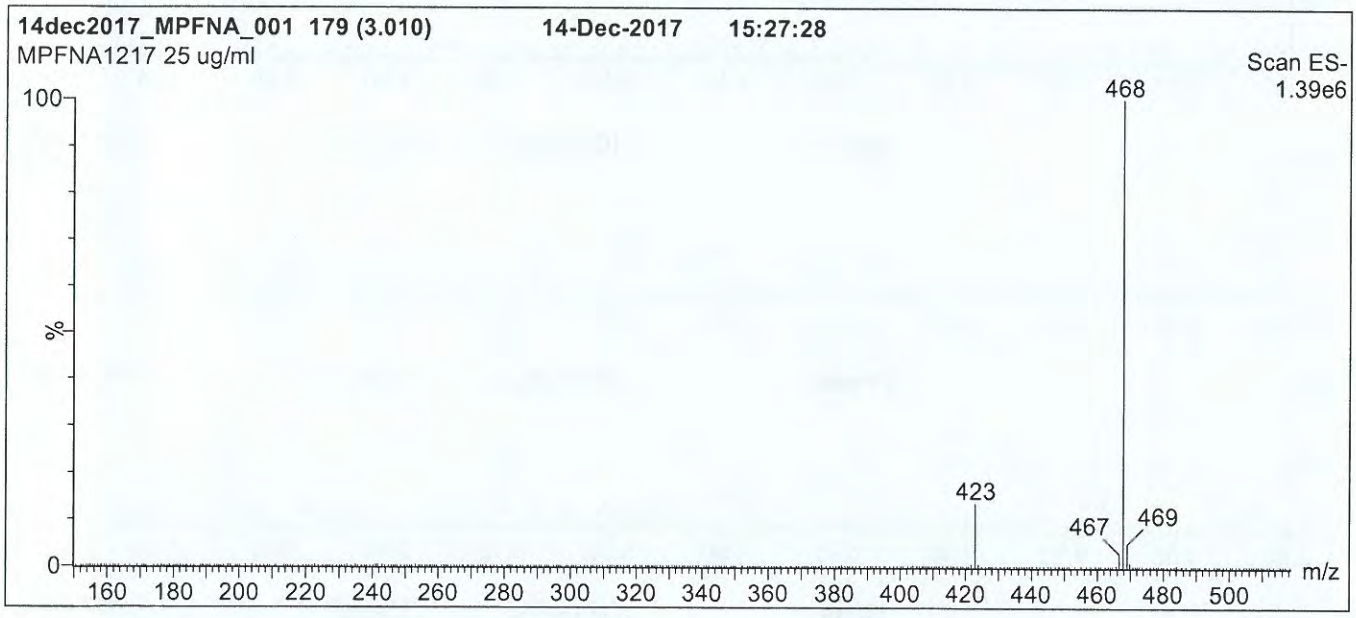
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

1812008

Figure 1: **MPFNA; 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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

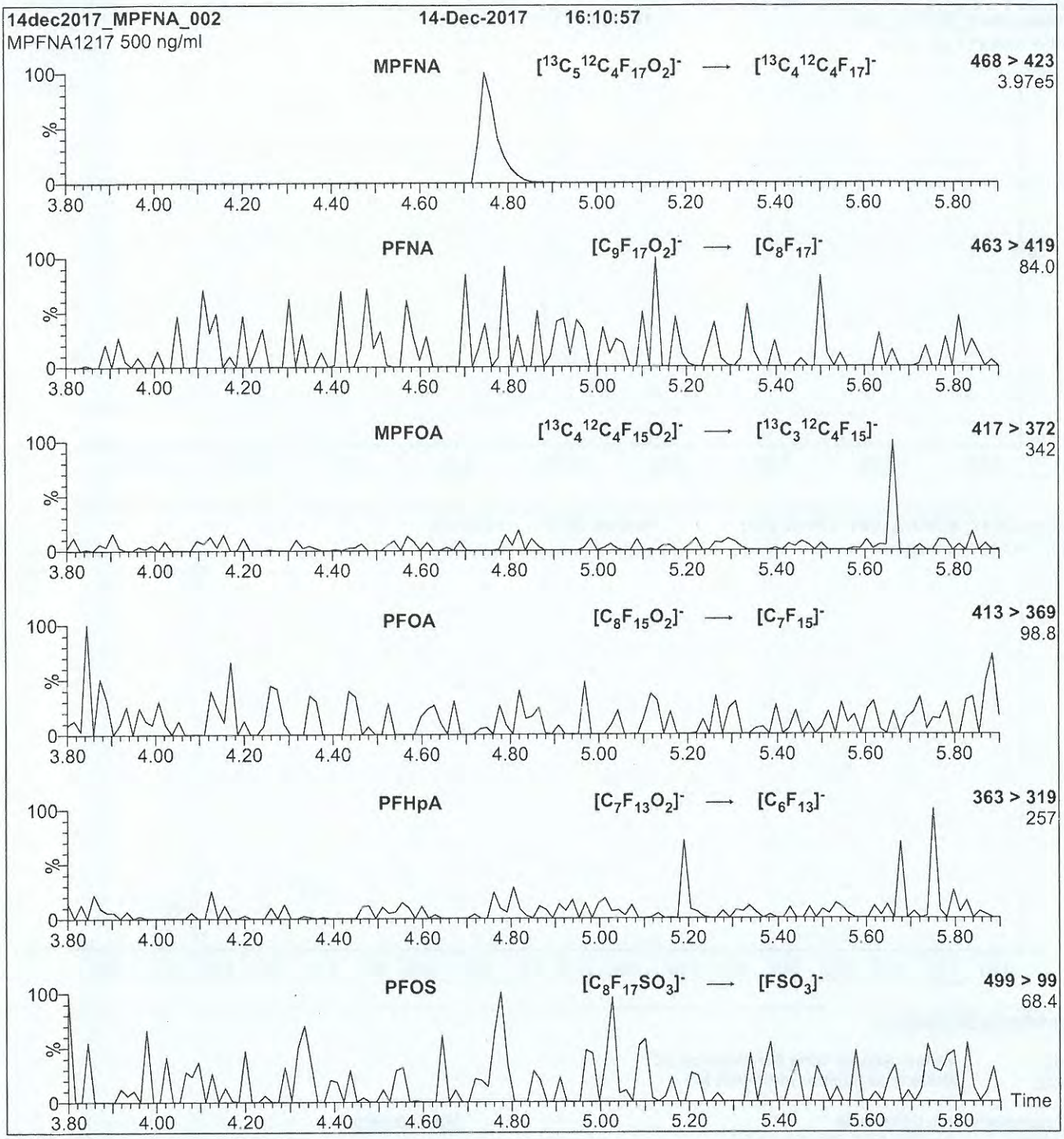
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

18L2008

Figure 2: **MPFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFNA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

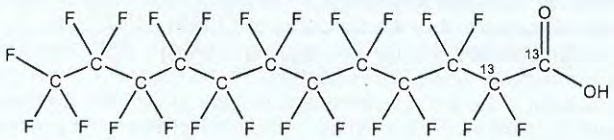
Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 11

18L2009

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFDoA	**LOT NUMBER:**	MPFDoA0218
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid		
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)	02/16/2018		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2023		
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:** 02/23/2018 (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

18L2009

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.

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:

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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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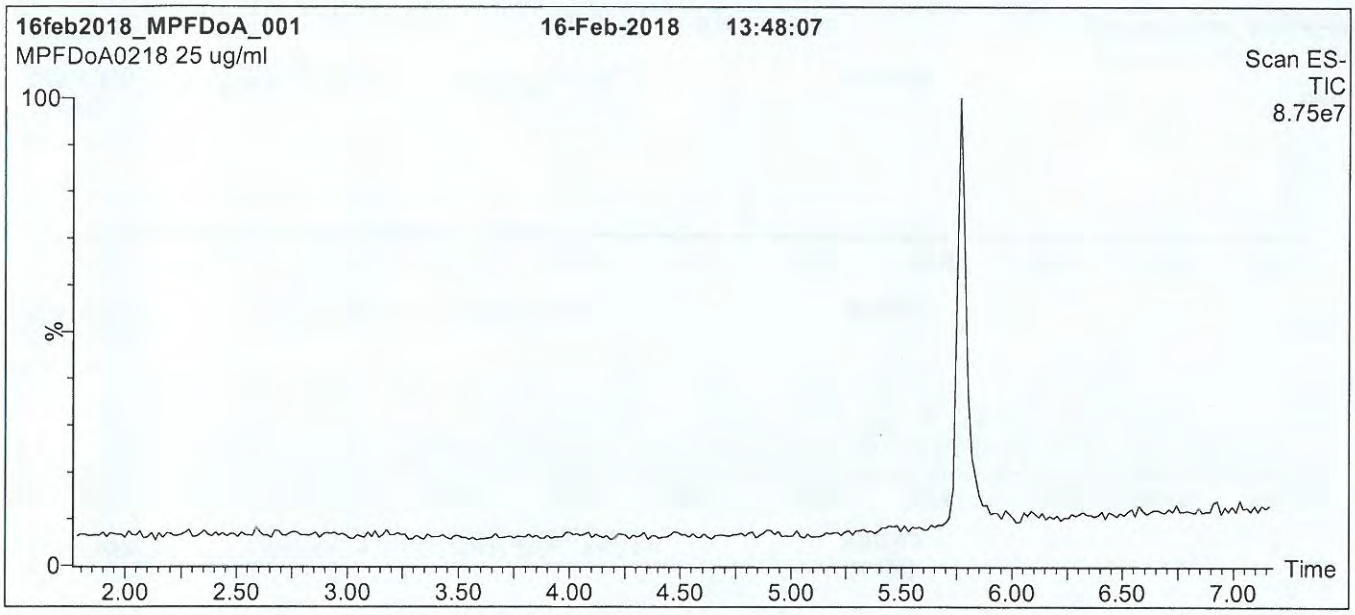
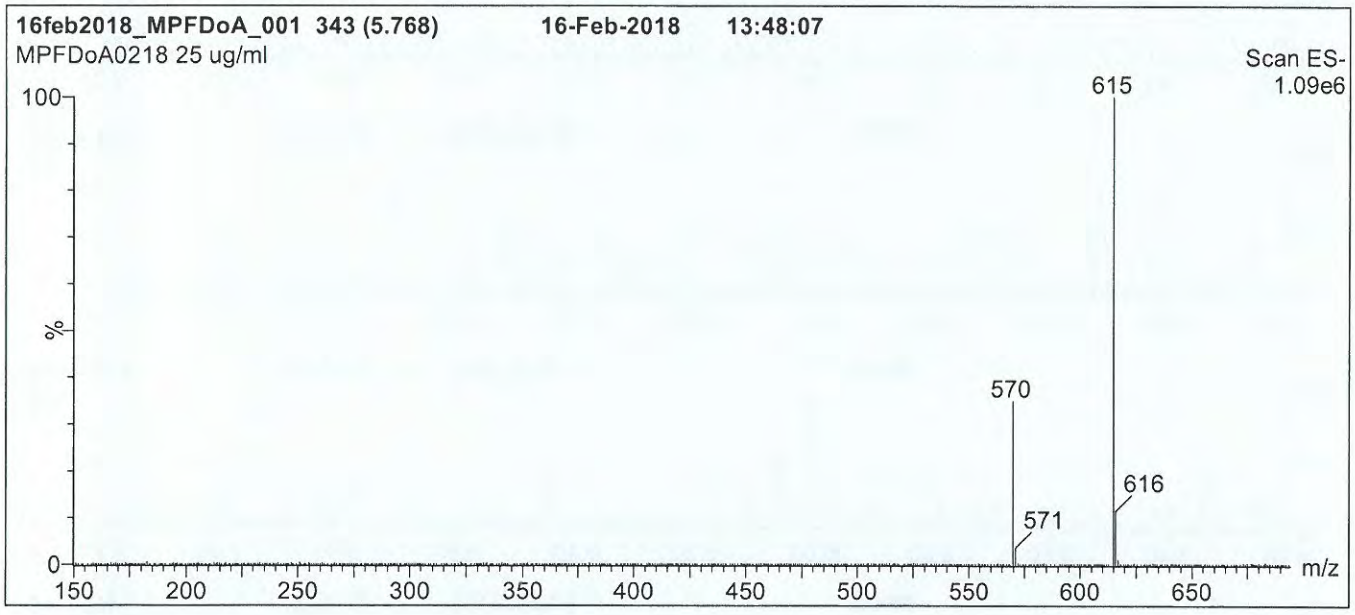
1862009

Figure 1: **MPFDoA; 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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

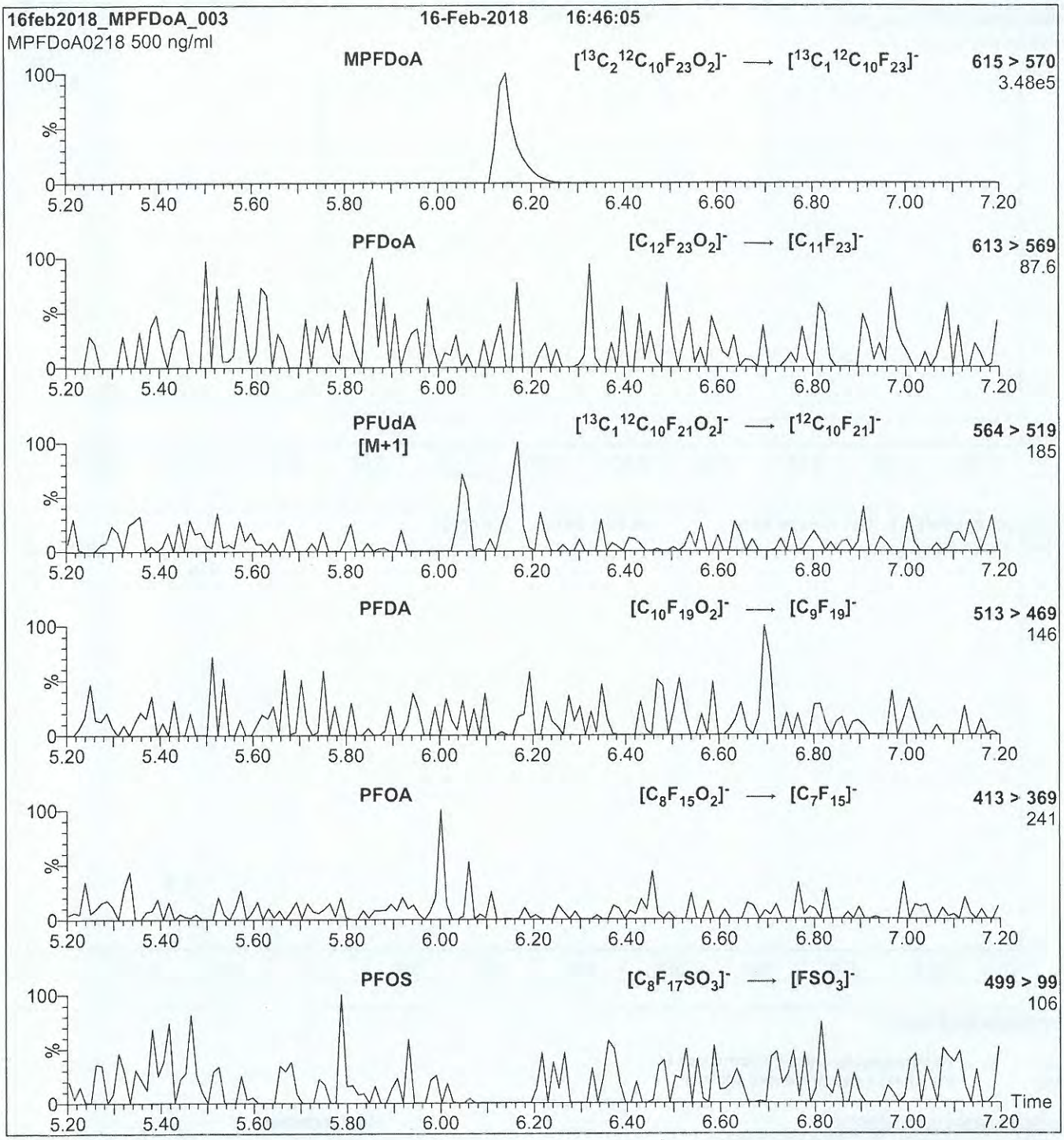
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 20.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

18L2009

Figure 2: **MPFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFDoA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

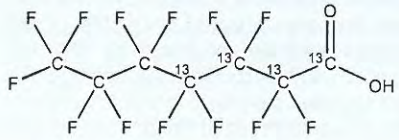
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 13

18L2010

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M4PFHpA	**LOT NUMBER:**	M4PFHpA0618
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)	07/06/2018		
EXPIRY DATE: (mm/dd/yyyy)	07/06/2023		
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.04% of perfluoro-n-heptanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/09/2018 (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

18L2010

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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).

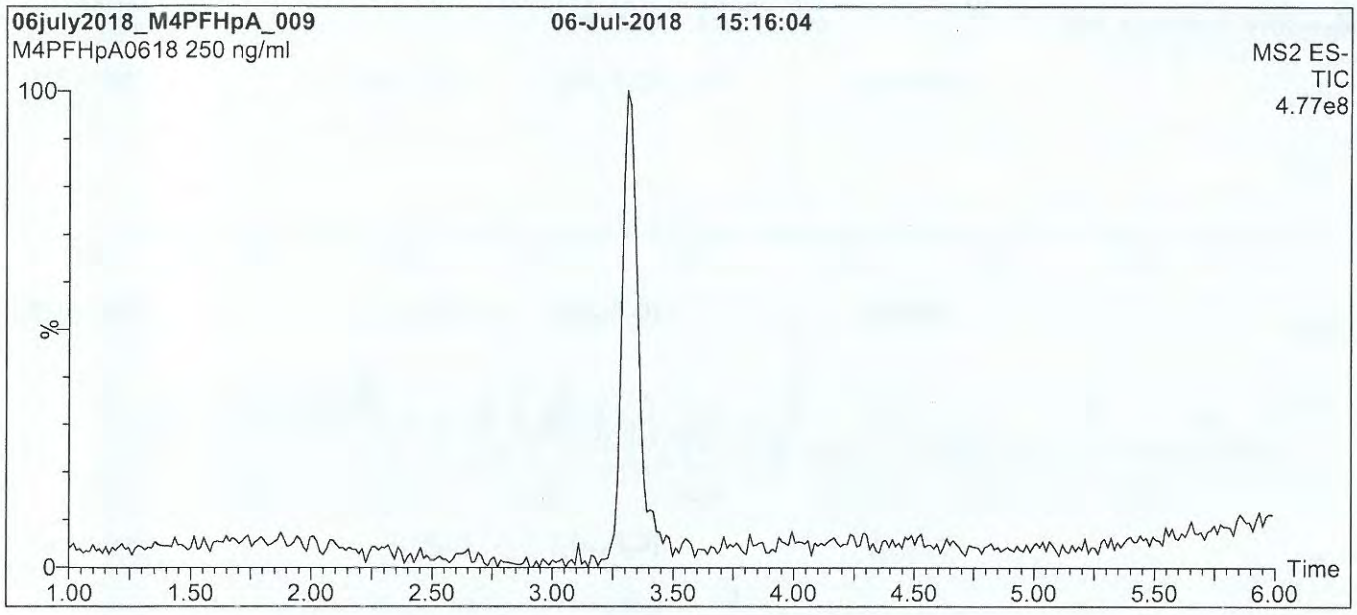
CALA Testing Accreditation No. A 1226

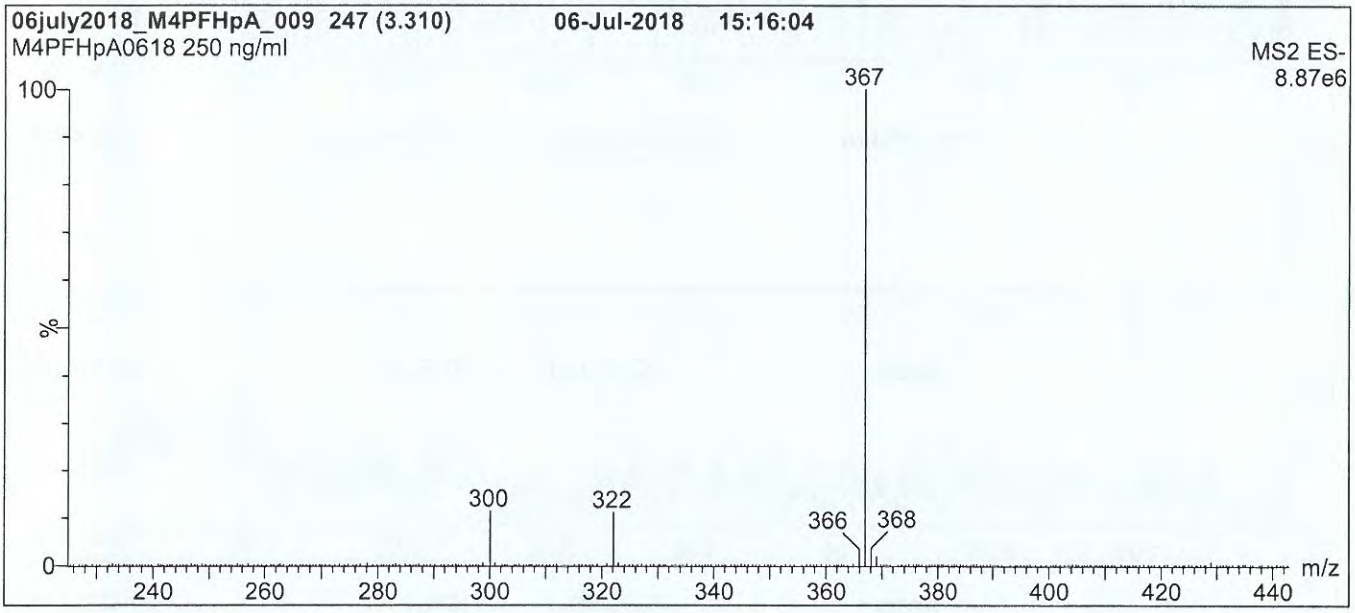
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2010

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 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

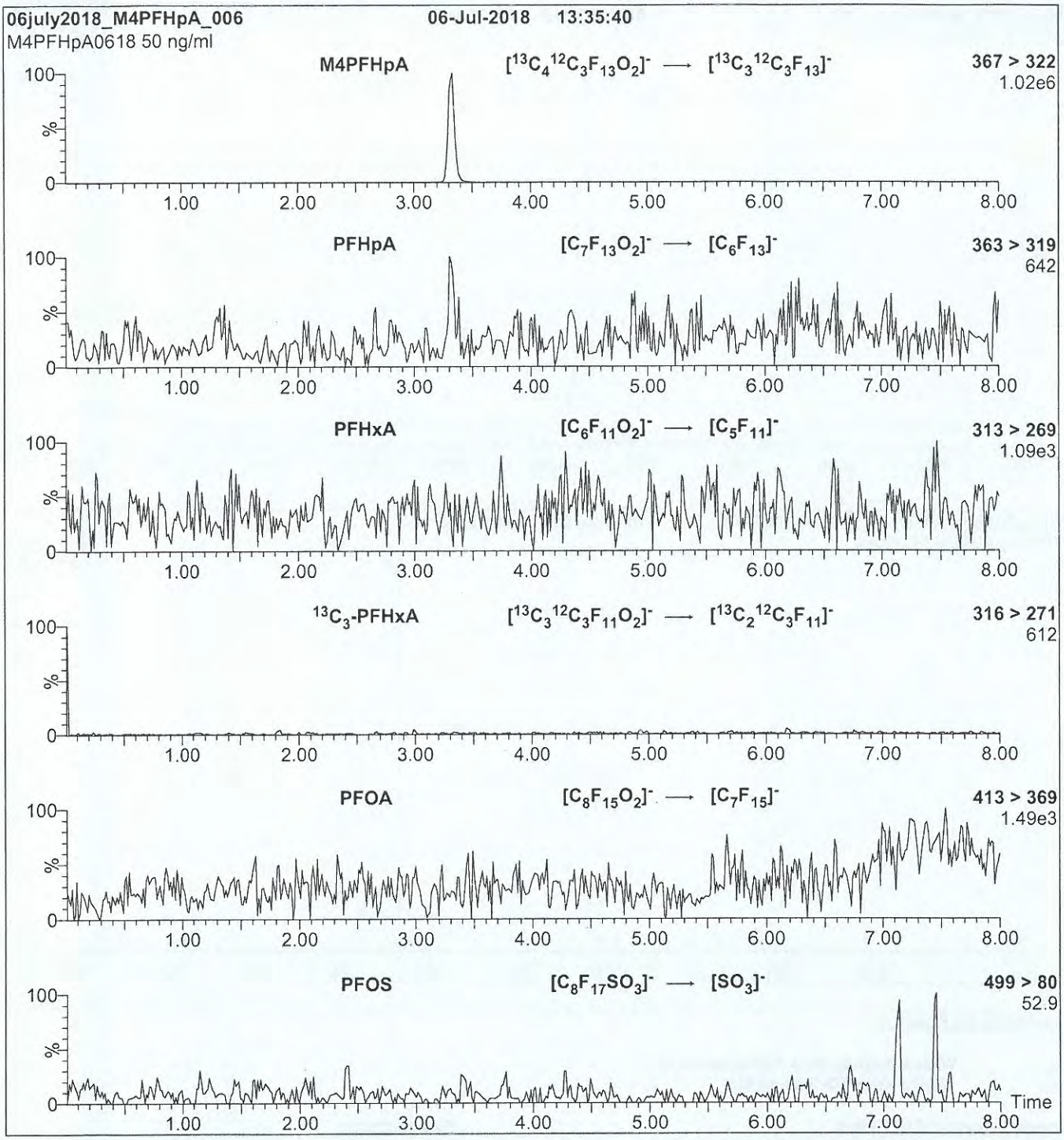
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1862010

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) = 3.89e-3
Collision Energy (eV) = 8

18L2011

WELLINGTON LABORATORIES

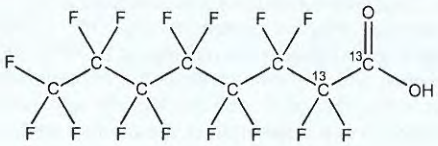
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2PFOA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid

LOT NUMBER: M2PFOA1018

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)	10/10/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/10/2023		
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 < 0.1% 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:** 10/17/2018 (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

18L2011

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 ISO17034 REFERENCE MATERIAL PRODUCER

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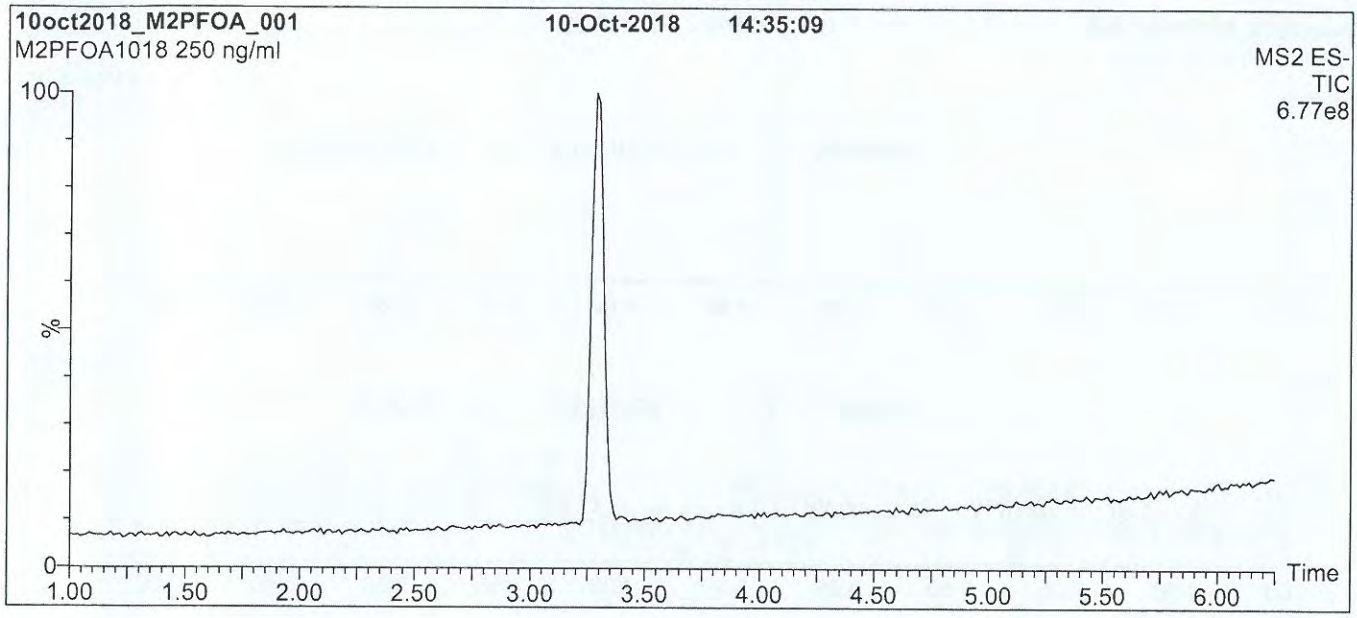
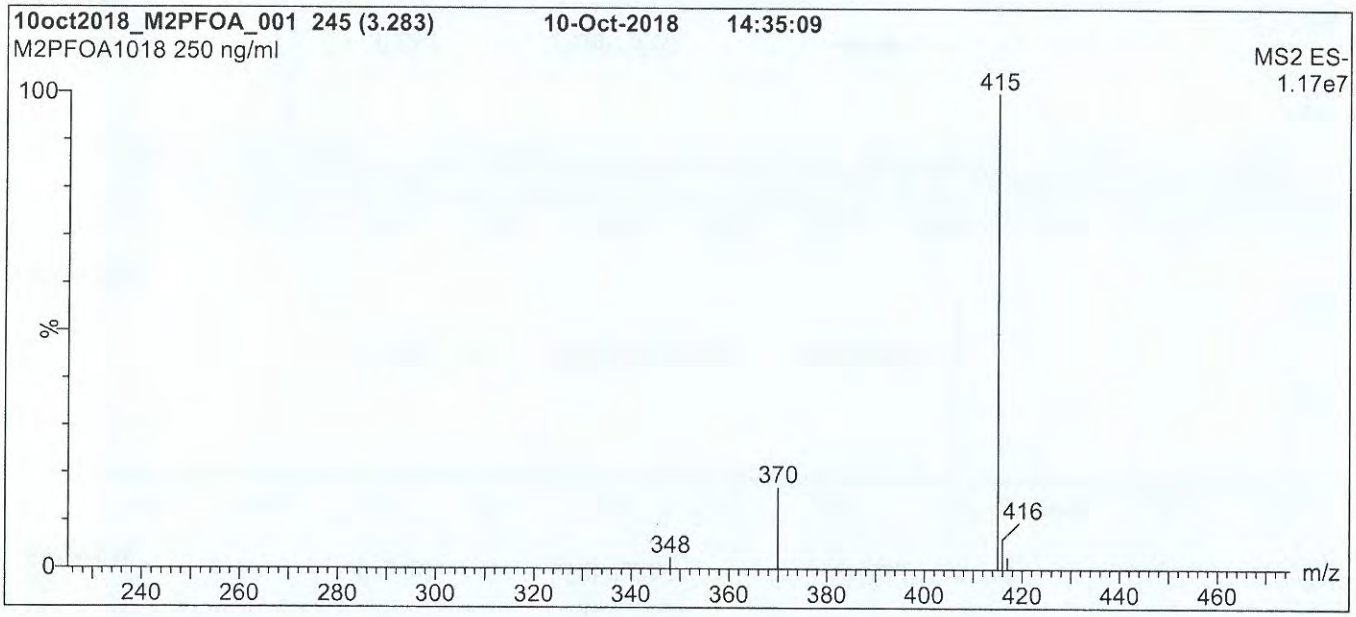
18L2011

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: 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

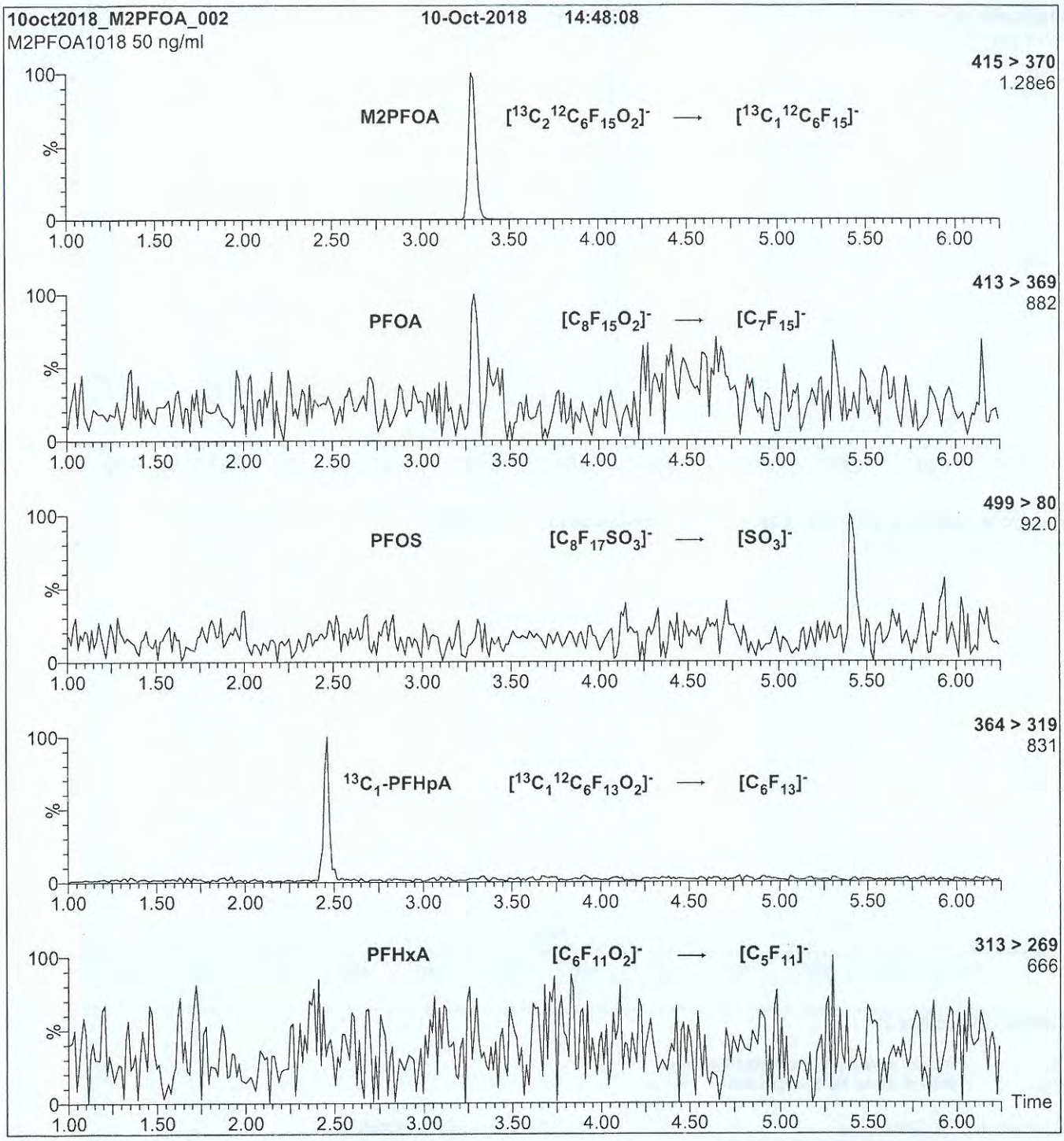
MS Parameters

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

1812011

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

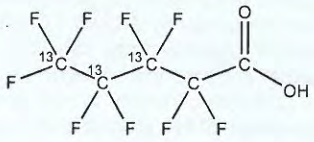
Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 8

1812012

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M3PFPeA	**LOT NUMBER:**	M3PFPeA0417
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)	04/20/2017		
EXPIRY DATE: (mm/dd/yyyy)	04/20/2022		
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 ~ 0.95% 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:** 04/24/2017 (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

18L2012

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,...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

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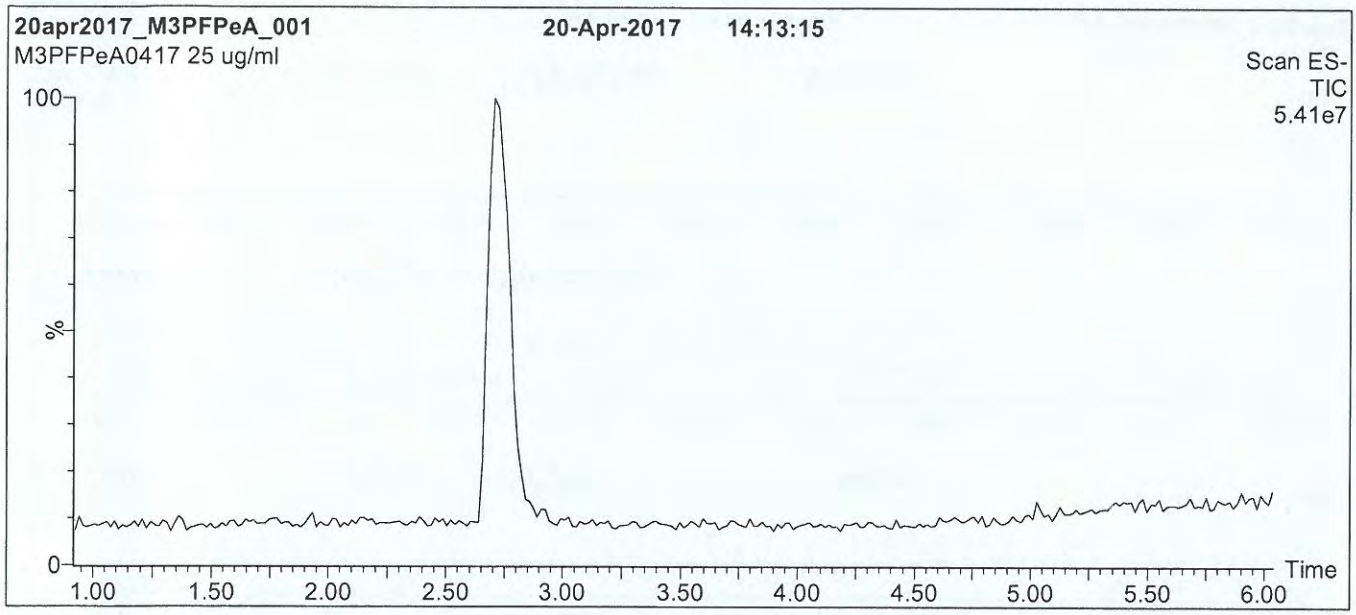
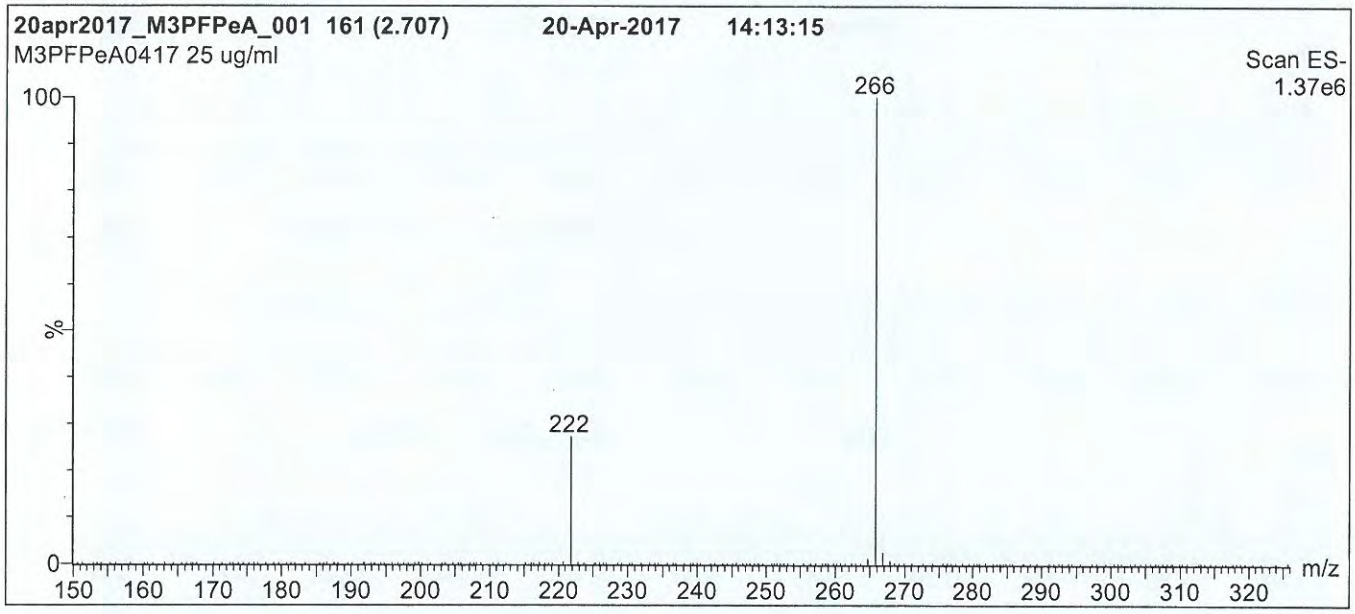
18L2012

Figure 1: **M3PFPeA; 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: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

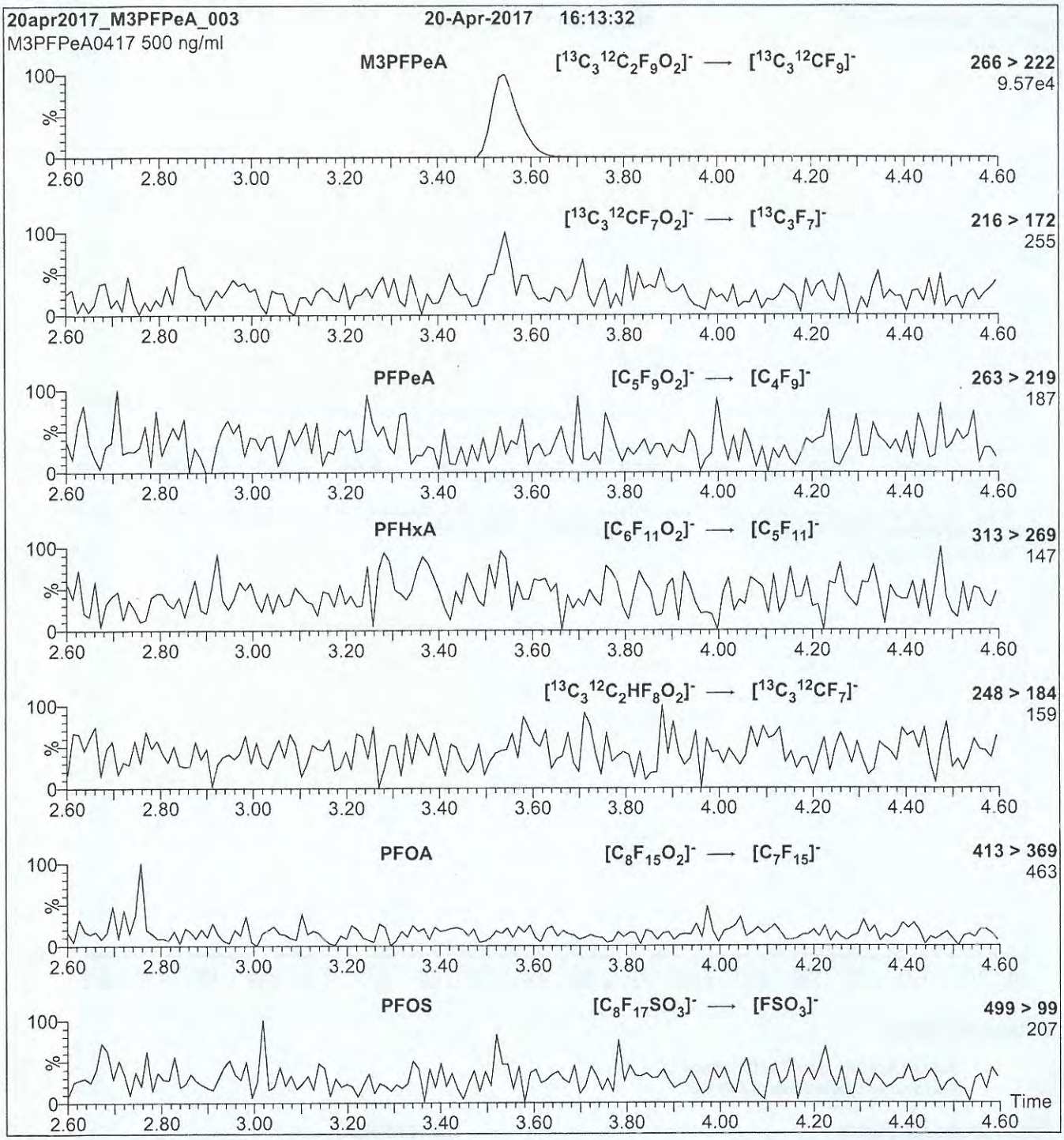
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

1&L2012

Figure 2: **M3PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M3PFPeA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

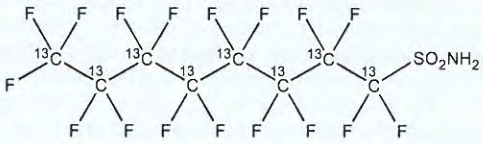
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 9

18L2013

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8FOSA-I	**LOT NUMBER:**	M8FOSA1018I
COMPOUND:	Perfluoro-1-[$^{13}C_8$]octanesulfonamide		
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)	10/10/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/10/2023		
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 ~ 1.1% of perfluoro-1-[$^{13}C_4$]octanesulfonamide, ~ 0.5% of perfluoro-n-[$^{13}C_8$]octanoic acid (M8PFOA), and ~ 0.02% of perfluoro-1-[$^{13}C_7$]heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/15/2018 (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

1812013

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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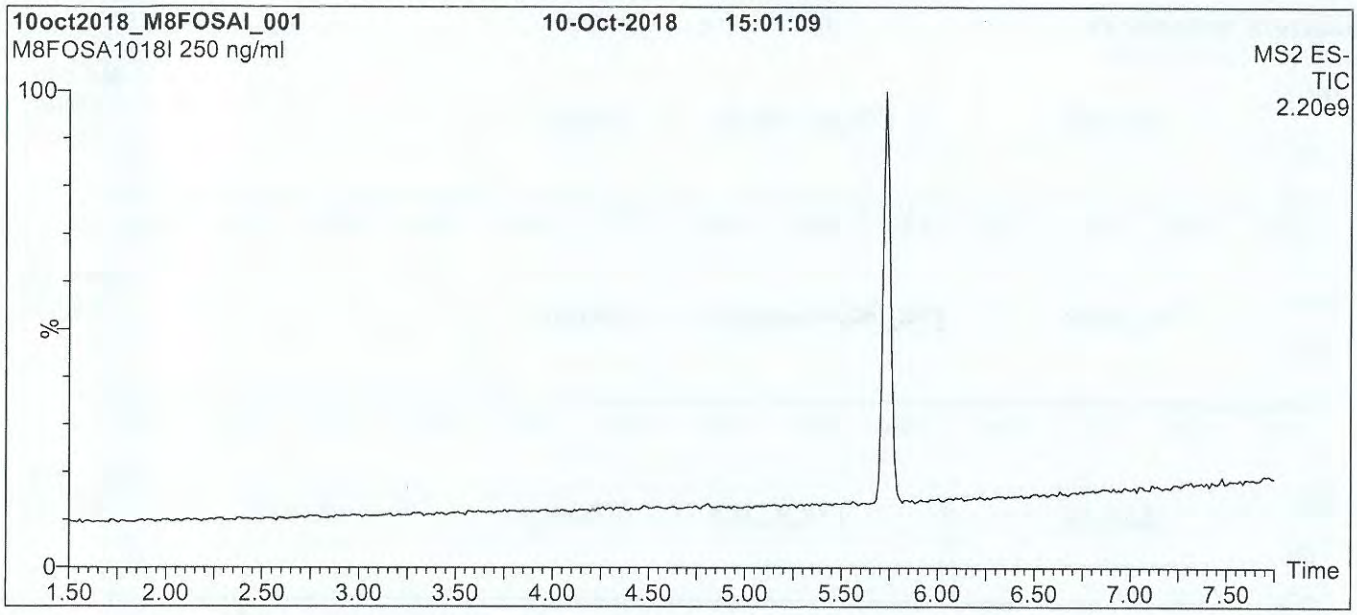
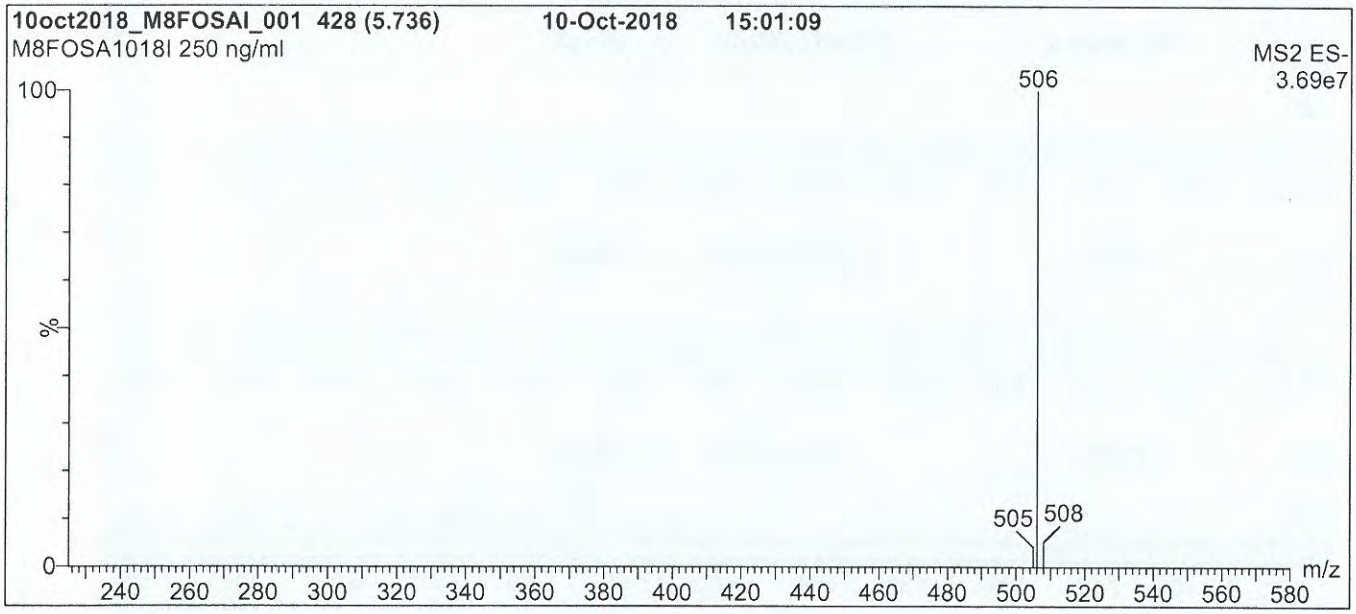
18L2013

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

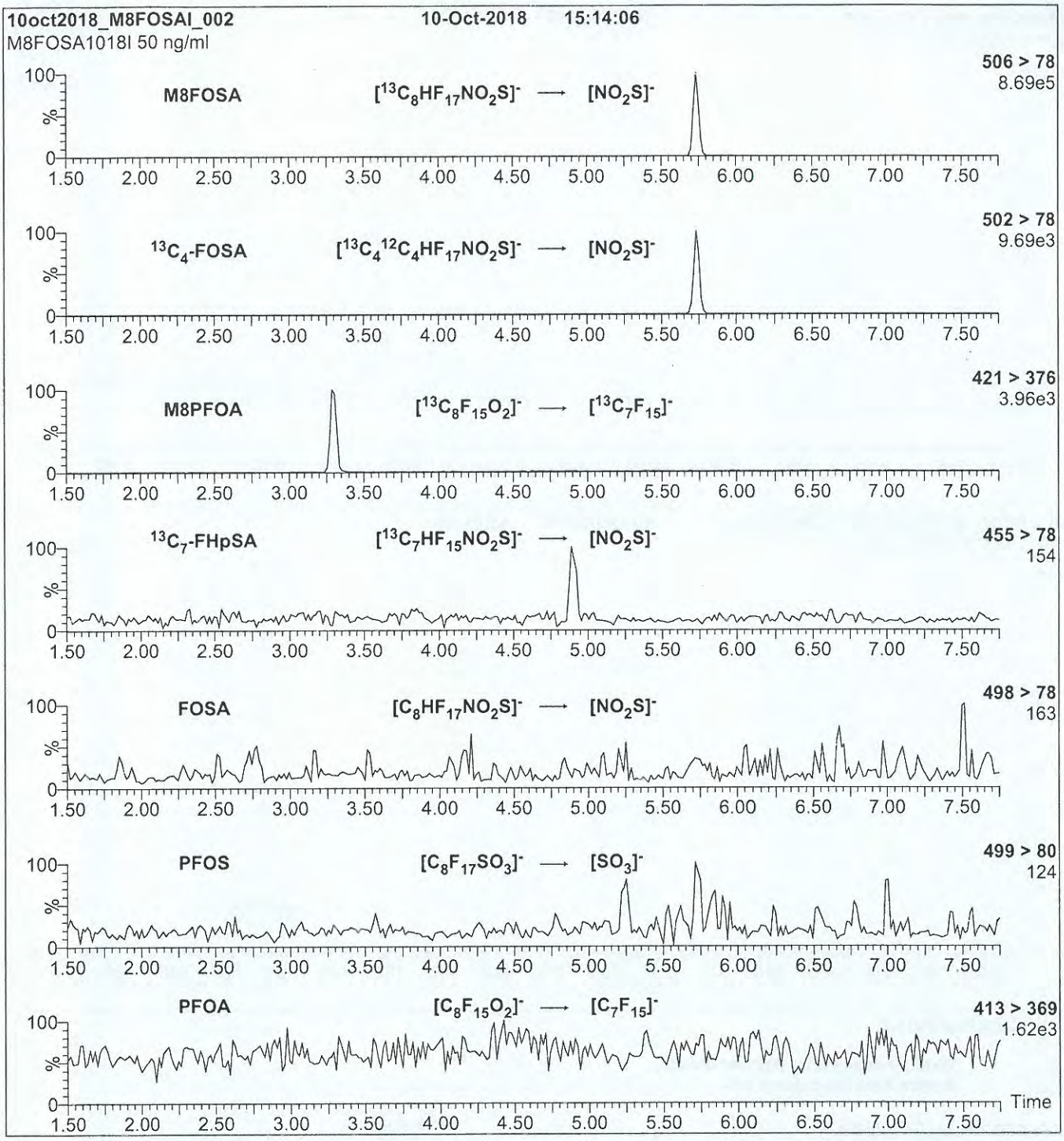
MS Parameters

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

18L2013

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) = 2.97e-3
Collision Energy (eV) = 30

18L2014

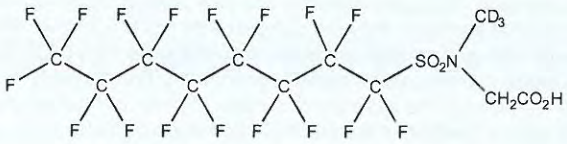
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA0818

COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



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)	08/23/2018		
EXPIRY DATE: (mm/dd/yyyy)	08/23/2023		
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:** 08/24/2018 (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

18L2014

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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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).

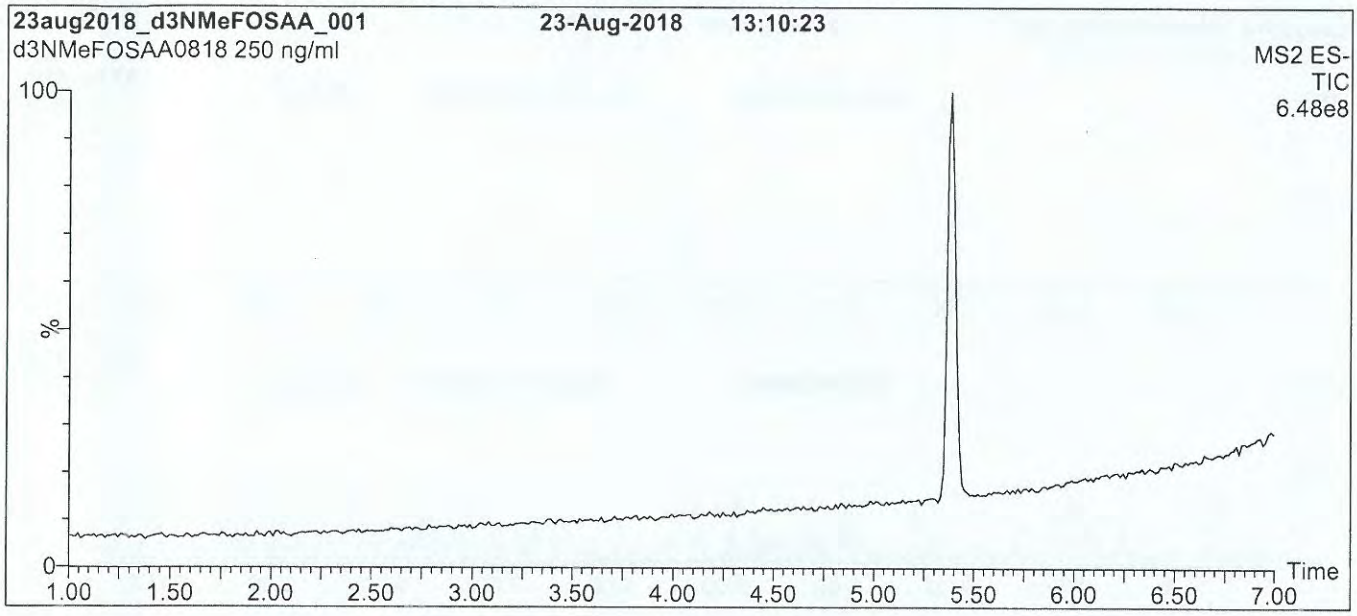
CALA Testing Accreditation No. A 1226

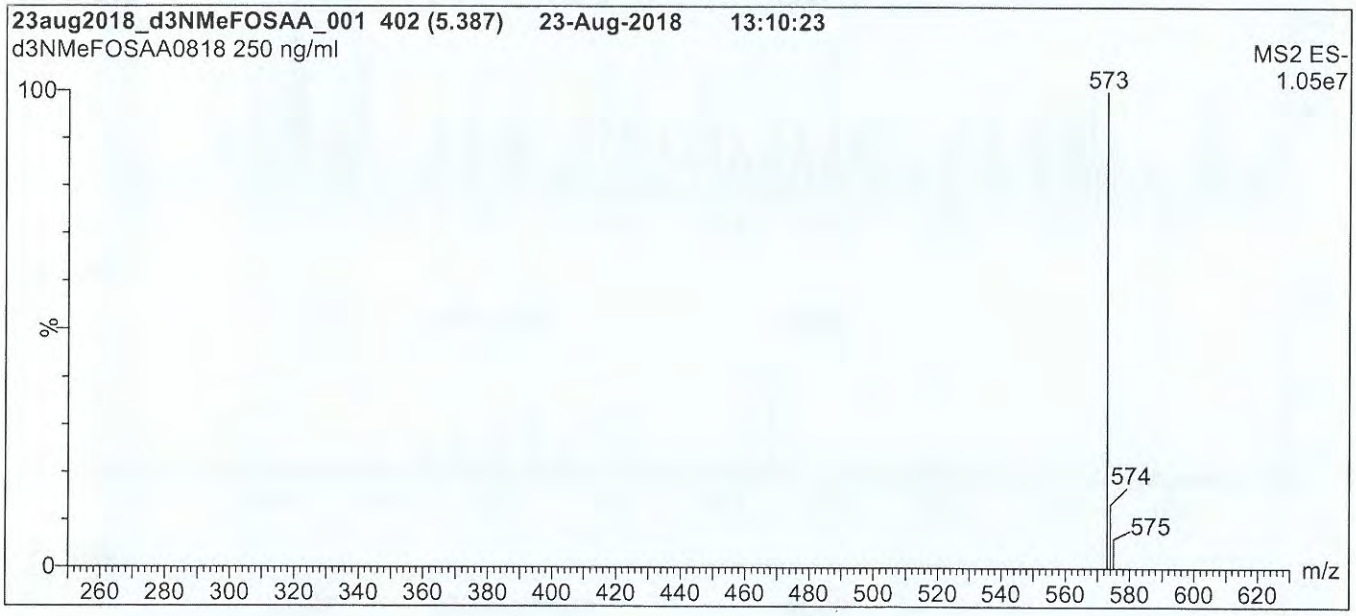
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2014

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: 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

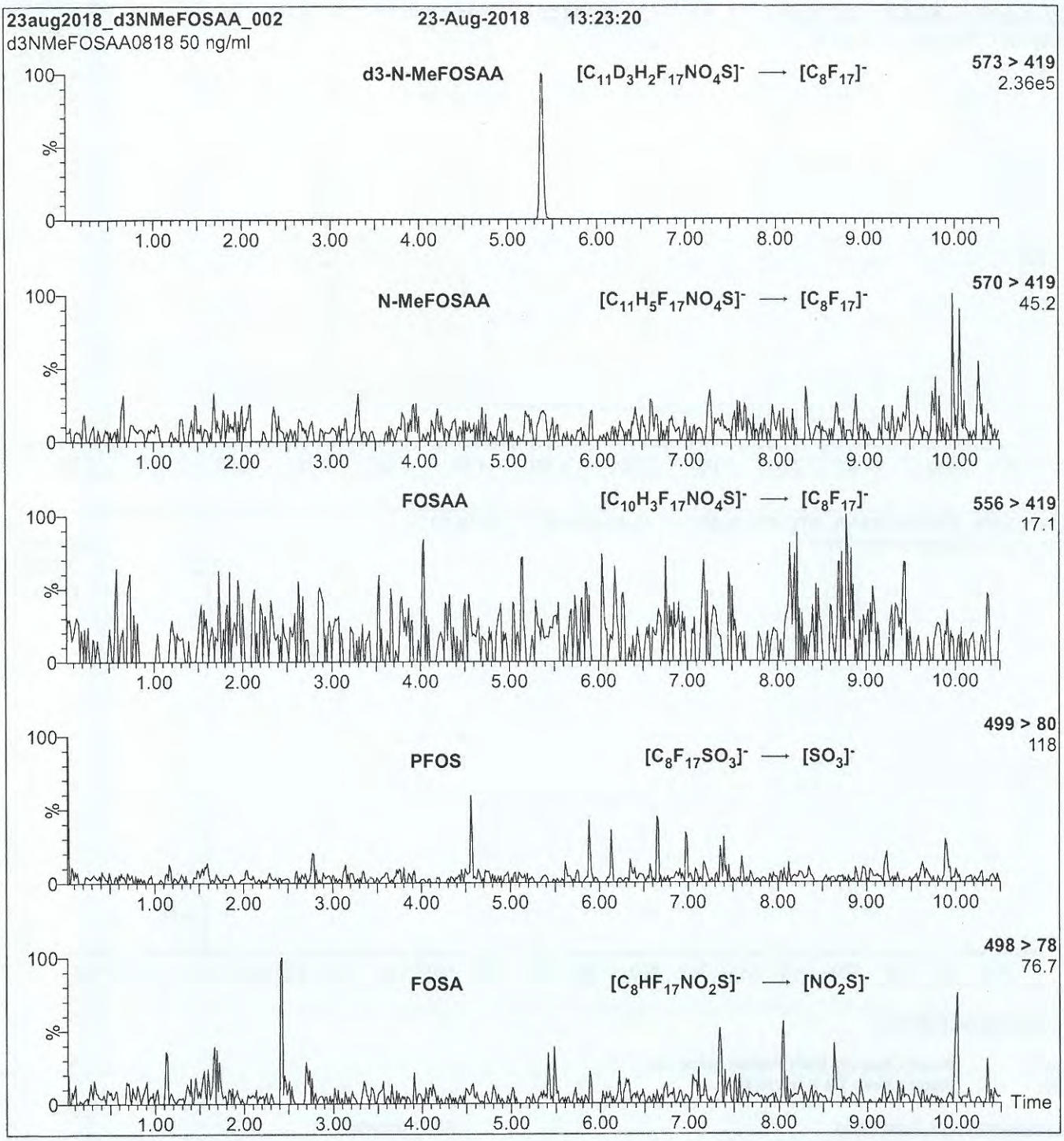
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

18L2014

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

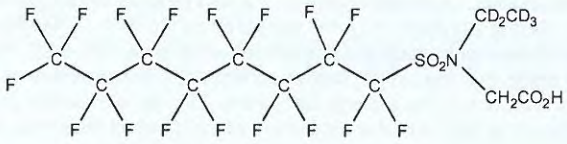
Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 18

18L2015

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	d5-N-EtFOSAA	**LOT NUMBER:**	d5NEtFOSAA0818
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)	08/23/2018		
EXPIRY DATE: (mm/dd/yyyy)	08/23/2023		
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:** 08/28/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

18L2015

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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EXPIRY DATE / PERIOD OF VALIDITY:

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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).

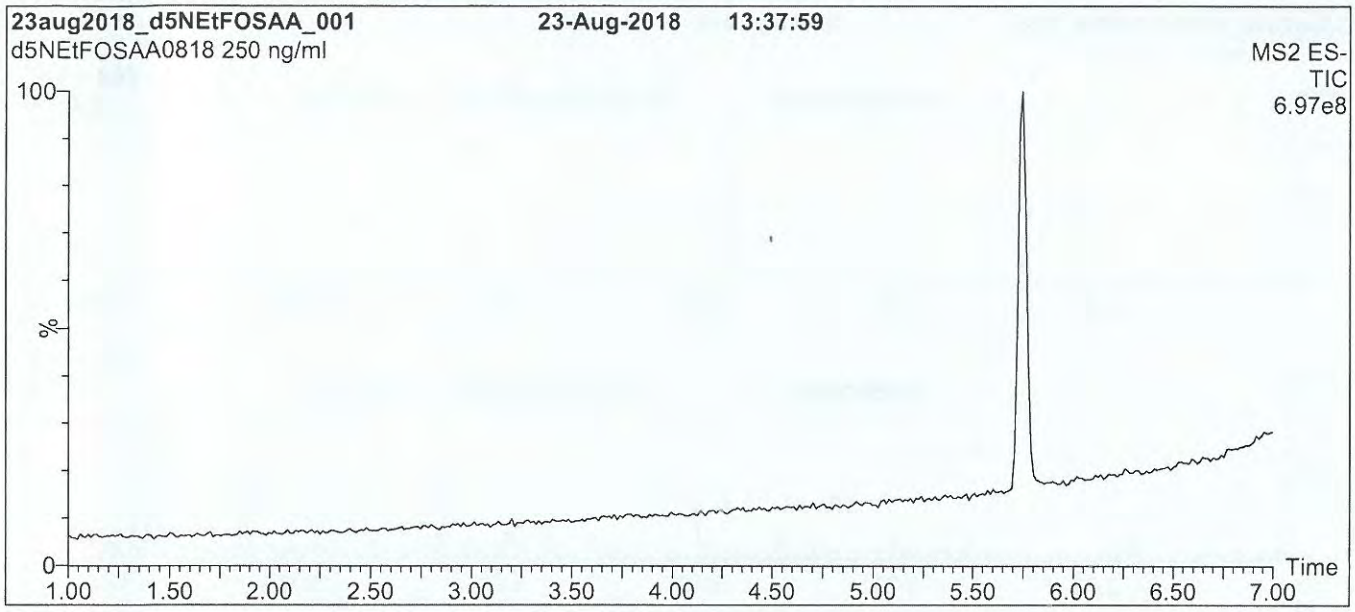
CALA Testing Accreditation No. A1226

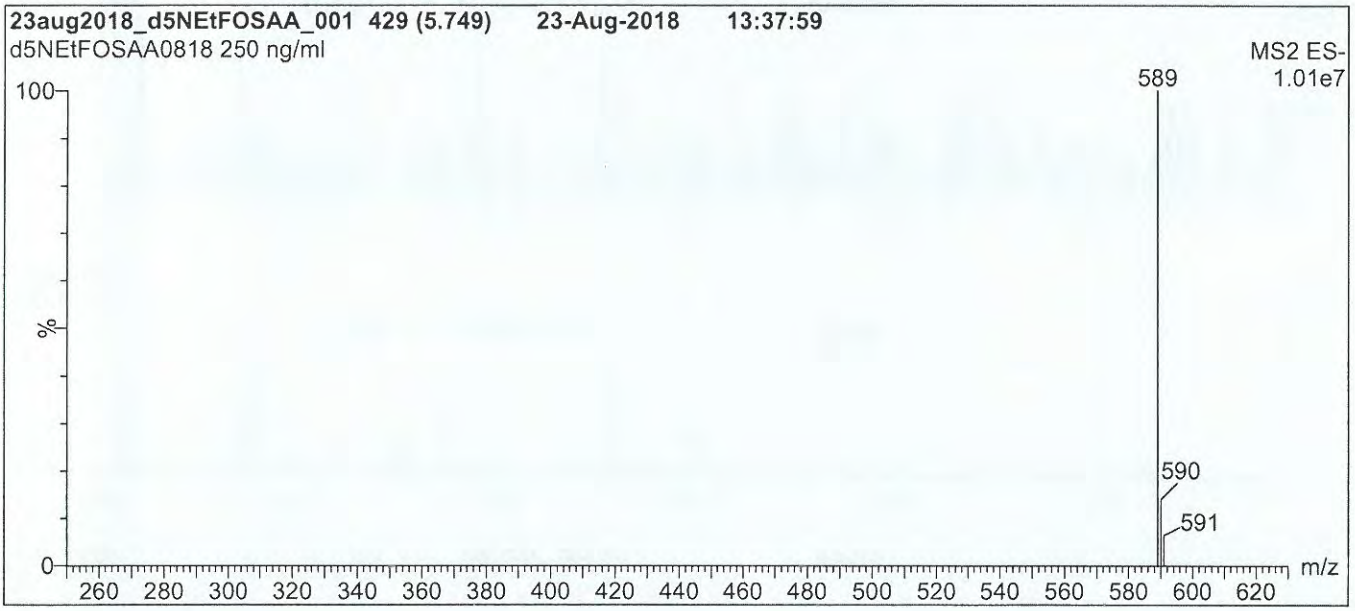
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812015

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: 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

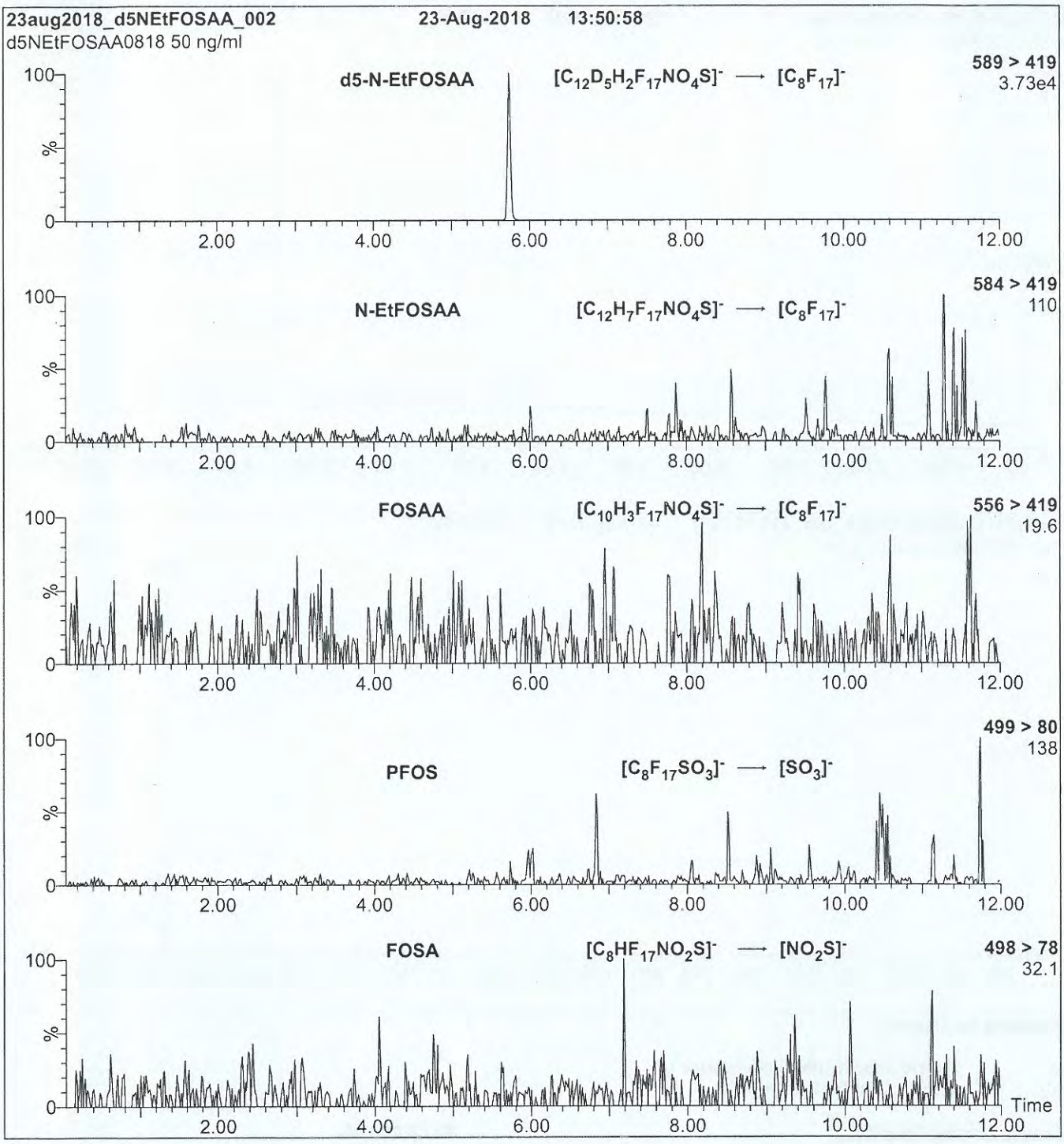
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

18L2015

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) = 3.43e-3
Collision Energy (eV) = 18

18L2016

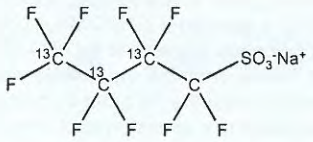
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFBS **LOT NUMBER:** M3PFBS1218

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)	12/10/2018		
EXPIRY DATE: (mm/dd/yyyy)	12/10/2023		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 12/13/2018 (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

18L2016

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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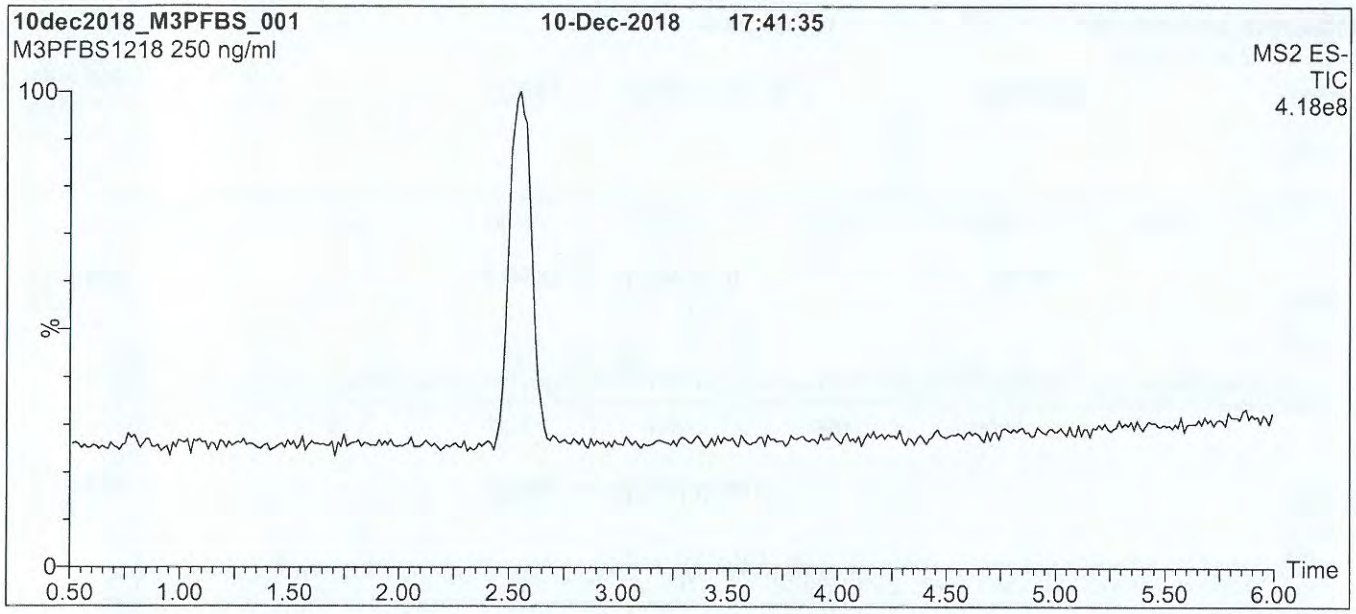
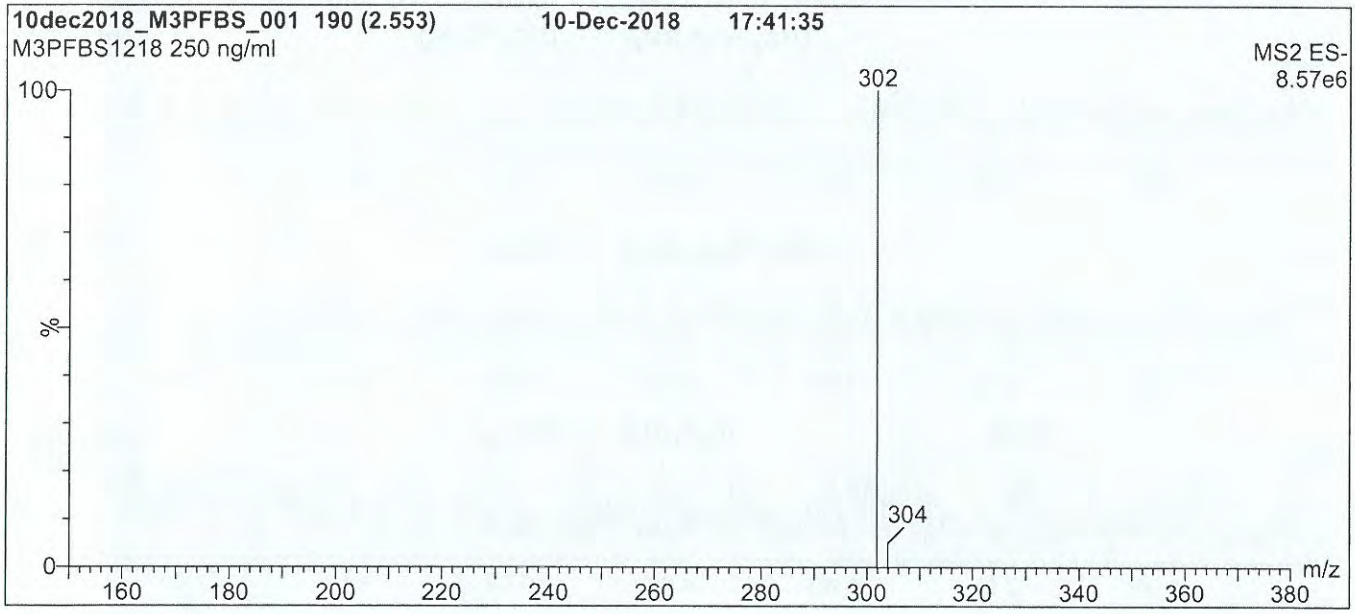
18L2016

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: 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

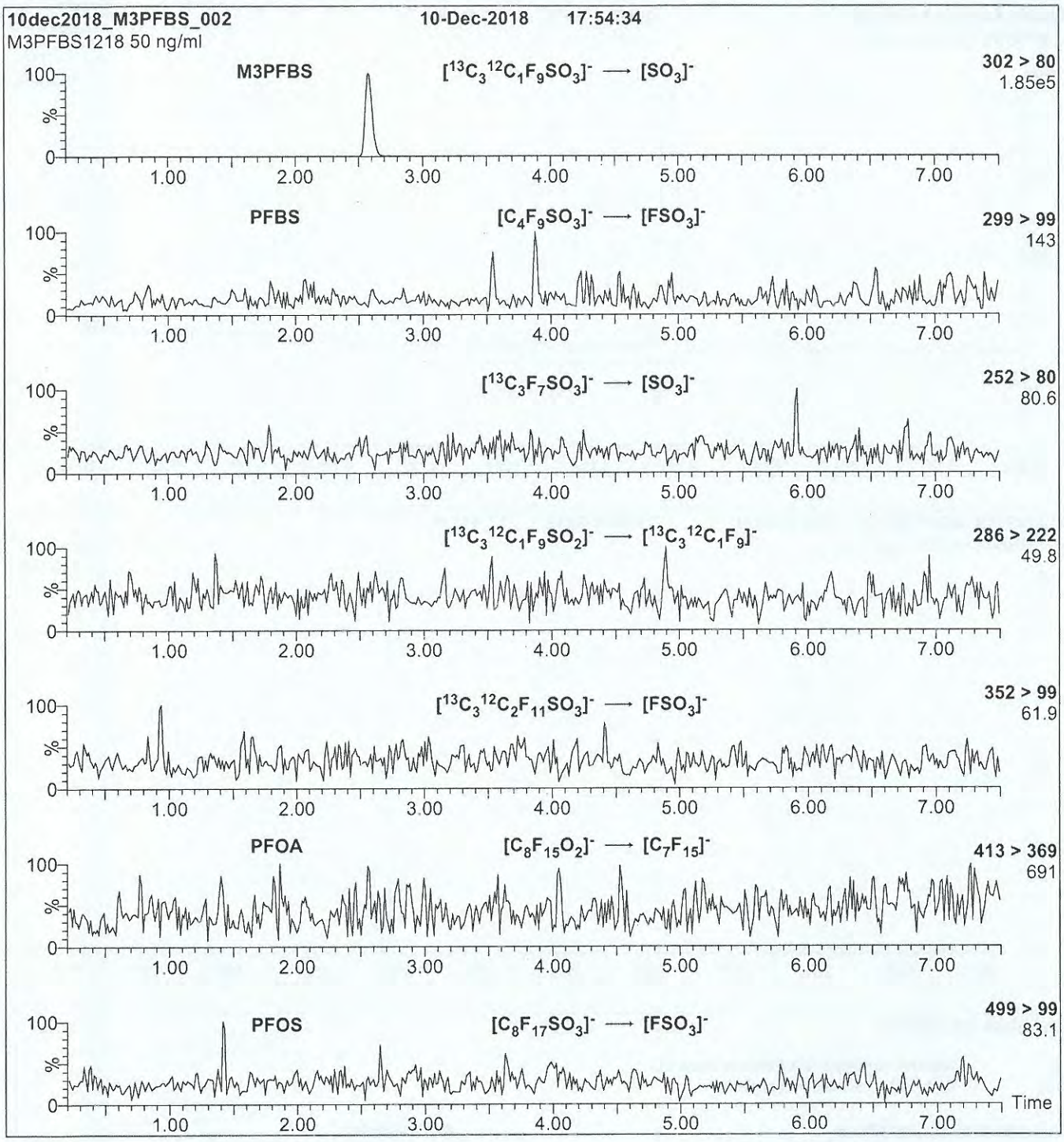
MS Parameters

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

18L2016

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

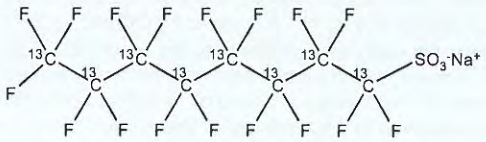
Collision Gas (mbar) = 2.90e-3
Collision Energy (eV) = 30

1812017

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8PFOS	**LOT NUMBER:**	M8PFOS0918
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)	09/20/2018		
EXPIRY DATE: (mm/dd/yyyy)	09/20/2023		
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 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:** 09/24/2018 (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

18L2017

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).

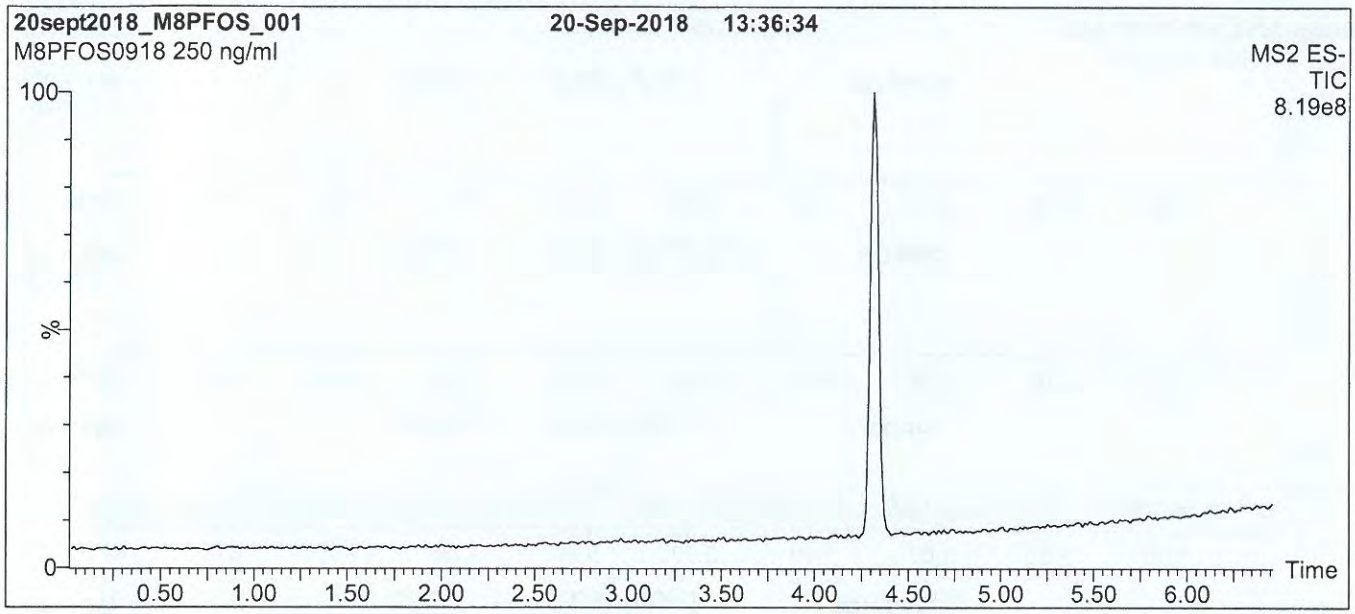
CALA Testing Accreditation No. A 1226

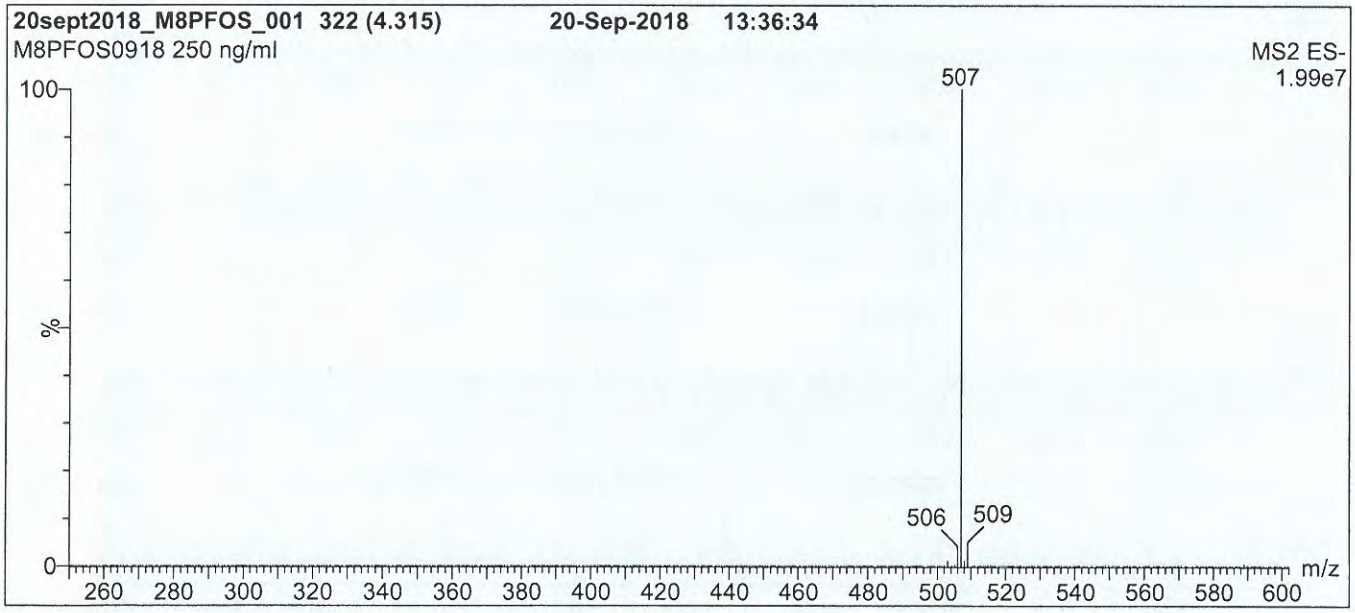
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812017

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: 12 min

Flow: 300 µl/min

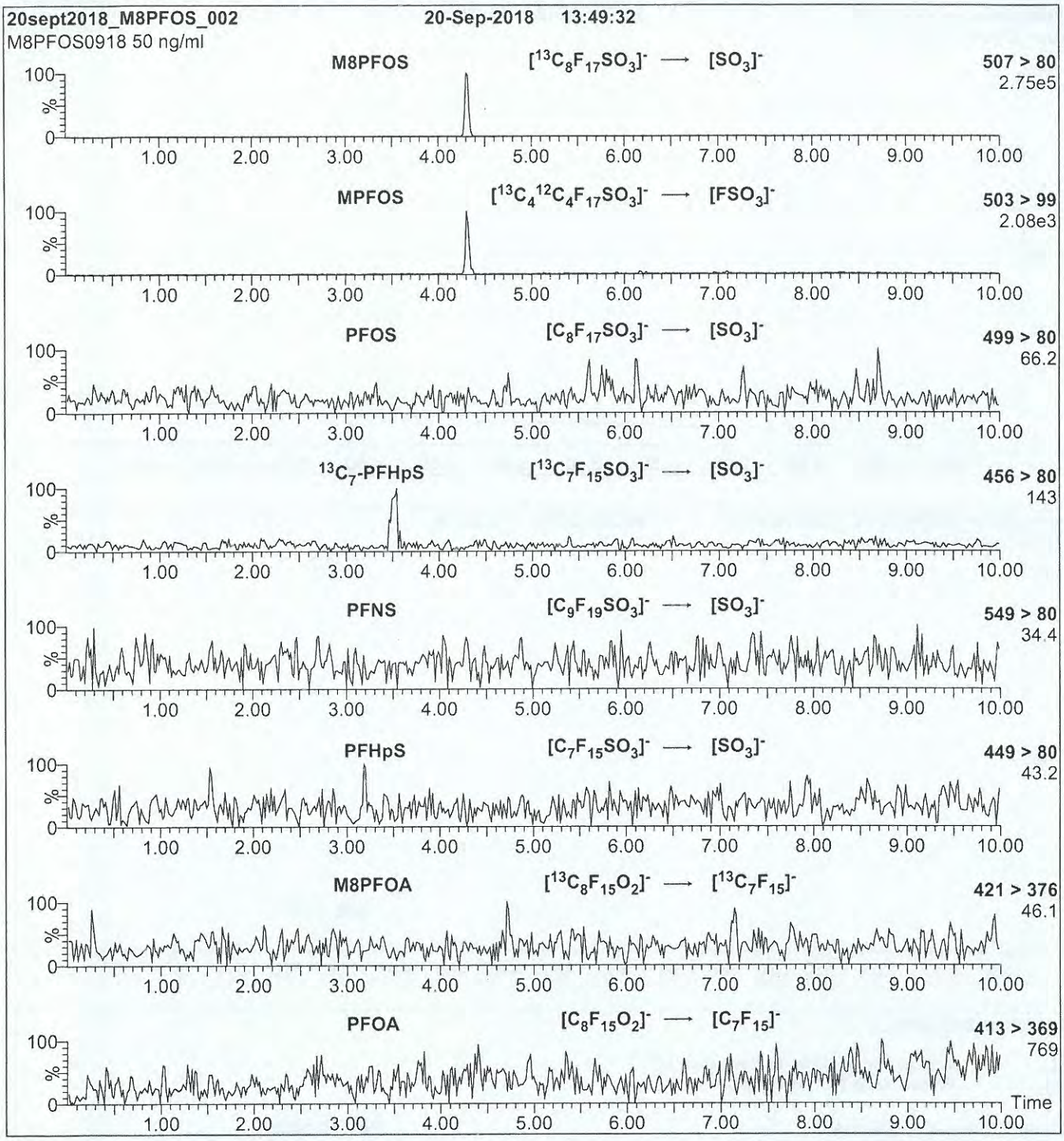
MS Parameters

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

18L2017

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) = 2.97e-3
Collision Energy (eV) = 42

18L2019

WELLINGTON LABORATORIES

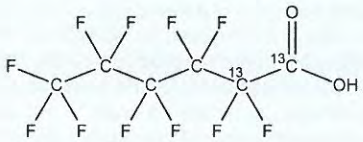
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFHxA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

LOT NUMBER: MPFHxA0518

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)	05/22/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/22/2023		
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 < 0.1% of perfluoro-n-hexanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/30/2018 (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

1812019

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:

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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).

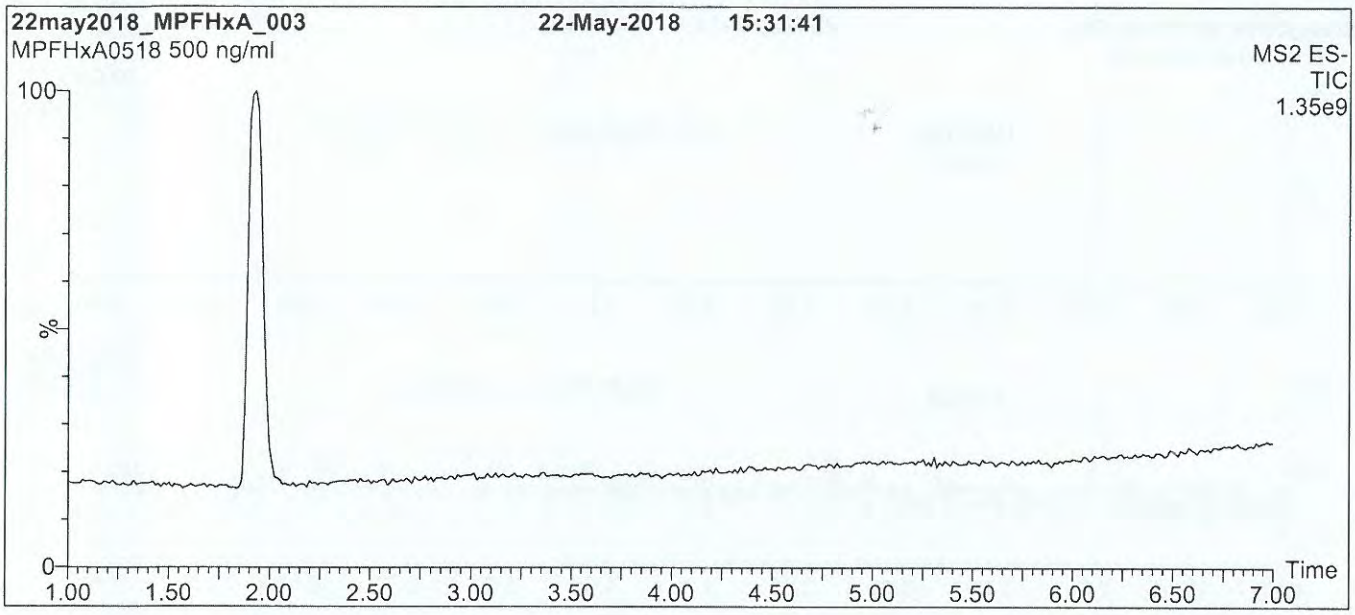
CALA Testing Accreditation No. A 1226

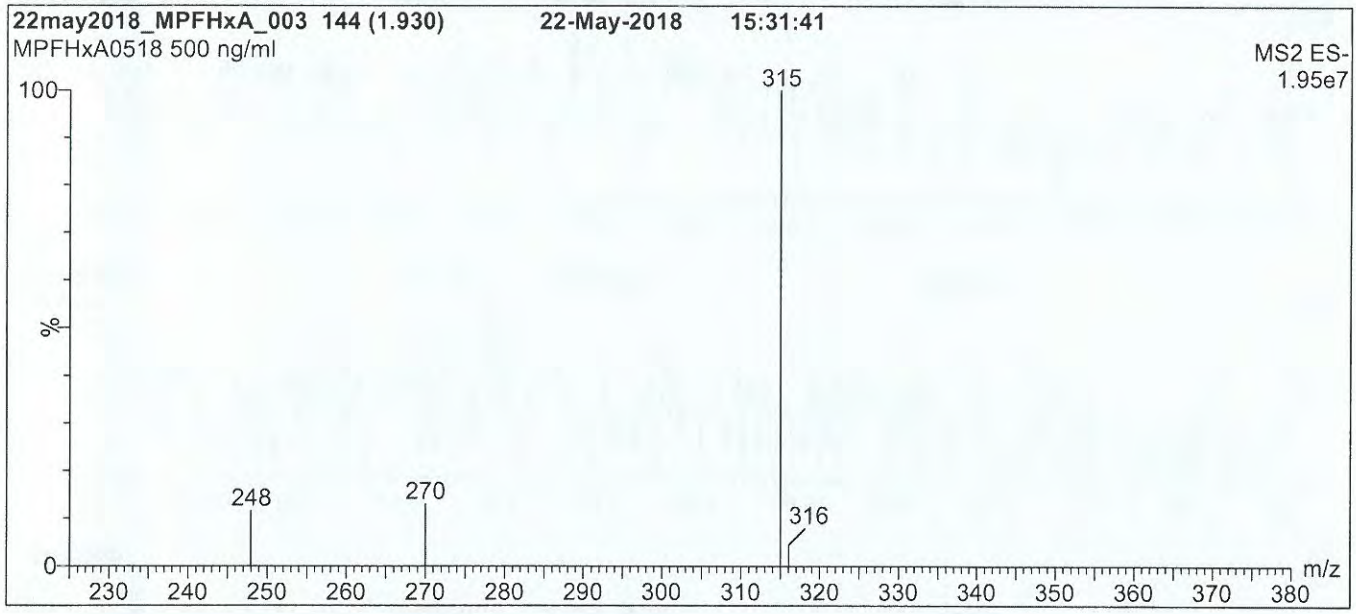
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2019

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 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

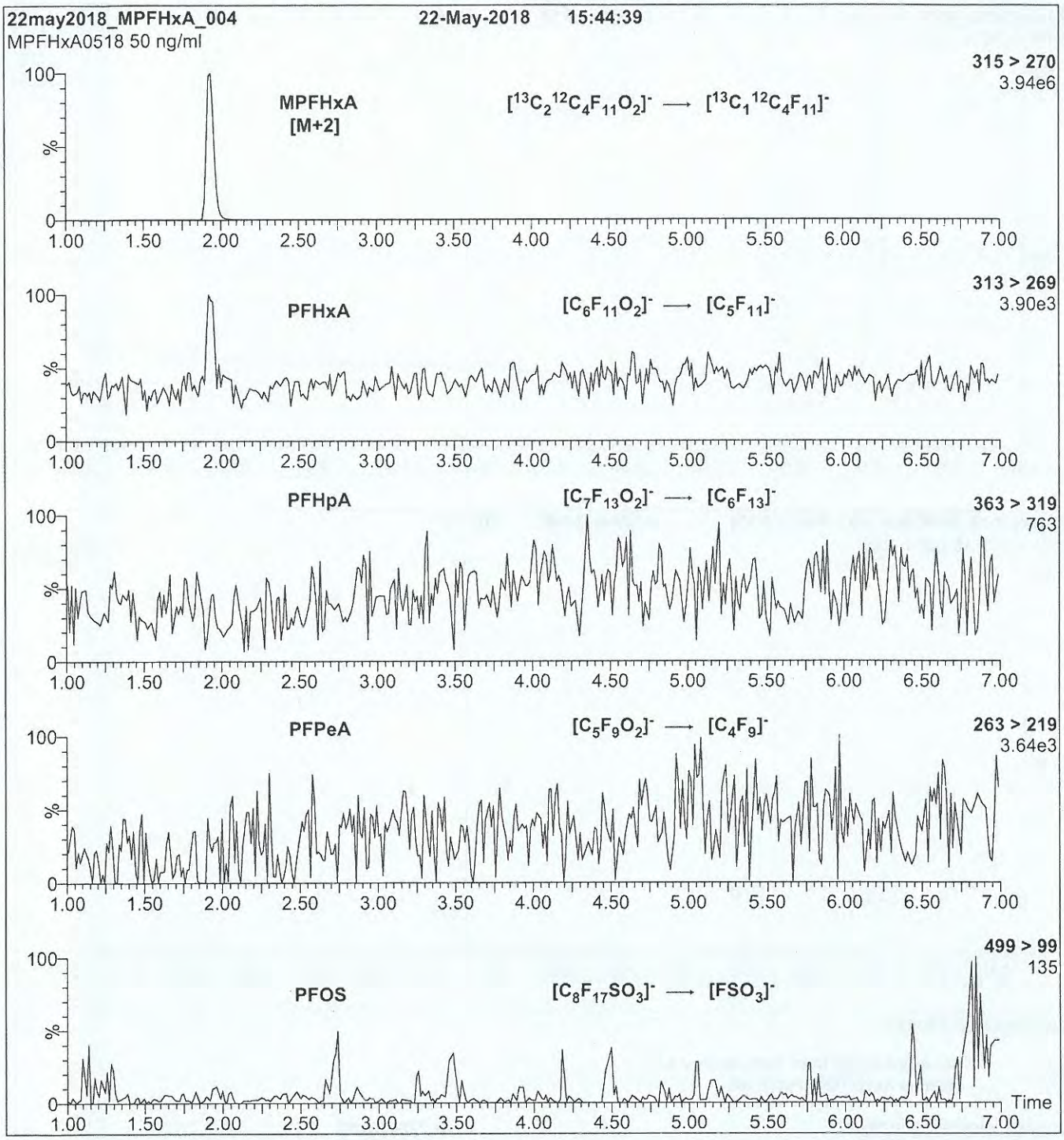
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2019

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

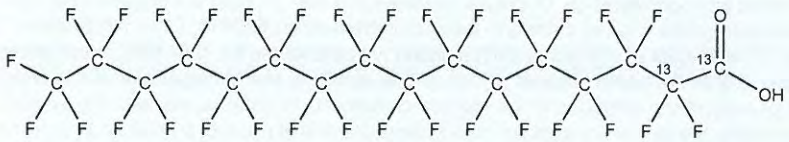
Collision Gas (mbar) = 3.55e-3
Collision Energy (eV) = 8

1812020

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

18L2020

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:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

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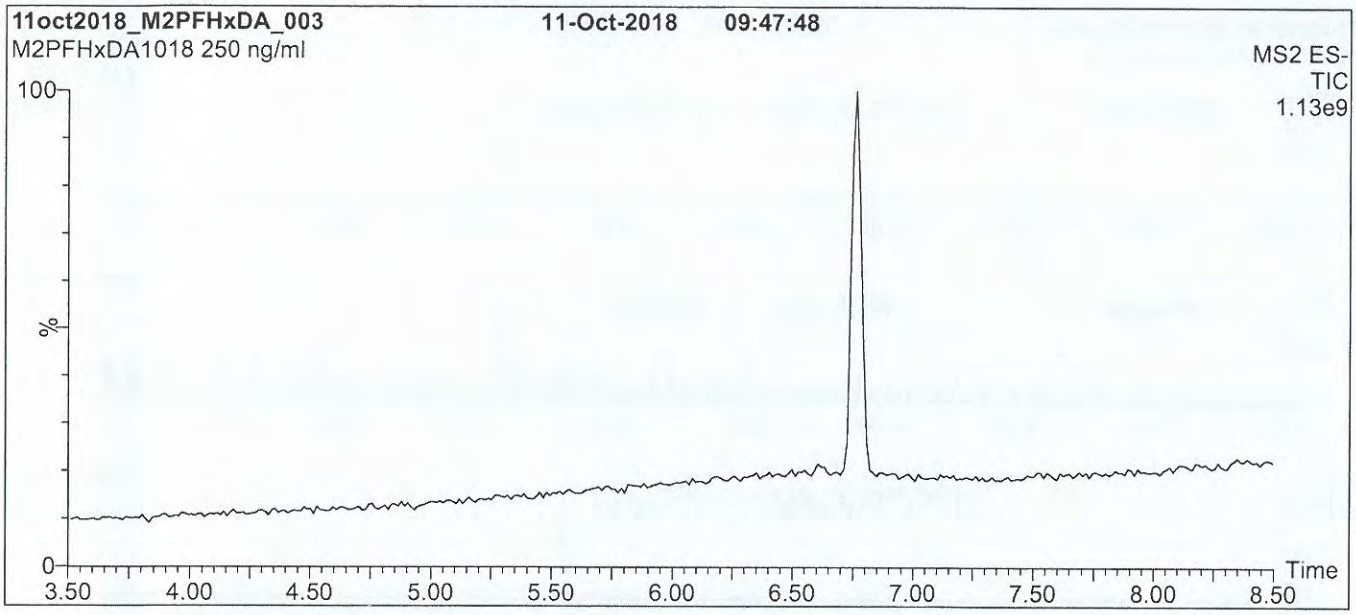
CALA Testing Accreditation No. A1226

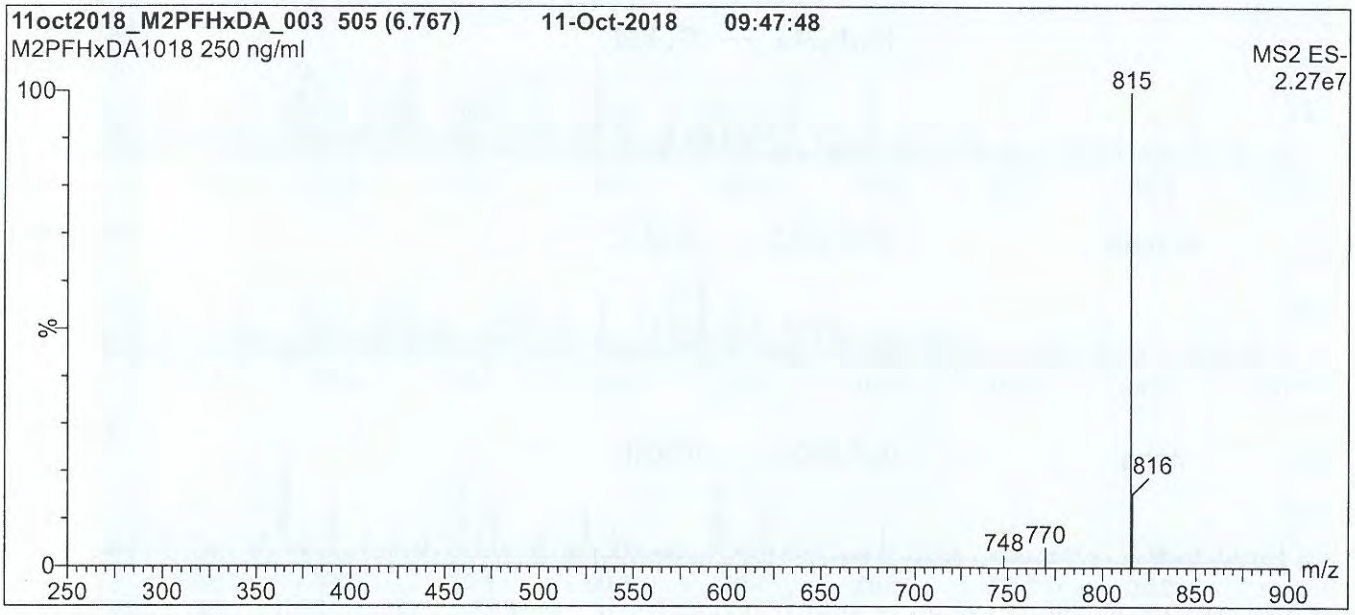
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2020

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

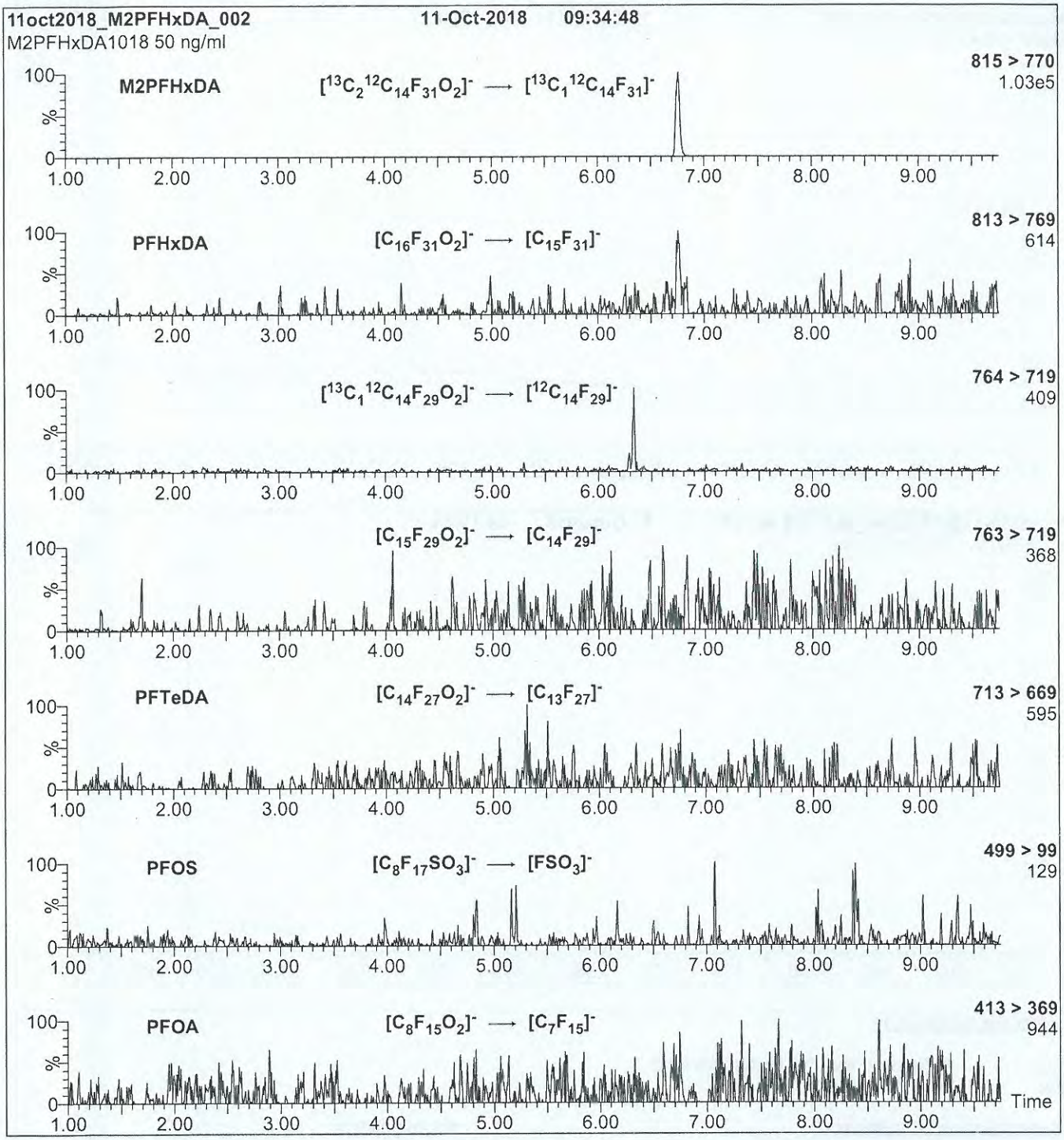
MS Parameters

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

18L2020

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

1812027

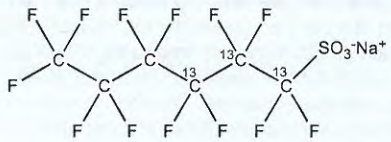
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3PFHxS **LOT NUMBER:** M3PFHxS0618

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)	06/20/2018		
EXPIRY DATE: (mm/dd/yyyy)	06/20/2023		
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 ~ 0.1% 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:** 06/29/2018 (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

1812027

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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).

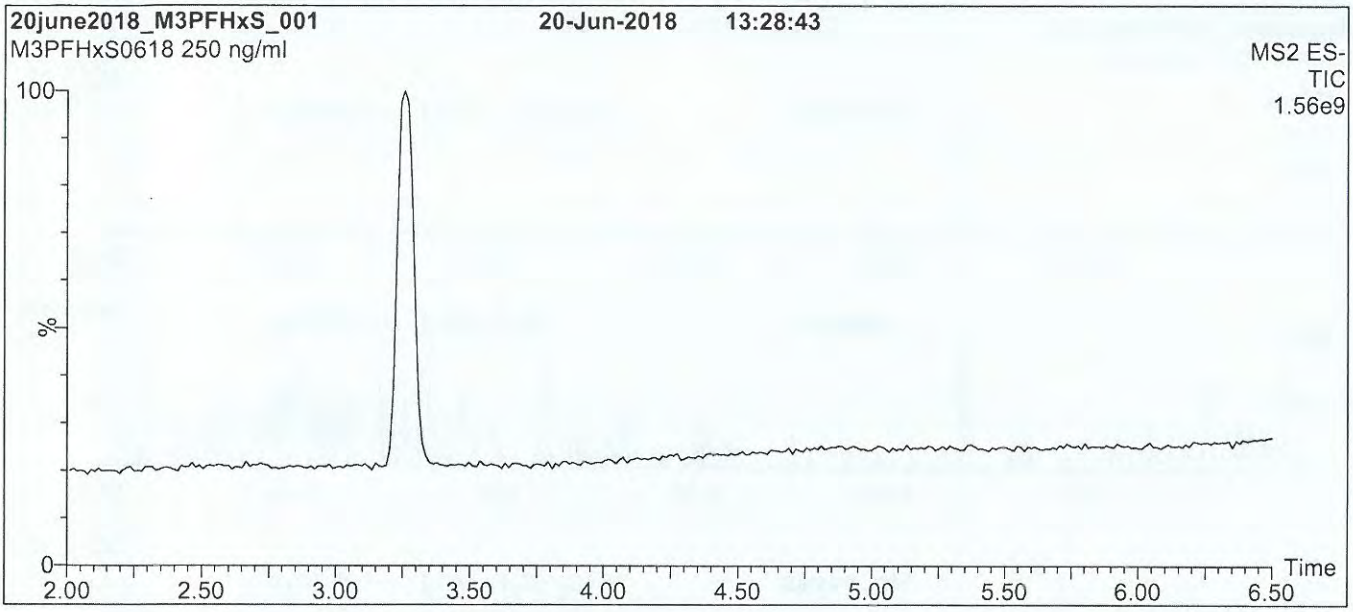
CALA Testing Accreditation No. A 1226

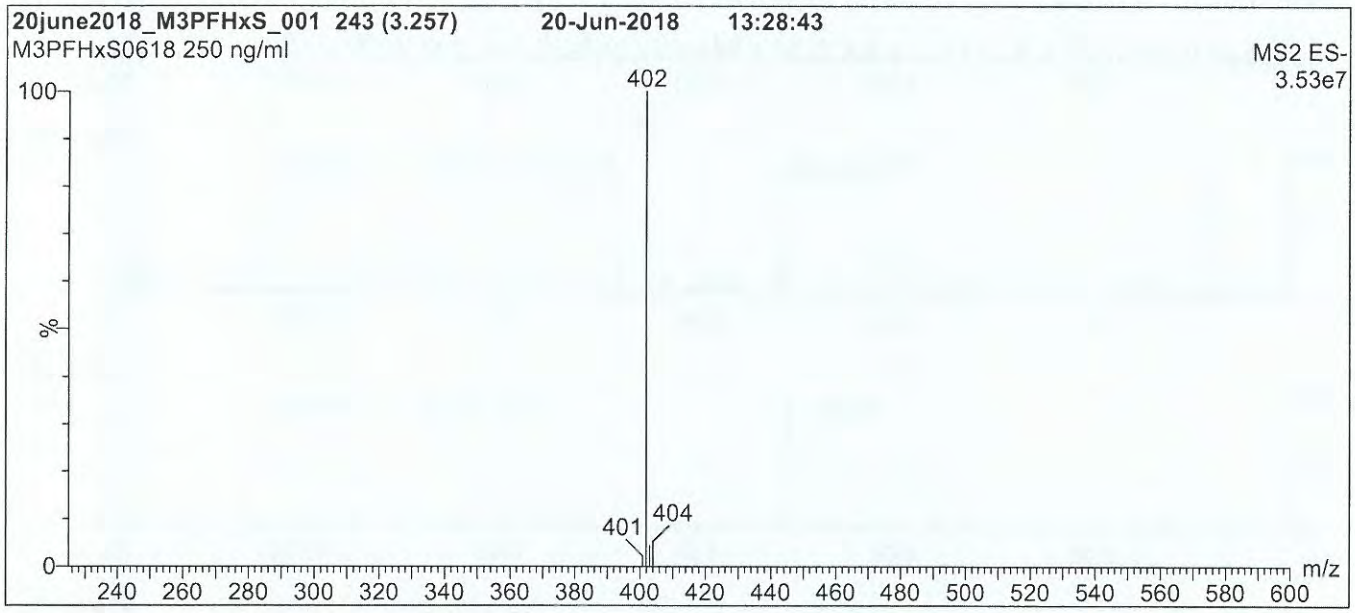
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812027

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: 50% (80:20 MeOH:ACN) / 50% 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

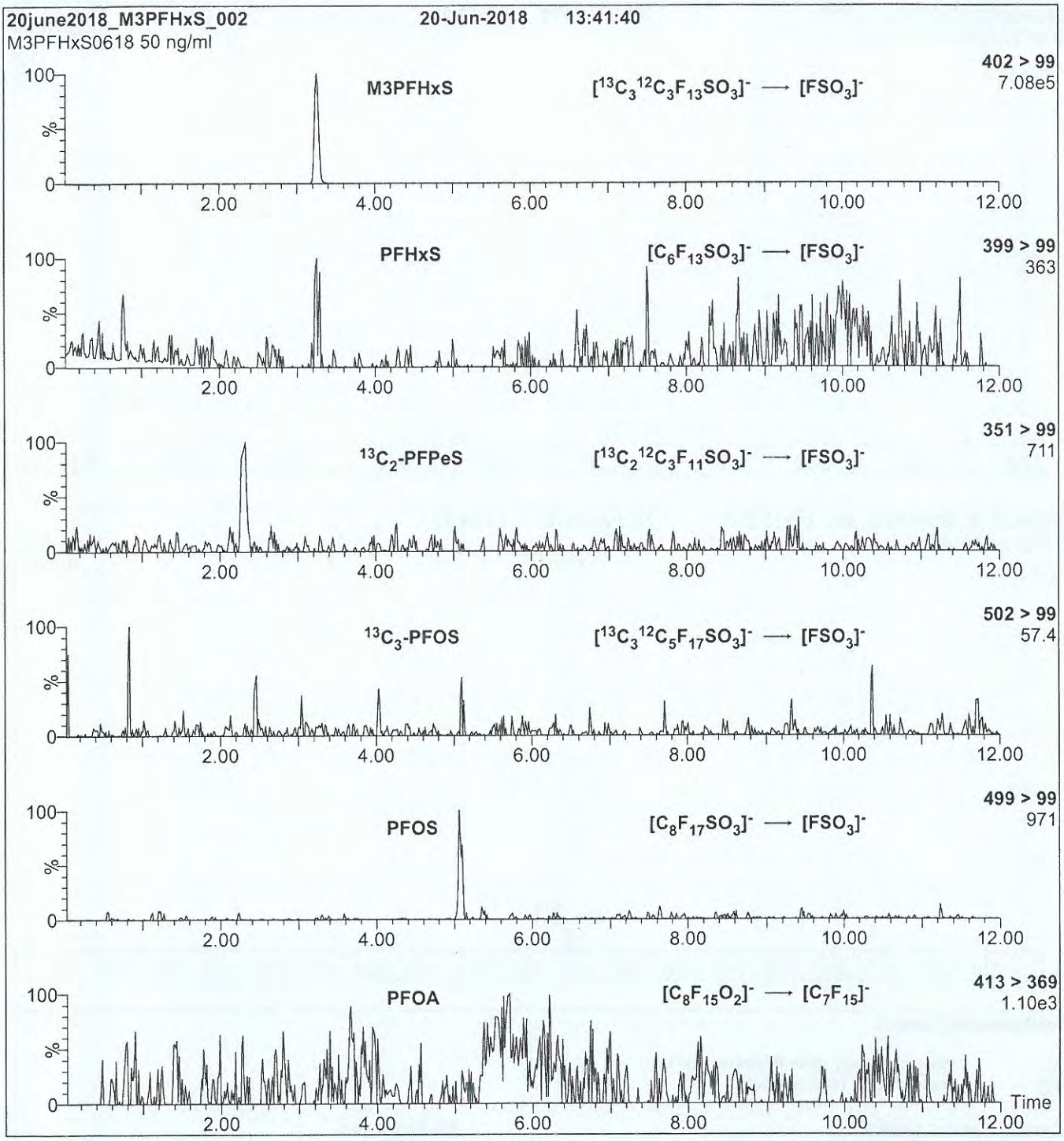
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2027

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) = 3.43e-3
Collision Energy (eV) = 36

1812077

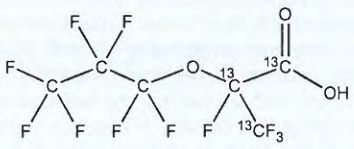
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA1018

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)	10/24/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/24/2021		
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 ~ 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:** 10/31/2018 (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

18L2077

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.

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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

18L2077

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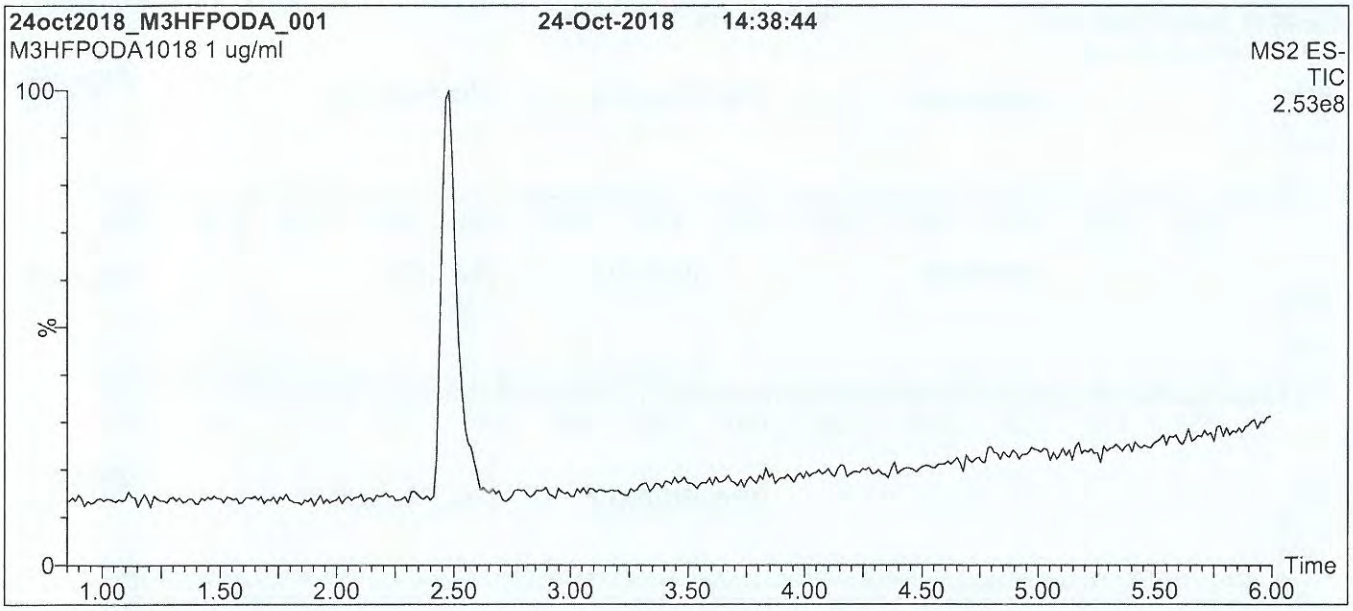

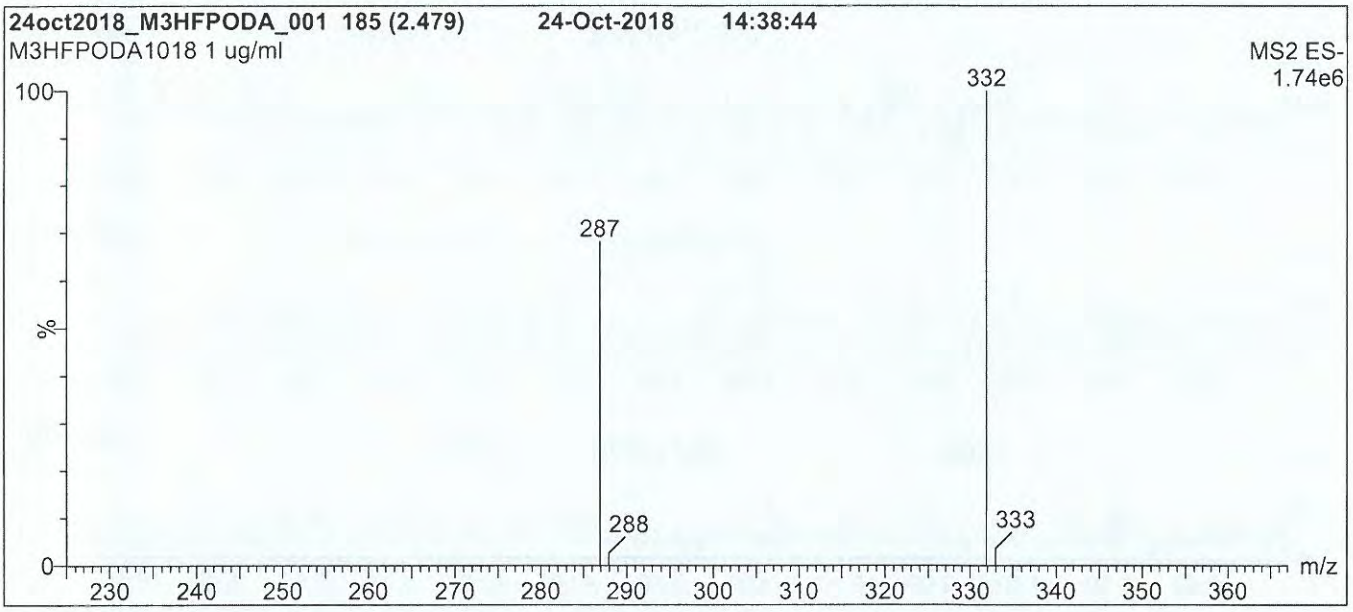

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Start: 45% (80:20 MeOH:ACN) / 55% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

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

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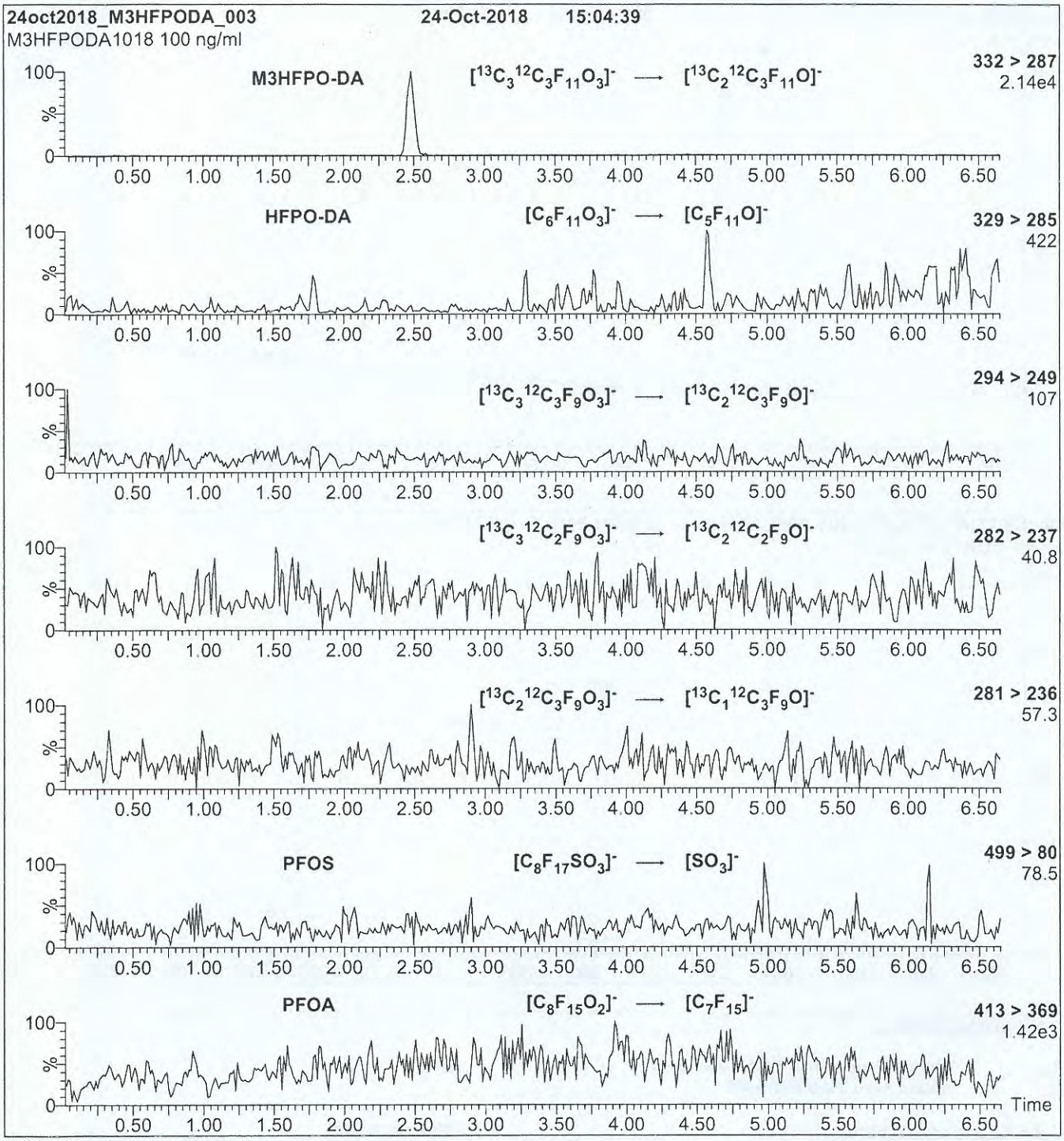
Figure 2: **M3HFPO-DA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (M3HFPO-DA)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.02e-3
Collision Energy (eV) = 6

Analytical Standard Record

Vista Analytical Laboratory

19E2204

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	(mls)
18C0911	PFECHS	09-Mar-18	** Vendor **	20-Feb-22	0.435
18L2034	PFDoA	20-Dec-18	** Vendor **	18-Apr-23	0.4
18L2035	PFBA	20-Dec-18	** Vendor **	28-Nov-23	0.4
18L2036	PFPeA	20-Dec-18	** Vendor **	16-Feb-23	0.4
18L2037	PFHxA	20-Dec-18	** Vendor **	18-May-23	0.4
18L2038	PFDA	20-Dec-18	** Vendor **	12-Nov-23	0.4
18L2039	PFUdA	20-Dec-18	** Vendor **	23-Aug-23	0.4
18L2040	PFTrDA	20-Dec-18	** Vendor **	16-Feb-23	0.4
18L2041	PFHpA	20-Dec-18	** Vendor **	12-Jul-23	0.4
18L2042	PFOA	20-Dec-18	** Vendor **	23-Aug-23	0.4
18L2043	PFNA	20-Dec-18	** Vendor **	16-Feb-23	0.4
18L2044	PFTeDA	20-Dec-18	** Vendor **	23-Aug-23	0.4
18L2045	PFHxDA	20-Dec-18	** Vendor **	13-Jul-22	0.4
18L2046	PFODA	20-Dec-18	** Vendor **	13-Jul-22	0.4
18L2047	L-PFBS	20-Dec-18	** Vendor **	04-May-23	0.454
18L2048	L-PFPeS	20-Dec-18	** Vendor **	12-Jul-23	0.428
18L2049	L-PFHpS	20-Dec-18	** Vendor **	04-May-23	0.42
18L2050	L-PFNS	20-Dec-18	** Vendor **	13-Jul-23	0.418
18L2051	L-PFDS	20-Dec-18	** Vendor **	05-Oct-23	0.415
18L2052	br-PFHxSK	20-Dec-18	** Vendor **	02-Oct-23	0.44
18L2053	br-PFOSK anion	20-Dec-18	** Vendor **	18-Apr-23	0.431
18L2054	4:2 FTS	20-Dec-18	** Vendor **	03-Jul-23	0.43
18L2055	6:2FTS	20-Dec-18	** Vendor **	03-Apr-23	0.422
18L2056	8:2FTS	20-Dec-18	** Vendor **	28-Nov-23	0.418
18L2057	FOSA-I	20-Dec-18	** Vendor **	20-Jun-23	0.4
18L2058	br-NMeFOSAA	20-Dec-18	** Vendor **	17-Jan-23	0.4
18L2059	br-NEtFOSAA	20-Dec-18	** Vendor **	26-Jul-23	0.4
18L2060	N-MeFOSA-M	20-Dec-18	** Vendor **	31-May-23	2
18L2061	N-EtFOSA-M	20-Dec-18	** Vendor **	31-May-23	2
18L2062	N-MeFOSE-M	20-Dec-18	** Vendor **	17-May-23	2
18L2063	N-EtFOSE-M	20-Dec-18	** Vendor **	04-Jun-23	2
18L2071	HFPO-DA	20-Dec-18	** Vendor **	24-Oct-21	0.4
18L2072	11Cl-PF3OUdS	20-Dec-18	** Vendor **	23-Nov-23	0.425
18L2073	9Cl-PF3ONS	20-Dec-18	** Vendor **	22-Nov-23	0.43
18L2074	NaDONA	20-Dec-18	** Vendor **	26-Mar-23	0.4
18L2076	L-PFPrS	20-Dec-18	** Vendor **	14-Dec-22	0.438
18L2078	10:2FTS	20-Dec-18	** Vendor **	13-Jul-21	0.415
19B0712	L-PFDoS	07-Feb-19	** Vendor **	30-Sep-21	0.415

Analytical Standard Record

Vista Analytical Laboratory

19E2204

Description:	PFC NS Stock	Expires:	29-May-21
Standard Type:	Analyte Spike	Prepared:	29-May-19
Solvent:	MeOH	Prepared By:	Giana R. Bilotta
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	28-May-19 09:03 by GRB

Analyte	CAS Number	Concentration	Units
L-PFHpA		1	ug/mL
10:2 FTS	120226-60-0	1	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
L-PFODA		1	ug/mL
L-PFDoS		1	ug/mL
EtFOSAA	2991-50-6	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
ADONA	919005-14-4	1	ug/mL
Br-EtFOSAA		0.224	ug/mL
Br-MeFOSAA		0.24	ug/mL
Br-PFHxS	3871-99-6	0.189	ug/mL
Br-PFOS	2795-39-3	0.211	ug/mL
L-EtFOSE	1691-99-2	5	ug/mL
EtFOSA	4151-50-2	5	ug/mL
L-PFPeA		1	ug/mL
EtFOSE	1691-99-2	5	ug/mL

Analytical Standard Record

Vista Analytical Laboratory

19E2204

Description:	PFC NS Stock	Expires:	29-May-21
Standard Type:	Analyte Spike	Prepared:	29-May-19
Solvent:	MeOH	Prepared By:	Giana R. Bilotta
Final Volume (mls):	20	Department:	LCMS
Vials:	1	Last Edit:	28-May-19 09:03 by GRB

Analyte	CAS Number	Concentration	Units
F-53B Major (9Cl-PF3ONS)	756426-58-1	1	ug/mL
F-53B Minor (11Cl-PF3OUdS)	763051-92-9	1	ug/mL
F-53B Total		2	ug/mL
HFPO-DA (GenX)	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
cis-PFECHS		0.668	ug/mL
Total 6:2 FTS		1	ug/mL
PFOA	335-67-1	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
L-PFOS		0.789	ug/mL
PFUnA	2058-94-8	1	ug/mL
PFHxS	355-46-4	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
trans-PFECHS		0.335	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

19E2204

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Solvent:	MeOH	Prepared By:	Giana R. Bilotta
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Vials:	1	Last Edit:	28-May-19 09:03 by GRB

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PFBS	375-73-5	1	ug/mL
PFNA	375-95-1	1	ug/mL
PFDoA	307-55-1	1	ug/mL
PFDoS	79780-39-5	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
L-PFOSA		1	ug/mL
PFBA	375-22-4	1	ug/mL

18C0911

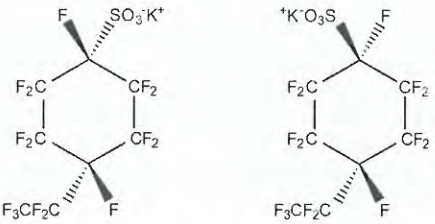
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFECHS **LOT NUMBER:** PFECHS0217

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)	02/20/2017		
EXPIRY DATE: (mm/dd/yyyy)	02/20/2022		
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 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:** 08/15/2017 (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

18C0911

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HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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).

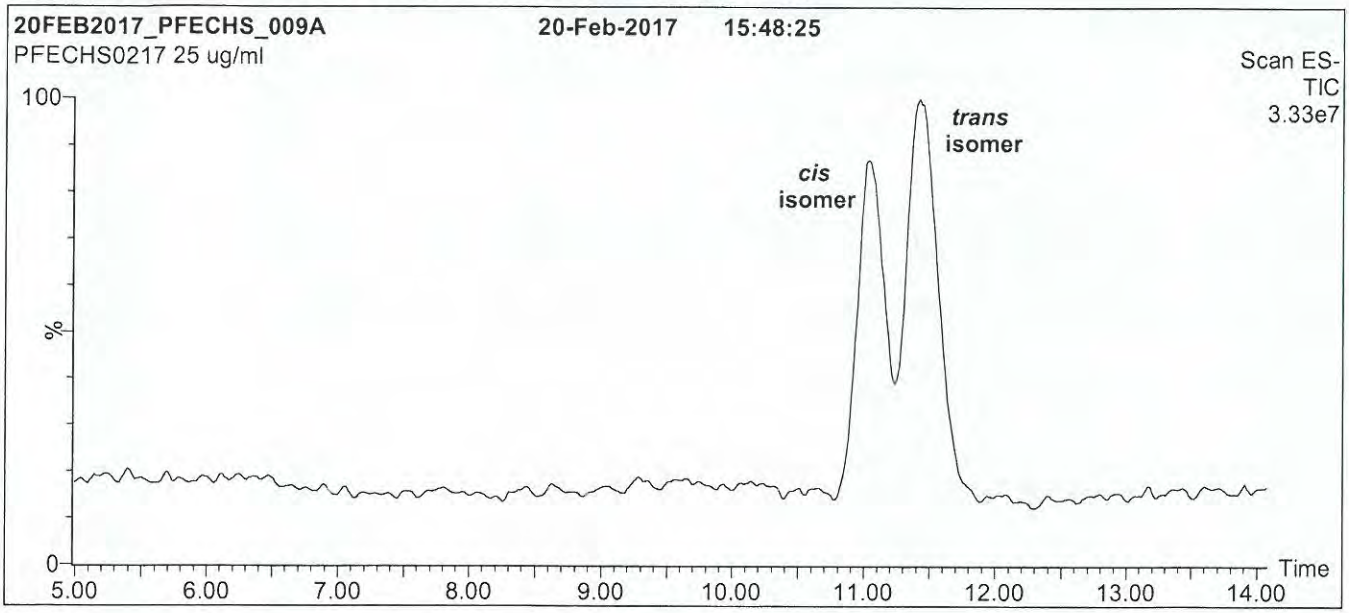
CALA

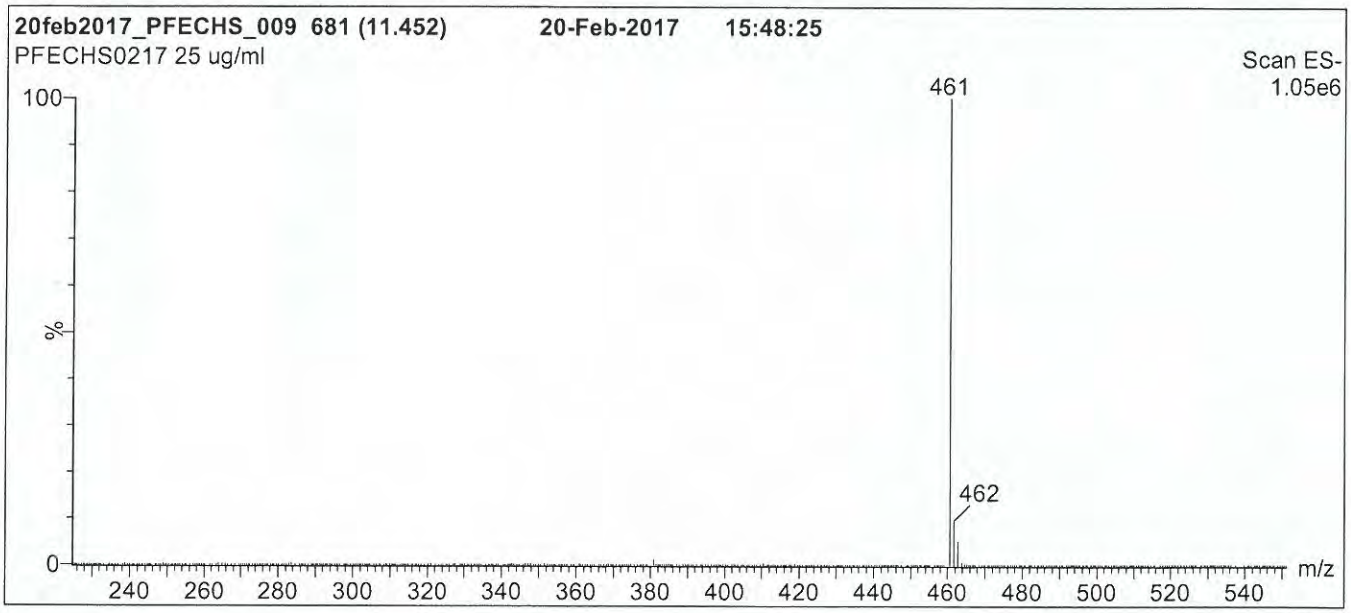
ANAB ACCREDITED

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

1801911

Figure 1: **PFECHS; 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 CSH Fluoro-Phenyl
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 35% (80:20 MeOH:ACN) / 65% H_2O
(both with 10 mM NH_4OAc buffer)
Hold for 13 min. Ramp to 50% organic over 1.5 min and hold for 2.5 min. Ramp to 80% organic over 1 min and hold for 1 min before returning to initial conditions in 0.5 min.
Time: 20 min

Flow: 300 µl/min

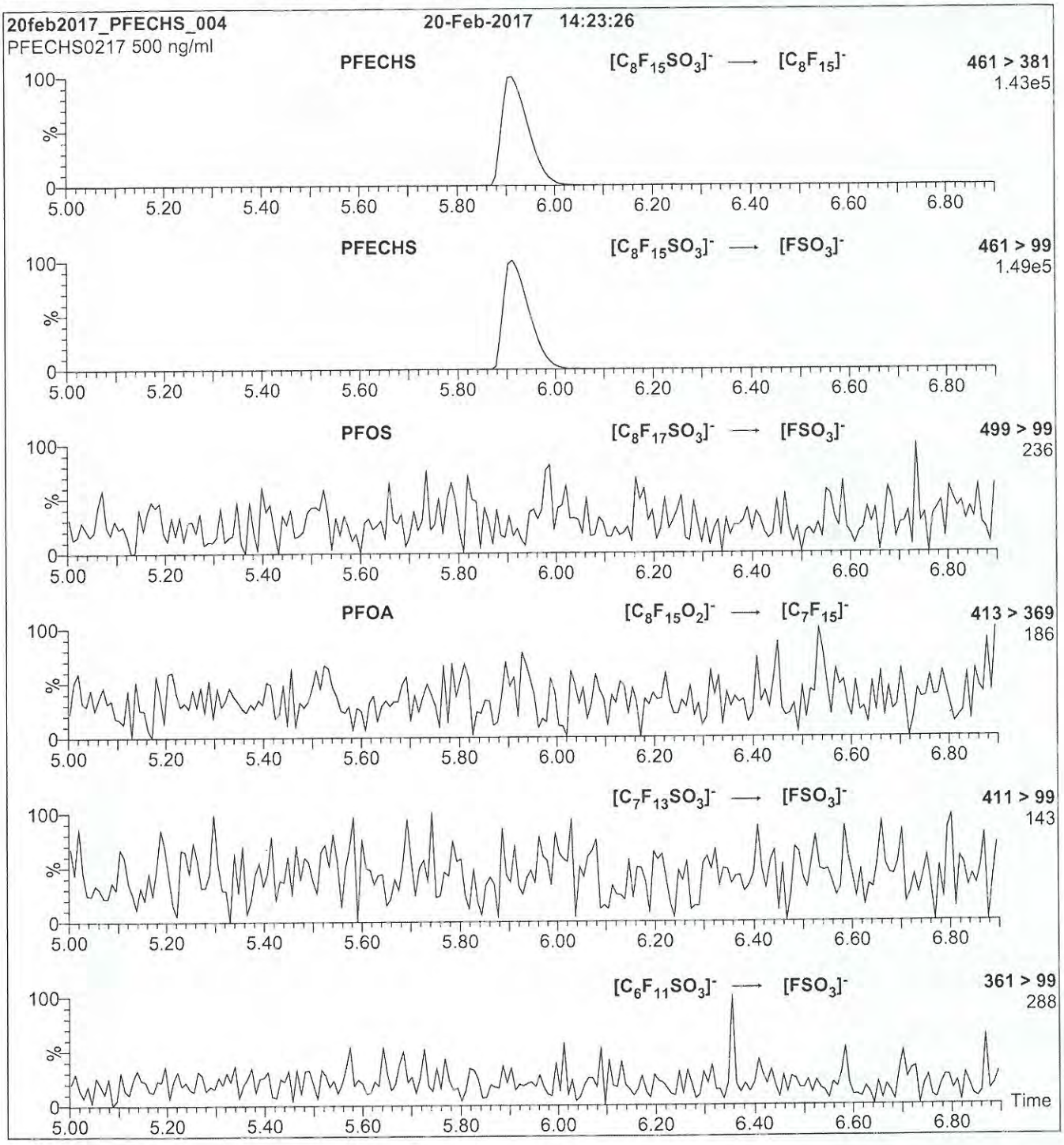
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.50
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

18C0911

Figure 2: **PFECHS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFECHS)

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) = 3.50e-3
Collision Energy (eV) = 25

18L2034

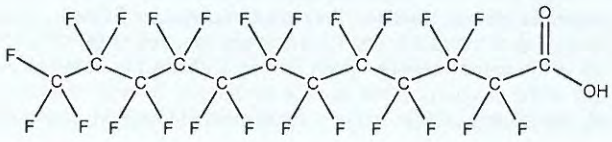
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDoA
COMPOUND: Perfluoro-n-dodecanoic acid
LOT NUMBER: PFDoA0418

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) 04/18/2018
EXPIRY DATE: (mm/dd/yyyy) 04/18/2023
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS Data (Mass Spectrum)
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 carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 04/24/2018 (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

1812034

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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TRACEABILITY:

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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

18L2034

Figure 1: **PFDoA; LC/MS Data (SIR)**

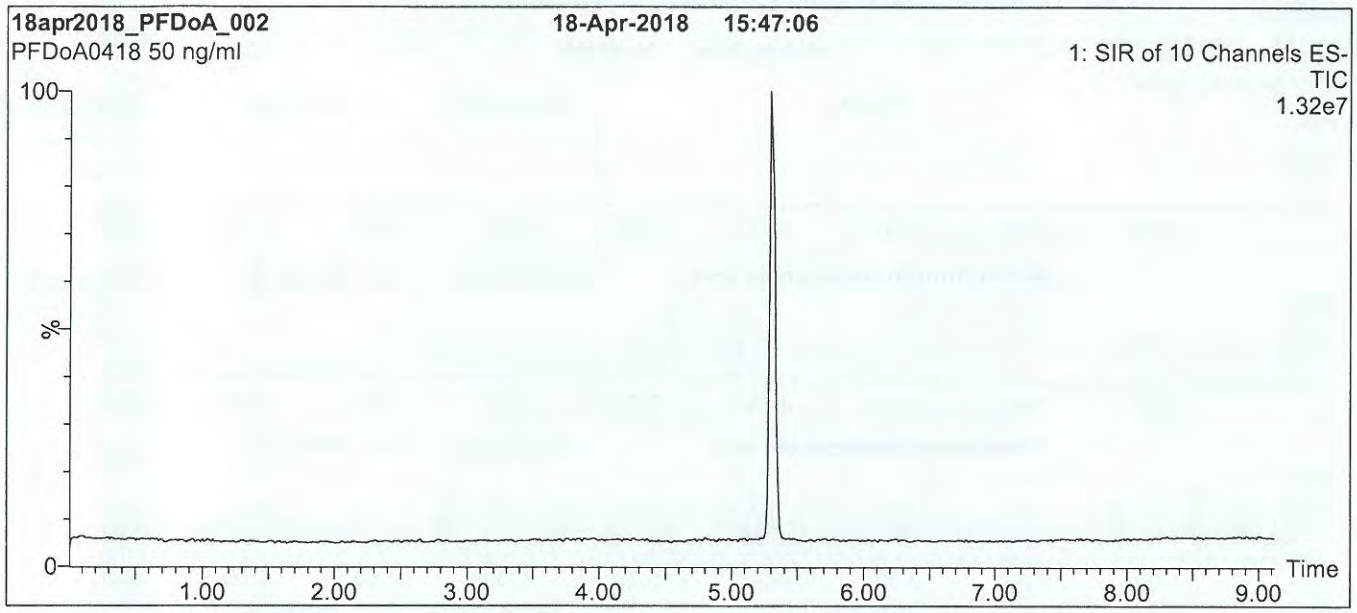
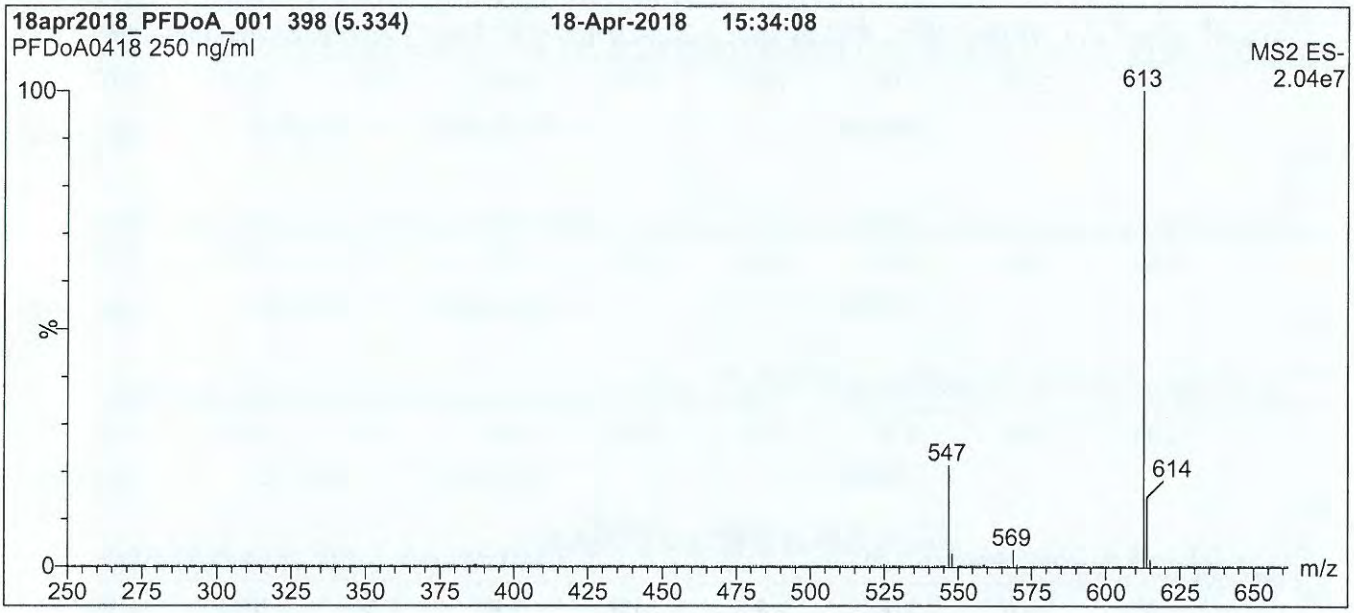


Figure 2: **PFDoA; LC/MS Data (Mass Spectrum)**



Conditions for Figures 1 & 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 85% organic over 7 min and hold for
3 min before returning to initial conditions in 0.75 min.
Time: 12 min

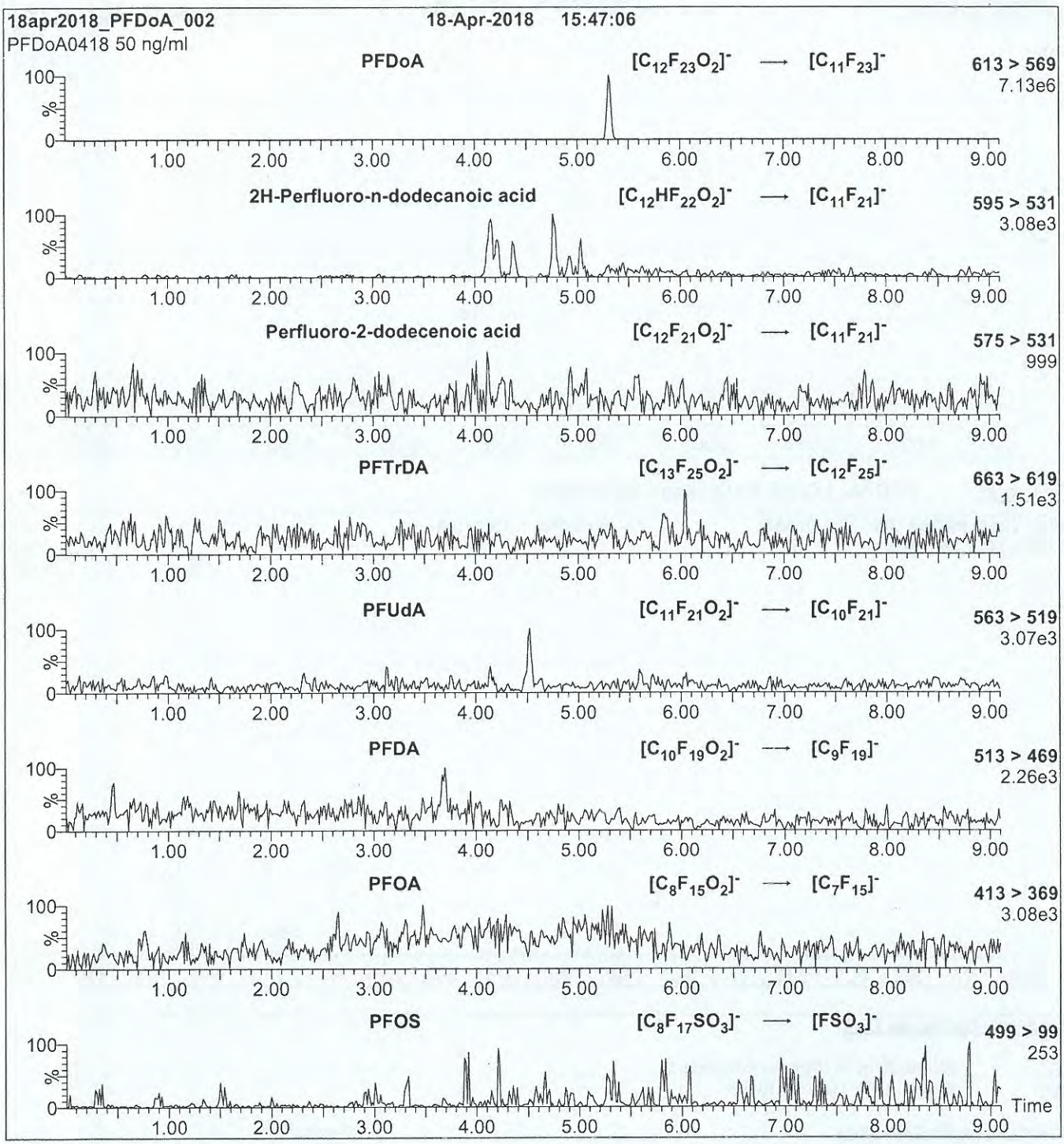
Flow: 300 µl/min

MS Parameters

Experiments: SIR of 10 channels
Full Scan (250 - 850 amu)
Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5 (variable for SIR (2-12))
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812034

Figure 3: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (PFDoA)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.47e-3

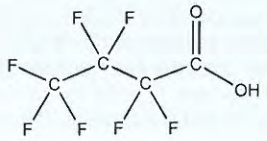
Collision Energy (eV) = 12

1812035

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	PFBA	**LOT NUMBER:**	PFBA1118
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)	11/28/2018		
EXPIRY DATE: (mm/dd/yyyy)	11/28/2023		
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:** 11/29/2018 (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

1812035

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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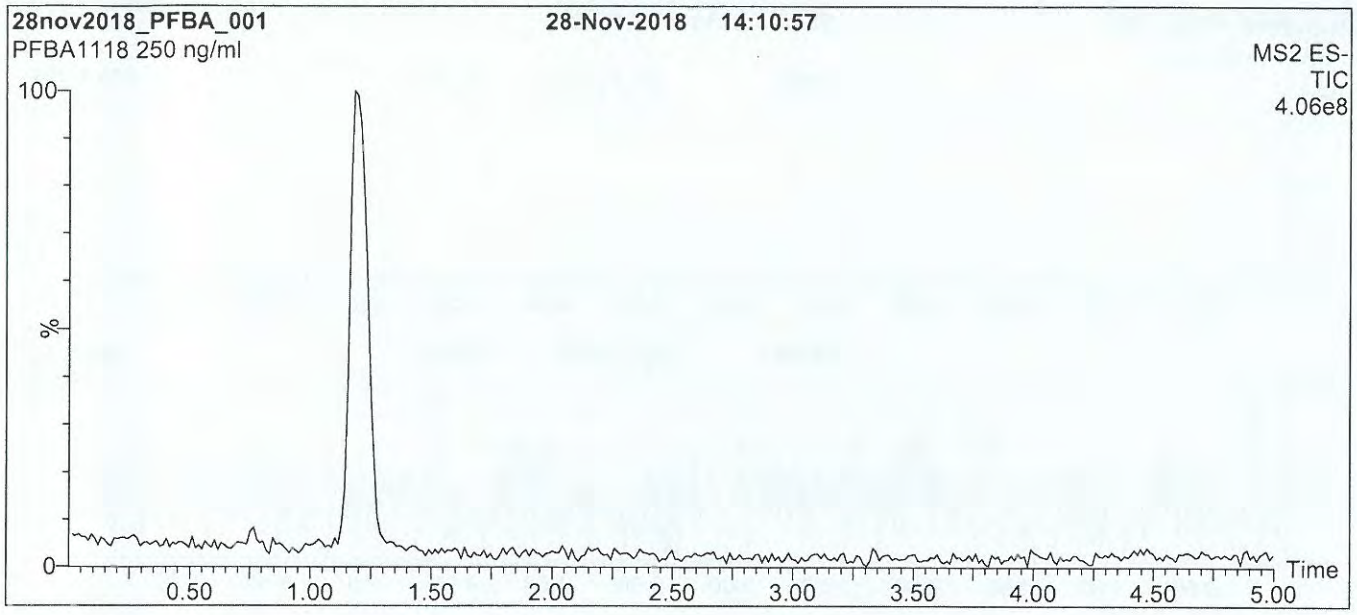
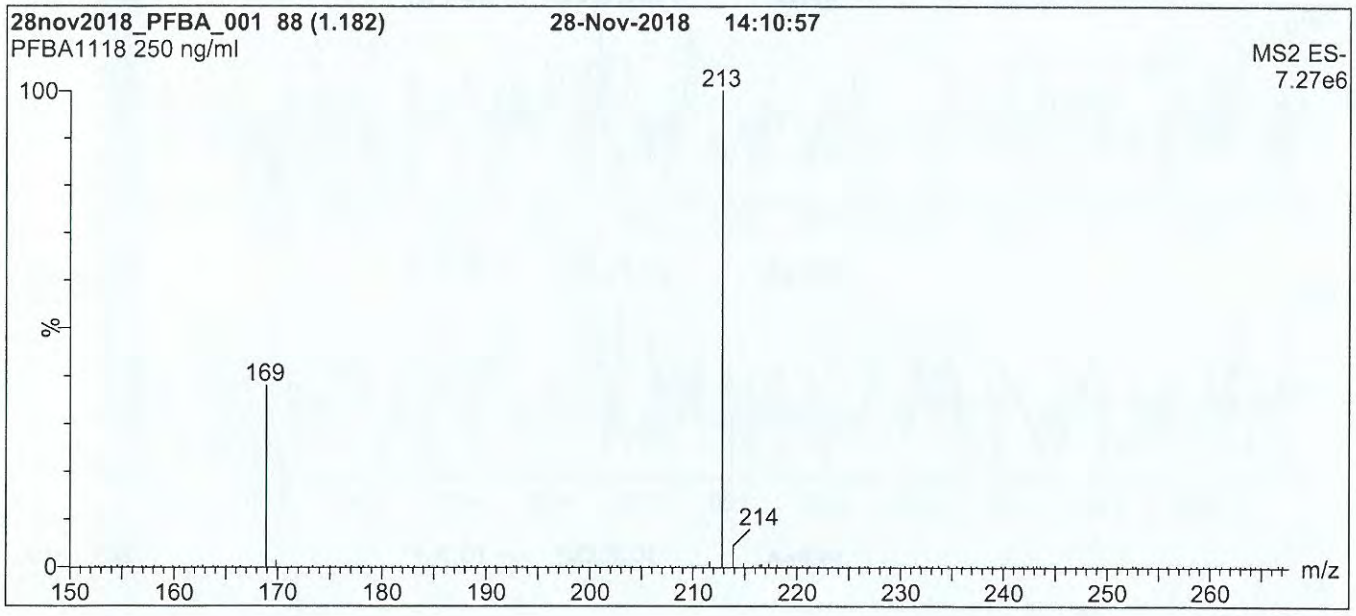
1812035

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 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

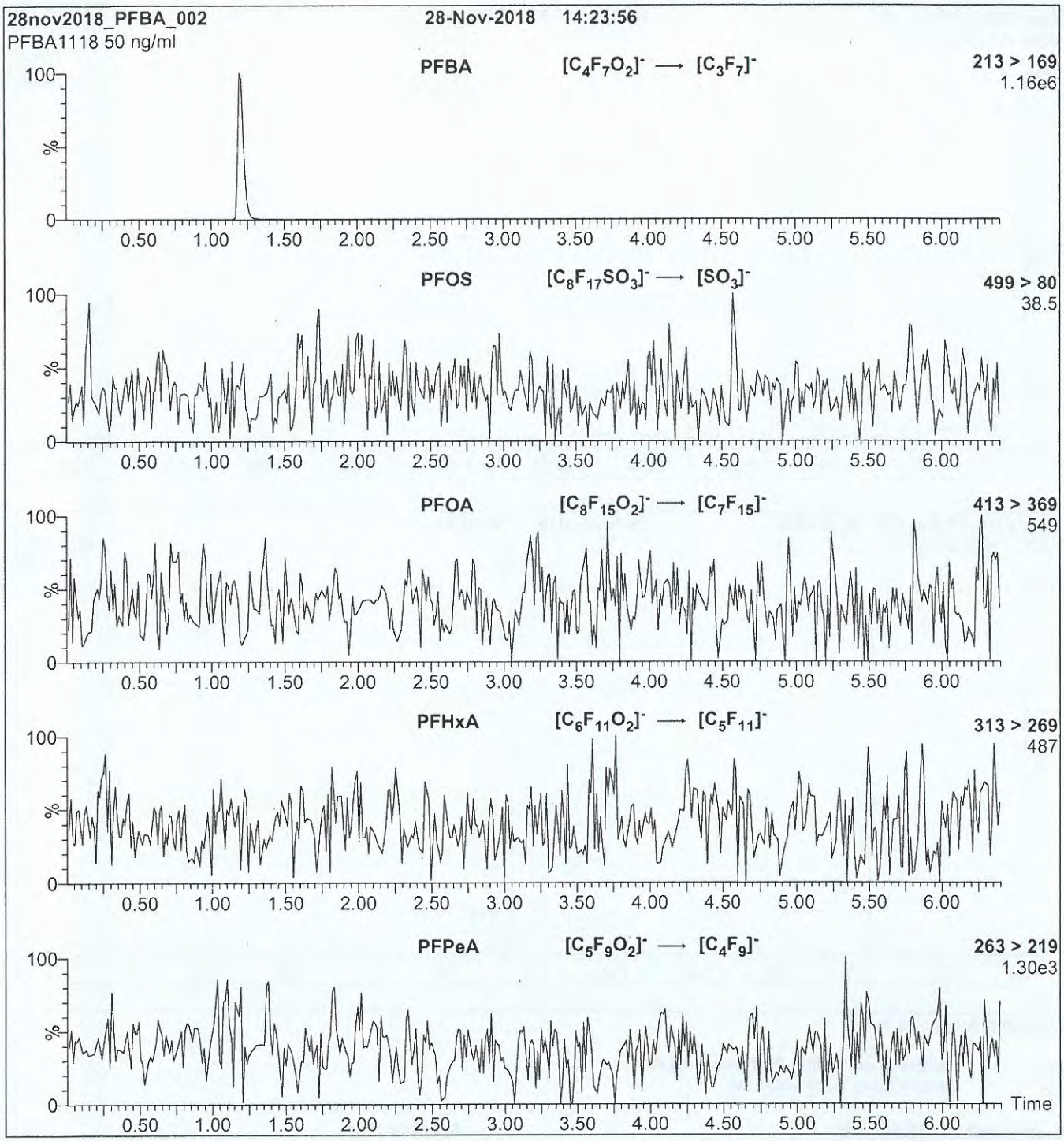
MS Parameters

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

1812035

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

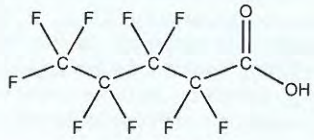
Collision Gas (mbar) = 2.79e-3
Collision Energy (eV) = 8

1812036

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFPeA	**LOT NUMBER:**	PFPeA0218
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)	02/16/2018		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2023		
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 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:** 02/20/2018 (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

1812036

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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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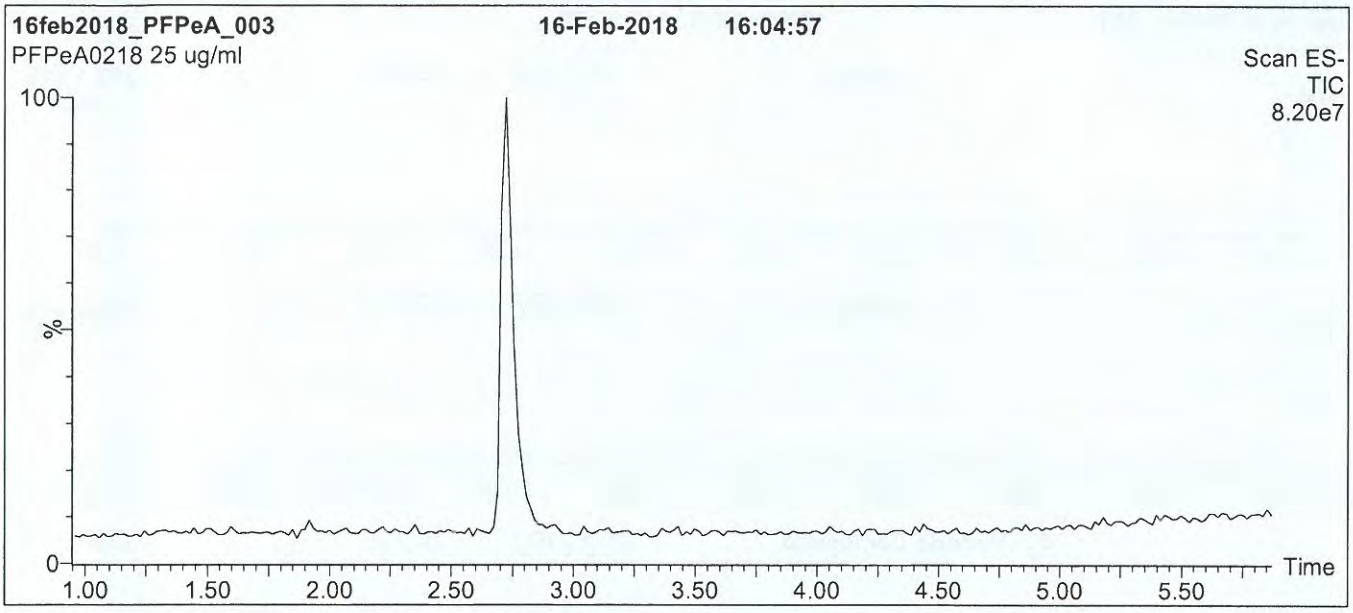
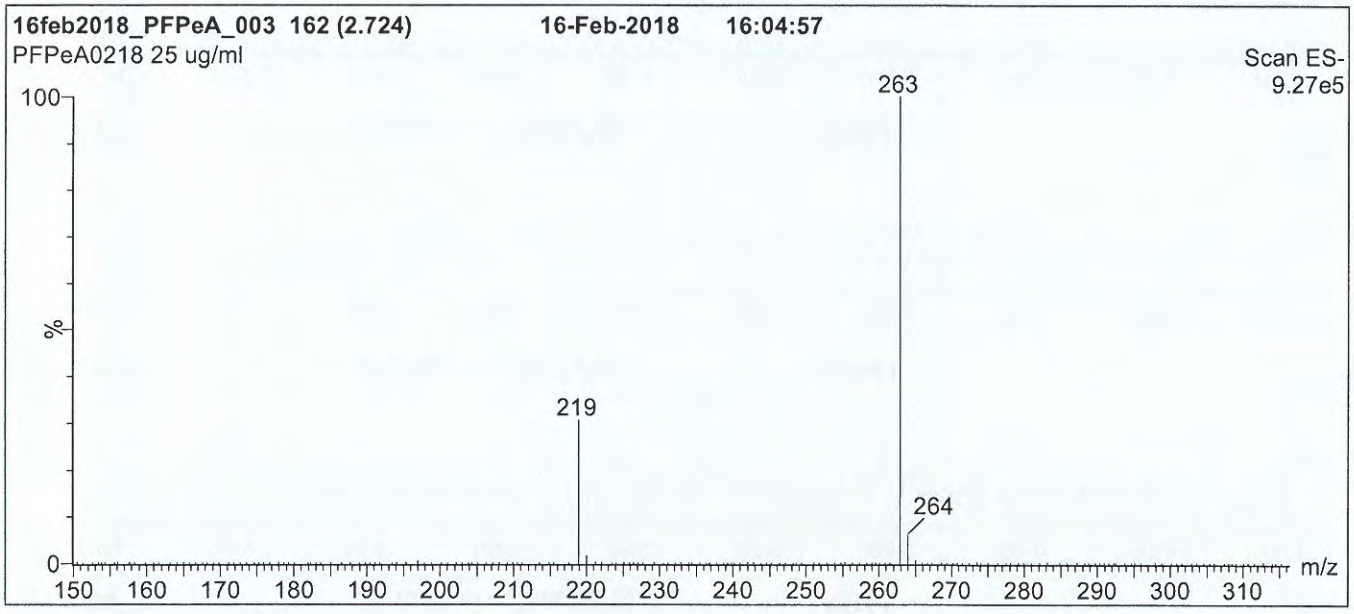
18L2036

Figure 1: **PFPeA; 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) = 2.50
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

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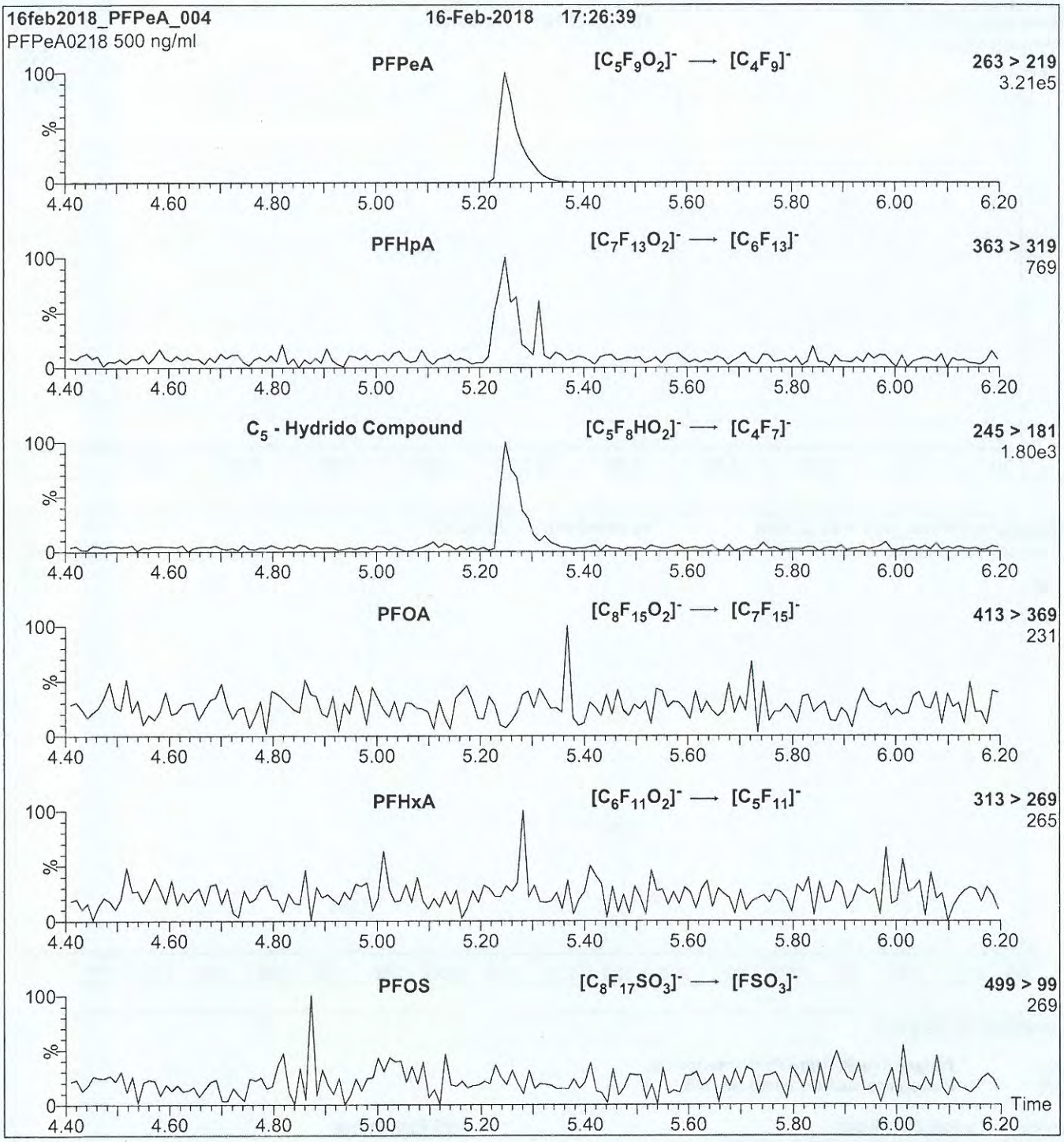
Figure 2: **PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFPeA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

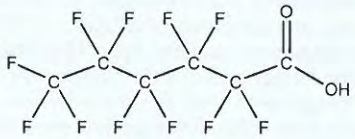
Collision Gas (mbar) = 3.28e-3
Collision Energy (eV) = 9

18L2037

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFHxA	**LOT NUMBER:**	PFHxA0518
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)	05/18/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/18/2023		
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 branched isomers.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/30/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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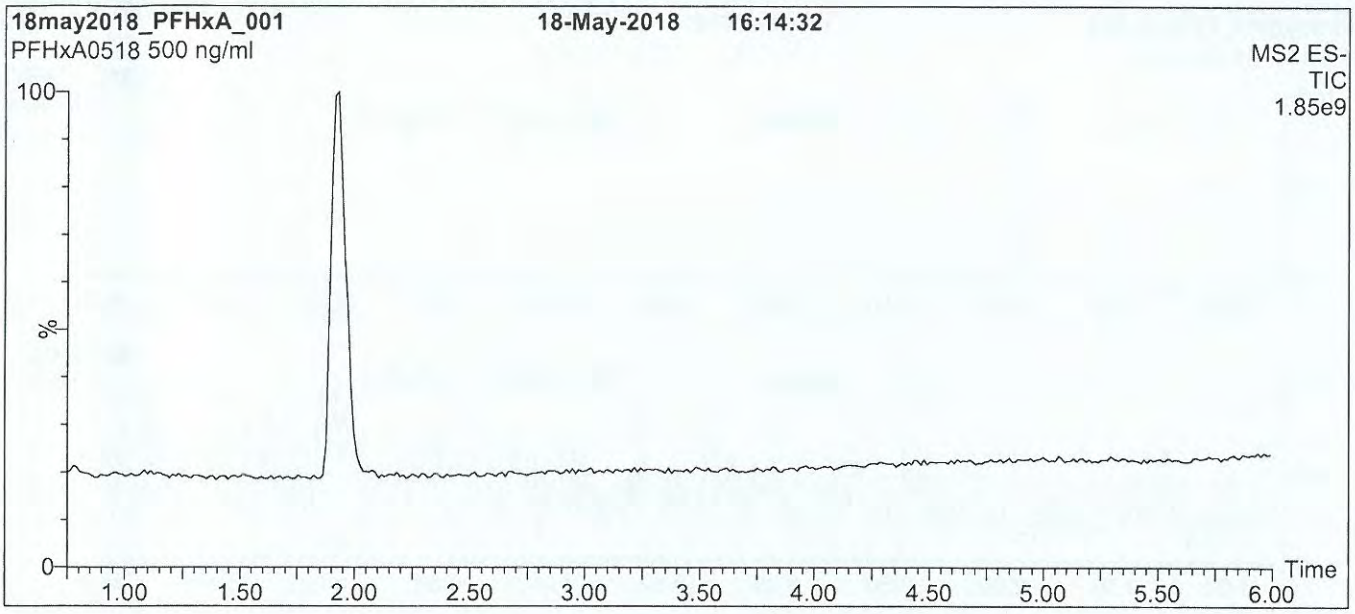
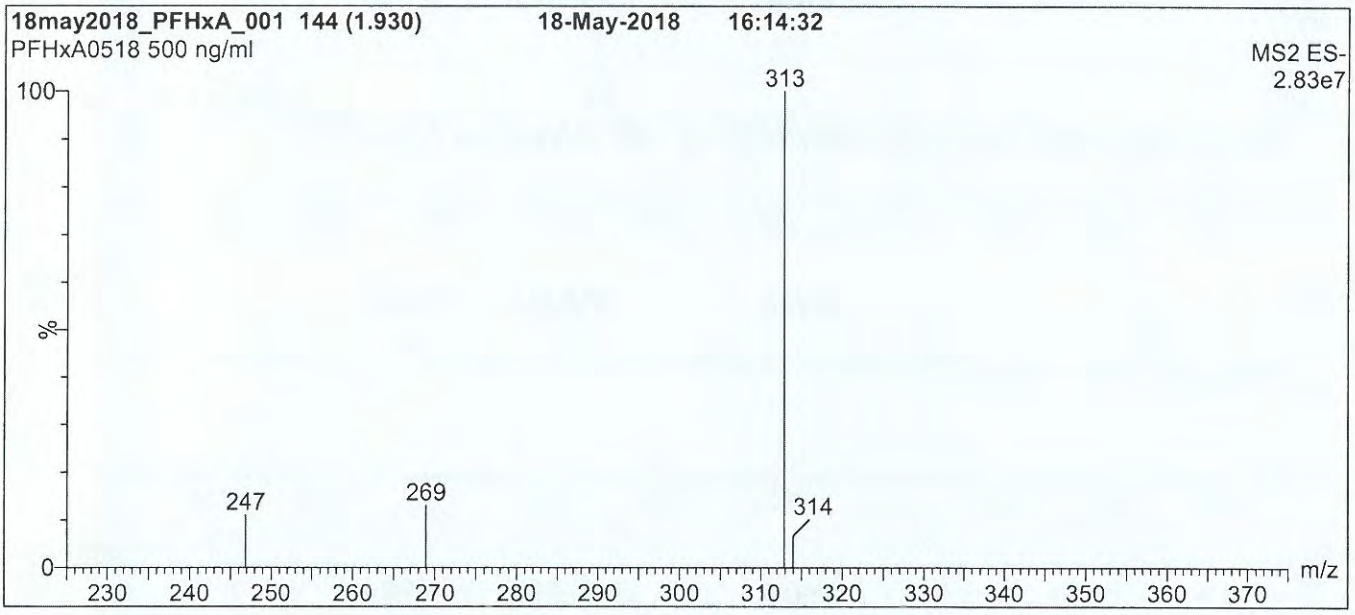
1812037

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: 50% (80:20 MeOH:ACN) / 50% 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 (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

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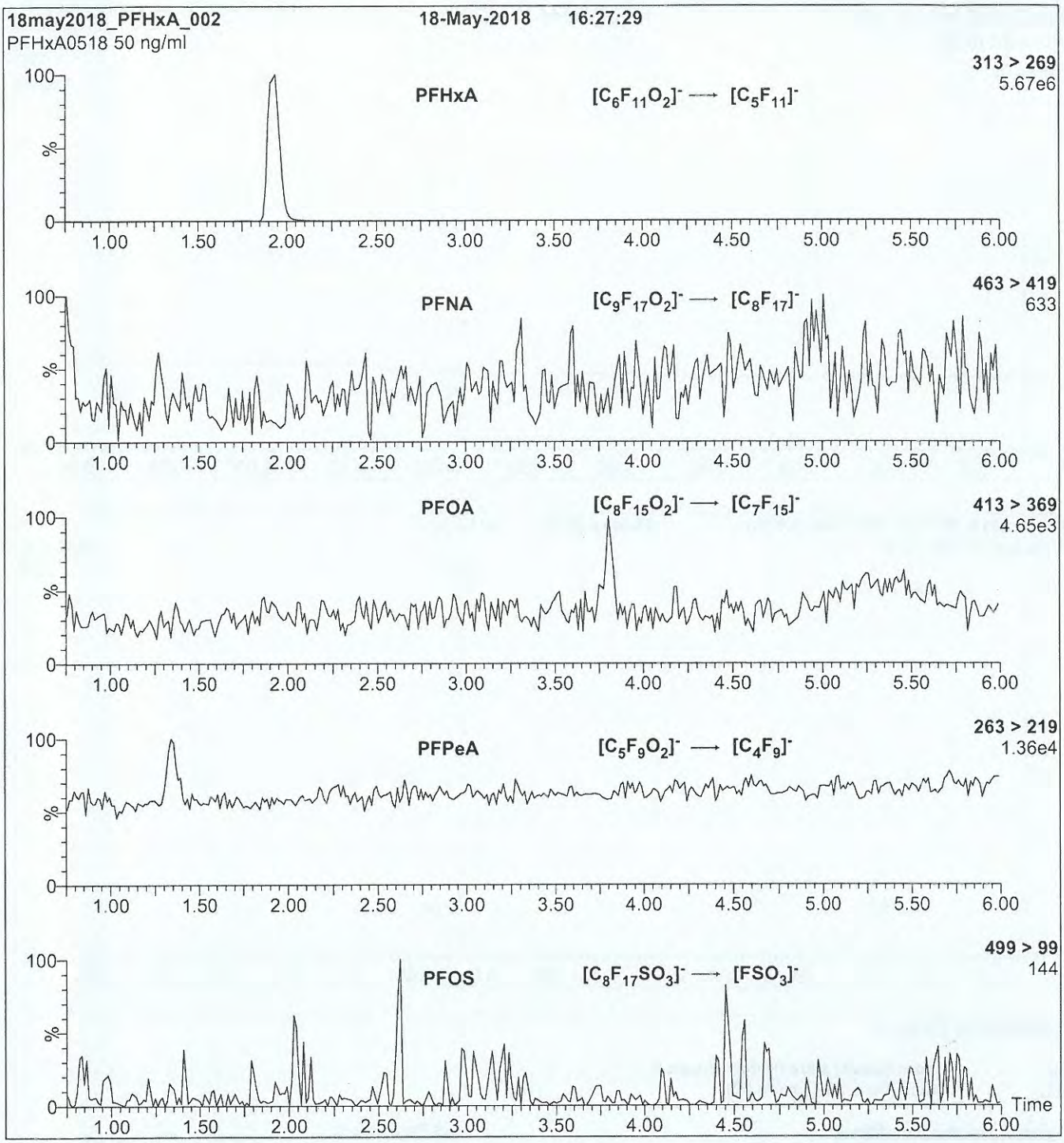
Figure 2: **PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFHxA)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.50e-3
Collision Energy (eV) = 8

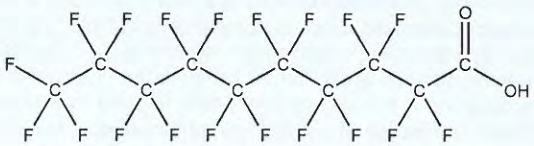
1812038

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDA
COMPOUND: Perfluoro-n-decanoic acid
LOT NUMBER: PFDA1118

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) 11/12/2018
EXPIRY DATE: (mm/dd/yyyy) 11/12/2023
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 ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/15/2018 (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

18L2038

INTENDED USE:

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SYNTHESIS / CHARACTERIZATION:

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CALA Testing Accreditation No. A 1226

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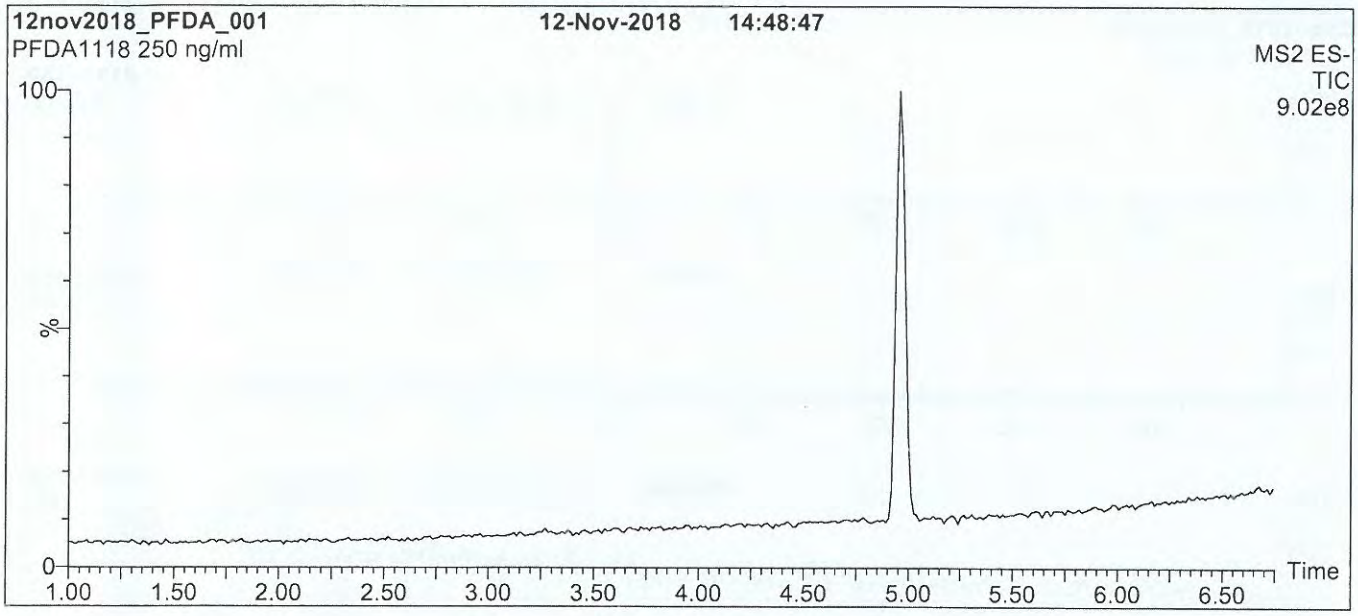
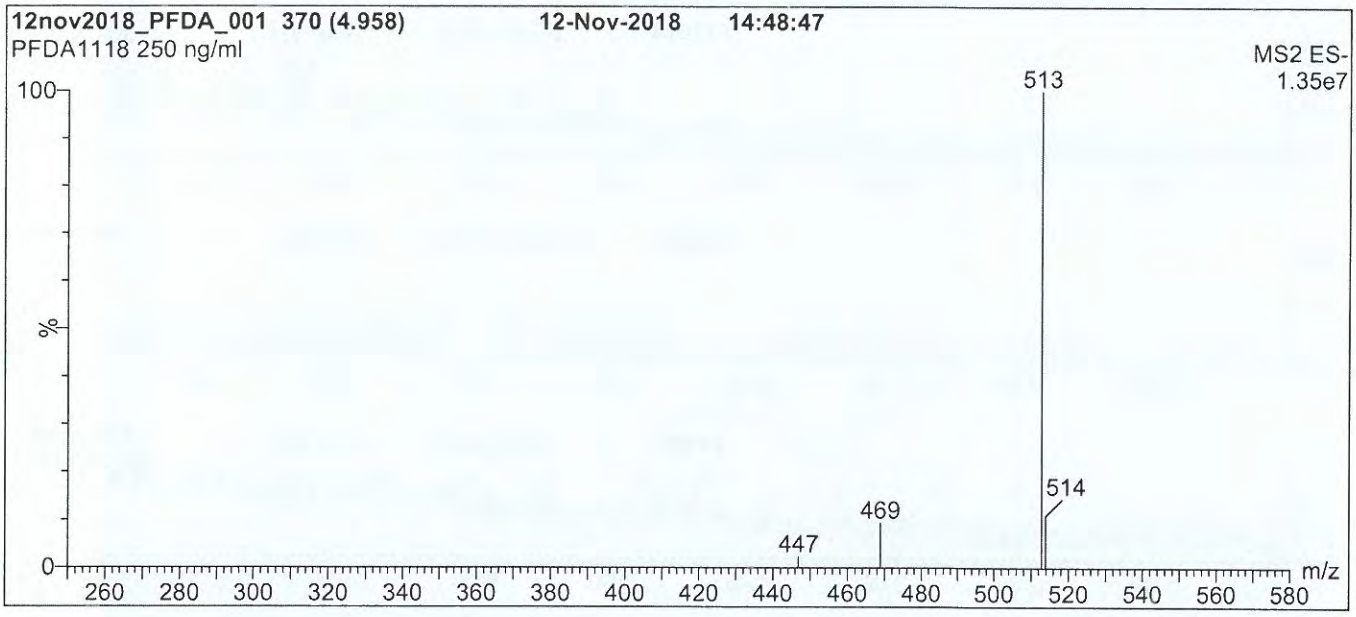
1812038

Figure 1: **PFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for
2 min before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µl/min

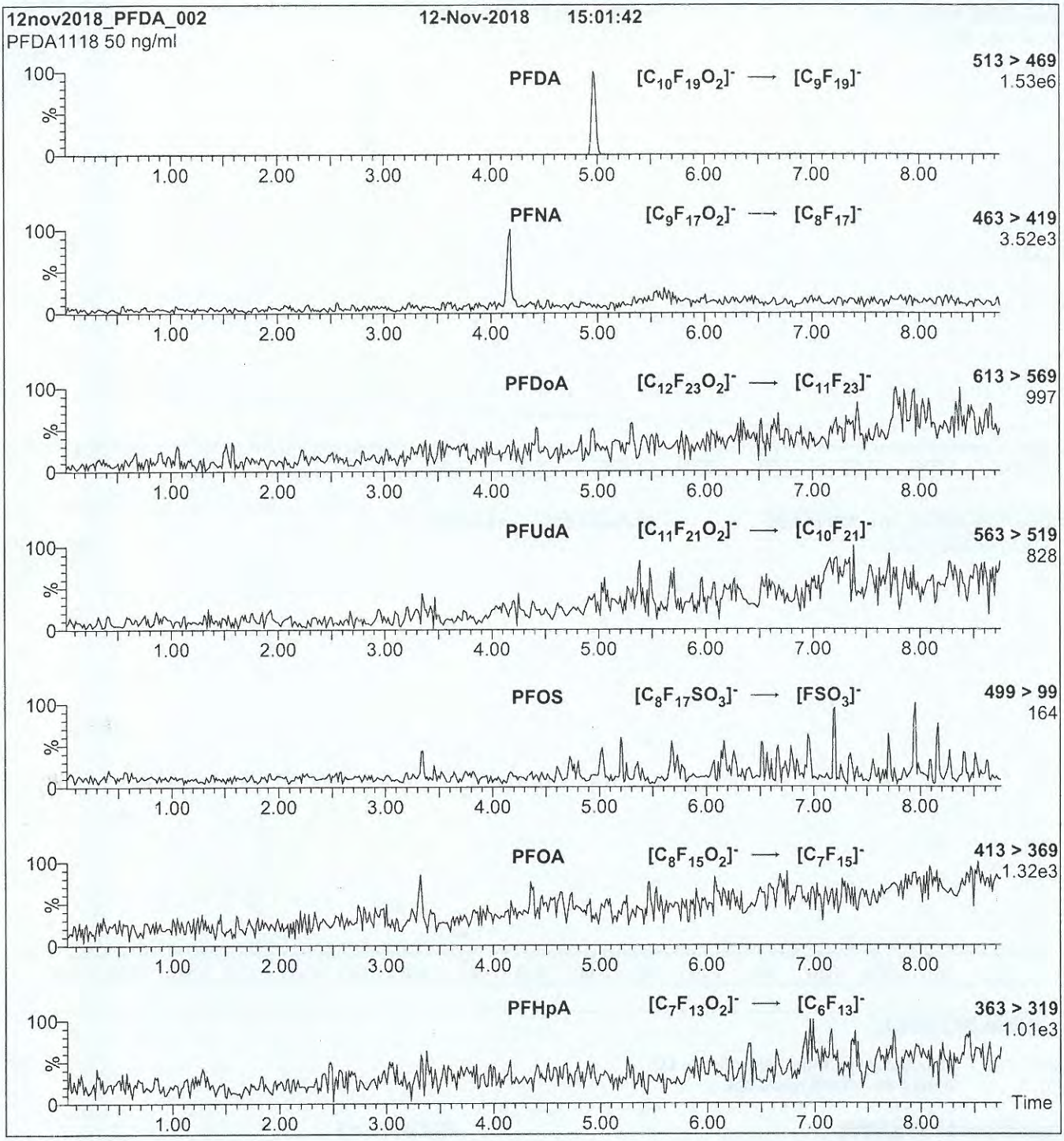
MS Parameters

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

1812038

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) = 3.04e-3
Collision Energy (eV) = 10

1812039

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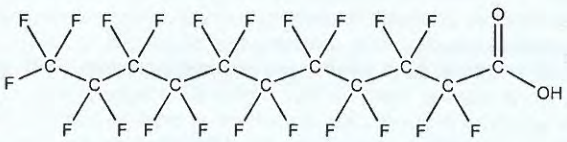
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFUdA
COMPOUND: Perfluoro-n-undecanoic acid
LOT NUMBER: PFUdA0818

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) 08/23/2018
EXPIRY DATE: (mm/dd/yyyy) 08/23/2023
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.
- 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:** 08/24/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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CALA Testing Accreditation No. A 1226

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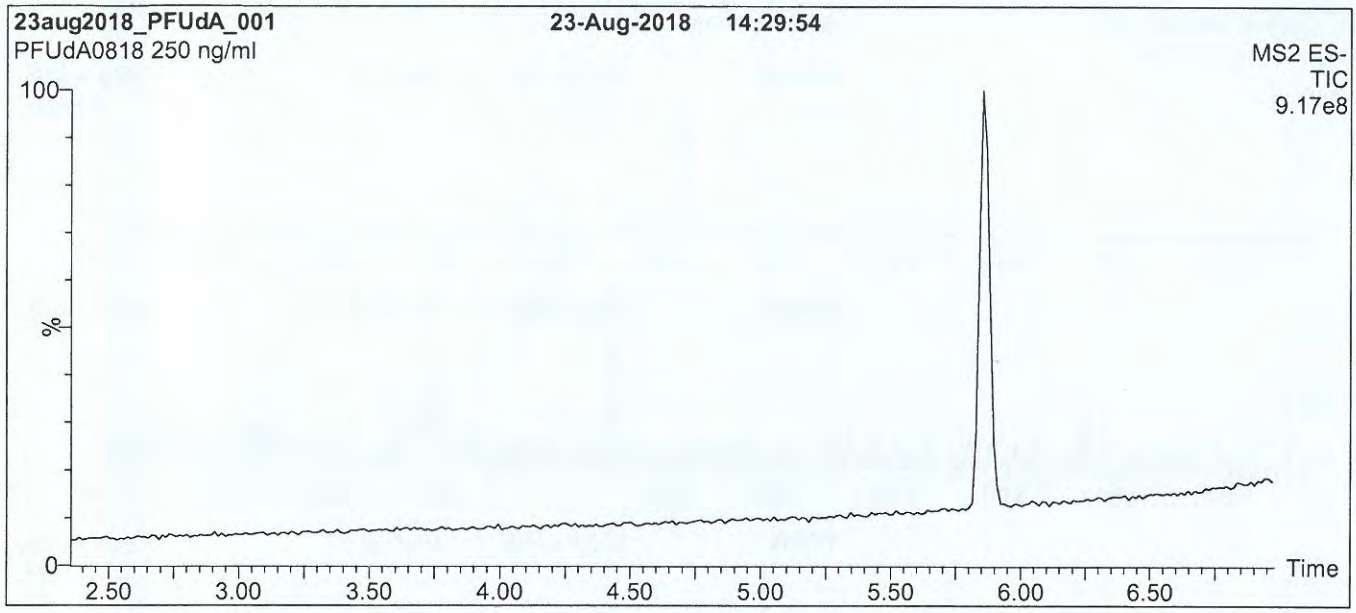
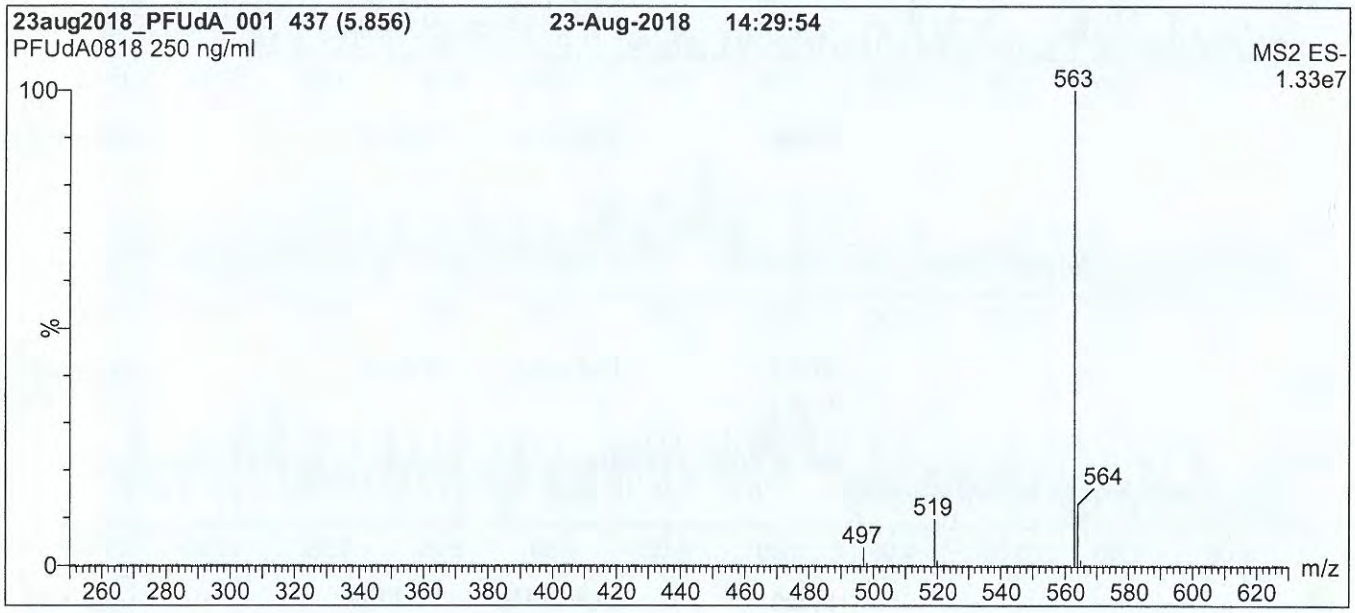
18L2039

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: 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

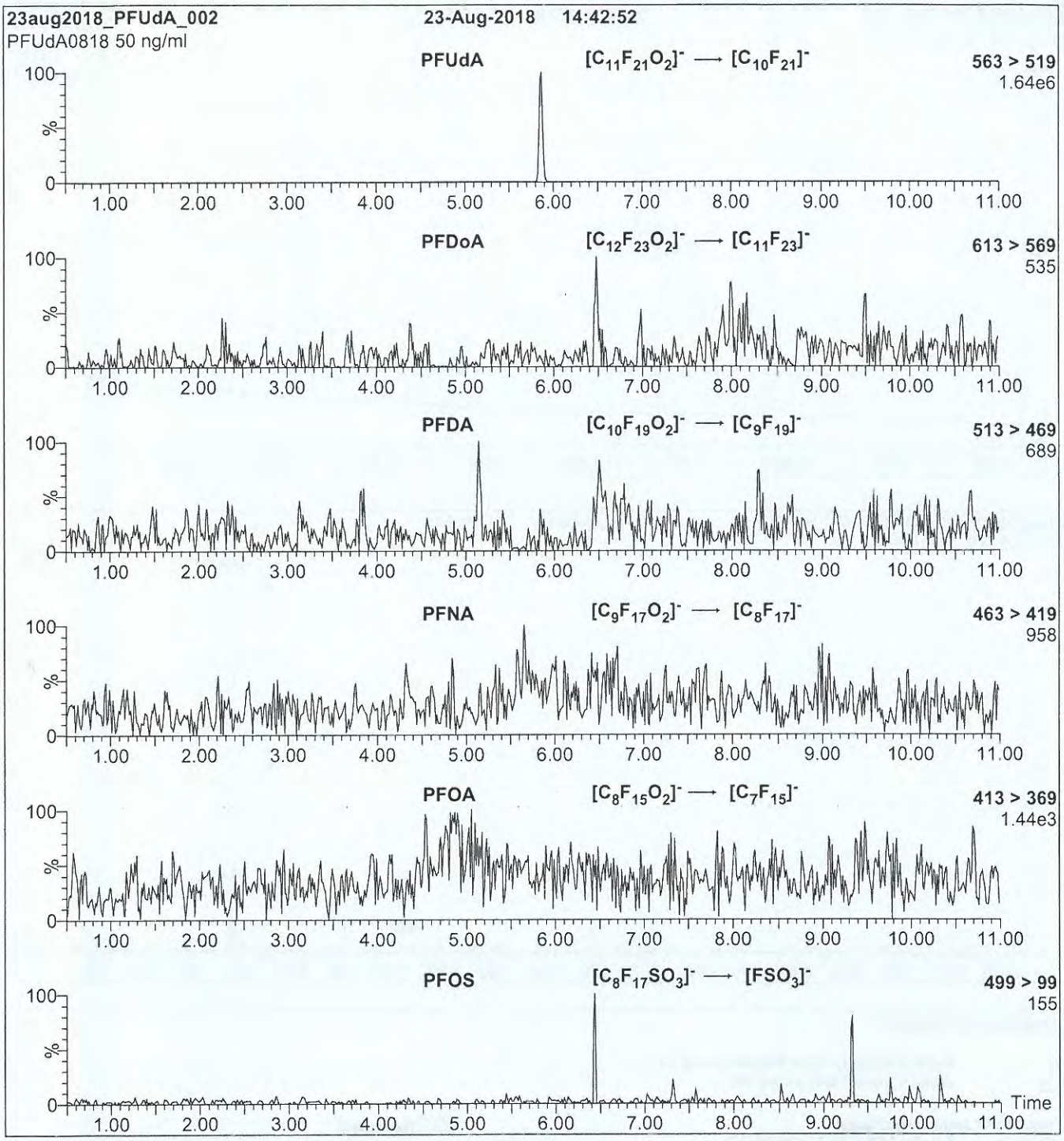
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1812039

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) = 3.45e-3
Collision Energy (eV) = 12

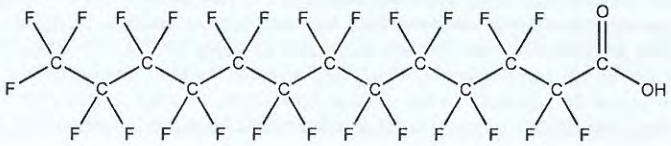
18L2040

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTrDA
COMPOUND: Perfluoro-n-tridecanoic acid
LOT NUMBER: PFTrDA0218

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) 02/16/2018
EXPIRY DATE: (mm/dd/yyyy) 02/16/2023
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 ~ 0.1% 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:** 02/20/2018 (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

1812040

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).

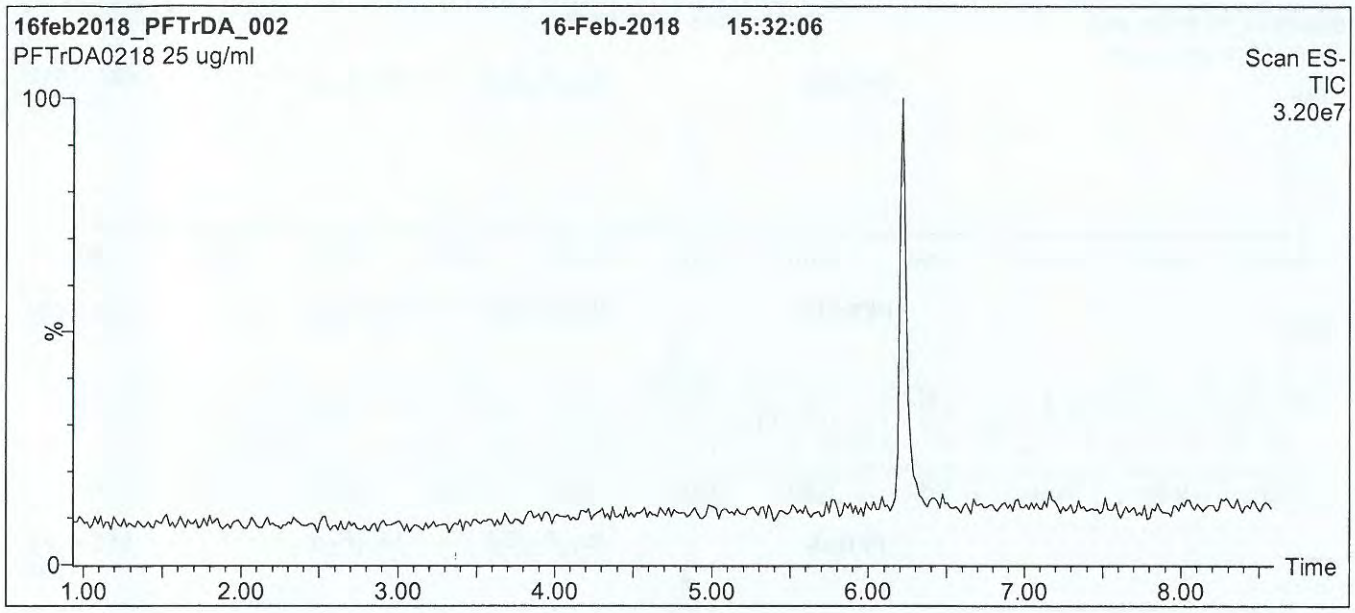
CALA Testing Accreditation No. A1226

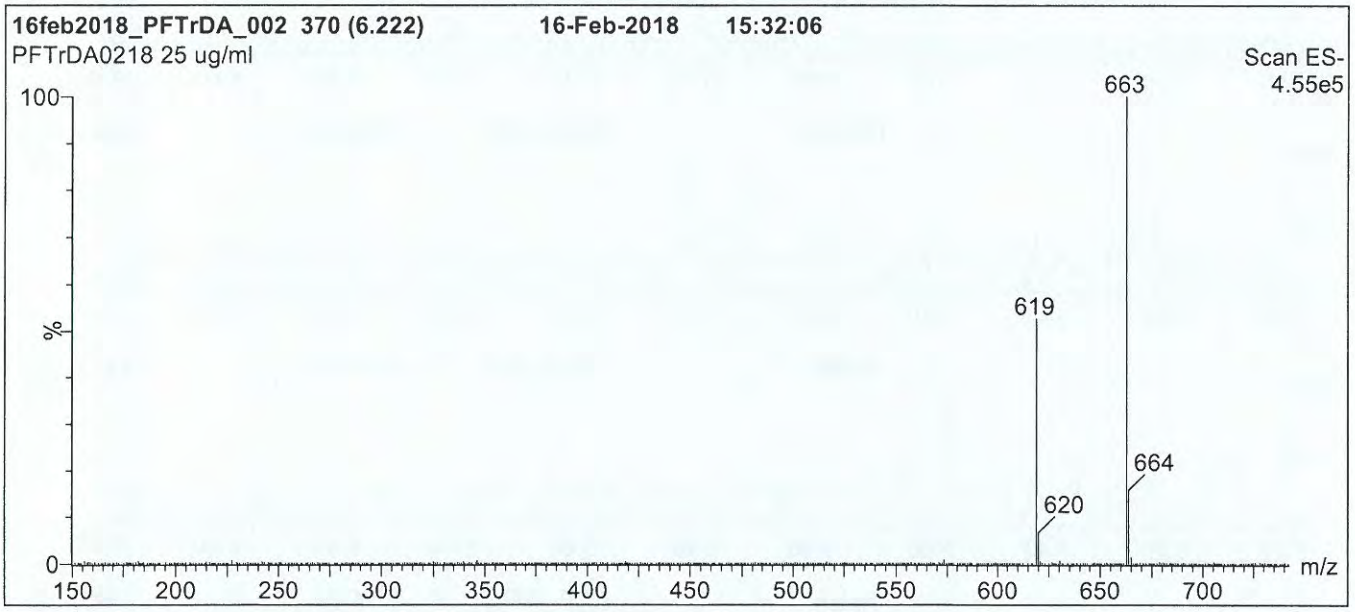
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2040

Figure 1: **PFTrDA; 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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

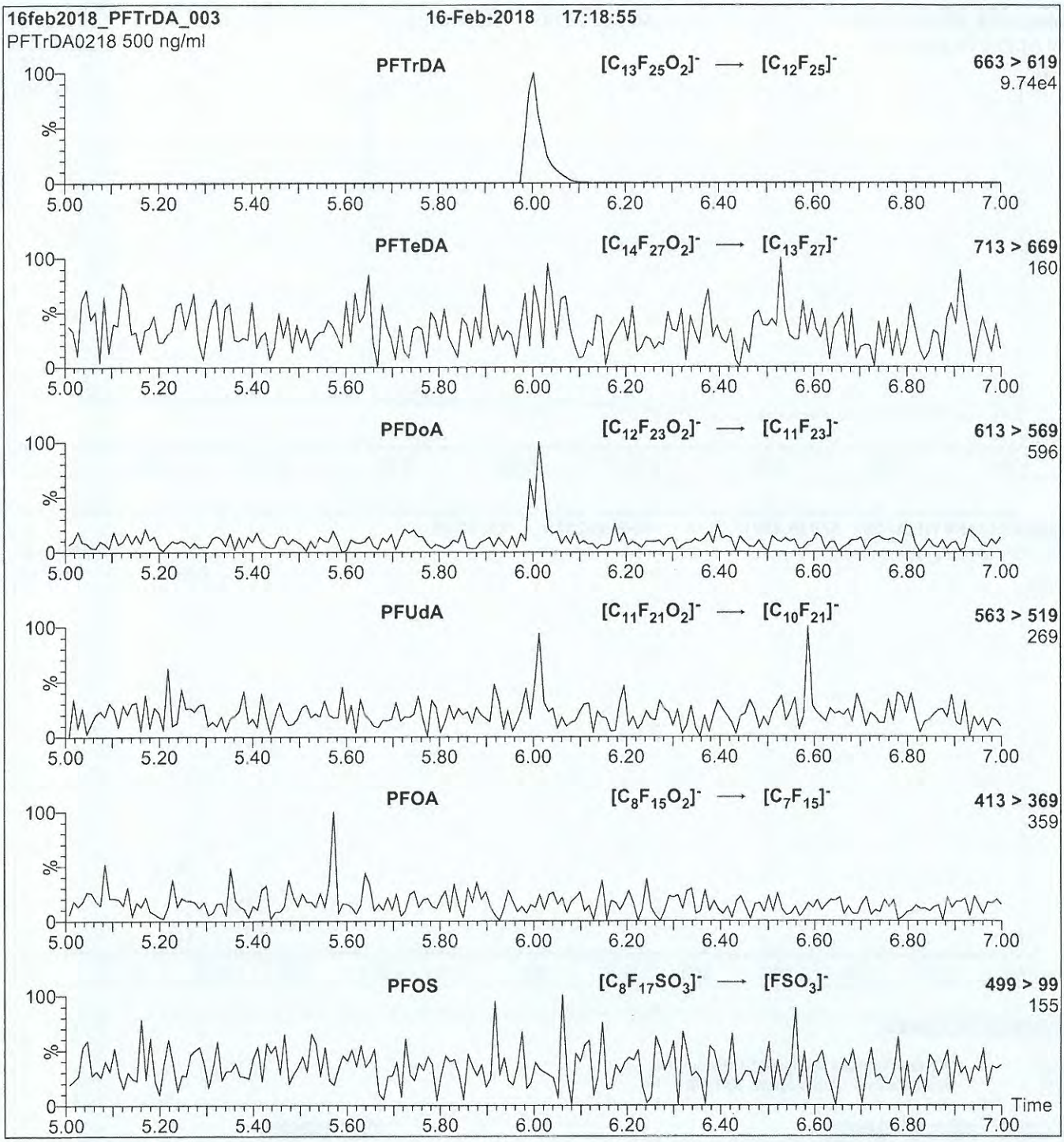
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 22.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 650

1862040

Figure 2: **PFTrDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFTrDA)

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) = 15

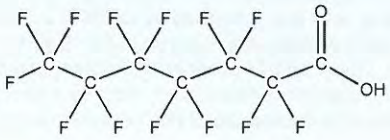
1812041

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid
LOT NUMBER: PFHpA0718

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) 07/12/2018
EXPIRY DATE: (mm/dd/yyyy) 07/12/2023
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:** 07/18/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1812041

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).

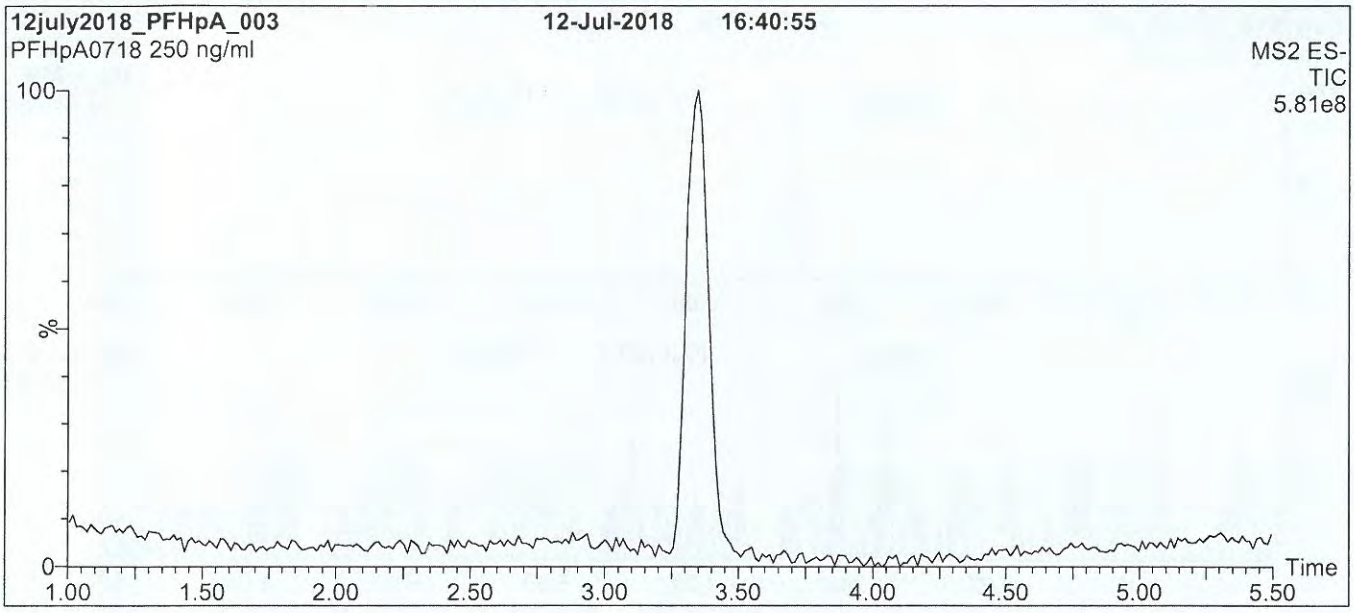
CALA Testing Accreditation No. A1226

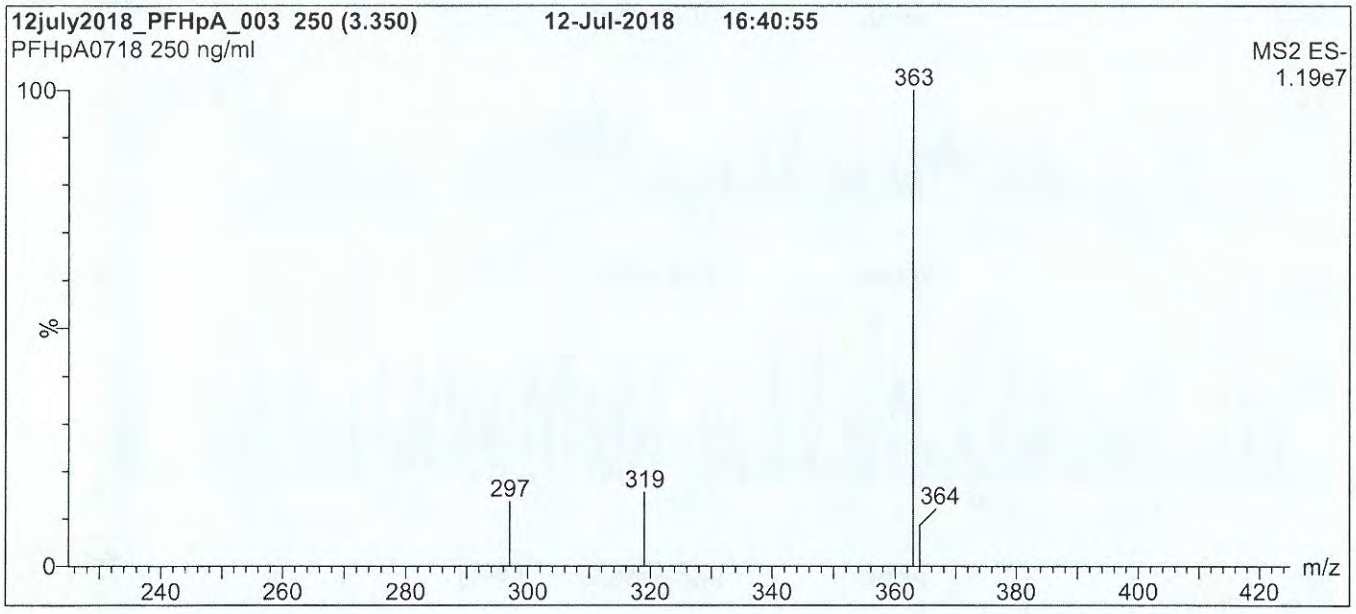
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2041

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 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

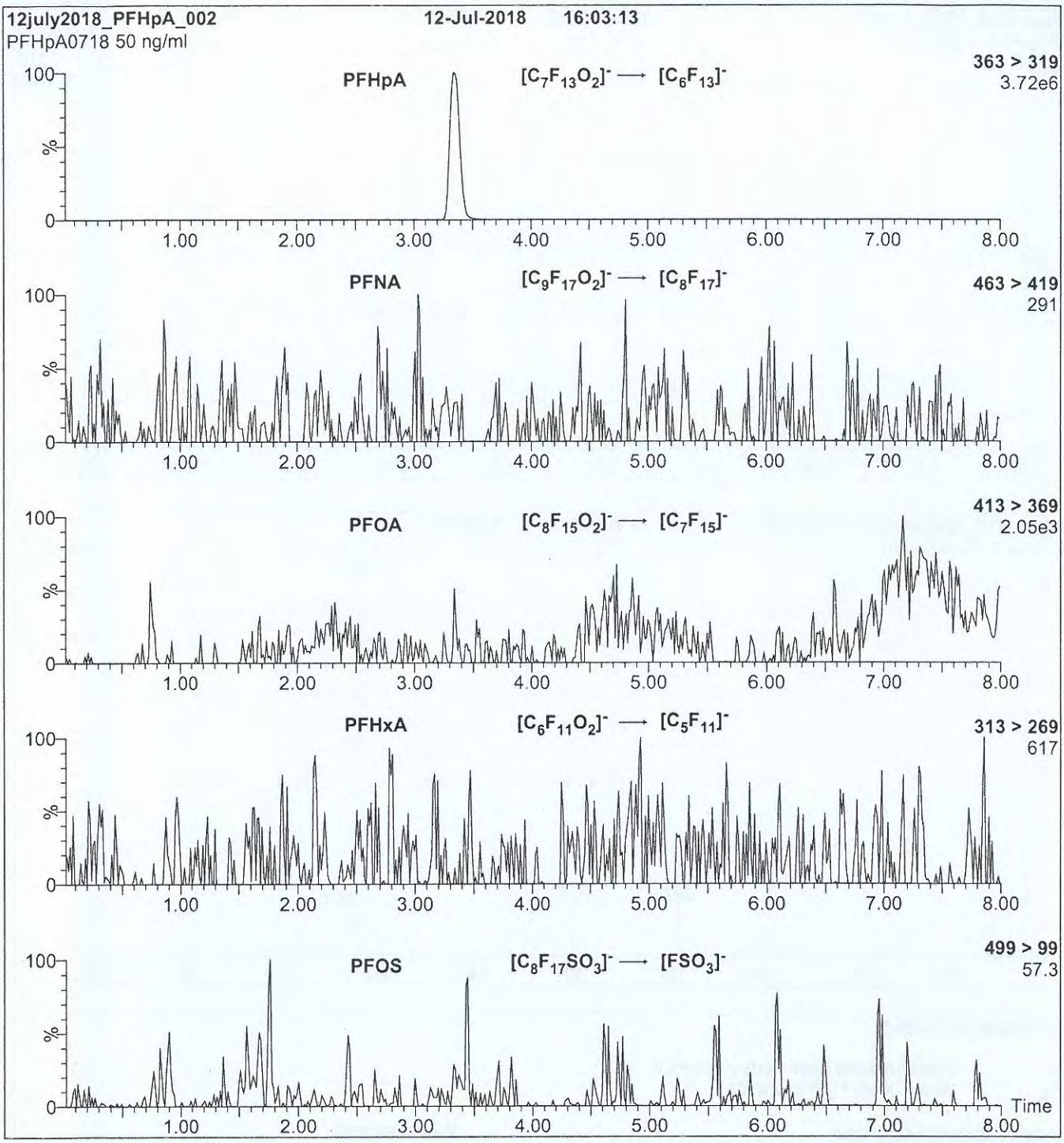
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

18L2041

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) = 3.47e-3
Collision Energy (eV) = 8

18L2042

WELLINGTON LABORATORIES

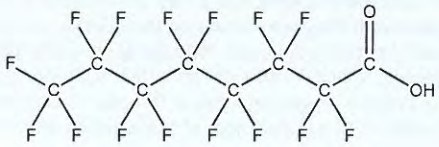
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFOA
COMPOUND: Perfluoro-n-octanoic acid

LOT NUMBER: PFOA0818

STRUCTURE:

CAS #: 335-67-1



MOLECULAR FORMULA: $C_8HF_{15}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 414.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/23/2018
EXPIRY DATE: (mm/dd/yyyy) 08/23/2023
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.
- 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:** 08/24/2018 (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

1812042

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,...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.

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TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

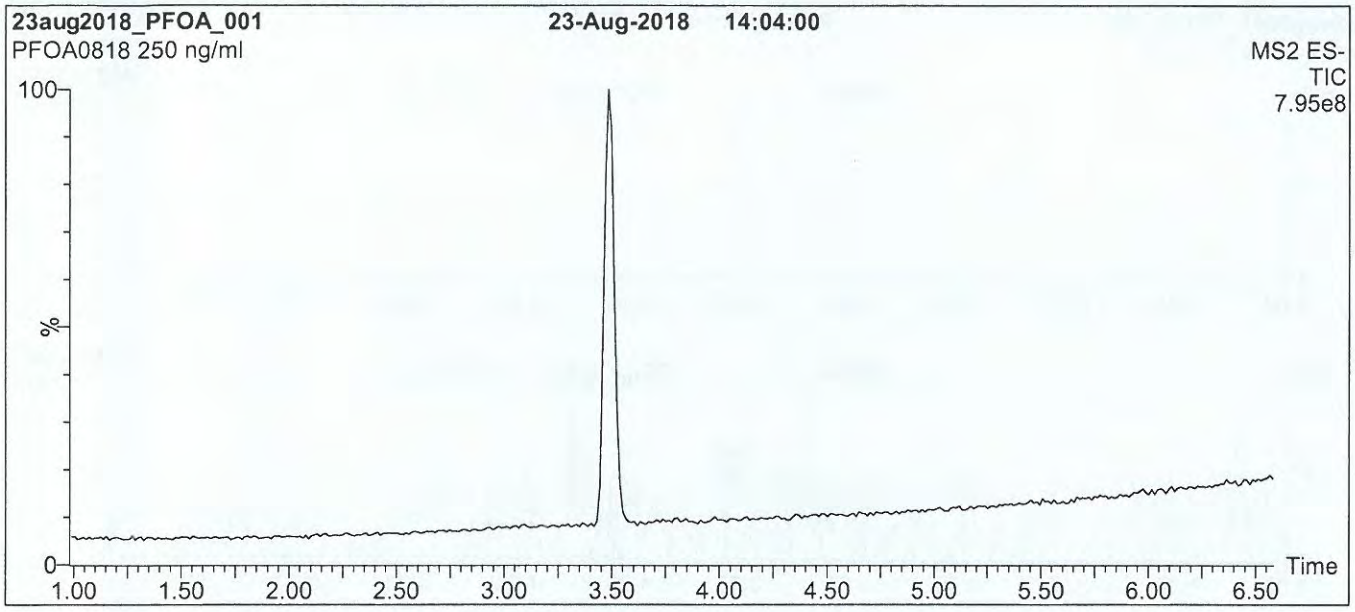
CALA Testing Accreditation No. A1226

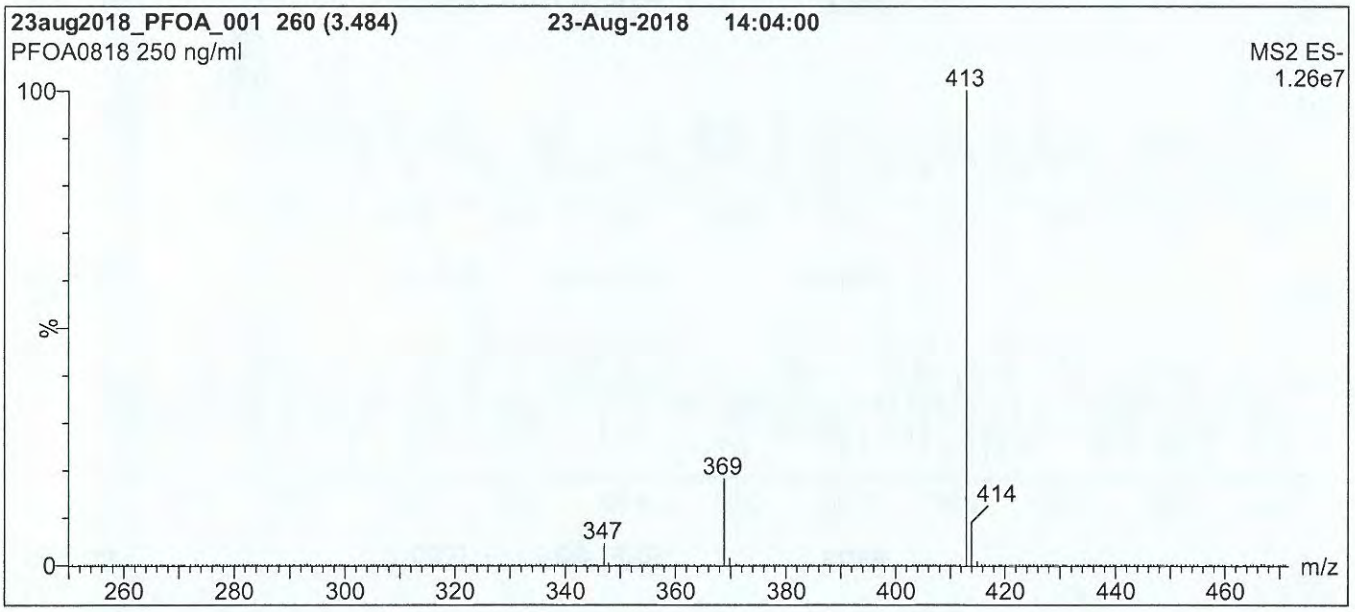
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2042

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: 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

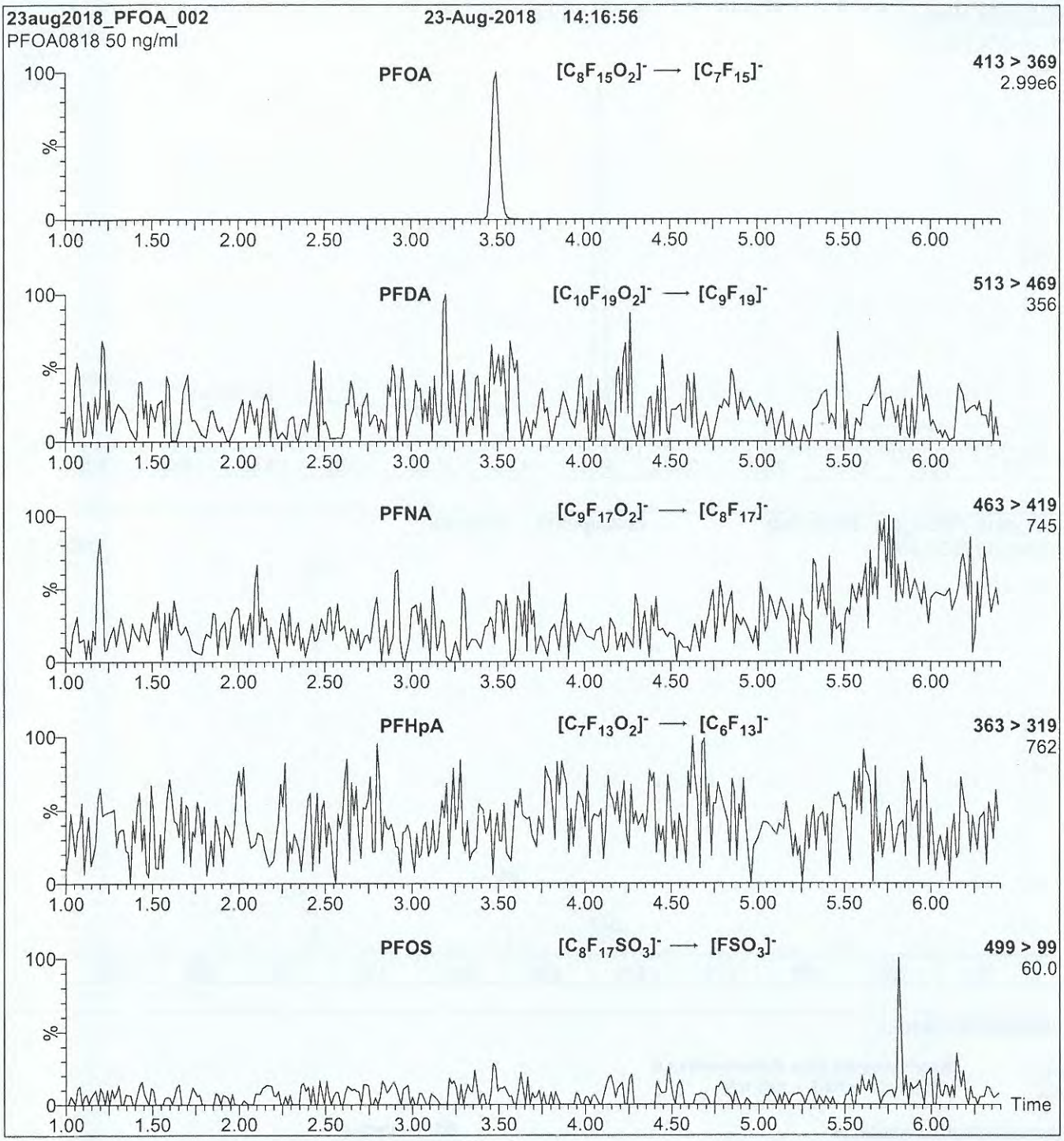
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1812042

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

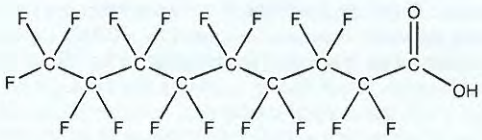
Collision Gas (mbar) = 3.45e-3
Collision Energy (eV) = 8

1812043

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	PFNA	**LOT NUMBER:**	PFNA0218
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)	02/16/2018		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2023		
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 ~ 0.2% 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:** 02/20/2018 (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

18L2043

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).

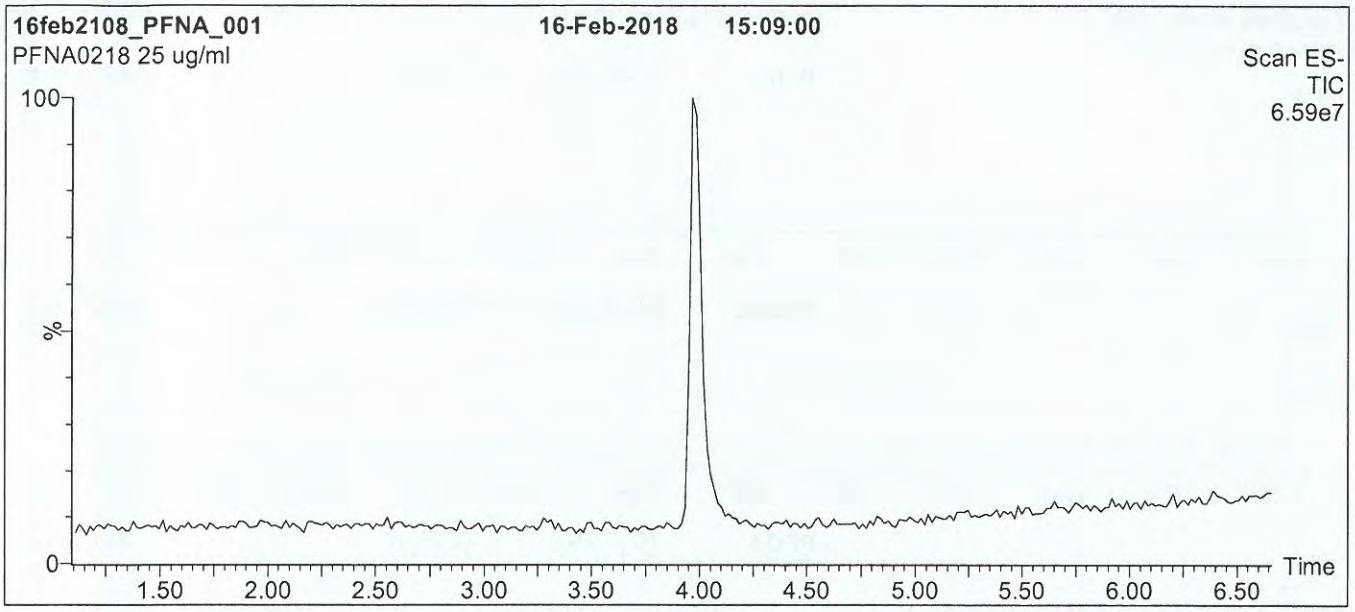
CALA Testing Accreditation No. A 1226

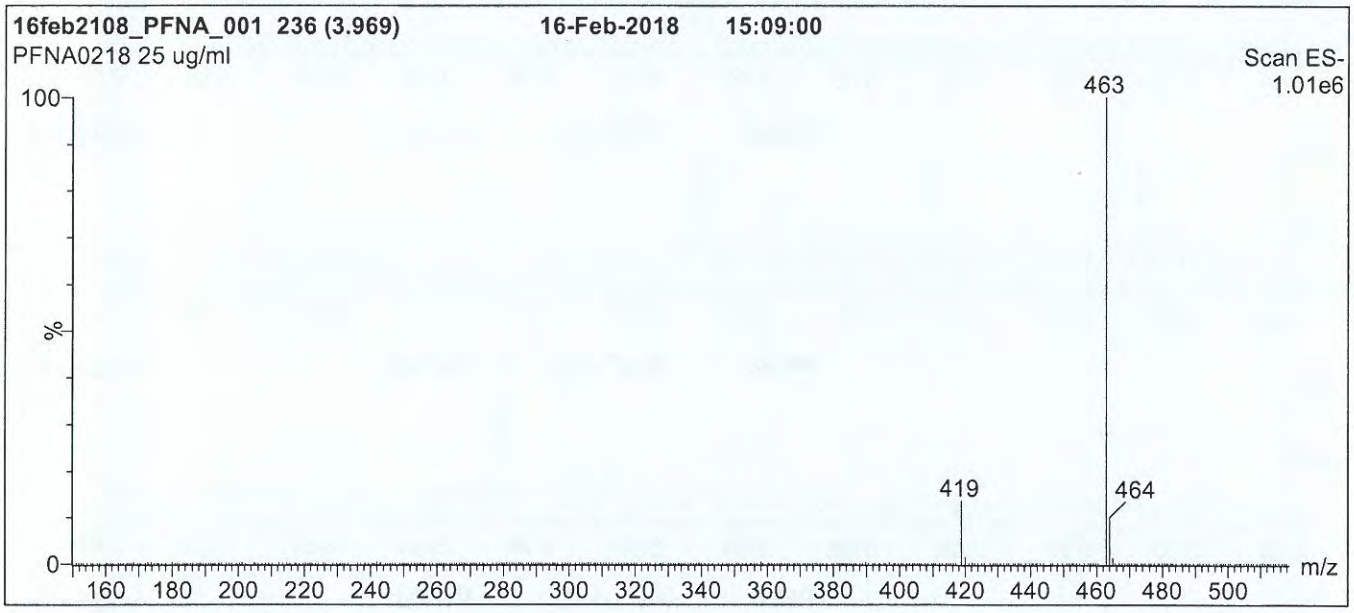
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2043

Figure 1: **PFNA; 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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

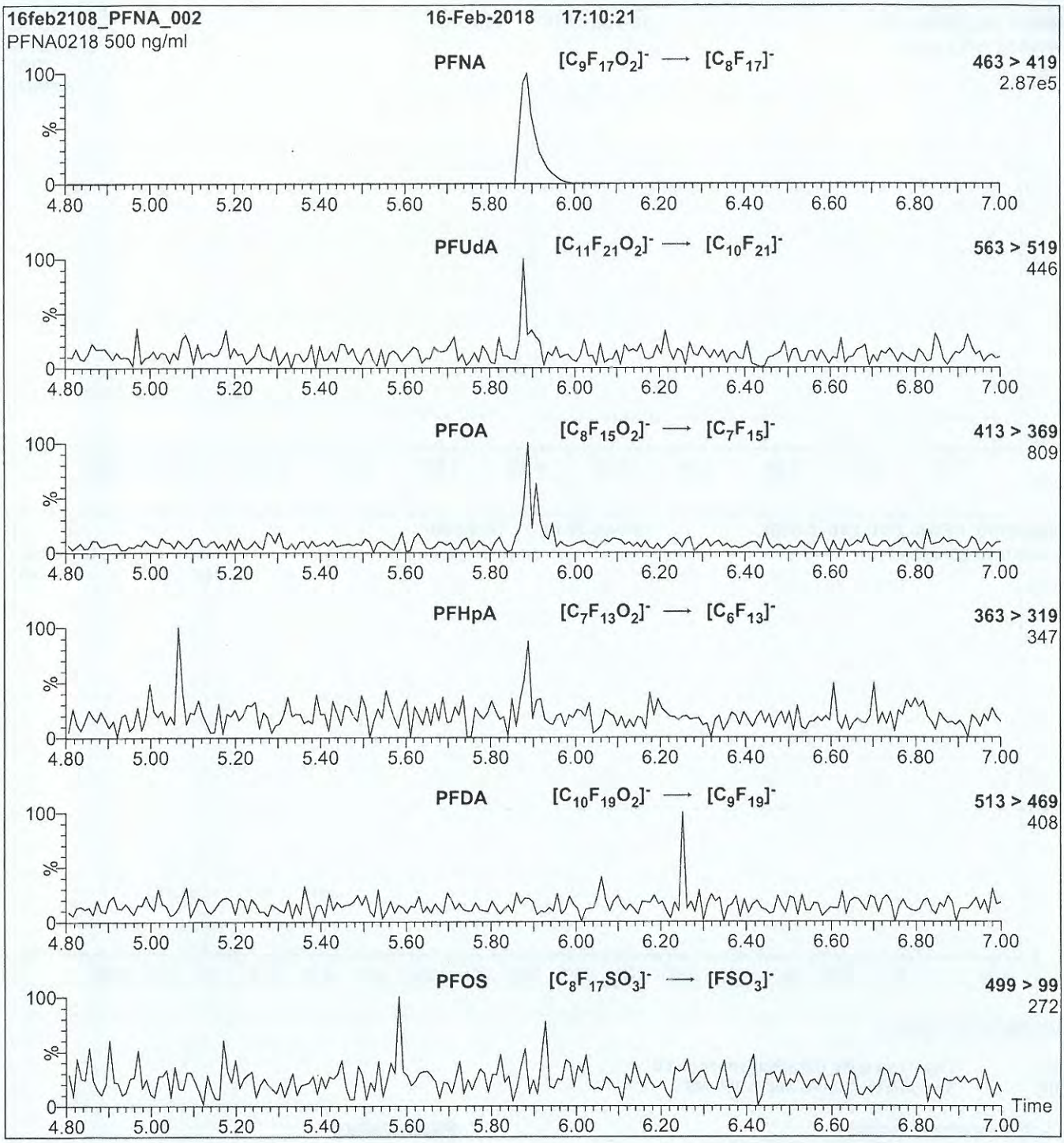
MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

1812043

Figure 2: **PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFNA)

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) = 3.24e-3
Collision Energy (eV) = 11

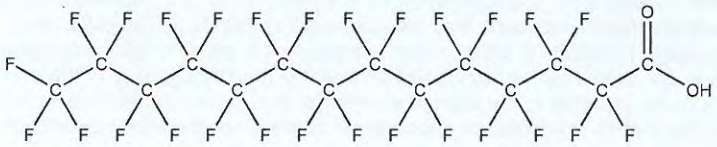
18L2044

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA
COMPOUND: Perfluoro-n-tetradecanoic acid
LOT NUMBER: PFTeDA0818

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) 08/23/2018
EXPIRY DATE: (mm/dd/yyyy) 08/23/2023
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.
- 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 PFPeDA ($C_{15}HF_{29}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/05/2018 (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

18L2044

INTENDED USE:

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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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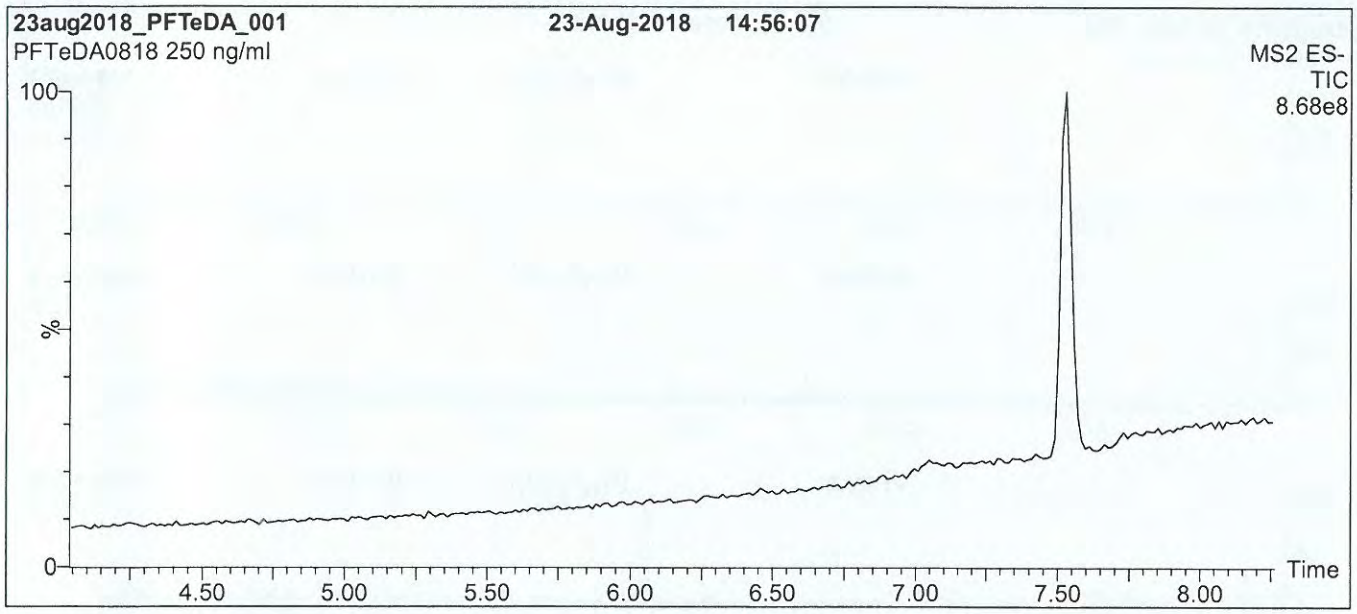
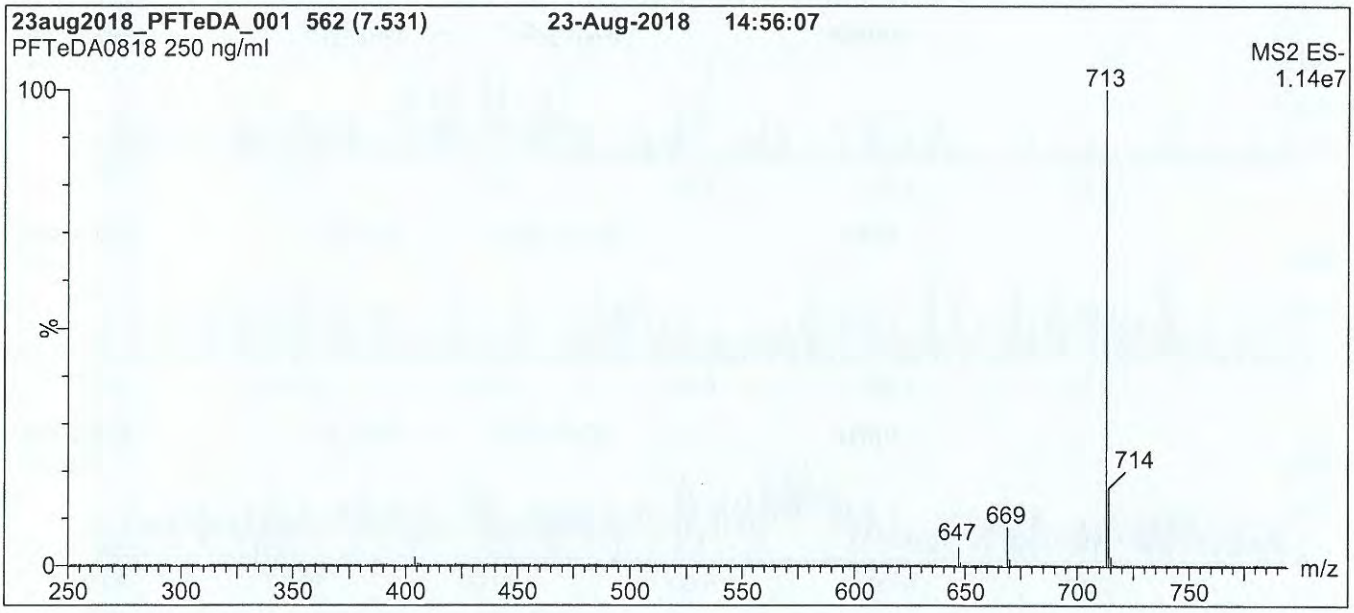
1812044

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: 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

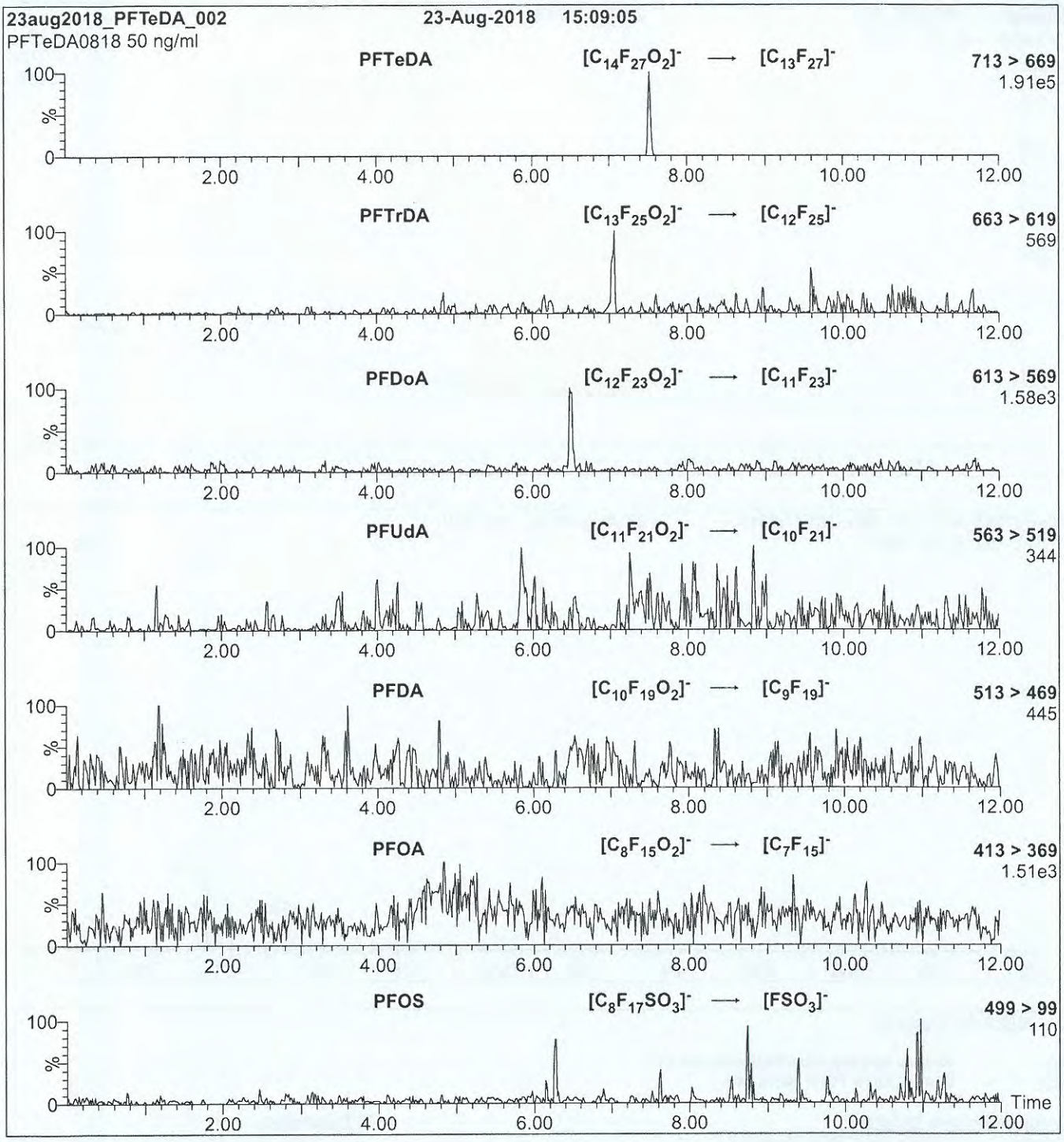
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

18L2044

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) = 3.45e-3
Collision Energy (eV) = 12

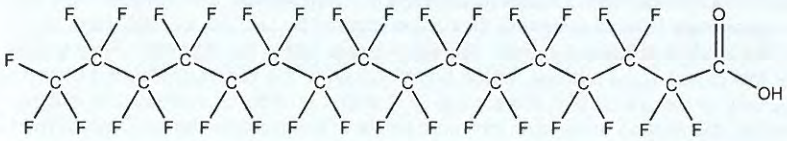
1812045

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHxDA
COMPOUND: Perfluoro-n-hexadecanoic acid
LOT NUMBER: PFHxDA0717

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) 07/13/2017
EXPIRY DATE: (mm/dd/yyyy) 07/13/2022
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 08/04/2017 (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

1812045

INTENDED USE:

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HAZARDS:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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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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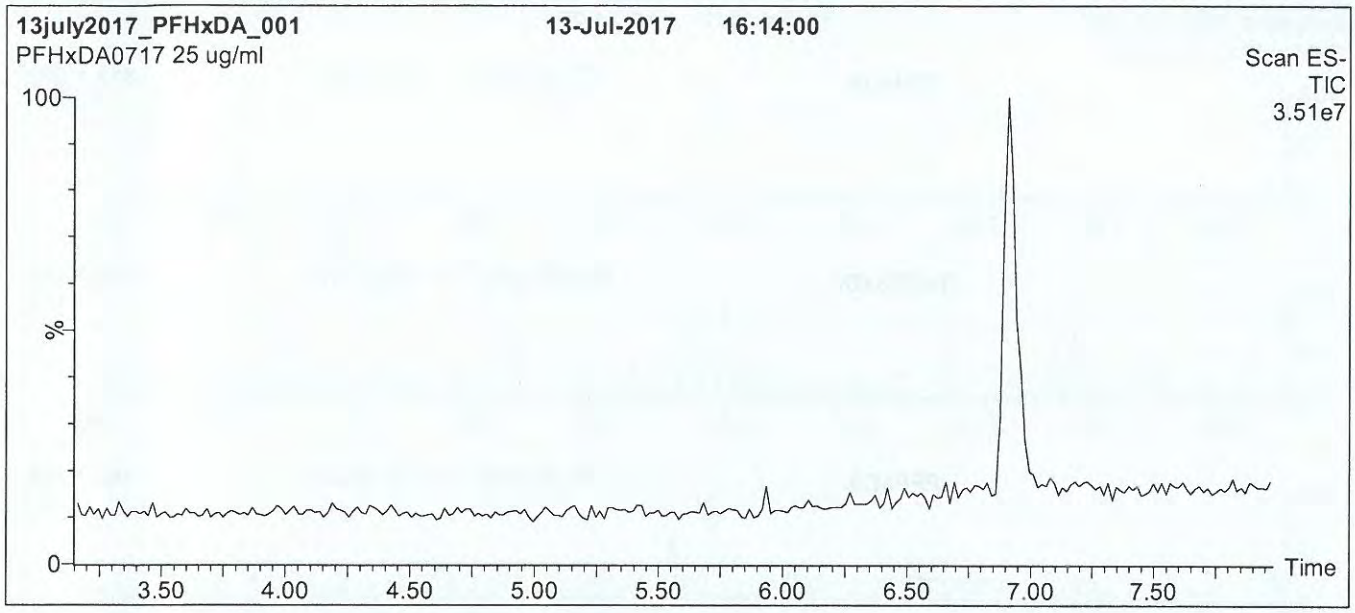
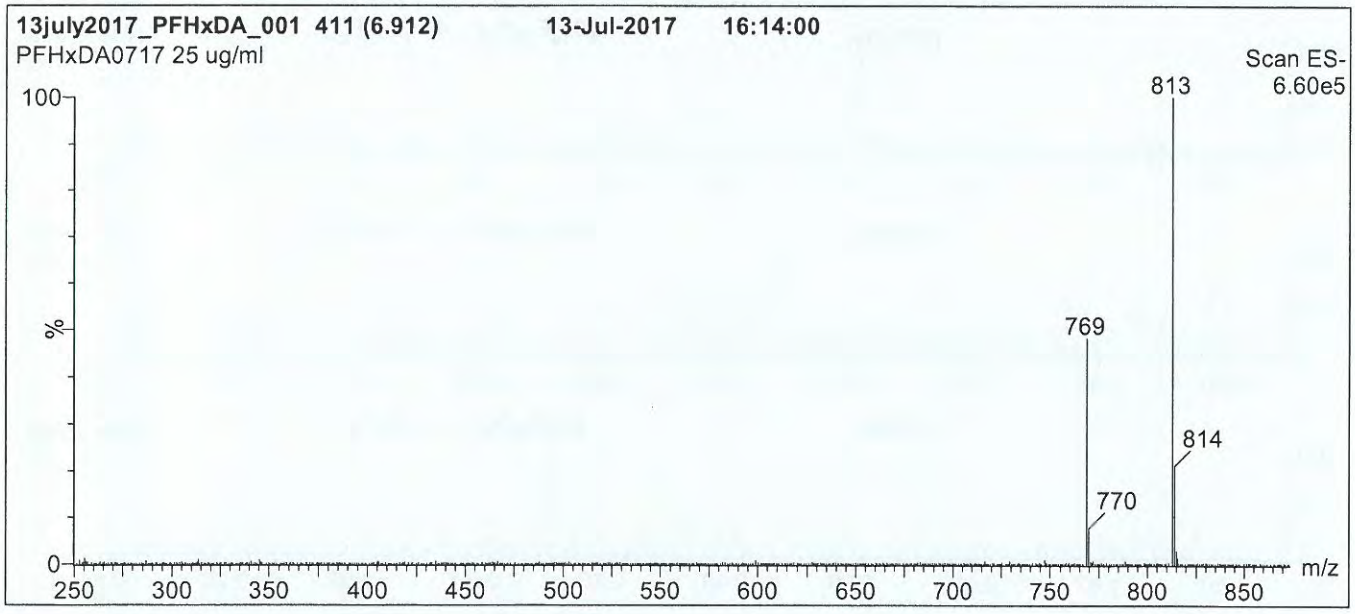
18L2045

Figure 1: **PFHxDA; 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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

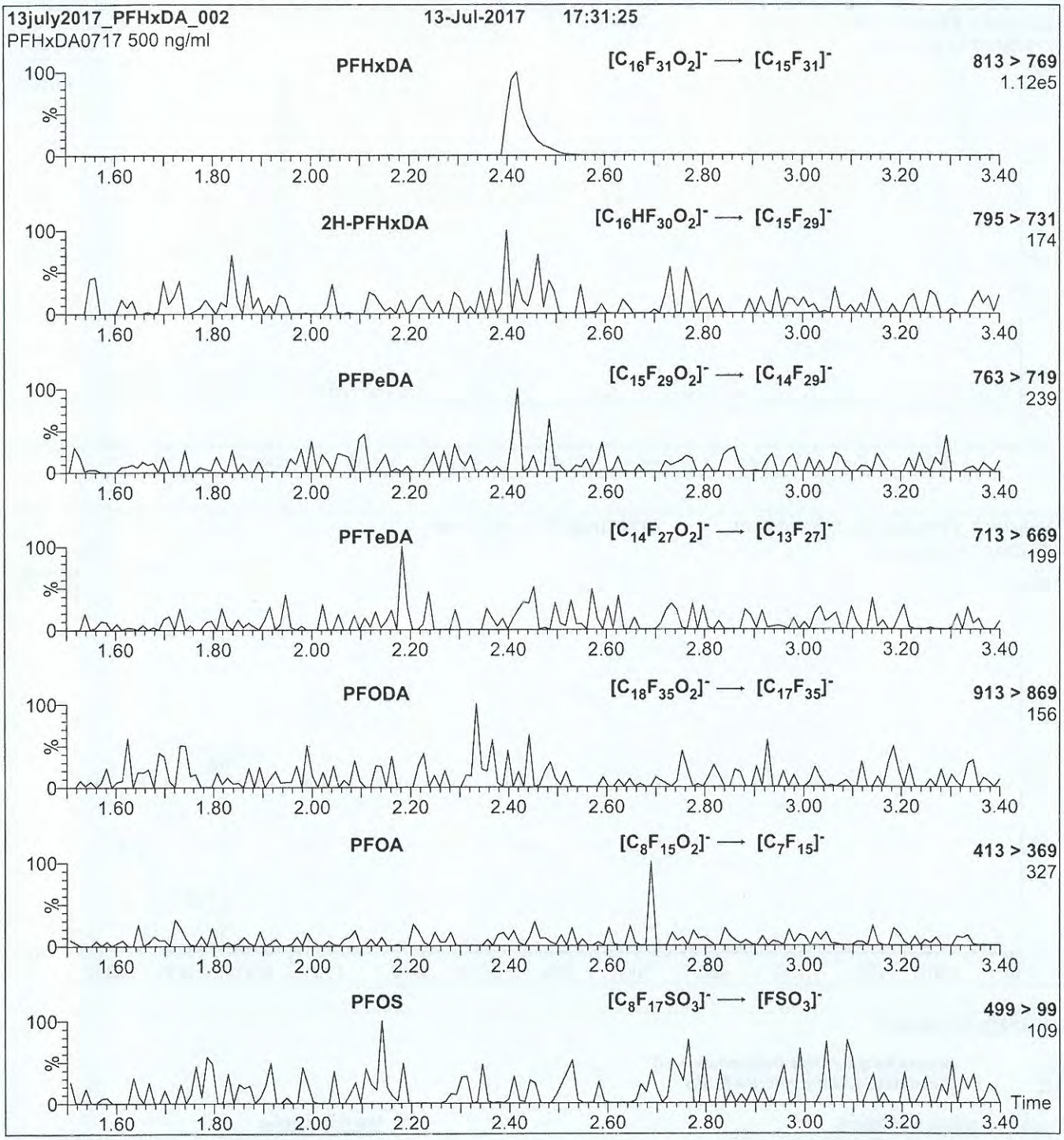
MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

182045

Figure 2: **PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFHxDA)

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) = 3.13e-3
Collision Energy (eV) = 15

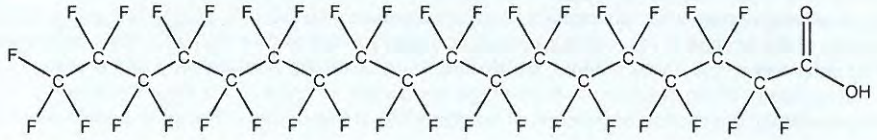
18L2046

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFODA
COMPOUND: Perfluoro-n-octadecanoic acid
LOT NUMBER: PFODA0717

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) 07/13/2017
EXPIRY DATE: (mm/dd/yyyy) 07/13/2022
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/14/2017 (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

18L2046

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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).

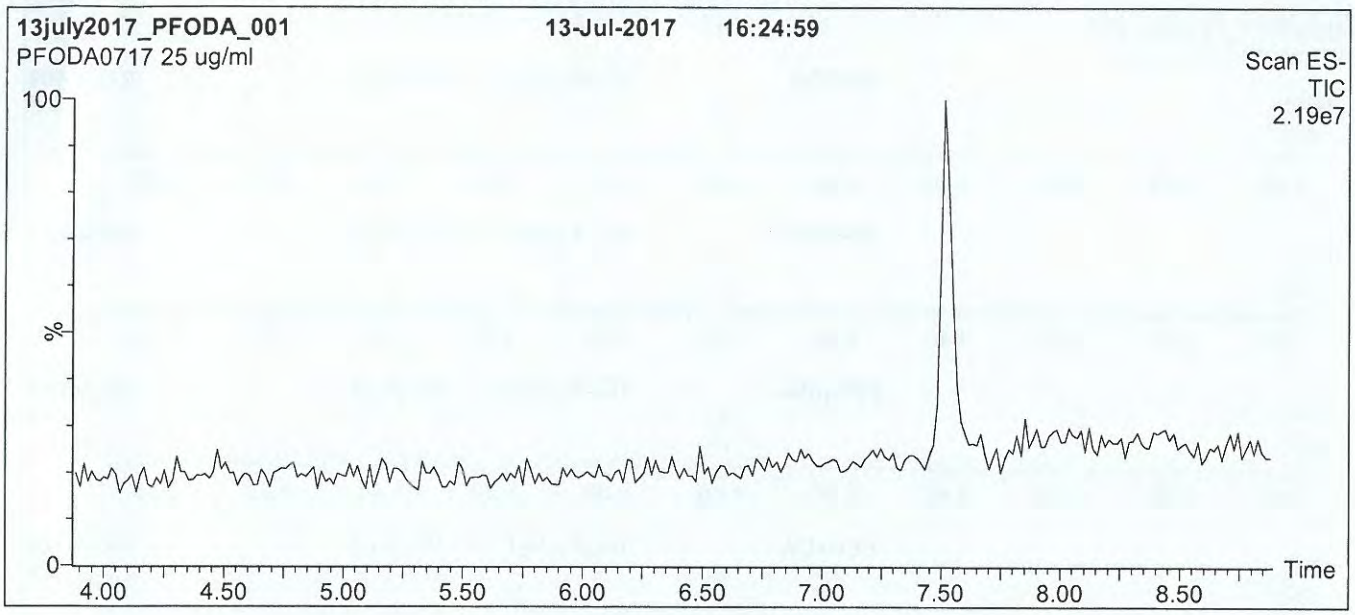
CALA Testing Accreditation No. A 1226

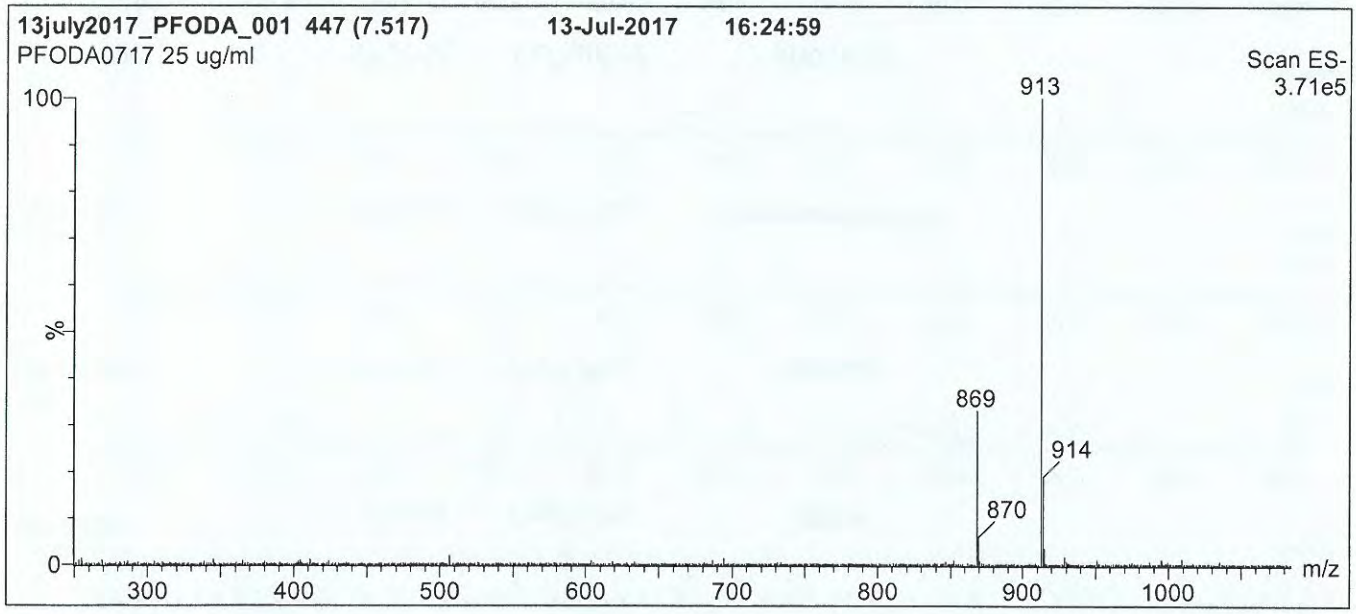
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812046

Figure 1: **PFODA; 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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

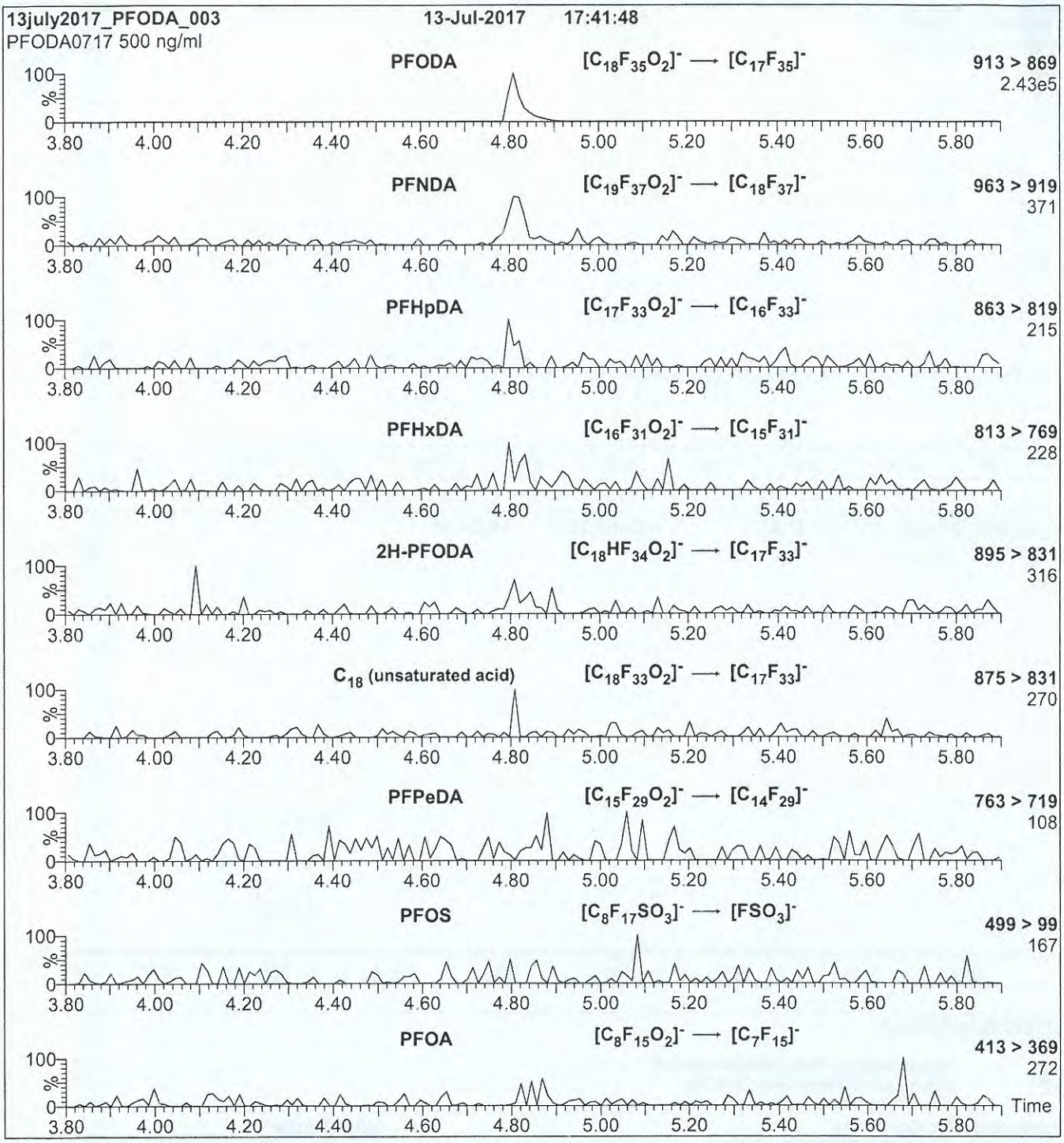
MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

18L2046

Figure 2: **PFODA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFODA)

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) = 3.31e-3
Collision Energy (eV) = 15

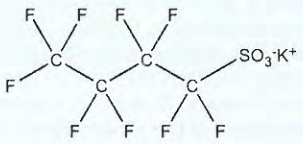
1812047

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFBS
LOT NUMBER: LPFBS0418
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)	05/04/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/04/2023		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/25/2018 (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

1812047

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:

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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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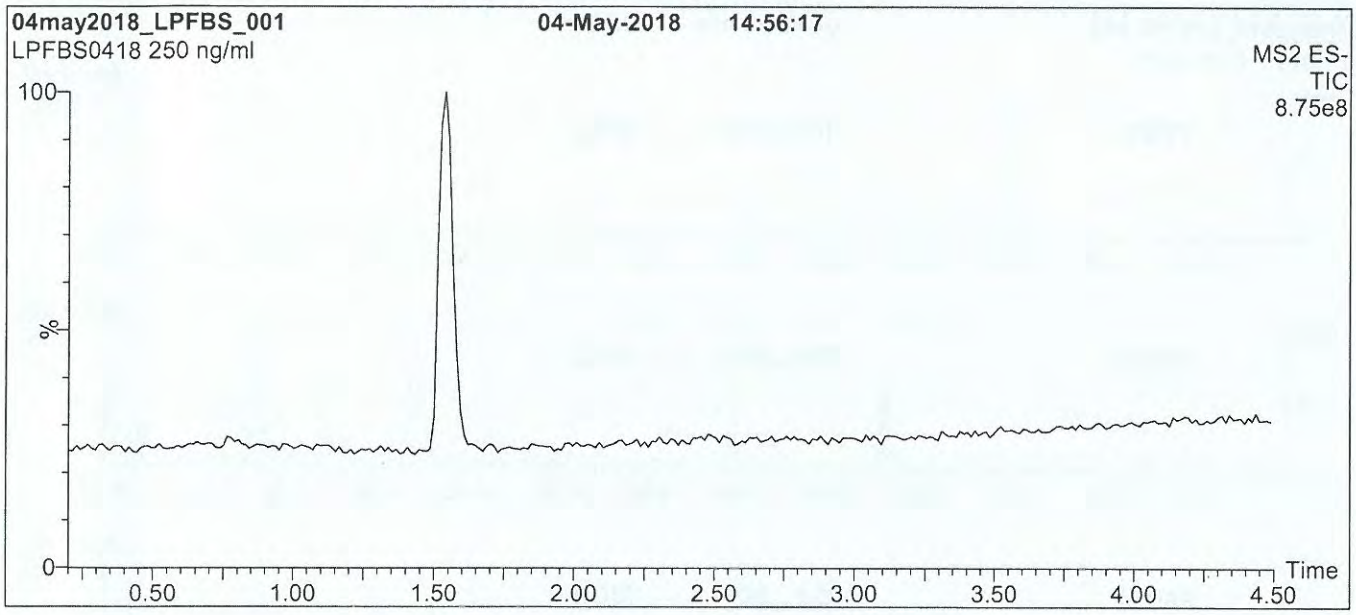
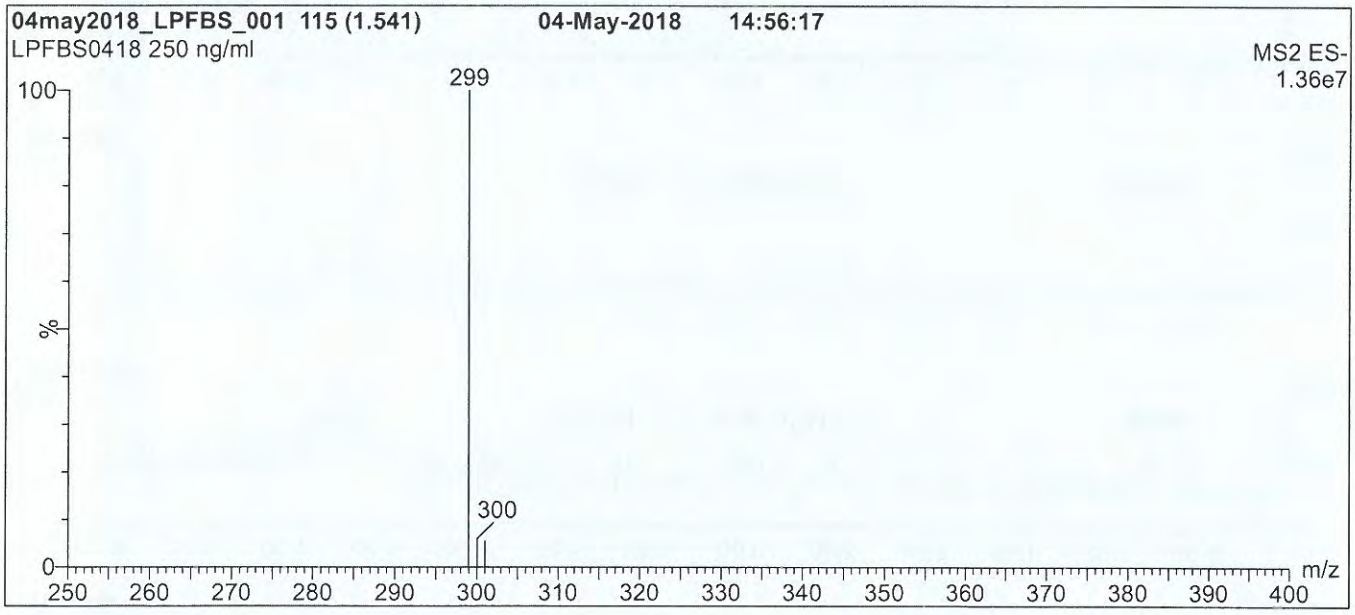
18L2047

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 80% 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

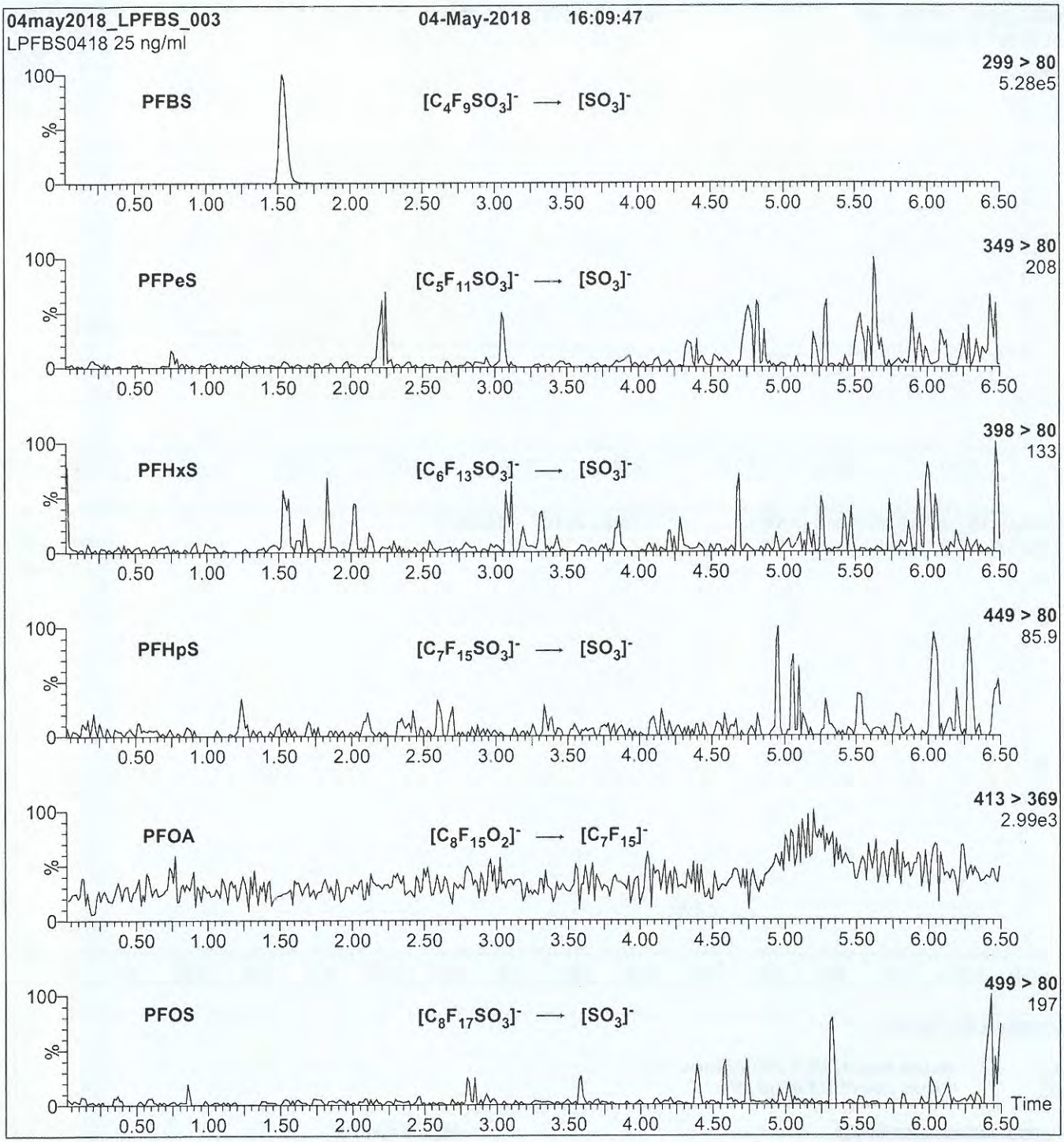
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812047

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) = 3.45e-3
Collision Energy (eV) = 30

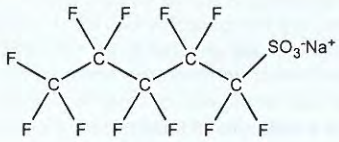
1812048

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFPeS
COMPOUND: Sodium perfluoro-1-pentanesulfonate
LOT NUMBER: LPFPeS0718
CAS #: 630402-22-1

STRUCTURE:



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)	07/12/2018
EXPIRY DATE: (mm/dd/yyyy)	07/12/2023
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/18/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1812048

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 $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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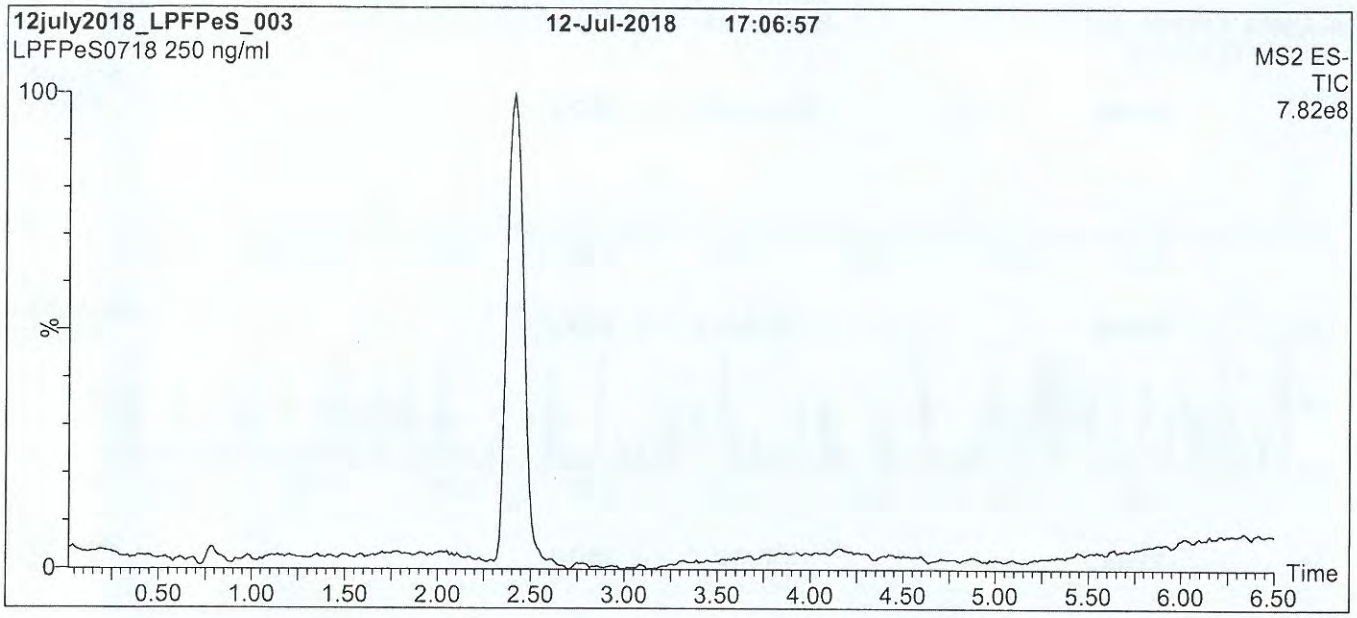
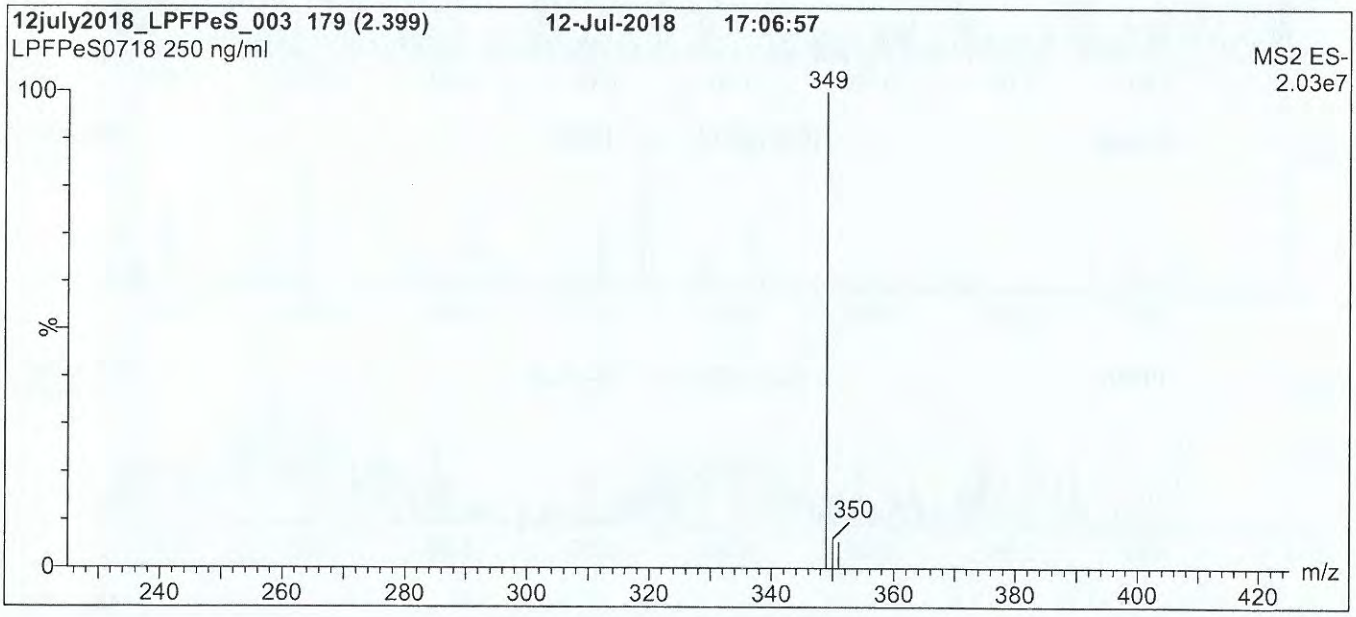
18L2048

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: 50% (80:20 MeOH:ACN) / 50% 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

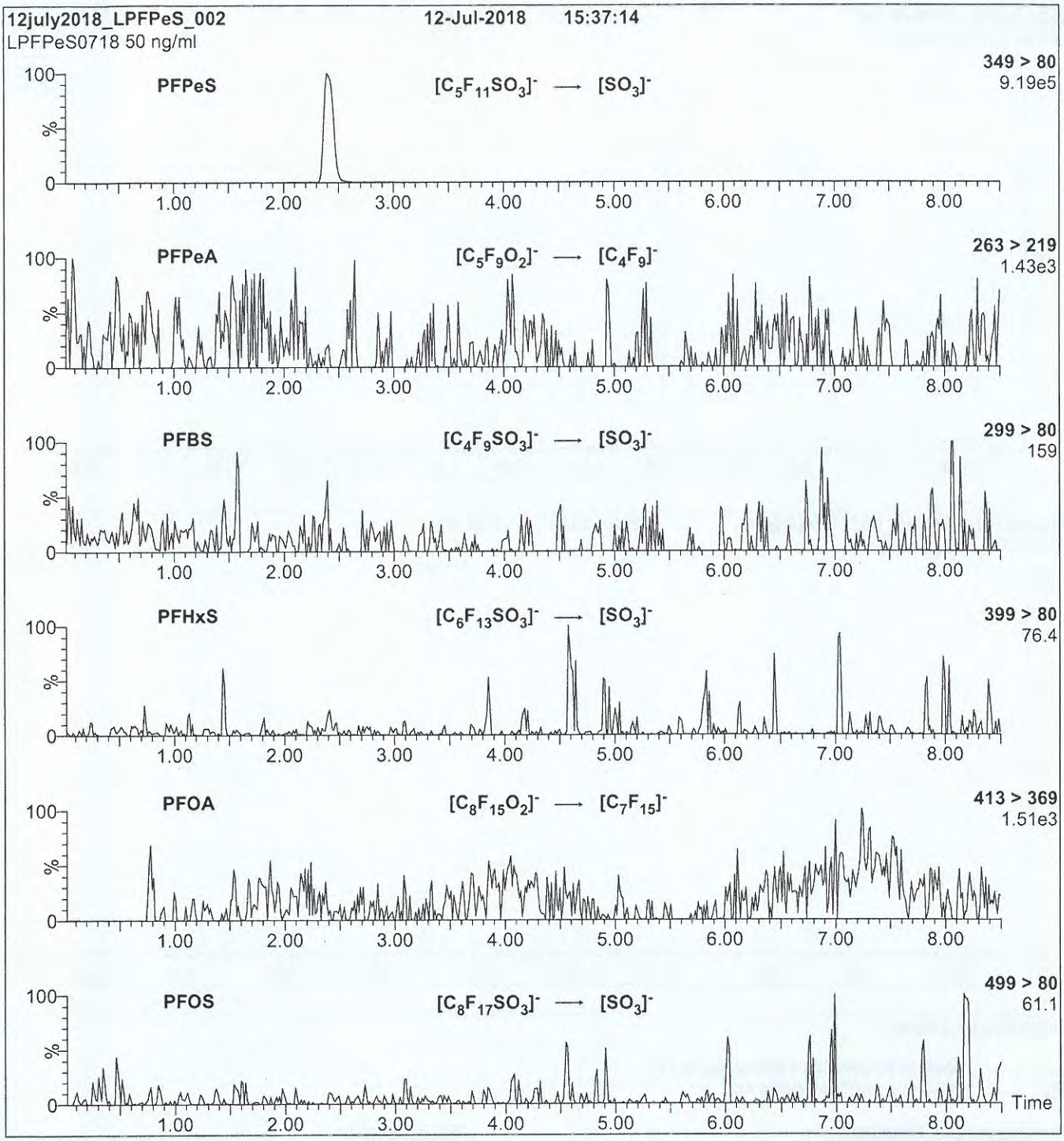
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1812048

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) = 3.47e-3
Collision Energy (eV) = 32

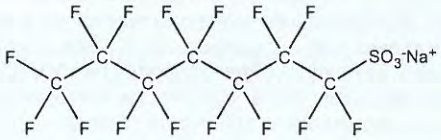
18L2049

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFHpS
LOT NUMBER: LPFHpS0418
COMPOUND: Sodium perfluoro-1-heptanesulfonate

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$C_7F_{15}SO_3Na$	**MOLECULAR WEIGHT:**	472.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.6 ± 2.4 µg/ml (PFHpS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/04/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/04/2023		
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 ~ 0.2% of L-PFHxS ($C_6F_{13}SO_3Na$) and ~ 0.1% of L-PFOS ($C_8F_{17}SO_3Na$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/17/2018 (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

1812049

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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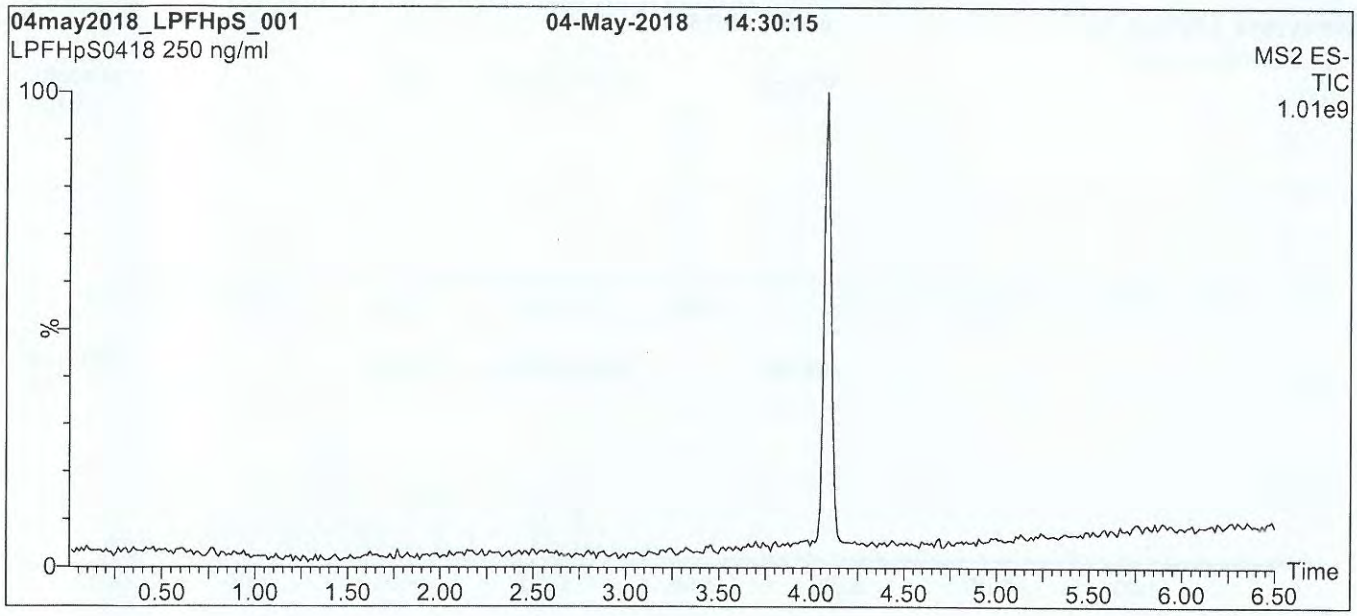
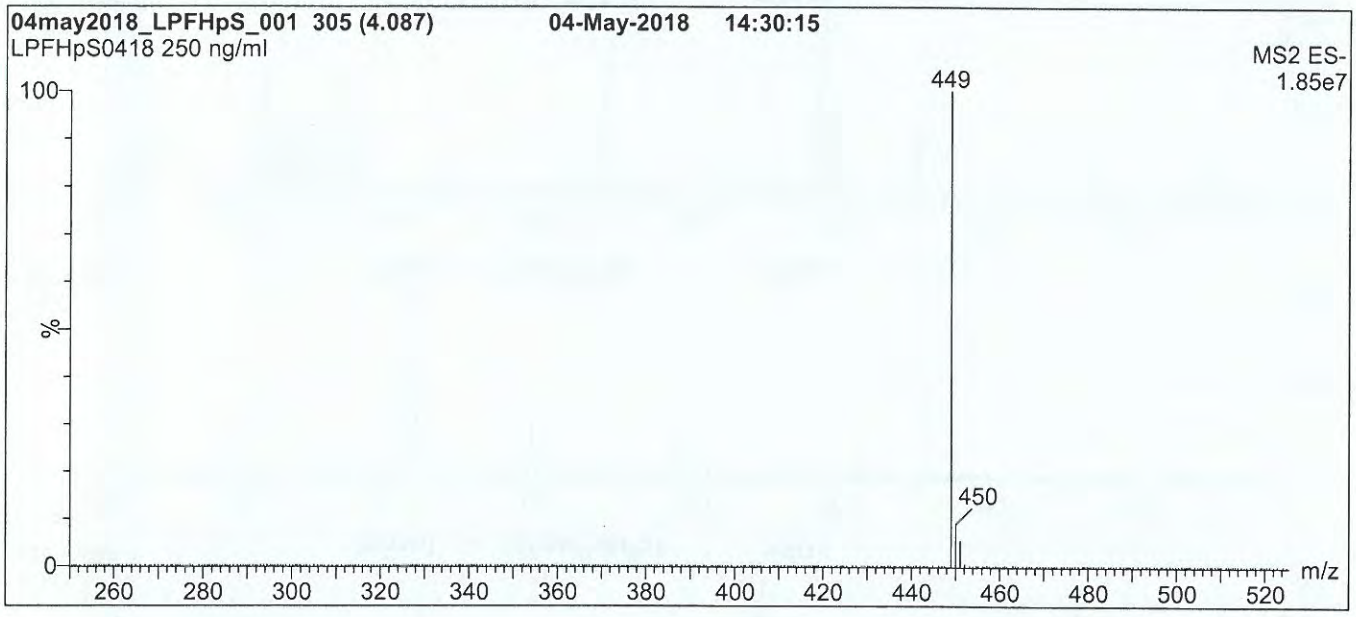
18L2049

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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 80% 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

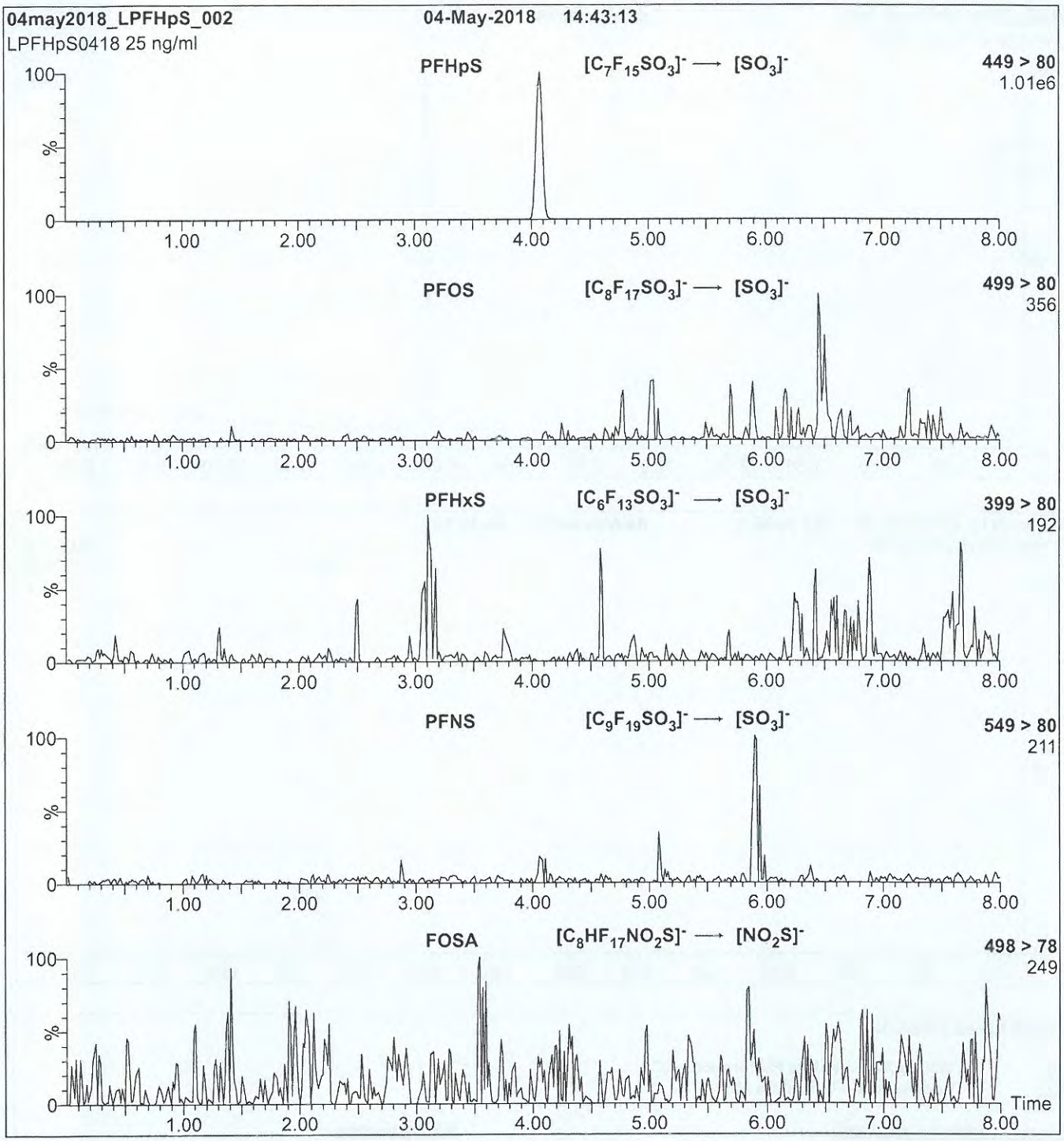
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2049

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) = 3.45e-3

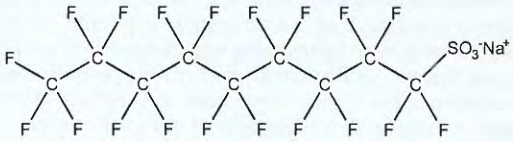
Collision Energy (eV) = 42

18L2050

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFNS	**LOT NUMBER:**	LPFNS0718
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)	07/13/2018		
EXPIRY DATE: (mm/dd/yyyy)	07/13/2023		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/18/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

18L2050

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).

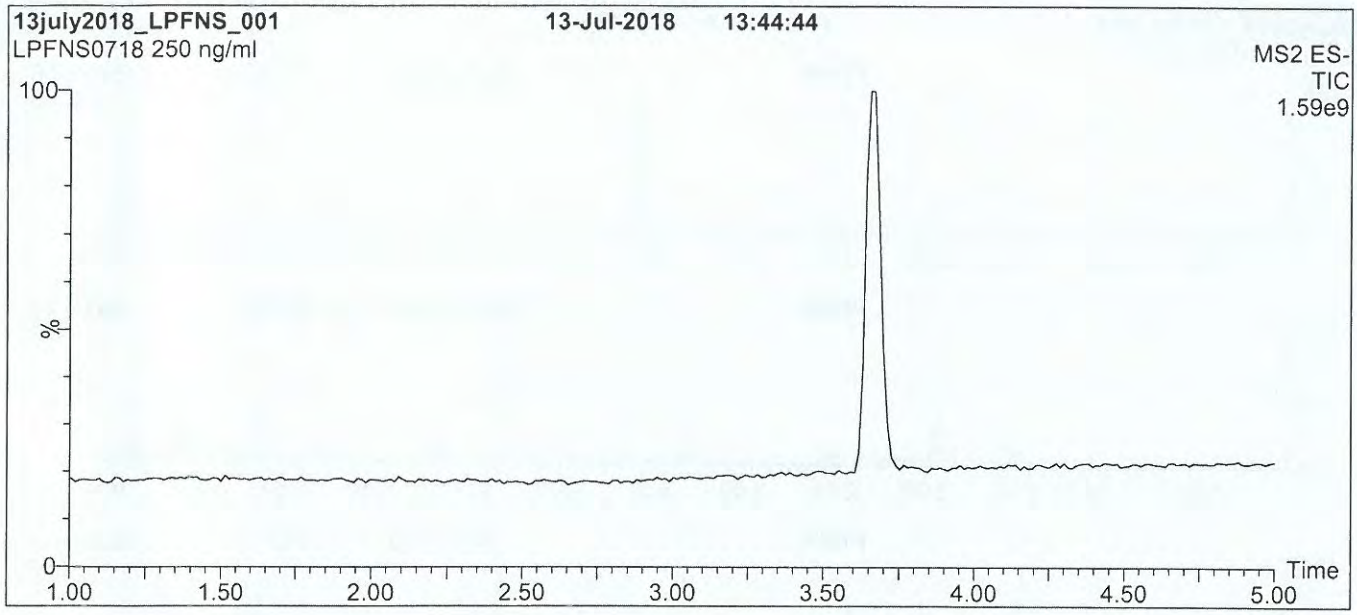
CALA Testing Accreditation No. A 1226

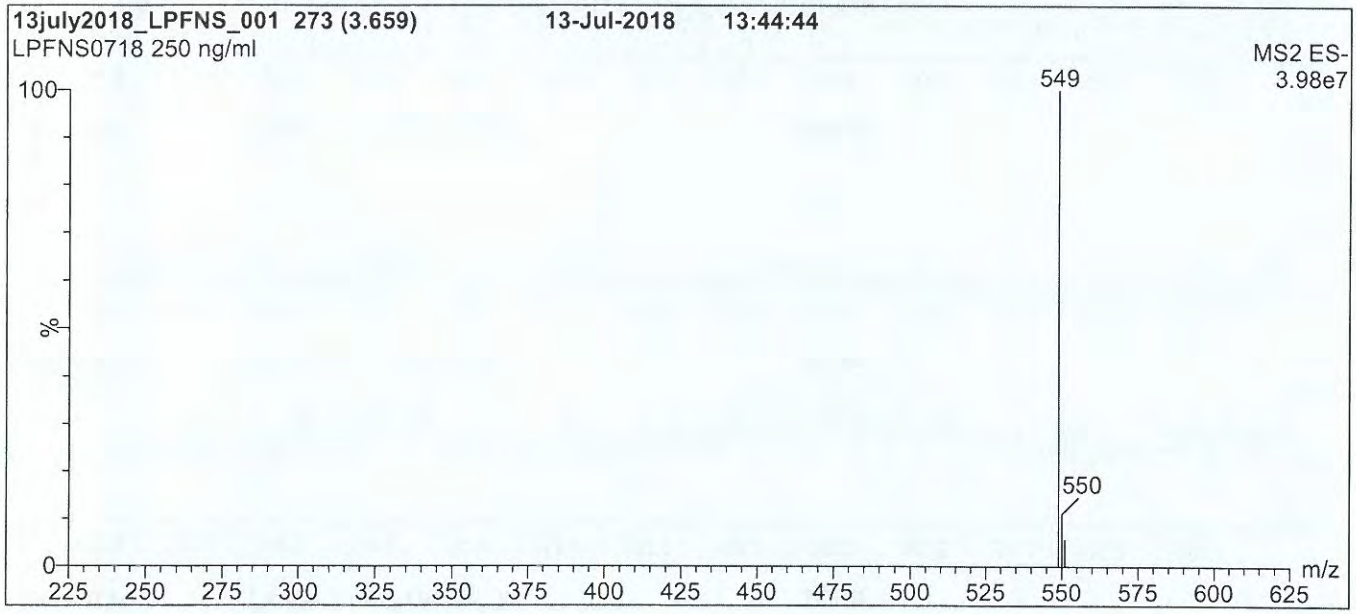
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812050

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: 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

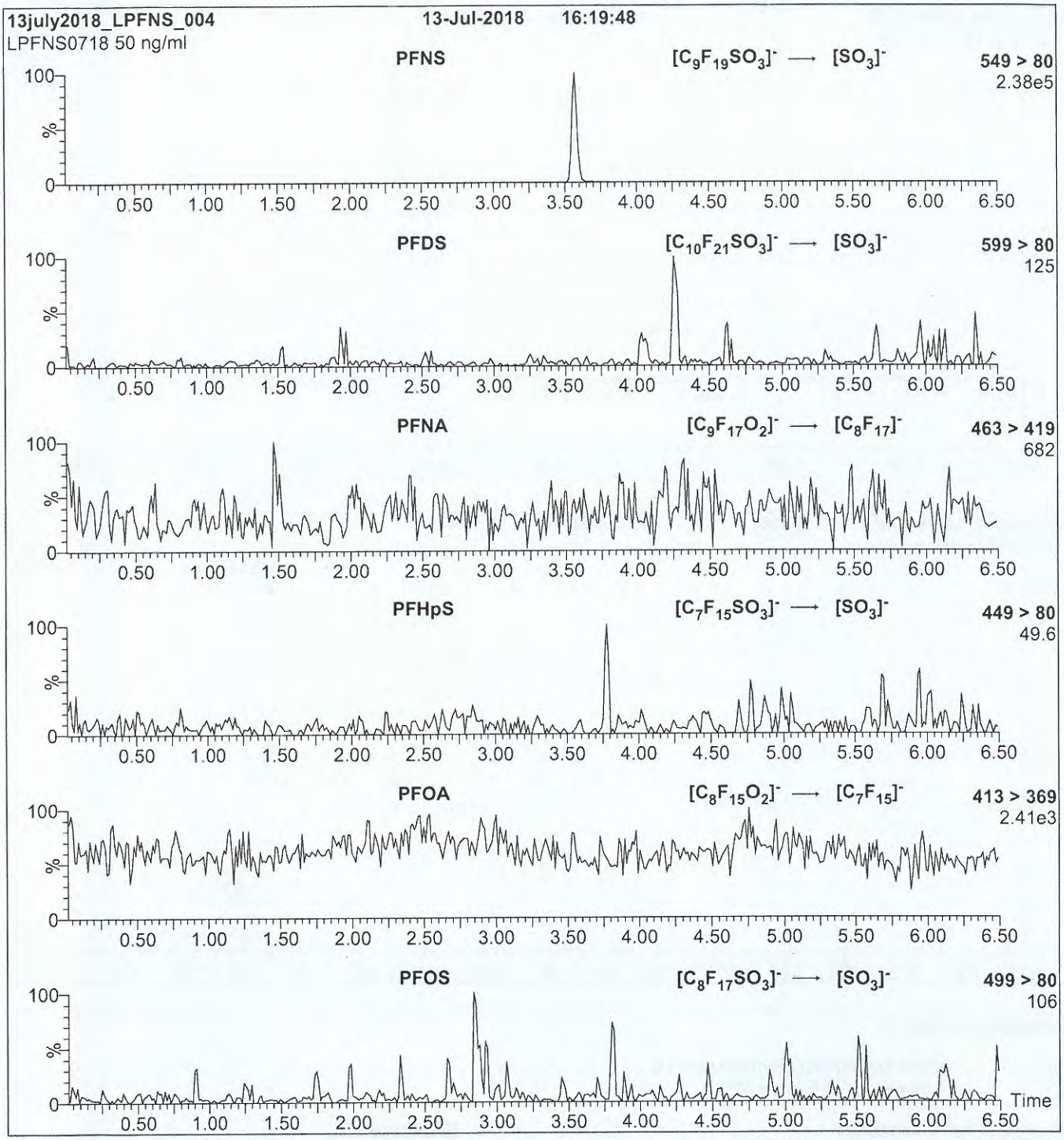
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 1000

1812050

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) = 3.45e-3
Collision Energy (eV) = 64

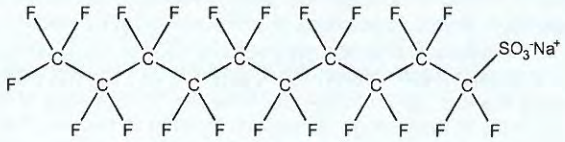
1812057

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS
LOT NUMBER: LPFDS1018
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)	10/05/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/05/2023		
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 ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/09/2018 (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

1812057

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:

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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. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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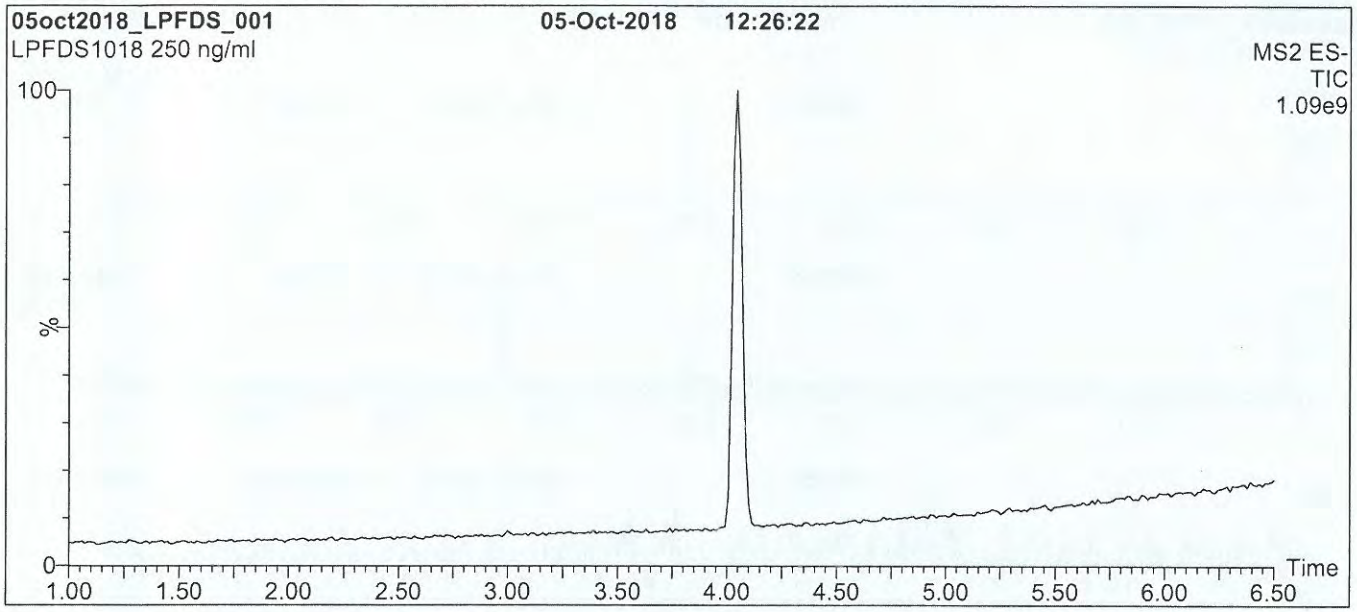
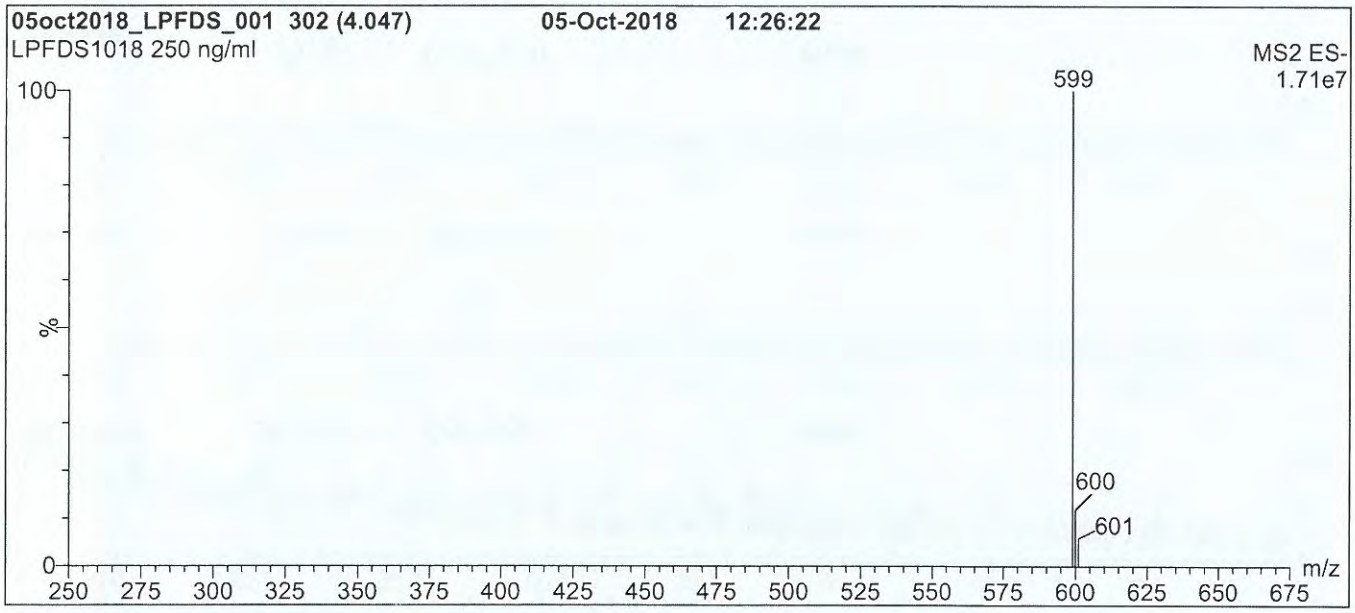
18L2051

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: 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

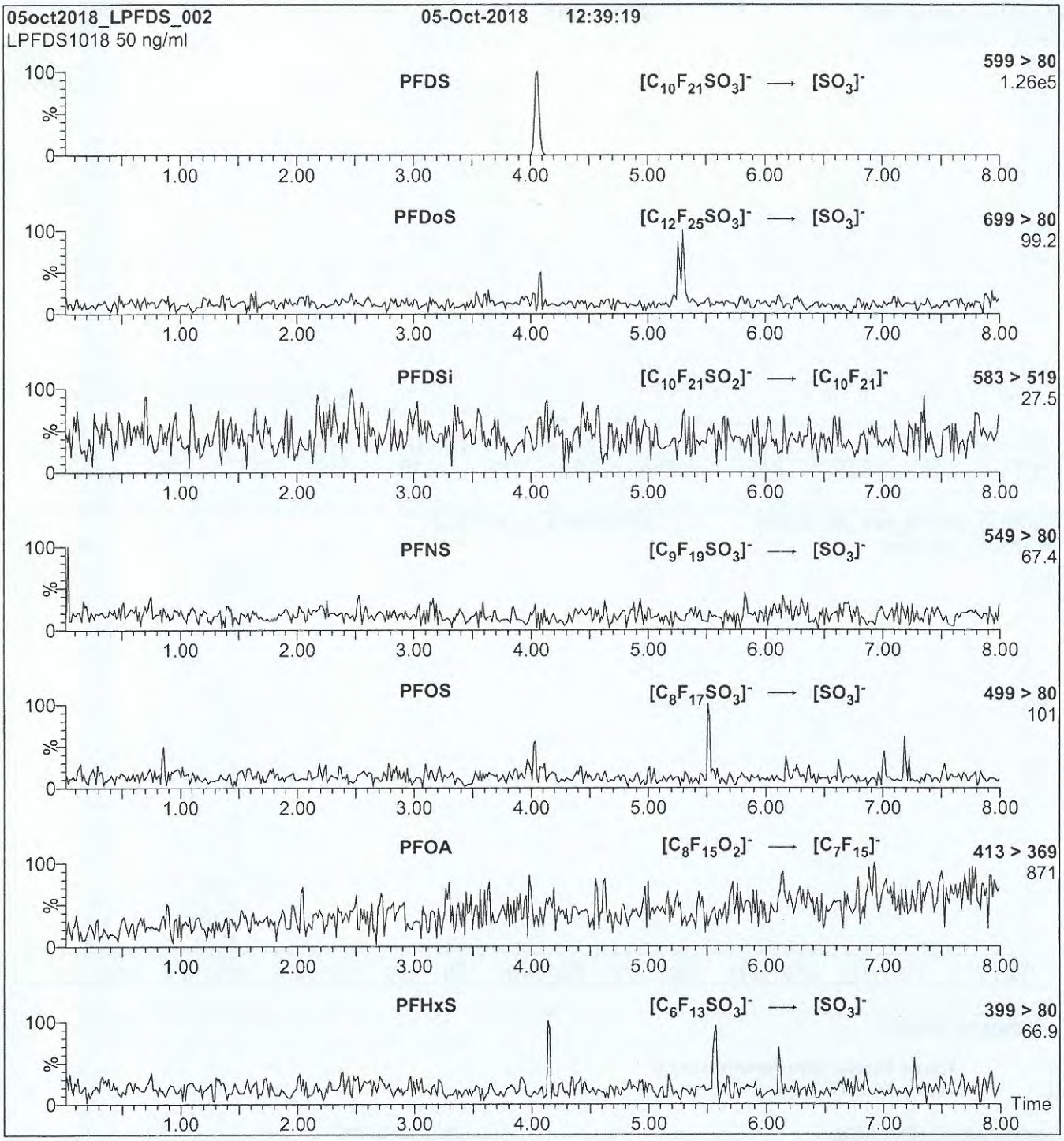
MS Parameters

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

1862057

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) = 2.97e-3
Collision Energy (eV) = 56

1812052

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).

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1812052

INTENDED USE:

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HANDLING:

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HOMOGENEITY:

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$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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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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1812052

Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

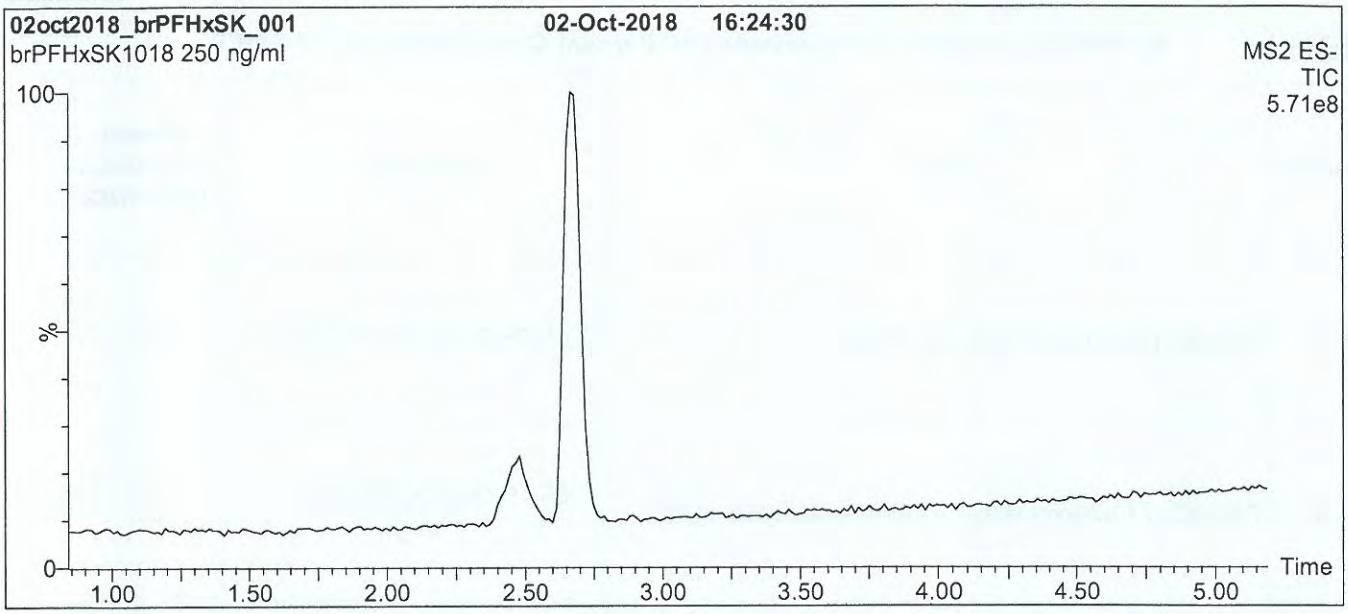
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3C(CF_3)_2CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

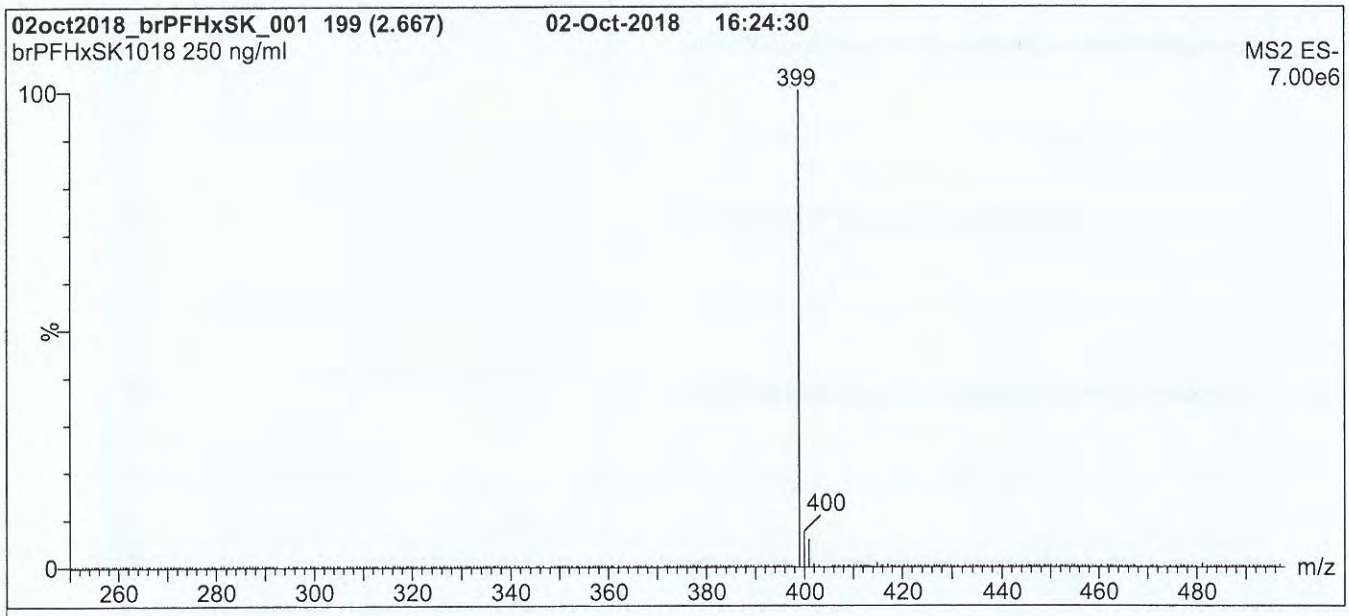
* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

Certified By: _____ **Date:** 10/05/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

18L2052

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

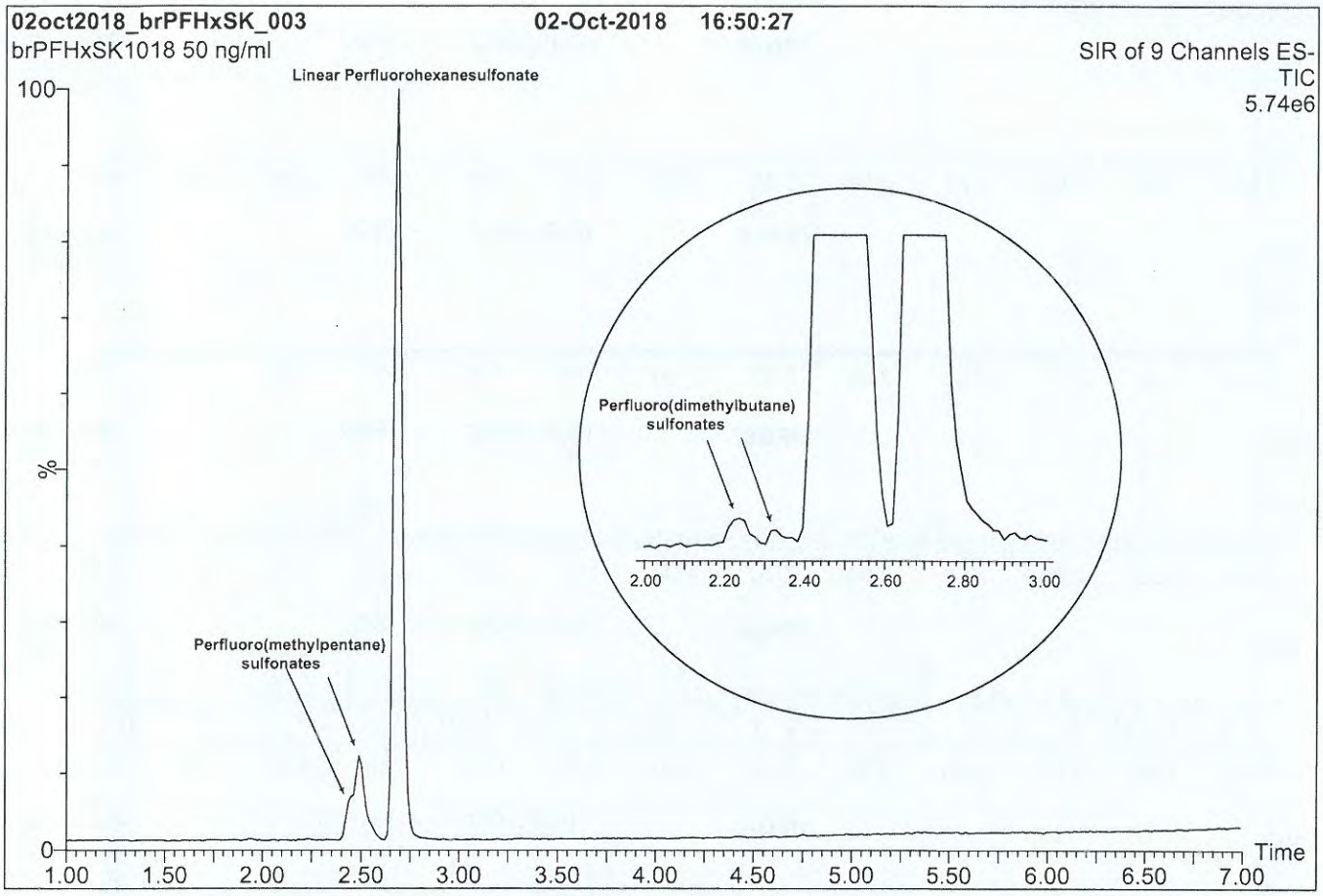
MS Parameters

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

1812052

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

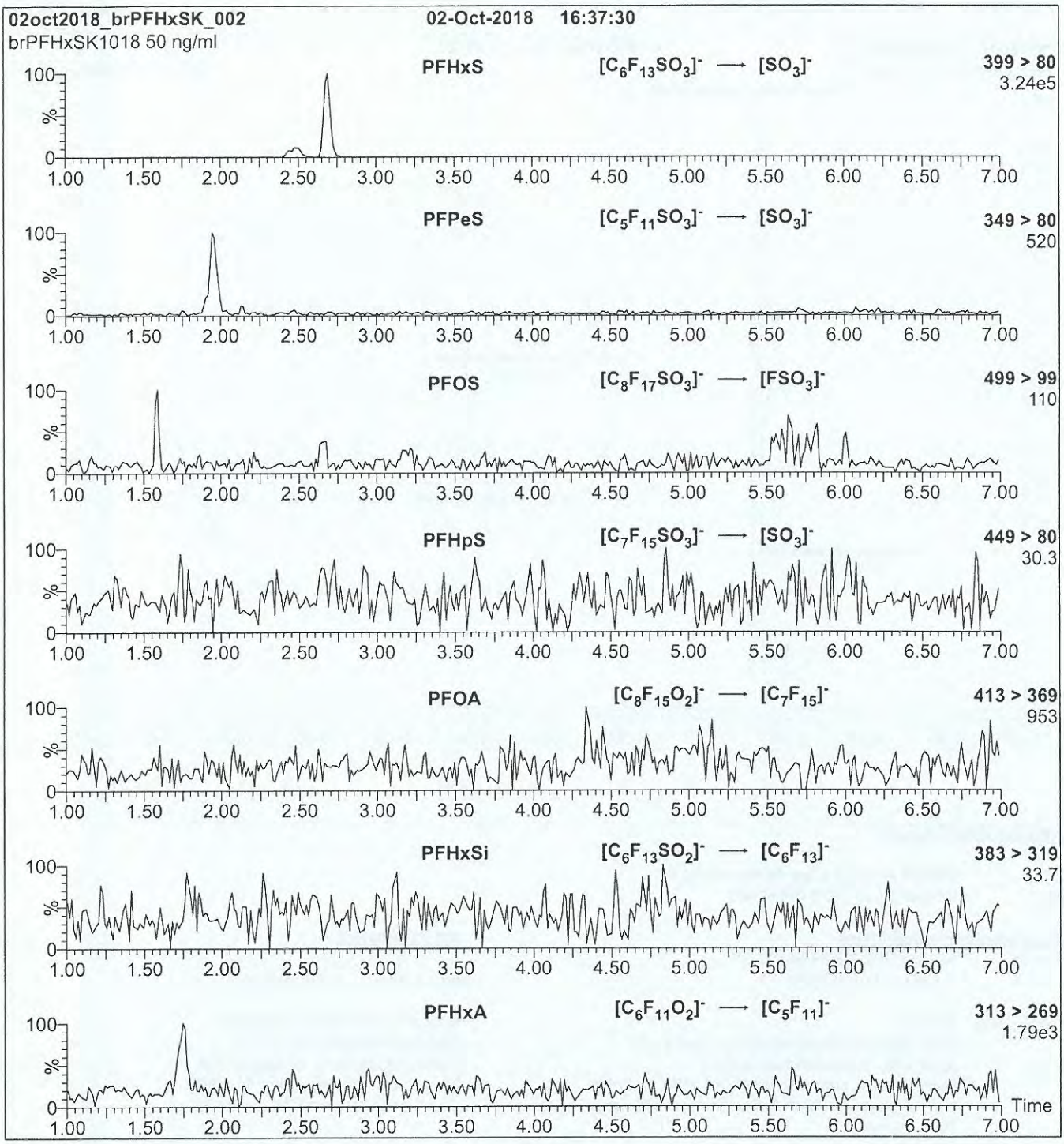
MS Parameters

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

1812052

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

1812053

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK0418
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)	04/09/2018
LAST TESTED: (mm/dd/yyyy)	04/18/2018
EXPIRY DATE: (mm/dd/yyyy)	04/18/2023
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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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1862053

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:

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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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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	$CF_3C(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2C(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.03
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.4
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF(CF_3)CF_2SO_3^-K^+$	0.07

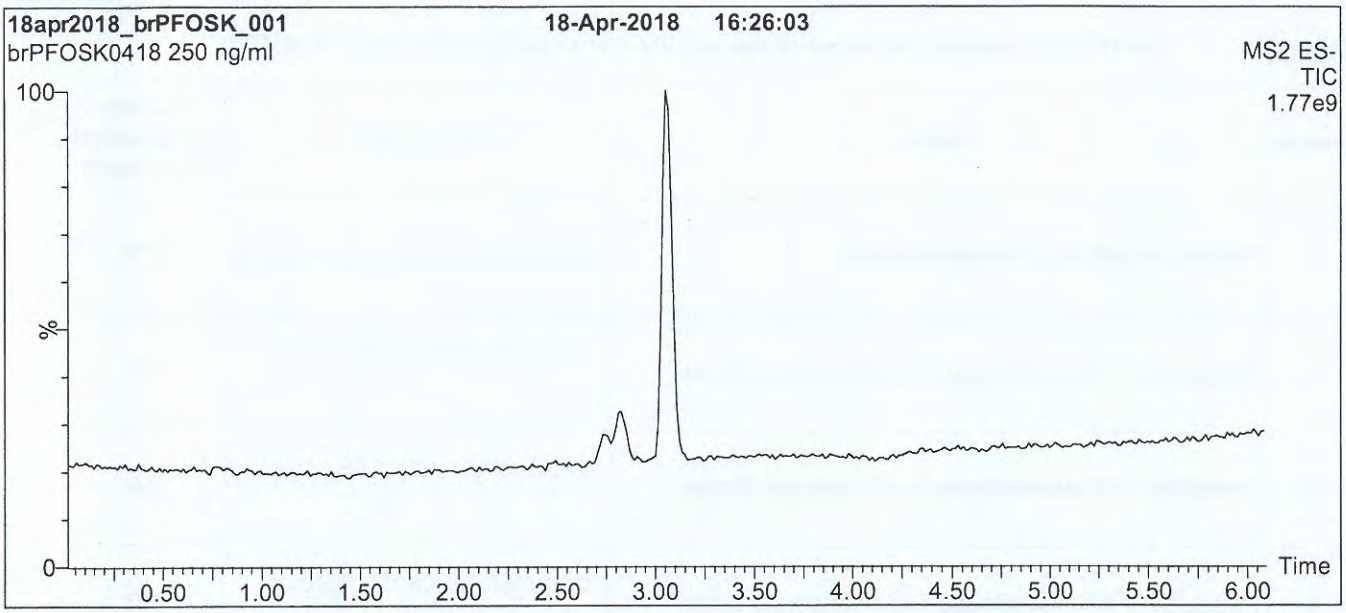
* Percent of total perfluorooctanesulfonate isomers only. Isomers are labelled in Figure 2.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

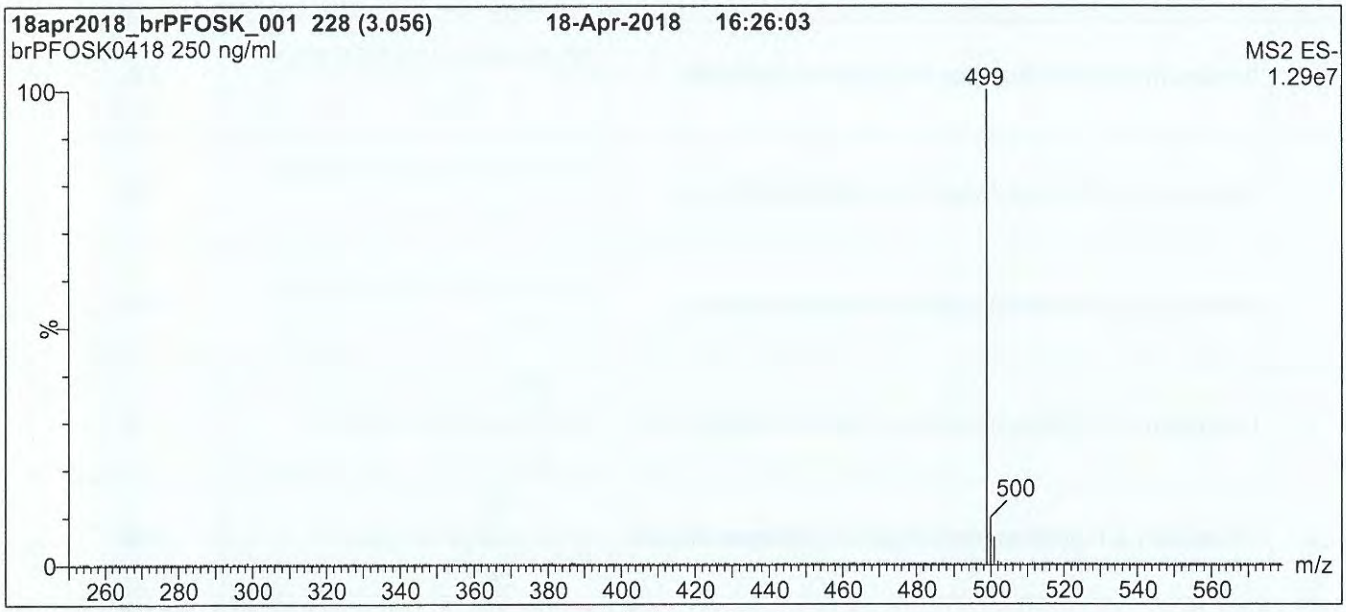
Certified By: _____ **Date:** 04/23/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

1812053

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: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 85% organic over 7 min and hold for 3 min.
Return to initial conditions over 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) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

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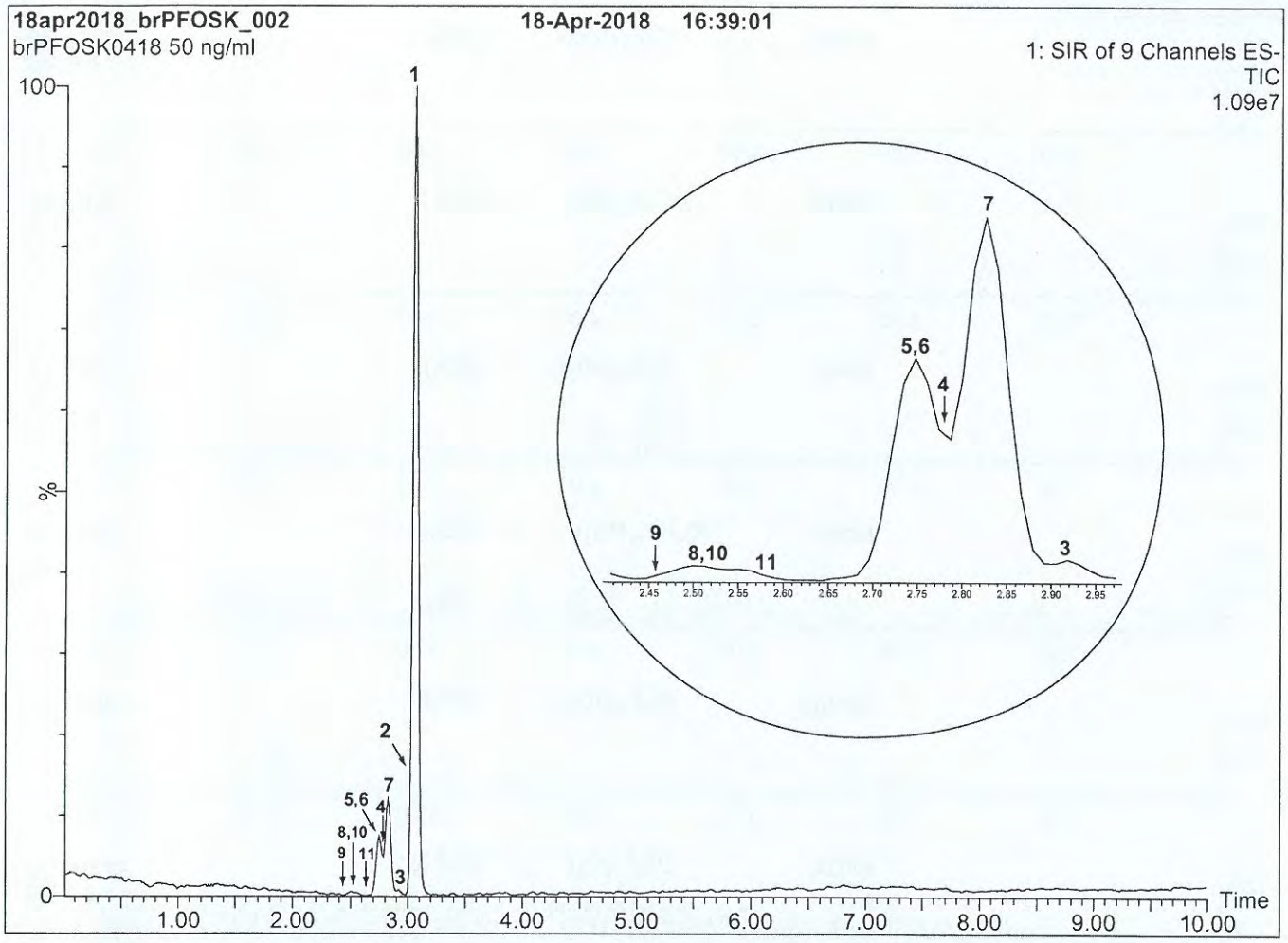
Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Waters Xevo TQ-S micro MS**

Chromatographic Conditions:

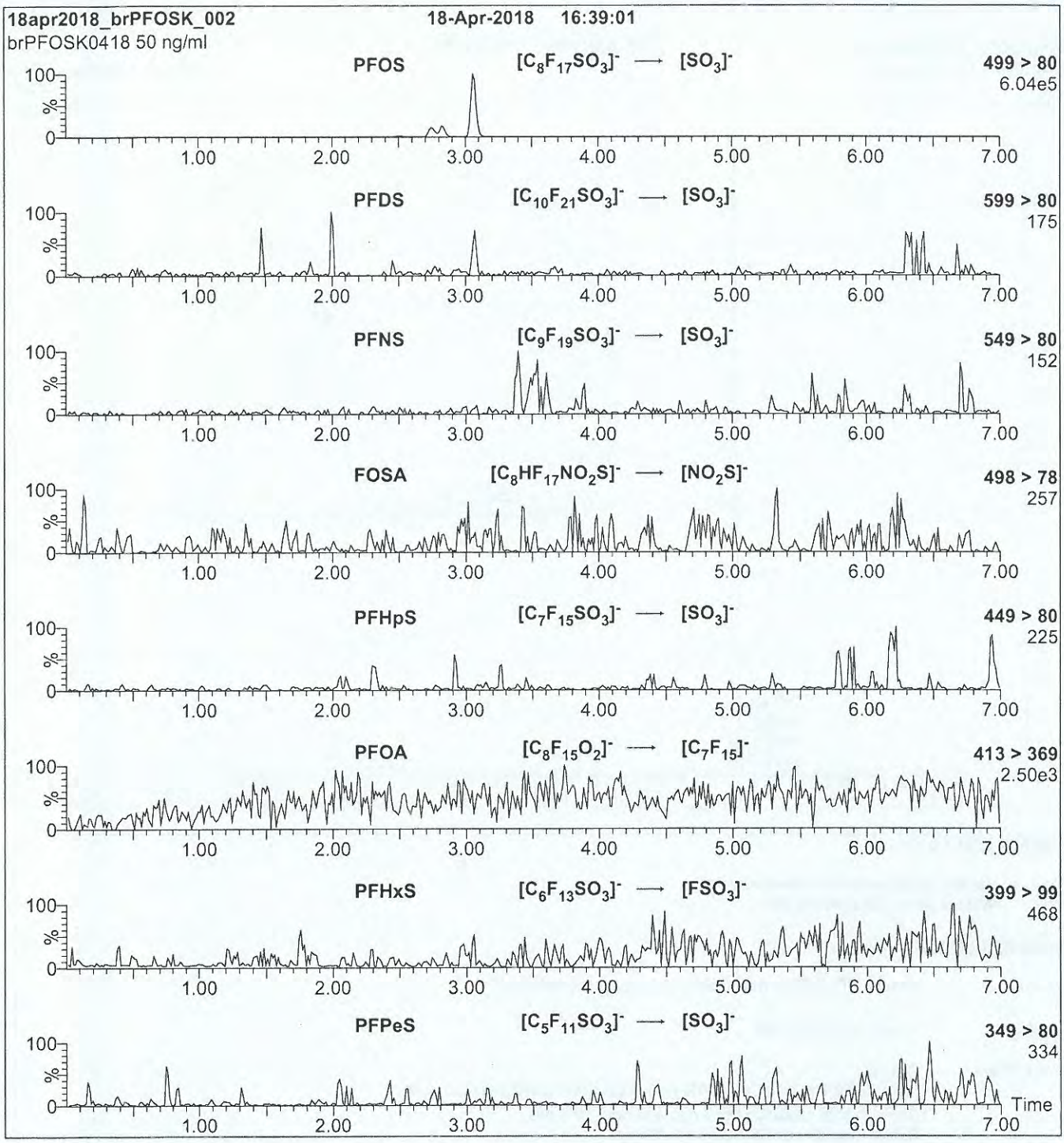
Column:	Acquity UPLC BEH Shield RP_{18} (1.7 µm, 2.1 x 100 mm)
Injection:	50 ng/ml of br-PFOSK
Mobile Phase:	Gradient 60% (80:20 MeOH:ACN) / 40% H_2O (both with 10 mM NH_4OAc buffer) Ramp to 85% organic over 7 min and hold for 3 min. Return to initial conditions over 0.75 min. Time: 12 min
Flow:	300 µl/min

MS Conditions:

SIR (ES^-)
Source = 150 °C
Desolvation = 500 °C
Cone Voltage = 2 - 20V (variable)

18L2053

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) = 3.47e-3
Collision Energy (eV) = 64

18L2054

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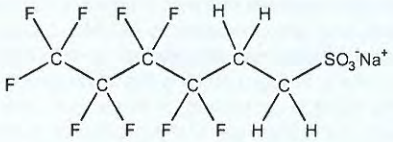
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS0718

COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexane sulfonate

STRUCTURE: **CAS #:** Not available



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)	07/03/2018		
EXPIRY DATE: (mm/dd/yyyy)	07/03/2023		
RECOMMENDED STORAGE:	Refrigerate ampoule		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS Data (Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: _____ **Date:** 07/05/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

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1812054

INTENDED USE:

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HANDLING:

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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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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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1812054

Figure 1: 4:2FTS; LC/MS Data (SIR)

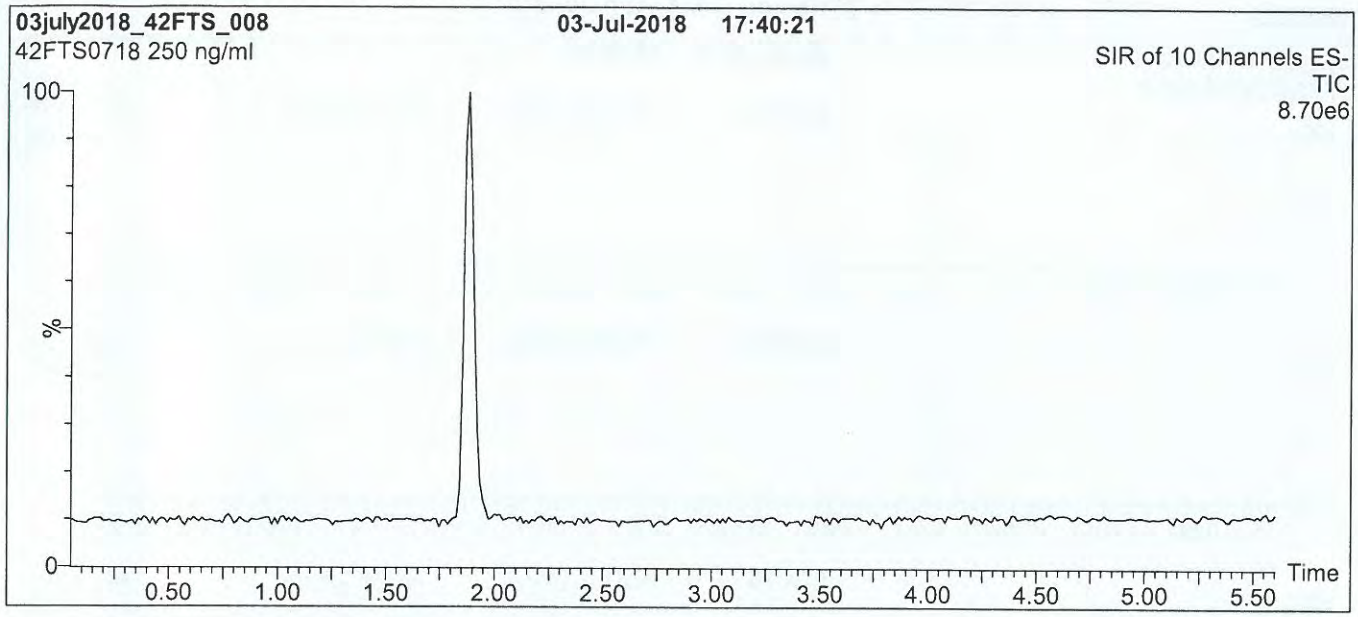
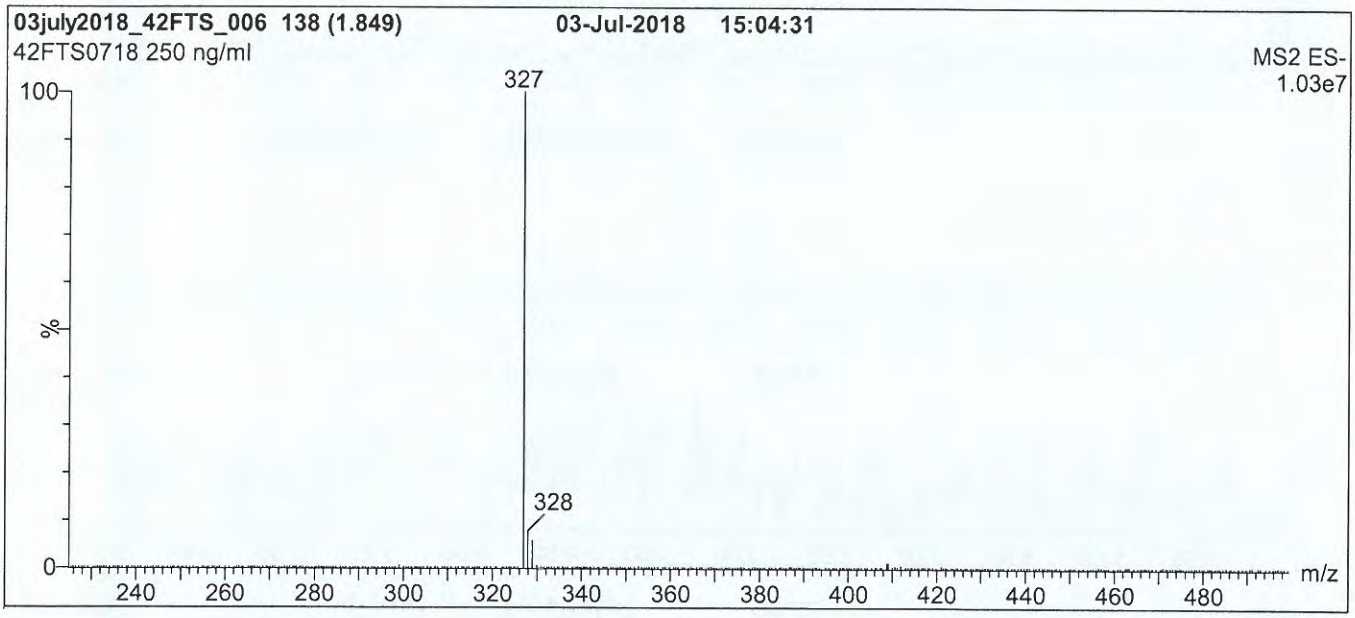


Figure 2: 4:2FTS; LC/MS Data (Mass Spectrum)



Conditions for Figures 1 & 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 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

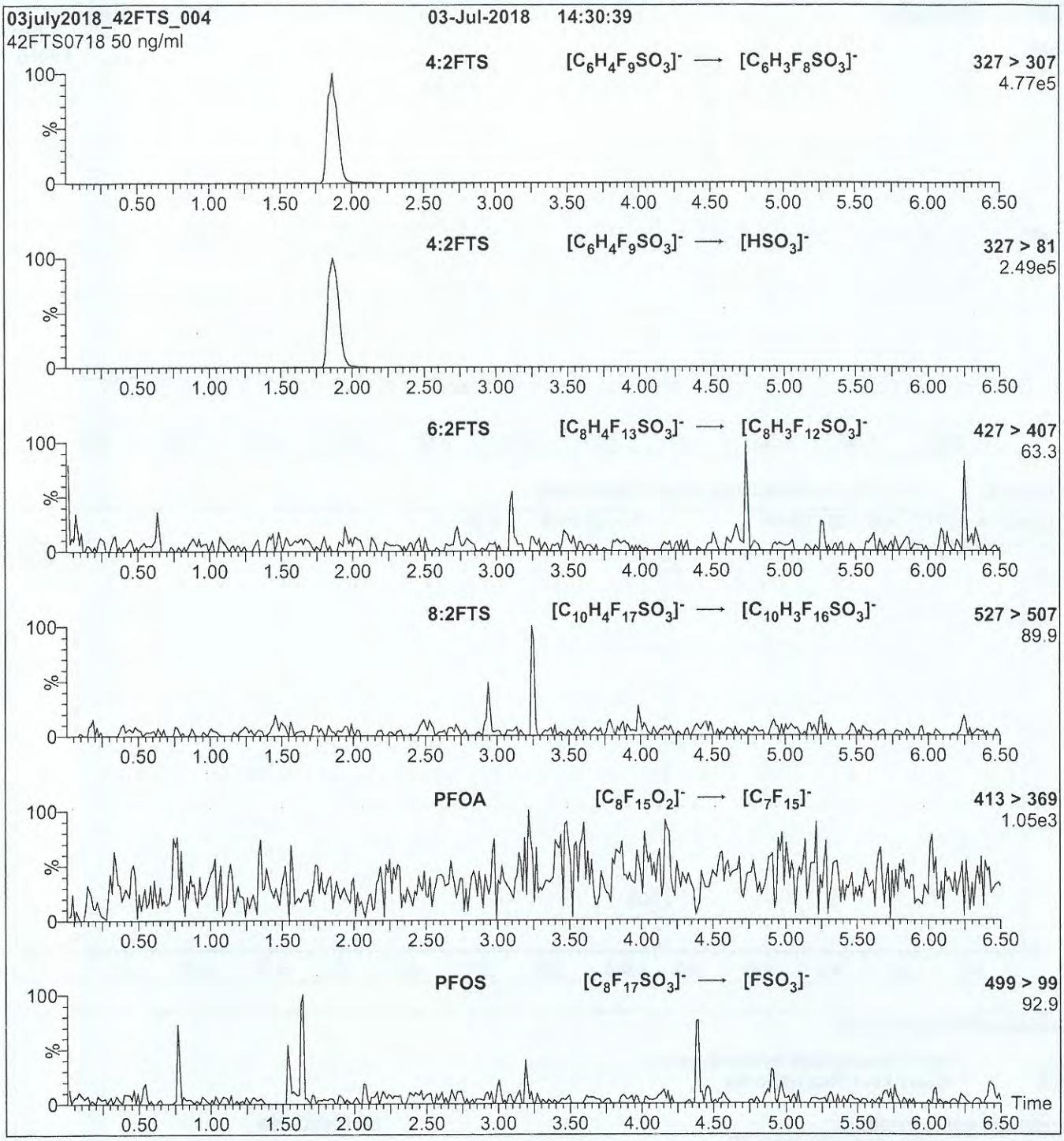
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 25 (variable for SIR (2-20))
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812054

Figure 3: **4:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column (4:2FTS)

Mobile phase: Same as Figures 1 & 2

Flow: 300 µl/min

MS Parameters
Collision Gas (mbar) = 3.55e-3
Collision Energy (eV) = 18

18L2055

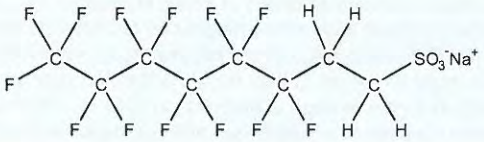
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0418

COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** Not available



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)	04/03/2018			
EXPIRY DATE: (mm/dd/yyyy)	04/03/2023			
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 ~ 0.3% of sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2FTS).

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

18L2055

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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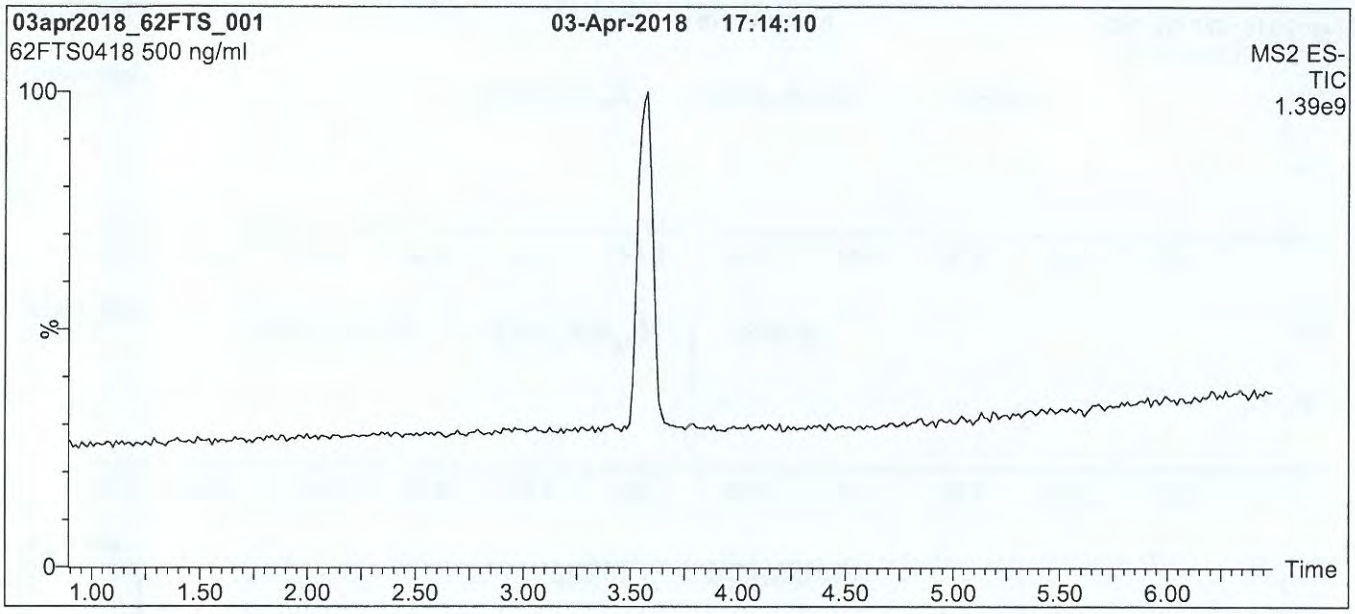
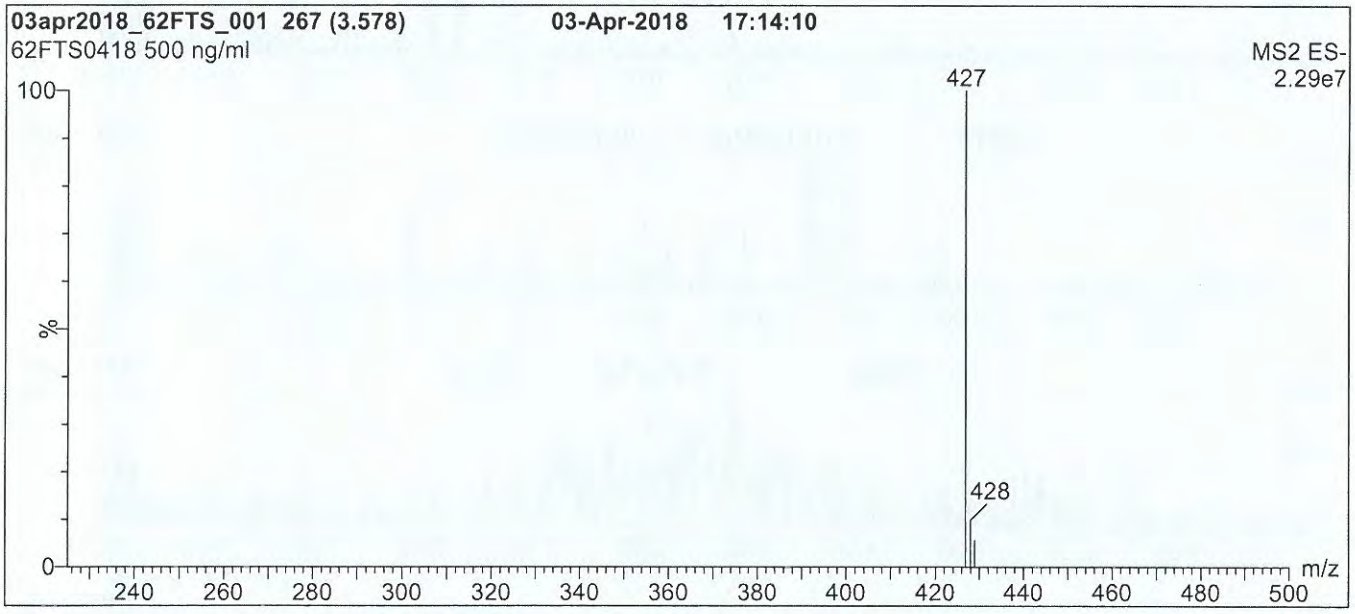
1901766

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 80% 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

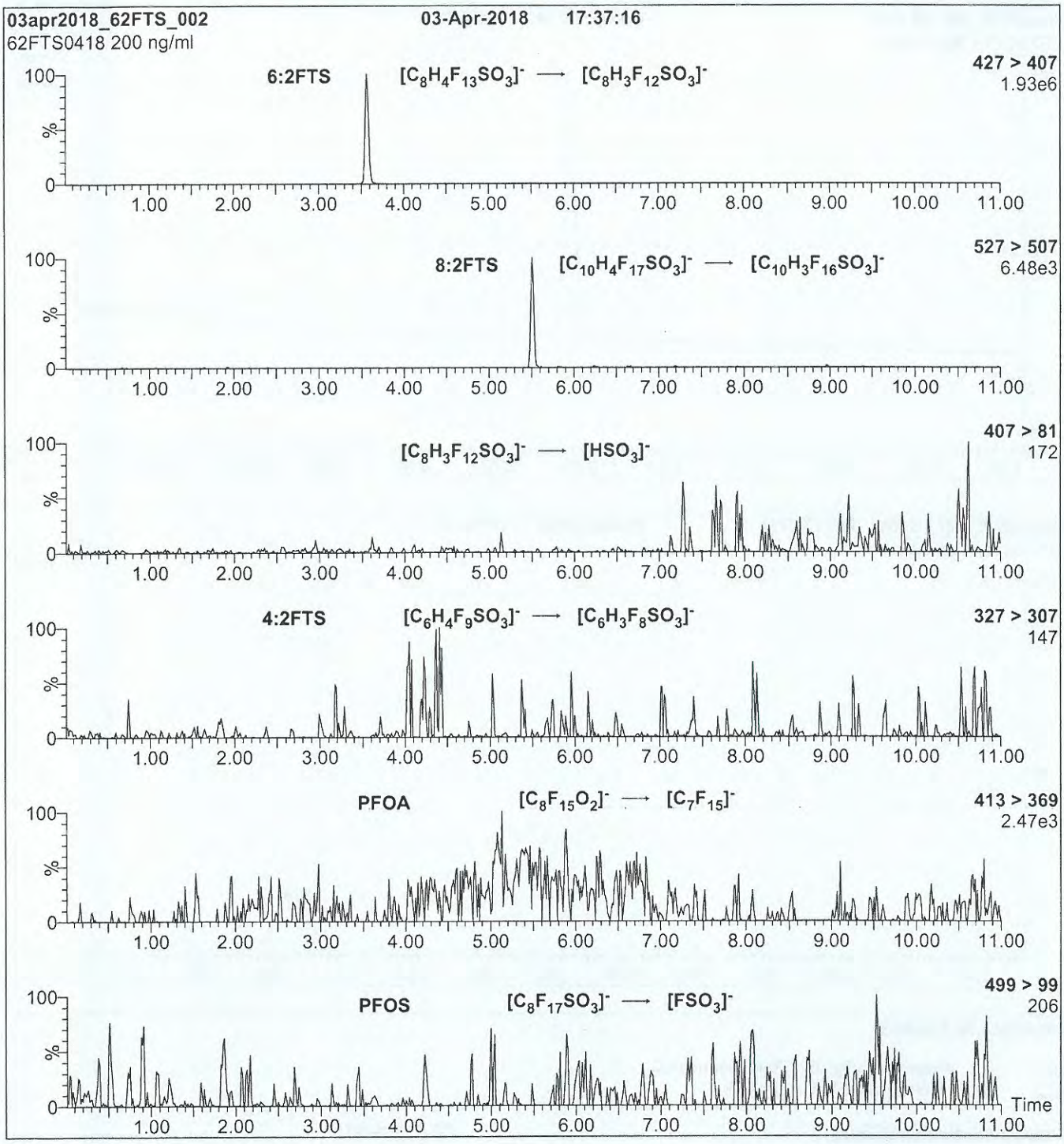
MS Parameters

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) = 750

1812055

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) = 3.39e-3
Collision Energy (eV) = 20

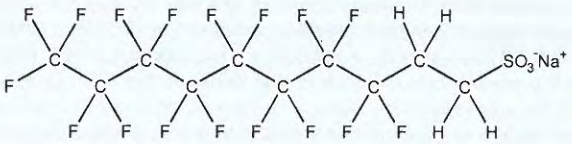
1812056

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS1118
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** Not available



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)	11/28/2018			
EXPIRY DATE: (mm/dd/yyyy)	11/28/2023			
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:** 11/29/2018 (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

1812056

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

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UNCERTAINTY:

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

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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).

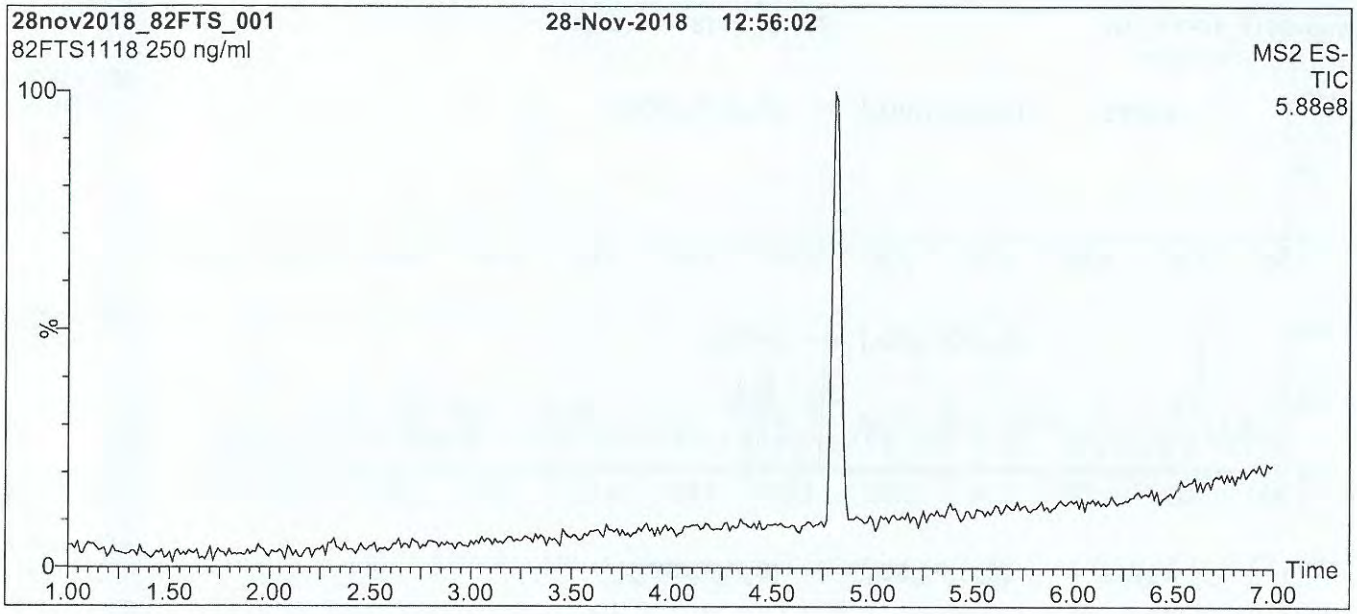
CALA Testing Accreditation No. A1226

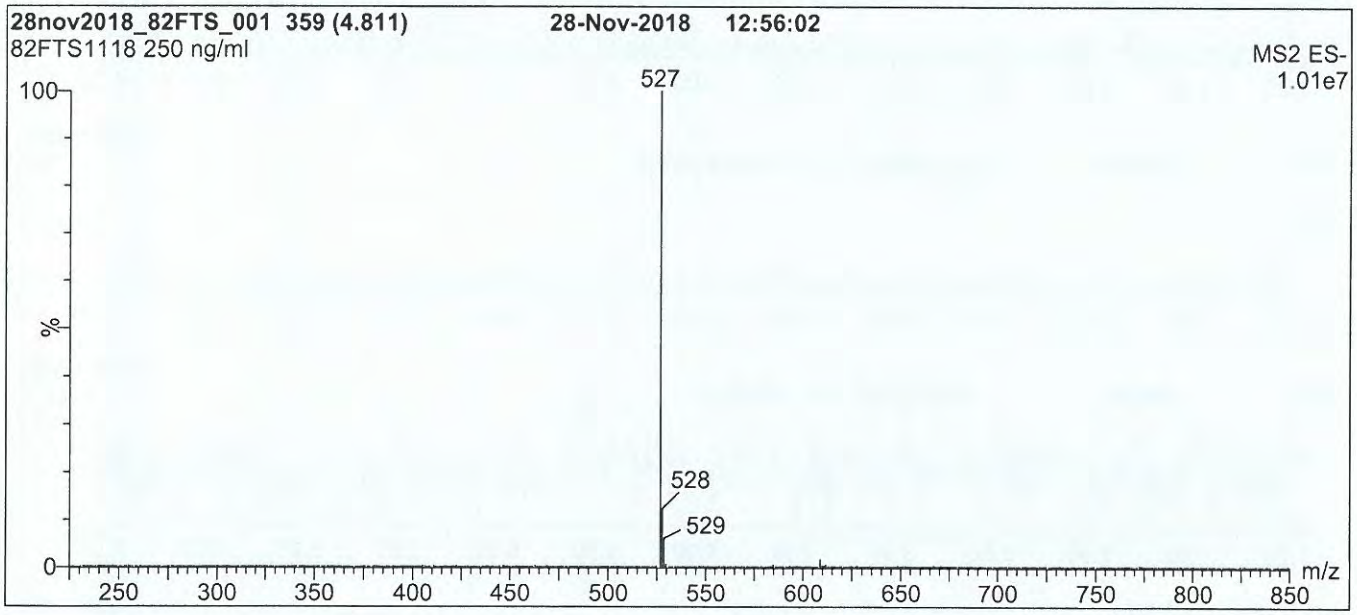
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

1812056

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: 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

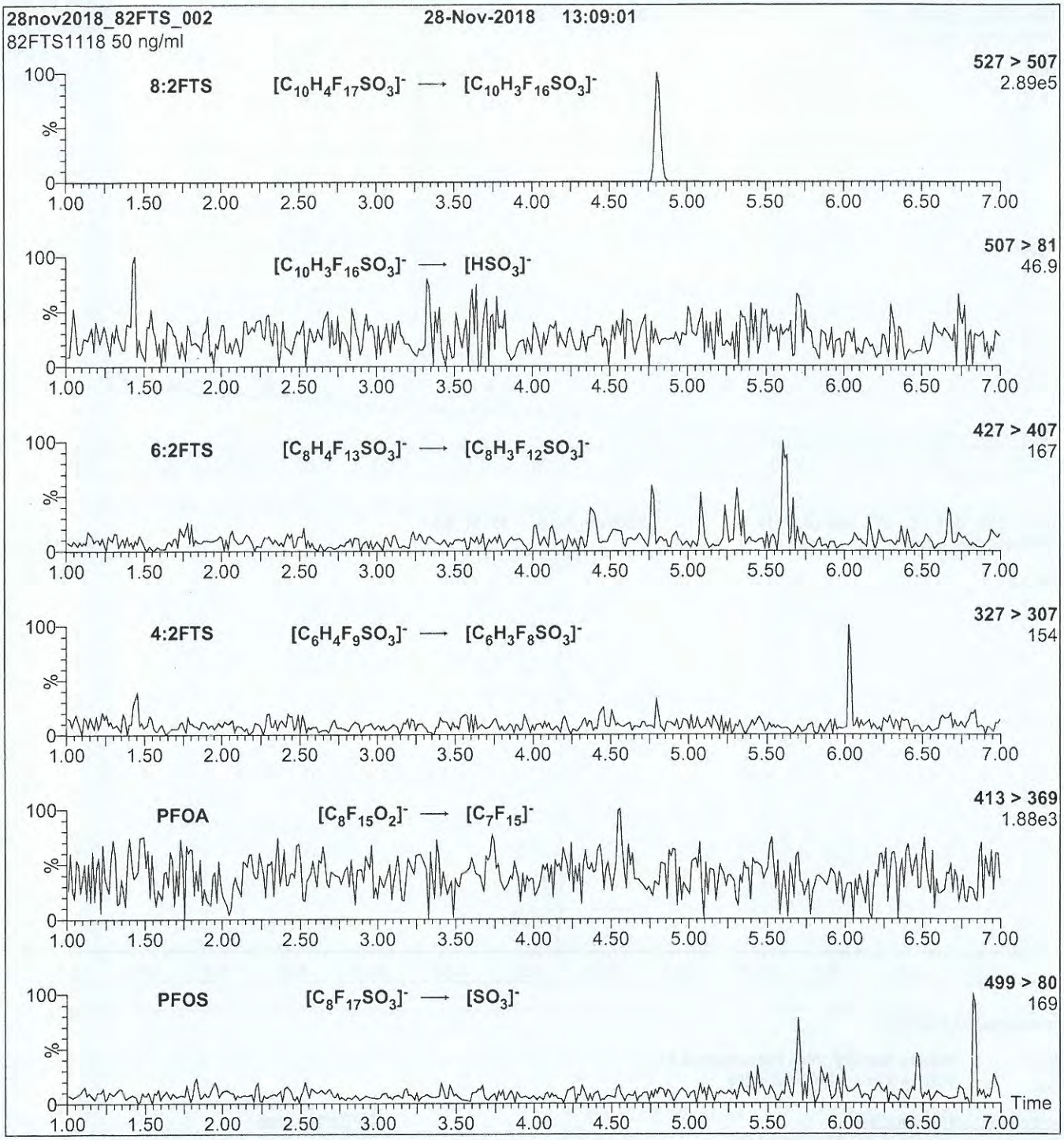
MS Parameters

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) = 750

1812056

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) = 2.74e-3
Collision Energy (eV) = 26

1812057

WELLINGTON LABORATORIES

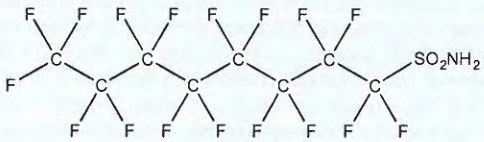
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: FOSA-I
COMPOUND: Perfluoro-1-octanesulfonamide

LOT NUMBER: FOSA0618I

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)	06/20/2018		
EXPIRY DATE: (mm/dd/yyyy)	06/20/2023		
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:** 06/25/2018 (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

1812057

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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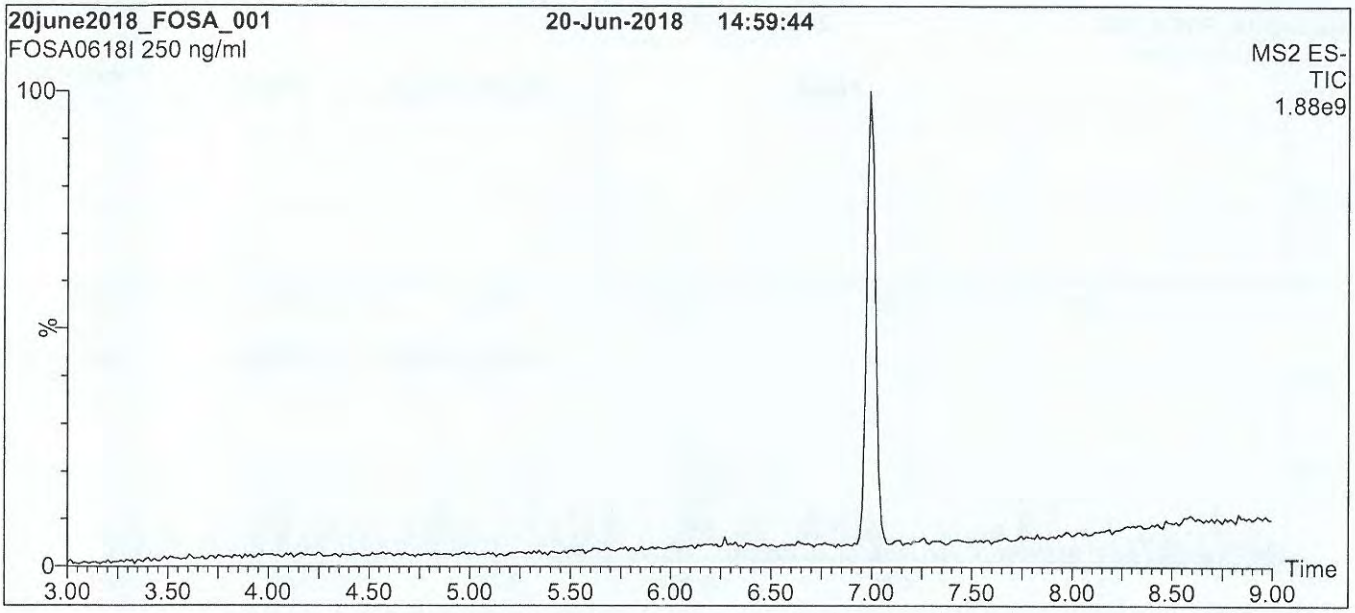
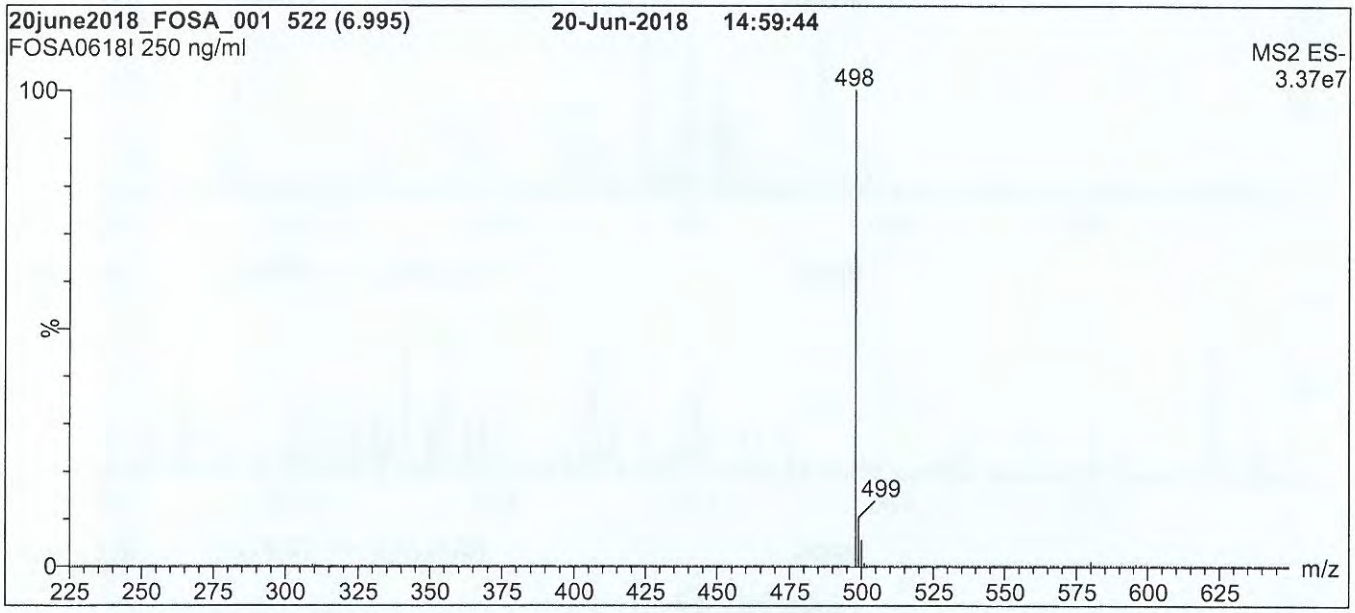
1812057

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: 50% (80:20 MeOH:ACN) / 50% 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

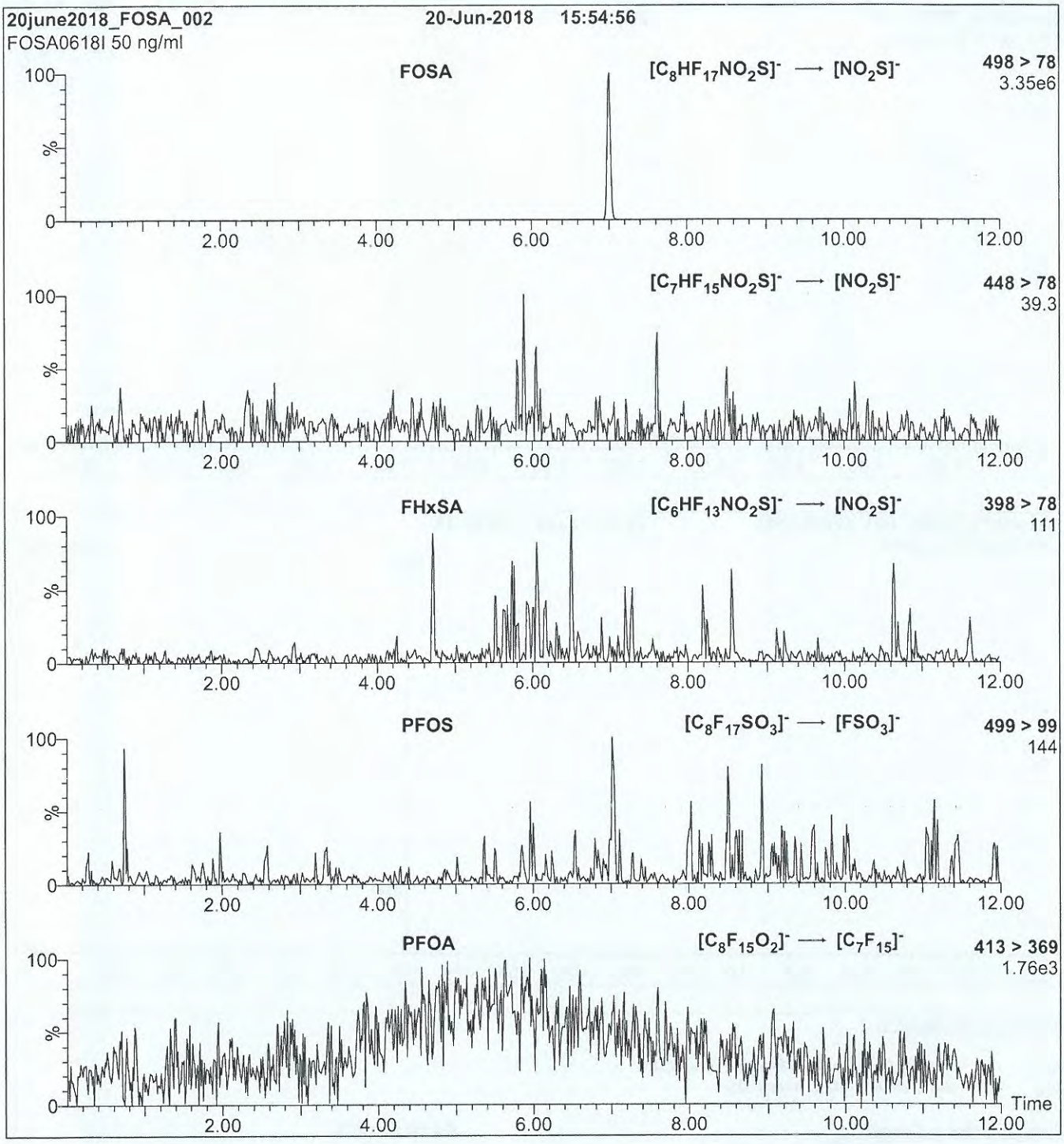
MS Parameters

Experiment: Full Scan (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) = 750

1862057

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) = 3.43e-3

Collision Energy (eV) = 30

1812058

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

N-Methylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NMeFOSAA
LOT NUMBER:	brNMeFOSAA0118
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/10/2018
LAST TESTED: (mm/dd/yyyy)	01/17/2018
EXPIRY DATE: (mm/dd/yyyy)	01/17/2023
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.

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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

18L2058

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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1862058

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

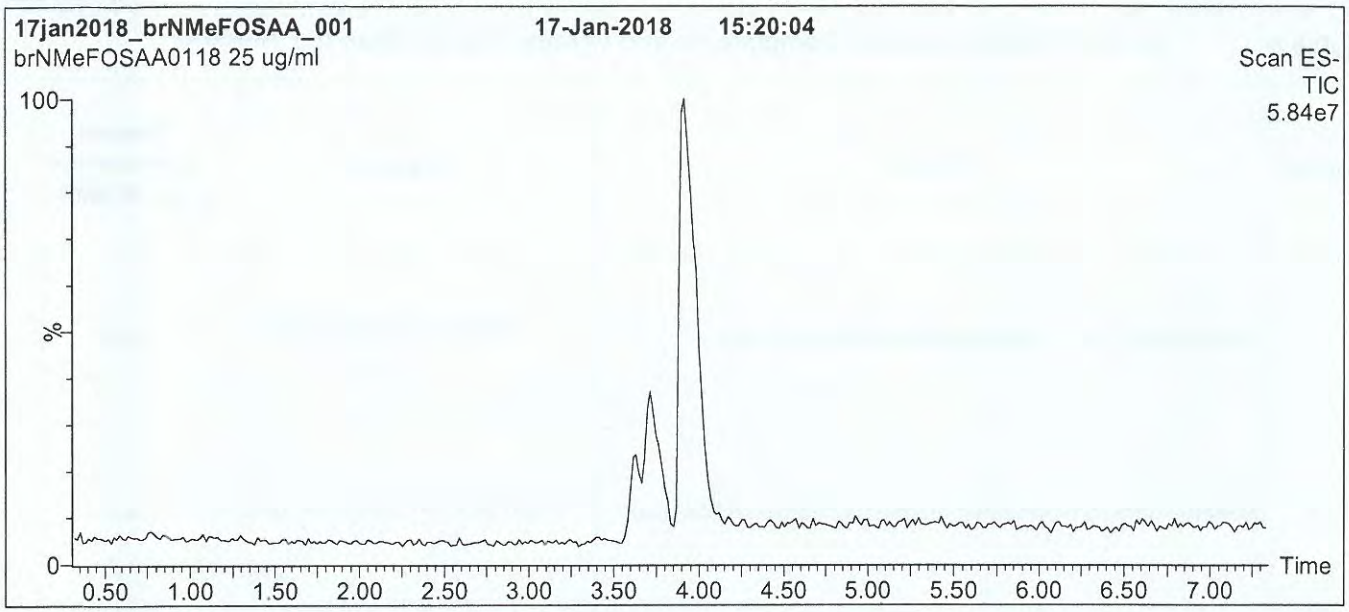
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

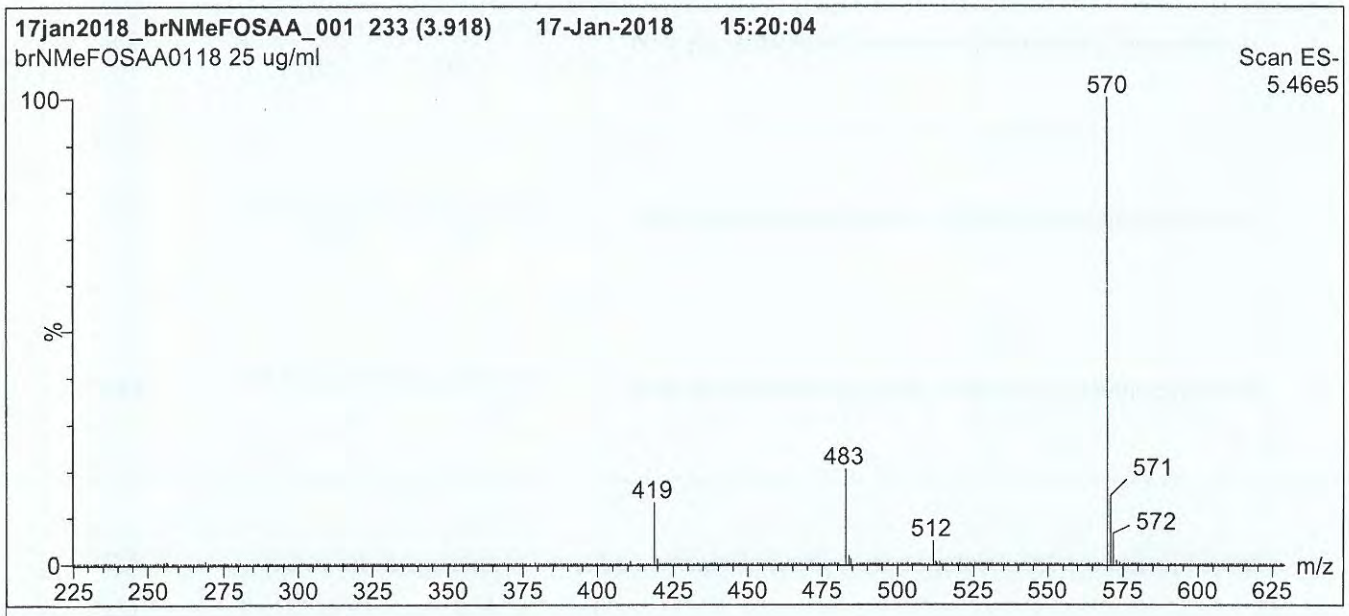
Certified By: _____ **Date:** 03/22/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

18L2058

Figure 1: **br-NMeFOSAA; 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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

Flow: 300 µl/min

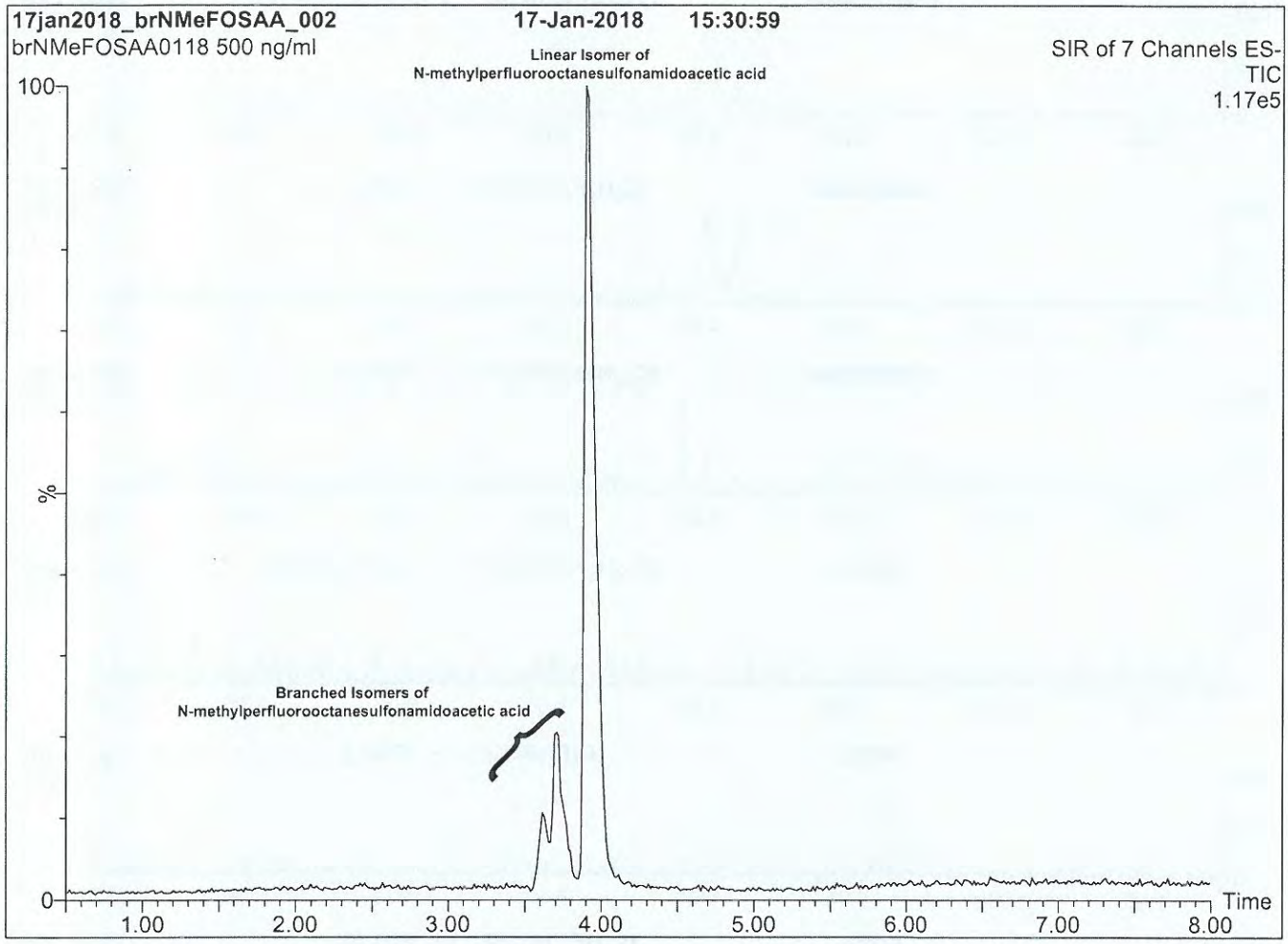
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

1812058

Figure 2: **br-NMeFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

Flow: 300 µl/min

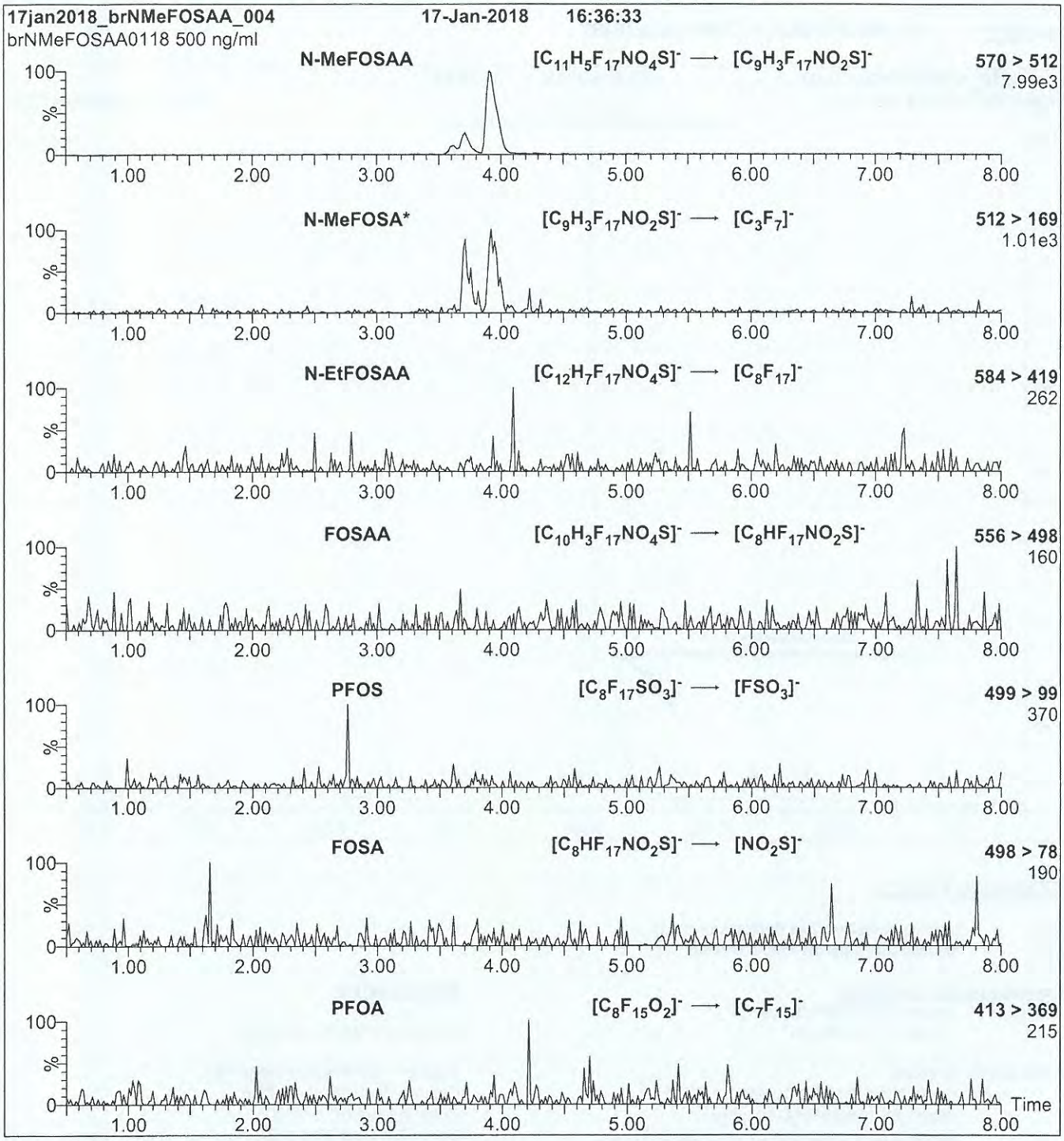
MS Parameters

Experiment: SIR (7 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15-60
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

1812058

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

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 11-40 (variable)

1812059

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NEtFOSAA

N-Ethylperfluorooctanesulfonamidoacetic Acid Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-NEtFOSAA
LOT NUMBER:	brNEtFOSAA0718
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	07/25/2018
LAST TESTED: (mm/dd/yyyy)	07/26/2018
EXPIRY DATE: (mm/dd/yyyy)	07/26/2023
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.
- Contains ~ 0.6% of perfluoro-n-octanoic acid.

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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

18L2059

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:

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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. 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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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	$CF_3CF(CF_3)CF(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	0.3
8	N-ethylperfluoro-3,5-dimethylhexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF_2CF(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	0.3
9	Other Unidentified Isomers		1.3

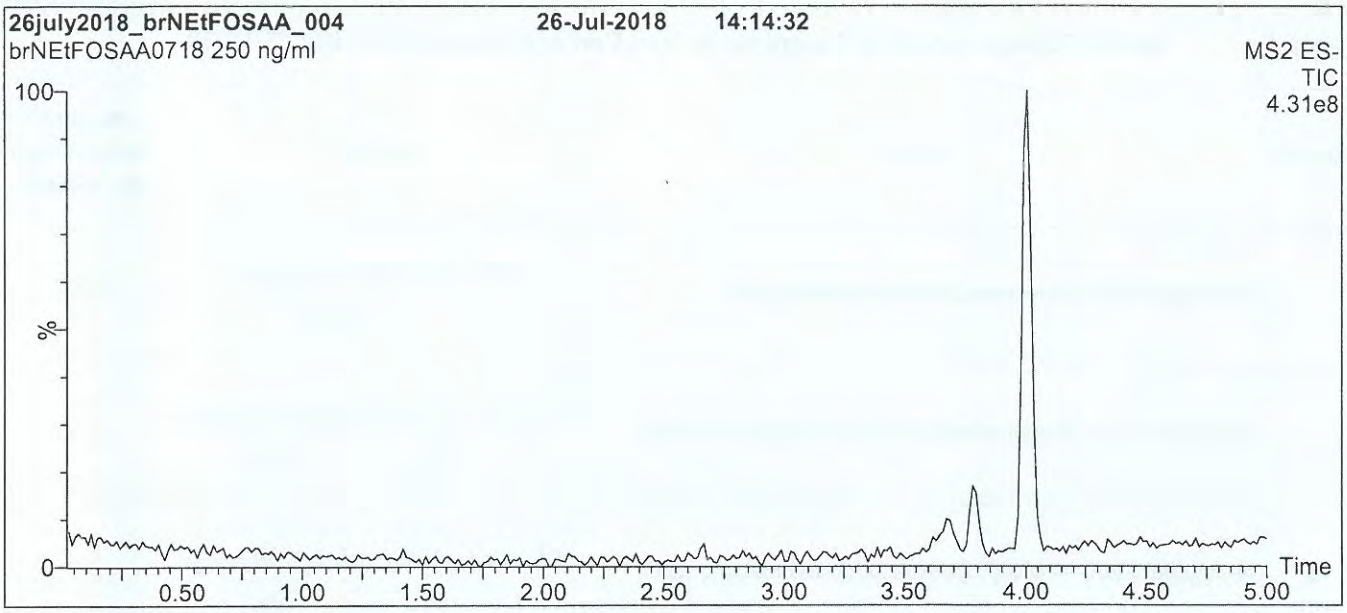
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

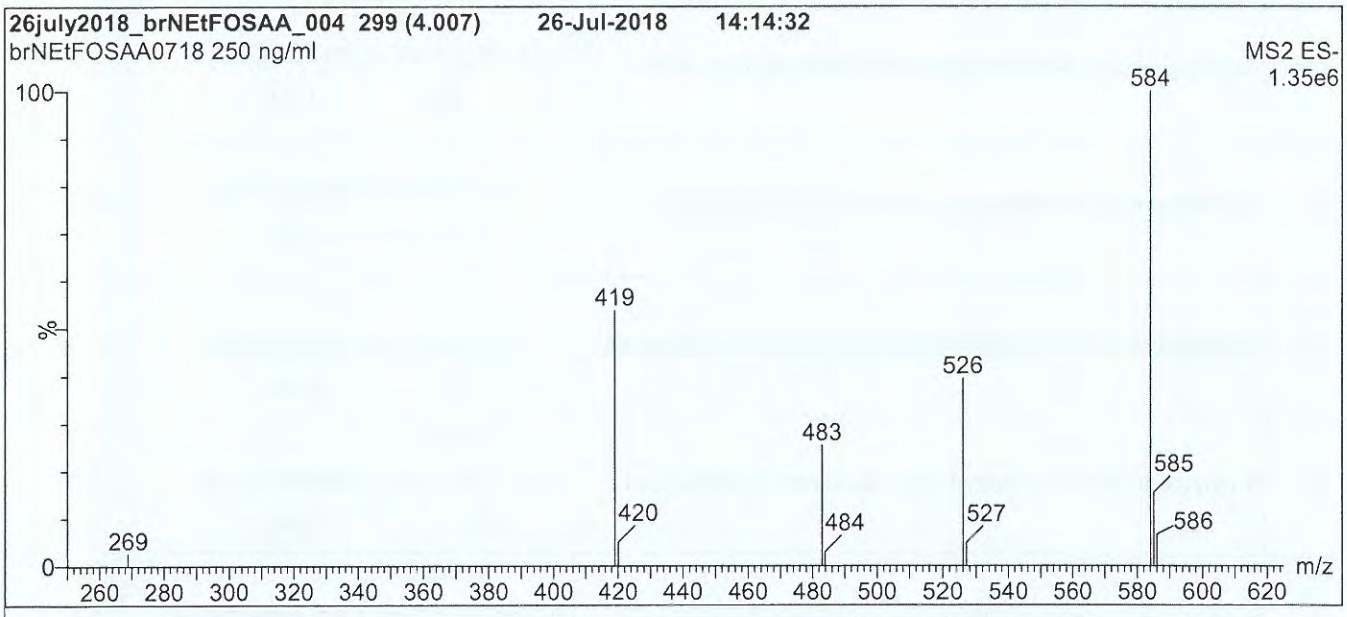
Certified By: _____ **Date:** 07/27/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

1812059

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: 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

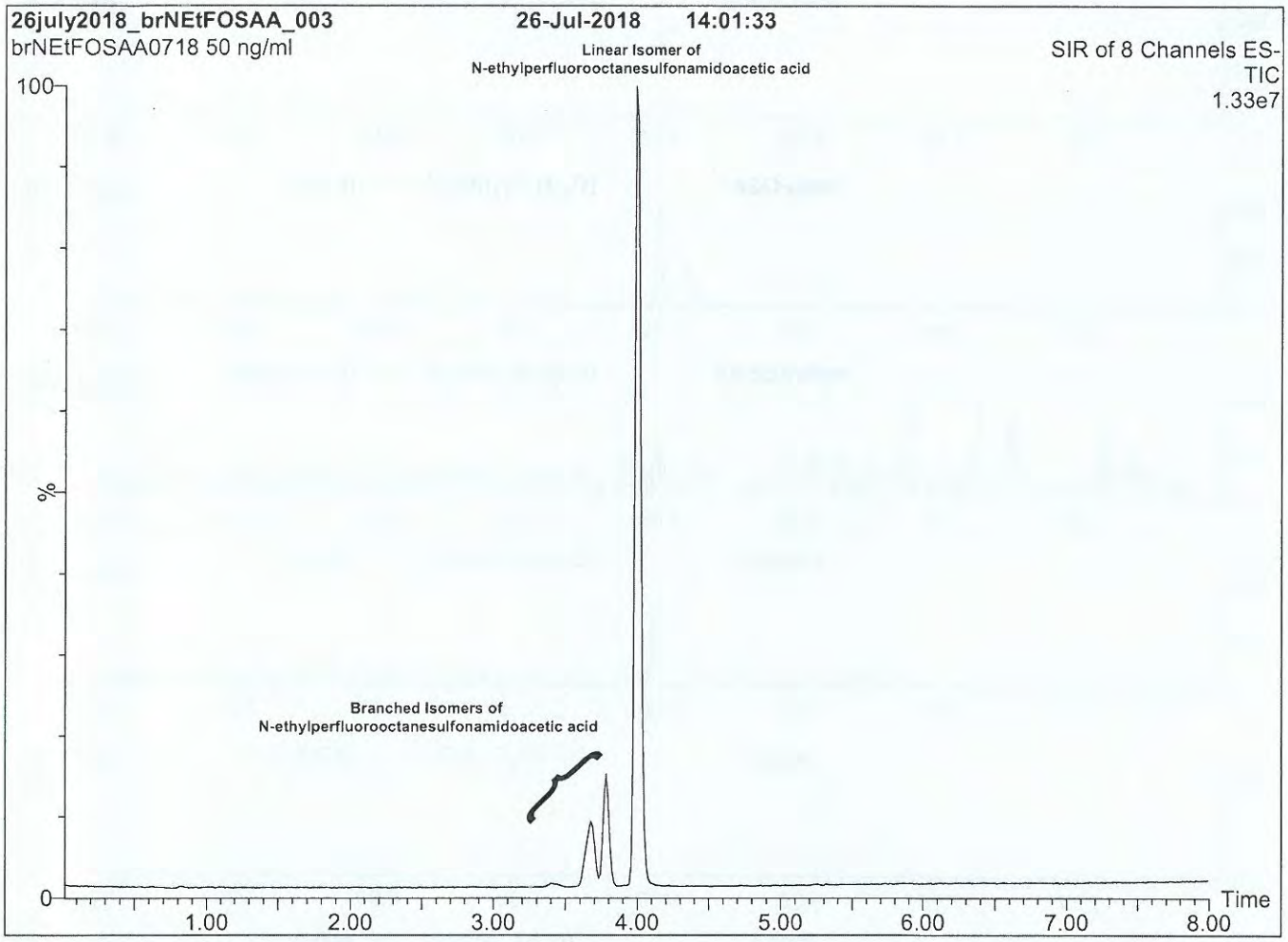
MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 64
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2059

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: 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) = 0.50
Cone Voltage (V) = variable (2-64)
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

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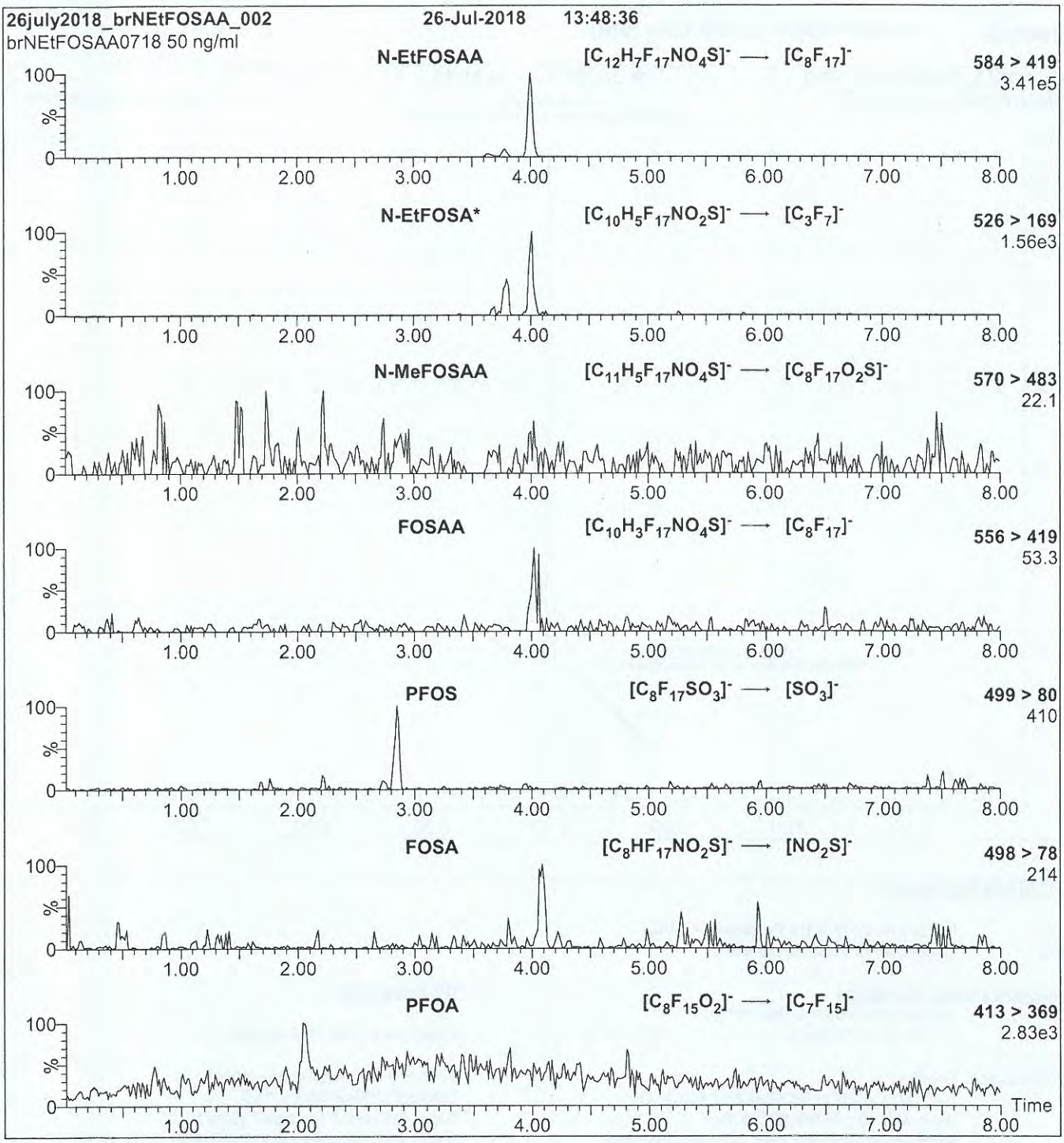
Figure 3: **br-NEtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



*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

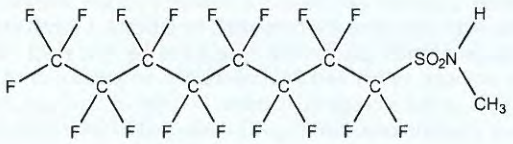
Collision Gas (mbar) = 3.76e-3
Collision Energy (eV) = 18

1812060

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-MeFOSA-M	**LOT NUMBER:**	NMeFOSA0518M
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)	05/31/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2023		
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.

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Certified By: _____ **Date:** 06/07/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

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18L2060

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

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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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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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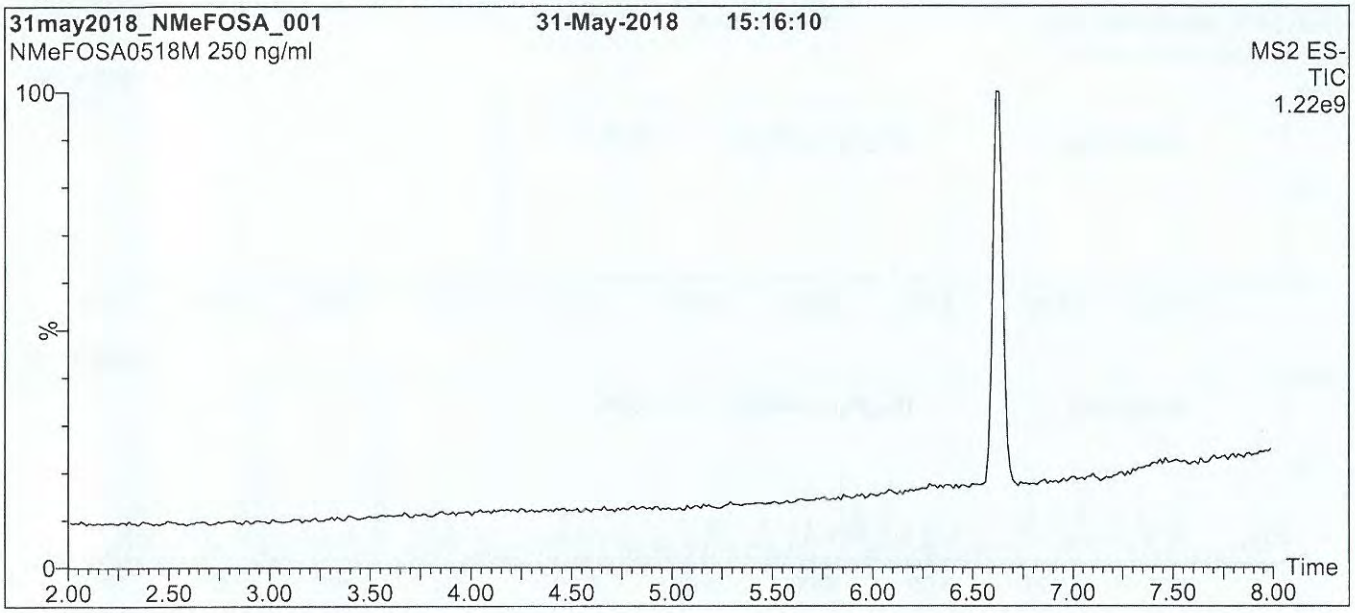
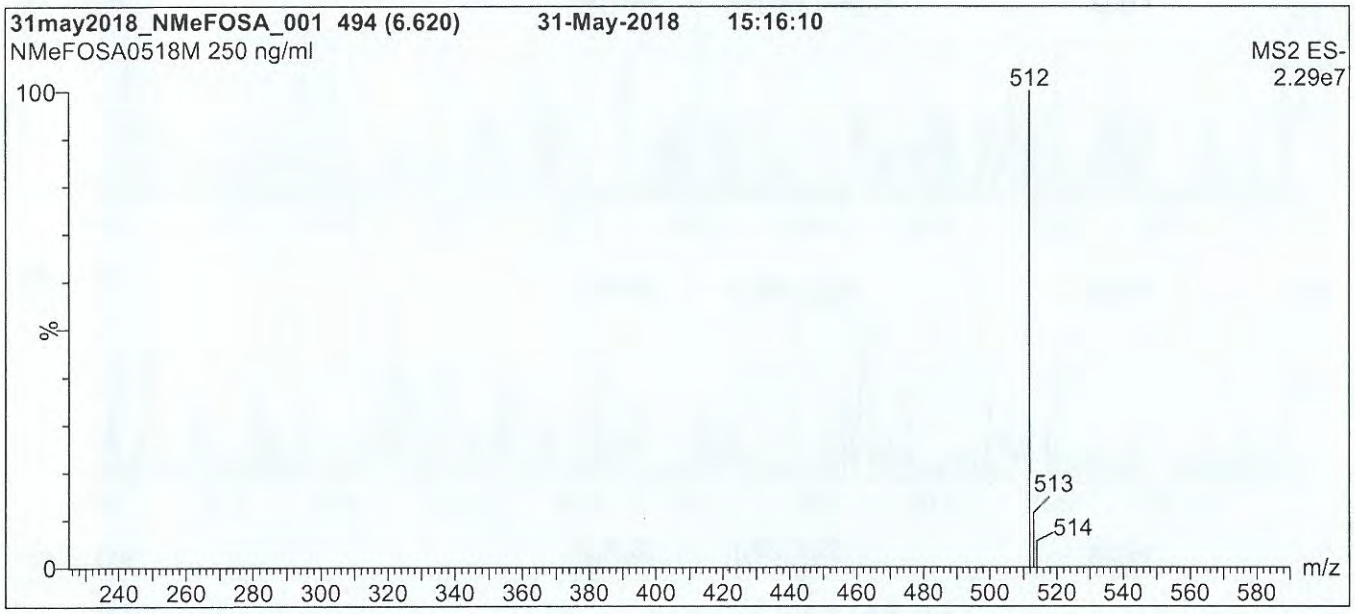
1812000

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 C_{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 85% 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

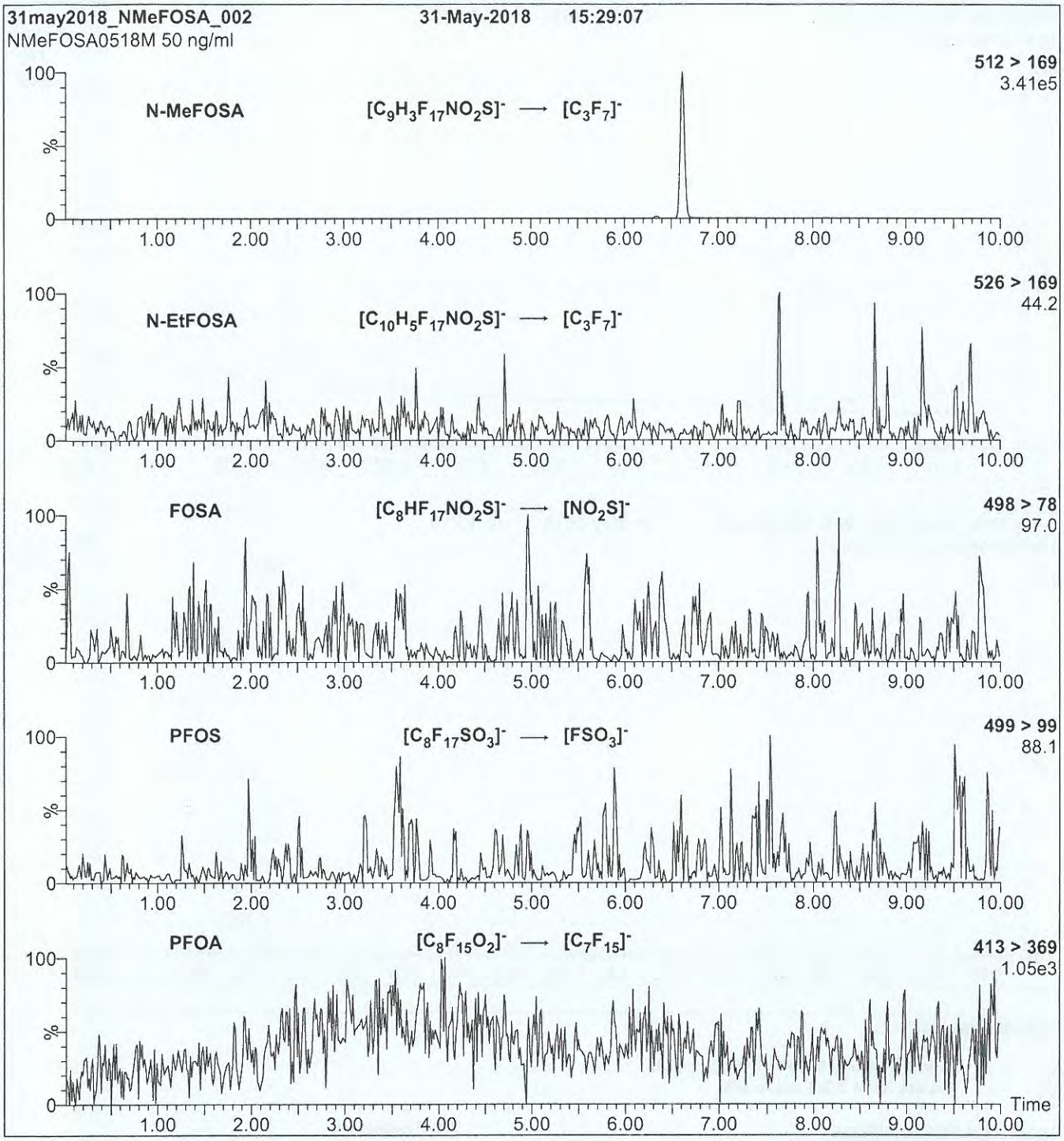
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812060

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

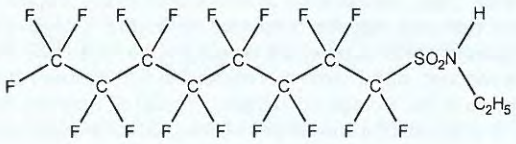
Collision Gas (mbar) = 3.37e-3
Collision Energy (eV) = 24

1812061

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-EtFOSA-M	**LOT NUMBER:**	NEtFOSA0518M
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)	05/31/2018		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2023		
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 ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 06/12/2018 (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

1820601

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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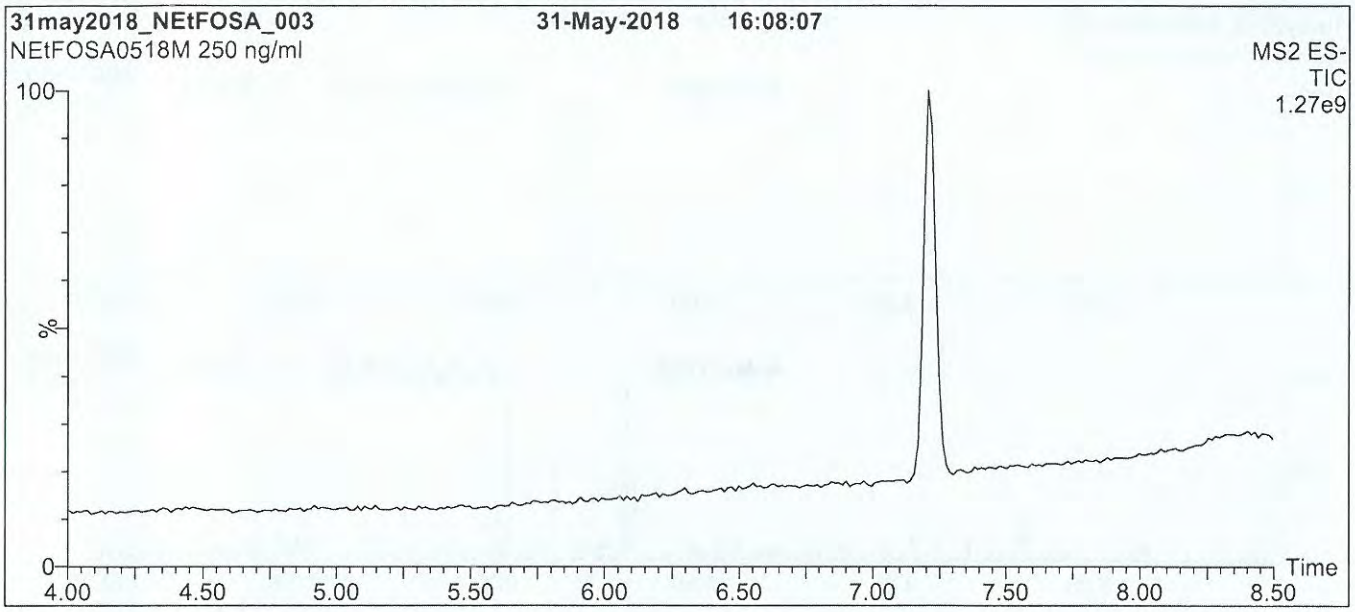
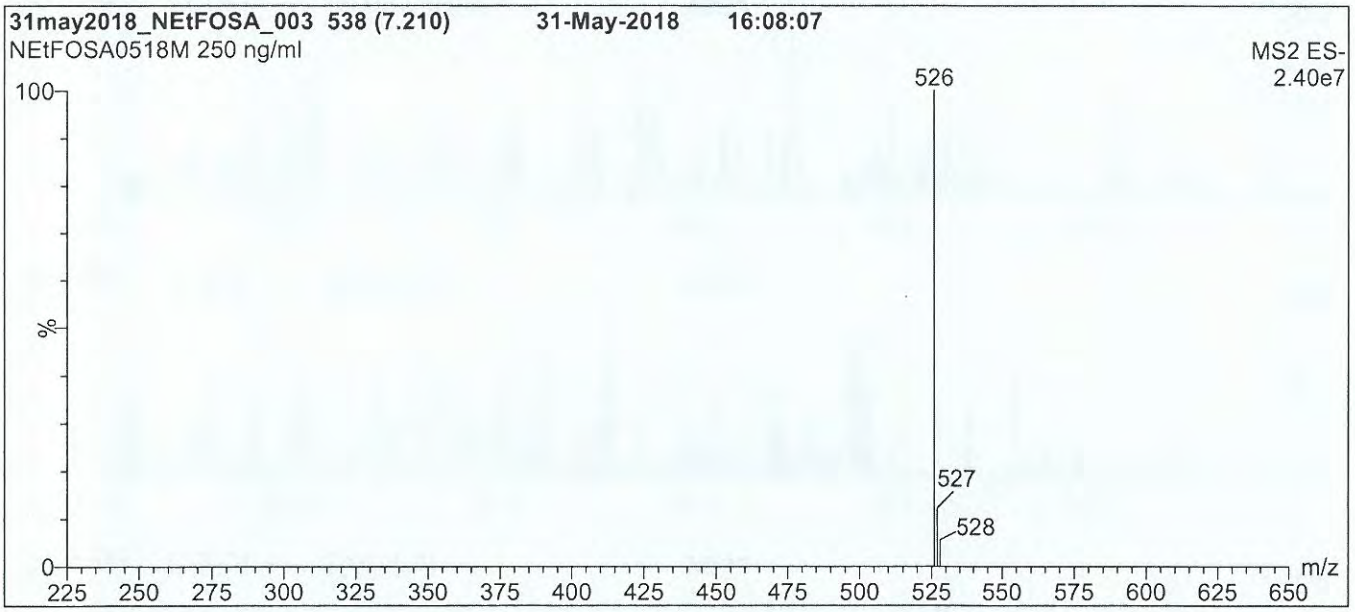
1812061

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 C_{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 85% 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

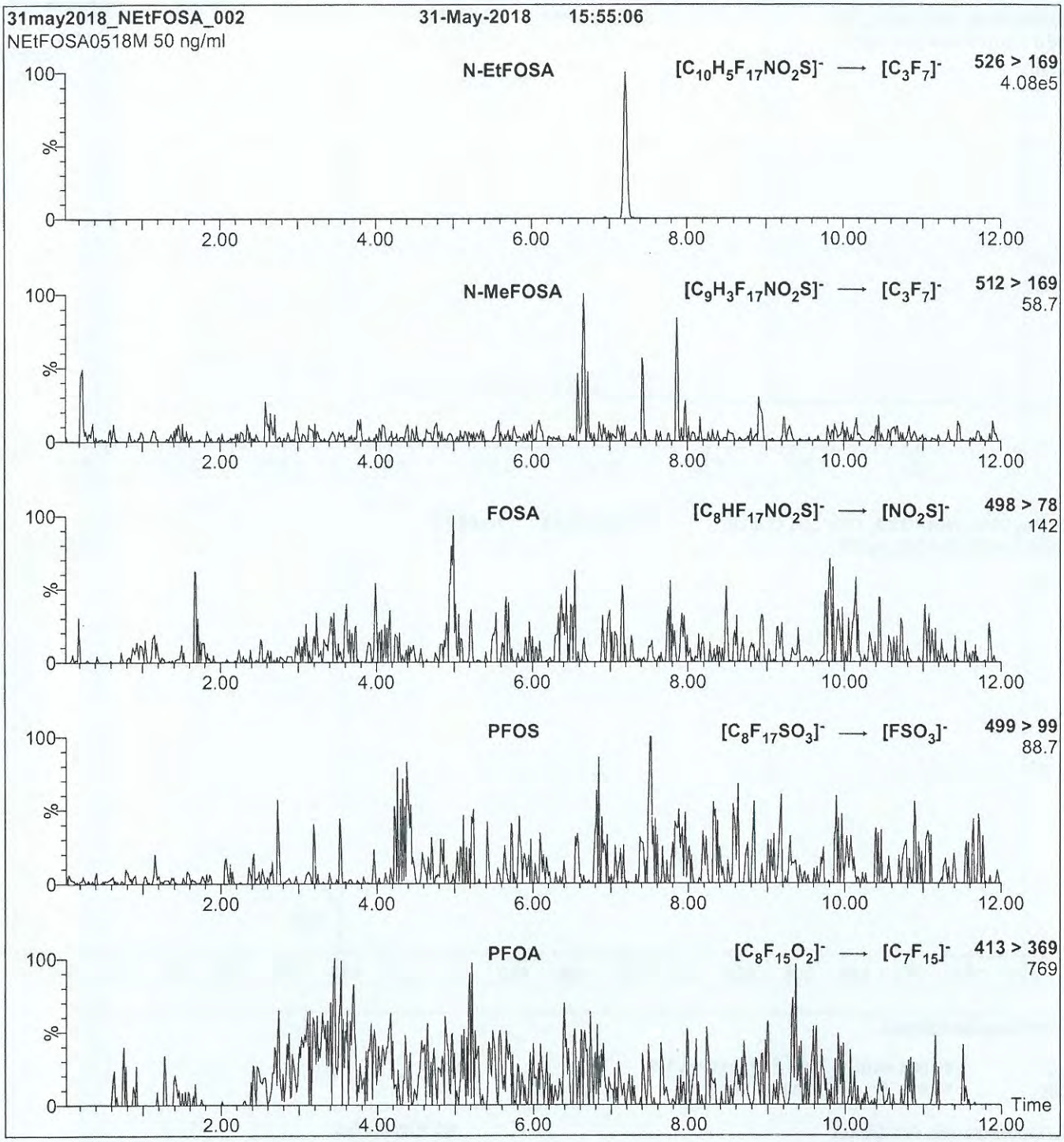
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 1.00
Cone Voltage (V) = 44.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812061

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) = 3.37e-3
Collision Energy (eV) = 24

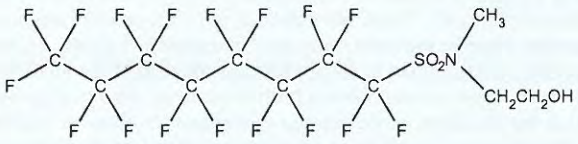
18L2062

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE0418M
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) 05/17/2018 (HRGC/LRMS)
05/03/2018 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 05/17/2023
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:** 05/25/2018 (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

1812062

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).

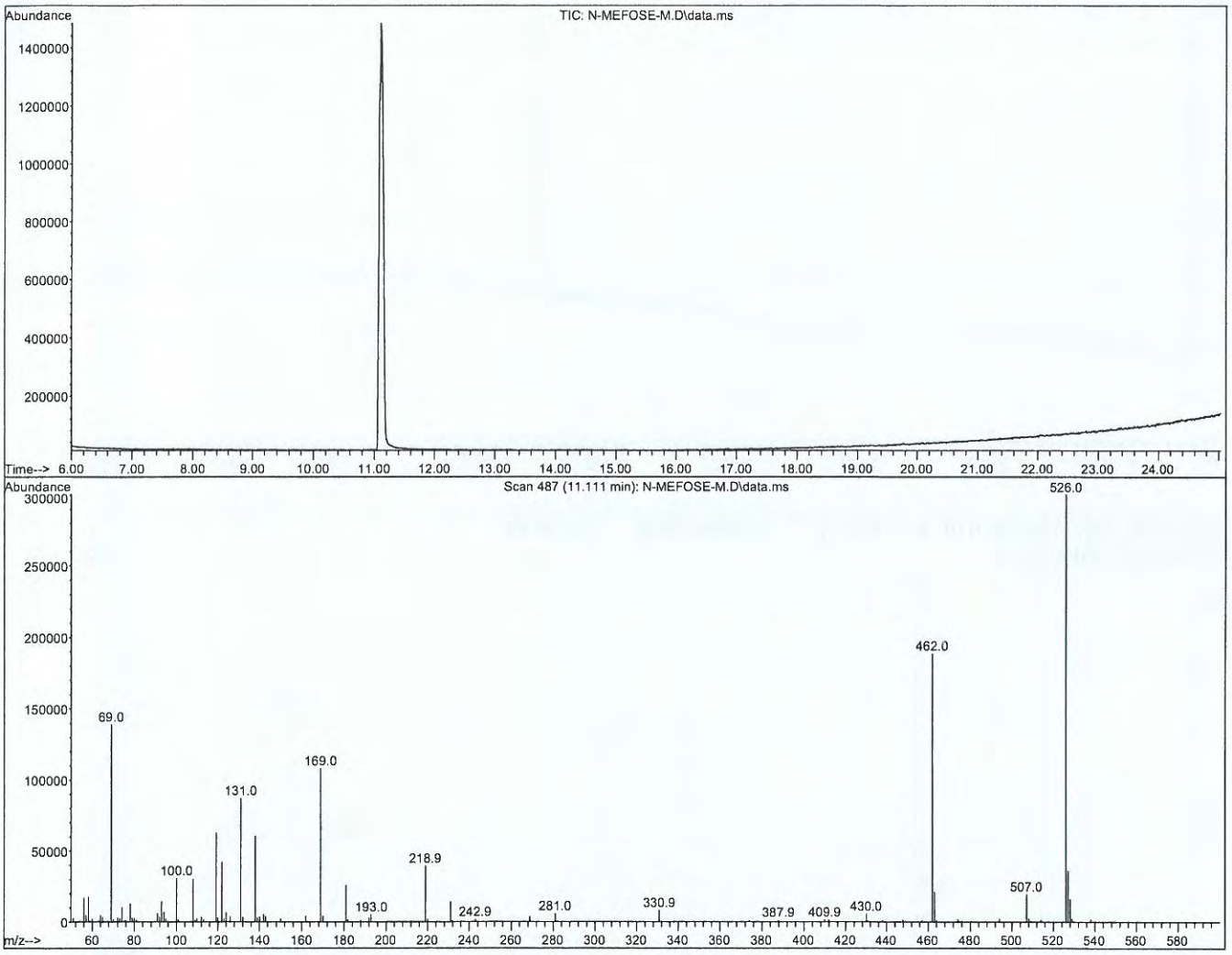
CALA Testing Accreditation No. A 1226

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

18L2062

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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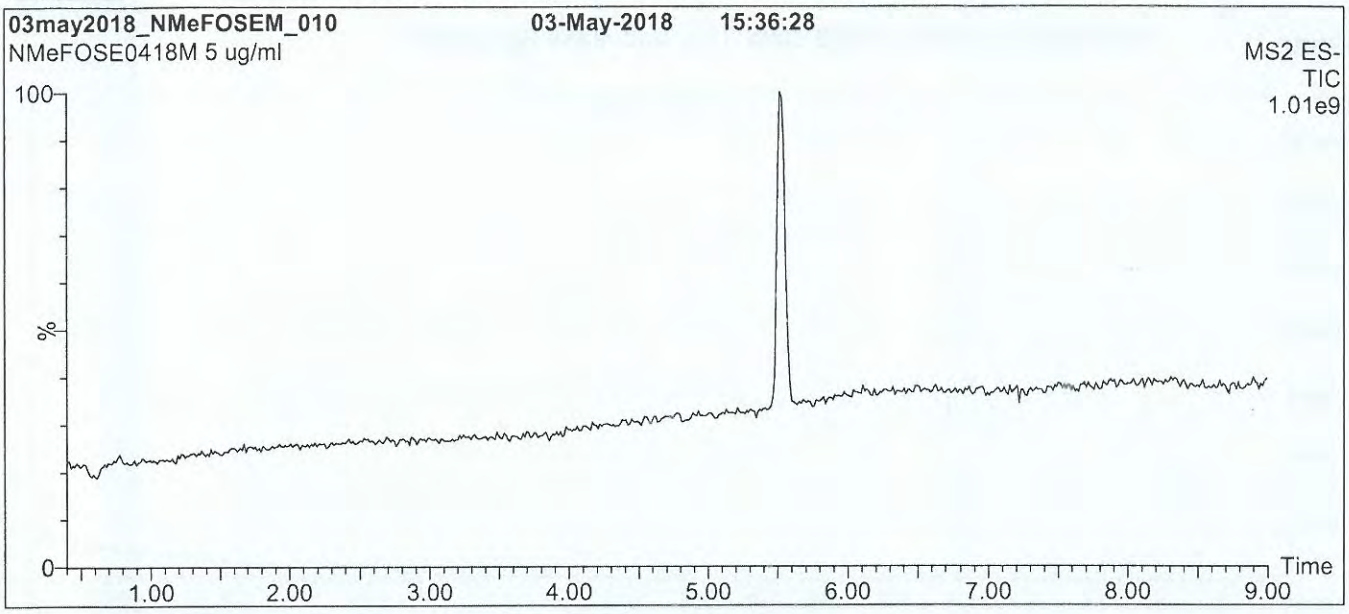
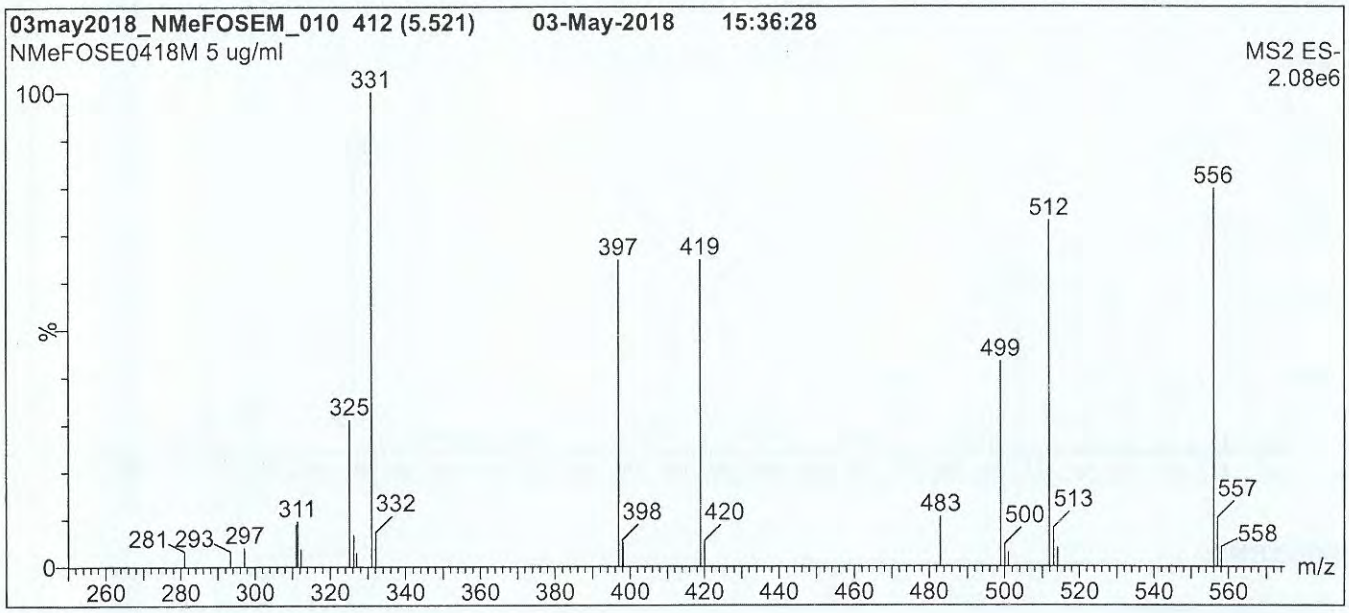
1812062

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 85% 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) = 750

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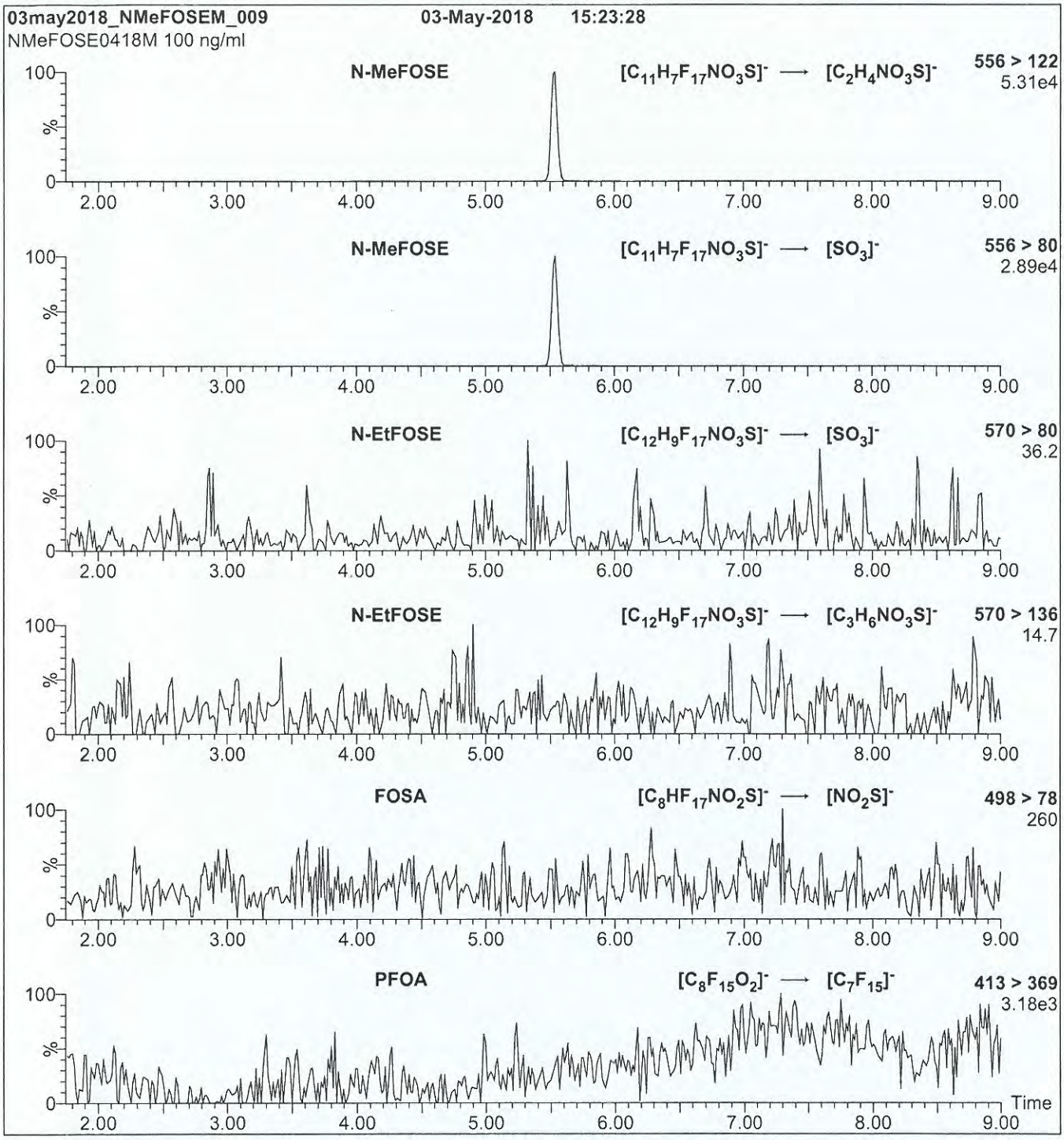
Figure 3: **N-MeFOSE-M; LC/MS/MS Data (Selected MRM Transitions)**



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) = 3.47e-3
Collision Energy (eV) = 36

1812063

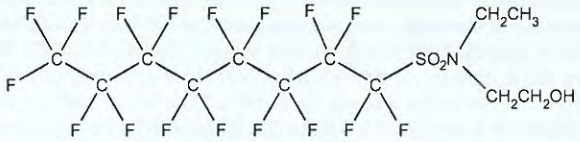
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE0518M

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)	06/04/2018 (HRGC/LRMS) 05/30/2018 (LC/MS)		
EXPIRY DATE: (mm/dd/yyyy)	06/04/2023		
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:** 06/04/2018 (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

1812063

INTENDED USE:

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HANDLING:

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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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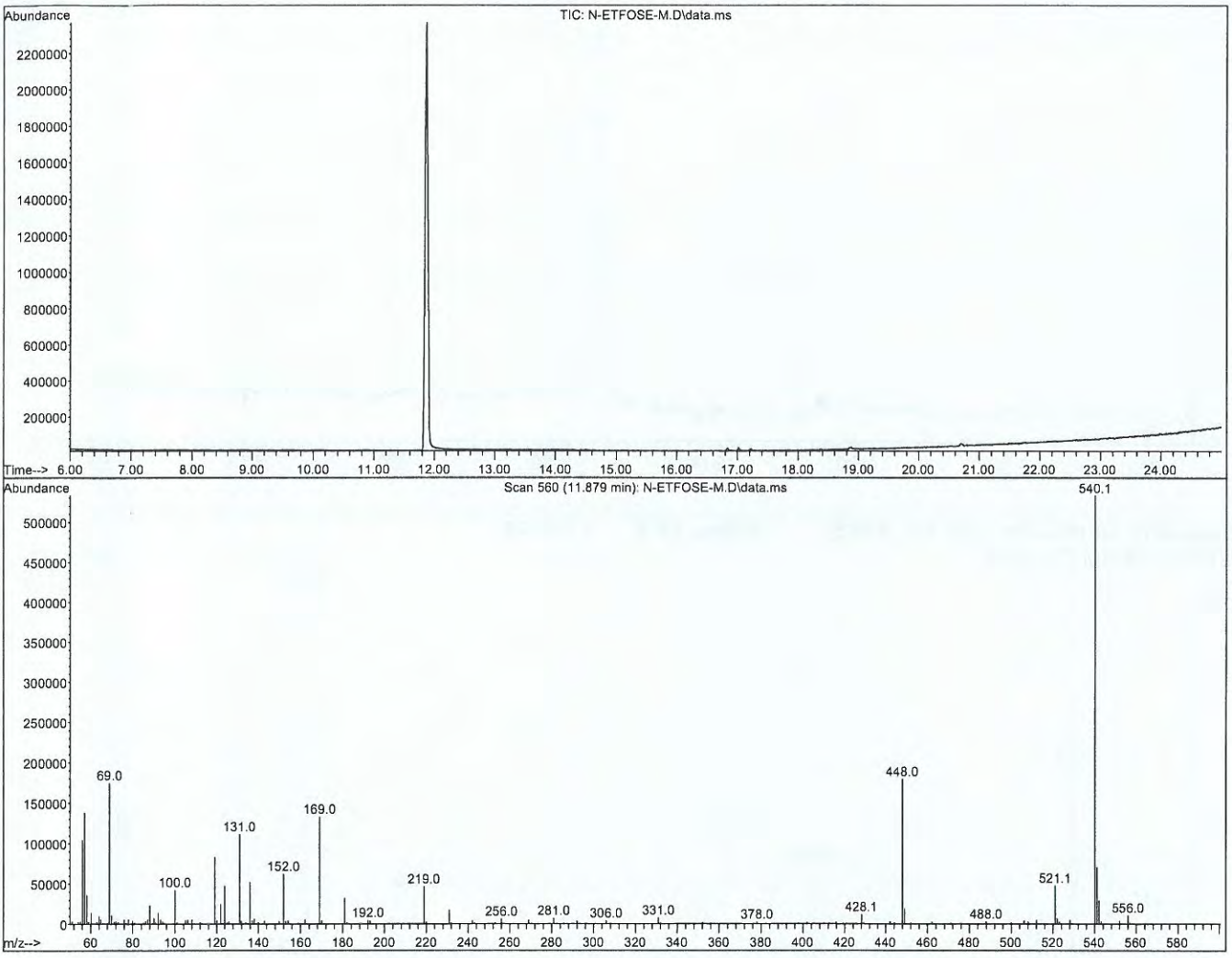
1812063

Figure 1: **N-EtFOSE-M; HRGC/LRMS Data (TIC and Mass Spectrum)**



HRGC/LRMS:

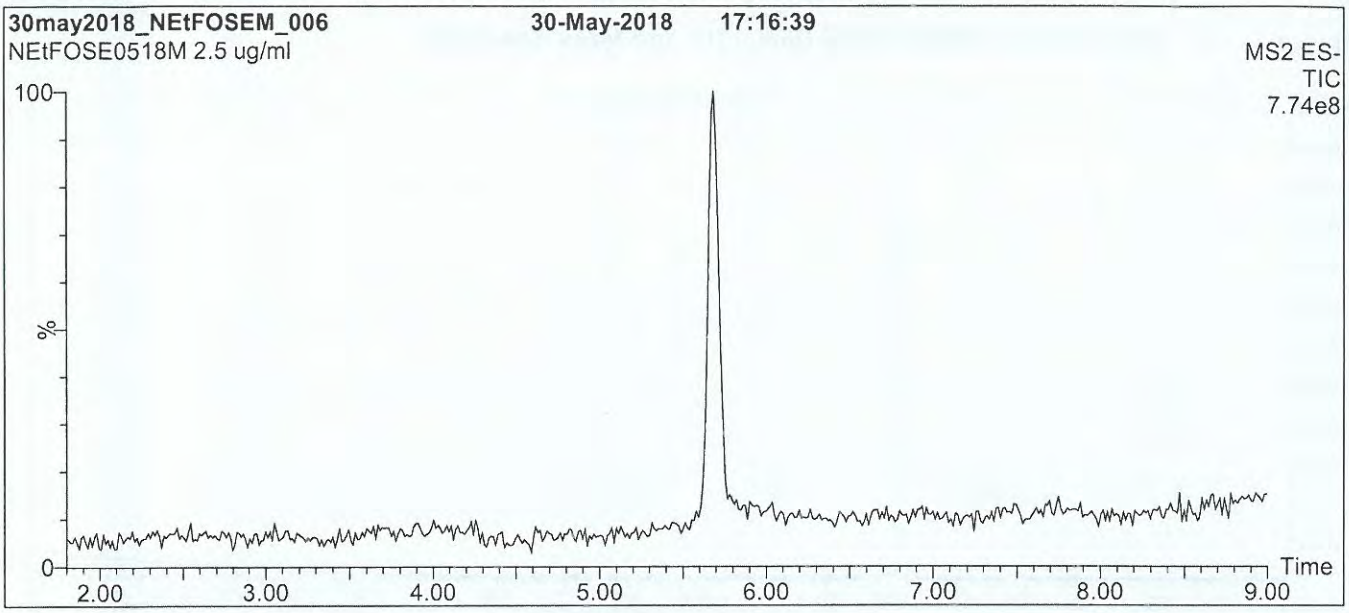
Agilent 7890A (HRGC)
Agilent 5975C (LRMS)

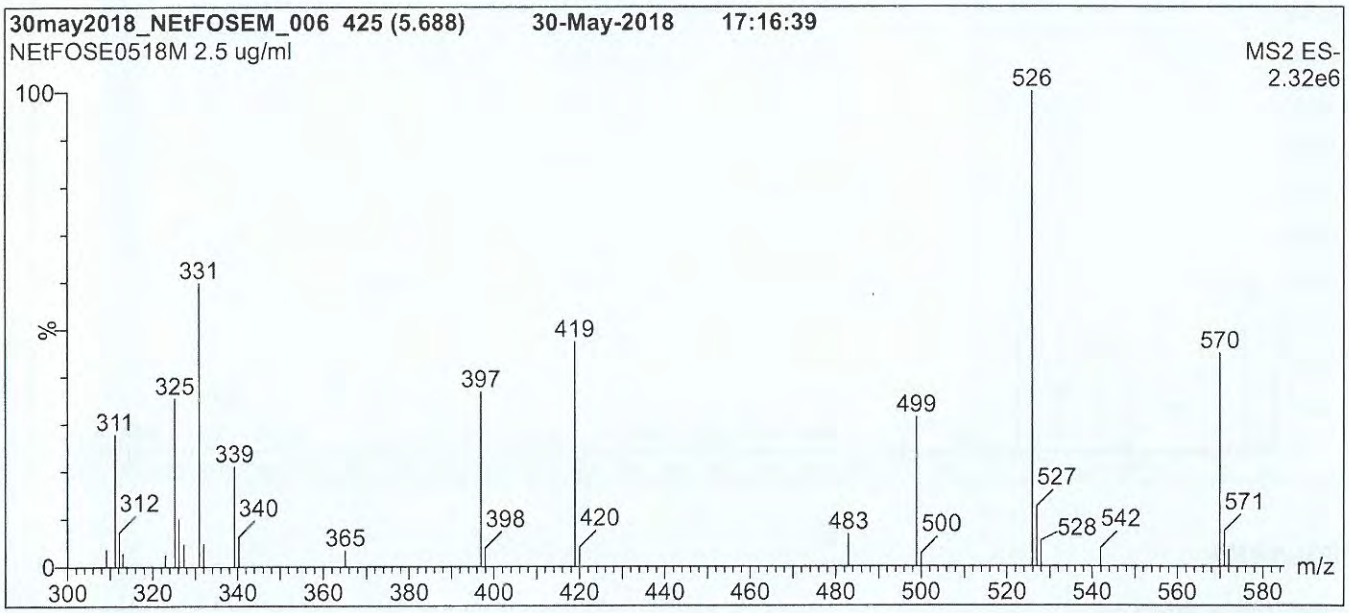
Chromatographic Conditions:

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)

1812063

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 C_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 70% MeOH / 30% H_2O
Ramp to 85% 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

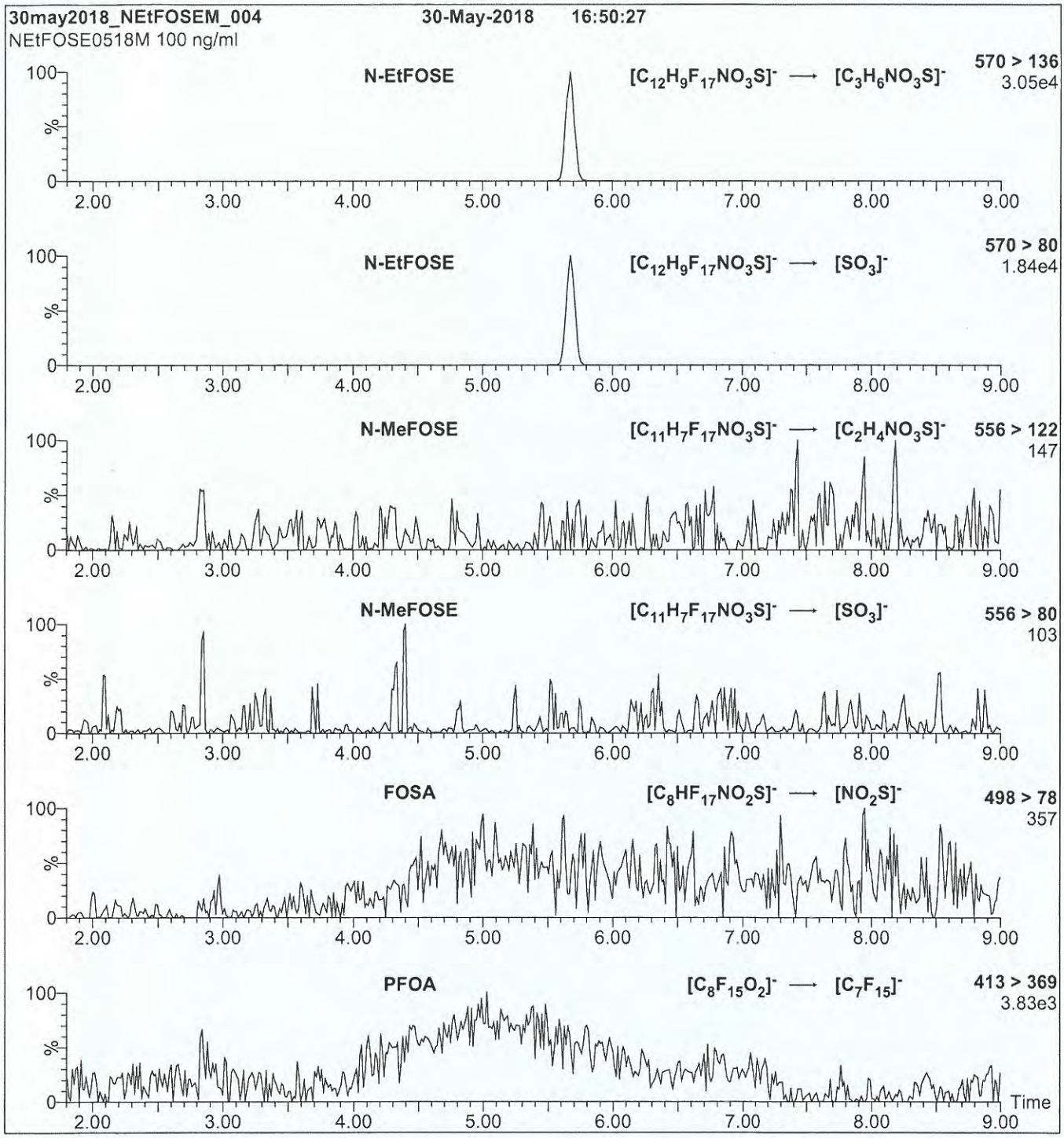
MS Parameters

Experiment: Full Scan (300 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 65.00
Desolvation Temperature (°C) = 450
Desolvation Gas Flow (l/hr) = 750

18L2063

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) = 3.45e-3
Collision Energy (eV) = 32

18L2071

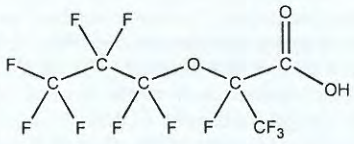
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA1018

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)	10/24/2018		
EXPIRY DATE: (mm/dd/yyyy)	10/24/2021		
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 GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 10/29/2018 (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

1812071

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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The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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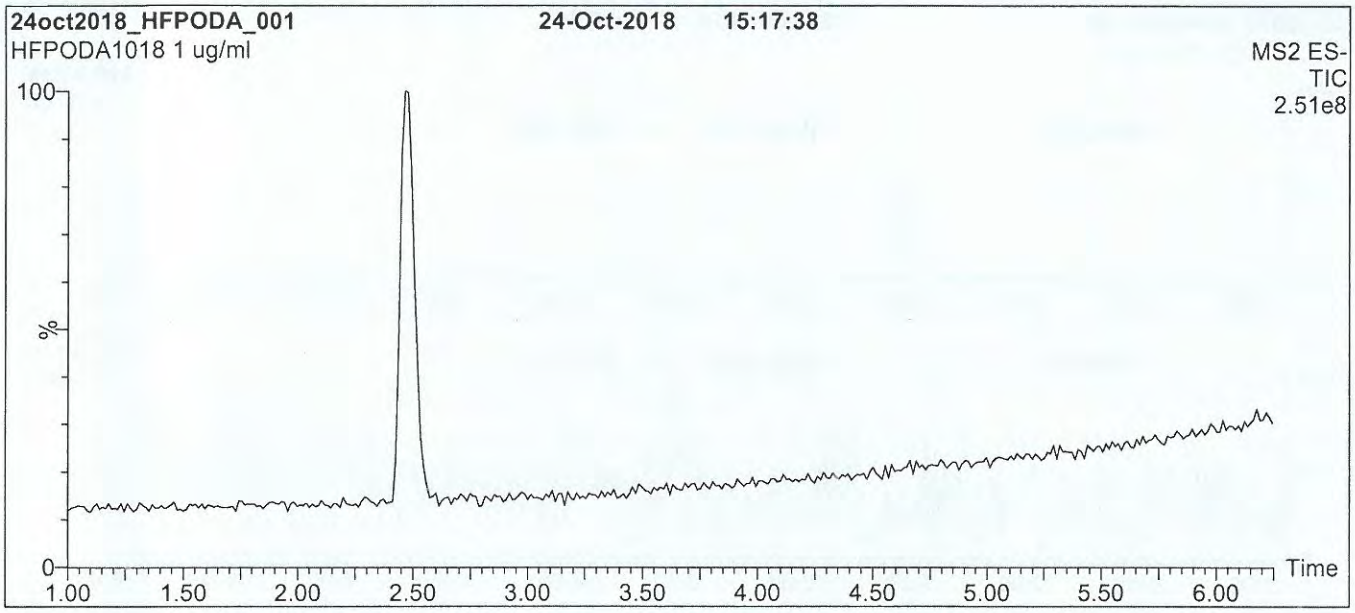
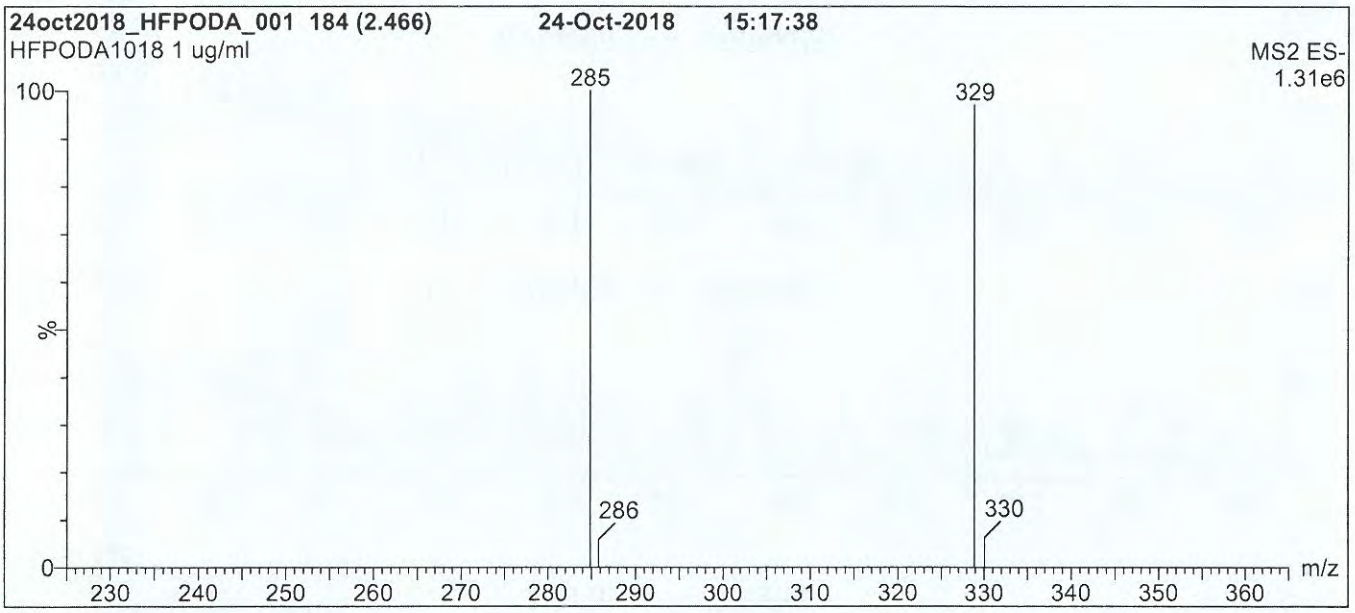
18L2071

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: 45% (80:20 MeOH:ACN) / 55% 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

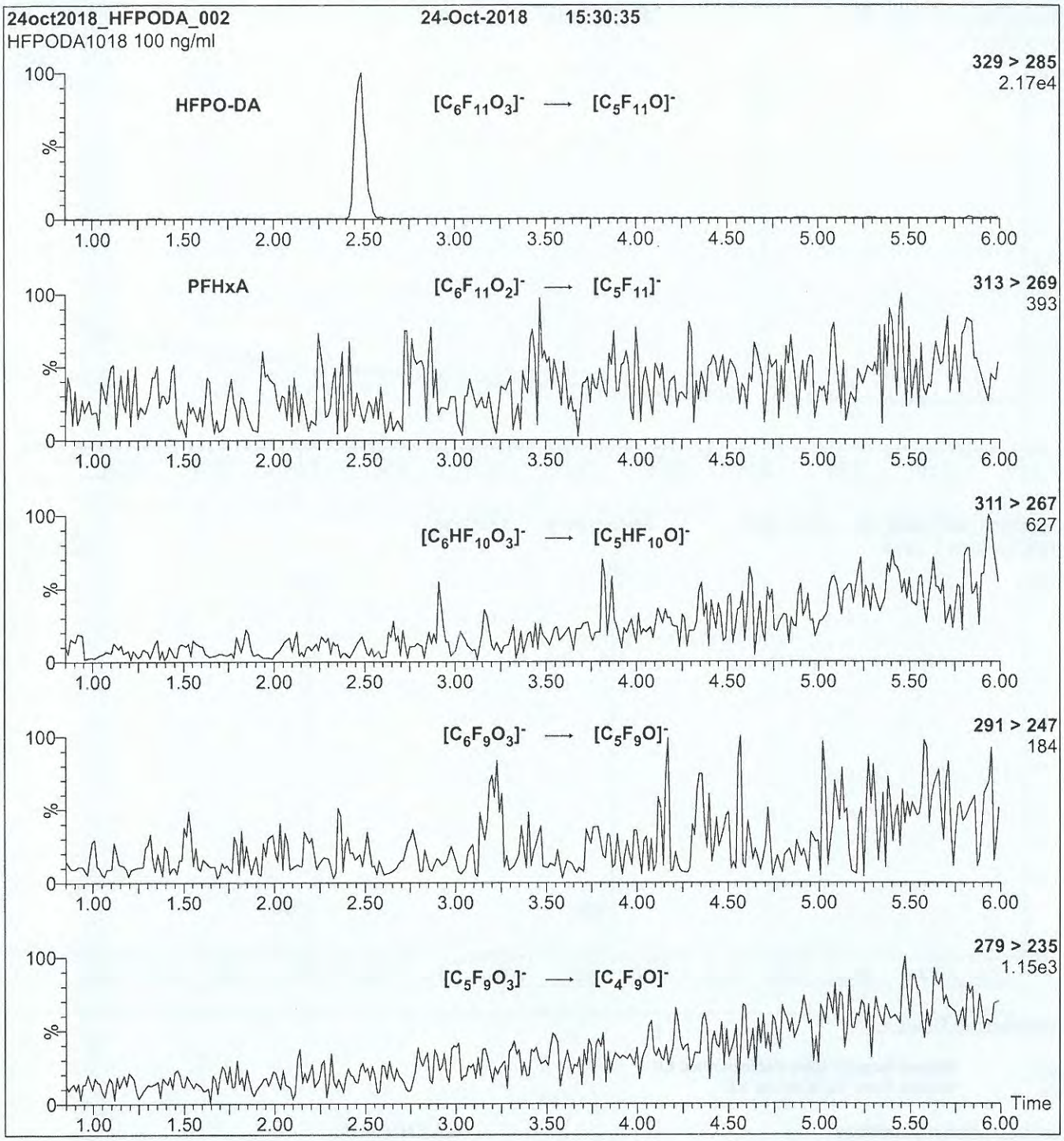
MS Parameters

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

1812071

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) = 3.02e-3
Collision Energy (eV) = 6

1812072

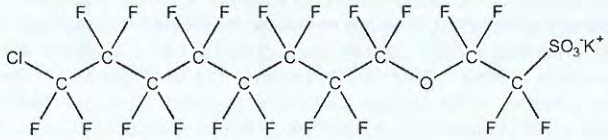
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 11Cl-PF3OUdS **LOT NUMBER:** 11ClPF3OUdS1118

COMPOUND: Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: $C_{10}F_{20}ClSO_4K$ **MOLECULAR WEIGHT:** 670.69

CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
47.1 ± 2.4 µg/ml (11Cl-PF3OUdS anion)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 11/23/2018

EXPIRY DATE: (mm/dd/yyyy) 11/23/2023

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This compound is a minor component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/28/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

1812072

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

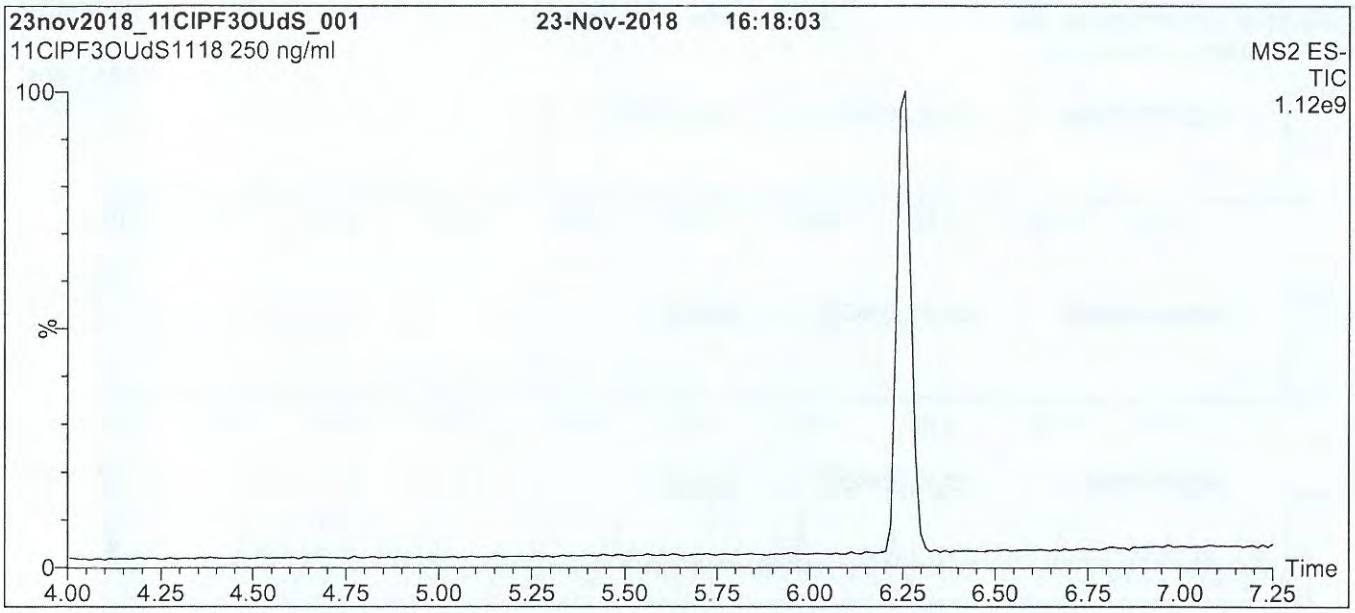
CALA Testing Accreditation No. A 1226

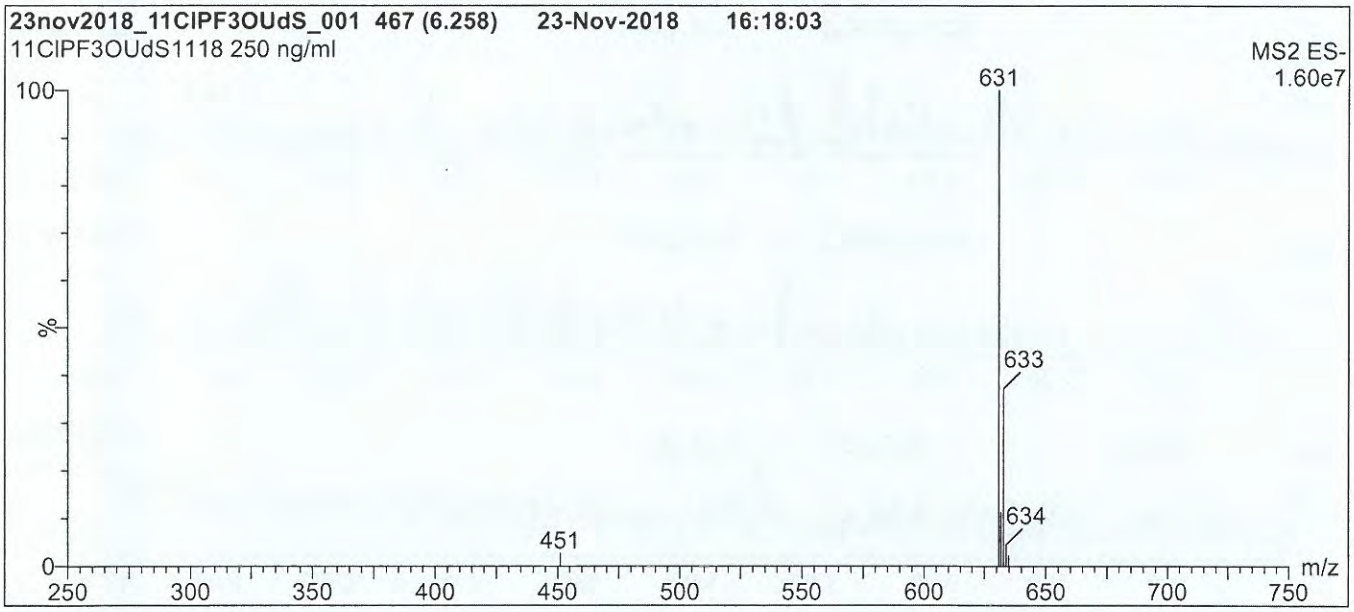
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

1812072

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

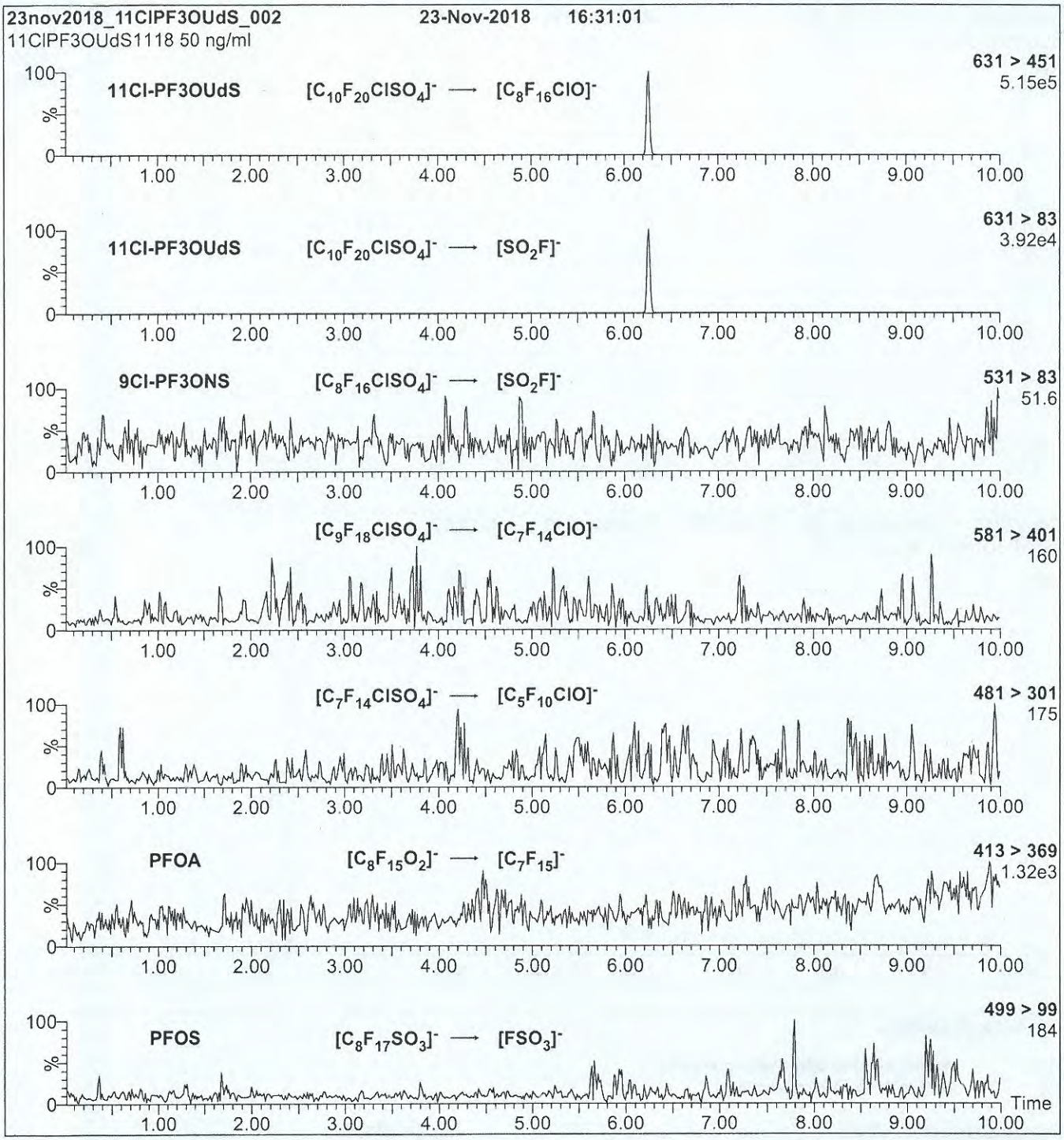
MS Parameters

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

1812072

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

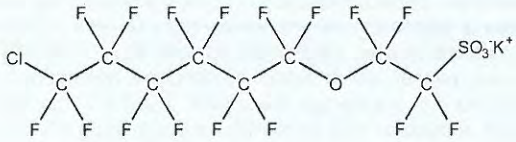
Collision Gas (mbar) = 2.84e-3
Collision Energy (eV) = 24

18L2073

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	9Cl-PF3ONS	**LOT NUMBER:**	9ClPF3ONS1118
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)	**SOLVENT(S):**	Methanol
	46.6 ± 2.3 µg/ml (9Cl-PF3ONS anion)		
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/22/2018		
EXPIRY DATE: (mm/dd/yyyy)	11/22/2023		
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 the major component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/23/2018 (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

1812073

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:

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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:

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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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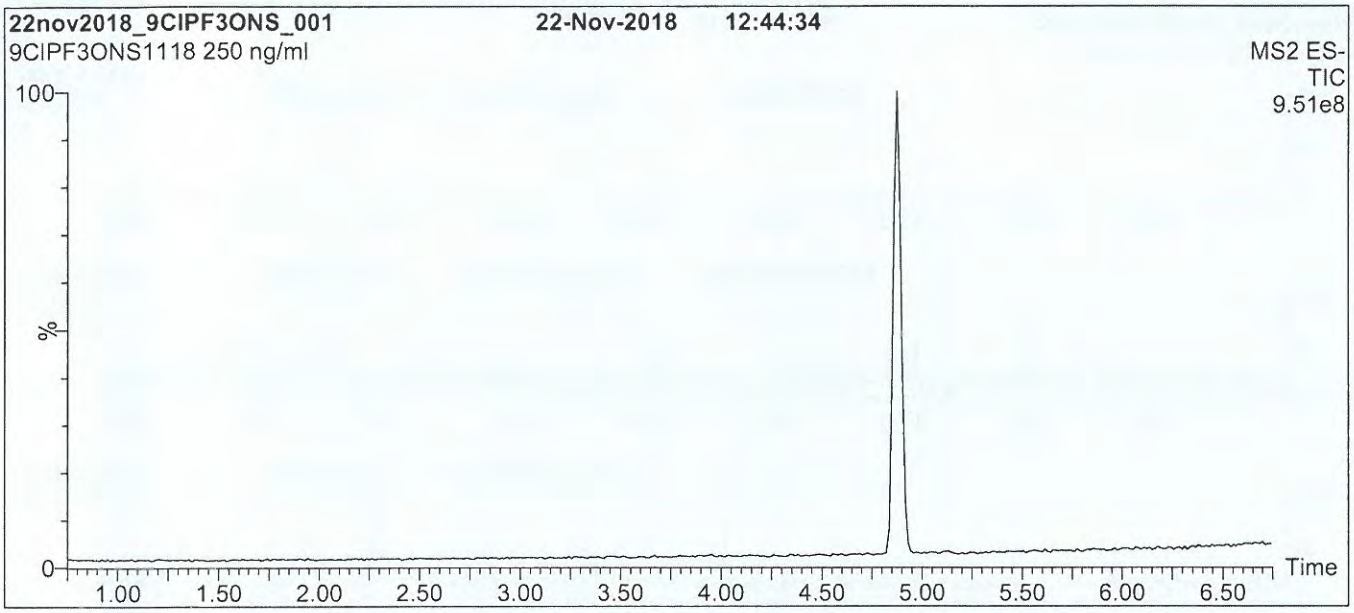
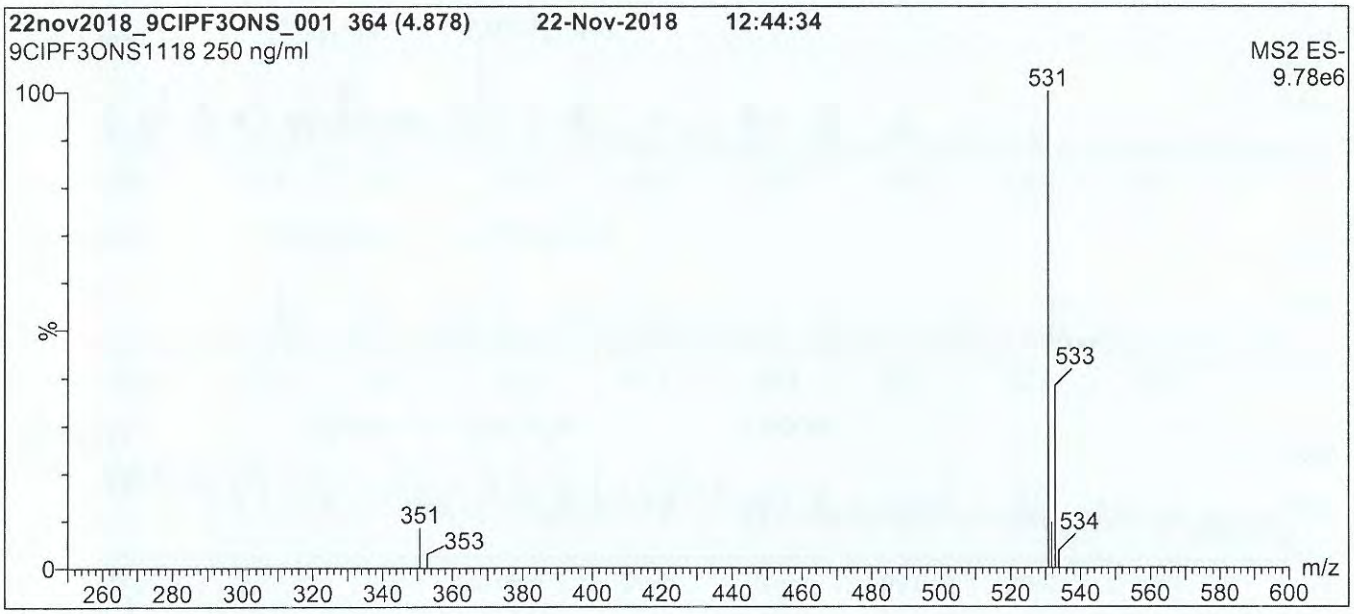
1812073

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: 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

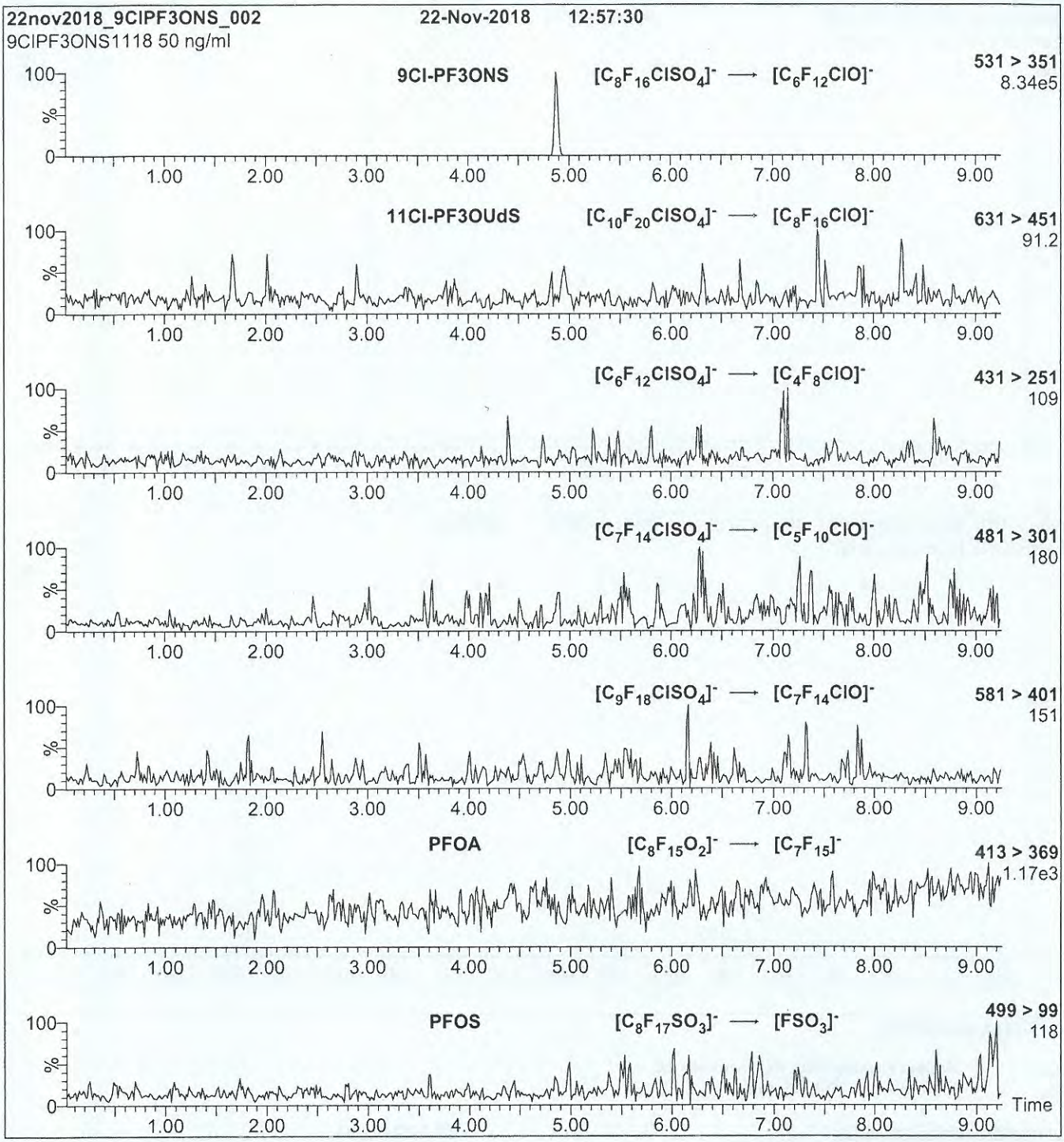
MS Parameters

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

1812073

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) = 3.16e-3
Collision Energy (eV) = 20

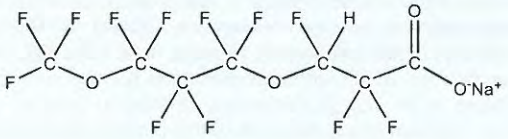
18L2074

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: NaDONA
LOT NUMBER: NaDONA0318
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
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/26/2018
EXPIRY DATE: (mm/dd/yyyy) 03/26/2023
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.
- 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:** 03/27/2018
(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

1812074

INTENDED USE:

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HANDLING:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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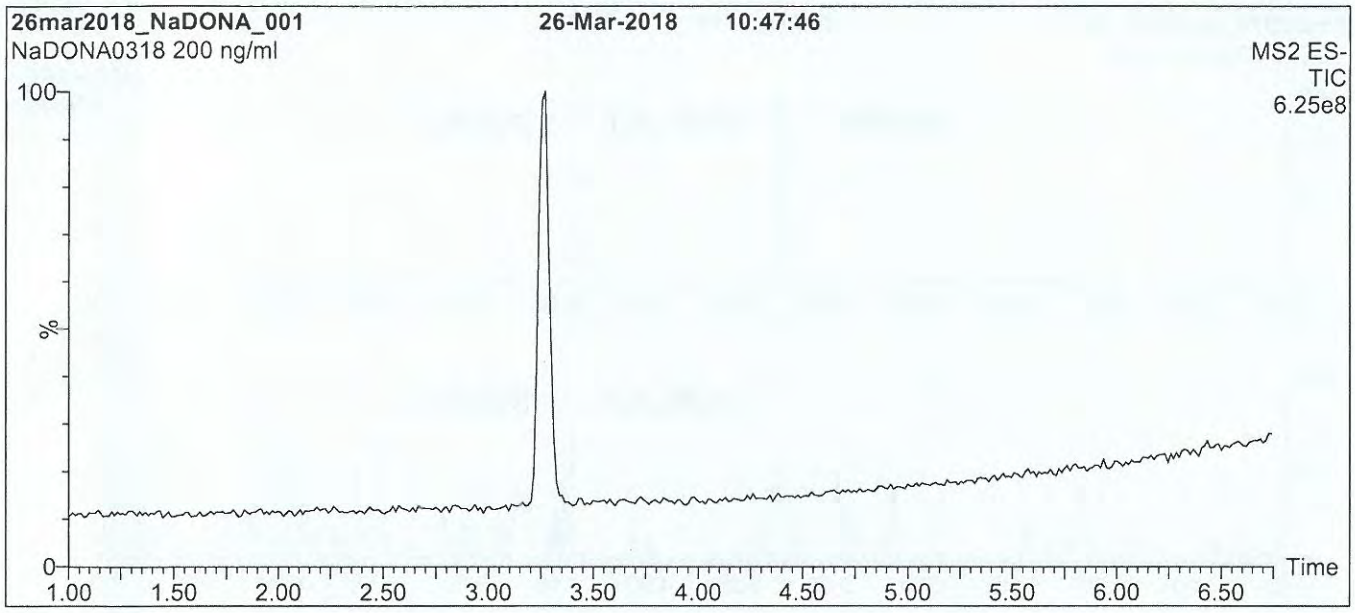
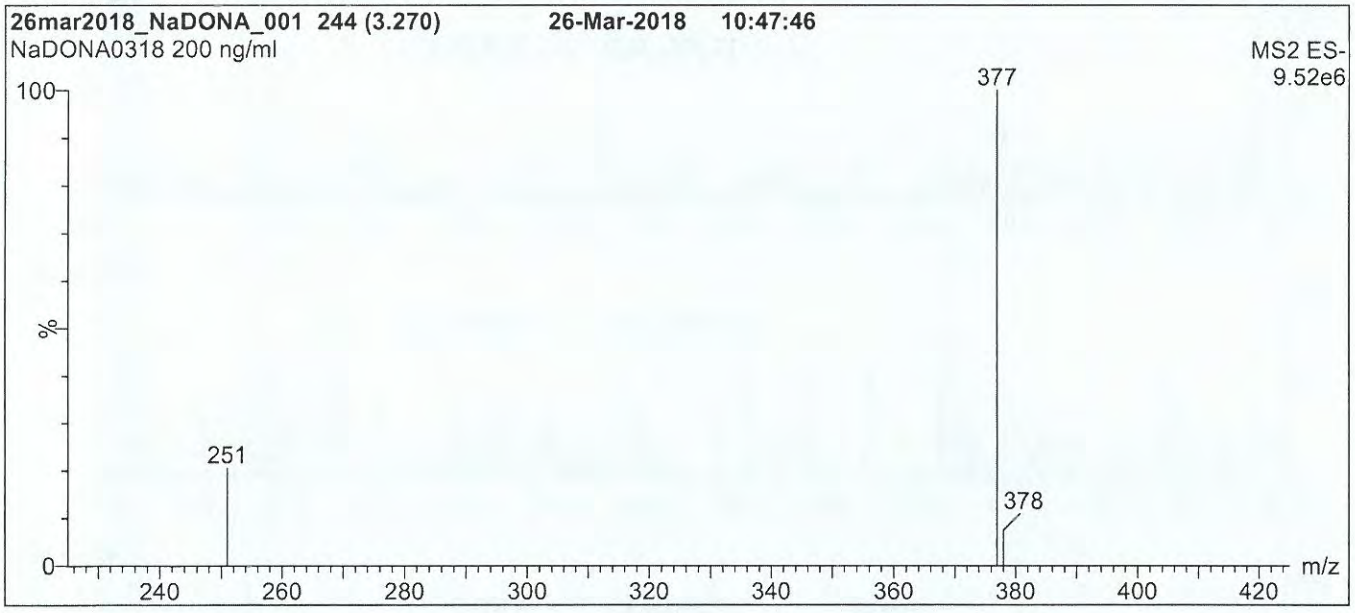
18L2074

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: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 80% 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

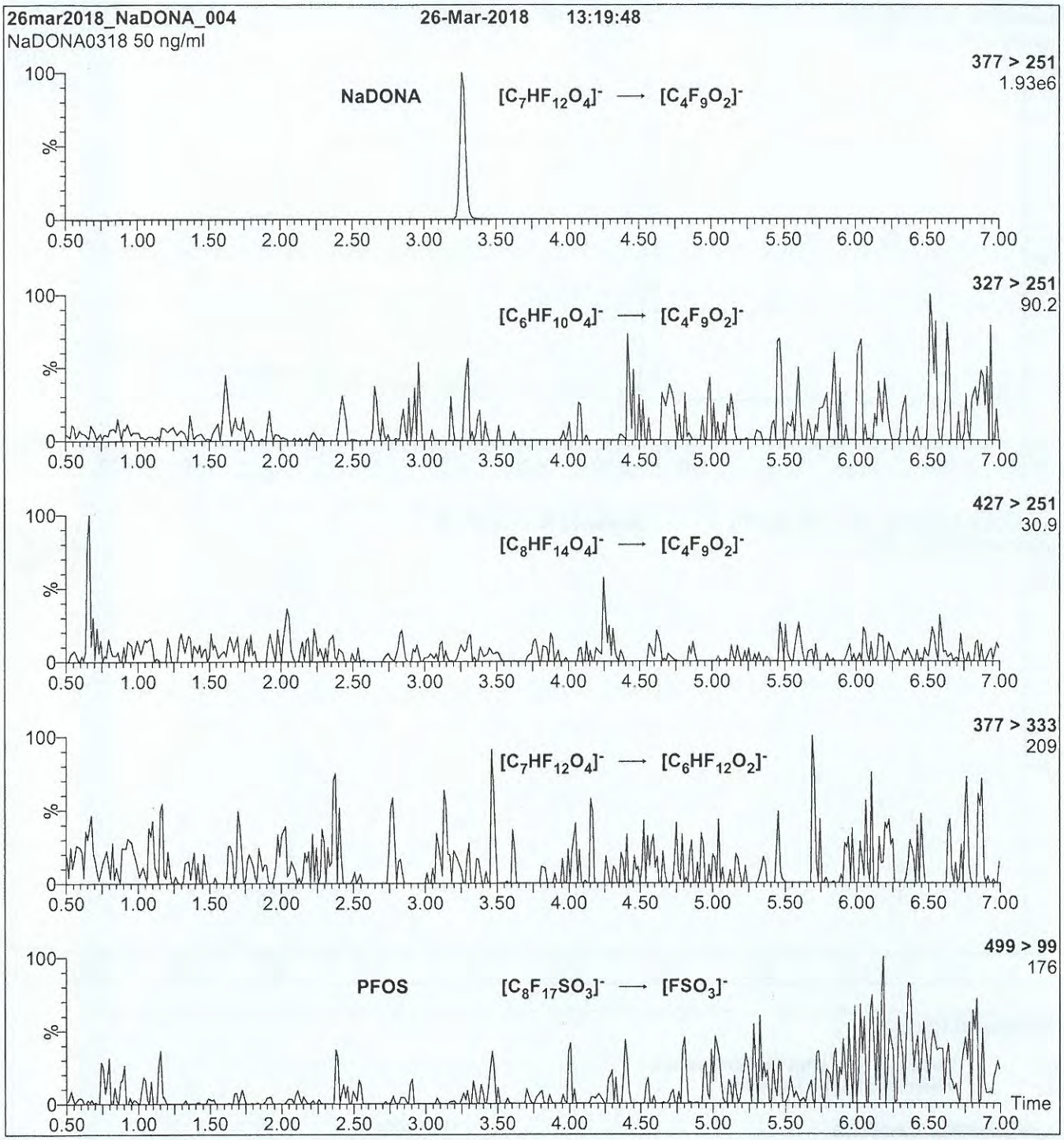
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.70
Cone Voltage (V) = 20.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812074

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

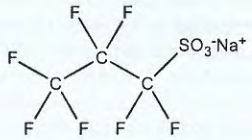
Collision Gas (mbar) = 3.65e-3
Collision Energy (eV) = 10

18L2076

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

1812076

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SYNTHESIS / CHARACTERIZATION:

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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,...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:

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).

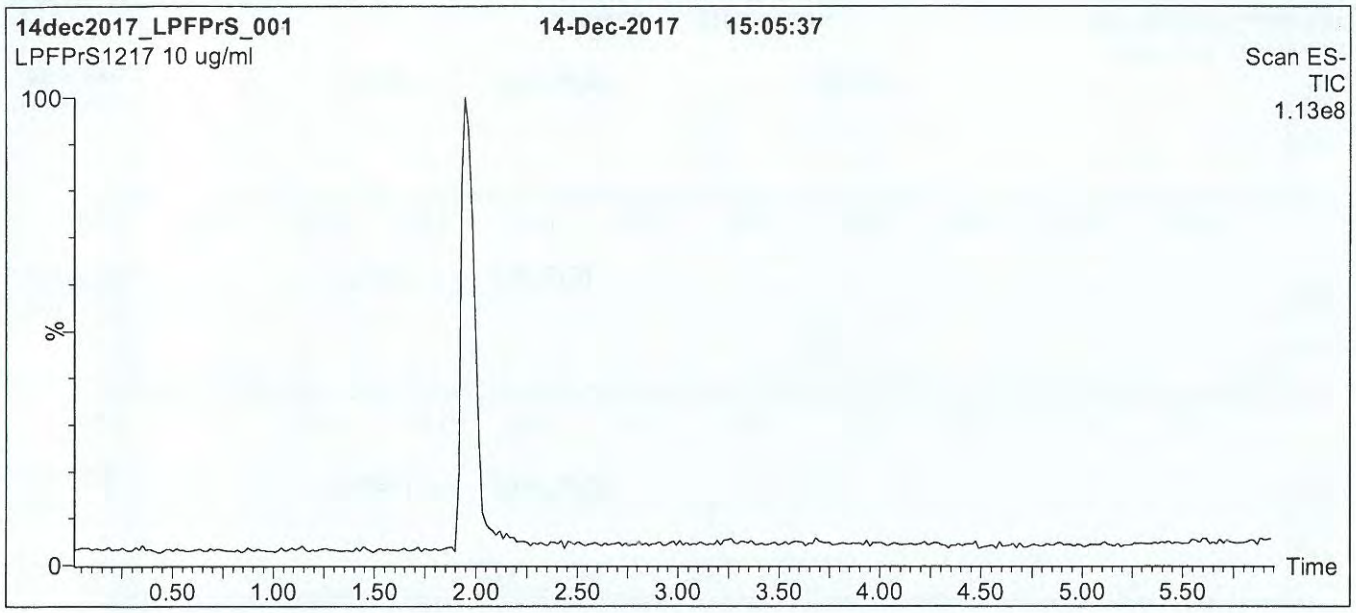
CALA Testing Accreditation No. A 1226

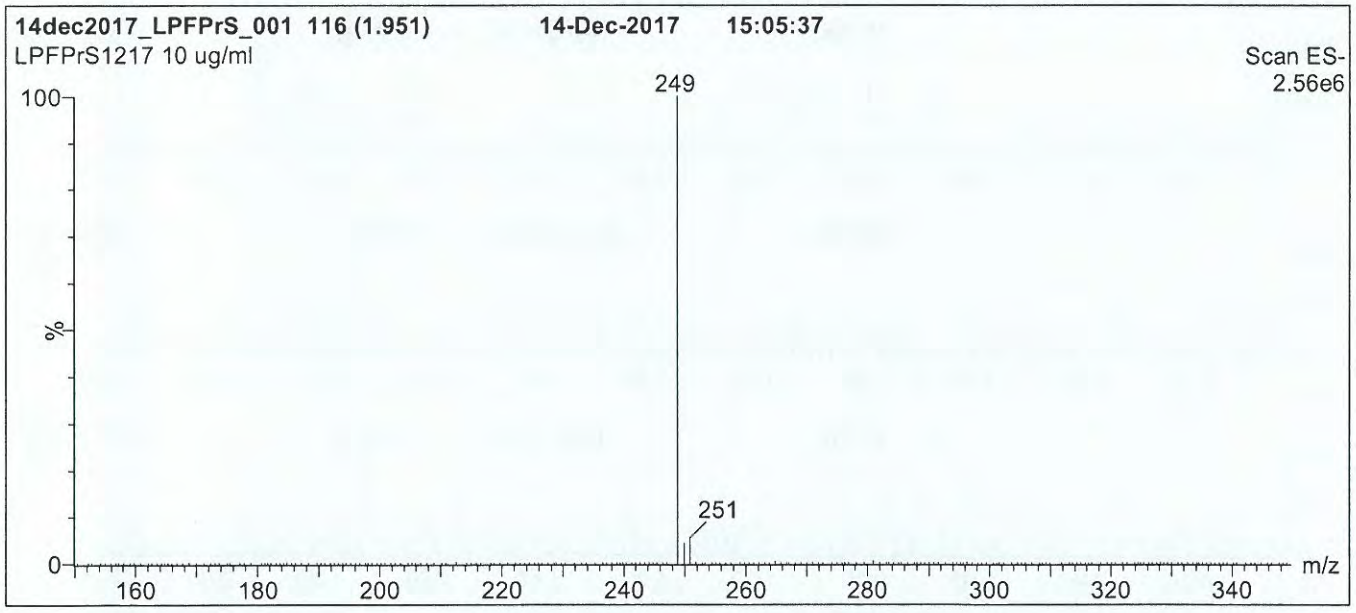
ANAB ACCREDITED Reference Material Producer

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

1812076

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

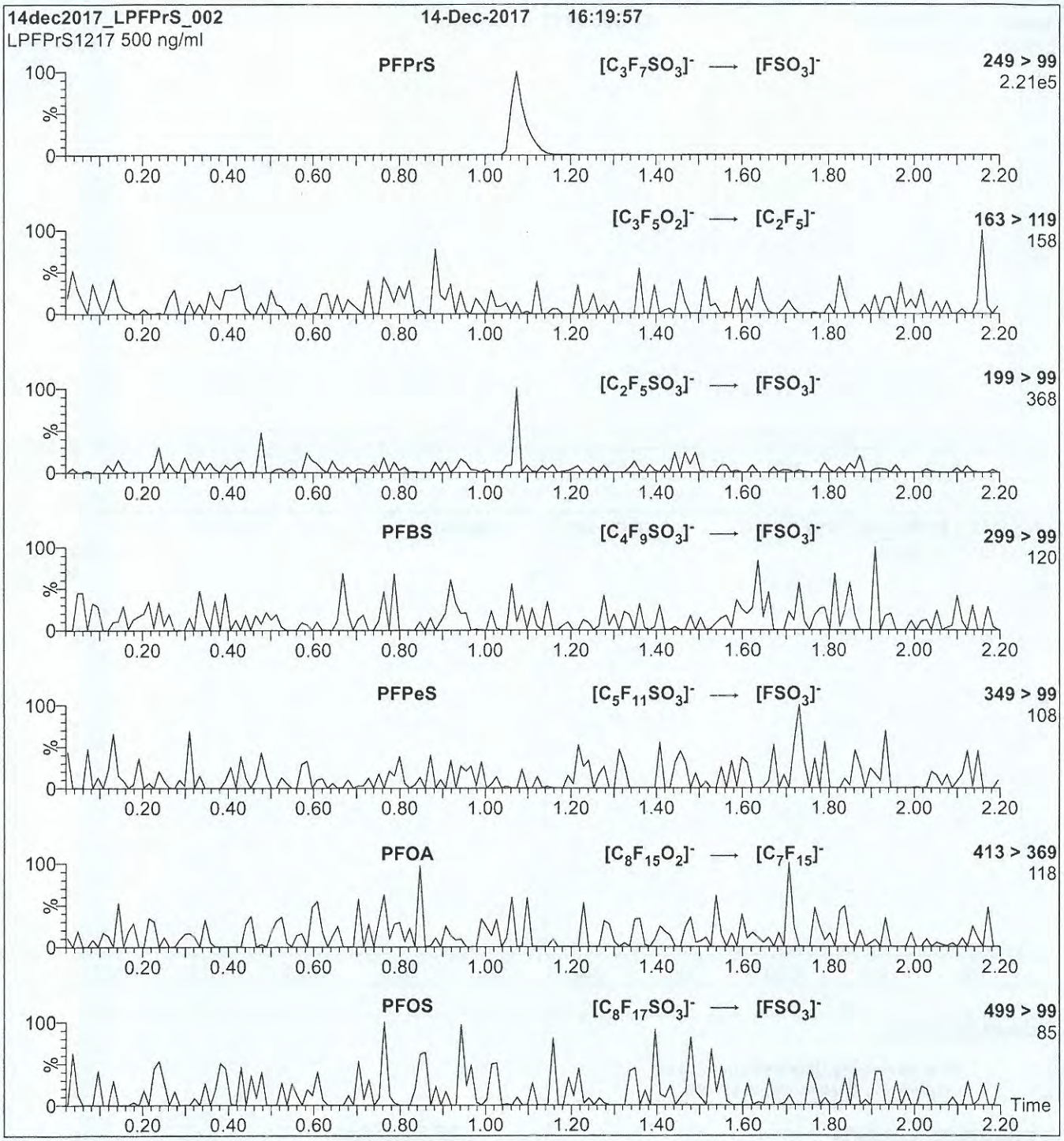
MS Parameters

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

1812076

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

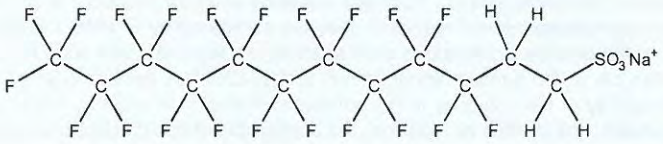
18L2078

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 10:2FTS **LOT NUMBER:** 102FTS0718
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)	07/13/2018			
EXPIRY DATE: (mm/dd/yyyy)	07/13/2021			
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/16/2018 (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

18L2078

INTENDED USE:

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HANDLING:

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SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

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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:

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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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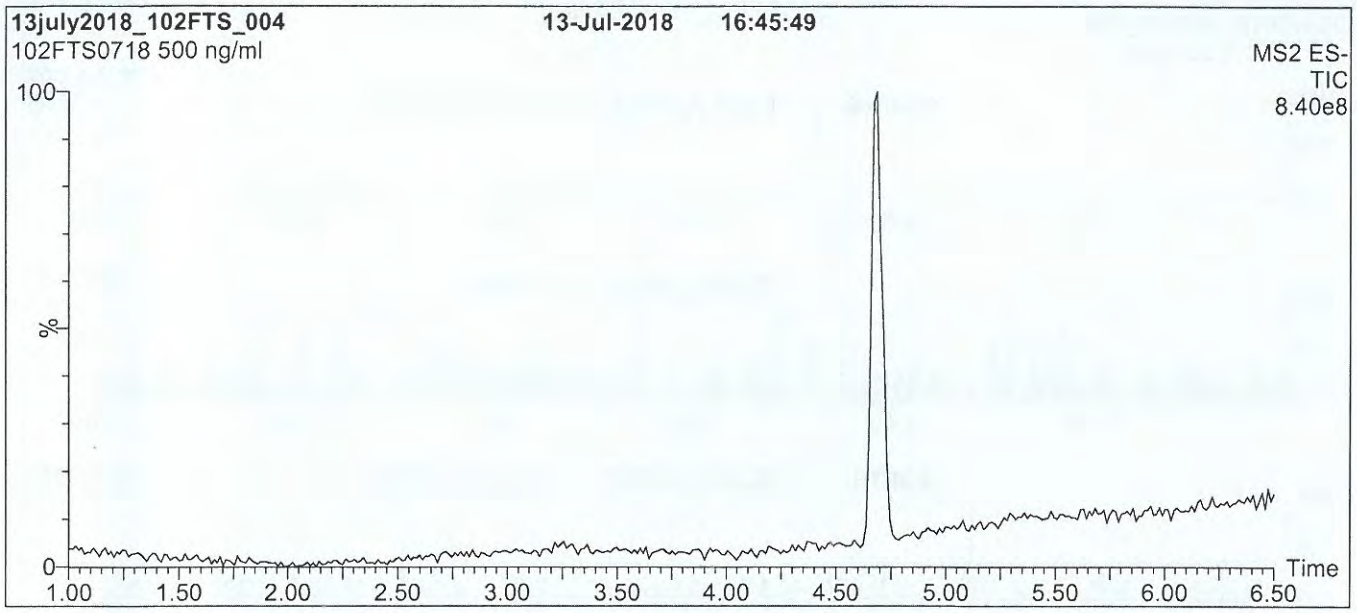
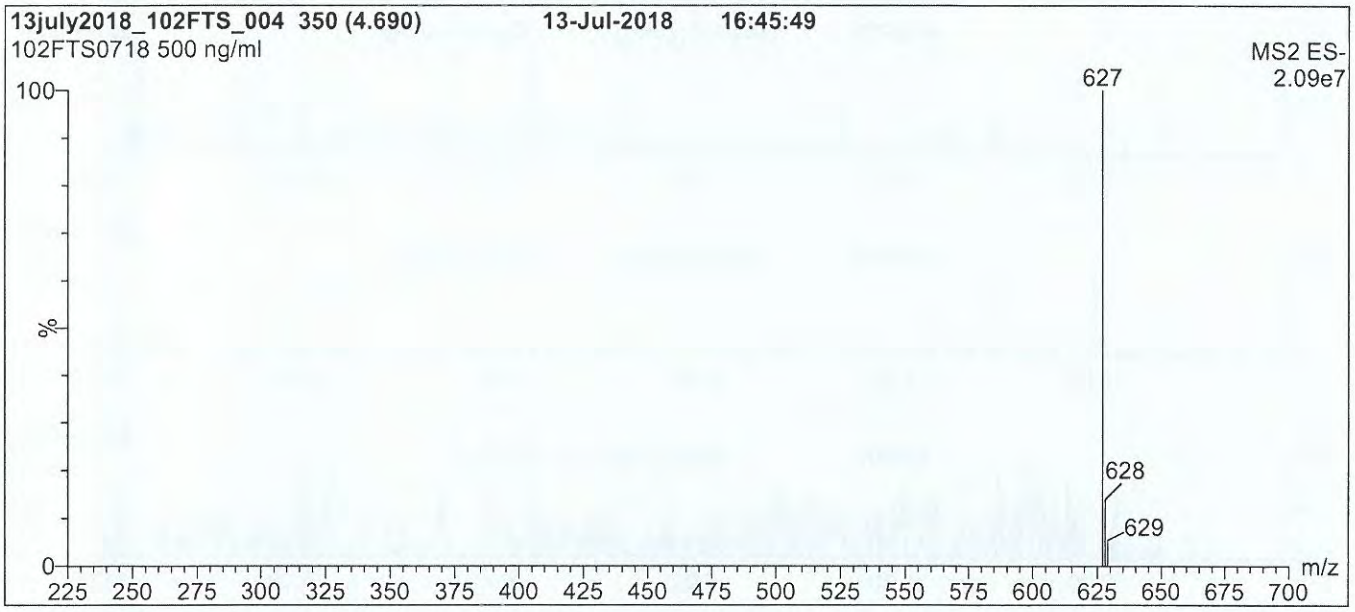
18L2078

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

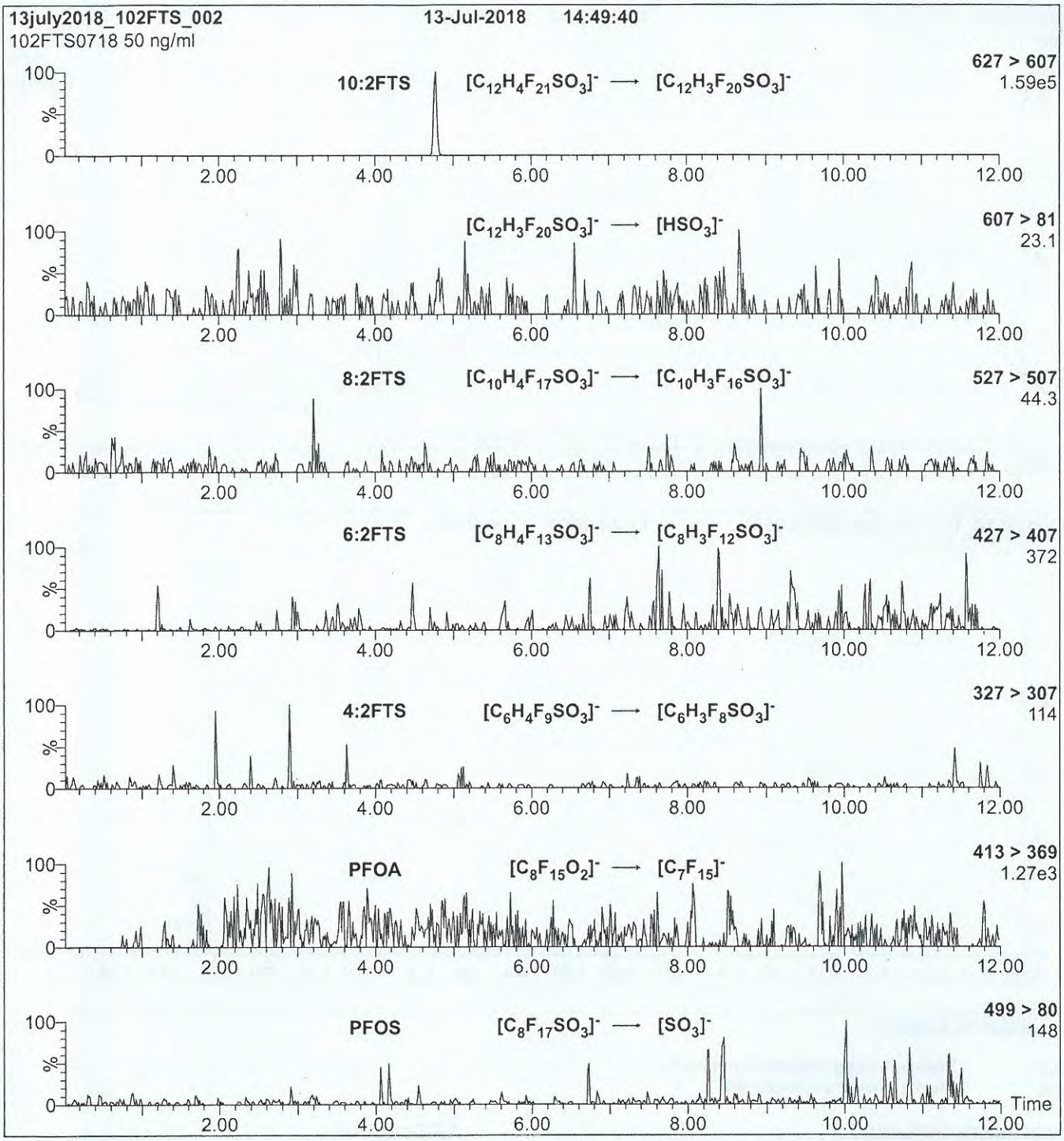
MS Parameters

Experiment: Full Scan (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) = 750

1812078

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) = 3.47e-3
Collision Energy (eV) = 25

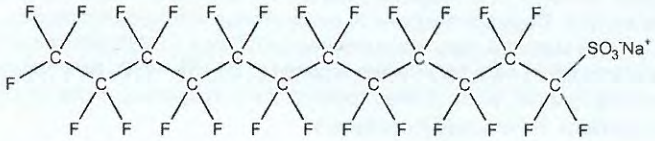
19B0712

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDoS
LOT NUMBER: LPFDoS0916
COMPOUND: Sodium perfluoro-1-dodecanesulfonate

STRUCTURE:
CAS #: Not available



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)	09/30/2016		
EXPIRY DATE: (mm/dd/yyyy)	09/30/2021		
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 ~ 0.7% of sodium perfluoro-1-tetradecanesulfonate and ~ 0.7% of perfluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/17/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

19B0712

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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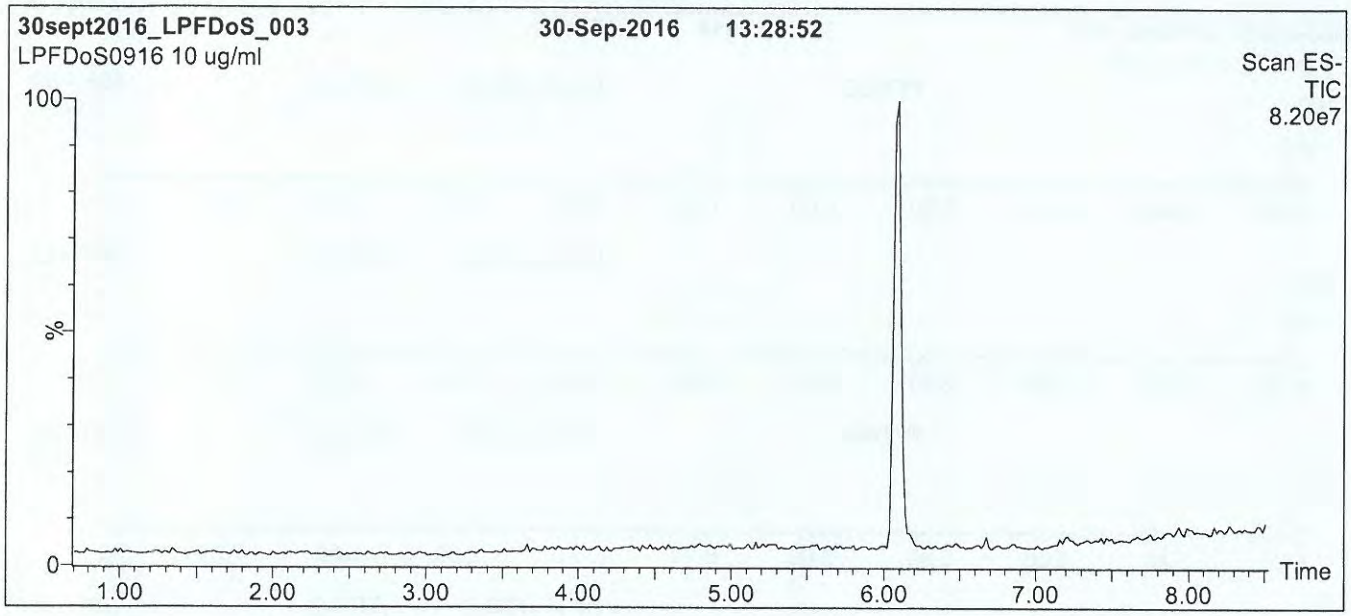
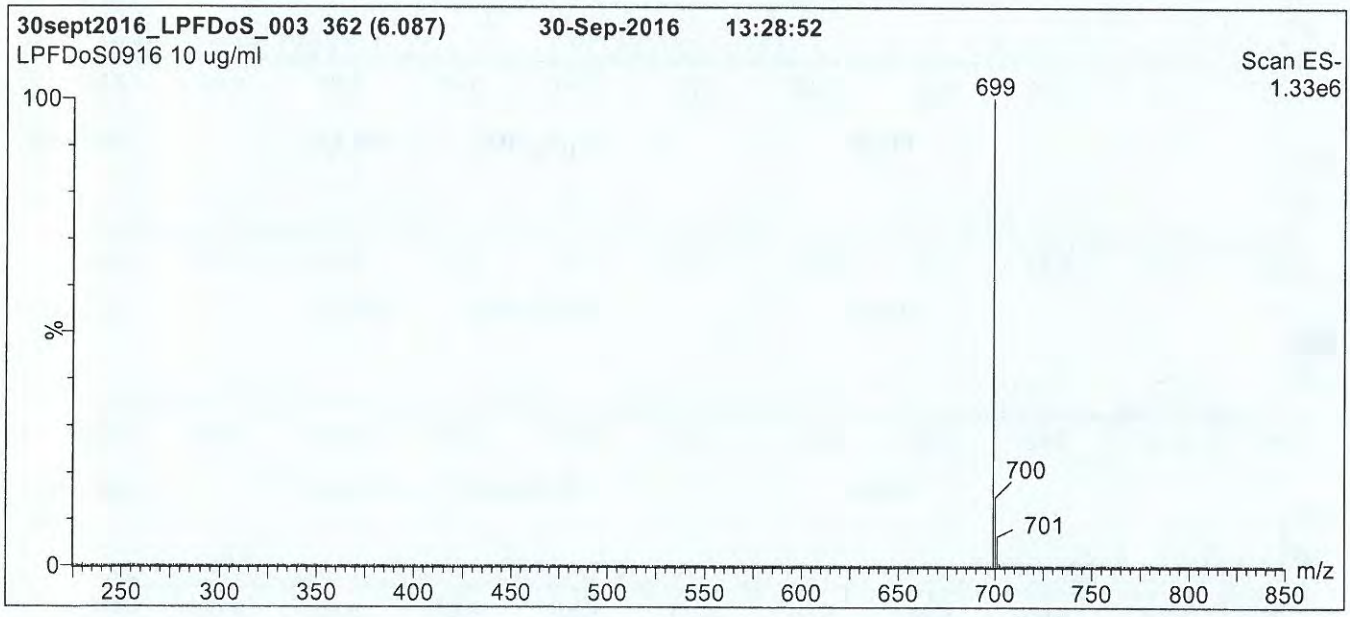
19B0712

Figure 1: **L-PFDoS; 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: 65% (80:20 MeOH:ACN) / 35% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

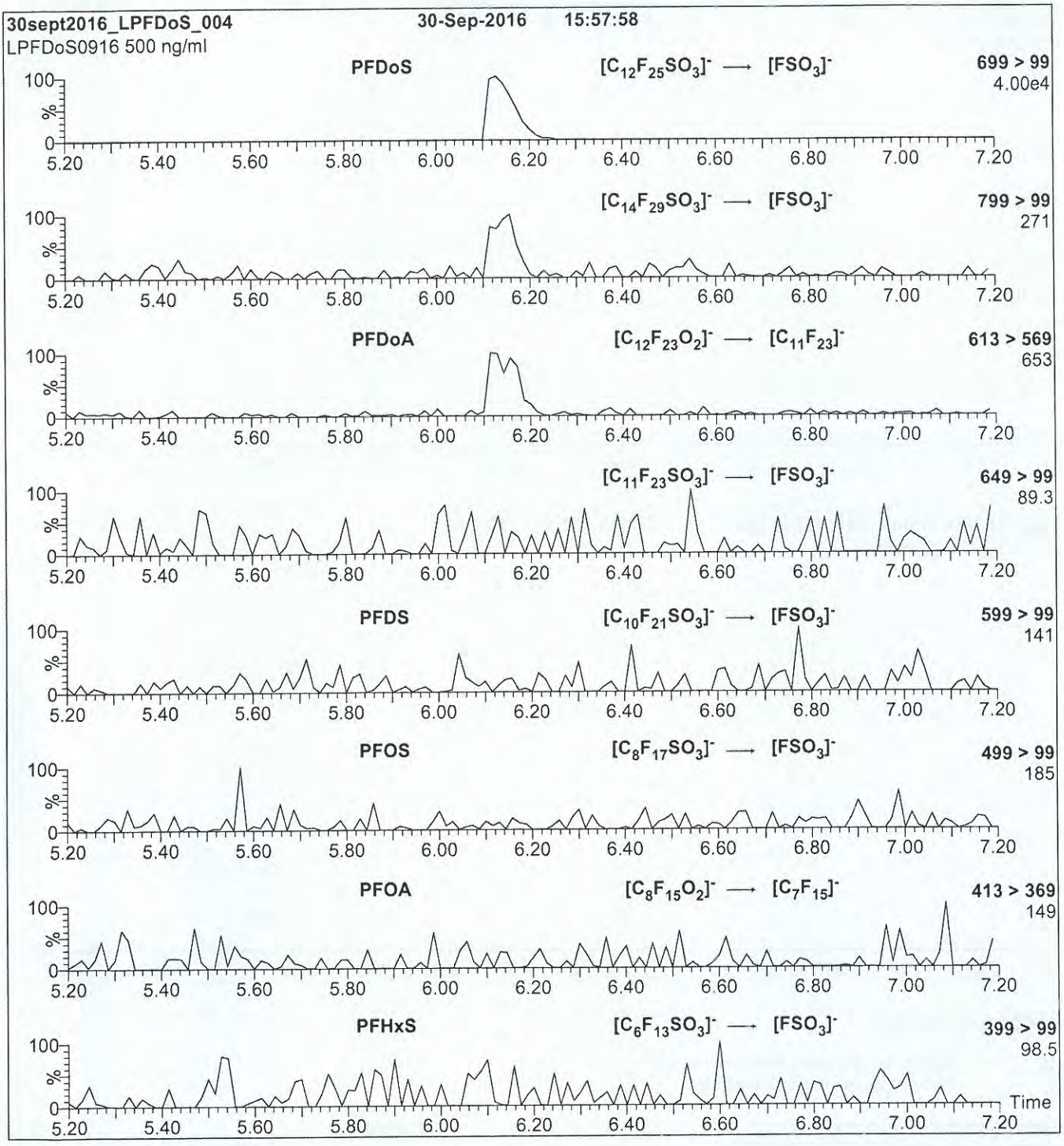
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 80.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

19B0712

Figure 2: **L-PFDoS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFDoS)

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) = 3.35e-3
Collision Energy (eV) = 50

Analytical Standard Record

Vista Analytical Laboratory

19E2202

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	(mls)
18L2018	18O2-PFHxS	20-Dec-18	** Vendor **	22-Mar-23	1.06
18L2021	13C2-FOUEA	20-Dec-18	** Vendor **	14-Nov-19	1
18L2022	13C4-PFBA	20-Dec-18	** Vendor **	16-Feb-23	1
18L2023	13C6-PFDA	20-Dec-18	** Vendor **	20-Sep-23	1
18L2024	13C9-PFNA	20-Dec-18	** Vendor **	23-May-22	1
18L2025	13C7-PFUdA	20-Dec-18	** Vendor **	20-Sep-23	1
18L2026	13C5-PFHxA	20-Dec-18	** Vendor **	27-Sep-23	1
18L2028	13C4-PFOS	20-Dec-18	** Vendor **	11-Sep-23	1.05
18L2029	13C8-PFOA	20-Dec-18	** Vendor **	29-Jun-23	1.02

Description:	PFC-RS	Expires:	14-Nov-19
Standard Type:	Reagent	Prepared:	23-May-19
Solvent:	MeOH	Prepared By:	Giana R. Bilotta
Final Volume (mls):	40	Department:	LCMS
Vials:	1	Last Edit:	28-May-19 09:02 by GRB

Expiration date set to expiration date of standard being used to create this one. GRB 05/22/19
18L2021 13C2-FOUEA EXP. 11/14/19

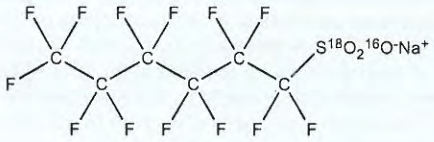
Analyte	CAS Number	Concentration	Units
18O2-PFHxS		1.25	ug/mL
13C9-PFNA		1.25	ug/mL
13C8-PFOA		1.25	ug/mL
13C7-PFUnA		1.25	ug/mL
13C6-PFDA		1.25	ug/mL
13C5-PFHxA		1.25	ug/mL
13C4-PFOS		1.25	ug/mL
13C4-PFBA		1.25	ug/mL
13C2-FOUEA		1.25	ug/mL

18L2018

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFHxS	**LOT NUMBER:**	MPFHxS0318
COMPOUND:	Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate		
STRUCTURE:		**CAS #:**	1585941-14-5



MOLECULAR FORMULA:	$C_6F_{13}S^{18}O_2{}^{16}ONa$	**MOLECULAR WEIGHT:**	426.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (MPFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	>94% ($^{18}O_2$)
LAST TESTED: (mm/dd/yyyy)	03/22/2018		
EXPIRY DATE: (mm/dd/yyyy)	03/22/2023		
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.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 1.0% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFOS) and ~ 0.3% 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:** 06/07/2018 (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

18L2018

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

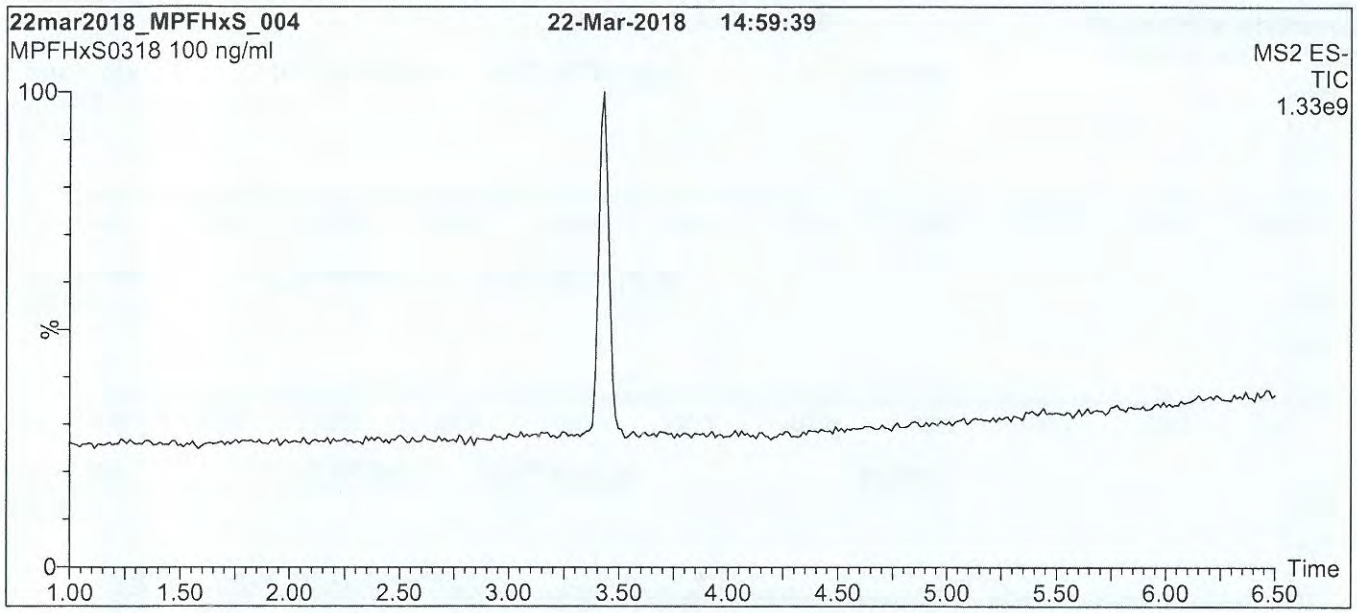
CALA Testing Accreditation No. A 1226

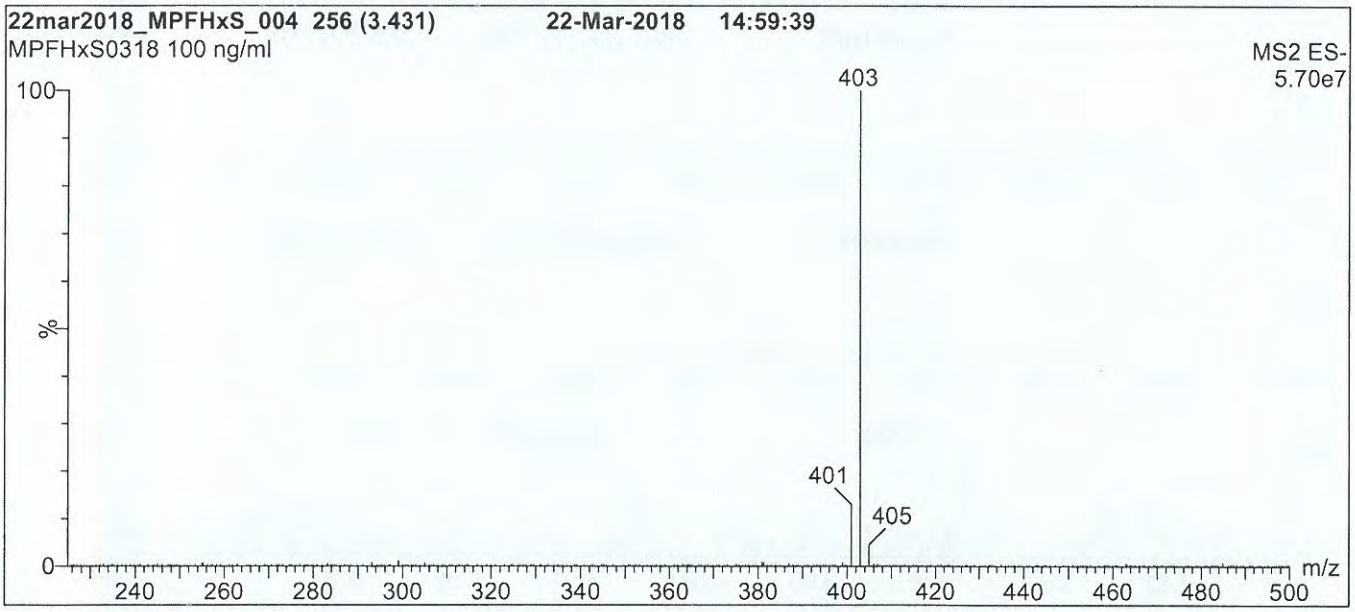
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

18L2018

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 80% 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

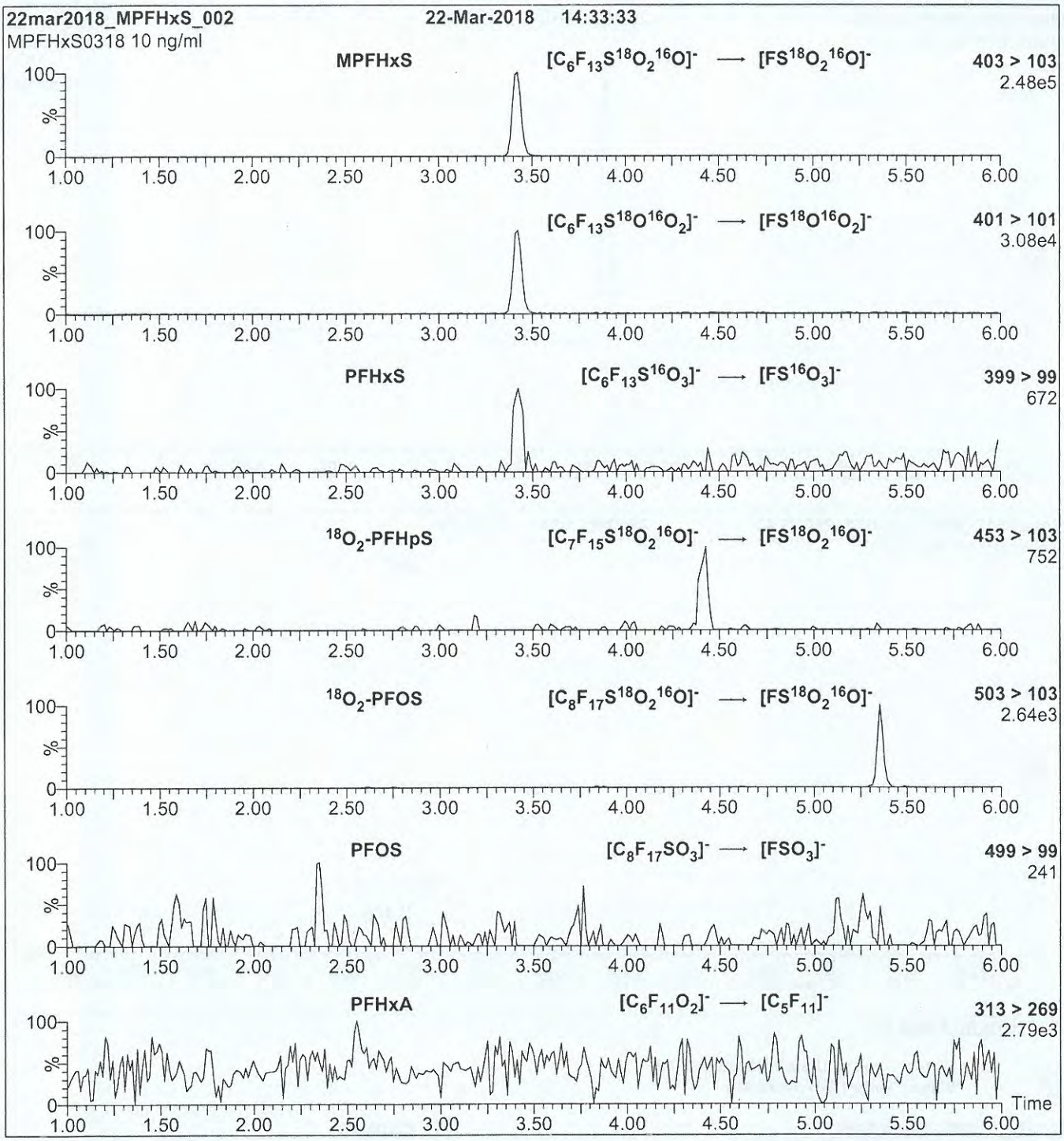
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 5.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

18L2018

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) = 3.64e-3
Collision Energy (eV) = 32

18L2021

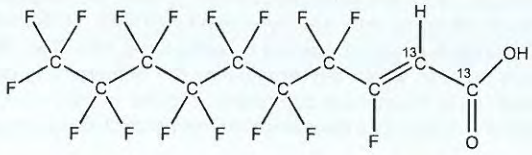
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MFOUEA
LOT NUMBER: MFOUEA1117
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)	11/14/2017		
EXPIRY DATE: (mm/dd/yyyy)	11/14/2019		
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:** 11/15/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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18L2021

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SYNTHESIS / CHARACTERIZATION:

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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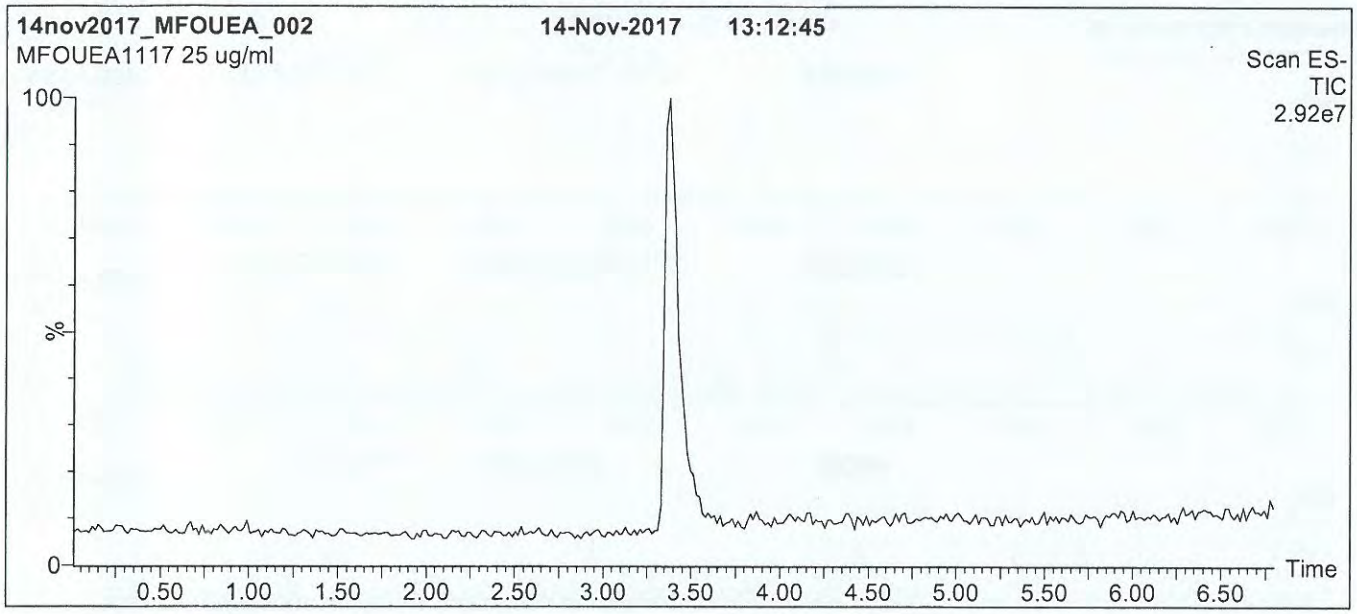
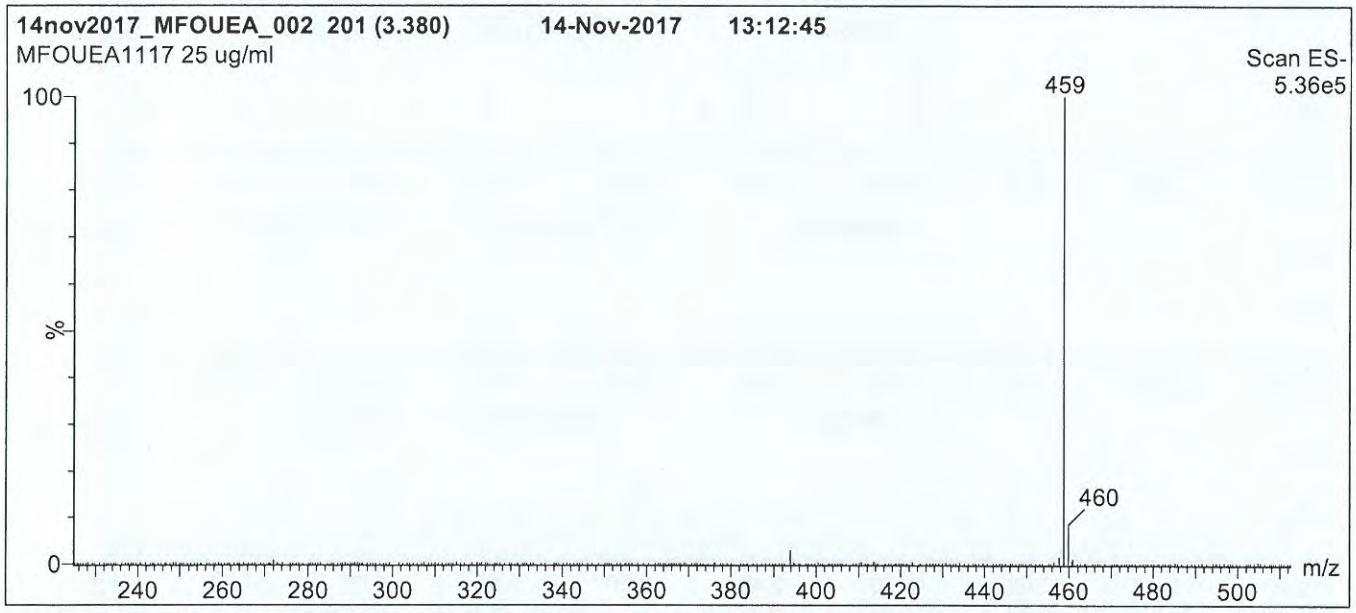
18L2021

Figure 1: **MFOUEA; 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: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold
for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

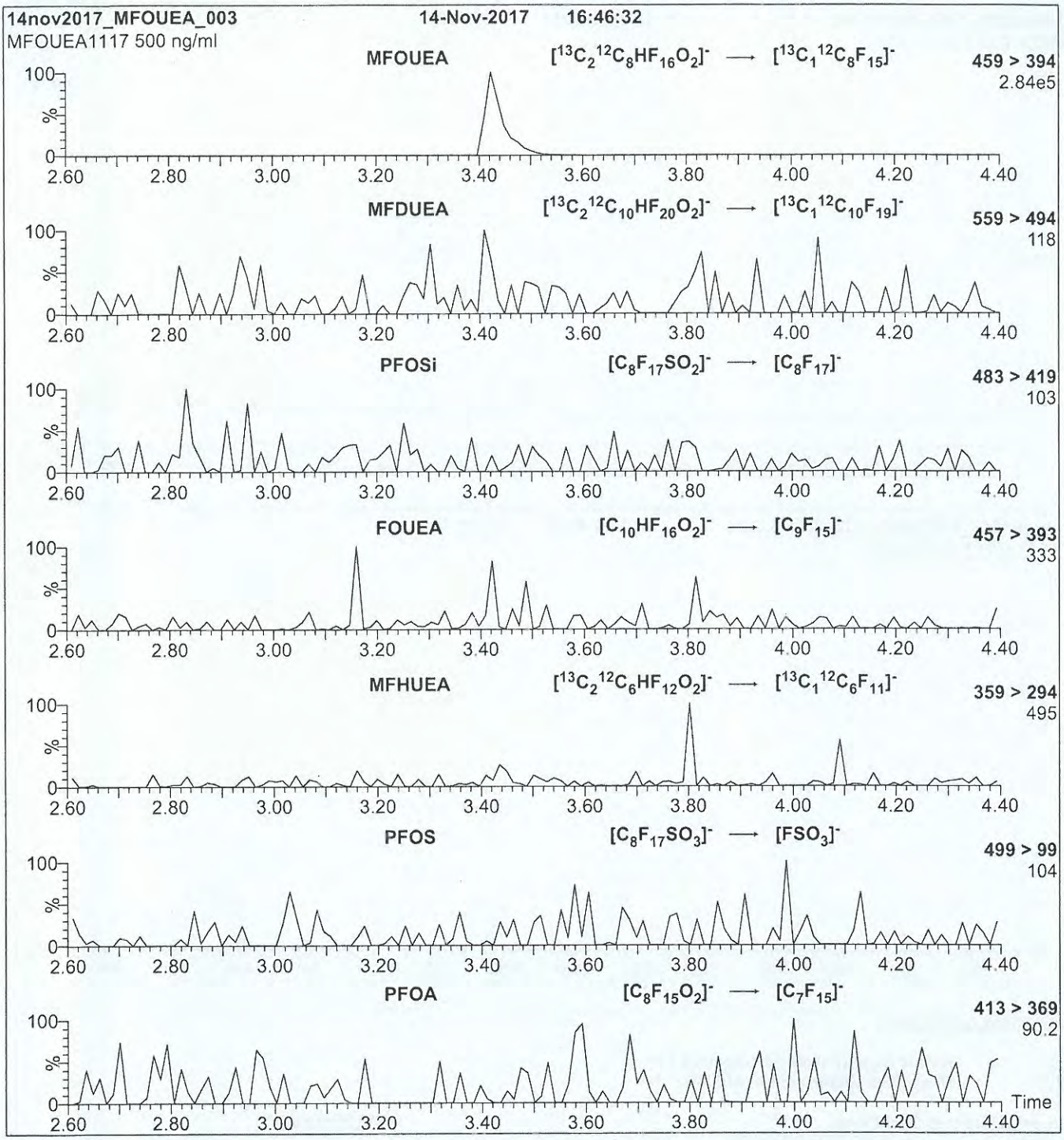
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 14.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

1/8/2021

Figure 2: **MFOUEA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MFOUEA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

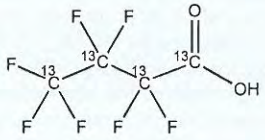
Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 21

18L2022

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFBA	**LOT NUMBER:**	MPFBA0218
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)	02/16/2018		
EXPIRY DATE: (mm/dd/yyyy)	02/16/2023		
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:** 02/22/2018 (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

18L2022

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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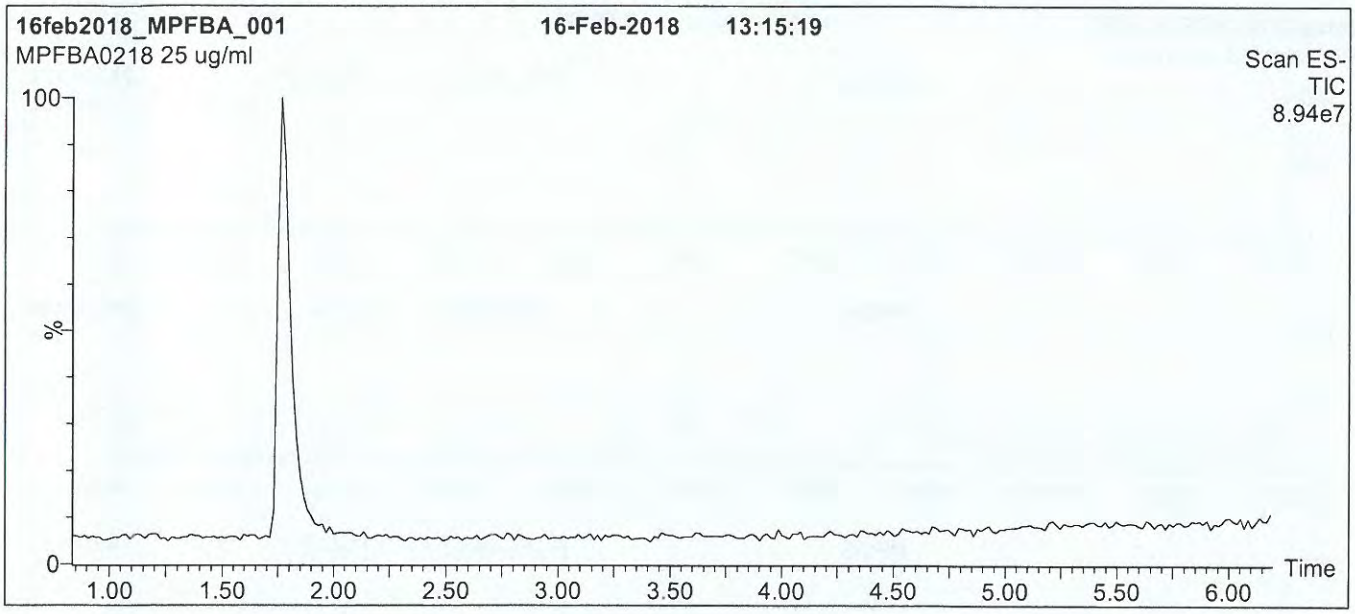
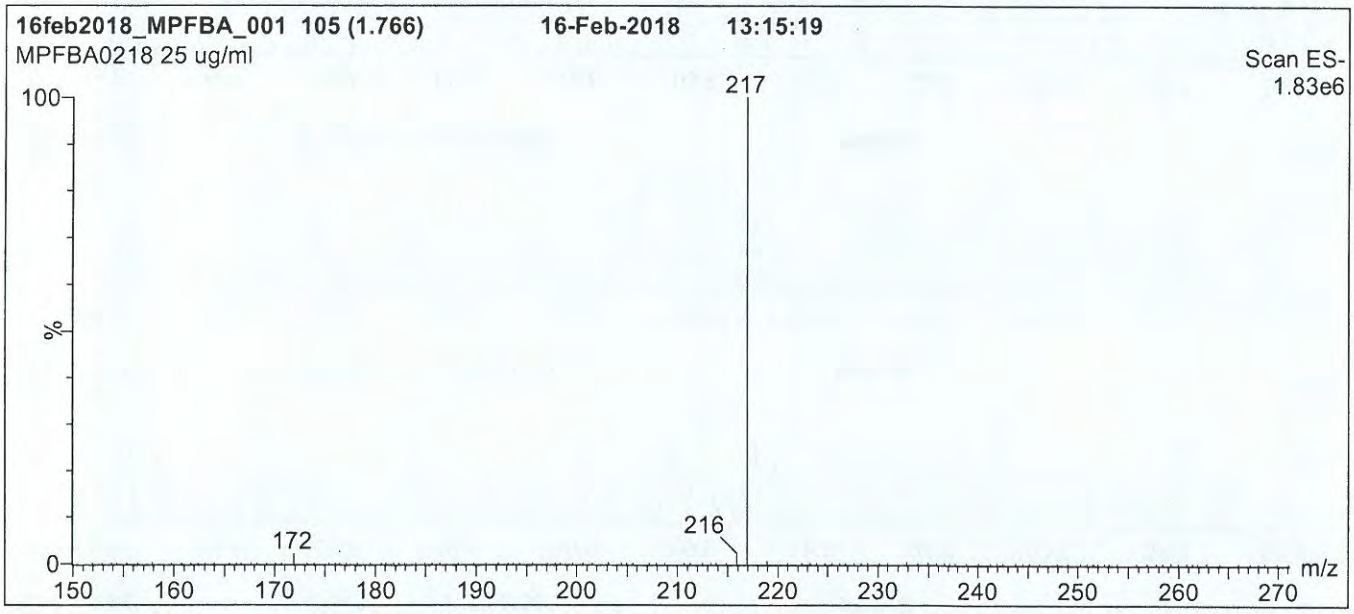
18L2022

Figure 1: **MPFBA; 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

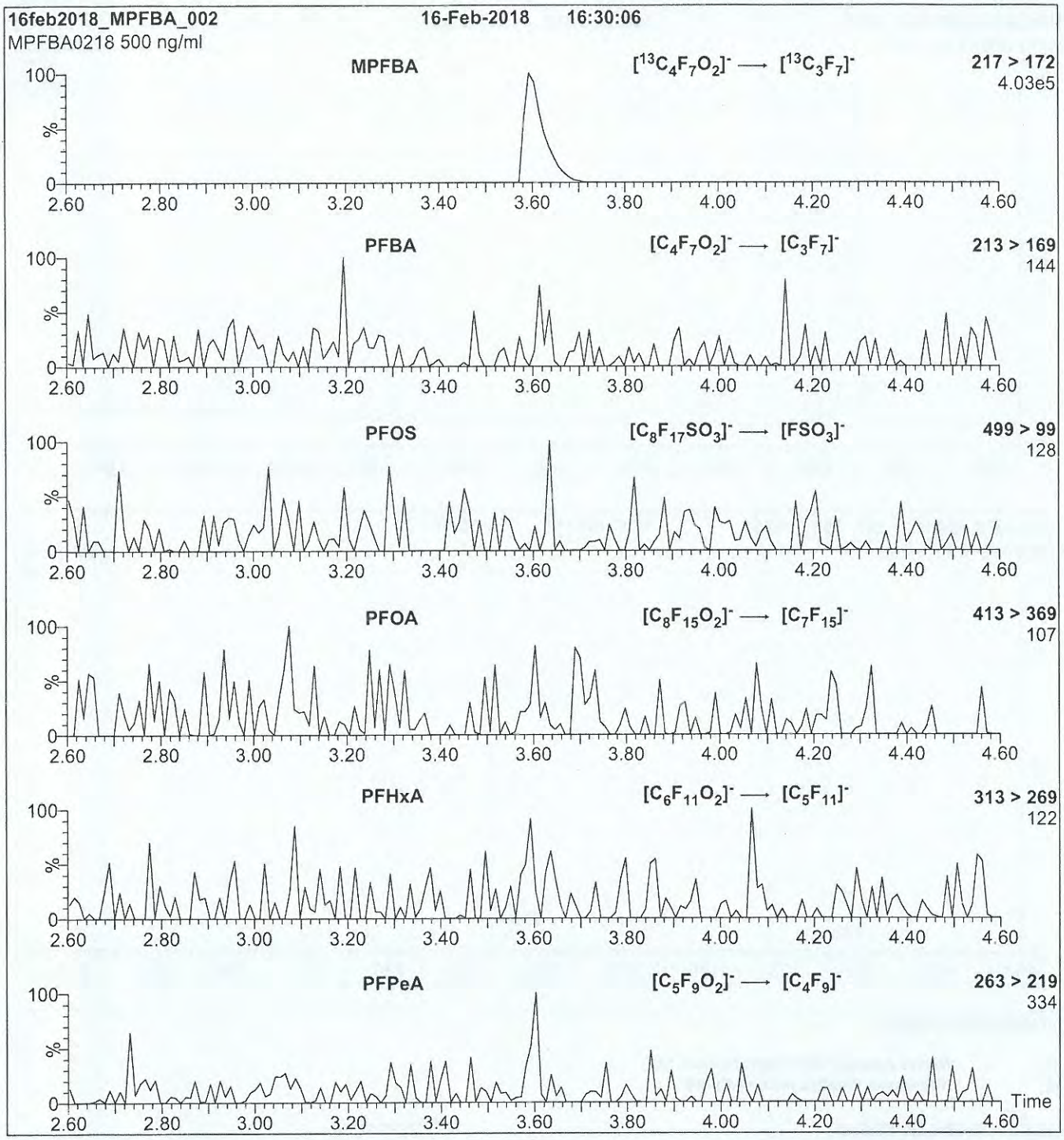
MS Parameters

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

1812022

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFBA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

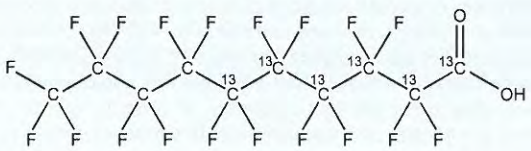
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 10

18L2023

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M6PFDA	**LOT NUMBER:**	M6PFDA0918
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
LAST TESTED: (mm/dd/yyyy)	09/20/2018		(1,2,3,4,5,6-$^{13}C_6$)
EXPIRY DATE: (mm/dd/yyyy)	09/20/2023		
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.
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Certified By: _____ **Date:** 10/03/2018 (mm/dd/yyyy)
B.G. Chittim, General Manager

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where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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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).

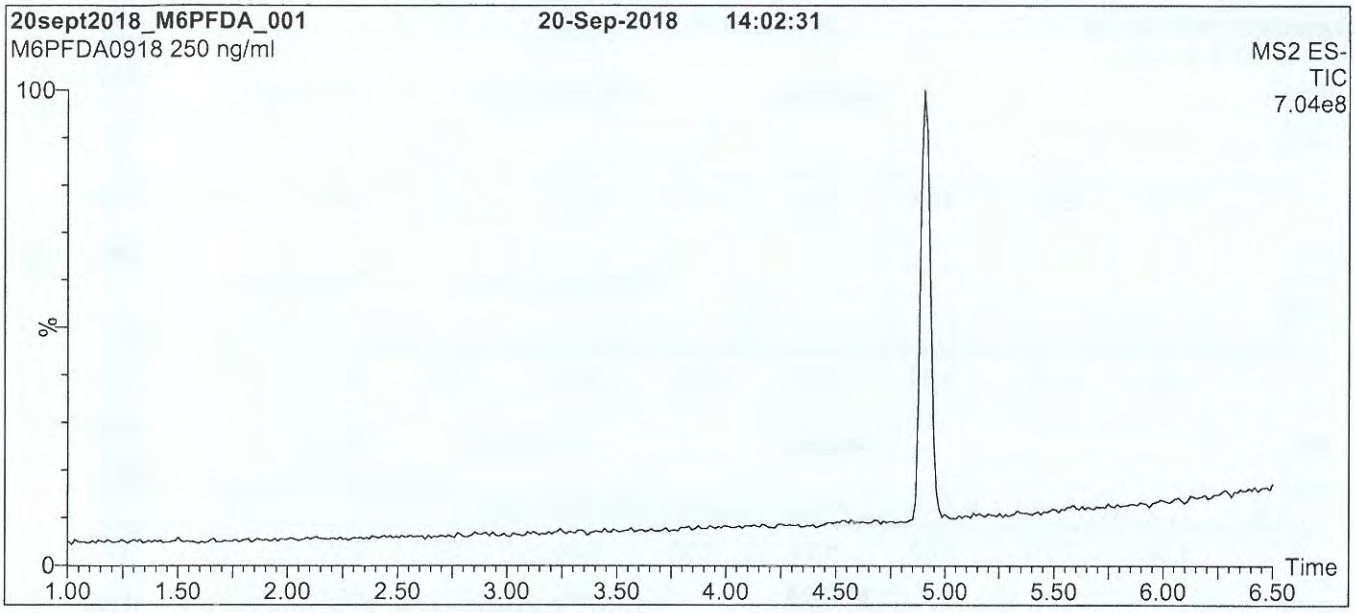
CALA Testing Accreditation No. A1226

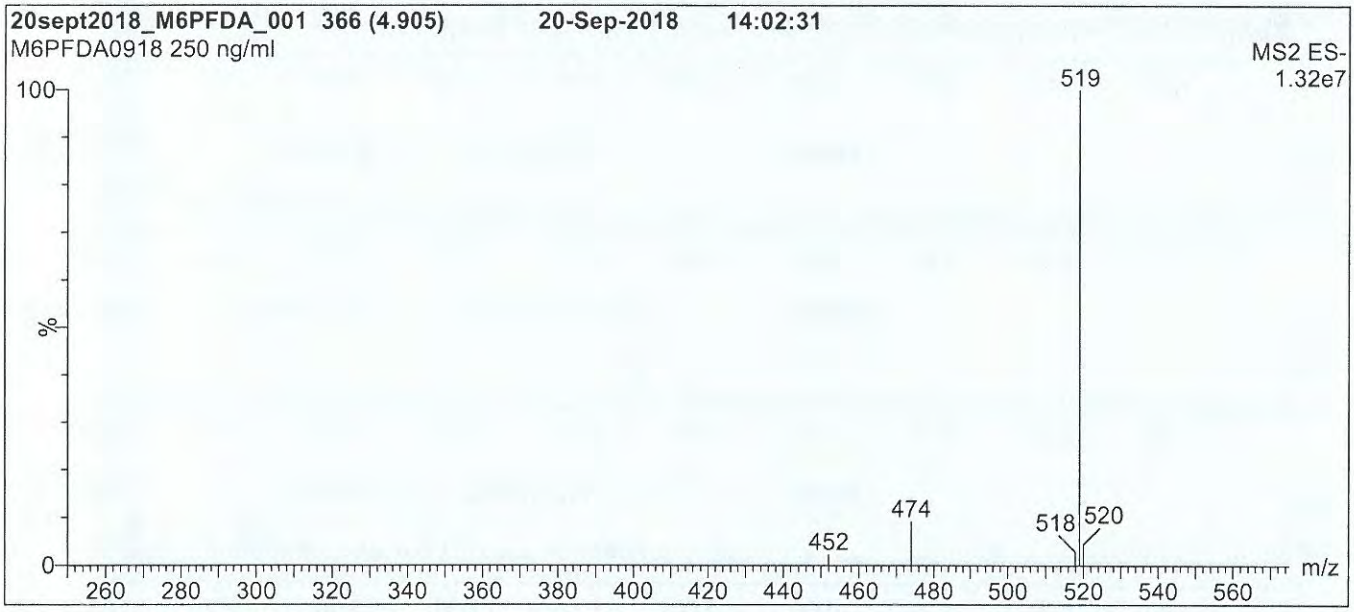
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2023

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: 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

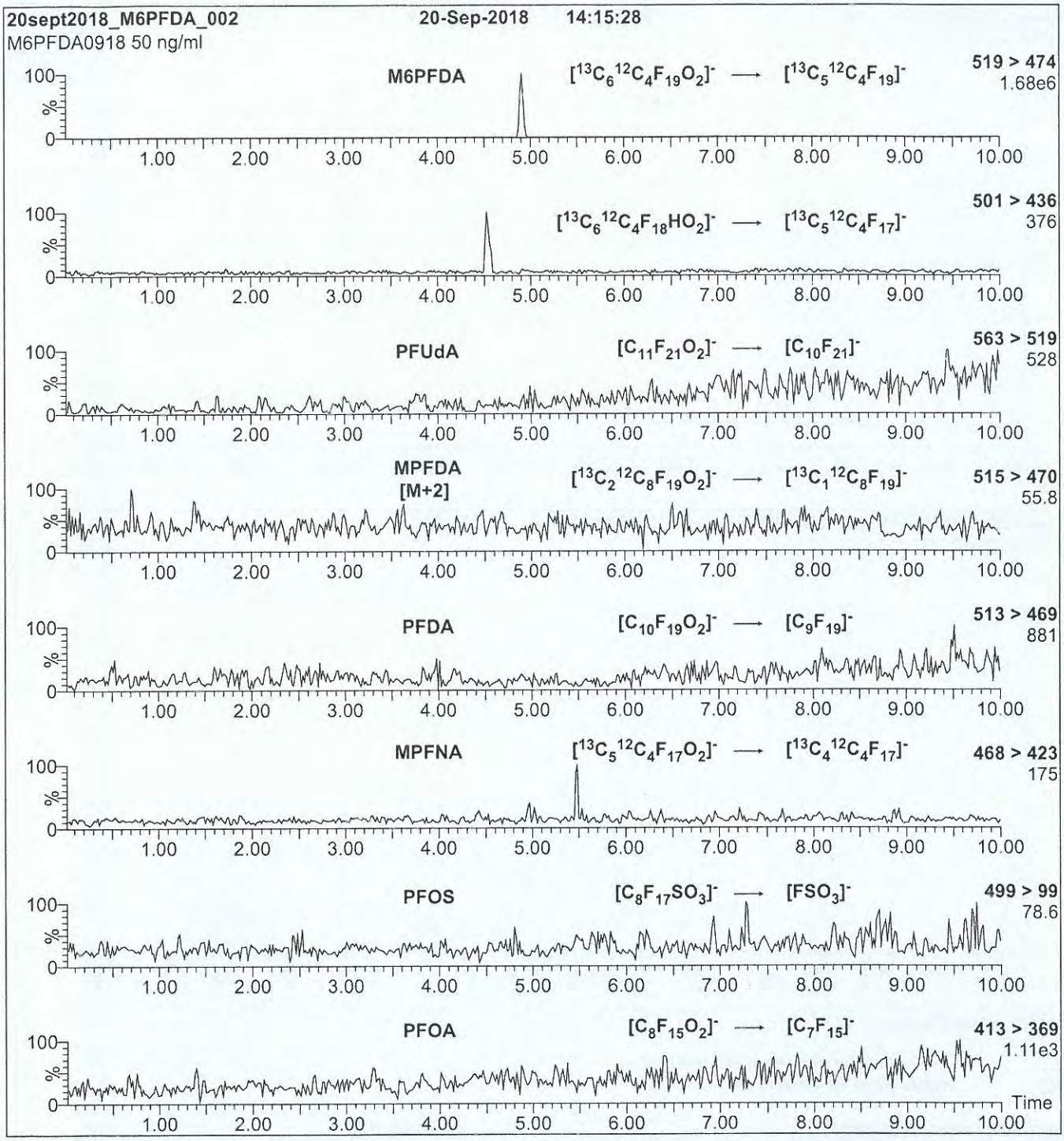
MS Parameters

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

1862023

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) = 2.97e-3
Collision Energy (eV) = 10

18L2024

WELLINGTON LABORATORIES

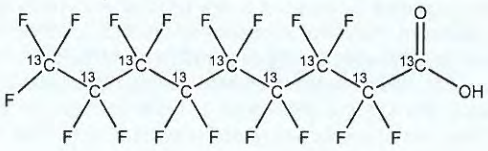
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M9PFNA
COMPOUND: Perfluoro-n-[$^{13}C_9$]nonanoic acid

LOT NUMBER: M9PFNA0517

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)	05/23/2017		
EXPIRY DATE: (mm/dd/yyyy)	05/23/2022		
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 ~ 0.9% of $^{13}C_5{}^{12}C_4HF_{17}O_2$ (MPFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/25/2017 (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

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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,...x_n on which it depends is:

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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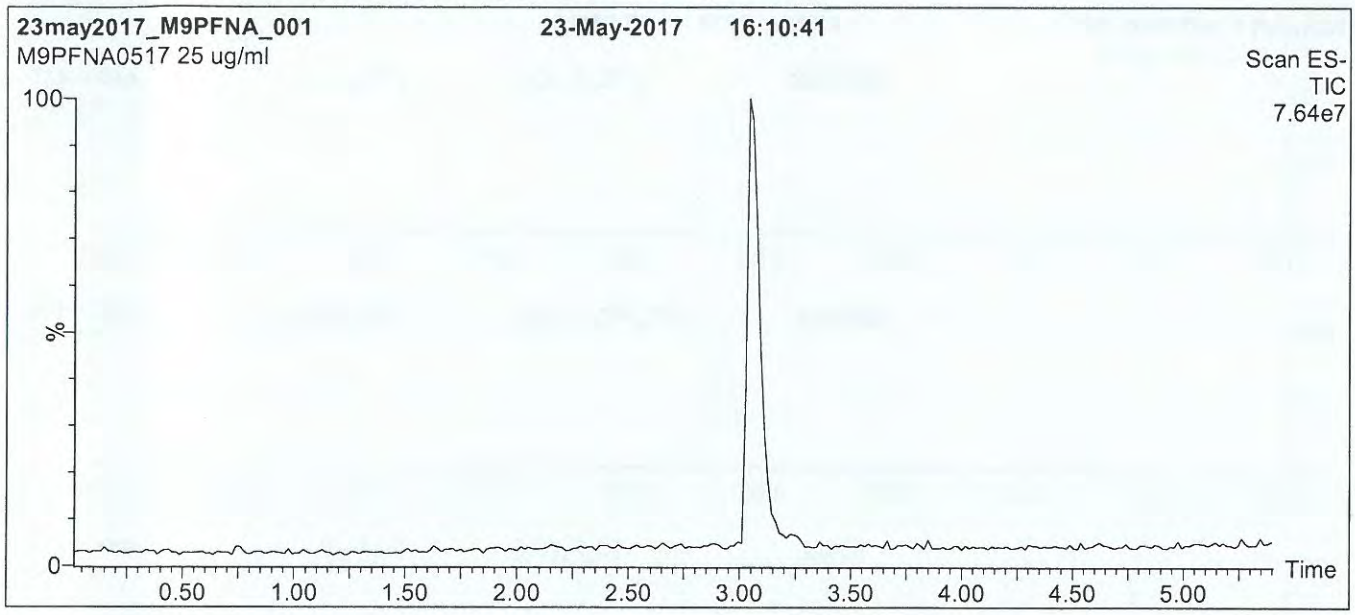
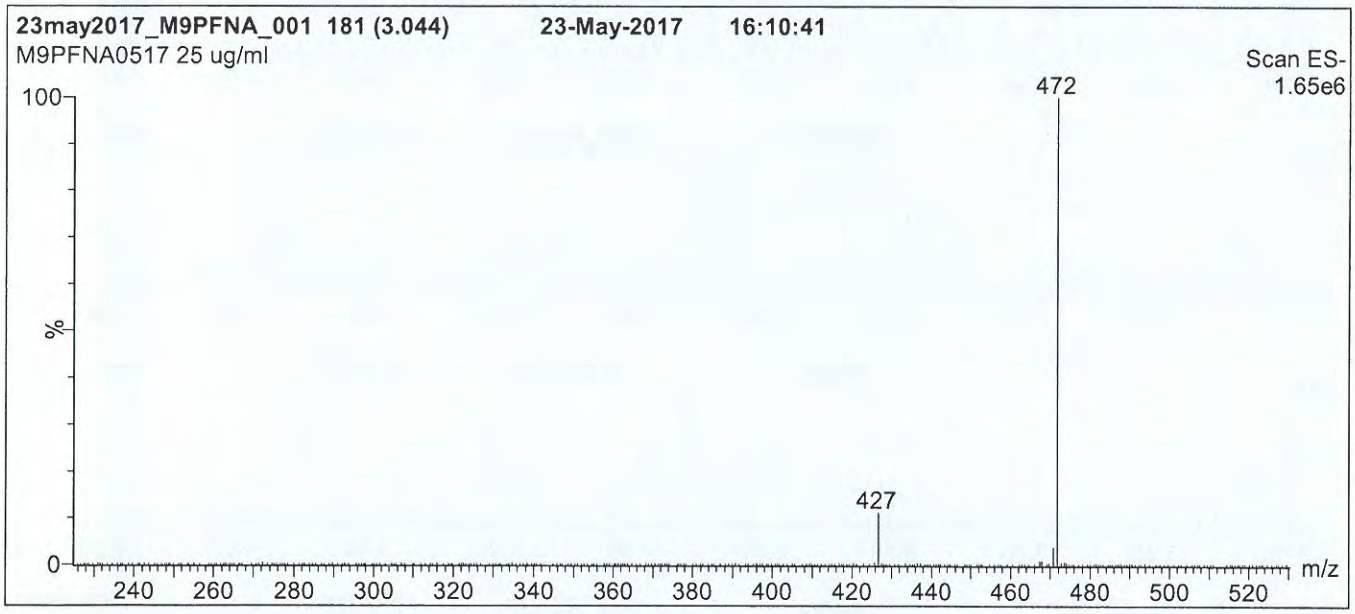
18L2024

Figure 1: **M9PFNA; 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: 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 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

Flow: 300 µl/min

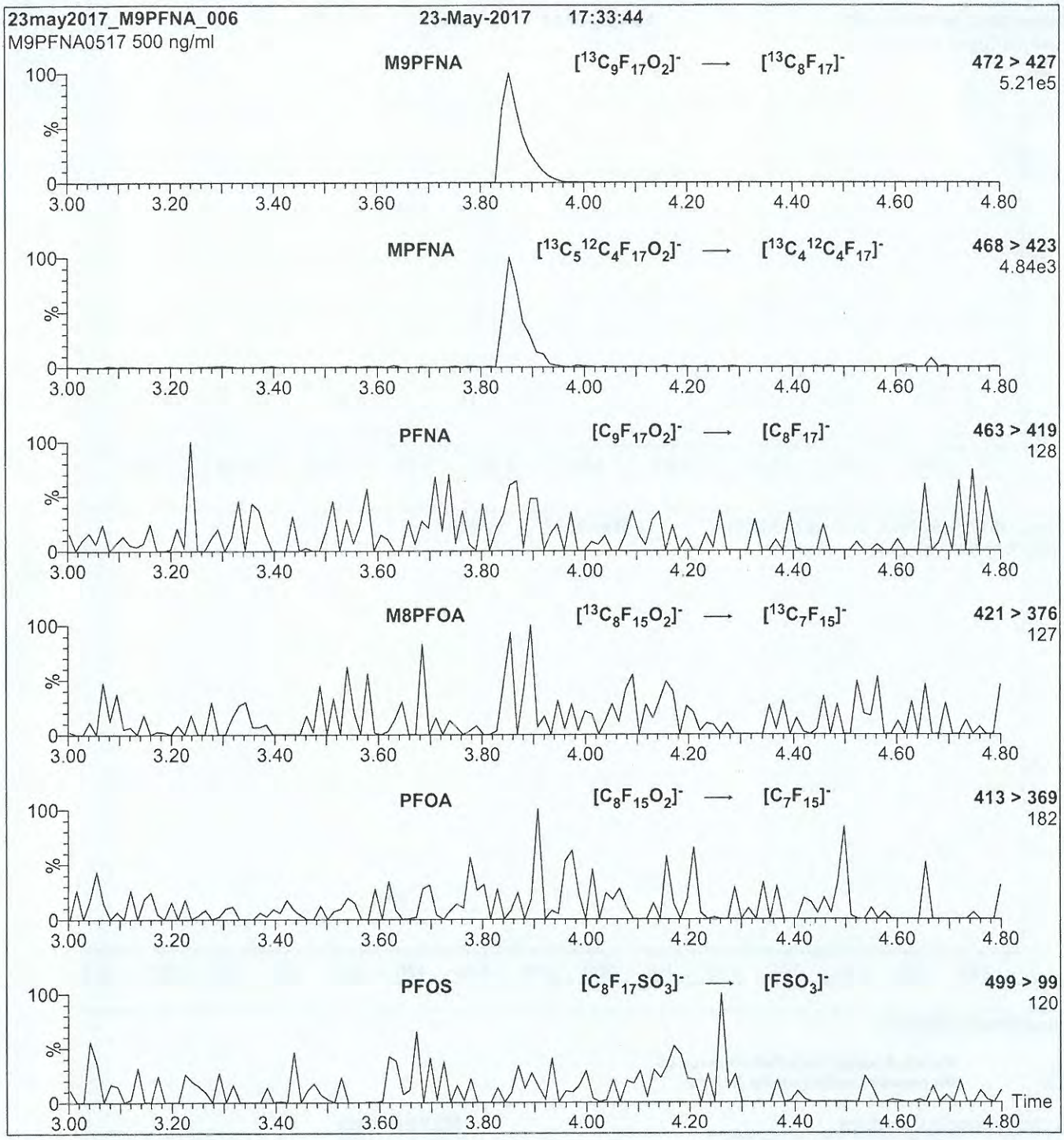
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

18L2024

Figure 2: **M9PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml M9PFNA)
Mobile phase:	Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O (both with 10 mM NH_4OAc buffer)
Flow:	300 µl/min

MS Parameters

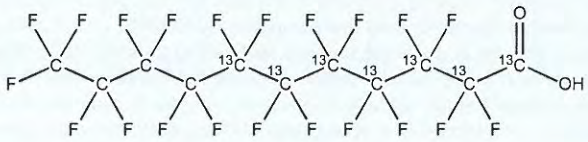
Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 11

18L2025

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M7PFUdA	**LOT NUMBER:**	M7PFUdA0918
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 (1,2,3,4,5,6,7-$^{13}C_7$)
LAST TESTED: (mm/dd/yyyy)	09/20/2018		
EXPIRY DATE: (mm/dd/yyyy)	09/20/2023		
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:** 09/27/2018 (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

18L2025

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:

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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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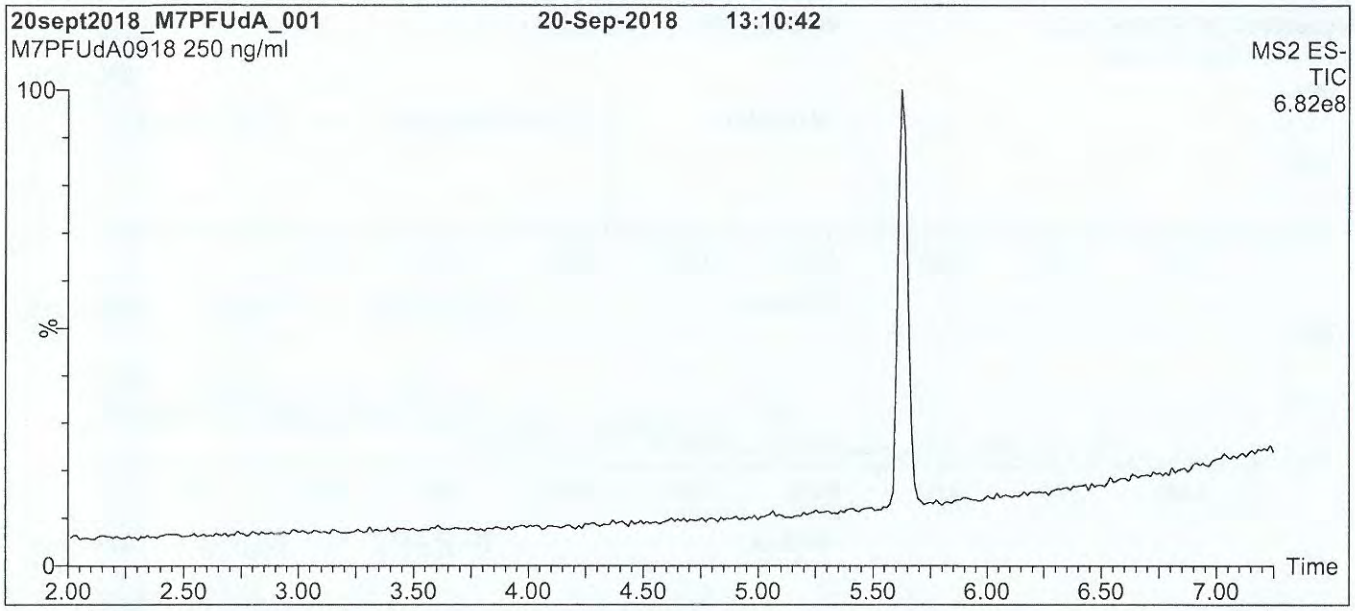
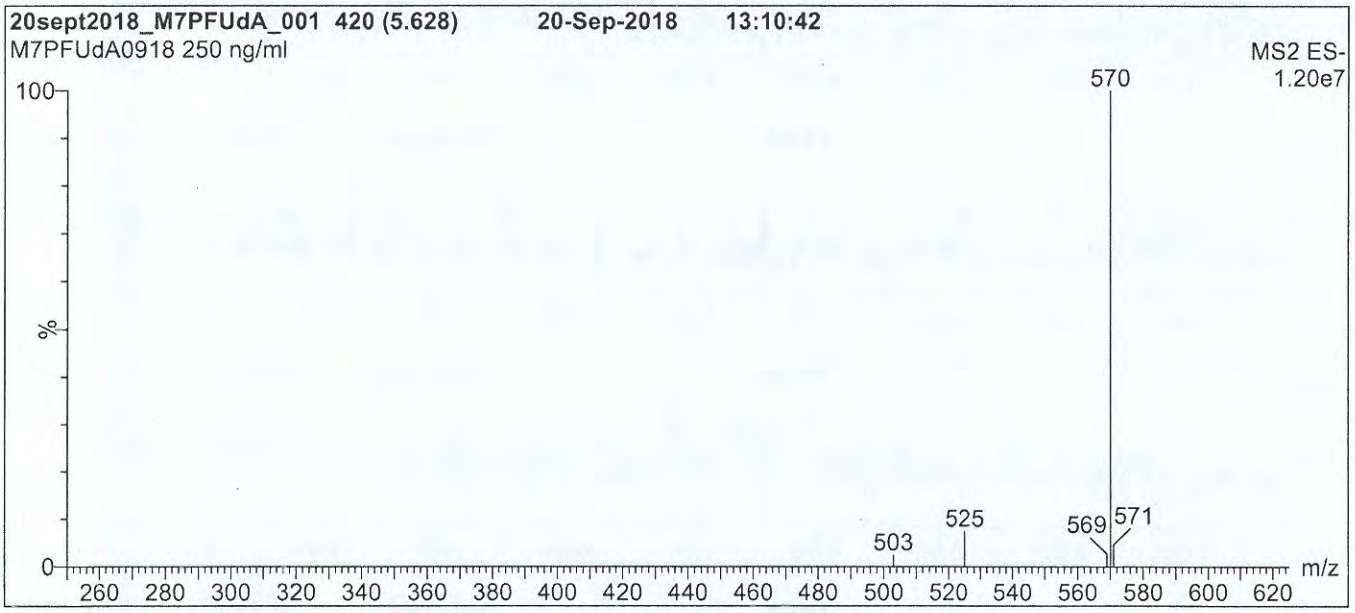
18L2025

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: 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

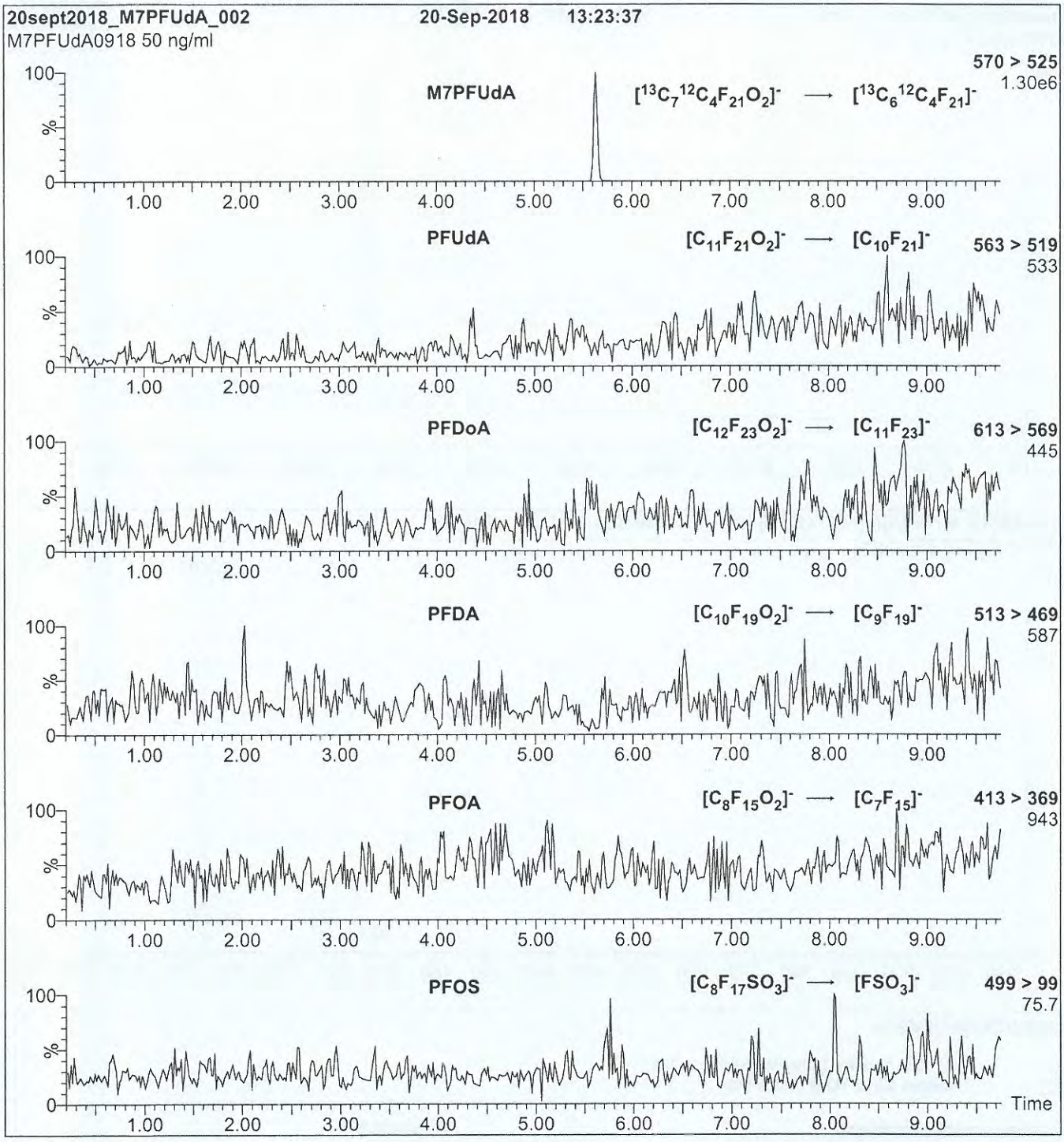
MS Parameters

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

18L2025

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

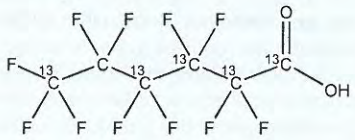
Collision Gas (mbar) = 2.97e-3
Collision Energy (eV) = 12

18L2026

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

18L2026

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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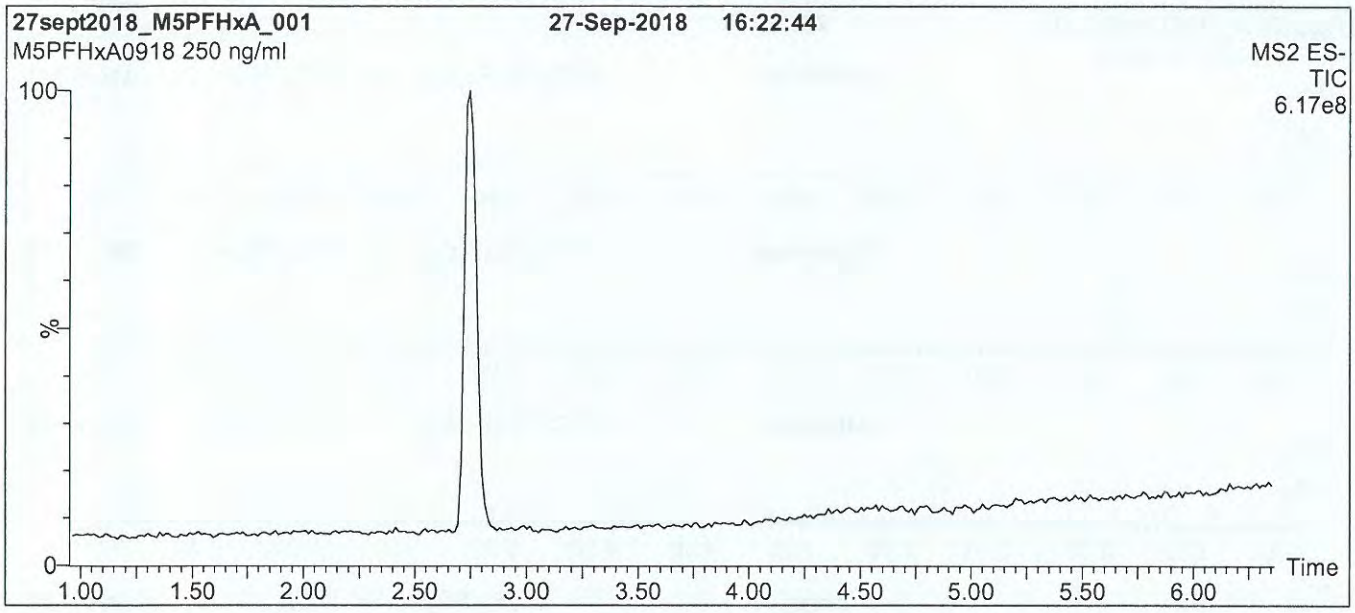
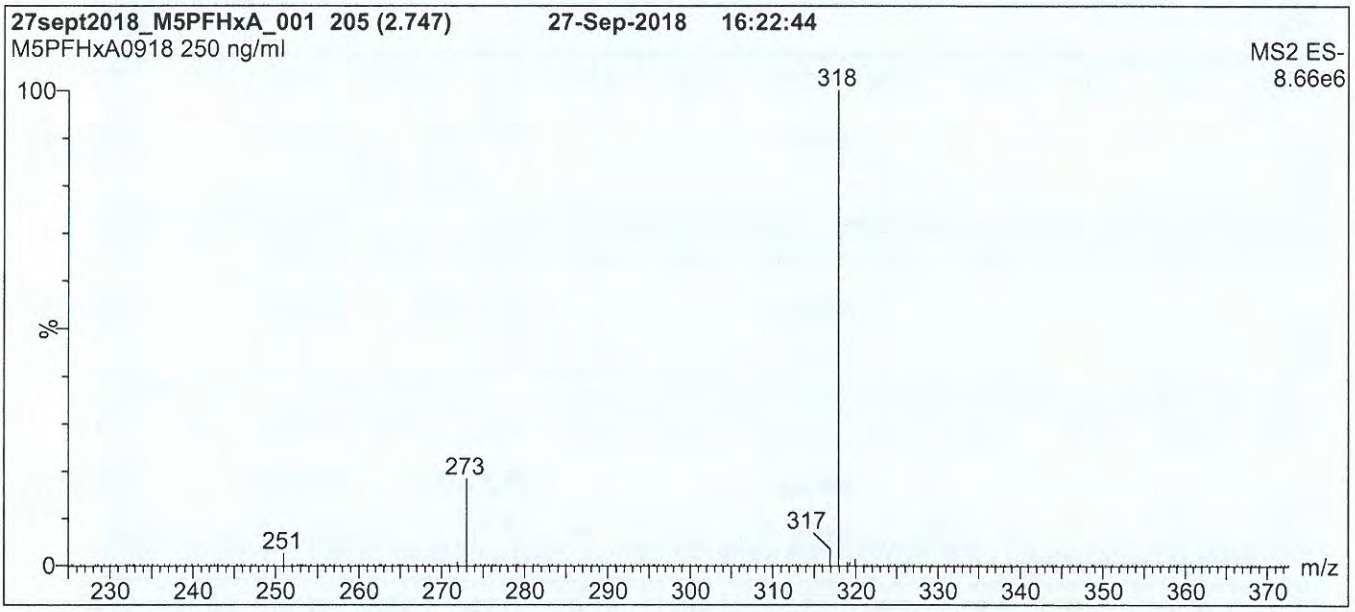
18L2026

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

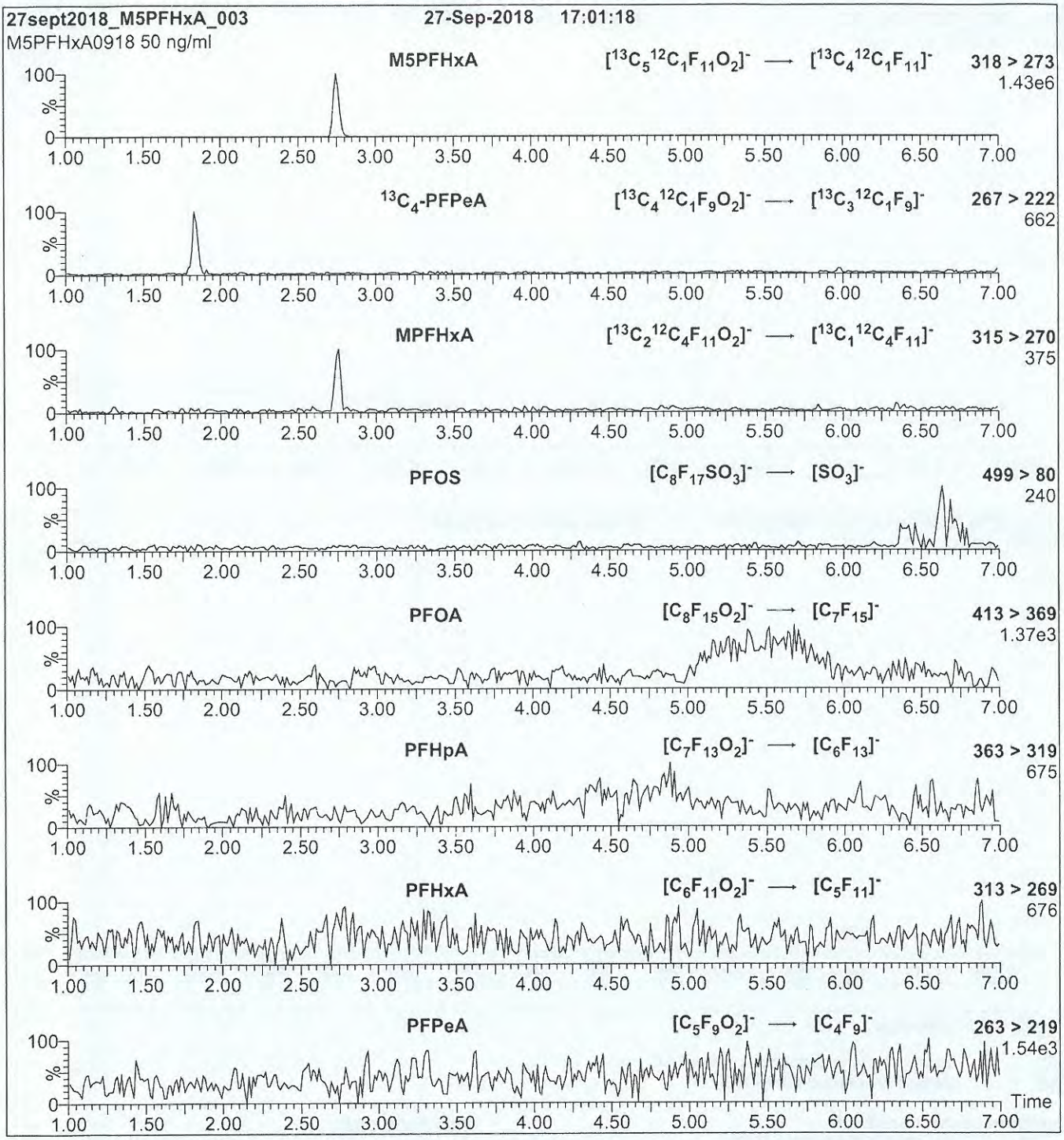
MS Parameters

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

1812026

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

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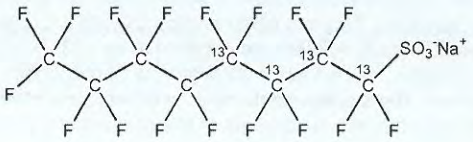
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS0918

COMPOUND: Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

STRUCTURE: **CAS #:** Not available



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)	09/11/2018		
EXPIRY DATE: (mm/dd/yyyy)	09/11/2023		
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 ~ 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:** 09/14/2018 (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

18L2028

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).

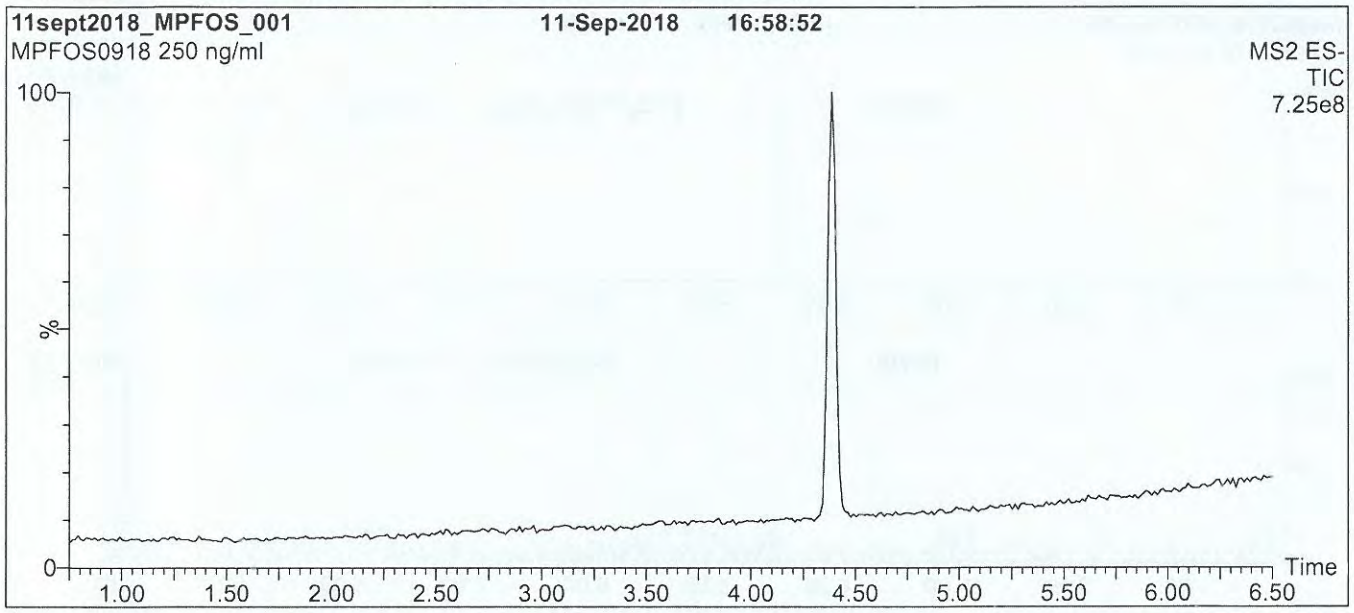
CALA Testing Accreditation No. A1226

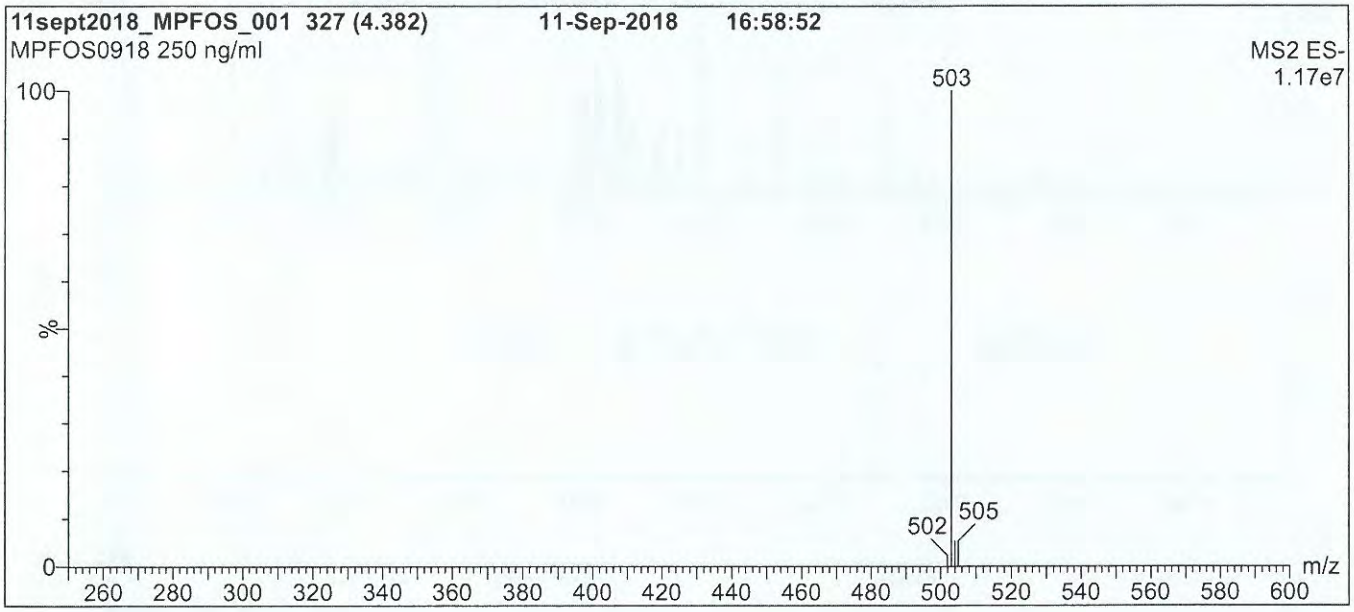
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

18L2028

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: 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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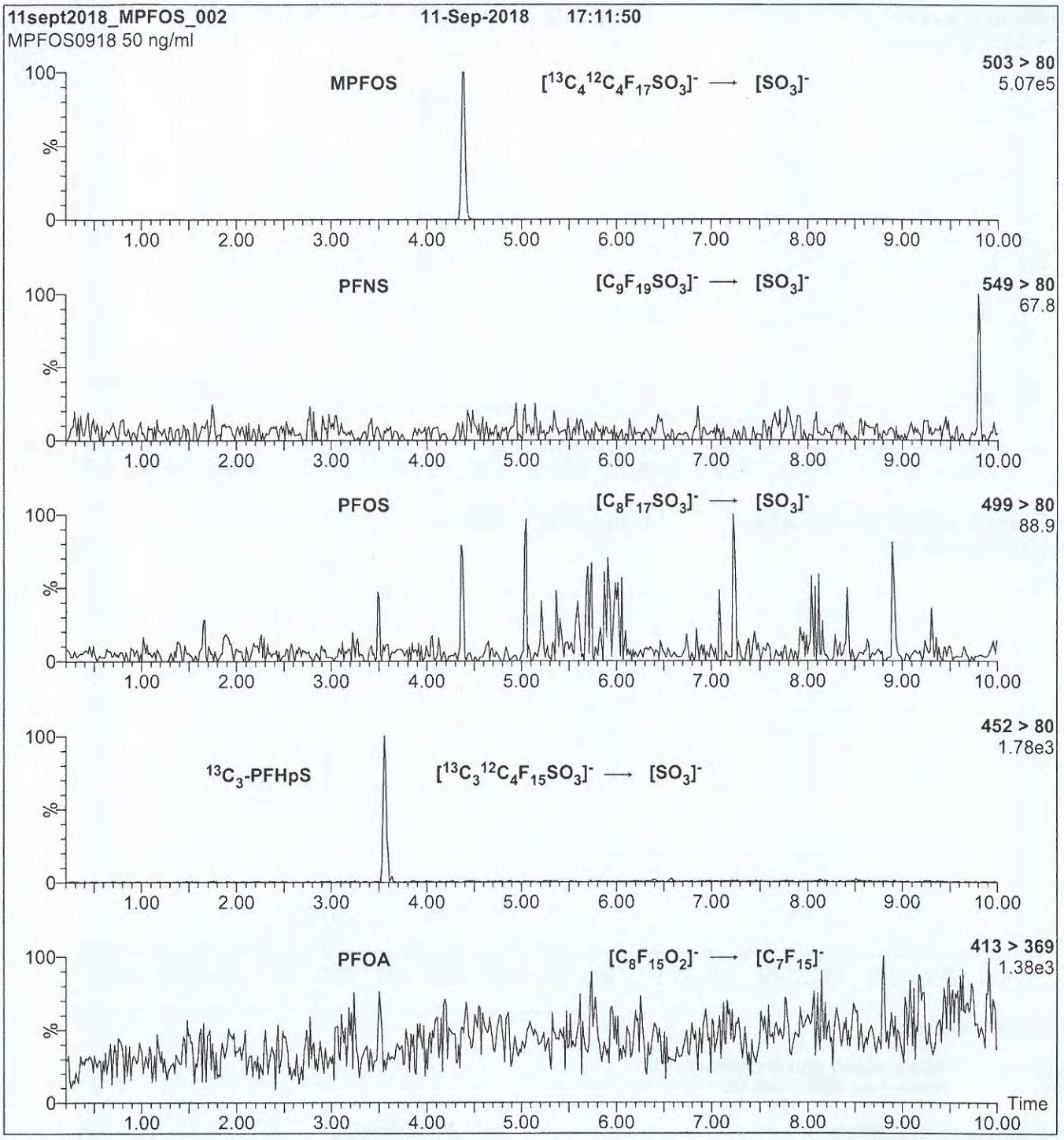
Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFOS)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 2.99e-3
Collision Energy (eV) = 42

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WELLINGTON LABORATORIES

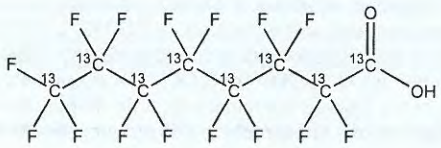
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8PFOA
COMPOUND: Perfluoro-n-[$^{13}C_8$]octanoic acid

LOT NUMBER: M8PFOA0618

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	422.01
CONCENTRATION:	49 ± 2.45 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	97.9% (M8PFOA) 2.1% (MPFOA [M+4])	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	06/29/2018		
EXPIRY DATE: (mm/dd/yyyy)	06/29/2023		
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 < 0.1% of native perfluoro-n-octanoic acid (PFOA) and ~ 1.9% of [M+4] perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/03/2018 (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

1812029

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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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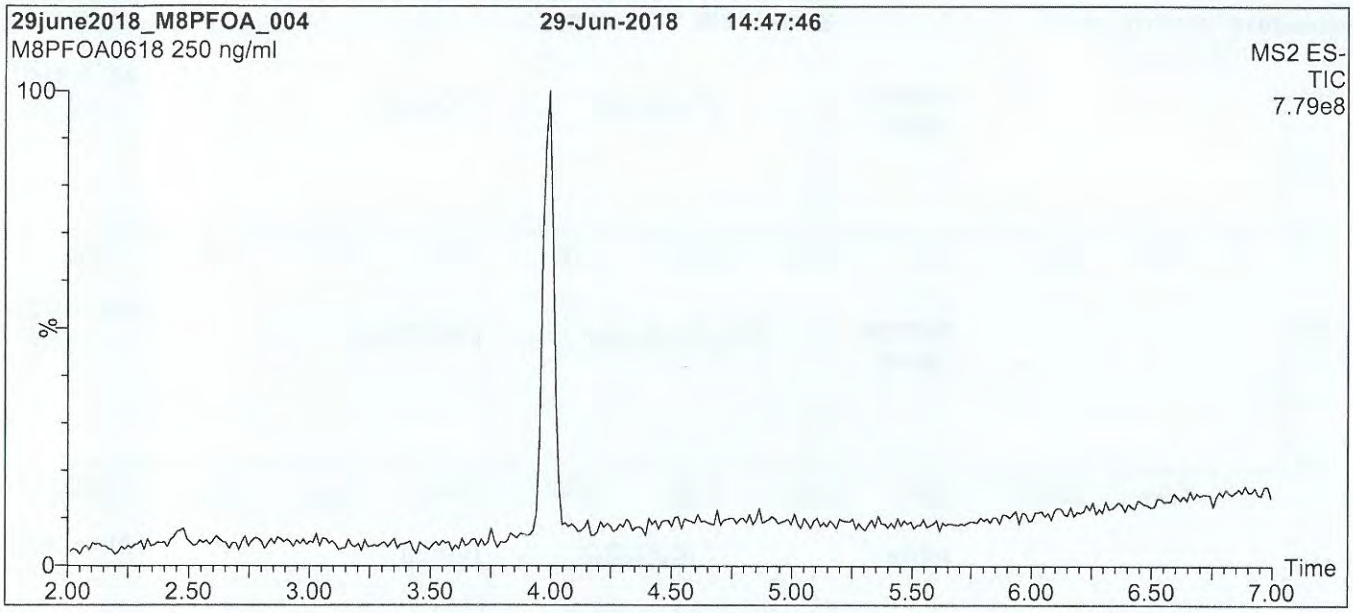
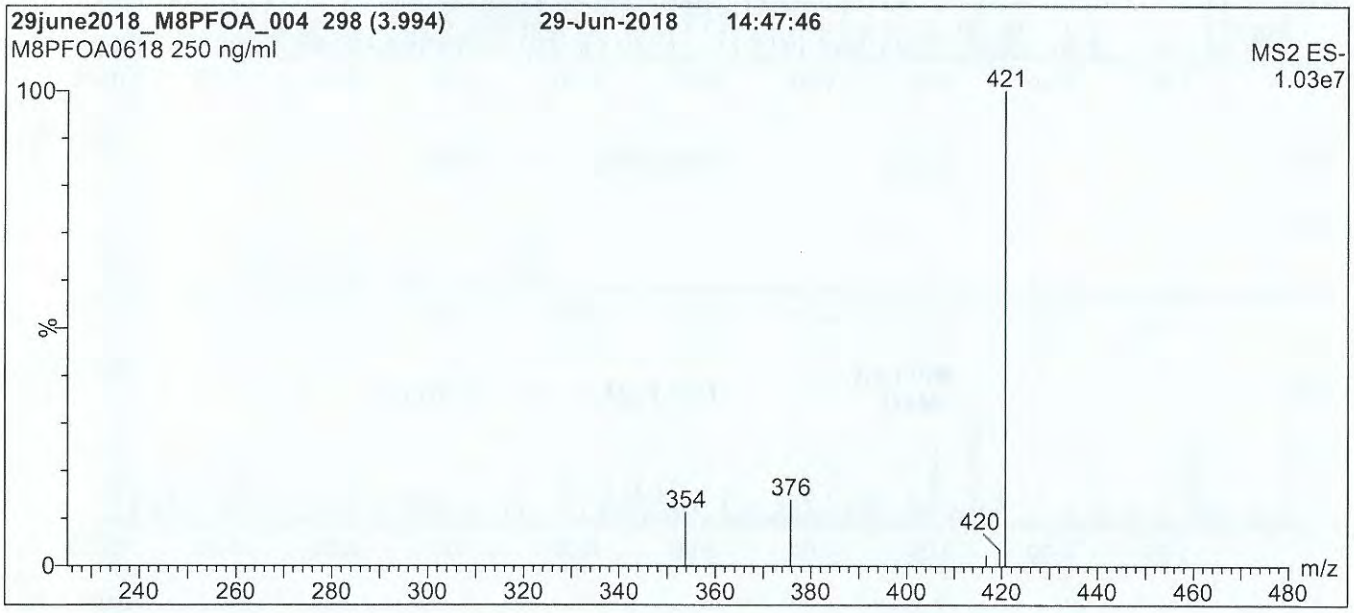
1812029

Figure 1: **M8PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

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MS: **Waters Xevo TQ-S micro MS**

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1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
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(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

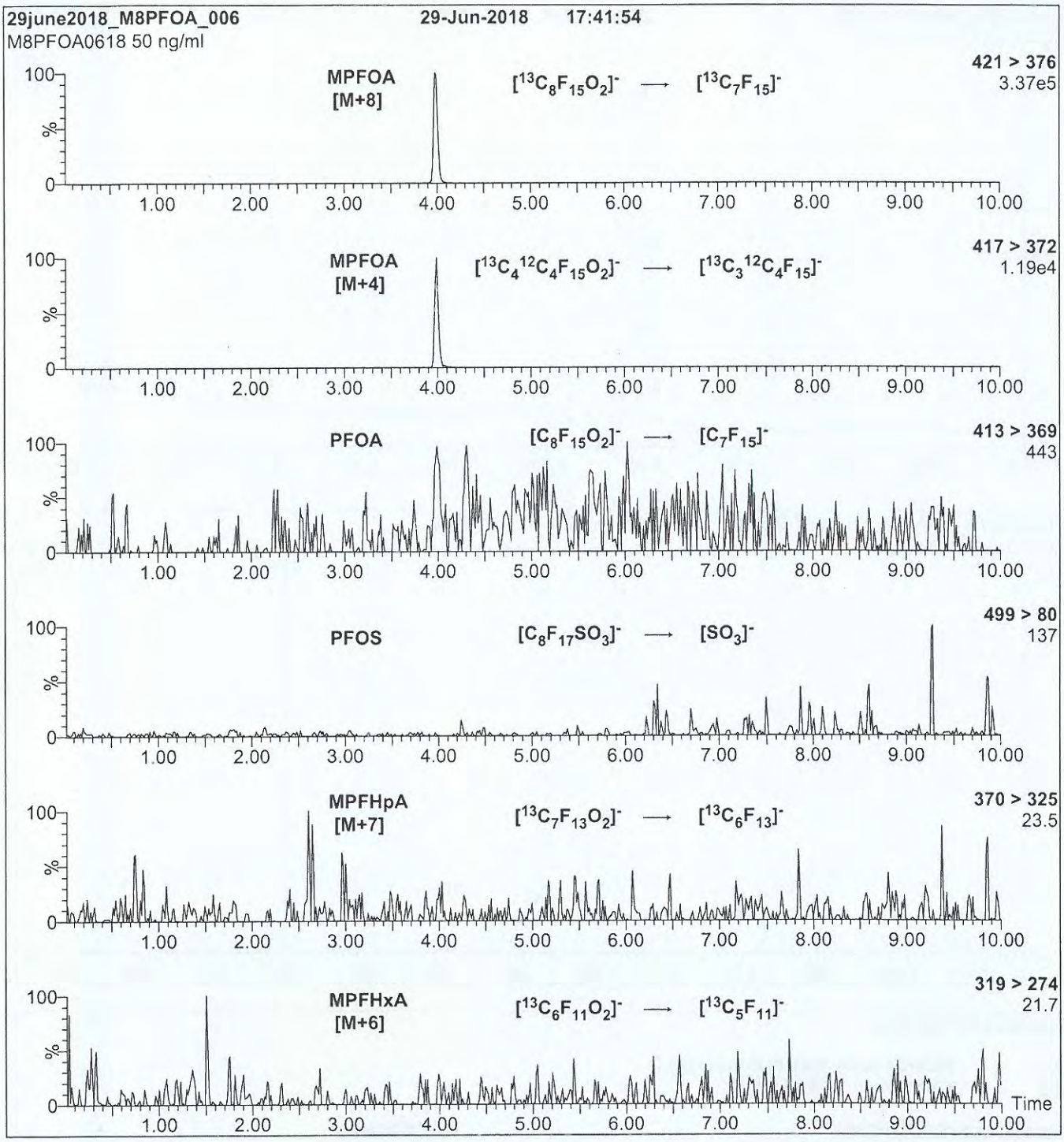
MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 0.50
Cone Voltage (V) = 14.00
Desolvation Temperature (°C) = 500
Desolvation Gas Flow (l/hr) = 750

1812029

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) = 3.39e-3
Collision Energy (eV) = 8

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7","PFTeDA","0.00442","ug/L","U","0.00442","CRDL","","TRG","","","0.00885","CRDL","YES","0.00303"
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PFHpA","92.3","%R","","","CRDL","","IS","92.3","","","CRDL","",""
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PFHxS","101","%R","","","CRDL","","IS","101","","","CRDL","",""
"EB-GW-06202019","537 MOD","RES","1901766-01","Vista","13C2-PFOA","13C2-
PFOA","92.1","%R","","","CRDL","","IS","92.1","","","CRDL","",""
"EB-GW-06202019","537 MOD","RES","1901766-01","Vista","13C5-PFNA","13C5-
PFNA","80.4","%R","","","CRDL","","IS","80.4","","","CRDL","",""
"EB-GW-06202019","537 MOD","RES","1901766-01","Vista","13C8-PFOS","13C8-
PFOS","93.1","%R","","","CRDL","","IS","93.1","","","CRDL","",""
"EB-GW-06202019","537 MOD","RES","1901766-01","Vista","13C2-PFDA","13C2-
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PFDoA","69.6","%R","","","CRDL","","IS","69.6","","","CRDL","",""
"EB-GW-06202019","537 MOD","RES","1901766-01","Vista","13C2-PFTeDA","13C2-

PFTeDA","71.2","%R","","","CRDL","","IS","71.2","","","CRDL","",""
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5","PFBS","0.142","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","307-24-
4","PFHxA","0.347","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","375-85-
9","PFHpA","0.0214","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","355-46-
4","PFHxS","0.276","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","335-67-
1","PFOA","0.177","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","375-95-
1","PFNA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","1763-23-
1","PFOS","0.0677","ug/L","","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","335-76-
2","PFDA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","2355-31-
9","NMeFOSAA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","2991-50-
6","NEtFOSAA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","2058-94-
8","PFUnA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","307-55-
1","PFDoA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","72629-94-
8","PFTrDA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","376-06-
7","PFTeDA","0.00427","ug/L","U","0.00427","CRDL","","TRG","","","0.00851","CRDL","YES","0.00292"
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C3-PFBS","13C3-
PFBS","88.8","%R","","","CRDL","","IS","88.8","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFHxA","13C2-
PFHxA","88.9","%R","","","CRDL","","IS","88.9","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C4-PFHpA","13C4-
PFHpA","90.5","%R","","","CRDL","","IS","90.5","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C3-PFHxS","13C3-
PFHxS","94.1","%R","","","CRDL","","IS","94.1","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFOA","13C2-
PFOA","92.2","%R","","","CRDL","","IS","92.2","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C5-PFNA","13C5-
PFNA","84.1","%R","","","CRDL","","IS","84.1","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C8-PFOS","13C8-
PFOS","88.8","%R","","","CRDL","","IS","88.8","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFDA","13C2-
PFDA","70.4","%R","","","CRDL","","IS","70.4","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","d3-MeFOSAA","d3-
MeFOSAA","74.9","%R","","","CRDL","","IS","74.9","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","d5-EtFOSAA","d5-
EtFOSAA","70.0","%R","","","CRDL","","IS","70.0","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFUnA","13C2-
PFUnA","74.1","%R","","","CRDL","","IS","74.1","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFDoA","13C2-
PFDoA","59.5","%R","","","CRDL","","IS","59.5","","","CRDL","",""
"SAOA-B06-GW","537 MOD","RES","1901766-02","Vista","13C2-PFTeDA","13C2-

PFTeDA","38.4","%R","H","","CRDL","","IS","38.4","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","375-73-
5","PFBS","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","307-24-
4","PFHxA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","375-85-
9","PFHpA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","355-46-
4","PFHxS","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","335-67-
1","PFOA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","375-95-
1","PFNA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","1763-23-
1","PFOS","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","335-76-
2","PFDA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","2355-31-
9","NMeFOSAA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","2991-50-
6","NEtFOSAA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","2058-94-
8","PFUnA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","307-55-
1","PFDoA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","72629-94-
8","PFTrDA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","376-06-
7","PFTeDA","0.00439","ug/L","U","0.00439","CRDL","","TRG","","","0.00878","CRDL","YES","0.00301"
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C3-PFBS","13C3-
PFBS","86.7","%R","","","CRDL","","IS","86.7","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFHxA","13C2-
PFHxA","94.9","%R","","","CRDL","","IS","94.9","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C4-PFHpA","13C4-
PFHpA","91.4","%R","","","CRDL","","IS","91.4","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C3-PFHxS","13C3-
PFHxS","93.5","%R","","","CRDL","","IS","93.5","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFOA","13C2-
PFOA","102","%R","","","CRDL","","IS","102","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C5-PFNA","13C5-
PFNA","87.9","%R","","","CRDL","","IS","87.9","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C8-PFOS","13C8-
PFOS","91.1","%R","","","CRDL","","IS","91.1","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFDA","13C2-
PFDA","78.4","%R","","","CRDL","","IS","78.4","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","d3-MeFOSAA","d3-
MeFOSAA","74.5","%R","","","CRDL","","IS","74.5","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","d5-EtFOSAA","d5-
EtFOSAA","76.2","%R","","","CRDL","","IS","76.2","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFUnA","13C2-
PFUnA","74.5","%R","","","CRDL","","IS","74.5","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFDoA","13C2-
PFDoA","69.8","%R","","","CRDL","","IS","69.8","","","CRDL","",""
"FRB-06242019","537 MOD","RES","1901766-03","Vista","13C2-PFTeDA","13C2-

PFTeDA","83.9","%R","","","CRDL","","IS","83.9","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","375-73-
5","PFBS","0.00918","ug/L","","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","307-24-
4","PFHxA","0.0439","ug/L","","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","375-85-
9","PFHpA","0.00335","ug/L","J","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","355-46-
4","PFHxS","0.0299","ug/L","","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","335-67-
1","PFOA","0.0196","ug/L","","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","375-95-
1","PFNA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","1763-23-
1","PFOS","0.0175","ug/L","","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","335-76-
2","PFDA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","2355-31-
9","NMeFOSAA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","2991-50-
6","NEtFOSAA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","2058-94-
8","PFUnA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","307-55-
1","PFDoA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","72629-94-
8","PFTrDA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","376-06-
7","PFTeDA","0.00424","ug/L","U","0.00424","CRDL","","TRG","","","0.00847","CRDL","YES","0.00290"
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C3-PFBS","13C3-
PFBS","90.2","%R","","","CRDL","","IS","90.2","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFHxA","13C2-
PFHxA","98.3","%R","","","CRDL","","IS","98.3","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C4-PFHpA","13C4-
PFHpA","97.8","%R","","","CRDL","","IS","97.8","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C3-PFHxS","13C3-
PFHxS","91.0","%R","","","CRDL","","IS","91.0","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFOA","13C2-
PFOA","91.7","%R","","","CRDL","","IS","91.7","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C5-PFNA","13C5-
PFNA","92.4","%R","","","CRDL","","IS","92.4","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C8-PFOS","13C8-
PFOS","93.9","%R","","","CRDL","","IS","93.9","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFDA","13C2-
PFDA","81.2","%R","","","CRDL","","IS","81.2","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","d3-MeFOSAA","d3-
MeFOSAA","68.9","%R","","","CRDL","","IS","68.9","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","d5-EtFOSAA","d5-
EtFOSAA","69.0","%R","","","CRDL","","IS","69.0","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFUnA","13C2-
PFUnA","76.6","%R","","","CRDL","","IS","76.6","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFDoA","13C2-
PFDoA","64.1","%R","","","CRDL","","IS","64.1","","","CRDL","",""
"SAOA-B07-GW","537 MOD","RES","1901766-04","Vista","13C2-PFTeDA","13C2-

PFTeDA","53.9","%R","","","CRDL","","IS","53.9","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","375-73-
5","PFBS","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","307-24-
4","PFHxA","9.24","ug/kg","","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","375-85-
9","PFHpA","7.56","ug/kg","","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","355-46-
4","PFHxS","10.9","ug/kg","","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","335-67-
1","PFOA","5.23","ug/kg","","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","375-95-
1","PFNA","1.60","ug/kg","J","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","1763-23-
1","PFOS","91.1","ug/kg","","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","335-76-
2","PFDA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","2355-31-
9","NMeFOSAA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","2991-50-
6","NEtFOSAA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","2058-94-
8","PFUnA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","307-55-
1","PFDoA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","72629-94-
8","PFTrDA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","376-06-
7","PFTeDA","0.958","ug/kg","U","0.958","CRDL","","TRG","","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C3-PFBS","13C3-
PFBS","96.1","%R","","","CRDL","","IS","96.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFHxA","13C2-
PFHxA","85.7","%R","","","CRDL","","IS","85.7","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C4-PFHpA","13C4-
PFHpA","80.6","%R","","","CRDL","","IS","80.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C3-PFHxS","13C3-
PFHxS","86.0","%R","","","CRDL","","IS","86.0","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFOA","13C2-
PFOA","90.5","%R","","","CRDL","","IS","90.5","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C5-PFNA","13C5-
PFNA","78.4","%R","","","CRDL","","IS","78.4","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C8-PFOS","13C8-
PFOS","92.5","%R","","","CRDL","","IS","92.5","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFDA","13C2-
PFDA","71.7","%R","","","CRDL","","IS","71.7","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","d3-MeFOSAA","d3-
MeFOSAA","67.8","%R","","","CRDL","","IS","67.8","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","d5-EtFOSAA","d5-
EtFOSAA","78.1","%R","","","CRDL","","IS","78.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFUnA","13C2-
PFUnA","71.7","%R","","","CRDL","","IS","71.7","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFDoA","13C2-
PFDoA","67.6","%R","","","CRDL","","IS","67.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5","537 MOD","RES","1901766-05","Vista","13C2-PFTeDA","13C2-

PFTeDA","73.7","%R","","","CRDL","","IS","73.7","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","375-73-
5","PFBS","1.29","ug/kg","J","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","307-24-
4","PFHxA","17.0","ug/kg","","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","375-85-
9","PFHpA","1.71","ug/kg","J","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","355-46-
4","PFHxS","4.29","ug/kg","","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","335-67-
1","PFOA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","375-95-
1","PFNA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","1763-23-
1","PFOS","2.06","ug/kg","","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","335-76-
2","PFDA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","2355-31-
9","NMeFOSAA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","2991-50-
6","NEtFOSAA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","2058-94-
8","PFUnA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","307-55-
1","PFDoA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","72629-94-
8","PFTrDA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","376-06-
7","PFTeDA","0.997","ug/kg","U","0.997","CRDL","","TRG","","","1.99","CRDL","YES","0.843"
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C3-PFBS","13C3-
PFBS","72.9","%R","","","CRDL","","IS","72.9","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFHxA","13C2-
PFHxA","73.1","%R","","","CRDL","","IS","73.1","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C4-PFHpA","13C4-
PFHpA","64.9","%R","","","CRDL","","IS","64.9","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C3-PFHxS","13C3-
PFHxS","71.2","%R","","","CRDL","","IS","71.2","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFOA","13C2-
PFOA","69.5","%R","","","CRDL","","IS","69.5","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C5-PFNA","13C5-
PFNA","59.1","%R","","","CRDL","","IS","59.1","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C8-PFOS","13C8-
PFOS","73.1","%R","","","CRDL","","IS","73.1","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFDA","13C2-
PFDA","48.6","%R","H","","CRDL","","IS","48.6","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","d3-MeFOSAA","d3-
MeFOSAA","48.2","%R","H","","CRDL","","IS","48.2","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","d5-EtFOSAA","d5-
EtFOSAA","46.7","%R","H","","CRDL","","IS","46.7","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFUnA","13C2-
PFUnA","41.1","%R","H","","CRDL","","IS","41.1","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFDoA","13C2-
PFDoA","41.0","%R","H","","CRDL","","IS","41.0","","","CRDL","",""
"SAOA-B04-SO-20-20.5","537 MOD","RES","1901766-06","Vista","13C2-PFTeDA","13C2-

PFTeDA","36.6","%R","H","","CRDL","","IS","36.6","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","375-73-
5","PFBS","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","307-24-
4","PFHxA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","375-85-
9","PFHpA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","355-46-
4","PFHxS","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","335-67-
1","PFOA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","375-95-
1","PFNA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","1763-23-
1","PFOS","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","335-76-
2","PFDA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","2355-31-
9","NMeFOSAA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","2991-50-
6","NEtFOSAA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","2058-94-
8","PFUnA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","307-55-
1","PFDoA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","72629-94-
8","PFTrDA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","376-06-
7","PFTeDA","0.979","ug/kg","U","0.979","CRDL","","TRG","","","1.96","CRDL","YES","0.828"
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C3-PFBS","13C3-
PFBS","93.8","%R","","","CRDL","","IS","93.8","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFHxA","13C2-
PFHxA","96.2","%R","","","CRDL","","IS","96.2","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C4-PFHpA","13C4-
PFHpA","84.0","%R","","","CRDL","","IS","84.0","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C3-PFHxS","13C3-
PFHxS","85.5","%R","","","CRDL","","IS","85.5","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFOA","13C2-
PFOA","86.0","%R","","","CRDL","","IS","86.0","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C5-PFNA","13C5-
PFNA","81.4","%R","","","CRDL","","IS","81.4","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C8-PFOS","13C8-
PFOS","77.1","%R","","","CRDL","","IS","77.1","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFDA","13C2-
PFDA","67.7","%R","","","CRDL","","IS","67.7","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","d3-MeFOSAA","d3-
MeFOSAA","55.2","%R","","","CRDL","","IS","55.2","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","d5-EtFOSAA","d5-
EtFOSAA","51.5","%R","","","CRDL","","IS","51.5","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFUnA","13C2-
PFUnA","58.6","%R","","","CRDL","","IS","58.6","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFDoA","13C2-
PFDoA","55.5","%R","","","CRDL","","IS","55.5","","","CRDL","",""
"SAOA-B04-SO-47-47.5","537 MOD","RES","1901766-07","Vista","13C2-PFTeDA","13C2-

PFTeDA","74.8","%R","","","CRDL","","IS","74.8","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","375-73-
5","PFBS","0.00597","ug/L","J","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","307-24-
4","PFHxA","0.0439","ug/L","","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","375-85-
9","PFHpA","0.00502","ug/L","J","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","355-46-
4","PFHxS","0.0383","ug/L","","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","335-67-
1","PFOA","0.0343","ug/L","","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","375-95-
1","PFNA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","1763-23-
1","PFOS","0.0573","ug/L","","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","335-76-
2","PFDA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","2355-31-
9","NMeFOSAA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","2991-50-
6","NEtFOSAA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","2058-94-
8","PFUnA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","307-55-
1","PFDoA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","72629-94-
8","PFTrDA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","376-06-
7","PFTeDA","0.00403","ug/L","U","0.00403","CRDL","","TRG","","","0.00804","CRDL","YES","0.00275"
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C3-PFBS","13C3-
PFBS","91.7","%R","","","CRDL","","IS","91.7","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFHxA","13C2-
PFHxA","85.5","%R","","","CRDL","","IS","85.5","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C4-PFHpA","13C4-
PFHpA","88.9","%R","","","CRDL","","IS","88.9","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C3-PFHxS","13C3-
PFHxS","94.6","%R","","","CRDL","","IS","94.6","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFOA","13C2-
PFOA","87.5","%R","","","CRDL","","IS","87.5","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C5-PFNA","13C5-
PFNA","79.1","%R","","","CRDL","","IS","79.1","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C8-PFOS","13C8-
PFOS","83.3","%R","","","CRDL","","IS","83.3","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFDA","13C2-
PFDA","73.9","%R","","","CRDL","","IS","73.9","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","d3-MeFOSAA","d3-
MeFOSAA","61.7","%R","","","CRDL","","IS","61.7","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","d5-EtFOSAA","d5-
EtFOSAA","66.0","%R","","","CRDL","","IS","66.0","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFUnA","13C2-
PFUnA","68.0","%R","","","CRDL","","IS","68.0","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFDoA","13C2-
PFDoA","55.8","%R","","","CRDL","","IS","55.8","","","CRDL","",""
"SAOA-B04-GW","537 MOD","RES","1901766-08","Vista","13C2-PFTeDA","13C2-

PFTeDA","26.5","%R","H","","CRDL","","IS","26.5","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","375-73-
5","PFBS","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","307-24-
4","PFHxA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","375-85-
9","PFHpA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","355-46-
4","PFHxS","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","335-67-
1","PFOA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","375-95-
1","PFNA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","1763-23-
1","PFOS","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","335-76-
2","PFDA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","2355-31-
9","NMeFOSAA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","2991-50-
6","NEtFOSAA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","2058-94-
8","PFUnA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","307-55-
1","PFDoA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","72629-94-
8","PFTrDA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","376-06-
7","PFTeDA","0.00420","ug/L","U","0.00420","CRDL","","TRG","","","0.00841","CRDL","YES","0.00288"
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C3-PFBS","13C3-
PFBS","91.2","%R","","","CRDL","","IS","91.2","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFHxA","13C2-
PFHxA","83.6","%R","","","CRDL","","IS","83.6","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C4-PFHpA","13C4-
PFHpA","82.9","%R","","","CRDL","","IS","82.9","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C3-PFHxS","13C3-
PFHxS","88.0","%R","","","CRDL","","IS","88.0","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFOA","13C2-
PFOA","82.4","%R","","","CRDL","","IS","82.4","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C5-PFNA","13C5-
PFNA","79.6","%R","","","CRDL","","IS","79.6","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C8-PFOS","13C8-
PFOS","80.6","%R","","","CRDL","","IS","80.6","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFDA","13C2-
PFDA","67.6","%R","","","CRDL","","IS","67.6","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","d3-MeFOSAA","d3-
MeFOSAA","58.8","%R","","","CRDL","","IS","58.8","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","d5-EtFOSAA","d5-
EtFOSAA","56.1","%R","","","CRDL","","IS","56.1","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFUnA","13C2-
PFUnA","62.8","%R","","","CRDL","","IS","62.8","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFDoA","13C2-
PFDoA","57.2","%R","","","CRDL","","IS","57.2","","","CRDL","",""
"EB-06252019","537 MOD","RES","1901766-09","Vista","13C2-PFTeDA","13C2-

PFTeDA","61.8","%R","","","CRDL","","IS","61.8","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","375-73-
5","PFBS","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","307-24-
4","PFHxA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","375-85-
9","PFHpA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","355-46-
4","PFHxS","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","335-67-
1","PFOA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","375-95-
1","PFNA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","1763-23-
1","PFOS","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","335-76-
2","PFDA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","2355-31-
9","NMeFOSAA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","2991-50-
6","NEtFOSAA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","2058-94-
8","PFUnA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","307-55-
1","PFDoA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","72629-94-
8","PFTrDA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","376-06-
7","PFTeDA","0.00446","ug/L","U","0.00446","CRDL","","TRG","","","0.00894","CRDL","YES","0.00306"
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C3-PFBS","13C3-
PFBS","99.7","%R","","","CRDL","","IS","99.7","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFHxA","13C2-
PFHxA","92.4","%R","","","CRDL","","IS","92.4","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C4-PFHpA","13C4-
PFHpA","92.9","%R","","","CRDL","","IS","92.9","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C3-PFHxS","13C3-
PFHxS","93.5","%R","","","CRDL","","IS","93.5","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFOA","13C2-
PFOA","95.7","%R","","","CRDL","","IS","95.7","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C5-PFNA","13C5-
PFNA","82.7","%R","","","CRDL","","IS","82.7","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C8-PFOS","13C8-
PFOS","90.3","%R","","","CRDL","","IS","90.3","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFDA","13C2-
PFDA","68.5","%R","","","CRDL","","IS","68.5","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","d3-MeFOSAA","d3-
MeFOSAA","43.8","%R","H","","CRDL","","IS","43.8","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","d5-EtFOSAA","d5-
EtFOSAA","52.6","%R","","","CRDL","","IS","52.6","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFUnA","13C2-
PFUnA","53.9","%R","","","CRDL","","IS","53.9","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFDoA","13C2-
PFDoA","52.2","%R","","","CRDL","","IS","52.2","","","CRDL","",""
"FRB-06252019","537 MOD","RES","1901766-10","Vista","13C2-PFTeDA","13C2-

PFTeDA","67.4","%R","","","CRDL","","IS","67.4","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","375-73-
5","PFBS","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","307-24-
4","PFHxA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","375-85-
9","PFHpA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","355-46-
4","PFHxS","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","335-67-
1","PFOA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","375-95-
1","PFNA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","1763-23-
1","PFOS","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","335-76-
2","PFDA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","2355-31-
9","NMeFOSAA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","2991-50-
6","NEtFOSAA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","2058-94-
8","PFUnA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","307-55-
1","PFDoA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","72629-94-
8","PFTrDA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","376-06-
7","PFTeDA","0.00400","ug/L","U","0.00400","CRDL","","TRG","","","0.00800","CRDL","YES","0.00274"
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C3-PFBS","13C3-
PFBS","103","%R","","","CRDL","","IS","103","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFHxA","13C2-
PFHxA","91.6","%R","","","CRDL","","IS","91.6","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C4-PFHpA","13C4-
PFHpA","90.9","%R","","","CRDL","","IS","90.9","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C3-PFHxS","13C3-
PFHxS","106","%R","","","CRDL","","IS","106","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFOA","13C2-
PFOA","86.1","%R","","","CRDL","","IS","86.1","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C5-PFNA","13C5-
PFNA","72.1","%R","","","CRDL","","IS","72.1","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C8-PFOS","13C8-
PFOS","85.6","%R","","","CRDL","","IS","85.6","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFDA","13C2-
PFDA","63.1","%R","","","CRDL","","IS","63.1","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","d3-MeFOSAA","d3-
MeFOSAA","67.2","%R","","","CRDL","","IS","67.2","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","d5-EtFOSAA","d5-
EtFOSAA","73.5","%R","","","CRDL","","IS","73.5","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFUnA","13C2-
PFUnA","73.2","%R","","","CRDL","","IS","73.2","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFDoA","13C2-
PFDoA","72.7","%R","","","CRDL","","IS","72.7","","","CRDL","",""
"B9F0253-BLK1","537 MOD","RES","B9F0253-BLK1","Vista","13C2-PFTeDA","13C2-

PFTeDA","51.3","%R","","","CRDL","","IS","51.3","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","375-73-
5","PFBS","0.0811","ug/L","","0.00400","CRDL","","SPK","101","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","307-24-
4","PFHxA","0.0901","ug/L","","0.00400","CRDL","","SPK","113","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","375-85-
9","PFHpA","0.0847","ug/L","","0.00400","CRDL","","SPK","106","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","355-46-
4","PFHxS","0.0863","ug/L","","0.00400","CRDL","","SPK","108","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","335-67-
1","PFOA","0.0866","ug/L","","0.00400","CRDL","","SPK","108","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","375-95-
1","PFNA","0.0898","ug/L","","0.00400","CRDL","","SPK","112","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","1763-23-
1","PFOS","0.0846","ug/L","","0.00400","CRDL","","SPK","106","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","335-76-
2","PFDA","0.0862","ug/L","","0.00400","CRDL","","SPK","108","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","2355-31-
9","NMeFOSAA","0.0931","ug/L","","0.00400","CRDL","","SPK","116","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","2991-50-
6","NEtFOSAA","0.0882","ug/L","","0.00400","CRDL","","SPK","110","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","2058-94-
8","PFUnA","0.0883","ug/L","","0.00400","CRDL","","SPK","110","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","307-55-
1","PFDoA","0.0922","ug/L","","0.00400","CRDL","","SPK","115","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","72629-94-
8","PFTrDA","0.0509","ug/L","","0.00400","CRDL","","SPK","63.6","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","376-06-
7","PFTeDA","0.0843","ug/L","","0.00400","CRDL","","SPK","105","","0.00800","CRDL","YES","0.00274"
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C3-PFBS","13C3-
PFBS","94.4","%R","","","CRDL","","IS","94.4","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFHxA","13C2-
PFHxA","95.0","%R","","","CRDL","","IS","95.0","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C4-PFHpA","13C4-
PFHpA","93.2","%R","","","CRDL","","IS","93.2","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C3-PFHxS","13C3-
PFHxS","86.4","%R","","","CRDL","","IS","86.4","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFOA","13C2-
PFOA","92.9","%R","","","CRDL","","IS","92.9","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C5-PFNA","13C5-
PFNA","83.1","%R","","","CRDL","","IS","83.1","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C8-PFOS","13C8-
PFOS","86.0","%R","","","CRDL","","IS","86.0","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFDA","13C2-
PFDA","69.6","%R","","","CRDL","","IS","69.6","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","79.3","%R","","","CRDL","","IS","79.3","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","84.2","%R","","","CRDL","","IS","84.2","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFUnA","13C2-
PFUnA","73.1","%R","","","CRDL","","IS","73.1","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFDoA","13C2-
PFDoA","45.9","%R","H","","CRDL","","IS","45.9","","","CRDL","",""
"B9F0253-BS1","537 MOD","RES","B9F0253-BS1","Vista","13C2-PFTeDA","13C2-

PFTeDA","18.2","%R","H","","CRDL","","IS","18.2","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","375-73-
5","PFBS","0.225","ug/L","","0.00424","CRDL","","SPK","98.2","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","307-24-
4","PFHxA","0.423","ug/L","","0.00424","CRDL","","SPK","89.6","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","375-85-
9","PFHpA","0.111","ug/L","","0.00424","CRDL","","SPK","106","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","355-46-
4","PFHxS","0.361","ug/L","","0.00424","CRDL","","SPK","101","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","335-67-
1","PFOA","0.276","ug/L","","0.00424","CRDL","","SPK","117","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","375-95-
1","PFNA","0.0926","ug/L","","0.00424","CRDL","","SPK","107","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","1763-23-
1","PFOS","0.159","ug/L","","0.00424","CRDL","","SPK","108","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","335-76-
2","PFDA","0.0950","ug/L","","0.00424","CRDL","","SPK","110","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","2355-31-
9","NMeFOSAA","0.0978","ug/L","","0.00424","CRDL","","SPK","115","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","2991-50-
6","NEtFOSAA","0.0968","ug/L","","0.00424","CRDL","","SPK","114","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","2058-94-
8","PFUnA","0.0943","ug/L","","0.00424","CRDL","","SPK","111","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","307-55-
1","PFDoA","0.0892","ug/L","","0.00424","CRDL","","SPK","105","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","72629-94-
8","PFTrDA","0.0681","ug/L","","0.00424","CRDL","","SPK","80.4","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","376-06-
7","PFTeDA","0.0951","ug/L","","0.00424","CRDL","","SPK","112","","0.00847","CRDL","YES","0.00290"
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C3-PFBS","13C3-
PFBS","97.6","%R","","","CRDL","","IS","97.6","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFHxA","13C2-
PFHxA","95.0","%R","","","CRDL","","IS","95.0","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C4-PFHpA","13C4-
PFHpA","93.0","%R","","","CRDL","","IS","93.0","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C3-PFHxS","13C3-
PFHxS","95.6","%R","","","CRDL","","IS","95.6","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFOA","13C2-
PFOA","90.2","%R","","","CRDL","","IS","90.2","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C5-PFNA","13C5-
PFNA","85.0","%R","","","CRDL","","IS","85.0","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C8-PFOS","13C8-
PFOS","99.3","%R","","","CRDL","","IS","99.3","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFDA","13C2-
PFDA","69.5","%R","","","CRDL","","IS","69.5","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","65.4","%R","","","CRDL","","IS","65.4","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","72.4","%R","","","CRDL","","IS","72.4","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFUnA","13C2-
PFUnA","68.1","%R","","","CRDL","","IS","68.1","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFDoA","13C2-
PFDoA","55.8","%R","","","CRDL","","IS","55.8","","","CRDL","",""
"SAOA-B06-GWMS","537 MOD","RES","B9F0253-MS1","Vista","13C2-PFTeDA","13C2-

PFTeDA","25.7","%R","H","","CRDL","","IS","25.7","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","375-73-
5","PFBS","0.241","ug/L","","0.00439","CRDL","","SPK","113","14.0","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","307-24-
4","PFHxA","0.442","ug/L","","0.00439","CRDL","","SPK","109","19.5","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","375-85-
9","PFHpA","0.113","ug/L","","0.00439","CRDL","","SPK","104","1.90","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","355-46-
4","PFHxS","0.370","ug/L","","0.00439","CRDL","","SPK","108","6.70","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","335-67-
1","PFOA","0.290","ug/L","","0.00439","CRDL","","SPK","129","9.76","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","375-95-
1","PFNA","0.105","ug/L","","0.00439","CRDL","","SPK","118","9.78","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","1763-23-
1","PFOS","0.165","ug/L","","0.00439","CRDL","","SPK","112","3.64","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","335-76-
2","PFDA","0.103","ug/L","","0.00439","CRDL","","SPK","115","4.44","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","2355-31-
9","NMeFOSAA","0.110","ug/L","","0.00439","CRDL","","SPK","126","9.13","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","2991-50-
6","NEtFOSAA","0.105","ug/L","","0.00439","CRDL","","SPK","120","5.13","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","2058-94-
8","PFUnA","0.103","ug/L","","0.00439","CRDL","","SPK","117","5.26","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","307-55-
1","PFDoA","0.0943","ug/L","","0.00439","CRDL","","SPK","108","2.82","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","72629-94-
8","PFTrDA","0.0743","ug/L","","0.00439","CRDL","","SPK","84.8","5.33","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","376-06-
7","PFTeDA","0.0915","ug/L","","0.00439","CRDL","","SPK","104","7.41","0.00876","CRDL","YES","0.00300"
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C3-PFBS","13C3-
PFBS","94.9","%R","","","CRDL","","IS","94.9","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFHxA","13C2-
PFHxA","91.6","%R","","","CRDL","","IS","91.6","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C4-PFHpA","13C4-
PFHpA","94.5","%R","","","CRDL","","IS","94.5","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C3-PFHxS","13C3-
PFHxS","93.0","%R","","","CRDL","","IS","93.0","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFOA","13C2-
PFOA","92.5","%R","","","CRDL","","IS","92.5","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C5-PFNA","13C5-
PFNA","81.8","%R","","","CRDL","","IS","81.8","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C8-PFOS","13C8-
PFOS","92.4","%R","","","CRDL","","IS","92.4","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFDA","13C2-
PFDA","75.4","%R","","","CRDL","","IS","75.4","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","d3-MeFOSAA","d3-
MeFOSAA","71.9","%R","","","CRDL","","IS","71.9","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","d5-EtFOSAA","d5-
EtFOSAA","73.7","%R","","","CRDL","","IS","73.7","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFUnA","13C2-
PFUnA","73.0","%R","","","CRDL","","IS","73.0","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFDoA","13C2-
PFDoA","59.3","%R","","","CRDL","","IS","59.3","","","CRDL","",""
"SAOA-B06-GWMSD","537 MOD","RES","B9F0253-MSD1","Vista","13C2-PFTeDA","13C2-

PFTeDA","33.4","%R","H","","CRDL","","IS","33.4","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","375-73-
5","PFBS","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","307-24-
4","PFHxA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","375-85-
9","PFHpA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","355-46-
4","PFHxS","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","335-67-
1","PFOA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","375-95-
1","PFNA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","1763-23-
1","PFOS","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","335-76-
2","PFDA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","2355-31-
9","NMeFOSAA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","2991-50-
6","NEtFOSAA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","2058-94-
8","PFUnA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","307-55-
1","PFDoA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","72629-94-
8","PFTrDA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","376-06-
7","PFTeDA","1.00","ug/kg","U","1.00","CRDL","","TRG","","","2.00","CRDL","YES","0.845"
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C3-PFBS","13C3-
PFBS","106","%R","","","CRDL","","IS","106","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFHxA","13C2-
PFHxA","93.2","%R","","","CRDL","","IS","93.2","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C4-PFHpA","13C4-
PFHpA","86.0","%R","","","CRDL","","IS","86.0","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C3-PFHxS","13C3-
PFHxS","94.0","%R","","","CRDL","","IS","94.0","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFOA","13C2-
PFOA","90.4","%R","","","CRDL","","IS","90.4","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C5-PFNA","13C5-
PFNA","77.0","%R","","","CRDL","","IS","77.0","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C8-PFOS","13C8-
PFOS","86.4","%R","","","CRDL","","IS","86.4","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFDA","13C2-
PFDA","62.9","%R","","","CRDL","","IS","62.9","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","d3-MeFOSAA","d3-
MeFOSAA","55.7","%R","","","CRDL","","IS","55.7","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","d5-EtFOSAA","d5-
EtFOSAA","58.5","%R","","","CRDL","","IS","58.5","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFUnA","13C2-
PFUnA","58.0","%R","","","CRDL","","IS","58.0","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFDoA","13C2-
PFDoA","53.1","%R","","","CRDL","","IS","53.1","","","CRDL","",""
"B9F0280-BLK1","537 MOD","RES","B9F0280-BLK1","Vista","13C2-PFTeDA","13C2-

PFTeDA","72.3","%R","","","CRDL","","IS","72.3","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","375-73-
5","PFBS","10.3","ug/kg","","1.00","CRDL","","SPK","103","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","307-24-
4","PFHxA","10.4","ug/kg","","1.00","CRDL","","SPK","104","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","375-85-
9","PFHpA","10.1","ug/kg","","1.00","CRDL","","SPK","101","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","355-46-
4","PFHxS","9.99","ug/kg","","1.00","CRDL","","SPK","99.9","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","335-67-
1","PFOA","10.3","ug/kg","","1.00","CRDL","","SPK","103","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","375-95-
1","PFNA","10.5","ug/kg","","1.00","CRDL","","SPK","105","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","1763-23-
1","PFOS","10.5","ug/kg","","1.00","CRDL","","SPK","105","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","335-76-
2","PFDA","10.4","ug/kg","","1.00","CRDL","","SPK","104","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","2355-31-
9","NMeFOSAA","12.0","ug/kg","","1.00","CRDL","","SPK","120","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","2991-50-
6","NEtFOSAA","10.9","ug/kg","","1.00","CRDL","","SPK","109","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","2058-94-
8","PFUnA","10.3","ug/kg","","1.00","CRDL","","SPK","103","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","307-55-
1","PFDoA","10.1","ug/kg","","1.00","CRDL","","SPK","101","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","72629-94-
8","PFTrDA","11.7","ug/kg","","1.00","CRDL","","SPK","117","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","376-06-
7","PFTeDA","10.7","ug/kg","","1.00","CRDL","","SPK","107","","2.00","CRDL","YES","0.845"
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C3-PFBS","13C3-
PFBS","85.1","%R","","","CRDL","","IS","85.1","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFHxA","13C2-
PFHxA","94.8","%R","","","CRDL","","IS","94.8","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C4-PFHpA","13C4-
PFHpA","97.5","%R","","","CRDL","","IS","97.5","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C3-PFHxS","13C3-
PFHxS","83.3","%R","","","CRDL","","IS","83.3","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFOA","13C2-
PFOA","88.8","%R","","","CRDL","","IS","88.8","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C5-PFNA","13C5-
PFNA","83.2","%R","","","CRDL","","IS","83.2","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C8-PFOS","13C8-
PFOS","90.7","%R","","","CRDL","","IS","90.7","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFDA","13C2-
PFDA","69.5","%R","","","CRDL","","IS","69.5","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","56.2","%R","","","CRDL","","IS","56.2","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","59.7","%R","","","CRDL","","IS","59.7","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFUnA","13C2-
PFUnA","62.2","%R","","","CRDL","","IS","62.2","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFDoA","13C2-
PFDoA","62.1","%R","","","CRDL","","IS","62.1","","","CRDL","",""
"B9F0280-BS1","537 MOD","RES","B9F0280-BS1","Vista","13C2-PFTeDA","13C2-

PFTeDA","76.7","%R","","","CRDL","","IS","76.7","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","375-73-
5","PFBS","11.5","ug/kg","","0.958","CRDL","","SPK","116","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","307-24-
4","PFHxA","22.6","ug/kg","H","0.958","CRDL","","SPK","139","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","375-85-
9","PFHpA","21.0","ug/kg","H","0.958","CRDL","","SPK","140","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","355-46-
4","PFHxS","25.5","ug/kg","H","0.958","CRDL","","SPK","152","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","335-67-
1","PFOA","18.6","ug/kg","H","0.958","CRDL","","SPK","140","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","375-95-
1","PFNA","12.9","ug/kg","","0.958","CRDL","","SPK","118","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","DL","B9F0280-MS1","Vista","1763-23-1","PFOS","122","ug/kg","D,
H","4.79","CRDL","","SPK","321","","9.58","CRDL","YES","4.05"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","335-76-
2","PFDA","10.3","ug/kg","","0.958","CRDL","","SPK","104","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","2355-31-
9","NMeFOSAA","11.8","ug/kg","","0.958","CRDL","","SPK","123","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","2991-50-
6","NEtFOSAA","11.2","ug/kg","","0.958","CRDL","","SPK","116","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","2058-94-
8","PFUnA","10.1","ug/kg","","0.958","CRDL","","SPK","105","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","307-55-
1","PFDoA","10.6","ug/kg","","0.958","CRDL","","SPK","111","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","72629-94-
8","PFTrDA","11.7","ug/kg","","0.958","CRDL","","SPK","122","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","376-06-
7","PFTeDA","11.3","ug/kg","","0.958","CRDL","","SPK","118","","1.92","CRDL","YES","0.809"
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C3-PFBS","13C3-
PFBS","92.8","%R","","","CRDL","","IS","92.8","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFHxA","13C2-
PFHxA","90.1","%R","","","CRDL","","IS","90.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C4-PFHpA","13C4-
PFHpA","85.3","%R","","","CRDL","","IS","85.3","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C3-PFHxS","13C3-
PFHxS","93.6","%R","","","CRDL","","IS","93.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFOA","13C2-
PFOA","82.4","%R","","","CRDL","","IS","82.4","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C5-PFNA","13C5-
PFNA","66.6","%R","","","CRDL","","IS","66.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","DL","B9F0280-MS1","Vista","13C8-PFOS","13C8-
PFOS","96.0","%R","D","","CRDL","","IS","96.0","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFDA","13C2-
PFDA","63.9","%R","","","CRDL","","IS","63.9","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","d3-MeFOSAA","d3-
MeFOSAA","65.0","%R","","","CRDL","","IS","65.0","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","d5-EtFOSAA","d5-
EtFOSAA","63.5","%R","","","CRDL","","IS","63.5","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFUnA","13C2-
PFUnA","68.1","%R","","","CRDL","","IS","68.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFDoA","13C2-
PFDoA","66.1","%R","","","CRDL","","IS","66.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5MS","537 MOD","RES","B9F0280-MS1","Vista","13C2-PFTeDA","13C2-

PFTeDA","77.9","%R","","","CRDL","","IS","77.9","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","375-73-
5","PFBS","11.5","ug/kg","","0.994","CRDL","","SPK","112","3.51","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","307-24-
4","PFHxA","16.7","ug/kg","H","0.994","CRDL","","SPK","75.5","59.2","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","375-85-
9","PFHpA","16.4","ug/kg","H","0.994","CRDL","","SPK","88.5","45.1","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","355-46-
4","PFHxS","18.3","ug/kg","H","0.994","CRDL","","SPK","74.6","68.3","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","335-67-
1","PFOA","14.7","ug/kg","H","0.994","CRDL","","SPK","95.1","38.2","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","375-95-
1","PFNA","12.1","ug/kg","","0.994","CRDL","","SPK","106","10.7","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","1763-23-
1","PFOS","86.3","ug/kg","H","0.994","CRDL","","SPK","-48.5","271","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","335-76-
2","PFDA","10.7","ug/kg","","0.994","CRDL","","SPK","105","0.957","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","2355-31-
9","NMeFOSAA","12.0","ug/kg","","0.994","CRDL","","SPK","121","1.64","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","2991-50-
6","NEtFOSAA","11.4","ug/kg","","0.994","CRDL","","SPK","114","1.74","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","2058-94-
8","PFUnA","11.6","ug/kg","","0.994","CRDL","","SPK","117","10.8","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","307-55-
1","PFDoA","10.8","ug/kg","","0.994","CRDL","","SPK","108","2.74","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","72629-94-
8","PFTrDA","12.0","ug/kg","","0.994","CRDL","","SPK","120","1.65","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","376-06-
7","PFTeDA","11.5","ug/kg","","0.994","CRDL","","SPK","116","1.71","1.99","CRDL","YES","0.840"
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C3-PFBS","13C3-
PFBS","86.0","%R","","","CRDL","","IS","86.0","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFHxA","13C2-
PFHxA","96.9","%R","","","CRDL","","IS","96.9","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C4-PFHpA","13C4-
PFHpA","90.1","%R","","","CRDL","","IS","90.1","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C3-PFHxS","13C3-
PFHxS","85.6","%R","","","CRDL","","IS","85.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFOA","13C2-
PFOA","89.6","%R","","","CRDL","","IS","89.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C5-PFNA","13C5-
PFNA","81.2","%R","","","CRDL","","IS","81.2","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C8-PFOS","13C8-
PFOS","79.6","%R","","","CRDL","","IS","79.6","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFDA","13C2-
PFDA","70.3","%R","","","CRDL","","IS","70.3","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","d3-MeFOSAA","d3-
MeFOSAA","67.7","%R","","","CRDL","","IS","67.7","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","d5-EtFOSAA","d5-
EtFOSAA","76.5","%R","","","CRDL","","IS","76.5","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFUnA","13C2-
PFUnA","67.8","%R","","","CRDL","","IS","67.8","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFDoA","13C2-
PFDoA","72.4","%R","","","CRDL","","IS","72.4","","","CRDL","",""
"SAOA-B04-SO-5-5.5MSD","537 MOD","RES","B9F0280-MSD1","Vista","13C2-PFTeDA","13C2-

PFTeDA","80.7","%R","","","CRDL","","IS","80.7","","","CRDL","",""
"4663.3803","CTO 17F3803 Yuma","EB-GW-06202019","06/20/2019 15:55","AQ","1901766-01","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
18:24","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B06-GW","06/24/2019 12:50","AQ","1901766-02","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
18:34","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","FRB-06242019","06/24/2019 15:30","AQ","1901766-03","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
18:45","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B07-GW","06/25/2019 08:50","AQ","1901766-04","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
18:56","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-5-5.5","06/25/2019 10:30","SO","1901766-05","","","","537
MOD","Gen Prep","RES","07/09/2019 16:26","07/10/2019
20:27","Vista","COA","DRY","","1","","","","3.31","B9F0280","B9F0280","S9G0023","S9G0023","1901766","06/26/
2019 09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-20-20.5","06/25/2019 10:50","SO","1901766-06","","","","537
MOD","Gen Prep","RES","07/09/2019 16:26","07/10/2019
20:38","Vista","COA","DRY","","1","","","","16.50","B9F0280","B9F0280","S9G0023","S9G0023","1901766","06/26
/2019 09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-47-47.5","06/25/2019 11:50","SO","1901766-07","","","","537
MOD","Gen Prep","RES","07/09/2019 16:26","07/10/2019
20:48","Vista","COA","DRY","","1","","","","14.20","B9F0280","B9F0280","S9G0023","S9G0023","1901766","06/26
/2019 09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-GW","06/25/2019 12:05","AQ","1901766-08","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
19:06","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","EB-06252019","06/25/2019 14:50","AQ","1901766-09","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
19:17","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","FRB-06252019","06/25/2019 15:00","AQ","1901766-10","","","","537
MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
19:27","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","06/26/2019
09:25","07/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","B9F0253-BLK1","","AQ","B9F0253-BLK1","MB","","","537 MOD","Gen
Prep","RES","07/01/2019 06:40","07/02/2019
17:10","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","","07/18/2019
00:00"
"4663.3803","CTO 17F3803 Yuma","B9F0253-BS1","","AQ","B9F0253-BS1","LCS","","","537 MOD","Gen
Prep","RES","07/01/2019 06:40","07/18/2019
11:54","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","","07/18/2019
00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B06-GWMS","07/01/2019 06:40","AQ","B9F0253-
MS1","MS","","","537 MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
16:48","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","","07/18/2019
00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B06-GWMSD","07/01/2019 06:40","AQ","B9F0253-

MSD1","MSD","","","537 MOD","Gen Prep","RES","07/01/2019 06:40","07/02/2019
16:59","Vista","COA","","","1","","","","","B9F0253","B9F0253","S9G0007","S9G0007","1901766","","07/18/2019
00:00"
"4663.3803","CTO 17F3803 Yuma","B9F0280-BLK1","","SO","B9F0280-BLK1","MB","","","537 MOD","Gen
Prep","RES","07/09/2019 16:26","07/10/2019
19:13","Vista","COA","DRY","","1","","","","100.00","B9F0280","B9F0280","S9G0023","S9G0023","1901766","","0
7/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","B9F0280-BS1","","SO","B9F0280-BS1","LCS","","","537 MOD","Gen
Prep","RES","07/09/2019 16:26","07/10/2019
18:41","Vista","COA","DRY","","1","","","","100.00","B9F0280","B9F0280","S9G0023","S9G0023","1901766","","0
7/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-5-5.5MS","07/09/2019 16:26","SO","B9F0280-
MS1","MS","","","537 MOD","Gen Prep","DL","07/09/2019 16:26","07/12/2019
12:42","Vista","COA","DRY","","5","","","","100.00","B9F0280","B9F0280","S9G0023","S9G0023","1901766","","0
7/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-5-5.5MS","07/09/2019 16:26","SO","B9F0280-
MS1","MS","","","537 MOD","Gen Prep","RES","07/09/2019 16:26","07/10/2019
18:52","Vista","COA","DRY","","1","","","","100.00","B9F0280","B9F0280","S9G0023","S9G0023","1901766","","0
7/18/2019 00:00"
"4663.3803","CTO 17F3803 Yuma","SAOA-B04-SO-5-5.5MSD","07/09/2019 16:26","SO","B9F0280-
MSD1","MSD","","","537 MOD","Gen Prep","RES","07/09/2019 16:26","07/10/2019
19:02","Vista","COA","DRY","","1","","","","100.00","B9F0280","B9F0280","S9G0023","S9G0023","1901766","","0
7/18/2019 00:00"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Tetra Tech EC, Inc.
17885 Von Karman Avenue, Suite 500
Irvine, CA 92614
ATTN: Ms. Lisa Bienkowski
Lisa.Bienkowski@tetratech.com

August 22, 2019

SUBJECT: Revised MCAS Yuma, CTO 17F3803, Data Validation

Dear Ms. Bienkowski,

Enclosed are the revised validation reports for the fraction listed below. These SDGs were received on July 23, 2019. Attachment 1 is a summary of the samples that were reviewed for each analysis.

- A: Updated the validation references. Corrected the LCS/OPR section.
- B: Updated the validation references. Removed the PFTrDA OPR qualifier since the compound recovered within laboratory limits.
- C: Updated the validation references. Corrected the LCS/OPR section. Corrected the 13C2-PFTeDA concentration listed in the "Labeled Compounds" section.
- D: Updated the validation references. Added the field blank qualifier to sample SAOA-B08-GW for PFDA. Corrected the LCS/OPR section.
- E: Updated the validation references.

LDC Project #45580_RV1:

SDG #	Fraction
1901705, 1901766, 1901857 1901920, 1901922	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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona; May 2019,
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.1; 2017
- USEPA National Functional Guidelines for Superfund Organic Methods Data Review; January 2017

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink

Christina Rink
crink@lab-data.com
Project Manager/Senior Chemist

Stage 4

LDC #45580 (Tetra Tech-EC, Inc.-Irvine, CA / MCAS Yuma, CTO 3803)

PO# 1164819

LDC	SDG#	DATE REC'D	(3) DATE DUE	PFAs (537)																																	
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	W	S
A	1901705	07/23/19	08/13/19	6	13																																
B	1901766	07/23/19	08/13/19	7	3																																
C	1901857	07/23/19	08/13/19	7	5																																
D	1901920	07/23/19	08/13/19	11	9																																
E	1901922	07/23/19	08/13/19	2	0																																
Total	T/CR			33	30	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	0	63

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation).

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS Yuma, CTO 17F3803

LDC Report Date: August 22, 2019

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1901705

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
NAOA-B05-SO	1901705-01	Soil	06/18/19
FRB-06182019	1901705-02	Water	06/18/19
NAOA-B10-SO-20-20.5	1901705-03	Soil	06/19/19
NAOA-B10-SO-0.5-1	1901705-04	Soil	06/19/19
NAOA-B11-SO-0.5-1	1901705-05	Soil	06/19/19
NAOA-B11-SO-20-20.5	1901705-06	Soil	06/19/19
NAOA-B15-SO-0.5-1	1901705-07	Soil	06/19/19
EB-06192019	1901705-08	Water	06/19/19
NAOA-B15-SO-20-20.5	1901705-09	Soil	06/19/19
NAOA-B12-SO-0.5-1	1901705-10	Soil	06/20/19
NAOA-B12-SO-20-20.5	1901705-11	Soil	06/20/19
NAOA-B13-SO-0.5-1	1901705-12	Soil	06/20/19
NAOA-B13-SO-20-20.5	1901705-13	Soil	06/20/19
NAOA-B14-SO-0.5-1	1901705-14	Soil	06/20/19
NAOA-B14-SO-20-20.5	1901705-15	Soil	06/20/19
FRB-06192019	1901705-16	Water	06/19/19
EB-06202019	1901705-17	Water	06/20/19
FRB-06202019	1901705-18	Water	06/20/19
NAOA-B07-GW	1901705-19	Water	06/20/19

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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona (May 2019), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). 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 method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified

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 method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was 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.

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

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.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples EB-GW-06202019 (from SDG 1901766), EB-06192019, and EB-06202019 were identified as equipment blanks. No contaminants were found with the following exceptions:

Blank ID	Collection Date	Compound	Concentration	Associated Samples In This SDG
EB-06202019	06/20/19	PFOS	0.0582 ug/L	NAOA-B12-SO-0.5-1 NAOA-B13-SO-0.5-1 NAOA-B14-SO-0.5-1

Samples FRB-06182019, FRB-06192019, and FRB-06202019 were identified as field reagent blanks. No contaminants were found.

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X for contaminants) than the concentrations found in the associated field blanks.

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/Ongoing Precision Recovery

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
B9F0278-BS1/BSD1 (All soil samples in SDG 1901705)	PFTrDA	-	131 (60-130)	NA	-

NA (Not Applicable): The percent recovery demonstrates a high bias and the affected compound was not detected in the associated samples. Sample qualification was not necessary.

Relative percent differences (RPD) were within QC limits.

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

OPR ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
B9F0253-BS1	PFTrDA	56.4 (60-130)	All water samples in SDG 1901705	UJ (all non-detects)	P

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 with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
NAOA-B05-SO	13C2-PFDoA	44.9 (50-150)	PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects)	P
NAOA-B10-SO-20-20.5	d5-EtFOSAA 13C2-PFUnA 13C2-PFDoA	49.1 (50-150) 47.8 (50-150) 46.9 (50-150)	EtFOSAA PFUnA PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
NAOA-B12-SO-20-20.5	13C5-PFNA 13C2-PFDA d3-MeFOSAA d5-EtFOSAA 13C2-PFUnA 13C2-PFDoA 13C2-PFTeDA	47.6 (50-150) 38.0 (50-150) 40.7 (50-150) 41.4 (50-150) 33.4 (50-150) 33.8 (50-150) 40.3 (50-150)	PFNA PFDA MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
NAOA-B11-SO-0.5-1	d3-MeFOSAA d5-EtFOSAA 13C2-PFUnA 13C2-PFDoA	43.3 (50-150) 47.5 (50-150) 45.9 (50-150) 40.9 (50-150)	MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
NAOA-B14-SO-0.5-1	d3-MeFOSAA	49.2 (50-150)	MeFOSAA	UJ (all non-detects)	P
NAOA-B07-GW	13C2-PFTeDA	25.8 (50-150)	PFTeDA	UJ (all non-detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the limit of quantitation (LOQ) were qualified as follows:

Sample	Finding	Flag	A or P
NAOA-B10-SO-20-20.5 NAOA-B10-SO-0.5-1 NAOA-B11-SO-20-20.5 NAOA-B15-SO-0.5-1 NAOA-B15-SO-20-20.5 NAOA-B12-SO-0.5-1 NAOA-B12-SO-20-20.5 NAOA-B13-SO-0.5-1	All compounds reported below the LOQ.	J (all detects)	A

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 method. No results were rejected in this SDG.

Due to OPR %R, labeled compound %R, and results below the LOQ, data were qualified as estimated in seventeen samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 1901705

Sample	Compound	Flag	A or P	Reason
FRB-06182019 EB-06192019 FRB-06192019 EB-06202019 FRB-06202019 NAOA-B07-GW	PFTrDA	UJ (all non-detects)	P	Ongoing precision and recovery (%R)
NAOA-B05-SO	PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B10-SO-20-20.5	EtFOSAA PFUnA PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B12-SO-20-20.5	PFNA PFDA MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B11-SO-0.5-1	MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B14-SO-0.5-1	MeFOSAA	UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B07-GW	PFTeDA	UJ (all non-detects)	P	Labeled compounds (%R)
NAOA-B10-SO-20-20.5 NAOA-B10-SO-0.5-1 NAOA-B11-SO-20-20.5 NAOA-B15-SO-0.5-1 NAOA-B15-SO-20-20.5 NAOA-B12-SO-0.5-1 NAOA-B12-SO-20-20.5 NAOA-B13-SO-0.5-1	All compounds reported below the LOQ.	J (all detects)	A	Compound quantitation

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 1901705

No Sample Data Qualified in this SDG

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 1901705

No Sample Data Qualified in this SDG

LDC #: 45580A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901705 Stage 4 Page: 1 of 2
Laboratory: Vista Analytical Laboratory Reviewer: SVG
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537)(M)

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/A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	✓ Individual ≤ 30% ICV ≤ 30%
IV.	Continuing calibration/ISC	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	SW	*FRB = 2, 16, 18 EB = *8, 17, *EB-GW-06202019 (1901766)
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	SW	LCS/D, OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
XI.	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:
FRB = Field Reagent Blank

	Client ID	Lab ID	Matrix	Date
1	NAOA-B05-SO	1901705-01	Soil	06/18/19
2	FRB-06182019	1901705-02	Water	06/18/19
3	NAOA-B10-SO-20-20.5	1901705-03	Soil	06/19/19
4	NAOA-B10-SO-0.5-1	1901705-04	Soil	06/19/19
5	NAOA-B11-SO-0.5-1	1901705-05	Soil	06/19/19
6	NAOA-B11-SO-20-20.5	1901705-06	Soil	06/19/19
7	NAOA-B15-SO-0.5-1	1901705-07	Soil	06/19/19
8	EB-06192019	1901705-08	Water	06/19/19
9	NAOA-B15-SO-20-20.5	1901705-09	Soil	06/19/19
10	NAOA-B12-SO-0.5-1	1901705-10	Soil	06/20/19
11	NAOA-B12-SO-20-20.5	1901705-11	Soil	06/20/19
12	NAOA-B13-SO-0.5-1	1901705-12	Soil	06/20/19
13	NAOA-B13-SO-20-20.5	1901705-13	Soil	06/20/19
14	NAOA-B14-SO-0.5-1	1901705-14	Soil	06/20/19
15	NAOA-B14-SO-20-20.5	1901705-15	Soil	06/20/19

1x/5x
1x/5x

LDC #: 45580A96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901705 Stage 4 Page: 2 of 2
Laboratory: Vista Analytical Laboratory Reviewer: SV6
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537)

	Client ID	Lab ID	Matrix	Date
16	FRB-06192019	1901705-16	Water	06/19/19
17	EB-06202019	1901705-17	Water	06/20/19
18	FRB-06202019	1901705-18	Water	06/20/19
19	NAOA-B07-GW	1901705-19	Water	06/20/19
20				
21				
22				
23				
24				

Notes:

1	BQF0278-BLK1						
2	BQF0253- ↓						

LDC #: 45580 A96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Method: LCMS (EPA Method 537M)

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?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤30%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard except the lowest point (50-150%)?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 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?	✓			
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzedin this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch in this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		

LDC #: 45580A96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?.			✓	
XI. Labeled Compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
XII. Compound quantitation				
Did the laboratory reporting limits (RL) meet the QAPP RLs?	✓			
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 quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Was m/z 499 to m/z 80 transition used as the quantitation transition for PFOS?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Perfluorinated Alkyl Acids (EPA Method 537)

A. PFBA	375-22-4
B. PFPeA	2706-90-3
C. PFBS	375-73-5
D. PFHxA	307-24-4
E. PFHpA	375-85-9
F. PFHxS	355-46-4
G. PFOA	335-67-1
H. PFHpS	375-92-8
I. PFNA	375-95-1
J. PFOSA	754-91-6
K. PFOS	1763-23-1
L. PFDA	335-76-2
M. PFUnA	2058-94-8
N. PFDS	335-77-3
O. PFDoA	307-55-1
P. MeFOSA	31506-32-8
Q. PFTrDA	72629-94-8
R. PFTeDA	376-06-7
S. EtFOSA	4151-50-2
T. MeFOSE	24448-09-7
U. EtFOSE	1691-99-2
V. MeFOSAA	2355-31-9
W. EtFOSAA	2991-50-6

Notes: _____

LDC #: 45580A96

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537)

Y N N/A Were field blanks identified in this SDG?

Y N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/kg

Sampling date: 06/20/19

Field blank type: (circle one) Trip Blank/Field Blank / Rinsate / Other: EB Associated Samples: ~~10~~ ~~15~~ ~~19~~ 10,12,14 (>5x)

Compound	Blank ID	Sample Identification								
	17	(5x)		~~19~~						
>LOQ K	0.0582	0.291		~~0.118~~ J						

Blank units: _____ **Associated sample units:** _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

LDC #: 45580A96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: JVG
2nd Reviewer: Q

METHOD: LC/MS PFCs (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	B9F0278-BS1/BSD1	Q	( )	131 (70-130)	( )	All S, MB1 (ND)	J det/p
			( )	(60)	( )		
			( )	( )	( )		
	B9F0253-BS1	Q	56.4 (70-130)	( )	( )	All W, MB2 (ND)	J/UJ/p
	(ORR)		(60)	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 45380 A96

VALIDATION FINDINGS WORKSHEET
Labeled Compound

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compounds within -50 to +150% of the associated calibration standard?

#	Date	Sample ID	Labeled Compound	%R	Limits (%)	Qualifications
		1 (ND)	13C2-O	44.9	50-150	J/UJ/P (qual O, R) Q
		3 (ND)	d5-W	49.1		W
			13C2-M	47.8		M
			13C2-O	46.9		O, Q
		11 (ND)	13C5-I	47.6		I
			13C2-L	38.0		L
			d3-V	40.7		V
			d5-W	41.4		W
			13C2-M	33.4		M
			13C2-O	33.8		O, Q
			13C2-R	40.3		R, R
		5 (ND)	d3-V	43.3		V
			d5-W	47.5		W
			13C2-M	45.9		M
			13C2-O	40.9		O, Q
		14 (ND)	d3-V	49.2		V
		19	13C2-R	25.8		R, R

LDC#: 45580A96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/1/2019	SCN945	PFOA	0.25	0.03318	3.125
			0.5	0.05895	6.250
	190701M1-CRV		1	0.11824	12.500
		13C2-PFOA	2	0.21986	25.000
			5	0.57756	62.500
			10	1.11263	125.000
			50	5.66807	625.000
			100	11.64186	1250.000
			250	27.00102	3125.000
			500	58.36004	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.117761	0.031497
Std Err of Y Est		
R Squared	0.999111	0.998858
Degrees of Freedom		
X Coefficient(s)	0.00922723	1.425390
Std Err of Coef.		
Correlation Coefficient	0.999555	
Coefficient of Determination (r^2)	0.999111	0.998858

LDC #_45580A96_

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	Instrument	Compound	Standard	(Y) Response ratio	(X) Conc. Ratio	(X^2) Conc. Ratio
7/1/2019	SCN945	PFOS	0.25	0.0123	0.02	0.00040
			0.5	0.0295	0.04	0.0016
	190701M1-CRV	13C8-PFOS	1	0.0651	0.08	0.0064
			2	0.1540	0.16	0.0256
			5	0.3969	0.40	0.1600
			10	0.9108	0.80	0.6400
			50	4.3887	4.00	16.0000
			100	9.6322	8.00	64.0000
			250	22.4459	20.00	400.0000
			500	45.9623	40.00	1600.0000

Regression Output	**Calculated**		***Reported WQR***	
Constant	*c*	*0.00905*	*c*	*-0.0827669*
Std Err of Y Est				
R Squared		*0.9998336*		*0.9992030*
Degrees of Freedom				
	m1	*m2*	*m1*	*m2*
X Coefficient(s)	*1.1286105*	*0.0004752*	*1.0321200*	*0.00169096*
Std Err of Coef.				
Correlation Coefficient		*0.999917*		
Coefficient of Determination (r^2)		*0.999834*		

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/8/2019	SCN945	PFOA	0.25	0.03026	3.125
			0.5	0.05635	6.250
	190707M2-CRV		1	0.12819	12.500
		13C2-PFOA	2	0.23652	25.000
			5	0.56342	62.500
			10	1.13496	125.000
			50	5.69897	625.000
			100	11.70763	1250.000
			250	27.83374	3125.000
			500	58.24964	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.064747	0.024985
Std Err of Y Est		
R Squared	0.999685	0.999567
Degrees of Freedom		
X Coefficient(s)	0.00925494	1.437000
Std Err of Coef.		
Correlation Coefficient	0.999843	
Coefficient of Determination (r^2)	0.999685	0.999567

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/8/2019	SCN945	PFOS	0.25	0.01762	3.125
			0.5	0.03271	6.250
			1	0.07312	12.500
	190707M2-CRV	13C8-PFOS	2	0.16106	25.000
			5	0.42655	62.500
			10	0.82050	125.000
			50	4.47916	625.000
			100	9.43586	1250.000
			250	20.96613	3125.000
			500	47.95613	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.206548	-0.104113
Std Err of Y Est		
R Squared	0.997431	0.996565
Degrees of Freedom		
X Coefficient(s)	0.00752625	1.149010
Std Err of Coef.		
Correlation Coefficient	0.998715	
Coefficient of Determination (r^2)	0.997431	0.996565

LDC #: 45580A96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG

2nd Reviewer:

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: BQF0278-BS1/BSD1

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	Recalc.
PFOA	10.0	10.0	10.7	10.9	107	107	109	109	1.95	1.85
PFOS	↓	↓								

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.

LDC # 45580A96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	(IS)	Conc	Reported	Recalculated	Reported % R	Recalculated % R
1	190702M2-4 ISC	7/2/2019	PFOA	(13C2-PFOA)	1.000	0.960	0.960	96.0	96.0
			PFOS	(13C8-PFOS)	1.000	0.936	0.936	93.6	93.6
2	190707M2-14 ICV	7/7/2019	PFOA	(13C2-PFOA)	10.000	7.882	7.882	78.8	78.8
			PFOS	(13C8-PFOS)	9.240	7.150	7.150	77.4	77.4

LDC #: 45580#96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer:

METHOD: LC/MS PFAS (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. 4 , PFOS :

Conc. = $\frac{\left[\left(\left(\frac{9800}{2100}\right)(12.5)\right)-(-0.104113)\right](1\ mL)}{(1.14901)(1.07\ g)(0.946)}$

= 50.24 ng/kg

#	Sample ID	Compound	Reported Concentration (ng/kg)	Calculated Concentration ( )	Qualification
			50.2		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS Yuma, CTO 17F3803

LDC Report Date: August 22, 2019

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1901766

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
EB-GW-06202019	1901766-01	Water	06/20/19
SAOA-B06-GW	1901766-02	Water	06/24/19
FRB-06242019	1901766-03	Water	06/24/19
SAOA-B07-GW	1901766-04	Water	06/25/19
SAOA-B04-SO-5-5.5	1901766-05	Soil	06/25/19
SAOA-B04-SO-20-20.5	1901766-06	Soil	06/25/19
SAOA-B04-SO-47-47.5	1901766-07	Soil	06/25/19
SAOA-B04-GW	1901766-08	Water	06/25/19
EB-06252019	1901766-09	Water	06/25/19
FRB-06252019	1901766-10	Water	06/25/19
SAOA-B06-GWMS	1901766-02MS	Water	06/24/19
SAOA-B06-GWMSD	1901766-02MSD	Water	06/24/19
SAOA-B04-SO-5-5.5MS	1901766-05MS	Soil	06/25/19
SAOA-B04-SO-5-5.5MSD	1901766-05MSD	Soil	06/25/19

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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona (May 2019), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). 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 method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified

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 method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was 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.

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

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.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples EB-GW-06202019 and EB-06252019 were identified as equipment blanks. No contaminants were found.

Samples FRB-06242019 and FRB-06252019 were identified as field reagent blanks. 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. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
SAOA-B04-SO-5-5.5MS/MSD (SAOA-B04-SO-5-5.5)	PFHxA	139 (70-130)	-	J (all detects)	A
	PFHpA	140 (70-130)	-	J (all detects)	
	PFHxS	152 (70-130)	-	J (all detects)	
	PFOA	140 (70-130)	-	J (all detects)	

For SAOA-B04-SO-5-5.5MS/MSD, no data were qualified for PFOS percent recoveries (%R) and relative percent differences (RPD) outside the QC limits since the MS/MSD was analyzed at greater than or equal to a 5X dilution.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
SAOA-B04-SO-5-5.5MS/MSD (SAOA-B04-SO-5-5.5)	PFHxA	59.2 (≤30)	J (all detects)	A
	PFHpA	45.1 (≤30)	J (all detects)	
	PFHxS	68.3 (≤30)	J (all detects)	
	PFOA	38.2 (≤30)	J (all detects)	

VIII. Laboratory Control Samples/Ongoing Precision Recovery

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.

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) 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 with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
SAOA-B06-GW	13C2-PFTeDA	38.4 (50-150)	PFTeDA	UJ (all non-detects)	P
SAOA-B04-SO-20-20.5	13C2-PFDA d3-MeFOSAA d5-EtFOSAA 13C2-PFUnA 13C2-PFDoA 13C2-PFTeDA	48.6 (50-150) 48.2 (50-150) 46.7 (50-150) 41.1 (50-150) 41.0 (50-150) 36.6 (50-150)	PFDA MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
SAOA-B04-GW	13C2-PFTeDA	26.5 (50-150)	PFTeDA	UJ (all non-detects)	P
FRB-06252019	d3-MeFOSAA	43.8 (50-150)	MeFOSAA	UJ (all non-detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the limit of quantitation (LOQ) were qualified as follows:

Sample	Finding	Flag	A or P
SAOA-B07-GW SAOA-B04-SO-5-5.5 SAOA-B04-SO-20-20.5 SAOA-B04-GW	All compounds reported below the LOQ.	J (all detects)	A

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 method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD, labeled compound %R, and results below the LOQ, data were qualified as estimated in six samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 1901766

Sample	Compound	Flag	A or P	Reason
SAOA-B04-SO-5-5.5	PFHxA PFHpA PFHxS PFOA	J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
SAOA-B04-SO-5-5.5	PFHxA PFHpA PFHxS PFOA	J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD)
SAOA-B06-GW	PFTeDA	UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B04-SO-20-20.5	PFDA MeFOSAA EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B04-GW	PFTeDA	UJ (all non-detects)	P	Labeled compounds (%R)
FRB-06252019	MeFOSAA	UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B07-GW SAOA-B04-SO-5-5.5 SAOA-B04-SO-20-20.5 SAOA-B04-GW	All compounds reported below the LOQ.	J (all detects)	A	Compound quantitation

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 1901766

No Sample Data Qualified in this SDG

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 1901766

No Sample Data Qualified in this SDG

LDC #: 45580B96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901766 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M)

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/A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	r² Individual ≤30% ICV≤30%
IV.	Continuing calibration/ISC	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = 1, 9 FRB = 3, 10
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	ASW	LCS/D, OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
XI.	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: FRB= Field Reagent Blank

	Client ID	Lab ID	Matrix	Date
1	EB-GW-06202019	1901766-01	Water	06/20/19
2	SAOA-B06-GW	1901766-02	Water	06/24/19
3	FRB-06242019	1901766-03	Water	06/24/19
4	SAOA-B07-GW	1901766-04	Water	06/25/19
5	SAOA-B04-SO-5-5.5	1901766-05	Soil	06/25/19
6	SAOA-B04-SO-20-20.5	1901766-06	Soil	06/25/19
7	SAOA-B04-SO-47-47.5	1901766-07	Soil	06/25/19
8	SAOA-B04-GW	1901766-08	Water	06/25/19
9	EB-06252019	1901766-09	Water	06/25/19
10	FRB-06252019	1901766-10	Water	06/25/19
11	SAOA-B06-GWMS	1901766-02MS	Water	06/24/19
12	SAOA-B06-GWMSD	1901766-02MSD	Water	06/24/19
13	SAOA-B04-SO-5-5.5MS	1901766-05MS	Soil	06/25/19
14	SAOA-B04-SO-5-5.5MSD	1901766-05MSD	Soil	06/25/19
15	B9F0253-BLK1			
-2	B9F0280-BLK1			

LDC #: 45580 B96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Method: LCMS (EPA Method 537M)

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?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤30%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard except the lowest point (50-150%)?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 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?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzedin this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch in this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		

Validation Area	Yes	No	NA	Findings/Comments
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?.			✓	
XI. Labeled Compounds				
Were labeled compound percent recoveries (%R) within the QC limits?	✓			
XII. Compound quantitation				
Did the laboratory reporting limits (RL) meet the QAPP RLs?	✓			
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 quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Was m/z 499 to m/z 80 transition used as the quantitation transition for PFOS?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Perfluorinated Alkyl Acids (EPA Method 537)

A. PFBA	375-22-4
B. PFPeA	2706-90-3
C. PFBS	375-73-5
D. PFHxA	307-24-4
E. PFHpA	375-85-9
F. PFHxS	355-46-4
G. PFOA	335-67-1
H. PFHpS	375-92-8
I. PFNA	375-95-1
J. PFOSA	754-91-6
K. PFOS	1763-23-1
L. PFDA	335-76-2
M. PFUnA	2058-94-8
N. PFDS	335-77-3
O. PFDoA	307-55-1
P. MeFOSA	31506-32-8
Q. PFTrDA	72629-94-8
R. PFTeDA	376-06-7
S. EtFOSA	4151-50-2
T. MeFOSE	24448-09-7
U. EtFOSE	1691-99-2
V. MeFOSAA	2355-31-9
W. EtFOSAA	2991-50-6

Notes:_____

LDC #: 45580 B96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (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 in this SDG?

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
		13/14	D	139 (70-130)	( )	( )	5 (det)	J det/A
			E	140 ( )	( )	( )		
			F	152 ( )	( )	( )		
			G	140 ( )	( )	( )		
	(5x)		K	321 ( )	-98.5 (70-130)	( )		NA (dil)
			D	( )	( )	59.2 (30)	(det)	J det/A
			E	( )	( )	45.1 ( )		
			F	( )	( )	68.3 ( )		
			G	( )	( )	38.2 ( )		
			K	( )	( )	271 ( )		NA (dil)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 45580 B96

VALIDATION FINDINGS WORKSHEET
Labeled Compound

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

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 all labeled compounds within -50 to +150% of the associated calibration standard?

#	Date	Sample ID	Labeled Compound	%R	Limits (%)	Qualifications
		2 (ND)	13C2 - R	38.4	50 - 150	J / UJ / P (qual R)
		6 (ND)	13C2 - L	48.6		(qual L)
			d3 - V	48.2		V
			d5 - W	46.7		W
			13C2 - M	41.1		M
			13C2 - O	41.0		O, Q
			13C2 - R	36.6		R
		8 (ND)	13C2 - R	26.5		(qual R)
		10 (ND)	d3 - V	43.8		(qual V)
		11	13C2 - R	25.7		NQ (QC)
		12	13C2 - R	33.4		

LDC#: 45580B96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/1/2019	SCN945	PFOA	0.25	0.03318	3.125
			0.5	0.05895	6.250
	190701M1-CRV		1	0.11824	12.500
		13C2-PFOA	2	0.21986	25.000
			5	0.57756	62.500
			10	1.11263	125.000
			50	5.66807	625.000
			100	11.64186	1250.000
			250	27.00102	3125.000
			500	58.36004	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.117761	0.031497
Std Err of Y Est		
R Squared	0.999111	0.998858
Degrees of Freedom		
X Coefficient(s)	0.00922723	1.425390
Std Err of Coef.		
Correlation Coefficient	0.999555	
Coefficient of Determination (r^2)	0.999111	0.998858

LDC #_45580B96_

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer:_JVG_
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	Instrument	Compound	Standard	(Y) Response ratio	(X) Conc. Ratio	(X^2) Conc. Ratio
7/1/2019	SCN945	PFOS	0.25	0.0123	0.02	0.00040
			0.5	0.0295	0.04	0.0016
	190701M1-CRV	13C8-PFOS	1	0.0651	0.08	0.0064
			2	0.1540	0.16	0.0256
			5	0.3969	0.40	0.1600
			10	0.9108	0.80	0.6400
			50	4.3887	4.00	16.0000
			100	9.6322	8.00	64.0000
			250	22.4459	20.00	400.0000
			500	45.9623	40.00	1600.0000

Regression Output	**Calculated**		***Reported WQR***	
Constant	*c*	*0.00905*	*c*	*-0.0827669*
Std Err of Y Est				
R Squared		*0.9998336*		*0.9992030*
Degrees of Freedom				
	m1	*m2*	*m1*	*m2*
X Coefficient(s)	*1.1286105*	*0.0004752*	*1.0321200*	*0.00169096*
Std Err of Coef.				
Correlation Coefficient		*0.999917*		
Coefficient of Determination (r^2)		*0.999834*		

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/10/2019	SCN945	PFOA	0.25	0.04424	3.125
			0.5	0.06626	6.250
			1	0.16054	12.500
		13C2-PFOA	2	0.28982	25.000
			5	0.76540	62.500
			10	1.42501	125.000
			50	7.42635	625.000
			100	14.79889	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.001555	0.038532
Std Err of Y Est		
R Squared	0.999983	0.999749
Degrees of Freedom		
X Coefficient(s)	0.01184661	1.848290
Std Err of Coef.		
Correlation Coefficient	0.999992	
Coefficient of Determination (r^2)	0.999983	0.999749

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/10/2019	SCN945	PFOS	0.25	0.00818	3.125
			0.5	0.03295	6.250
	190710M2-CRV		1	0.10211	12.500
		13C8-PFOS	2	0.14330	25.000
			5	0.43202	62.500
			10	0.82840	125.000
			50	5.02607	625.000
			100	10.45259	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.076994	-0.175183
Std Err of Y Est		
R Squared	0.999354	0.995937
Degrees of Freedom		
X Coefficient(s)	0.00836341	1.269460
Std Err of Coef.		
Correlation Coefficient	0.999677	
Coefficient of Determination (r^2)	0.999354	0.995937

LDC # 45580B96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	(IS)	Conc	Reported	Recalculated	Reported % R	Recalculated % R
1	190702M2-4	7/2/2019	PFOA	(13C2-PFOA)	1.000	0.960	0.960	96.0	96.0
	ISC		PFOS	(13C8-PFOS)	1.000	0.936	0.936	93.6	93.6
2	190710M2-17	7/10/2019	PFOA	(13C2-PFOA)	10.000	7.241	7.241	72.4	72.4
	ICV		PFOS	(13C8-PFOS)	9.240	7.763	7.763	84.0	84.0
3	090712M1-2	7/12/2019	PFOA	(13C2-PFOA)	1.000	0.909	0.909	90.9	90.9
			PFOS	(13C8-PFOS)	1.000	0.983	0.983	98.3	98.3

LDC #: 45580 B96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: LC/MS PFAS (EPA Method 537Mod)

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: 11/12

Compound	Spike Added (ug/L)		Sample Conc (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
PFOA	0.0847	0.0876	0.177	0.276	0.290	117	117	129	129	9.76	9.76
PFOS	↓	↓	0.0677	0.159	0.165	108	108	112	112	3.64	3.64

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.

% RPD based on % R

LDC #: 45580 B96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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: B9F0280-BS1

Compound	Spike Added (ng/kg)		Spike Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	10.0	NA	10.3	NA	103	103				
PFOS	↓	↓	10.5	↓	105	105				

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.

LDC #: 45580 B96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd reviewer:

METHOD: LC/MS PFAS (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. 5 , PFOS :

Conc. = $\frac{\left[\left(\frac{11500}{1190} \times 12.5\right) - (-0.175183)\right](1ml)}{(1.26996)(1.08g)(0.967)}$

= 91.1 ug/kg

#	Sample ID	Compound	Reported Concentration (ug/kg)	Calculated Concentration ( )	Qualification
			91.1		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS Yuma, CTO 17F3803

LDC Report Date: August 22, 2019

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1901857

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
SAOA-B05-GW	1901857-01	Water	06/26/19
SAOA-B09-SO-1-1.5	1901857-02	Soil	06/26/19
SAOA-B09-SO-20-20.5	1901857-03	Soil	06/26/19
SAOA-B09-GW	1901857-04	Water	06/26/19
FRB-06262019	1901857-05	Water	06/26/19
EB-06262019	1901857-06	Water	06/26/19
SAOA-B11-SO-1-1.5	1901857-07	Soil	06/27/19
SAOA-B11-SO-20-20.5	1901857-08	Soil	06/27/19
SAOA-B11-GW	1901857-09	Water	06/27/19
SAOA-B08-SO-1-1.5	1901857-10	Soil	06/27/19
EB-06272019	1901857-11	Water	06/27/19
FRB-06272019	1901857-12	Water	06/27/19

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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona (May 2019), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). 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 method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified

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 method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was 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.

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

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.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples EB-06272019-GW (from SDG 1901920), EB-06262019, and EB-06272019 were identified as equipment blanks. No contaminants were found with the following exceptions:

Blank ID	Collection Date	Compound	Concentration	Associated Samples In This SDG
EB-06272019-GW	06/27/19	PFOS PFDA	0.0103 ug/L 0.00428 ug/L	SAOA-B11-GW

Samples FRB-06262019 and FRB-06272019 were identified as field reagent blanks. No contaminants were found.

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X for contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
SAOA-B11-GW	PFOS	0.00941 ug/L	0.00941J ug/L

Sample results were qualified as follows:

- If sample concentration was < 5X the blank concentration and the sample was <limit of quantitation (LOQ), the sample result was qualified as nondetect (U).
- If sample concentration was < 5X the blank concentration and the sample was >LOQ, the sample result was qualified as estimated (J).

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/Ongoing Precision Recovery

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.

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

OPR ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
B9G0116-BS1	EtFOSAA	137 (70-130)	SAOA-B09-SO-1-1.5 SAOA-B09-SO-20-20.5 SAOA-B11-SO-1-1.5 SAOA-B11-SO-20-20.5 SAOA-B08-SO-1-1.5	NA	-

NA (Not Applicable): The percent recovery demonstrates a high bias and the affected compound was not detected in the associated samples. Sample qualification was not necessary.

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 with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
SAOA-B05-GW	d5-EtFOSAA 13C2-PFUnA 13C2-PFDoA 13C2-PFTeDA	49.4 (50-150) 43.1 (50-150) 35.9 (50-150) 17.0 (50-150)	EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
SAOA-B11-GW	13C2-PFTeDA	47.2 (50-150)	PFTeDA	UJ (all non-detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the limit of quantitation (LOQ) were qualified as follows:

Sample	Finding	Flag	A or P
SAOA-B09-SO-1-1.5 SAOA-B09-GW SAOA-B11-SO-1-1.5 SAOA-B11-GW SAOA-B08-SO-1-1.5	All compounds reported below the LOQ.	J (all detects)	A

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 method. No results were rejected in this SDG.

Due to labeled compound %R and results below the LOQ, data were qualified as estimated in six samples.

Due to equipment blank contamination, 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 Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 1901857

Sample	Compound	Flag	A or P	Reason
SAOA-B05-GW	EtFOSAA PFUnA PFDoA PFTrDA PFTeDA	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B11-GW	PFTeDA	UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B09-SO-1-1.5 SAOA-B09-GW SAOA-B11-SO-1-1.5 SAOA-B11-GW SAOA-B08-SO-1-1.5	All compounds reported below the LOQ.	J (all detects)	A	Compound quantitation

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 1901857

No Sample Data Qualified in this SDG

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 1901857

Sample	Compound	Modified Final Concentration	A or P
SAOA-B11-GW	PFOS	0.00941J ug/L	A

LDC #: 45580C96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901857 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: JV6
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537(M))

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 / A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	r² Individual ≤ 30% ICV ≤ 30%
IV.	Continuing calibration/ISC	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	SW	*FRB = 5, 12 EB = *6, *11, EB-06272019-GW (1901920)
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	SW	LCS/D OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
XI.	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: FRB = Field Reagent Blank

	Client ID	Lab ID	Matrix	Date
1	SAOA-B05-GW	1901857-01	Water	06/26/19
2	SAOA-B09-SO-1-1.5	1901857-02	Soil	06/26/19
3	SAOA-B09-SO-20-20.5	1901857-03	Soil	06/26/19
4	SAOA-B09-GW	1901857-04	Water	06/26/19
5	FRB-06262019	1901857-05	Water	06/26/19
6	EB-06262019	1901857-06	Water	06/26/19
7	SAOA-B11-SO-1-1.5	1901857-07	Soil	06/27/19
8	SAOA-B11-SO-20-20.5	1901857-08	Soil	06/27/19
9	SAOA-B11-GW	1901857-09	Water	06/27/19
10	SAOA-B08-SO-1-1.5	1901857-10	Soil	06/27/19
11	EB-06272019	1901857-11	Water	06/27/19
12	FRB-06272019	1901857-12	Water	06/27/19
13				
14	1. B9G0050-BLK1			
15	2. B9G0116-1			

LDC #: 45580C96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Method: LCMS (EPA Method 537M)

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?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤30%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard except the lowest point (50-150%)?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 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?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzedin this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch in this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		

LDC #: 45580C96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?.			✓	
XI. Labeled Compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
XII. Compound quantitation				
Did the laboratory reporting limits (RL) meet the QAPP RLs?	✓			
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 quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Was m/z 499 to m/z 80 transition used as the quantitation transition for PFOS?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Perfluorinated Alkyl Acids (EPA Method 537)

A. PFBA	375-22-4
B. PFPeA	2706-90-3
C. PFBS	375-73-5
D. PFHxA	307-24-4
E. PFHpA	375-85-9
F. PFHxS	355-46-4
G. PFOA	335-67-1
H. PFHpS	375-92-8
I. PFNA	375-95-1
J. PFOSA	754-91-6
K. PFOS	1763-23-1
L. PFDA	335-76-2
M. PFUnA	2058-94-8
N. PFDS	335-77-3
O. PFDoA	307-55-1
P. MeFOSA	31506-32-8
Q. PFTrDA	72629-94-8
R. PFTeDA	376-06-7
S. EtFOSA	4151-50-2
T. MeFOSE	24448-09-7
U. EtFOSE	1691-99-2
V. MeFOSAA	2355-31-9
W. EtFOSAA	2991-50-6

Notes: _____

LDC #: 45580 C96

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: LC/MS PFAS (EPA Method 537M)

(Y) N N/A Were field blanks identified in this SDG?
Y/N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ng/L
Sampling date: 06/27/19
Field blank type: (circle one) Trip Blank/Field Blank / Rinsate / Other: _____ Associated Samples: 9

Compound	Blank ID	Sample Identification								
EB-06272019-GW		9								
>LOQ K	0.0103		0.00941 J							
<LOQ L	0.00428									

Blank units: _____ **Associated sample units:** _____
Sampling date: _____
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

LDC #: 45580C96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	BG0116-BS1 (COPR)	W	137 (70-130)	( )	( )	2,3,7,8,16, MB2 (ND)	J dets / P
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 45580 C96

VALIDATION FINDINGS WORKSHEET
Labeled Compound

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compounds within -50 to +150% of the associated calibration standard?

#	Date	Sample ID	Labeled Compound	%R	Limits (%)	Qualifications
		1 (ND)	d5-W	99.4	50-150	J/UJ/P (qual W)
		↓	13C2-M	43.1	↓	M
			13C2-O	35.9		O,Q
			13C2-R	17.0		R,
		9 (ND)	13C2-R	47.2		R,
		BG0050-BLK1	13C2-R	39.8		R
		BG0116-BLK1	13C2-R	47.3	↓	R

LDC#: 45580C96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/8/2019	SCN945	PFOA	0.25	0.03026	3.125
			0.5	0.05635	6.250
			1	0.12819	12.500
		13C2-PFOA	2	0.23652	25.000
			5	0.56342	62.500
			10	1.13496	125.000
			50	5.69897	625.000
			100	11.70763	1250.000
			250	27.83374	3125.000
			500	58.24964	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.064747	0.024985
Std Err of Y Est		
R Squared	0.999685	0.999567
Degrees of Freedom		
X Coefficient(s)	0.00925494	1.437000
Std Err of Coef.		
Correlation Coefficient	0.999843	
Coefficient of Determination (r^2)	0.999685	0.999567

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/8/2019	SCN945	PFOS	0.25	0.01762	3.125
			0.5	0.03271	6.250
			1	0.07312	12.500
		13C8-PFOS	2	0.16106	25.000
			5	0.42655	62.500
			10	0.82050	125.000
			50	4.47916	625.000
			100	9.43586	1250.000
			250	20.96613	3125.000
			500	47.95613	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.206548	-0.104113
Std Err of Y Est		
R Squared	0.997431	0.996565
Degrees of Freedom		
X Coefficient(s)	0.00752625	1.149010
Std Err of Coef.		
Correlation Coefficient	0.998715	
Coefficient of Determination (r^2)	0.997431	0.996565

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/12/2019	SCN945	PFOA	0.25	0.03226	3.125
			0.5	0.06127	6.250
			1	0.11149	12.500
		13C2-PFOA	2	0.22345	25.000
			5	0.55250	62.500
			10	1.13393	125.000
			50	5.63506	625.000
			100	10.95602	1250.000
			250	26.97489	3125.000
			500	54.69562	6250.000

Regression Output	Calculated	Reported WLR
Constant	0.014494	0.073917
Std Err of Y Est		
R Squared	0.999962	0.999890
Degrees of Freedom		
X Coefficient(s)	0.00872764	1.364860
Std Err of Coef.		
Correlation Coefficient	0.999981	
Coefficient of Determination (r^2)	0.999962	0.999890

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/12/2019	SCN945	PFOS	0.25	0.02715	3.125
			0.5	0.02748	6.250
			1	0.07680	12.500
		13C8-PFOS	2	0.14878	25.000
			5	0.44086	62.500
			10	0.85959	125.000
			50	4.21093	625.000
			100	8.30061	1250.000
			250	22.46399	3125.000
			500	45.30008	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.133686	-0.160592
Std Err of Y Est		
R Squared	0.999751	0.999099
Degrees of Freedom		
X Coefficient(s)	0.00724403	1.115200
Std Err of Coef.		
Correlation Coefficient	0.999876	
Coefficient of Determination (r^2)	0.999751	0.999099

LDC # 45580C96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	(IS)	Conc	Reported	Recalculated	Reported % R	Recalculated % R
1	090708M3_2	7/8/2020	PFOA	(13C2-PFOA)	1.000	1.033	1.033	103.3	103.3
			PFOS	(13C8-PFOS)	1.000	0.998	0.998	99.8	99.8
2	190712M2_17 ICV	7/12/2019	PFOA	(13C2-PFOA)	10.000	7.535	7.535	75.3	75.3
			PFOS	(13C8-PFOS)	9.240	6.554	6.554	70.9	70.9

LDC #: 45580 C96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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: B9G0050-BS1/BSD1

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	0.040	0.040	0.0418	0.0425	104	104	106	106	1.84	1.7
PFOS	↓	↓	0.0378	0.0434	94.4	94.4	109	109	13.9	13.6

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.

LDC #: 45580C96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd reviewer:

METHOD: LC/MS PFAS (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, PFOS:

Conc. $= \frac{\left[\left(\left(\frac{5630}{2550}\right)(12.5)\right) - (-0.160592)\right]}{(1.1152)} = 16.10$

final conc. $= \frac{(16.10)(1\ mL)}{(1.0\ g)(0.995)}$

$= 16.0\ ug/kg$

#	Sample ID	Compound	Reported Concentration (ug/kg)	Calculated Concentration ( )	Qualification
			16.0		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS Yuma, CTO 17F3803

LDC Report Date: August 22, 2019

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1901920

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
SAOA-B08-SO-30-30.5	1901920-01	Soil	06/27/19
SAOA-B08-GW	1901920-02	Water	06/27/19
EB-06272019-GW	1901920-03	Water	06/27/19
FRB-06282019	1901920-04	Water	06/28/19
SAOA-B12-GW	1901920-05	Water	06/28/19
SAOA-B12-GW-D	1901920-06	Water	06/28/19
NAOA-B08-SO-1-1.5	1901920-07	Soil	07/01/19
NAOA-B08-SO-20-20.5	1901920-08	Soil	07/01/19
NAOA-B09-SO-1-1.5	1901920-09	Soil	07/01/19
NAOA-B09-SO-20-20.5	1901920-10	Soil	07/01/19
NAOA-B02-GW	1901920-11	Water	07/01/19
EB-07012019	1901920-12	Water	07/01/19
NAOA-B01-SO-1-1.5	1901920-13	Soil	07/01/19
FRB-07012019	1901920-14	Water	07/01/19
NAOA-B01-SO-20-20.5	1901920-15	Soil	07/01/19
NAOA-B01-GW	1901920-16	Water	07/02/19
NAOA-B01-GW-D	1901920-17	Water	07/02/19
CAOA-B02-SO-0.5-1	1901920-18	Soil	07/02/19
CAOA-B02-SO-20-20.5	1901920-19	Soil	07/02/19
EB-07022019	1901920-20	Water	07/02/19
CAOA-B02-SO-0.5-1MS	1901920-18MS	Soil	07/02/19
CAOA-B02-SO-0.5-1MSD	1901920-18MSD	Soil	07/02/19

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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona (May 2019), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). 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 method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified

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 method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was 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.

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

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.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples EB-06272019-GW, EB-07012019, and EB-07022019 were identified as equipment blanks. No contaminants were found with the following exceptions:

Blank ID	Collection Date	Compound	Concentration	Associated Samples in this SDG
EB-06272019-GW	06/27/19	PFOS PFDA	0.0103 ug/L 0.00428 ug/L	SAOA-B08-GW

Samples FRB-06272019 (from SDG 1901857), FRB-06282019, and FRB-07012019 were identified as field reagent blanks. No contaminants were found.

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were either not detected or were significantly greater (>5X for contaminants) than the concentrations found in the associated field blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
SAOA-B08-GW	PFDA	0.00298 ug/L	0.00298U ug/L

Sample results were qualified as follows:

- If sample concentration was < 5X the blank concentration and the sample was <limit of quantitation (LOQ), the sample result was qualified as nondetect (U).
- If sample concentration was < 5X the blank concentration and the sample was >LOQ, the sample result was qualified as estimated (J).

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
CAOA-B02-SO-0.5-1MS/MSD (CAOA-B02-SO-0.5-1)	PFHxA	-	138 (70-130)	J (all detects)	A

Relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples/Ongoing Precision Recovery

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.

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

OPR ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
B9G0116-BS1	EtFOSAA	134 (70-130)	SAOA-B08-SO-30-30.5 NAOA-B08-SO-1-1.5 NAOA-B08-SO-20-20.5 NAOA-B09-SO-1-1.5 NAOA-B09-SO-20-20.5 NAOA-B01-SO-1-1.5 NAOA-B01-SO-20-20.5 CAOA-B02-SO-0.5-1 CAOA-B02-SO-20-20.5	NA	-

NA (Not Applicable): The percent recovery demonstrates a high bias and the affected compound was not detected in the associated samples. Sample qualification was not necessary.

IX. Field Duplicates

Samples SAOA-B12-GW and SAOA-B12-GW-D and samples NAOA-B01-GW and NAOA-B01-GW-D were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	SAOA-B12-GW	SAOA-B12-GW-D			
PFBS	0.00758	0.00664	Not calculable	-	-
PFHxA	0.0178	0.0203	Not calculable	-	-
PFHpA	0.00410U	0.00361	Not calculable	-	-
PFHxS	0.00478	0.0157	Not calculable	-	-
PFOA	0.00410U	0.00635	Not calculable	-	-
PFNA	0.00410U	0.00302	Not calculable	-	-
PFOS	0.0127	0.0904	Not calculable	-	-
PFDA	0.00410U	0.00407	Not calculable	-	-

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	NAOA-B01-GW	NAOA-B01-GW-D			
PFBS	0.0823	0.170	70 (≤30)	J (all detects)	A
PFHxA	0.176	0.613	111 (≤30)	J (all detects)	A
PFHpA	0.0307	0.0573	60 (≤30)	J (all detects)	A

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	NAOA-B01-GW	NAOA-B01-GW-D			
PFHxS	0.167	0.120	33 (≤30)	J (all detects)	A
PFOA	0.00628	0.00362U	Not calculable	-	-
PFOS	0.0664	0.0447	39 (≤30)	J (all detects)	A

Not calculable = One or both results were less than 5x the limit of quantitation.

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
SAOA-B08-GW	13C2-PFTeDA	44.1 (50-150)	PFTeDA	UJ (all non-detects)	P
SAOA-B12-GW-D	13C2-PFTeDA	30.7 (50-150)	PFTeDA	UJ (all non-detects)	P
NAOA-B02-GW	13C2-PFTeDA	45.7 (50-150)	PFTeDA	UJ (all non-detects)	P
NAOA-B01-GW	13C2-PFTeDA	47.7 (50-150)	PFTeDA	UJ (all non-detects)	P
NAOA-B01-GW-D	13C2-PFTeDA	39.8 (50-150)	PFTeDA	UJ (all non-detects)	P
CAOA-B02-SO-20-20.5	13C2-PFDoA	46.3 (50-150)	PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the limit of quantitation (LOQ) were qualified as follows:

Sample	Finding	Flag	A or P
SAOA-B08-GW EB-06272019-GW SAOA-B12-GW SAOA-B12-GW-D NAOA-B09-SO-1-1.5 NAOA-B02-GW NAOA-B01-SO-1-1.5 NAOA-B01-GW CAOA-B02-SO-0.5-1 CAOA-B02-SO-20-20.5	All compounds reported below the LOQ.	J (all detects)	A

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 method. No results were rejected in this SDG.

Due to MS/MSD %R, field duplicate RPD, labeled compound %R, and results below the LOQ, data were qualified as estimated in eleven samples.

Due to equipment blank contamination, data were qualified as not detected in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 1901920

Sample	Compound	Flag	A or P	Reason
CAOA-B02-SO-0.5-1	PFHxA	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)
NAOA-B01-GW NAOA-B01-GW-D	PFBS PFHxA PFHpA PFHxS PFOS	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Field duplicates (RPD)
SAOA-B08-GW SAOA-B12-GW-D NAOA-B02-GW NAOA-B01-GW NAOA-B01-GW-D	PFTeDA	UJ (all non-detects)	P	Labeled compounds (%R)
CAOA-B02-SO-20-20.5	PFDoA PFTrDA	UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R)
SAOA-B08-GW EB-06272019-GW SAOA-B12-GW SAOA-B12-GW-D NAOA-B09-SO-1-1.5 NAOA-B02-GW NAOA-B01-SO-1-1.5 NAOA-B01-GW CAOA-B02-SO-0.5-1 CAOA-B02-SO-20-20.5	All compounds reported below the LOQ.	J (all detects)	A	Compound quantitation

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 1901920

No Sample Data Qualified in this SDG

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 1901920

Sample	Compound	Modified Final Concentration	A or P
SAOA-B08-GW	PFDA	0.00298U ug/L	A

LDC #: 45580D96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901920 Stage 4 Page: 1 of 2
Laboratory: Vista Analytical Laboratory Reviewer: SVG
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M)

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 / A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	r² Individual ≤ 30% ICV ≤ 30%
IV.	Continuing calibration/ISC	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	SW	EB = 3, 12*, 20 FRB = 4, 14*, FRB-06272019 (1901857)
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	LCS/D
IX.	Field duplicates	SW	D = 16/17, 5/6
X.	Labeled Compounds	SW	
XI.	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: FRB = Field Reagent Blank

	Client ID	Lab ID	Matrix	Date
1	SAOA-B08-SO-30-30.5	1901920-01	Soil	06/27/19
2	SAOA-B08-GW	1901920-02	Water	06/27/19
3	EB-06272019-GW	1901920-03	Water	06/27/19
4	FRB-06282019	1901920-04	Water	06/28/19
5	SAOA-B12-GW D	1901920-05	Water	06/28/19
6	SAOA-B12-GW-D D	1901920-06	Water	06/28/19
7	NAOA-B08-SO-1-1.5	1901920-07	Soil	07/01/19
8	NAOA-B08-SO-20-20.5	1901920-08	Soil	07/01/19
9	NAOA-B09-SO-1-1.5	1901920-09	Soil	07/01/19
10	NAOA-B09-SO-20-20.5	1901920-10	Soil	07/01/19
11	NAOA-B02-GW	1901920-11	Water	07/01/19
12	EB-07012019	1901920-12	Water	07/01/19
13	NAOA-B01-SO-1-1.5	1901920-13	Soil	07/01/19
14	FRB-07012019	1901920-14	Water	07/01/19
15	NAOA-B01-SO-20-20.5	1901920-15	Soil	07/01/19

LDC #: 45580D96 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/12/19
SDG #: 1901920 Stage 4 Page: 2 of 2
Laboratory: Vista Analytical Laboratory Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537)

	Client ID	Lab ID	Matrix	Date
16	NAOA-B01-GW	1901920-16	Water	07/02/19
17	NAOA-B01-GW-D	1901920-17	Water	07/02/19
18	CAOA-B02-SO-0.5-1	1901920-18	Soil	07/02/19
19	CAOA-B02-SO-20-20.5	1901920-19	Soil	07/02/19
20	EB-07022019	1901920-20	Water	07/02/19
21	CAOA-B02-SO-0.5-1MS	1901920-18MS	Soil	07/02/19
22	CAOA-B02-SO-0.5-1MSD	1901920-18MSD	Soil	07/02/19
23				
24				
25				
26				
27				

Notes:

1	BQG0116-BLK1						
2	BQG0062-1						

LDC #: 45580 D96

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

Method: LCMS (EPA Method 537M)

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?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤30%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard except the lowest point (50-150%)?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 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?	✓			
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzedin this SDG?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch in this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		

Validation Area	Yes	No	NA	Findings/Comments
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?.	✓			
XI. Labeled Compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		✓		
XII. Compound quantitation				
Did the laboratory reporting limits (RL) meet the QAPP RLs?	✓	-		
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 quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Was m/z 499 to m/z 80 transition used as the quantitation transition for PFOS?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Perfluorinated Alkyl Acids (EPA Method 537)

A. PFBA	375-22-4
B. PFPeA	2706-90-3
C. PFBS	375-73-5
D. PFHxA	307-24-4
E. PFHpA	375-85-9
F. PFHxS	355-46-4
G. PFOA	335-67-1
H. PFHpS	375-92-8
I. PFNA	375-95-1
J. PFOSA	754-91-6
K. PFOS	1763-23-1
L. PFDA	335-76-2
M. PFUnA	2058-94-8
N. PFDS	335-77-3
O. PFDoA	307-55-1
P. MeFOSA	31506-32-8
Q. PFTrDA	72629-94-8
R. PFTeDA	376-06-7
S. EtFOSA	4151-50-2
T. MeFOSE	24448-09-7
U. EtFOSE	1691-99-2
V. MeFOSAA	2355-31-9
W. EtFOSAA	2991-50-6

Notes:_____

LDC #: 45580 D9G

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537)

(Y) N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Blank units: ng/L **Associated sample units:** ng/L

>5x or <LOQ

Sampling date: 06/27/19

Field blank type: (circle one) Trip Blank/Field Blank / Rinsate / Other: EB Associated Samples: 2 (either < or > 5x)

Compound	Blank ID	Sample Identification								
	3		32							
>LOQ K	0.0103		0.144 J	a						
<LOQ L	0.00428		0.00298 U							

Blank units: _____ **Associated sample units:** _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

LDC #: 45580D 96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: JVG
2nd Reviewer: O

METHOD: LC/MS PFCs (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 in this SDG?

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
		21/22	D	( )	138 (70-130)	( )	18 (Det)	J dets/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 45580 D96

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	B9G0116-BS1 (OPR)	W	134 (70-130)	( )	( )	1, 7-10, 13, 15, 18,	J dets/P
			( )	( )	( )	19, MB1 (ND)	
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#: 45580D96

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: LCMS PFAS (EPA Method 537M)
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD (≤30%)	Qualifications (Parent only)
	5	6		
C	0.00758	0.00664	NC	
D	0.0178	0.0203	NC	
E	0.00410U	0.00361	NC	
F	0.00478	0.0157	NC	
G	0.00410U	0.00635	NC	
I	0.00410U	0.00302	NC	
K	0.0127	0.0904	NC	
L	0.00410U	0.00407	NC	

Compound	Concentration (ug/L)		RPD (≤30%)	Qualifications (Parent only)
	16	17		
C	0.0823	0.170	70	Jdets/A
D	0.176	0.613	111	Jdets/A
E	0.0307	0.0573	60	Jdets/A
F	0.167	0.120	33	Jdets/A
G	0.00628	0.00362U	NC	
K	0.0664	0.0447	39	Jdets/A

NC (<5XLOQ)

V:\Josephine\FIELD DUPLICATES\45580D96 ttech yuma1.wpd

LDC #: 45580B96

VALIDATION FINDINGS WORKSHEET
Labeled Compound

Reviewer: JVG
2nd Reviewer:

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 all labeled compounds within -50 to +150% of the associated calibration standard?

#	Date	Sample ID	Labeled Compound	%R	Limits (%)	Qualifications
		2 (ND)	13C2-R	44.1	50-150	J/UJ (all R)
		6		30.7		
		11		45.7		
		16		47.7		
		17		39.8		
		19	13C2-O	46.3		(all O, R)
		BG0062-BLK1	13C2-R	46.6		R
		BG0116-BLK1	d5-W	47.3		W

LDC#: 45580D96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/10/2019	SCN945	PFOA	0.25	0.04424	3.125
			0.5	0.06626	6.250
			1	0.16054	12.500
		13C2-PFOA	2	0.28982	25.000
			5	0.76540	62.500
			10	1.42501	125.000
			50	7.42635	625.000
			100	14.79889	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.001555	0.038532
Std Err of Y Est		
R Squared	0.999983	0.999749
Degrees of Freedom		
X Coefficient(s)	0.01184661	1.848290
Std Err of Coef.		
Correlation Coefficient	0.999992	
Coefficient of Determination (r^2)	0.999983	0.999749

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/10/2019	SCN945	PFOS	0.25	0.00818	3.125
			0.5	0.03295	6.250
	190710M2-CRV		1	0.10211	12.500
		13C8-PFOS	2	0.14330	25.000
			5	0.43202	62.500
			10	0.82840	125.000
			50	5.02607	625.000
			100	10.45259	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.076994	-0.175183
Std Err of Y Est		
R Squared	0.999354	0.995937
Degrees of Freedom		
X Coefficient(s)	0.00836341	1.269460
Std Err of Coef.		
Correlation Coefficient	0.999677	
Coefficient of Determination (r^2)	0.999354	0.995937

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/12/2019	SCN945	PFOA	0.25	0.03226	3.125
			0.5	0.06127	6.250
	190712M-CRV		1	0.11149	12.500
		13C2-PFOA	2	0.22345	25.000
			5	0.55250	62.500
			10	1.13393	125.000
			50	5.63506	625.000
			100	10.95602	1250.000
			250	26.97489	3125.000
			500	54.69562	6250.000

Regression Output	Calculated	Reported WLR
Constant	0.014494	0.073917
Std Err of Y Est		
R Squared	0.999962	0.999890
Degrees of Freedom		
X Coefficient(s)	0.00872764	1.364860
Std Err of Coef.		
Correlation Coefficient	0.999981	
Coefficient of Determination (r^2)	0.999962	0.999890

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/12/2019	SCN945	PFOS	0.25	0.02715	3.125
			0.5	0.02748	6.250
			1	0.07680	12.500
	190712M-CRV	13C8-PFOS	2	0.14878	25.000
			5	0.44086	62.500
			10	0.85959	125.000
			50	4.21093	625.000
			100	8.30061	1250.000
			250	22.46399	3125.000
			500	45.30008	6250.000

Regression Output	Calculated	Reported WLR
Constant	-0.133686	-0.160592
Std Err of Y Est		
R Squared	0.999751	0.999099
Degrees of Freedom		
X Coefficient(s)	0.00724403	1.115200
Std Err of Coef.		
Correlation Coefficient	0.999876	
Coefficient of Determination (r^2)	0.999751	0.999099

LDC # 45580D96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	(IS)	Conc	Reported	Recalculated	Reported % R	Recalculated % R
1	190711M3-32	7/12/2019	PFOA	(13C2-PFOA)	1.000	0.937	0.937	93.7	93.7
			PFOS	(13C8-PFOS)	1.000	1.090	1.090	109.0	109.0
2	190712M2-17 ICV	7/12/2019	PFOA	(13C2-PFOA)	10.000	7.535	7.535	75.3	75.3
			PFOS	(13C8-PFOS)	9.240	6.554	6.554	70.9	70.9
3	190712M2-35 CCV	7/12/2019	PFOA	(13C2-PFOA)	10.000	10.172	10.172	101.7	101.7
			PFOS	(13C8-PFOS)	10.000	9.410	9.410	94.1	94.1

LDC #: 45580 D96

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537Mod)

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: 21/22

Compound	Spike Added (ng/kg)		Sample Conc (ng/kg)	Spiked Sample Concentration (ng/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
PFOA	9.97	9.73	1.56	13.7	12.7	122	122	115	115	5.91	5.91
PFOS	↓	↓	8.16	19.2	19.1	111	111	112	112	0.89%	0.90

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.

% RPD based on %R

LDC #: 45580 D96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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: 890116-351

Compound	Spike Added (ng/kg)		Spike Concentration (ng/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	10.0	NA	10.8	NA	108	108				
PFOS	"	"	10.5	"	105	105				

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.

LDC #: 45580 D96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer:

METHOD: LC/MS PFAS (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. #7 , PFOS :

Conc. = $\frac{\left[\left(\left(\frac{6780}{2770}\right)(12.5)\right) - (-0.160592)\right](1\,ml)}{(1.1152)(1.03g)(0.985)}$

= 27.2 ng/kg

#	Sample ID	Compound	Reported Concentration (ng/kg)	Calculated Concentration ( )	Qualification
			27.2		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS Yuma, CTO 17F3803

LDC Report Date: August 22, 2019

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Stage 4

Laboratory: Vista Analytical Laboratory

Sample Delivery Group (SDG): 1901922

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
FRB-07022019	1901922-01	Water	07/02/19
CAOA-B02-GW	1901922-02	Water	07/02/19

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 (Field Sampling Plan and Quality Assurance Project Plan), Site Inspection for Per- and Polyfluoroalkyl Substances, Marine Corps Air Station Yuma, Arizona (May 2019), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1 (2017), and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). 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 method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified

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 method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was 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.

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

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.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample FRB-07022019 was identified as a field reagent 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.

All compounds reported below the limit of quantitation (LOQ) were qualified as follows:

Sample	Finding	Flag	A or P
CAOA-B02-GW	All compounds reported below the LOQ.	J (all detects)	A

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 method. No results were rejected in this SDG.

Due to results below the LOQ, 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 Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG 1901922

Sample	Compound	Flag	A or P	Reason
CAOA-B02-GW	All compounds reported below the LOQ.	J (all detects)	A	Compound quantitation

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification Summary - SDG 1901922

No Sample Data Qualified in this SDG

MCAS Yuma, CTO 17F3803
Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification Summary - SDG 1901922

No Sample Data Qualified in this SDG

LDC #: 45580E96 **VALIDATION COMPLETENESS WORKSHEET** Date: 08/12/19
SDG #: 1901922 Stage 4 Page: 1 of 1
Laboratory: Vista Analytical Laboratory Reviewer: JV6
2nd Reviewer:

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537)

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/A	
II.	LC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	rr Individual ≤ 30% ICV ≤ 30%
IV.	Continuing calibration/ISC	A	CCV ≤ 30%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FRB = 1
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
XI.	Compound quantitation RL/LOQ/LODs	A	
XII.	Target compound identification	A	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank FRB = Field Reagent Blank

	Client ID	Lab ID	Matrix	Date
1	FRB-07022019	1901922-01	Water	07/02/19
2	CAOA-B02-GW	1901922-02	Water	07/02/19
3				
4				
5				
6				
7				
8				
9				
10				

Notes:

	860062-Blk1						

LDC #: 45580E96

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: JVG
2nd Reviewer:

Method: LCMS (EPA Method 537M)

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?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤30%?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit criteria of ≥ 0.990?	✓			
Were all analytes within 70-130% or percent differences (%D) ≤30% of their true value for each calibration standard except the lowest point (50-150%)?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) of the continuing calibration ≤ 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?		✓		
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzedin this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch in this SDG?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			

Validation Area	Yes	No	NA	Findings/Comments
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?.			✓	
XI. Labeled Compounds				
Were labeled compound percent recoveries (%R) within the QC limits?	✓	✓		
XII. Compound quantitation				
Did the laboratory reporting limits (RL) meet the QAPP RLs?	✓			
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 quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Was m/z 499 to m/z 80 transition used as the quantitation transition for PFOS?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 45580 E96

VALIDATION FINDINGS WORKSHEET
Labeled Compound

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFAS (EPA Method 537)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Were all labeled compounds within -50 to +150% of the associated calibration standard?

#	Date	Sample ID	Labeled Compound	%R	Limits (%)	Qualifications
		B9G0062-BLK1	13C2-PFTeDA	46.6	50-150	J/UJ/P

LDC#: 45580E96

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
711/19	SCN945	PFOA	0.25	0.04424	3.125
			0.5	0.06626	6.250
			1	0.16054	12.500
		13C2-PFOA	2	0.28982	25.000
			5	0.76540	62.500
			10	1.42501	125.000
			50	7.42635	625.000
			100	14.79889	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.001555	0.038532
Std Err of Y Est		
R Squared	0.999983	0.999749
Degrees of Freedom		
X Coefficient(s)	0.01184661	1.848290
Std Err of Coef.		
Correlation Coefficient	0.999992	
Coefficient of Determination (r^2)	0.999983	0.999749

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

METHOD: LC/MS PFCs (EPA Method 537Mod)

Calibration Date	System	Compound	Standard	(Y) Area ratio	(X) Conc ratio
7/11/2019	SCN945	PFOS	0.25	0.00818	3.125
			0.5	0.03295	6.250
			1	0.10211	12.500
		13C8-PFOS	2	0.14330	25.000
			5	0.43202	62.500
			10	0.82840	125.000
			50	5.02607	625.000
			100	10.45259	1250.000

Regression Output	Calculated	Reported WLR
Constant	-0.076994	-0.175183
Std Err of Y Est		
R Squared	0.999354	0.995937
Degrees of Freedom		
X Coefficient(s)	0.00836341	1.269460
Std Err of Coef.		
Correlation Coefficient	0.999677	
Coefficient of Determination (r^2)	0.999354	0.995937

LDC # 45580E96

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: LC/MS PFCs (EPA Method 537Mod)

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 = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound,
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Conc	Reported	Recalculated	Reported % R	Recalculated % R
1	190711M3_32	7/11/2019	PFOA (13C2-PFOA)	10.000	10.329	10.329	103.3	103.3
			PFOS (13C8-PFOS)	10.000	10.227	10.227	102.3	102.3

LDC #: 45580E96

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG

2nd Reviewer:

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: BJG0062-BS1/BSD1

Compound	Spike Added (ug/L)		Spike Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
PFOA	0.080	0.080	~~0.0857~~ 0.0880	0.0846	109	109	106	106	2.89	2.80
PFOS	1	1	0.0880	0.0817	110	110	102	102	7.33	7.42

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.

LDC #: 45580 E96

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer:

METHOD: LC/MS PFAS (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. 7, PFOS:

Conc. = $\frac{\left[\left(\frac{2550}{1250}\right)(12.5) - (-0.17518)\right]}{(1.26946)} = 20.225$

final conc. = $\frac{(20.225)(12)}{(0.1205)(1000)} = 0.1678$

≈ 0.168 ng/L

#	Sample ID	Compound	Reported Concentration (ng/L)	Calculated Concentration ( )	Qualification
			0.168		

LOCATION-NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIC_DESC	COLLECT_DATE
SAOA-B04	SITE 00019	YUMA_MCAS	BH	BOREHOLE	1901766	438485.745	601607.209	Perfluoroalkyl Compounds	SAOA-B04-GW	WG	GROUNDWATER	6/25/2019
SAOA-B06	SITE 00019	YUMA_MCAS	BH	BOREHOLE	1901766	438538.332	602213.408	Perfluoroalkyl Compounds	SAOA-B06-GW	WG	GROUNDWATER	6/24/2019
SAOA-B07	SITE 00019	YUMA_MCAS	BH	BOREHOLE	1901766	438231.324	601679.262	Perfluoroalkyl Compounds	SAOA-B07-GW	WG	GROUNDWATER	6/25/2019